YEDITEPE UNIVERSITY

GRADUATE SCHOOL OF EDUCATIONAL SCIENCES

EXAMINATION OF EMOTION REGULATION SKILLS AND HOPE LEVELS AS PREDICTORS OF FLOW EXPERIENCE IN ATHLETES

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ABSTRACT

EXAMINATION OF EMOTION REGULATION SKILLS AND HOPE LEVELS AS PREDICTORS OF FLOW EXPERIENCE IN ATHLETES

The main purpose of the study was to investigate the predictive power of athletes' emotion regulation skills and hope levels on flow experience. Athletes aged 18-29 years (n= 368) living in Istanbul, Turkey were included in this study. The demographic information form prepared by the researcher, Flow State Questionnaire (FSQ), Emotion Regulation Scale for Athletes (ERSA), and Dispositional Hope Scale (DHS) were used for data collection. Descriptive statistics, Pearson Product Moment Correlation, Hierarchical Regression Analysis, Independent Sample t-test, Oneway ANOVA Test and Post-hoc analyses were used in the analyses. The findings related to the correlational analysis of the study showed that there were significant and strong relationships between athletes' emotion regulation skills, hope levels and flow experiences at varying rates. According to the results of hierarchical regression analysis conducted in line with these relationships; emotion regulation skills and hope levels of athletes are determinants of flow experiences. In the analysis, the rate of explaining the flow experiences of athletes increased with each variable added in turn. When emotion regulation processes were added to the hierarchical regression model, training frequency maintained its significance and the explanatory power of the model increased from 6% to 67.5%. With the addition of hope level, training frequency also lost its significance and the explanatory power of the model increased by 4.4%. The independent variables explained 71.9% of the total variance of the total flow experience score of the athletes.

Keywords: Flow Experience, Emotion Regulation, Hope, Sports Psychology

ÖZET

SPORCULARDA AKIŞ DENEYİMİNİN YORDAYICILARI OLARAK DUYGU DÜZENLEME BECERİLERİ VE UMUT DÜZEYLERİNİN İNCELENMESİ

Çalışmanın temel amacı, sporcuların duygu düzenleme becerileri ve umut düzeylerinin akış deneyimi üzerindeki yordayıcı gücünü araştırmaktır. Bu çalışmaya İstanbul Türkiye'de yaşayan 18-29 yaş arası sporcular (n= 368) dâhil edilmiştir. Verilerin toplanmasında araştırmacı tarafından hazırlanan demografik bilgi formu, Akış Yaşantısı Ölçeği, Sporcu Duygu Düzenleme Ölçeği ve Sürekli Umut Ölçeği kullanılmıştır. Analizlerde, tanımlayıcı istatistikler, Pearson Momentler Çarpımı Korelasyonu, Hiyerarşik Regresyon Analizi, Bağımsız Örneklem t-test, Tek Yönlü ANOVA Testi ve Post-hoc analizlerinden yararlanılmıştır. Çalışmanın korelasyonel analizi ile ilgili bulgular sporcuların duygu düzenleme becerileri, umut düzeyleri ve akış deneyimleri arasında değişen oranlarda anlamlı ve güçlü ilişkiler bulunduğunu göstermiştir. Bu ilişkiler doğrultusunda yapılan hiyerarşik regresyon analizi sonuçlarına göre; sporcuların duygu düzenleme becerileri ve umut düzeyleri, akış deneyimlerinin belirleyicisidir. Analizde sırayla eklenen her bir değişkenle sporcuların akış deneyimlerini açıklama oranında artış görülmüştür. Hiyerarşik regresyon modeline duygu düzenleme süreçleri eklendiğinde antrenman sıklığı anlamlılığını koruyarak modelin açıklayıcılığı %6'dan %67.5'a yükselmiştir. Umut düzeyinin eklenmesiyle antrenman sıklığı da anlamlılığını kaybetmiş ve modelin açıklayıcılığı %4.4 oranında artmıştır. Bağımsız değişkenlerin sporcuların toplam akış deneyimi puanına ilişkin toplam varyansın %71.9'unu açıklamaktadır.

Anahtar Kelimeler: Akış Deneyimi, Duygu Düzenleme, Umut, Spor Psikolojisi

DEDICATION

To my husband Alparslan, my family and teachers especially my dad.

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ABBREVIATION LIST

FSQ **:** Flow State Questionnaire

ERSA **:** Emotion Regulation Scale for Athletes

DHS **:** Dispositional Hope Scale

CHAPTER 1

INTRODUCTION

1.1. Problem of the Study

In today's world where sports awareness and the factors that it affects and is affected by are gaining importance, the relationship between sports and psychology is also evolving. The psychological conditions of athletes during their sporting life are also a matter of curiosity (Şahan & Şahin, 2020). Many studies have shown that psychological factors such as an athlete's emotions, thoughts, and behaviours their ability to focus and maintain focus under the most difficult conditions, their desire to compete, train and improve, and their personality traits all have a significant impact on performance (Chang et al., 2020; Davies, 2005; Nwachukwu, 2019; Raglin 2001). When athletes experience flow, they engage in sports activities both emotionally and physically (Öner & Aşçı, 2020; Sarıçam & Akın, 2013; Tingaz & Ekiz, 2021). This study will be written to investigate the relationship between emotion regulation skills and hope levels of licensed athletes and their flow experiences. It is thought that flow experience, emotion regulation skills and hope levels of athletes in sports activities, which is a multidisciplinary social field, are essential in the field of performance psychology (Balk et al., 2015; Burton et al., 2010; Csikszentmihalyi, 1990; Kim & Tamminen, 2023; Jackson et al., 2001; Weinberg & Gould, 2014). While flow experience can help athletes increase their performance and satisfaction, emotion regulation skills and hope levels can also contribute to this process.

Many studies have emphasised the effect of flow experience on sporting activities (Csikszentmihalyi, 1990; Korer & Alpullu, 2020; Marsh & Jackson, 1999; Turan, 2019; Jackson & Kimiecik, 2008; Stambulova & Wrisberg, 2014; Swann at al., 2012; Swan, 2016) is remarkable. Csikszentmihalyi developed and conceptualised the concept of flow in the 1970s.

Its starting point is Maslow's peak experience studies and owes its existence to research in the field of motivation. Alongside motivational theories, flow is one of positive psychology's fundamental concepts (Turan, 2019). According to Csikszentmihalyi (1977), while time passes quickly for the individual experiencing flow, the person concentrates on the action she is doing and ignores all other factors unrelated to the action. It is a holistic experience that does not require a special effort but develops spontaneously, where the anxiety of being evaluated is low, the person's goals are clear, she receives feedback on her performance, affects the person positively, provides high performance, gives pleasure, and is acted with full commitment and participation (Csikzentmihalyi, 1977; Nakamura & Csikszentmihalyi, 2002). Athletes who are in a state of flow are able to concentrate fully on the task at hand during performance and integrate themselves harmoniously with their activities. This situation allows athletes to use their mental and physical skills at the highest level and facilitates their success (Csikszentmihalyi, 1990; Jackson & Marsh, 1996). There are numerous definitions for the flow experience (Turan, 2019), but in some definitions, situations such as "the presence of a purpose/goal, task, or activity and engaging in them with intense participation, effortlessly immersing oneself, concentrating, being motivated, focusing, and having a focused state of consciousness" seem to be more prominent (Bakker, 2008; Bonaiuto et al., 2016; Csikszentmihalyi, 1975, 1990, 1997; Dietrich 2004; Fullagar & Kelloway, 2009; Fullagar et al., 2012; Goleman, 2013; Harris et al., 2017; Nakamura & Csikszentmihalyi, 2002; Quinn, 2005; Schaffer, 2013).

Emotions, which are involved in every aspect of life, have an important place in sports. Emotions affect people's goals and motivation (Baumeister et al., 2007; Gross & Feldman Barrett, 2011; Lench et al., 2011). The ability to regulate these emotions entails that an individual must understanding of one's emotional state, and awareness of how one reacts on various stimuli (Xie, 2021). Emotion regulation facilitates an athlete's ability to monitor,

control, evaluate, and modify emotional responses that may either support or hinder optimal performance. In particular, it is noted that emotion regulation skills enable athletes to cope with stress when faced with challenges and to transform negative emotions into positive ones (Laborde et al., 2014). Emotions such as anger, fear, and anxiety can motivate individuals to cope with the causes of these emotions. Maladaptive coping strategies may lead to consequences such as impeding performance. In such situations, emotion regulation skills constitute a crucial component of responding appropriately to individual and environmental demands (Gross, 1998; Gross & Feldman Barrett, 2011; Nesse & Ellsworth, 2009). Athletes utilize emotion regulation strategies and exhibit emotion regulation-related behavioral patterns both before and after competitions, as well as during competitions. Athletes may experience rapid emotional transitions during competitions or training sessions, at which point emotion regulation skills can become a necessity. Achieving goals, enhancing performance, and maintaining and preserving health are other prominent components of this process (Gross, 1998; Öner & Aşçı, 2020; Tingaz & Ekiz, 2021).

Another essential element for participating, persevering, and exerting effort in an activity is hopefulness. Snyder et al. (1991) presented a recent cognitive, motivational model known as hope theory, which has undergone several reconceptualization (Snyder, 1989, 1994, 2000a, 2000b, 2002) and is now a strength-based construct within the burgeoning field of positive psychology. Hope theory posits that hope reflects an individual's perceptions of their ability to (1) clearly define goals, (2) devise specific strategies to attain those goals (pathways thinking), and (3) generate and maintain the motivation to utilize those strategies (agency thinking) (Snyder & Lopez, 2002).

Both pathways and agency components are crucial, but neither alone is sufficient to support successful goal pursuit. Consequently, pathways and agency thoughts are complementary, reciprocally connected, and positively correlated, but not identical. As per the

hope theory, a goal could be anything that an individual desire to experience, create, obtain, accomplish, or become. Goals vary greatly, from significant lifelong pursuits like developing a comprehensive theory of human motivation, to mundane objectives like cycling to training. Moreover, they may differ in their perceived probability of attainment, ranging from low to high (Sarıçam & Akın, 2013; Snyder et al., 2003).

High-hope individuals are more likely than their low-hope counterparts to create alternative routes, especially when goals are crucial and obstacles occur (Snyder et al., 1991; Snyder et al., 1996). Nevertheless, even effective cognitive routing is unproductive without the corresponding agency-inducing cognitions (Snyder et al., 1999). Agency thinking is demonstrated by the positive self-talk that high hope individuals engage in, such as 'I can' or 'I won't give up' (Snyder et al., 1998). Agency thinking supports high-hope individuals when they encounter difficult situations or obstacles (Snyder, 1994, 1999). Therefore, high-hope individuals are more likely than low-hope individuals to motivate themselves to "take the next step". The study conducted by Kim et al. in 2020 reveals a positive correlation between hope, academic success, athletic achievement, and health-promoting behaviours among athletes. Athletes with greater hope tend to possess the ability to create contingency plans to deal with unexpected challenges.

The reason for investigating flow experience with the specified variables (hope level and emotion regulation skills) in this study is the absence of research examining their interrelationship in sports psychology literature. These variables have been included in the study to gain a closer look at athletes' flow experiences. The flow experience can be supported by both emotion regulation and hope to transform the dimensions of flow into action. Specifically, the athlete needs to be able to control, monitor, evaluate, and modify emotional responses that support or hinder the formation of clear goals; to desire to achieve the goal and

feel empowered to reach it; and to possess beliefs in their ability to create successful plans to achieve their goals (Öner & Aşçı, 2020; Sarıçam & Akın, 2013; Tingaz & Ekiz, 2021).

1.2. The Significance of the Study

Experiencing flow in athletes contributes to optimising their performance and has an important place in the sports psychology literature. Achieving a flow experience requires athletes to be mentally and emotionally prepared. (Kahya & Küçükibiş, 2022; Kesler, 2022; Moran et al., 2019; Tomporowski & Pesce, 2019). The rapidly evolving and changing dominance and influence of technology in our lives, the presence of numerous changes, the impacts of global pandemics, and natural disasters make it difficult to experience long-term flow. Examining various variables that can strengthen athletes' flow experiences will have a significant impact on both their sports activities and their overall lives. Therefore, there may be a need to improve the emotion regulation skills of athletes and increase their hope levels to experience more flow, which is a significant factor for athletes, and to increase their ability to stay in the flow. In this way, sports psychologists can use the techniques of emotion-focused therapy and hope therapy as a guide to enhance athletes' flow experiences. Although studies related to flow experience have been increasing in recent years, studies in national literature and sports literature are limited. These studies mainly focused on and predicted the positive relationship of variables individually regarding performance (Curry et al., 1997; Neil, Fletcher, & Hanton, 2012; Swan et al., 2012). The findings obtained will contribute to the literature on positive psychology, sports sciences, and sports/performance psychology, which is an ongoing developing field, and serve as a guide for other researchers, sports psychologists, coaches, experts working in the Ministry of Youth and Sports and its affiliated institutions (e.g., The Turkish Olympic Preparatory Centre/TOHM) interested in the subject.

1.3. Purpose of the Study

The goal of this study determines the extent to which athletes' hope levels and emotion regulation skills explain and predict their flow experiences.

1.4. Research Questions

The following questions of the study were addressed:

1. Is there a significant difference between athletes' emotion regulation skills, hope levels, and flow experiences based on demographic variables (age, gender, disability status, branch, frequency of training)?
2. Is there a significant relationship between emotion regulation skills, hope levels, and flow experiences of athletes?
3. To what extent do emotion regulation skills and hope predict the level of flow experience?

1.5. Assumptions

In this study, the following assumptions are accepted as accurate:

a. The scales used in the study Flow State Questionnaire (FSQ), Emotion Regulation Scale for Athletes (ERSA) and Dispositional Hope Scale (DHS) are reliable and valid.

b. The athlete who participated in the study answered the measurement tools sincerely

1.6. Limitations

1. The study is limited to 387 athletes between the ages of 18-29 in Istanbul.

2. The data obtained in our research is confined to the data collected through the data collection tools we utilize.

1.7. Definitions

The definitions of the basic concepts in the research are given below.

Flow Experience: Csikszentmihalyi (1990) define it as an individual's engagement in an action, through which they experience pleasure and creativity, feel fully immersed in life, and subsequently concentrate on the values they acquire.

Emotion Regulation: Gross (1998) defined it as a process by which we influence which emotions we have, when we have them, and how we experience and express them.

Hope: Snyder et al. (1991) defined it as a dynamic motivational phenomenon resulting from the interaction of two distinct cognitive components related to goal attainment: pathways and agency thinking.

CHAPTER II

LITERATURE REVIEW

In this section, the theoretical background and types of flow experience, emotion regulation, and hope are explained.

2.1. Flow Experience

One of the crucial determinants of athletes' performance is their emotional states in sporting environments, such as training, competitions, or matches. Different situations and environments that athletes are in can cause them to feel emotions such as stress, anxiety, comfort, etc., and thus their performance can be affected for better or worse (Cranmer et al., 2015). The main goal of sports and exercise psychology in this context is to investigate how psychological states affect individuals' physical performance and their psychological development towards sports (Şahin, 2010; Weinberg & Gloud, 2015). In this context, one significant factor that impacts an athlete's psychological state and performance is flow experiences. Flow was first introduced by Csikszentmihalyi (1990) to examine the reasons why individuals turn to leisure activities, has gained more importance and has been frequently examined in subsequent studies.

Csikszentmihalyi (1990) defines flow experience as a state in which an individual completely devotes herself to an activity integrates herself, concentrates her attention on the activity by using all her senses, and endures material and spiritual sacrifices to obtain it due to the high level of pleasure derived from the experience of the activity. This is an experience independent of the environment, where all thoughts, intentions and feelings towards the current activity are concentrated. Flow happens when you feel challenged enough to be engaged but not to feel overwhelmed. It's an optimal psychological state that can occur during activities, sports, or exercise. In the flow experience, in general, it is not the race, task, score or

achievement that is important, but the sense of discovery and creativity, pleasure, benefit, satisfaction or happiness derived from the action itself. In addition, flow experience can also be defined by experiences such as "time stops" or "the activity flows by itself" during a particular activity (Csikszentmihalyi, 1990; Gözmen & Aşçı, 2016; Jackson et al., 1998; Weinberg & Gould, 2003).

Fournier et al. (2007) stated that the optimal performance mood is the individual's enjoyment of the task, the feeling of being able to perform the task without difficulty, and the ability to integrate with the activity. In addition, Moneta (2004) defined this state as the feeling that the individual can cope with the difficulties of a given task. In addition, it has been stated that the flow experience develops a sense of "competence", which is a psychological need. The flow state increases the sense of competence of the person and strengthens the motivation and desire to achieve one's goals (Csikszentmihalyi & LeFevre, 1989). This increases the self-confidence of the individual and enables him/her to perform the activity more efficiently.

Csikszentmihalyi (1990) proposed that a flow experience consists of different aspects, including a balance of skills and challenges, clear objectives, immediate feedback, focused attention, perceived control, a combination of action and awareness, changes in time perception and self- consciousness, and self-directed activities (autotelic).

In situations where the athlete is not aware of the passage of time, is completely focused on the task and is internally motivated, he or she enjoys the task and is integrated into the activity in all the movements that she feels are under her control. Athletes who experience flow can keep their skills and challenges in balance and thus maximise their performance. As a result, flow in sports is considered an important determinant of an individual's sportive performance (Csikszentmihalyi, 1990; Fournier et al., 2007; Jackson, 1995). It is thought that

it will be useful to examine the dimensions of the experience and channel models after the conceptual content of the flow experience in the current study.

2.1.1. Flow Experience Models

A state of flow is a state in which an individual is active at full capacity, and this state arises from a balance between the potential for action and the opportunities available. However, this balance is delicate. If the balance shifts and the challenges exceed the individual's skills, the individual becomes anxious. On the contrary, when the skills begin to exceed the challenges, the individual relaxes, but when this situation persists, a feeling of boredom arises. Therefore, the flow state ends both when challenges exceed skills and when skills exceed challenges. Therefore, it is necessary to maintain a delicate balance of challenge and skill. In case the balance is disturbed, the individual can either stop the activity or make an effort to restore the balance and move to the flow state (Nakamura & Csikszentmihalyi, 2009).

Flow experience has been expressed in various models and these models are usually based on the concepts of challenge and skill. These models address the elements that determine the process of flow formation and are organised into three basic models: triplet, quadruplet and octet. More detailed information about these models is given below.

2.1.1.1. Three-Channel Flow Experience Model

According to the triadic flow model created by Csikszentmihalyi (1975) (see Figure 1), depending on the challenge levels of the flow experience and the skills of the person, high skill with low challenge creates boredom or low skill with high challenge creates anxiety. When the challenge level of the activity is in balance with the skills, a flow state is experienced (Berk et al., 2021).

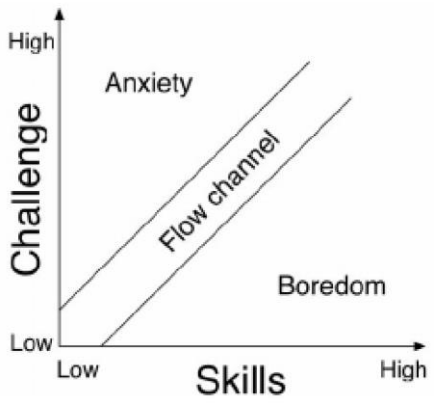

Figure 1: Csikszentmihalyi's 3-channel flow model (Pearce,2005)

2.1.1.2. Four-Channel Flow Experience Model

Massimini and Carli (1986) proposed the quadruple flow model (see Figure 2), which can be considered an improved version of Csikszentmihalyi "s (1975) three-channel model. Unlike the three-channel model, the distinction of this model is that when low skill and low challenge come together, the individual will not experience a flow state. For flow to occur, the levels of skill and challenge must exceed a certain threshold. Skill and challenge overlap at four different levels and each level causes individuals to experience four different states (Özkara & Özmen, 2016). When the skill and challenge are low, the individual feels apathy and avoids performing the activity. In this case, the flow experience does not occur. When the challenge is high while the skill is low, the individual experiences anxiety, and vice versa, when the challenge is low while the skill is high, the individual experiences boredom. The area where flow is experienced is the area where both skill and challenge are high. This model emphasises that a goal that is difficult to achieve should be set to experience flow. By setting goals for oneself, the individual experiences flow with the belief that she has enough skills and can reach the goal. Individuals usually do not show interest in activities that are less demanding than their skills and get bored. When the challenges exceed the skills, it creates anxiety in the individual. This anxiety prevents the individual from performing the activity in a fun and motivated way and thus experiencing flow (Köse et al., 2019).

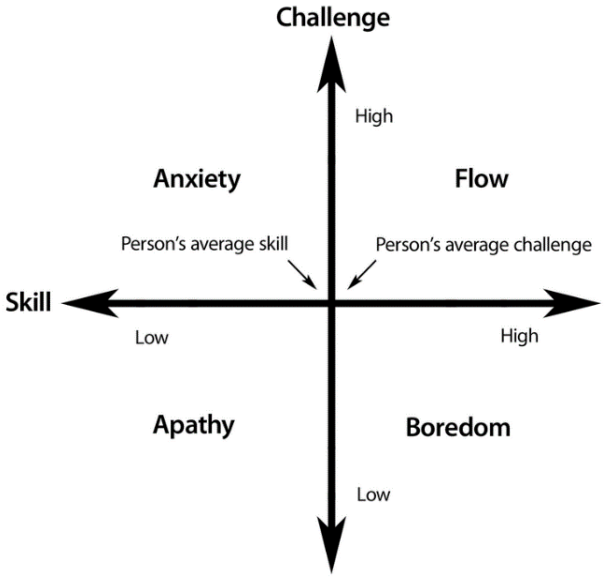

Figure 2: Massimini and Carli's 4-channel flow model (Pace, 2012)

2.1.1.3. Eight-Channel Flow Experiment Model

In this model, which is a reorganised version of the four-channel flow experience by Carli, Fave, and Massimi, the authors added relaxation, control, arousal (revitalisation) and anxiety elements and presented an eight-channel flow model (see Figure 3). According to this model, eight different situations arise as a result of the matching of different skill levels and different challenge levels (Özer Canarslan, 2017). Flow experience occurs only when high skill and high challenge levels are together, as in the four-channel model. When high skill and average challenge come together, a state of control emerges, and when high skill and low challenge come together, a state of boredom emerges. When low skill and high challenge come together, the individual experiences anxiety, whereas in the case of low skill and average challenge, worry emerges, and in the case of low skill and low challenge, apathy emerges. In the case of average skill, the individual who encounters low challenge experiences a sense of relaxation, while the individual with average skill level experiences arousal (revitalisation) if the individual encounters high challenge (Köse et al., 2019).

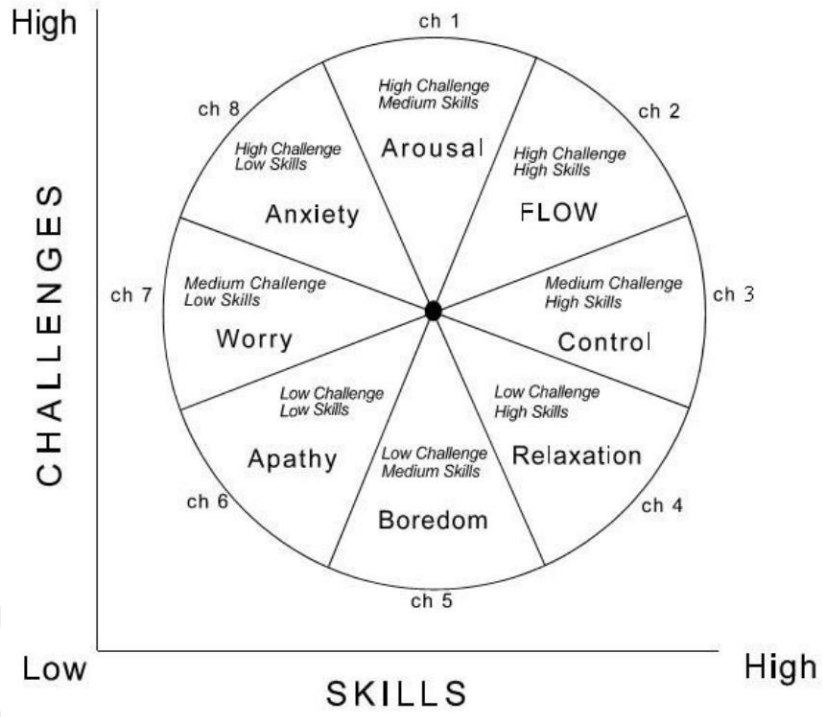

Figure 3: Carli, Fave & Massimi's Eight-Channel Model (Jonsson, 2008)

2.1.1.4. Causal Flow Experience Models

Skill and challenge, namely competence and defiance alone are not sufficient for the experience of flow. For flow to occur, the set task must have a clear goal and be supported by a quick feedback mechanism. A clear goal encourages individuals to focus on the essence of the activity, while rapid and salient feedback helps the individual monitor her progress towards achieving the goal (Guo & Poole, 2009). Causal flow models consider the cause and effect relationship between the antecedent elements of flow and its various dimensions. Analysing flow only in terms of challenges and skills may lead to ignoring the wide range of the flow experience. Causal models suggest that there are some sub-dimensions of the flow experience and that one or more antecedents must be present for these sub-dimensions to occur (Özkara & Özmen, 2016). However, in this approach, which is called causal flow model or causal modelling, the cause-effect relationship between the variables in the model may change depending on the theoretical configuration of the researcher (Sahranç, 2008).

2.1.2. Flow Experience Dimensions

The concepts of challenge-skill balance, action-awareness merging, clear goals, unambiguous feedback, concentration on the task at hand, sense of control, loss of self-consciousness, the transformation of time, and otelic experience, as identified by Csikszentmihalyi (1997), are considered as the nine dimensions of the flow experience. These concepts include different aspects, each of which overlaps with the other and at the same time defines a particular activity as a whole.

Challenge-Skill Balance: Achieving a state of balance between the individual's skills and the difficulty of the task. It is the perception of the balance between the struggle to do the task that needs to be done in the activity and the abilities that the person uses to accomplish this task. Individuals usually enter the flow state when they feel that this balance exists (Csikszentmihalyi, 1990; Keller et al., 2011). However, it has been stated that this balance should be maintained continuously (Asakawa, 2004).

Action-Awareness Merging: In flow, the individual's actions and awareness are integrated, which creates harmony between the activity and the individual. While the person is involved in the activity with her whole self with the flow experience, the activity automatically realises itself spontaneously, bringing about proper coordination and interaction between the environment and the individual (Csikszentmihalyi, 2005; Nakamura & Csikszentmihalyi, 2002). In this way, the individual gives her full attention to the activity without feeling distress and anxiety (Jones et al., 2003).

Clear Goals: It is an important part of the flow state that the individual feels that she is on the way to reaching a certain goal and realises that she can make progress towards this goal. For the flow to be realised, there must be clear and accessible goals. This dimension is expressed as knowing what the task is, when and how it can be achieved and receiving

immediate feedback. (Elliot et al., 2011; Jones et al., 2003). For instance, a tennis player knowing where the ball she throws will land or an instrument player knowing the next note is an indicator of one's clear goals (Csikszentmihalyi, 2005).

Unambiguous Feedback: To stay in the flow, individuals need immediate and clear feedback about their performance. Feedback ensures that the individual can complete the task correctly and reach the goal of maintaining the challenge-skill balance (Fong et al., 2015). This helps the individual to understand where she is in the task and what to do. Feedback enables the individual to understand the results of their actions and what the results mean for them (Landhäußer & Keller, 2012; Özkara & Özmen, 2016). In this way, the individual knows what to do in the next step and can act accordingly (Ayazlar, 2015).

Concentration on the Task at Hand: It concern to the individual's focus on the task so completely that she does not notice an external stimulus and prevents distraction. The individual has to maintain her attention to stay on task and maintain her performance. While performing the activity, the individual closes her mind to all distracting stimuli and thinks only about the activity (Çetinkalp, 2011; Engeser & Rheinberg, 2008; Keller et al., 2011; Özşahin, 2003).

Sense of Control: It is the feeling that the individual can control the situation and manage the events experienced during the activity. This also relates to the individual's confidence in successfully completing the task. It usually arises as a result of the individual's self-confidence and sense of competence. When the individual has control, her satisfaction increases because she feels that she is successful in the tasks she performs by receiving positive feedback (Aşçı et al., 2007; Berk et al., 2021; Jackson et al., 2001; Kowal & Fortier, 1999).

Loss of Self-Consciousness: It refers to situations in which the individual's self-awareness or self-perception is reduced or completely lost. The individual may not pay attention to

feedback from the environment or may lose awareness as a result of being immersed in the activity. This situation may occur when the individual tends to become more detached from the moment by focusing on negative emotions and experiences. In the flow experience, the person is not interested in thoughts about himself/herself as she focuses only on the activity. (Asakawa, 2004; Csikszentmihalyi, 2005; Jones, Hollenhorst & Perna, 2003; Sahranç, 2008; Walker, 2010).

Transformation of Time: During flow, individuals may often feel that time passes faster than usual, or vice versa, slower. This occurs when the individual is fully engaged in the activity and their perception of time changes. This situation varies based on the complexity and difficulty of the task and is generally more common in tasks that the individual finds fun and interesting (Bakker, 2005; Peifer et al., 2014; Özkara & Özmen, 2016).

Autotelic Experience: The autotelic experience or rewarding situation enables the individual to perform the activity only for oneself, not for its results, and even though the individual has entered into a flow experience for any reason, the feelings such as pleasure, happiness, excitement, etc. no longer emphasise the experience, but these phenomena. This situation occurs when the individual feels that performing the task itself is pleasant and satisfying, and for the individual, the activity is the goal itself. The activity is undertaken solely for the intrinsic value of the activity without any expectation of a future benefit. This represents the pleasure the individual derives from using her abilities, and talents and being competent in a particular task. In autotelic experience, the sense of enjoyment brought by the flow experience turns the activity into an internal motivation (Canarslan, 2017; Csikszentmihalyi, 1998; Kawabata et al., 2008; Landhäußer & Keller, 2012; Özşahin, 2003; Ryan & Deci, 2000).

2.1.3. Research on Flow Experience and Age

The studies explaining the relationship between age and flow experience are described below.

The Fossmo (2006) study, conducted in Norway, examined 145 athletes (85 man, 59 women) aged between 18 and 40 years (M = 21.34, SD = 3.89). The study results indicate that age was a significant predictor of challenge-skill balance.

Kaya et al. (2015) concluded that the flow experience of 106 active exercise participants (82 women and 24 men, 18 years and older) who used indoor recreation facilities in Eskişehir did not change according to the age variable.

Korer and Alpullu (2020) found that the flow experience did not vary according to age in their study with 28 man and women Turkish athletes between the ages of 19-50 who participated in tournaments organised by the International Racketlon Federation.

Öner (2022) found that flow experience did not vary according to age in his study with 402 (361 male and 41 female) football players aged between 28-32 years.

In the literature review, in general, research results on flow experience and age revealed a relationship between these two variables. However, when the findings of the studies are analysed, the flow experience does not differ according to the age variable.

2.1.4. Research on Flow Experience and Gender

Studies explaining the relationship between flow experience and gender are described below.

The study by Fossmo (2006) was conducted in Norway with 145 athletes who participated in the study, there were 85 man and 59 women ranging in age from 18 to 40 years. There were no notable disparities among the groups in relation to gender.

Kaya et al. (2015) concluded that the flow experience of 106 active exercise participants (82 women and 24 men, 18 years and older) using indoor recreation facilities in Eskişehir differed according to gender. However, it was also found that the level of this significant difference was low.

Korer and Alpullu (2020) found that the flow experience did not vary according to gender in their study with 28 male and female Turkish athletes between the ages of 19-50 who participated in tournaments organised by the International Racketlon Federation.

Russel (2001) examined qualitative and quantitative aspects of flow in a group of college-aged athletes. 42 athletes (27 males and 15 females) representing team sports (n=28) and individual sports were interviewed about the factors they perceived to help, hinder, and disrupt flow formation. Irrespective of gender, university athletes seem to experience similar occurrences of flow states.

In most of the studies, no significant relationship was found between flow experience and gender variables.

2.1.5. Research on Flow Experience and Branches

Studies explaining the relationship between flow experience and branches are described below.

Boyd et al. (2018) investigated the differences between the flow experiences of NCAA Division I team athletes (n = 67) and individual athletes (n = 37). 104 Division I collegiate student-athletes (37 males and 67 females, ages between 18 to 23) from a university in the southeastern United States participated in the study. The findings revealed that team athletes experienced a significantly greater flow compared to individual athletes.

Bakker et al. (2011) conducted a study with 398 male footballers aged 16-18 years (A1) and 14-16 years (B1) from three teams of 15 Dutch professional football clubs and traditionally associated the flow experience only with individual sports.

The study by Fossmo (2006) took place in Norway and involved 145 athletes, 85 males and 59 females between the ages of 18 and 40. To establish any differences between the groups, the athletes were divided into team sports athletes (n = 74) and individual sports athletes (n = 71). The study concluded that team sports athletes had greater flow experience scores than individual sports athletes.

Russel (2001) investigated the characteristics of 'flow' experienced by college-aged athletes, using both qualitative and quantitative methods. Forty-two athletes, consisting of 27 males and 15 females who represented team sports (n=28) and individual sports, were interviewed to identify the factors that influenced their flow formation. It was noted that university athletes reported comparable flow experiences, irrespective of their sport type.

Previous studies on 'flow' have suggested that it is an all-encompassing phenomenon in sports (Young & Pain, 2006). However, in the research mentioned earlier, team sport players had higher flow experience ratings compared to individual sport players.

2.1.6. Research on Flow Experience and Disability Status

There is very limited information on the relationship between disability status and flow experience and no specific studies have been conducted on the comparison of disabled athletes and non-disabled athletes. Descriptions of the studies that have been conducted are given below.

Dunn and Brody (2008), wrote a study to explore the attitudes and behaviours related to living a good life after acquiring a physical disability. They found that experiencing flow is possible for almost anyone. It was stated that a person's social class, gender, culture, age, or

disability do not affect the occurrence of the flow experience. The key is to pinpoint an activity and a setting that can trigger the flow state. Those with disabilities may pursue or resume enjoyable activities that facilitate the flow experience and contribute to a fulfilling life. For some disabled individuals, they may encounter a problem where the activities they used to enjoy are no longer within reach following their injury. Hence, they might have to look for alternative activities to engage in. For some disabled individuals, they may encounter a problem where the activities they used to enjoy are no longer within reach following their injury.

Martin (2013) provided a qualitative review of selected research on the attendance of people with physical disabilities in physical activity from the perspective of the social relations model. In his study, he showed that disabled athletes generally report high levels of self-efficacy, resilience and determination, characteristics that can facilitate flow experiences.

Studies show that there is no significant relationship between flow experience and disability status.

2.1.7. Research on Flow Experience and Training Frequency

Studies explaining the relationship between flow experience and training frequency are described below.

Jackson et al. (1998) investigated the potential psychological factors associated with flow in a sample of 398 older athletes (243 men, 143 women, 12 participants did not indicate their gender) aged between 26 and 85, who took part in the World Masters Competition. The study revealed a favourable correlation between the frequency of "flow" occurrences and the duration of practice sessions. They put forward the idea that additional training could enhance athletes' skills and self-confidence, thereby allowing them to concentrate more on their performance and experience flow more often.

Swann et al. (2012) discovered that the more time an elite athlete spends training, the more likely they are to experience the state of flow. This finding emerged from their thorough examination into the frequency, occurrence, and controllability of flow states in professional sports.

A positive correlation has been found in research exploring the relationship between flow experience and frequency of training.

2.1.8. Research on Flow Experience and Emotion Regulation

Studies examining the relationship between emotion regulation and flow experience are very rare and these studies have not been conducted with athletes. Studies on flow experience and emotion regulation are described below.

Rankin et al. (2019) investigated the advantages of feeling engrossed in an activity when facing uncertain waiting times and found that it correlates with increased emotional wellness, positive moods and decreased negativity and anxiety. Uncertainty often precedes significant life events, and individuals tend to resort to inefficient coping methods during such periods of limbo. Being able to distract oneself can help pass time while waiting for uncertain news. However, some individuals struggle to find an activity engaging enough to take their mind off things. The study aimed to ascertain whether activities that encourage flow are effective in distracting individuals and enhancing their waiting experience. The research was conducted through three studies, two observational and one experimental. During Study 1, 125 law graduates revealed that waiting for bar exam results was less stressful if they experienced more flow. The participants reported feeling less negative and more positive emotions. Nonetheless, they were not able to precisely identify the activities that brought personal flow. In Study 2, these results were replicated and expanded by examining 141 PhD students in the academic labour market over a longer period. Study 3 tested how playing an adaptive Tetris

game affected the emotions of undergraduate participants (n = 309) who thought their peers would judge their physical attractiveness. The study found that engaging in the game improved positive emotions and reduced negative emotions, but it did not lower anxiety levels. These results matched those of Studies 1 and 2, which also measured subjective flow experiences. The results indicate that experiencing flow can be challenging, but participating in flow activities can improve mental health during uncertain times and ease waiting. This study emphasises the significance of flow experiences and their impact on athletes struggling with uncertainty regarding their success in the preparatory stages leading up to competitions.

Knapp (2023) concluded in his pilot study on the concept of Emotional Regulation Flow that people can experience a state of flow by regulating their emotions. This contribution presents a new type of flow beyond the usual forms acknowledged in prior literature. Therefore, the simplified version in British English is: Flow involves balancing challenge and skill. This text already adheres to the given principles and lacks context. As one becomes more proficient at the given task, the difficulty should be increased to sustain the ideal state. To maintain challenge appraisal and prevent negative emotional experiences, emotion regulation can be beneficial during flow. Regulating emotions can make a person feel more in control and capable of coping with difficult situations (Reeves et al., 2011; Tamir, 2016). For athletes who need to perform at their best, it may be helpful to develop skills in emotion regulation that allow them to seek out challenging opportunities. This may aid in achieving flow. Additionally, if regulating emotions effectively becomes a goal, selecting circumstances where unpleasant stimuli are present offers a perfect chance to experience flow. Implementing strategies for regulating emotions, like reappraisal, not only boosts flow by helping to maintain an optimal level of challenge but also allows for reappraisal in a psychologically safe setting.

Studies have found a positive relationship between flow and emotion regulation.

2.1.9. Research on Flow Experience and Hope

Snyder's (2002) first expression of hope theory referred to the pursuit of "positive" goals (Snyder et al., 1991). Snyder emphasised that hope is both cognitive (in terms of being based on goal-oriented thinking) and affective. Hope theory suggests that people who have succeeded in achieving their goals in the past tend to add positive emotion sets to similar goal pursuits and that these positive emotion sets positively reinforce the continuation of goals. Those who have not achieved their goals in the past, on the other hand, experience passive and negative emotions while pursuing similar goals, and these emotions undermine the continuation of goal pursuit (Rand & Cheavens, 2009; Snyder et al., 2011). The theory of emergent goals, one of the cornerstones of flow theory, is also explanatory here (Csikszentmihalyi, 1990; Csikszentmihalyi & Nakamura, 1999). The emergent goal theory suggests that when we experience an event, we become aware of this experience and its emotional valence and compare it with previous experiences. If the comparison is favourable, our goal is to maintain the current situation. If the comparison is not favourable, our goal is to change our experience. This feedback loop leads to the emergence of goals in a dynamic way. Positive emotions reinforce the pursuit of goals that elicit these positive emotions, negative emotions encourage the pursuit of new goals, and an individual can experience positive emotions by avoiding so-called anti-goals. Therefore, emotions determine goals and achieving our goals promotes positive emotions (Csikszentmihalyi & Nakamura, 1999). The possible link between hope and flow is the pursuit of valued goals. Hope is based upon the pursuit of goals valued by the individual. Similarly, flow is (partly) based on clear and proximate goals and is an intrinsically motivated experience of fully absorbing a task for its own sake (Csikszentmihalyi, 1990). The common feature underlying hope and flow is the pursuit of goals valued by the individual. Therefore, hope theory requires the pursuit of valued goals that may (but need not) be compatible with one's flow activities. The studies between flow and hope are given below.

Mouton (2015) investigated how positive psychology can aid our comprehension of peak performance. It identified the most influential positive psychology factors affecting performance in academia, athletics, and work. The research compared the variables' predictive power, and established mediating and moderating relationships between them, creating a composite score of the most prominent predictors of performance. This score was assessed for its validity, as a foundation for future scale validation and factor analysis. Three groups of individuals who were 18 years old or above and spoke English were recruited without compensation. These included Southern California college students, staff members of a North American company, and CrossFit athletes from diverse nations. Results from Figure 4 revealed that the essential variables for performance within the three domains were aligned passion, flow, and hope. These variables also showed a positive and significant correlation with each other.

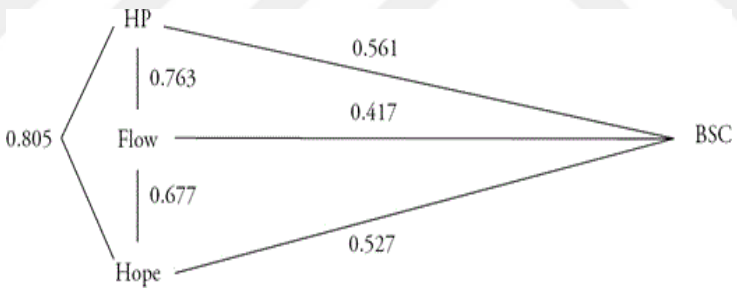

Figure 4: Correlations between harmonious passion (HP), flow, hope, and employee performance against a balanced scorecard (BSC) as rated by their managers (Mouton, 2015).

Using a study that involved collecting data before and after a fire incident, Yotsidi et al. (2018) questioned 180 firefighters (97.2% male) who work for the Central Hellenic Fire Service located in Athens. Out of the 180 surveyed individuals, 41.9% were between the ages of 25-34, 44.1% were between the ages of 35-44, and 14% were over the age of 45. A total of 67.2% of firefighters who participated in the survey had been working in the profession for less

than ten years. According to the results, the hope levels of firefighters reduced whereas their burnout levels increased after a fire incident. Following a fire event, scores for the flow dimension were significantly related to hope pathways, hope agency, and total hope score levels. A higher flow was associated with stable hope scores after the occurrence of the fire. The researchers believe that their findings are of great significance in enabling high-stress employees to understand the complicated links between flow, hope, and burnout syndrome.

Research indicates a positive correlation between flow experience and level of hope.

2.1.10. Flow Experience in Sports Psychology Research

Flow enables athletes to perform at their maximum, cope with stress, and maintain their overall motivation. In this context, sports psychology and flow research play a key role in understanding and optimising sports performance. Flow pertains to the state wherein an individual becomes completely absorbed in the activity and experiences a sense of time acceleration or deceleration (Csikszentmihalyi, 1990). For athletes, this state usually refers to the moments when they perform at their best and experience the highest levels of satisfaction. For example, Jackson et al. (2001) found that flow is an important link between athletes' psychological abilities and performance. That is, having a flow experience plays an important role in both increasing athletes' skill levels and achieving their goals. However, flow also helps athletes to maintain their psychological health. Athletes who are in a state of flow generally experience less stress and anxiety and have higher overall life satisfaction (Koehn et al., 2013). Flow can also be a coping strategy used to cope with challenges and manage high-performance pressure. Swinney and Harwood (2008) also stated in a study that flow is a psychological strategy that athletes can use to improve how they perform and to help cope with challenges. Athletes who are under high pressure can manage this pressure better by setting a goal to reach a state of flow. This shows that flow is not only a result but also a process. Kimiecik and Jackson (2002) stated that flow experience can improve performance by increasing the

motivation of athletes. To enable athletes to maximise their performance, studies have been conducted on how to encourage and maintain flow. For example, Wang, Liu, and Khoo (2009) emphasised the importance of psychological and environmental strategies to help athletes experience the flow state more frequently and for longer periods. As a result, the flow experience of athletes enables them to perform at their best, maintain their psychological health, and increase their overall life satisfaction (Csikszentmihalyi, 1990; Jackson & Kimiecik, 2008; Korer & Alpullu, 2020; Marsh & Jackson, 1999; Swan, 2016; Swann at al., 2012; Stambulova & Wrisberg, 2014; Turan, 2019).

2.2. Emotion Regulation

The basic reason for the existence of emotions is to show the tendency of individuals to approach or move away from an object (Damasio, 1994). The existence of emotions is shaped by the complex interactions of biological, psychological and environmental factors. Therefore, emotions can be considered to have a complex structure that includes the individual's feelings, physical and mental changes, and certain behavioural responses (Solomon, 2007). For example, the feeling of fear that occurs when we see a bear and the physiological experiences, we have such as running away from the bear are closely related (LeDoux, 2000). As can be understood from this, an emotion can cause significant physiological changes in our body: a rapidly beating heart or a flushed face can be associated with emotions such as excitement, fear and anger (Davidson, 2003). Emotions make us feel what and who is important, and they shape and motivate our relationships with others. Therefore, emotional development is an important priority and concepts such as emotional intelligence, emotional awareness, emotional competence, emotional socialisation and emotional regulation have emerged. Many studies show that these concepts are related to many phenomena such as cognitive/behavioural health, interpersonal communication, sports and academic success, and professional and social competence (Goleman, 1995).

Understanding emotions means knowing their functions and the way they work, helping the individual to function appropriately in a given situation (Ekman, 1999). Every athlete faces various emotional states during competition. These emotions can be positive (e.g., the thrill of victory or passion for competition) or negative (e.g., the fearing to fail or a feeling of inadequacy). Depending on how an athlete regulates these emotional states, it can significantly affect both his or her performance and overall well-being. In the sports psychology literature, emotion regulation generally refers to how athletes manage their emotional responses to cope with a particular situation or event (Tamminen & Crocker, 2013). This may include, for example, coping with frustration or anger after making a mistake, the ability to remain calm in a stressful situation, or reducing nervousness before a competition. Research has shown that effective emotion regulation skills can increase athletes' mental focus, help them cope better with stress, and improve their overall performance (Nicholls et al., 2007; Wagstaff, 2014).

Emotion regulation, in general, refers to strategies used to shape an individual's emotional development to mobilise, reduce, expand or intensify emotional experiences, consciousness, reactions and/or physiology (Gross, 1999; Gross & Thompson, 2007; Gross, Sheppes & Urry, 2011). This intervention is accepted as internal and external processes that manage individuals' emotional experiences and expressions, emotional reactions and evaluations of situations (Gross & Thomson, 2007). The emotion regulation process involves the regulation of all emotional states rather than regulating specific situations such as anger management and stress management. This includes how individuals change their moods and adjust their emotional responses (Diamond & Aspinwall, 2003). At the same time, the process of emotion regulation and the emotional responses that occur depend on the individual's past experiences, current context and emotional goals, and it is a flexible process. An individual can change emotional regulation strategies to adapt to the context of a situation. (Gross et al., 2007; Gyurak & Gross, 2013). Emotion regulation is not only related to the interaction between

events and emotional responses but also to personal and environmental factors such as self-efficacy perception, coping strategies and social support (Gross & Mayer, 2001).

Dodge and Garber (1991) argue that emotion regulation is grounded on the belief that a child perceives social cues and subsequently modifies their behaviour accordingly. They highlight the significant contribution of familial and environmental factors in regulating emotions. Parrott (2001) supports this perspective, stating that emotions have a social basis, primarily developed through interpersonal interactions. In social situations, individuals tend to manifest their positive emotions while concealing their negative emotions.

Pizaro and Salovey (2002) stated that emotions can direct our thought processes and thus our decisions and that the way we think that our emotional responses are positive or negative can affect how we react to a situation. Furthermore, Davidson et al. (2000) stated that people who have difficulty regulating their emotions may be more prone to impulsive violent tendencies and often experience negative emotions like a depression, anxiety, stress and anger.

Garnefski et al. (2001) investigated how cognitive processes affect emotions, and designed the Cognitive Emotion Regulation Questionnaire, with nine sub-dimensions, to aid in the management of emotional issues. This tool assesses strategies that individuals use during negative situations, including self-blame, acceptance, rumination, positive refocusing, refocusing on planning, positive reappraisal, putting things into perspective, catastrophization, and blaming others.

2.2.1. Process and Strategy-Based Emotion Regulation Model

Gross's Emotion Regulation Process Model (1998) is divided into two in terms of the regulation mechanisms used before and after the response to the stimulus. An important framework is presented in understanding how we manage our emotional reactions. While antecedent-oriented regulation refers to the process before the emergence of an emotional

response, response-oriented regulation is the regulation that occurs after the emergence of a response. Here, reaction refers to the emerging emotion. The model states that emotion regulation strategies are effective in both the formation and expression of emotional responses. This model is very useful in showing how emotion regulation processes interact with each other and how the effect of different processes on emotional responses can vary (Gross, 2015).

The emotion regulation model, formulated by Gross and Thomson (2007), presents a sequential process consisting of state, attention, evaluation, and response. The language used is formal, clear, and value-neutral, adhering to conventional structure and grammar rules. The five emotion regulation strategies in this process are situation selection, situation change, distraction, cognitive change, and response modulation. Gross's model outlines emotion regulation strategies for regulating emotions before and after they occur. Pre-reaction strategies include situation selection, modification, attentional deployment, and reappraisal, while post-reaction strategies involve suppression. The figure below (Figure 4) provides a detailed explanation of the five emotion regulation strategies discussed in this model (Gross & Thomson, 2007).

Situation Selection refers to choosing conditions by anticipating the emotions/feelings that a person may experience. For example, a person might avoid a stressful meeting that they expect will upset them. This preventive strategy is often based on past experiences and knowledge of what kind of situations are likely to trigger certain emotions. On the other hand, it is argued that since young children's life circumstances are often determined by those around them, their emotional life is also determined by situation selection. In terms of an athlete, not participating in a competition in which the athlete predicts that the candidate will not be ranked can be given as an example.

Situation Modification involves an endeavour to change a situation we are in to change its emotional impact. It requires the person to already be emotional and actively trying to manage it. An athlete who is normally late after a lost match can be on time for training or fulfil all responsibilities in a complete timely manner

Attentional Deployment refers to where the individual focuses her attention by addressing certain aspects of the situation she is in. A student who does not want to go to school due to fear of academic performance may prefer to get away from this unpleasant situation without thinking about lessons. At the same time, she can also direct her attention to the pleasant moments she spends with her friends at school. When an athlete's score falls behind that of an opponent, this situation can either be motivating or, on the contrary, the athlete can give up, convincing himself that he cannot succeed.

Reappraisal is the ability to look at a situation from a different perspective. It involves changing how we evaluate a situation or the way of thinking that causes emotion. Emotional change can occur as a result of reassessing the situation. For example, we may reinterpret a negative development in our lives as a chance. Instead of seeing an upcoming competition as a stressful situation, an athlete may see it as an exciting opportunity. A specific strategy, reappraisal, is effective in regulating emotions and is associated with better interpersonal functioning, goal orientation, solution orientation and well-being.

Suppression: is the modification of experiential, behavioural or physiological responses after an emotional reaction has occurred. This may involve suppressing emotional reactions or enhancing them according to the requirements of the situation. Although sometimes necessary, continued suppression can lead to negative personal and social consequences. In other words, it is the avoidance of expressing emotions. For example, an athlete may avoid expressing anxiety because they do not want to increase the confidence of their opponents.

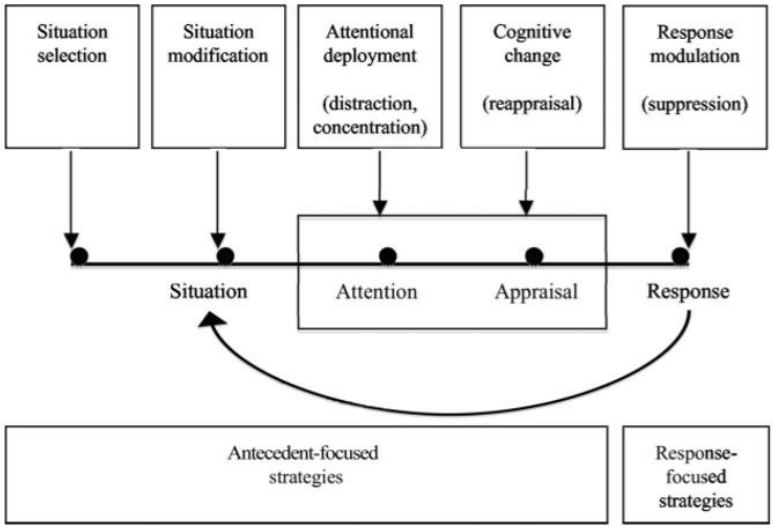

Figure 5: Model of Emotion Regulation (Gross & Thompson, 2007)

2.2.2. Research on Emotion Regulation and Age

There are no studies examining emotion regulation and age variables in athletes. The studies are explained below.

Van and Gantz (2021) concluded that the group of older adults demonstrated superior aptitude in the application of emotional regulation skills when compared to the emerging adult group, in their study investigating the relationship between athletes' emotion regulation and age. The basis for this conclusion was Gross's (1998) initial emotion regulation model, which explains the various approaches used for emotion regulation by older versus younger cohorts. Whilst antecedent-focused strategies are commonly utilised by older adults, response-focused emotion regulation techniques are typically adopted by younger adults (Droulers et al., 2015; Urry & Gross, 2010). In this study, young adults denote individuals aged between 18 and 25, while older adults refer to those over the age of 55.

Orgeta (2009) examined how age affects emotion regulation skills. In the study, 40 older adults had less difficulty regulating their emotions compared to 40 younger people. This

indicates that getting older can lead to better emotional regulation abilities. As people age, they have more strategies available to regulate emotions and greater emotional clarity.

Growney et al. (2023) investigated how age, physical and cognitive abilities, emotional experiences, and perceived demands for emotion regulation correlated with one another in a sample of 290 individuals aged 25-85. Their findings indicate that irrespective of arousal levels, higher emotion regulation needs are associated with negative emotions whilst lower regulation needs appear to be associated with positive emotions. Elderly people in bad physical condition who felt intense negative emotions generally had less need to control their feelings compared to younger counterparts in the same situation. Those elderly persons who suffered from poor cognitive functions and felt strong negative emotions on average had a higher need for emotional regulation.

When the researches are examined, the general opinion is that the usability of emotion regulation skills increases with age.

2.2.3. Research on Emotion Regulation and Gender

Various perspectives have been addressed in research exploring the correlation between gender and emotion regulation. The following section presents these studies.

Robazza et al. (2022) investigated the impact of coaches' motivational climate on athletes' emotion regulation strategies (i.e. reappraisal and suppression), emotions, and psychobiosocial experiences. The study included 459 competitive athletes aged between 16 to 35 years from individual and team sports (201 females, 258 males). Results indicated that male athletes scored higher in suppression than female athletes.

Goubet & Chrysikou (2019) researched gender disparities in two methods of controlling emotions, context sensitivity and repertoire, via a newly created system for categorising

emotion regulation tactics. Findings showed that females utilise a more extensive range of tactics than males and employ them in a more adaptable manner.

Nolen-Hoeksema (2012) investigated three topics on gender, emotion regulation and psychopathology. These were: (a) Whether there were gender disparities in regulating emotions, (b) If women and men had comparable pathways to psychopathology through emotion regulation, and (c) If gender variations in regulating emotions explained differences in psychopathology between the genders. Women report using the majority of emotion regulation methods more often than men, and these approaches have comparable associations with mental illnesses for both genders. Higher levels of rumination in women in comparison to men are partly accountable for the increased occurrence of depression and anxiety in women. On the other hand, men's greater inclination to depend on alcohol to handle emotional pressure is partially responsible for higher alcohol abuse in men than in women.

There are different views to explain the relationship between gender and emotion regulation, but the common opinion is that women use emotion regulation skills more than men.

2.2.4. Research on Emotion Regulation and Branches

There is very limited information on the relationship between emotion regulation and athletes' branches. The studies are described below.

Robazza et al. (2022) examined the influence of coaches' perceived motivational climate on emotion regulation strategies, emotions, and athletes' psychobiosocial experiences. The study involved 459 competitive athletes (201 women, 258 men) aged 16-35 years, selected from individual and team sports. Athletes participating in team sports exhibited higher levels of expressive suppression compared to those in individual sports.

A study by Belem et al. (2014) examined the influence of coping strategies on the resilience of beach volleyball athletes. The research incorporated 48 adult sportspeople from the Banco do Brasil Beach Volleyball Circuit.The results suggest that team sports athletes displayed greater levels of hope than their counterparts participating in individual sports.The hypothesis states that this phenomenon may be attributed to the shared goals and collaborative nature of team sports. This fosters a sense of collective ambition and mutual motivation among the team members.

2.2.5. Research on Emotion Regulation and Disability Status

There is a paucity of information regarding the correlation between emotion regulation and disability status in athletes. The following studies will be expounded upon.

Neil et al. (2006) emphasised that all athletes use various emotion regulation strategies regardless of disability status. However, disabled athletes stated that they may need extra strategies due to the special difficulties and stress factors they face. In a later study by Neil and Hanton (2012), they concluded that disabled athletes may rely more on suppression as a defence mechanism, which may hinder their performance and affect their psychological well-being. For example, Martin (2013) stated that disabled athletes may rely more on suppression due to social prejudices and expectations, which can potentially have negative effects on their well-being and performance.

More studies are needed to arrive at a conclusion about the tendency of athletes with disabilities to use emotion regulation skills.

2.2.6. Research on Emotion Regulation and Training Frequency

There is scarce information available regarding the connection between emotion regulation and training frequency in athletes. The following studies provide a brief overview.

Regarding emotion regulation, no direct studies for athletes were found to show higher reappraisal scores among those who train more frequently and higher suppression scores among those who train less frequently. However, Gross and John (2003) in their study mentioned that athletes who train more frequently may have more opportunities to improve their cognitive reappraisal skills by encountering stressors more frequently and reappraising them, thus increasing their use of cognitive reappraisal. While suppression, which is considered a less adaptive strategy, can lead to worse emotional outcomes, athletes who train less frequently may encounter more external stressors (work, academics, etc.) and thus resort to suppression more often.

2.2.7. Research on Emotion Regulation and Hope

The studies examining the relationship between emotion regulation and hope level are explained below.

Research into how people control their emotions has become more significant in recent times (Gross, 2014). In particular, the regulation of emotions is fundamental to achieving objectives, good performance, well-being, and maintaining positive relationships in sport (Davis & Davis, 2016; Jones, 2003; Moore & Gardner, 2011; Tamminen & Crocker, 2013; Wagstaff, 2014; Woodcock et al., 2012). The primary aspects of controlling emotions involve setting a goal to modify the process that generates emotions, analyzing the direction of the emotion and its possible outcomes (Gross, 2014; Gross et al., 2011).

Several emotion regulation strategies have been proposed for use in sports; by extension, these strategies can also be used to regulate hope. For example, implementation intentions or "if-then" plans are an effective self-regulation technique in sports (Achtziger et al., 2008) and have been suggested for use by athletes and coaches to minimise the effects of anxiety (Davis

& Davis, 2016). The structure of the if-then plan seems to coincide with Lazarus' (2000) theme of hope in relationships (fearing the worst but having faith in the possibility of recovery).

Besides research depicting hope as an emotion (Farina et al., 1995), Snyder et al. (2017) emphasized cognitive strategies in their hope conceptualization. Specifically, they proposed that optimistic feelings should derive from recognizing progress towards desired objectives. Progress towards desired objectives may come from unhindered progress or signify circumstances in which individuals successfully overcome obstacles. They argued that negative emotions are the product of unsuccessful goal pursuits. Perceptions of failed attempts to achieve goals may result from insufficient action and/or guidance, or an inability to overcome obstructive situations. Hence, it is suggested that cognitions aimed at achieving targets induce emotions. According to Snyder et al. (1996), individuals who face insurmountable goal barriers tend to experience negative emotions, while those who succeed in unhindered goal pursuit or overcome barriers during goal pursuit tend to experience positive emotions. This finding was reached through both correlational and causal methodologies. These findings align with prior research, suggesting that individuals who encounter significant hindrances when pursuing essential aims are more prone to experiencing a decline in their overall well-being (Diener, 1984; Emmons, 1986; Little, 1983; Omodei & Wearing, 1990; Palys & Little, 1983; Ruehlman & Wolchik, 1988). Furthermore, it is widely acknowledged that a perceived absence of advancement towards significant aims is more apt to result in a deterioration of well-being, as opposed to the opposite (Brunstein, 1993; Little, 1989).

To date, apart from studies conceptually evaluating the relationship between hope and emotion regulation, limited research has been conducted examining the regulation of hope. However, these studies have not been conducted with athletes.

Peh et al. (2016) conducted a cross-sectional study using self-report questionnaires to investigate the relationship between hope, emotion regulation, and psychosocial outcomes in newly diagnosed cancer patients (n = 101). The study findings suggest that hope plays a protective role in patients' well-being, while reappraisal may be an especially effective strategy for those with low levels of hope. This research is underpinned by Peh et al.'s (2017) subsequent investigation into the intermediary function of hope in the reorganization process among 144 adult cancer patients (65.3% women, mean age = 48.96 years, SD = 9.23).

Halperin and Gross (2011) examined whether the use of reappraisal predicts support for providing humanitarian aid to out-group members during the war through its effect on the positive sense of hope. The study involved 201 Jewish-Israeli adults (101 men and 100 women). They were contacted and interviewed one week after the start of the conflict between Israelis and Palestinians in Gaza. Results from the structural equation modelling revealed that Israeli citizens who regulated their negative emotions via reappraisal during the war showed greater support in providing humanitarian aid to innocent Palestinian citizens. This relationship was found to be partially mediated by an increased sense of hope.

Yun et al. (2021) investigated the role of family function as a critical factor associated with loneliness, hope, and emotional regulation among students in a secondary vocational school in the midst of a novel coronavirus pandemic. The results supported a moderated mediation model that demonstrated the relationship between family function, loneliness, expressive suppression, and hope. The study showed that high hope mediated lower family functioning and loneliness, while high suppression resulted in significant levels of loneliness. It was similarly determined that those who are proficient in emotion regulation can employ hope and solitude to effectively establish objectives and ease their loneliness.

Finally, Aldao et al. (2010) and Gross (2014) discovered that individuals with elevated levels of hope commonly employ more effective methods of emotion regulation, such as cognitive reappraisal, which has demonstrated consistent support for resilience to mental illness and other advantages.

In the studies examining emotion regulation and hope, a significant positive relationship was found.

2.2.8. Emotion Regulation in Sports Psychology Research

Emotions have an important place in human life and are closely related to sports. Athletes may face many negative factors such as injustices during training or in competitions, making mistakes, team performance, problems with their partner or coach, competitors, parental pressures, audience and responsibilities to maintain the licence (Reeves et al., 2009). Since every critical event that the athlete does and experiences will affect the performance of the athlete to a high degree, it is important to regulate emotions (Vallerand & Blanchard, 2000). Although it has gained importance in the field of sports psychology since the 2000s, its first references were included in Morgan's "Mental Health" (1979), Hanin's "IZOF" (2000) models and Kirshenbaum's "Self-Regulation's Five-Step Model" (1984) as a stage of effect. Emotion regulation strategies used by athletes are frequently examined, functional and dysfunctional strategies related to performance are determined and studies are carried out on strategies that will increase performance. While athletes use the previously mentioned emotion regulation strategies similarly, they differ in adapting them to the sports context (timing of application, materials used, etc.) and applying strategies to trigger emotions that they believe will help performance rather than pleasant emotions (Lane et al., 2011). Although positive emotional states create an advantage for the athlete, negative emotional states may cause a decrease in the athlete's performance.

Bird et al. (2021) found that athletes' use of reappraisal was positively related to mental well-being, while the use of suppression was negatively related. Similarly, Troy and Mauss (2011) stated that people with the ability to regulate their own emotions are more likely to exhibit higher mental flexibility than those with low emotion regulation ability.

Uphill et al. (2012) found that athletes who utilised reappraisal experienced greater pleasant affect, supporting the previous work of Gross & John (2003). However, their analysis revealed that suppression was unrelated to either positive or negative emotions, challenging the aforementioned findings of Gross & John. The authors contend that negative emotions in sporting environments may not be intrinsically detrimental if athletes perceive them as advantageous (for example, interpreting anxiety as a sign of preparedness), as opposed to situations that do not involve performance (Kim & Tamminen, 2023).

Balk et al. (2015) investigated effective ways of coping with stress and presented 40 athletes with situations in which they used reappraisal and attentional deployment strategies. The results of this study showed that excessive stress decreased objective performance and both coping strategies mitigated these effects. Regulation of emotions is also important in improving the economy of movement, improving team interactions, and reducing punitive movements and injury risk, and is therefore recognised as an important psychological skill by sports psychologists (Lane et al., 2011).

Wagstaff (2014) carried out a study using a single-blind, within-participant, counterbalanced, and repeated measures design to examine the potential correlation between emotional self-regulation and athletic performance. The study involved a total of 20 competitive athletes who underwent a four-phase laboratory-based intervention: familiarization, control, emotion suppression, and non-suppression. During each phase, participants completed a 10 km cycling time trial that required self-regulation. In the

experimental setup, participants watched a distressing video before carrying out the cycling task. Participants who suppressed their emotional responses towards the video (suppression condition), those who did not receive any self-regulation instructions during the video (non-suppression condition), and those who did not watch any video (control condition) completed the cycling task at a slower pace. Moreover, the participants exhibited lower average power outputs, attained a lower maximum heart rate, and reported experiencing greater physical exertion. The study indicates that an impairment in emotional self-regulation resources has an impact on perceived exertion, tempo, and sports performance.

Using an instrumental case study approach, Tamminen and Crocker (2013) explored emotional self-regulation and interpersonal emotion regulation skills through multiple semi-structured interviews with four members of a high-performing women's curling team, alongside observing team meetings, practices, and matches throughout the season. The athletes ranged from 23 to 58 years old and possessed between 14 and 33 years of competitive curling experience. Technical terms were clarified upon first use. The text was written in passive voice and a formal register, without filler words or ornamental language. The structure was logical with causal connections between statements and balanced, unbiased phrasing. Consistent citation style, grammar, spelling, and punctuation were also observed. The findings highlight the significance of exploring the intricate relationship between athletes' emotions, their emotional expressions, and self-regulation to attain diverse objectives (e.g. favourable performances and healthy social relationships), along with interpersonal dynamics linked to emotions and their regulation in team sports.

Martin et al. (2011) found that cognitive control of emotional responses supports goal-directed decision-making ability and reduces risk-seeking behaviour. Emotion control is also a sub-dimension of the concept and scale of mental toughness, which is a critical issue for sports sciences (Clough et al., 2002). Emotion regulation is a process that affects athletes'

performance and general well-being, so being knowledgeable about it is important for sports psychologists, researchers, coaches, athletes and all sports participants.

2.3. Hope

Hope is conceptualized as a belief that gives meaning to the lives of individuals, and motivates them to cope with difficulties and to achieve future goals (Snyder et al., 1991; Snyder, 2002; Staats, 1989). Similarly, Stotland (1969) defined hope as "the expectation of the possibility of achieving a desired state in the future". Frank (1968) claims that hope is a characteristic that makes a person feel good and makes them feel and activate themselves by having a motivational effect (Akman & Korkut, 1993). Hope can be defined as a human condition which involves one's belief in the value of life (Zournazi, 2023). Miller (1985) defines hope as an emotion that enables individuals to articulate their expectations and desires, whilst also facilitating the realisation of their goals by ensuring they do not break down easily in difficult situations. According to Fromm (1995), hope plays a crucial role in determining the goals which must be achieved if change is to occur in future. He emphasises that hope is about being prepared for what is yet to come, and not losing faith, even in the absence of change. Hope is also regarded as an important emotion for comprehending fundamental human reactions, including goal-setting, implementation and change (Bruininks and Malle, 2005). Schrank et al. (2008) conducted a study on the definition of hope. They reached 49 different definitions and determined 7 dimensions by synthesizing these definitions. The dimensions determined by the synthesis include time, an undesirable starting point, goals, probability of success, locus of control, relationships, and personal characteristics. According to the definition, created by evaluating all these dimensions, hope is the attainment of goals and objectives that are valuable to the person as well as expectations about the future. Snyder (2002) provided one of the most significant definitions of hope. Hope, according to this definition,

entails thinking of alternative ways to achieve desired goals, and taking continuous actions towards it.

A substantial body of literature suggests that hope has a significant impact on individuals' quality of life, general health, and psychological well-being (Arnau et al., 2007; Scheier & Carver, 1985; Snyder, 2002). Scheier and Carver's (1985) research found that hopeful individuals tend to have higher life satisfaction and lower levels of depression. Furthermore, the impact of hope on managing hard circumstances and stress has been the subject of frequent research (Arnau et al., 2007; Feldman & Dreher, 2012). According to Martin's (2007) findings, a high level of hope positively affects individuals' well-being, while a low level of hope can increase feelings of sadness and problems. Therefore, as the level of hope increases in individuals, they encounter fewer problems and experience less sadness. Individuals with high hope are capable of setting clear goals and maintaining their motivation to achieve them (Kahle-Wrobleski & Snyder, 2005). Individuals with high hope excel in achieving their goals and are better equipped to face obstacles while pursuing them when compared to those with low hope levels (Duncan et al., 2022). Furthermore, hope has the potential to bring about positive changes in the behaviour of people dealing with chronic illness or in a health-related situation. A study conducted among young individuals has found that hope serves four crucial purposes in their lives: as a means to achieve goals and happiness, as a support system during moments of loss, and as an essential element of their existence. Furthermore, hope acts as an aid in achieving objectives (Bishop & Willis, 2014). Concerning the final point, the participants expressed the sentiment that "a life without hope is no life". Therefore, hope may assist individuals in attaining their objectives and aid them in coping with life's adversities. Lopez et al. (2009) identified a positive correlation between hope and life satisfaction. Hopeful individuals are psychologically balanced. They display realism and self-confidence when facing challenges. They are conscious that life presents difficulties, and

always devise strategies to deal with them (Göka, 2020). Hope also serves as a crucial motivator in one's career path. Şeker's (2022) study found that hope is a more influential variable in the career planning process than family support. Research by Curry et al. (1997), Gustafsson et al. (2013), Nunn et al. (2004), and Gana et al. (suggests that the effect of hope on athletes is parallel to past research findings. A study by Curry and his colleagues (1997) has found that the hope levels of university athletes have a positive effect on their athletic performance. Researchers have discovered that athletes with high levels of hope achieve better results and possess greater motivation in their performance. Although the positive effects of hope have been widely accepted, there are still ongoing debates about some negative aspects of hope. For example, hope may create unrealistic expectations or have the potential to cause disappointment in the face of failure (Nesse, 2000). However, hope is generally recognised as a significant psychological resource that plays an important role in individuals' lives and can enhance their overall well-being.

2.3.1. Theories on Hope

The first researcher to highlight the cognitive substructures of hope as a phenomenon was Stotland (1969). He expressed hope as a situation in which there are expectations for these goals in addition to future-oriented goals (Snyder, 1995). Individuals with high hopes possess a stronger conviction towards achieving their goals. When striving to accomplish a goal, the individual must align their thoughts with this objective. Stotland did not propose a measuring model for hope. Rather, he suggested that hope manifests through individual actions (Snyder, 1995).

Hope is defined as an emotion governed by cognitive rules by Averill et al. (1990). For the feeling of hope to emerge, individuals need realistic goals that they can manage, and these goals should be socially accepted. This approach, which considers social factors, values, and norms, has a more intricate structure than other theories of hope.

Ekland (1991) classifies hope into two subcategories: generalized and specific. He asserts that generalized hope is cognitive, while specialized hope involves believing in a specific goal and its realization. Hope, in general, pertains to all aspects of life, whereas specialised hope is nurtured for achieving something specific and valuable to the individual. Ekland (1991) assesses hope based on six sub-dimensions namely affect, cognitive, behavioural, integrative, time, and general situation dimensions.

The affective dimension refers to the feeling of confidence or doubt regarding the accomplishment of the goal.

The cognitive dimension is associated with rational thinking, imagining, perceiving, remembering, and judging.

The behavioural dimension involves adaptive effort towards action.

The unifying dimension is the coherence of purpose and goal-oriented emotions.

The time dimension reveals the factors that influence hope in the past, present and future.

The general situation dimension refers to examining all the variables surrounding an individual's life.

According to Farran and Popovich (1990), hope is a concept that comprises four main processes. These processes are experiential, relational, spiritual and logical thought processes.

The experiential process searches for hope by acknowledging the relationship that ensues due to losses, pain, hopelessness and pessimism.

The relational process aims to enhance relationships with others by assessing their impact on hope.

The spiritual process is a journey of exploring the meaning and purpose of life through faith in a higher power that is inaccessible.

The logical thinking process involves establishing goals and identifying strategies, such as cognitive reappraisal, to achieve these goals (Farran et al., 1995).

Morse and Doberneck (1995) defined the concept of hope and examined it in four different sample groups: individuals with spinal cord injury, those who had undergone heart transplantation, mothers of newborn babies, and breast cancer patients. The interviews resulted in 7 abstract situations defining hope: 1) The initial assessment of a threatening situation, 2) The creation of goals and the development of alternative paths, 3) Support mechanisms in negative plans, 4) The individual's realization of themselves, their environment, and their support, 5) Relationships to be established as social educators, 6) The evaluation of each stage in achieving goals, and 7) The ability to persevere and resist.

2.3.1.1. Snyder's Hope Theory

Snyder (2002) argues that hope is a cognitive structure and process based on expectations about desired future states. These cognitive structures are the dynamics that shape the individual's process of achieving the goal. According to this theory, hope consists of the ability to provide motivation (agency thinking) and the ability to find alternative and functional ways to achieve these goals (pathways thinking), which are formed by the perception of the individual's ability and competence to achieve the goals (Snyder et al., 2003). These two components converge around the goals that form the core of the hope process. Goals, which are inherent in planned behaviours, are accepted as values that motivate individuals within the framework of hope theory. Goals can be anything that the individual attributes value to in her life and thinks to experience. This can be a large-scale goal that covers a large part of her life, or it can be an item or object that can be achieved quickly. Goals should be chosen with a certain degree of precision and should be neither completely unattainable nor directly attainable. If the goals are unrealistic, they may undermine the individual's confidence and the individual may find it difficult to motivate oneself. On the contrary, goals that are too easily attainable may demotivate the individual (Snyder, 2005). Snyder states that people are naturally inclined to set goals and it is imperative to set goals for their lives to progress in the direction

they want. Goal-oriented thinking plays a significant role in bolstering an individual's capability to manage challenges and bounce back (Dağcı, 2014; Snyder, 1995; Snyder et al., 2000; Snyder et al., 2003).

The ability to establish strategic connections to achieve goals, which Snyder calls "pathways", refers to the individual's perception of competence between her current situation and the point she wants to reach in the future. While there is at least one way to reach the goal, obstacles that may be encountered on this path may cause the individual to give up the goal. Therefore, determining alternative ways to reach the goal ensures the continuity of hope (Rand & Cheavens, 2009). It covers the processes of individuals' dreaming, creating mental experiences and achieving desired states. In addition, the individual needs to develop planned and organised behaviours to reach the targeted situations.

Achieving hope is not only related to the perception of competence but also the will of individuals to initiate and sustain this process (Snyder et al., 2002). This motivation and energy is called "agency" by Snyder and colleagues and functions as an "ignition" (Snyder et al., 1997). Sayings such as "I can do this", "I can achieve this" and "I will not give up" are realised through this component (Snyder et al., 1998). The individual needs to plan a way to reach the goals and take action according to this plan (Snyder, 2002).

As a result, Snyder's theory of hope provides a comprehensive framework that defines hope as the ability to identify goals, to generate alternative ways to achieve goals and to initiate and sustain actions towards goals. The persistence of hope is based on the interplay between planning alternative pathways and agency thinking. These two factors feed each other and there is a positive relationship between them (Snyder et al., 2000). If the individual has motivation (agency) but lacks planning (pathways), the goal cannot be achieved. On the contrary, the

presence of planning loses its functionality in the absence of motivation (Snyder, 1994, 2000, 2003; Snyder et al., 2000).

2.3.2. Research on Hope and Age

There is a restricted amount of research exploring the link between hope and age, and the available studies don't pertain to the domain of sports psychology. The studies are elaborated below.

Erci et al. (2017) investigated the influence of self-care ability and life contentment on hope levels among senior citizens. They obtained data from 4181 individuals aged 65 and above from three Family Health Centres situated in Malatya province. The study revealed a significant difference between the average age and levels of hope, self-care ability, and life satisfaction. As age increases, there is a corresponding decline in self-care capability, life satisfaction, and hopefulness.

Khurana et al. (2023) explored a potential correlation between irritability and suicidal ideation and behaviour, particularly amongst elderly adolescents and those with diminished levels of hope. The study analysed 142 children and adolescents, aged 6 to 18 years, who used mental health services at a university outpatient clinic. The results reveal a substantial correlation between irritability, hope, age, suicidal thoughts, and conduct. Hope and age moderated the association between irritability and suicidal ideation and behaviour. The link between irritability and suicidal thoughts and behaviour was specifically identified in adolescents, rather than young children, and only evident when hope levels were low.

Studies have shown that hope level and age are related to each other.

2.3.3. Research on Hope and Gender

There is a scarcity in research investigating the correlation between hope and gender, with a lack of studies carried out on elite athletes. The subsequent studies are outlined below.

Aral (2020) examined the relationship between self-efficacy, hope and well-being parameters, which are generally accepted as determinants in the provision and protection of holistic health and well-being, with 277 participants between the ages of 18 and 60 who practice CrossFit, Fitness and Pilates exercise residing in Istanbul. Among the female recreation exercise participants, it was concluded that male participants had a higher mean total hope.

Gündüz et al. (2017) conducted a descriptive study involving 376 students from various universities, in which they investigated the influence of personality traits, age, gender, and dispositional hope on problematic internet use among university students. The results showed that increased levels of hope were associated with reduced negative effects of internet use. However, the study found no correlation between gender and hope level.

There are different views on the relationship between hope and gender. More studies are needed for a common view to be formed.

2.3.4. Research on Hope and Branches

There is a restricted number of studies investigating the variable of hope in athletes. The subsequent studies provide an explanation.

In a study conducted by Belem et al. (2014), the effect of coping strategies on the endurance of beach volleyball athletes was examined. The study included 48 adult athletes from the Banco do Brasil Beach Volleyball Circuit. They concluded that team athletes exhibited higher levels of hope compared to individual athletes. They hypothesised that this may be due to the common goals and collaborative nature of team sports, which may promote a sense of collective hope and common motivation among team members.

A study by Gustafsson, Hassmén, and Podlog (2010) found that individual athletes may have to rely more on personal hope and self-efficacy due to the absence of team support. They

concluded that these athletes can still achieve high levels of hope, but this hope may depend more on their personal beliefs and self-confidence.

Although studies show that the level of hope is higher in athletes participating in team sports, more studies are needed to form a common opinion.

2.3.5. Research on Hope and Disability Status

There is a narrow range of studies that examine the variable of hope and disability status in athletes. Details of the studies are outlined below.

In the field of sports psychology, Curry et al. (1997) conducted a study revealing high levels of hope among both disabled and non-disabled athletes. Martin (2016) suggests that disabled athletes may display even higher levels of hope, potentially attributed to their resilience and determination amidst adversity.

Phillips et al. (2016) carried out a research to evaluate the possible mediating impacts of strength-based elements, i.e. proactive coping, self-respect, and perceived social support, on the link between functional disability and hope among adult males and females suffering from spinal cord injury (Average Age: 44.6, 66.1% Male). The results showed that proactive coping, self-confidence and perceived social support were significant mediators in the relationship between functional disability and hope, while disability acceptance was not. Additionally, the study found that functional disability did not predict hope after adjusting for these strength-based factors.

Studies have shown that there is no relationship between hope level and disability status.

2.3.6. Research on Hope and Training Frequency

Regarding hope, no study in the literature explains the contribution of training frequency to hope levels. However, Yelken et al. (2021) found in their study of Wushu athletes

during the COVID-19 pandemic that athletes' positivity levels increased with weekly training days and duration.

2.3.7. Hope in Sports Psychology Research

Although hope research is still in its infancy, there is a substantial body of research on the constituents of hope, namely goal pathways and agency. For example, there are reviews summarising concepts such as goal setting (Harwood et al., 2008; Kylle & Landers, 1995; Roberts & Walker, 2020) and self-efficacy (Brace et al., 2020; Morita et al., 2000) and achievement motivation (Çetinöz et al., 2020; Lochbaum & Gottardy, 2015). The performance of athletes is significantly impacted by their ability to achieve predetermined goals and develop strategies to attain them, referred to as their level of hope. Snyder's hope theory proposes that hope can be divided into two primary components: the desire to reach the goal (agency) and the ability to find pathways to achieve the goal (pathways).

Over an extended period, the sports psychology field has been researching the impact of hope on athletes' performance, and findings highlight an affirmative correlation. Evidence from Gustafsson et al.'s (2013) study, explicitly sets out hope's advantageous impact on athletes' mental health, revealing those athletes with high levels of hope lead better, less depressed lives than their less hopeful counterparts. Furthermore, optimism is paramount to athletes' capability to confront the challenges and hurdles that come their way. Adelmann and Zajonc's (1989) research buttresses the idea that optimism boosts players' tenacity against injuries and other setbacks.

Woodman et al. (2009), as a result of their experimental study in which they examined the relationships between emotions and subcomponents of performance in 18 semi-professional male English football players (M_{age} = 21.50 years; SD = 2.12), found that football players with high levels of hope had faster football-related reaction times.

Treasure, Lemyre, and Kuczka (2007) conducted a study that illustrates the crucial role of hope in athletes' motivation. The findings indicated that hope increases athletes' willingness to achieve their goals and put in the required effort.

Likewise, Lines et al. (2020) explored how hope and other psychological qualities, such as mental toughness, affect athletic performance. This study aimed to investigate the relationship between these abilities and performance. The researchers found a substantial correlation between athletes' hope and mental toughness and observed that both factors positively impact performance. These results indicate that hope may be a significant factor in enhancing athletes' mental toughness, thereby improving their athletic performance.

The results indicate that hope significantly impacts athletes' performance and general psychological health. Thus, developing strategies to increase athletes' hope levels is a crucial matter in sports psychology literature. These strategies might incorporate methods including goal setting, positive thinking training, and celebrating achievements, as stated by Gustafsson et al. (2008). By increasing the level of hope, such strategies can effectively enhance athletes' performance and promote their general psychological health.

2.4. Sports Psychology Research on Flow Experience, Emotion Regulation and Hope

In both the general literature and the sports psychology literature, no study examines the relationship between flow experience, emotion regulation skills and hope level. For athletes, flow refers to moments of 'peak experience' where they realise their peak performance (Jackson et al., 2001). When an athlete is in a state of flow, they are usually at the peak of their performance and this state can be critical for maintaining optimal performance. On the other hand, in high-performance sports, emotional regulation enables athletes to cope with stressful and challenging situations, maintain their focus and optimise their overall performance (Lane et al., 2012). The same importance also applies to athletes' hope levels, considering that athletes

should set goals for themselves, find a way to achieve these goals and have the necessary motivation to progress on this path (Gustafsson et al., 2010; Gustafsson et al., 2013).

A firm conviction that athletes are capable of achieving their objectives may boost their ability to regulate their emotions both during competition and in their daily lives, while also advancing their capacity to experience flow. Similarly, the inverse relationship between the two should also be acknowledged. Further research is required to establish the link between flow experience and hope level, flow experience and emotion regulation, hope level and emotion regulation, and flow experience and emotion regulation and hope level. There is currently a lack of research directly investigating the relationship between these concepts within the sports psychology literature.

CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the research model, the study's participants, data collection tools, the data collection process, the and analysis of data are explained.

3.1. Research Model

This study aims to examine the extent to which athletes' emotion regulation skills and hope levels predict their flow experiences after controlling for socio-demographic variables. For this study, a predictive correlational research design was used alongside quantitative research methods to investigate the relationship between the variables in question. This approach was chosen in line with the research aims (Büyüköztürk, 2021). By considering the relationships between variables, it is tried to determine the value of one of the variables with which a relationship is established according to the other variable (Büyüköztürk et al., 2019). Fraenkel et al. (2012) stated that there are predictor variables whose value are known and a criterion variable whose value will be determined. The predictor variables of this study are emotion regulation skills and hope level. The criterion variable was determined as a flow experience.

Regarding the number of predictor variables, predictive correlational patterns are in two dimensions single and multifactorial. Since there were two predictor variables in this study, a multifactorial predictive correlational pattern was used (Büyüköztürk et al., 2019).

3.2. Study Group

The participants for the study consist of athletes living in Istanbul, who possess a sports license and have at least one year of active sports experience. The sample for the study was selected through convenient sampling. Convenient sampling is a type of sampling that relies on conducting the study with individuals and situations that are easily accessible and nearby

when the researcher does not have the opportunity to use other sampling types. It provides convenience for the researcher in terms of time and cost (Mertens, 2010). Although 400 individuals participated in the study, the total number of participants meeting the study's criteria was calculated as (n= 368). After excluding 15 individuals from the 400 volunteers who did not meet the study criteria (not being under 18 or over 29 years old). The 18 individuals who worked with the sports psychologist have been excluded from the data analysis due to the smallness of the number. Demographic information about the participants is presented in Table 1.

Table 1: Demographic Characteristics of Participants

Variables	Frequency (n)	Percent (%)
Age		
18-23	239	64,9
24-29	129	35,1
Gender		
Female	157	42,7
Male	211	57,3
Disability Status		
Yes	60	16,3
No	308	83,7
Branches		
Team Sports	266	72,3
Individual Sports	102	27,7
Frequency of Training		
3 or Less a Week	226	61,4
4 or More a Week	142	38,6

n:368

According to Table 1, of the athletes participating in the study, 64.9% are within the age range of 18-23, 35.1% are within the 24-29 age range. 42.7% of athletes are female, 57.3% are male. 16.3% of athletes are disabled, 83.7% are not disabled. 72.3% of athletes are involved in team sports (11.1% (n:41) American Soccer, 7.8% (n:29) Amputee Soccer, 12.2% (n:45) Basketball, 11.4% (n:42) Flag Soccer, 2.7% (n:10) Ice Hockey, 2.9% (n:11) Football, 2.9% (n:11) Goalball, 3.5% (n:13) Handball, 2.7% (n:13) Korfball, 3.8% (n:14) Ultimate Frisbee, 10.3% (n:38) Volleyball, 27.7% in individual sports (3.5% (n:13) Badminton, 2.1% (n:8) Ocean Paddle, 4.3% (n:16) Table Tennis, 1.3% (n:5) Archery, 5.9% (n:22) Tennis, 3.8% (n:14)

Sail, 6.2% (n:24) Swimming). 61.4% of athletes train 3 or less a week while 38.6% train 4 or more a week.

3.3. Data Collection Tools

Demographic Information Form, Flow State Questionnaire, Dispositional Hope Scale, and Emotion Regulation Scale for Athletes were used for data collection.

3.3.1. Demographical Information Form

Demographical Information Form was developed by the researcher and used for collecting demographic information on athletes. In this form, there are 6 questions including age, gender, sports branch, disability status, training frequency, and working with a sports psychologist.

3.3.2. Flow State Questionnaire

The Flow State Questionnaire is a measure developed by (Magyarodi et al., 2013) and adapted into Turkish by Uz-Baş (2019) to examine individuals' flow experience and its core characteristics. The scale consists of a 5-point Likert-type format, including the statements "Strongly Disagree," "Disagree," "Undecided," "Agree," and "Strongly Agree," with a total of 12 items. The scale comprises two subscales: balance and absorption in the activity. Scores on the scale can range from a minimum of 12 to a maximum of 60. Higher scores on the scale indicate a higher level of flow experience for the individual. The structural validity of the 12-item, two-factor version of the scale shows acceptable fit indices ($\chi 2/sd = 2.640$, GFI = .926, CFI = .961, RMSEA = .076). The Cronbach's alpha reliability coefficients for internal consistency of the scale are .93 for the balance subscale, .83 for the work immersion subscale, and .91 for the total score.

3.3.3. Emotion Regulation Scale for Athletes

The Turkish adaptation of the Emotion Regulation Questionnaire (ERQ), originally developed by Gross and John (2003), was conducted by Eldeleklioğlu and Eroğlu (2015). The adaptation for athletes was performed by Tingaz and Ekiz (2021). The scale aims to assess emotion regulation skills in individuals aged eighteen and above. The scale consists of two subscales: Reappraisal and Suppression. The Cognitive Reappraisal subscale has a scoring range of 4-28, while the Suppression subscale has a scoring range of 4-28 as well. Each subscale is evaluated independently, as the theoretical framework of the scale does not involve combining the two subscales. The Cronbach's alpha reliability coefficient was found to be r=.74 for the Cognitive Reappraisal subscale and r=.72 for the Suppression subscale. The scale is rated on a 7-point Likert-type scale (1=Strongly Disagree, 4=Undecided, 7=Strongly Agree).

3.3.4. Dispositional Hope Scale

The Turkish adaptation of the Hope Scale, developed by Snyder et al. (1991), was conducted by Tarhan and Bacanlı (2015). The scale aims to assess the level of hope in individuals aged fifteen and above. The scale consists of twelve items, each evaluated using an eight-point Likert-type rating scale. The scale includes two subscales, namely, Pathways Thinking and Agency Thinking, as well as filler items unrelated to hope. The internal consistency coefficients of the scale were found to be .78 for the Pathways Thinking subscale, .81 for the Agency Thoughts subscale, and .86 for the total scale. The minimum score that can be obtained from the subscales is 4, while the maximum score is 32. The minimum and maximum scores that can be obtained from the entire scale are 8 and 64, respectively. A high score on the scale indicates a high level of hope in an individual.

The reliability scores of these scales in the present study are shown in Table 2.

Table 2: Reliability Scores of Flow State Questionnaire, Emotion Regulation Scale for Athletes, and Dispositional Hope Scale

Scale	Cronbach's Alpha reliability co-efficient
Flow State Questionnaire	0,88
Balance	0,79
Absorption in the Activity	0,78
Emotion Regulation Scale for Athletes*	
Reappraisal	0,93
Suppression	0,90
Dispositional Hope Scale	0,98
Pathways Thinking	0,96
Agency Thinking	0,96

** Each dimension is evaluated within itself. Due to the theoretical substructure of the scale, two sub-dimensions are not summed and used. n: 368*

3.4. Data Collection Process

For the first stage of the data collection process, permission was obtained via email from the developers of the scales used in this research. Following this, a demographic information form was created. The necessary permissions were obtained from the Yeditepe University Ethics Committee for the execution of the study. After receiving ethical approval, a Google Form document consisting of a demographic questionnaire and scales was created (see Appendix 1, 2, 3 and 4). After the training or match, the Google form link was shared with the athletes online by the researcher. The researcher personally accompanied the data collection and answered possible questions. Athletes with disabilities were assisted one-to-one. For example, the researcher helped the visually impaired athletes to read and fill out the form one-to-one. Those who wished also filled out the form using their screen reader applications. The data collection process started in January 2022 and concluded in September 2022. It takes approximately 10-15 minutes to complete the Google Form document.

3.5. Analysis of the Data

All data were recorded and analysed using Statistical Package for Social Sciences 26 (SPSS) software. Categorical variables were presented as frequency (n) and percentage (%). Prior to performing statistical tests, assumptions were tested to determine the appropriate tests to utilise. To evaluate the distribution normality, the Kolmogorov-Smirnov test was administered revealing normal data, with skewness and kurtosis coefficients between ±2.0 (George & Mallery, 2010). Independent Sample t-Test was utilised to compare two independent groups. Oneway ANOVA analysis was used for comparing more than two peripherally related groups. The source of the difference was determined using post-Hoc analysis, with Bonferroni's Test applied in cases when variances were homogeneous and Tamhane's test used when they were not. The homogeneity of variance was determined by calculating the Levene statistic. The correlation between the Total Scale Scores was examined through the Pearson correlation coefficient. A model was built using hierarchical regression analysis to predict work absorption in the activity and balance sub-dimensions of the flow experience scale. Results were evaluated at a significance level of 0.05 to determine their significance.

3.5.1. Outlier Analysis

Firstly, according to the regression standardised residual histogram presented below, no data exceeding the plot was found in the middle of the normally distributed data. Cook's distance values were checked and the maximum value was found as .222. The maximum value should not be less than +1 (Cook & Weisberg, 1982). According to Cook's distance value, no extreme value was found in the study.

3.5.2. Regression Assumption Tests

To conduct a hierarchical regression analysis, the assumptions of regression analysis must first be met. Assumptions consist of normality of error terms (residuals), linearity, multicollinearity and homoscedasticity. These assumptions were tested in 4 sections. As the results show, the regression assumptions are not violated.

3.5.2.1. Normality Test of Regression Assumption

To perform a regression analysis, regression assumptions must be met. For this reason, the histogram of the regression standardised residuals and the normal p-p plot of the errors were examined (see Figure 6). When we look at the histogram distribution, it is determined that there is a distribution very close to the normal distribution; there is no right and left skewness in the form of a bell curve and it is evaluated that the errors do not deviate excessively from the normal distribution. In the "Normal P-P" graph, the fact that the points are above or very close to the 45^0 (45-degree) line indicates a normal distribution; we see that there is no obvious violation in the scatter graph.

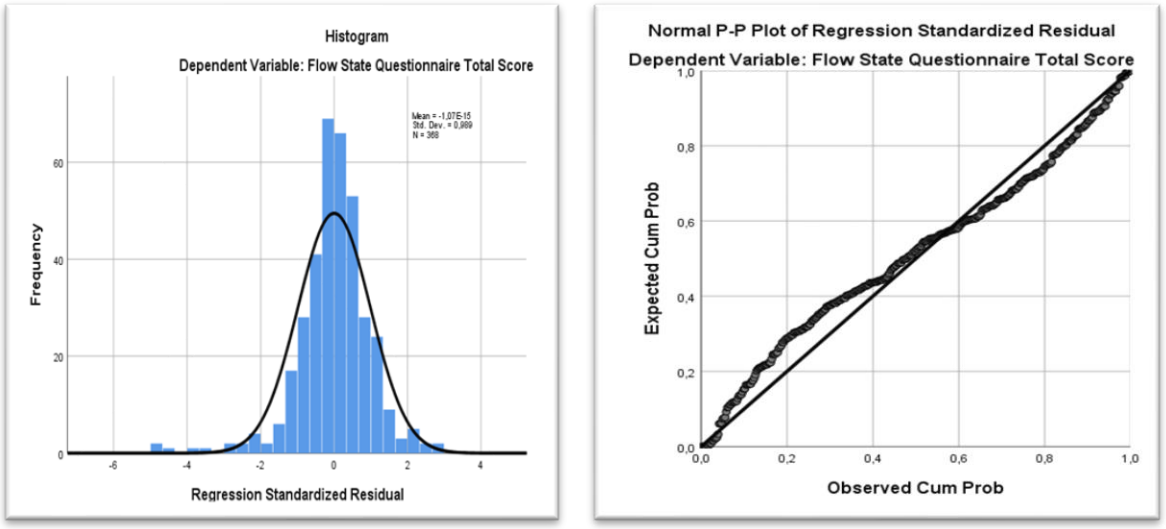

Figure 6: Examination of the Compliance of Estimation Errors with Normal Distribution and Co-variance for the total score of the Flow State Questionnaire

3.5.2.2. Linearity and Homoscedasticity

One of the regression assumptions is linearity for the dependent (flow state) variable. As it can be seen in the scatter plot (see Figure 7), there are a few deviations but overall they can be grouped at a certain point. Furthermore, by checking the scatter plot, the homoscedasticity assumption was also checked. Values between ±3 are required to fulfil the homoscedasticity assumption. There are some outliers in the scatter plot, but this does not pose a major problem in the scatter plot, and we see that the assumption of normal distribution of differences/surpluses is met.

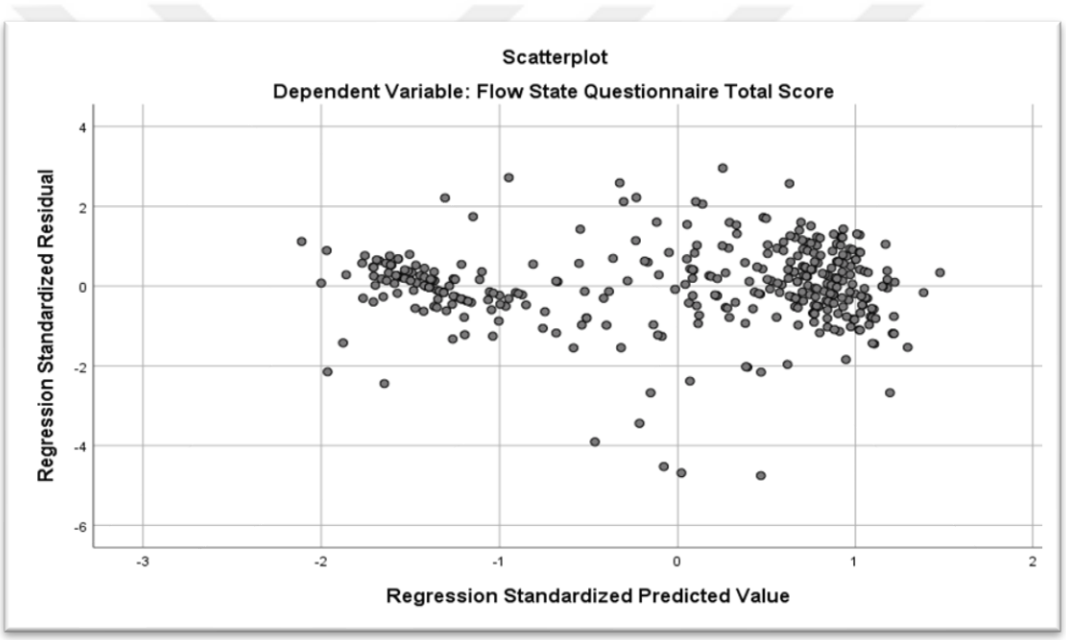

Figure 7: Examination of Co-variance Cases for Flow Experience Scale total score

3.5.2.3. Multicollinearity

When examining the assumptions of regression analysis, it becomes clear that the continuous variables exhibit a normal distribution, a linear relationship is present between the independent and dependent variables, and the r value among the independent variables is 0.9 or higher (Field, 2017). VIF values were discovered to be less than 10, indicating that there is no issue with multicollinearity (see Table 3).

Table 3: Variance Inflation Factor of the Study

Collinearity Statistics- Model 3	**Tolerance**	**VIF**
(Constant)		
Age	0,899	1,112
Gender	0,963	1,039
Branches	0,896	1,116
Disability	0,788	1,268
Training Frequency	0,925	1,081
Reappraisal	0,363	2,757
Suppression	0,612	1,635
Dispositional Hope Total Score	0,287	3,484

3.5.2.4. Assumption of Independence of Residuals

The independence of the observations was assessed using the Durbin-Watson statistic. The test statistic ranges from 0-4, whereby a value of 2 indicates that the residuals are uncorrelated, meaning there is no autocorrelation. Conversely, a value greater than 3 suggests a negative correlation between adjacent residuals, whilst a value below 1 indicates a positive correlation (Tabachnick et al., 2013). In the analysis, Durbin-Watson values were 1,978 and it was evaluated that there was no autocorrelation. The Durbin-Watson coefficient is between 1.5-2.5 for each regression analysis.

CHAPTER IV

RESULTS

This section presents the data analysis and results. The following chapters provide correlations between the study variables, demographic variables, and hierarchical regression analysis, using descriptive statistics about the variables.

4.1. Descriptive Statistics

Descriptive statistics of the dependent variable (flow experience) and two independent variables (hope and emotion regulation) of this study are presented in Table 4.

Table 4: Findings Related to Descriptive Statistics of the Scales

Scales	**Descriptive Statistics**						
	Min	Max	Median	$\bar{x}$	SD	Skewness	Kurtosis
Flow State Questionnaire (FSQ)	18	59	45,00	42,48	8,71	-0,42	-0,93
Balance	10	34	25,50	23,36	5,52	-0,33	-1,23
Absorption in the Activity	7	25	20,00	19,12	3,66	-0,53	-0,14
Emotion Regulation Scale for Athletes (ERSA)*							
Reappraisal	4	28	20,00	18,21	6,70	-0,46	-1,19
Suppression	4	28	15,00	15,56	6,72	0,20	-1,40
Dispositional Hope Scale (DHS)	8	64	51,00	43,25	15,64	-0,67	-1,04
Pathways Thinking	4	32	25,00	21,64	7,82	-0,62	-1,01
Agency Thinking	4	32	25,00	21,61	8,02	-0,62	-1,11

** Due to the theoretical substructure of Emotion Regulation Scale for Athletes does not give a total score. Each dimension is evaluated in itself.* n:368

According to Table 3, the scores of the athletes from the total sum of the FSQ were between 18-59 with an average score of $\bar{x}$=42,48±8,71, the scores from the total sum of the DHS were between 8-6496 with an average score of $\bar{x}$=43,25±15,64, the total score from the cognitive reappraisal dimension of the ERSA was between 4-28 with an average score of

$\bar{x}$=18,21±6,70, and the total score from the suppression sub-dimension of the ERSA was between 4-28 with an average score of $\bar{x}$=15,56±6,72.

According to Table 4, the results of the Kolmogorov Smirnov test were examined to determine whether the scores obtained from the responses of the FSQ, ERSA and the DHS were normally distributed, and it was understood that the scores of the scale and sub-dimension scores were not normally distributed ($p<0.05$).

However, when histogram, normal Q-Q graph and box-plots normal distribution curve, which are other indicators of normal distribution, were drawn and kurtosis-skewness coefficients were taken into consideration, it was evaluated that the data did not deviate excessively from normal distribution. Since the skewness and kurtosis coefficients of the data were between ±2.0 (George & Mallery, 2010), they were accepted as normal. Parametric tests will be applied in the analyses.

4.2. Findings Related to the Comparison of Scales and Dimensions with Some Variables

For normally distributed data, Independent Sample T-test was used to compare two independent groups, Oneway ANOVA analysis was used to compare more than two unrelated groups, and Post-hoc analysis was used to determine the source of the difference. Bonferroni Test was used when the variances were homogenous and Tamhane's Test was used when the variances were not homogenous. Levene's Test was also used to determine whether the variances were homogenous.

Table 5: Comparison of Flow State Questionnaire/Subscale Scores According to Descriptive Characteristics of Athletes

Variables		Flow State Questionnaire	Balance	Absorption in the Activity
		x̄±SD	**x̄±SD**	**x̄±SD**
Age	18-23	43,16±8,75	23,69±5,58	19,47±3,68
	24-29	41,25±8,53	22,77±5,39	18,48±3,56
Statistic	t	2,02	1,53	2,51
	p	0,04*	0,13	0,01*
Gender	Female	42,53±8,59	23,41±5,27	19,13±3,75
	Male	42,46±8,82	23,34±5,72	19,12±3,6
Statistic	t	0,09	0,11	0,04
	p	0,93	0,91	0,97
Branches	Team	42,56±9	23,46±5,67	19,11±3,78
	Individual	42,3±7,94	23,13±5,14	19,17±3,36
Statistic	t	0,26	0,51	-0,15
	p	0,80	0,61	0,88
Disability Status	Yes	39,04±8,85	21,22±5,92	17,82±3,32
	No	43,16±8,54	23,79±5,35	19,38±3,68
Statistic	t	-3,40	-3,34	-3,05
	p	0,01**	0,01**	0,01**
Frequency of Training	3 or Less a Week	41,03±8,82	22,45±5,56	18,58±3,68
	4 or More Times a Week	44,81±8,04	24,84±5,16	19,98±3,48
Statistic	t	-4,15	-4,13	-3,63
	p	0,01**	0,01**	0,01**

*p<0,05 **p<0,01 t= *Independent sample t-test* F= *Oneway ANOVA* n:368

According to Table 5, there is a statistically significant difference in the total scores of the FSQ for athletes according to their age (t=2.02, p<0.05). Looking at the averages, the scores of those aged 18-23 (43.16±8.75) are higher than the scores of those aged 24-29 (41.25±8.53). There is no statistically significant difference in the Balance Subscale score of the FSQ according to the age of the athletes (p>0.05). The Absorption in the Activity Subscale score of the FSQ shows a statistically significant difference according to the age of the athletes (t=2.51, p<0.05). Looking at the averages, the scores of those aged 18-23 (19.47±3.68) are higher than the scores of those aged 24-29 (18.48±3.56).

There is no statistically significant difference in the scores of the FSQ and its sub-dimensions according to the gender and sports branch of the athletes ($p>0.05$).

The total score of the FSQ shows a statistically significant difference according to individuals' disability status ($t=-3.40$, $p<0.05$). Looking at the averages, the scores of those without disabilities (42.3±7.94) are higher than the scores of those with disabilities (39.04±8.85). The Balance Subscale score of the FSQ shows a statistically significant difference according to the disability status of the athletes ($t=-3.34$, $p<0.05$). Looking at the averages, the scores of those without disabilities (23.79±5.35) are higher than the scores of those with disabilities (21.22±5.92). The Absorption in the Activity Subscale score of the FSQ shows a statistically significant difference according to individuals' disability status ($t=-3.05$, $p<0.05$). Looking at the averages, the scores of those without disabilities (19.38±3.68) are higher than the scores of those with disabilities (17.82±3.32).

The total score of the FSQ shows a statistically significant difference according to the frequency of athletes' training ($t=-4.15$, $p<0.05$). Looking at the averages, the scores of those who train 4 or more times a week (44.81±8.04) are significantly higher than the scores of those who train 3 times or less a week (41.03±8.82). The Balance Subscale score of the FSQ shows a statistically significant difference according to the frequency of athletes' training ($t=-4.13$, $p<0.05$). Looking at the averages, the scores of those who train 4 or more times a week (24.84±5.16) are significantly higher than the scores of those who train 3 times or less a week (22.45±5.56). The Absorption in the Activity Subscale score of the FSQ shows a statistically significant difference according to the frequency of athletes' training ($t=-3.63$, $p<0.05$). Looking at the averages, the scores of those who train 4 or more times a week (19.98±3.48) are significantly higher than the scores of those who train 3 times or less a week (18.58±3.68).

Table 6: Comparison of Subscale Scores of Emotion Regulation Scale for Athletes According to Descriptive Characteristics of Athletes

Variables		Reappraisal	Suppression
		x̄±SD	**x̄±SD**
Age	18-23	23,69±5,58	19,47±3,68
	24-29	22,77±5,39	18,48±3,56
Statistic	t	1,53	2,51
	p	0,13	0,01*
Gender	Female	23,41±5,27	19,13±3,75
	Male	23,34±5,72	19,12±3,6
Statistic	t	0,11	0,04
	p	0,91	0,97
Branches	Team	23,46±5,67	19,11±3,78
	Individual	23,13±5,14	19,17±3,36
Statistic	t	0,51	-0,15
	p	0,61	0,88
Disability Status	Yes	21,22±5,92	17,82±3,32
	No	23,79±5,35	19,38±3,68
Statistic	t	-3,34	-3,05
	p	0,01**	0,01**
Frequency of Training	3 or Less a Week	22,45±5,56	18,58±3,68
	4 or More Times a Week	24,84±5,16	19,98±3,48
Statistic	t	-4,13	-3,63
	p	0,01**	0,01**

*p<0,05 **p<0,01 t= *Independent sample t-test* F= *Oneway ANOVA* n:368

According to Table 6, the total score of the Reappraisal Subscale of the ERSA shows a statistically significant difference according to their age (t=2.20, p<0.05). Looking at the averages, the scores of those aged between 18-23 (18.77±6.71) are higher than the scores of those aged between 24-29 (17.18±6.6). The total score of the Suppression Subscale of the ERSA does not show a statistically significant difference according to their age (p>0.05).

The total score of the Reappraisal Subscale of the ERSA does not show a statistically significant difference according to their gender (p>0.05). The total score of the Suppression

Subscale of the ERSA does not show a statistically significant difference according to their gender ($p>0.05$).

The total score of the Reappraisal Subscale of the ERSA does not show a statistically significant difference according to their sports branch ($p>0.05$). The total score of the Suppression Subscale of the ERSA does not show a statistically significant difference according to their sports branch ($p>0.05$).

The total score of the Reappraisal Subscale of the ERSA shows a statistically significant difference according to their disability status ($t=-3.59$, $p<0.05$). Looking at the averages, the scores of those without disabilities (18.76±6.5) are higher than the scores of those with disabilities (15.42±7.08). The total score of the Suppression Subscale of the ERSA does not show a statistically significant difference according to their disability status ($p>0.05$).

The total score of the Reappraisal Subscale of the ERSA shows a statistically significant difference according to their training frequency ($t=-3.36$, $p<0.05$). Looking at the averages, the scores of those who train 4 or more times a week (19.63±6.05) are higher than the scores of those who train 3 or less times a week (17.32±6.95). The total score of the Suppression Subscale of the ERSA shows a statistically significant difference according to their training frequency ($t=2.05$, $p<0.05$). Looking at the averages, the scores of those who train 3 or less times a week (16.13±6.83) are higher than the scores of those who train 4 or more times a week (14.66±6.47).

Table 7: Comparison of Dispositional Hope Scale/Subscale Scores According to Descriptive Characteristics of Athletes

Variables		Dispositional Hope Scale	Pathway Thinking	Agency Thinking
		x̄±SD	**x̄±SD**	**x̄±SD**
Age	18-23	44,45±15,79	22,26±7,92	22,19±8,07
	24-29	41,05±15,19	20,51±7,55	20,55±7,86
Statistic	t	2,00	2,06	1,88
	p	0,05*	0,04*	0,06
Gender	Female	44,26±15,07	22,13±7,43	22,14±7,8
	Male	42,51±16,05	21,29±8,11	21,22±8,19
Statistic	t	1,06	1,01	1,08
	p	0,29	0,31	0,28
Branches	Team	43,64±15,59	21,88±7,83	21,76±7,98
	Individual	42,27±15,83	21,03±7,82	21,24±8,17
Statistic	t	0,75	0,93	0,55
	p	0,45	0,35	0,58
Disability Status	Yes	35,42±16,24	17,37±7,84	18,05±8,5
	No	44,78±15,09	22,48±7,56	22,31±7,76
Statistic	t	-4,34	-4,76	-3,83
	p	0,001**	0,001**	0,001**
Frequency of Training	3 or Less a Week	40,26±16,41	20,15±8,16	20,12±8,41
	4 or More Times a Week	48,03±13,04	24,04±6,62	24±6,75
Statistic	t	-4,78	-4,79	-4,64
	p	0,001**	0,001**	0,001**

*p<0,05 **p<0,01 t= *Independent sample t-test* F= *Oneway ANOVA* n:368

According to 7, the total score of the DHS for athletes shows a statistically significant difference based on their age (t=2.00, p<0.05). Looking at the averages, the scores of those aged between 18-23 (44.45±15.79) are higher than the scores of those aged between 24-29 (41.05±15.19). The total score of the Pathway Thinking Subscale shows a statistically significant difference based on their age (t=2.06, p<0.05). Looking at the averages, the scores of those aged between 18-23 (22.26±7.92) are higher than the scores of those aged between 24-29 (20.51±7.55). The total score of the Agency Thinking Subscale does not show a statistically significant difference based on their age (p>0.05).

The total score of the DHS for athletes does not show a statistically significant difference based on their gender or branch ($p>0.05$).

The total score of the DHS for athletes shows a statistically significant difference based on their disability status ($t=-4.34$, $p<0.05$). Looking at the averages, the scores of those without disabilities (44.78±15.09) are significantly higher than the scores of those with disabilities (35.42±16.24). The total score of the Pathway Thinking Subscale shows a statistically significant difference based on their disability status ($t=-4.76$, $p<0.05$). Looking at the averages, the scores of those without disabilities (22.48±7.56) are significantly higher than the scores of those with disabilities (17.37±7.84). The total score of the Agency Thinking subscale shows a statistically significant difference based on their disability status ($t=-3.83$, $p<0.05$). Looking at the averages, the scores of those without disabilities (22.31±7.76) are significantly higher than the scores of those with disabilities (18.05±8.5).

The total score of the DHS for athletes shows a statistically significant difference based on their training frequency ($t=-4.78$, $p<0.05$). Looking at the averages, the scores of those who train 4 or more times a week (48.03±13.04) are significantly higher than the scores of those who train 3 or fewer times a week (40.26±16.41). The total score of the Pathway Thinking Subscale shows a statistically significant difference based on their training frequency ($t=-4.79$, $p<0.05$). Looking at the averages, the scores of those who train 4 or more times a week (24.04±6.62) are significantly higher than the scores of those who train 3 or fewer times a week (20.15±8.16). The total score of the Agency Thinking subscale shows a statistically significant difference based on their training frequency ($t=-4.64$, $p<0.05$). Looking at the averages, the scores of those who train 4 or more times a week (24±6.75) are significantly higher than the scores of those who train 3 or fewer times a week (20.12±8.41).

4.3. Correlation Analysis for the Relationship of Scale Scores

The relationship between the FSQ, ERSA and DHS scores were analysed by the Pearson correlation coefficient. Correlation analysis is a statistical approach used to determine the degree and direction of a relationship between variables without considering them as dependent or independent (Büyüköztürk et al., 2009).

The correlation coefficient is represented as r and provides information about the strength and direction of the linear relationship between two continuous variables (Büyüköztürk, 2009). Correlation ranges are divided into three categories; values between 0.70-1.00 are strong, values between 0.70-0.30 are moderate and values between 0.30-0.00 are weak (Cohen, 2013)

Table 8: Examination of the Relationship Between Emotion Regulation Scale for Athletes Subscale Scores and Dispositional Hope Scale/Subscale Scores

	FSQ (1)	1.1	1.2	2.1	2.2	3	3.1	
FSQ (1)	1							
Balance (1.1)	0,97**	1						
Absorption in the Activity (1.2)	0,93**	0,8**	1					
Reappraisal (2.1)	0,80**	0,8**	0,71**	1				
Suppression (2.2)	-0,59**	-0,61**	-0,49**	-0,54**	1			
DHS (3)	0,67**	0,67**	0,58**	0,66**	-0,36**	1		
Agency Thinking (3.1)	0,79**	0,8**	0,68**	0,79**	-0,59**	0,9**	1	
Pathway Thinking (3.2)	0,81**	0,82**	0,69**	0,8**	-0,65**	0,87**	0,95**	1

*p<0,05, **p<0,01 DHS: Dispositional Hope Scale, FSQ: Flow State Questionnaire, n:368

According to Table 8, the Reappraisal Subscale scores of the Emotion Regulation Scale for Athletes (ERSA) were significantly and positively high-level correlated with the total score of the DHS. Additionally, there was a high-level positive relationship between the scores of the Pathways Thought subscale and the Agency Thought subscale (respectively, r:0.79, r:0.78, r:0.79, p<0.05).

There is a moderate negative correlation between the scores on the Suppression subscale of ERSA and the total score of DHS, while a high-level negative correlation exists between the scores of the Pathways Thought subscale and the Agency Thought subscale (respectively, r:-0.61, r:-0.57, r:-0.63, $p<0.05$).

There is a high-level positive correlation between the total score of the athletes' FSQ and the Balance subscale score; between the Absorption in the Activity subscale score of FSQ and the Reappraisal subscale scores of ERSA (respectively, r:0.97, r:0.92, r:0.80, $p<0.05$).

There is a high-level negative correlation between the Suppression subscale score of ERSA and the total score of FSQ as well as the Balance subscale score, whereas there is a moderate-level negative correlation with the Absorption in the Activity subscale score (respectively, r:-0.57, r:-0.59, r:-0.46, $p<0.05$).

There is a high-level positive correlation between the total score of the athletes' DHS and the total score of FSQ; the Balance subscale score and the Absorption in the Activity subscale score (respectively, r:0.81, r:0.82, r:0.68, $p<0.05$).

There is a high-level positive correlation between the Pathways Thinking subscale score of the athletes' DHS and the total score of FSQ; the Balance subscale score and the Absorption in the Activity subscale score (respectively, r:0.79, r:0.80, r:0.678, $p<0.05$).

There is a high-level positive correlation between the Agency Thinking subscale score of the athletes' DHS and the total score of FSQ; the Balance subscale score and the Absorption in the Activity score (respectively, r:0.80, r:0.82, r:0.67, $p<0.05$).

4.4. Hierarchical Regression Analysis for Flow Experience

The variables found to have a relationship with the total score of the Flow Experience Scale were included in the regression model and the prediction of the scale scores was examined. Hypotheses were tested using hierarchical regression analysis. In this method, each independent variable is preordered in a certain order and evaluated in terms of how much it contributes to the equation at the point of entry into the model (George & Mallery, 2010).

In this study, categorical variables were entered into the model in the first step, ERSA subscales in the second step, and DHS total score in the third step. Due to the order in which the scales were administered in the form used as a data collection tool and based on some studies, DHS was entered into the model in the last step (Berber, 2018; Hagen et al., 2005). The results of the model mentioned below are presented in Table 9 and Table 10.

- Model 1. Age, Gender, Branches, Disability, Training Frequency
- Model 2. Age, Gender, Branches, Disability, Training Frequency, Reappraisal, Suppression
- Model 3. Age, Gender, Branches, Disability, Training Frequency, Reappraisal, Suppression, Dispositional Hope

Table 9: Findings for the Prediction of the Subscale Scores of the Flow State Questionnaire

		B	SE	β	t	p
1	(Constant)	38,82	1,46		26,53	.00
	Age	-.968	.97	-.05	-.99	.31
	Gender	.145	.9	.008	.16	.87
	Branches	-1,04	1,02	-.05	-1,01	.30
	Disability	3,48	1,31	.14	2,65	.008**
	Training Frequency	3,33	.91	.18	3,63	.00**
2	(Constant)	29,62	1,54		19,18	.00
	Age	-.2	.57	-.01	-0,35	.72
	Gender	1,08	.53	.06	2,02	.04
	Branches	-1,14	.6	-.05	-1,89	.059
	Disability	1,003	.77	.04	1,28	.19
	Training Frequency	1,17	.54	.06	2,16	.03*
	Reappraisal	.86	.04	.66	18,92	.00**
	Suppression	-.28	.04	-.22	-6,43	.00**
3	(Constant)	24,57	1,58		15,52	.00
	Age	-.21	.53	-.01	-.409	.68
	Gender	.98	.49	.05	1,97	.04
	Branches	-.36	.56	-.01	-.64	.51
	Disability	.12	.73	.005	.16	.87
	Training Frequency	.53	.51	.03	1,03	.3
	Reappraisal	.55	.06	.42	9,25	.00**
	Suppression	-.14	.04	-.11	-3,17	.002*
	DHS Total Score	.21	.02	.39	7,57	.00**

d. Dependent Variable: Flow State Questionnaire Total Score, *p<0,05, **p<0,01

Table 10: Comparison Values for the Hierarchical Model for Flow State Questionnaire

Model	R	R^2	Adjusted R^2	R^2 Change	F
1	.268	.072	.059	.072	5,600
2	.825	.681	.675	.609	109,853
3	.852	.725	.719	.044	118,345

The model for the prediction of the total score of the FSQ was carried out in three stages. In Model-1, it was determined that the model is significant when categorical variables are included with the FSQ score [F(5:362)= 5,600; p<0.05 Adjusted R2:0.059]. It was found that categorical variables explain 6% of the change in FSQ scores. It was statistically determined that the total FSQ scores of non-disabled athletes were 3.484 points higher than those of disabled athletes, and the balance scores of those who do sports 4 or more times a week were 3.336 points higher than those who do sports 3 or fewer times a week (p<0.05).

In Model-2, it was determined that the model is significant when the DHS is added to the categorical variables with the FSQ score [F(7:360)= 109.853 p<0.05 Adjusted R2:0.675]. It was found that the variables in Model 2 explain 67.5% of the change in FSQ scores. It was statistically significantly determined that the balance scores of the people who train 4 or more times a week were 1,177 points higher than the people who train 3 or less times a week (p<0,05). Reappraisal Subscale scores positively affect Balance Subscale scores by 0,869 and suppression scores by -0,289 standard deviation (p<0,01).

In Model-3, it was determined that the model is significant when the Reappraisal Subscale and Suppression Subscale of the ERSA and the DHS are added to the categorical variables with the FSQ score [F(8:359)= 118.345, p<0.05 Adjusted R2:0.719]. It was found that the variables in Model 3 explain 71.9% of the change in FSQ scores. The total score of the DHS affects positively by 0.218, cognitive scores of the ERSA affect Balance Subscale scores positively by 0.553, and Suppression Subscale scores negatively by -0.146 per standard deviation (p<0.01).

CHAPTER V

DISCUSSION

This study aims to investigate the role of athletes' emotion regulation skills and hope levels in predicting their flow experiences and to examine whether these three psychological concepts differ according to various variables. In this section, the findings obtained from the study are discussed within the framework of hypotheses and previous studies in the literature. Suggestions for the study are also included in this section.

5.1. Summary of the Results

According to the research questions of the study, Independent Sample T-tests, One-Way ANOVA analysis, post-hoc analysis, Bonferroni Tests, Tamhane’s tests, and Levene's tests were conducted and their assumptions were checked. Results indicated significant differences in flow experience, emotion regulation skills, and hope levels of athletes based on their age, disability status, and frequency of training. A Pearson's Product-Moment Correlation analysis was performed for the second research question.

Significant relationships were found between athletes' flow experience, emotion regulation skills, levels of hope, and all sub-dimensions. For the study's third research question, a hierarchical regression analysis was performed. The results of the model showed that emotion regulation and level of hope were significant predictors for athletes' flow experience. While disability status and training frequency explained 6% of the model in model-1, the predictive power of the model increased to 67.5% when emotion regulation skills were included in the analysis in model-2. Training frequency maintained its significance. When the level of hope was included in the analysis, the explanatory power of Model-3 increased by 4.4%. Training frequency lost its effect on the model. The whole model explains 71.9% of the flow experience. As a result of the preliminary tests, there is no multicollinearity between the variables with

high correlation values. This means that each of the independent variables that have an effect on the dependent variables measures different things and there is no problem of having the same root between them.

5.1.1. Discussion of Findings on Emotion Regulation Skills, Hope Levels and Flow Experiences of Athletes According to Age

There is a statistically significant difference according to age in the athletes' Flow Experiences total score and Absorption in the Activity sub-dimension score, Emotion Regulation Reappraisal sub-dimension score, Hope total score and Pathway Thinking sub-dimension. Looking at the averages, the scores of 18-21 years old are higher than the scores of 22-25 years old. However, the scores between age groups are quite close to each other. Contrary to our findings, some studies have found that there is no significant difference according to the age of the athletes (Aral, 2020; Kaya et al., 2015; Korer & Alpullu, 2020; Öner, 2022).

In a study conducted by Fossmo (2006) in Norway with 145 athletes (85 males and 59 females, aged between 18 and 40), age was found to be an important determinant of the flow experience sub-dimension of balance. As in this study, it was not evaluated from which age group the difference originated.

Van & Gantz (2021) concluded that the older adult group used emotion regulation skills better than the emerging adult group in the relationship of athletes' emotion regulation skills by age. He based this on Gross's (1998) first emotion regulation model. This model explains the different emotion regulation strategies used by older and younger people. While older adults tend to use antecedent-focused strategies, younger adults tend to use response-focused emotion regulation (Droulers et al., 2015; Urry & Gross, 2010). The young adults mentioned above represent the 18-25 age group and older adults represent the 55+ group. Because in this study there is a situation that changes with age, it can be seen that our findings do not overlap with this study in terms of emotion regulation skills. Orgeta (2009) examined

the correlation between age and emotion regulation skills, and found that older adults demonstrated more less difficulty in regulating emotions than young people. This implies that as individuals age, their ability to control emotional reactions improves.

In terms of research on the concept of hope, it was reported that significant differences were obtained between age and hope level (p=0.001) (Erci et al. 2017). Hope decreased with increasing age. It was thought that this situation may be due to the fact that individuals cannot meet their own needs, cannot act independently, and have fewer plans for the future as age increases.

It is assumed that individuals' judgements about the effort they have made for the experiences they have gained with age increase, so it is estimated that this situation is reflected in their emotion regulation skills and hope levels. Since there is a limited number of studies in the literature, more studies can be conducted on this subject. The difference between the results may be due to factors such as being a student and being at the beginning of their working life considering the living standards in Turkey. The findings of this study by age can be re-evaluated with new studies to be conducted with different demographic variables with youth and emerging adult groups.

5.1.2. Discussion of Findings on Emotion Regulation Skills, Hope Levels and Flow Experiences of Athletes According to Gender

Flow Experience and sub-dimension scores, Emotion Regulation sub-dimension scores, and Hope and sub-dimension scores do not show a statistically significant difference according to the gender of the athletes. Some studies support these findings (Fossmo, 2006; John & Eng, 2014; Kaya et al., 2015; Korer & Alpullu, 2020; Russell, 2001; Özer & Tezer, 2008; Ünlü et al., 2022).

Contrary to the findings of this study, Robazza et al. (2022) obtained higher scores in Suppression in males. The higher Reappraisal found in male athletes in this study contradicts

observations in general life contexts where gender differences in Reappraisal use across cultures have not been reported.

Aral (2020), on the other hand, concluded that among female recreation exercise participants, male participants had higher mean total hope. The differences encountered in the studies may be due to the change in the psychological skills of individuals with the change in perceived gender roles (Charlesworth, & Banaji, 2019; Croft et al., 2015; Koening, 2018).

5.1.3. Discussion of Findings on Emotion Regulation Skills, Hope Levels and Flow Experiences of Athletes According to Branches

Flow Experience and sub-dimension scores, Emotion Regulation sub-dimension scores, and Hope and sub-dimension scores do not exhibit a statistically significant disparity among the disciplines of the athletes.

This finding is consistent with Russell's (2001) research, which found that there was no significant distinction and stated that flow was experienced similarly across all sporting environments. Moreover, the notion of flow has typically been linked only to individual sports (Bakker et al., 2011). Nevertheless, Boyd et al. (2018) and Fossmo (2006) demonstrated that flow was experienced significantly more by athletes in team sports than in individual sports.

Robazza et al. (2022) linked higher levels of expressive suppression with athletes participating in team sports compared to those competing in individual sports. In contrast, in a study performed by Belem et al. (2014), team sports athletes demonstrated higher levels of hope than athletes in individual sports. The researchers posited that this phenomenon could be attributed to the shared objectives and collaborative spirit intrinsic to team sports. This may foster a collective sense of hope and mutual motivation among the team members.

In contrast, a study by Gustafsson, Hassmén, and Podlog (2010) found that individual athletes may have to rely more on personal hope and self-efficacy due to the absence of team

support. They concluded that these athletes can still achieve high levels of hope, but this hope may depend more on their personal beliefs and self-confidence.

In summary, while both individual and team athletes may exhibit high levels of hope and emotion regulation skills and remain in the flow, the source of this manifestation may differ significantly depending on the nature of the sports. Due to the paucity of existing research, future studies could continue to investigate this trend across different populations and sports, leading to clearer conclusions.

5.1.4. Discussion of Findings on Emotion Regulation Skills, Hope Levels and Flow Experiences of Athletes According to Disability Status

Flow Experience and sub-dimension scores, Emotion Regulation Reapraisal sub-dimension score, and Hope and sub-dimension scores show a statistically significant difference according to the disability status of the athletes. When the averages are considered, the scores of the non-disabled are higher than the scores of the disabled. However, the scores of groups are quite close to each other. Emotion Regulation Suppression sub-dimension total score of the athletes does not show a statistically significant difference according to the disability status of the athletes.

There is very limited information on the relationship between flow experience and disability status and no specific studies have been conducted on the comparison of disabled athletes and non-disabled athletes. Dunn and Brody wrote to provide an empirical and theoretical perspective on what attitudes and behaviours may constitute living a good life after acquiring a physical disability and mentioned that anyone (almost anywhere) can experience flow. They stated that individuals' social class, gender, culture, age and disability status do not affect the emergence of flow experience. Similarly, Martin (2012) showed that athletes with disabilities often report high levels of self-efficacy, resilience, and determination, which are characteristics that can facilitate flow experiences.

In contrast to the findings of this study, Neil, Mellalieu, and Hanton (2006) emphasised that all athletes use various emotion regulation strategies regardless of disability status. However, disabled athletes stated that they may need extra strategies due to the special difficulties and stress factors they face. In a later study by Neil and Hanton (2012), they concluded that disabled athletes may rely more on suppression as a defence mechanism, which may hinder their performance and affect their psychological well-being. For example, Martin (2013) stated that disabled athletes may rely more on suppression due to social prejudices and expectations, which can potentially have negative effects on their well-being and performance.

A study by Curry et al. (1997) revealed that both disabled and non-disabled athletes tend to exhibit high levels of hope. However, contrary to the findings of this study, it was stated that disabled athletes may exhibit even higher levels of hope, possibly due to their resilience and determination in the face of adversity (Martin, 2016).

In conclusion, although athletes with disabilities may face unique challenges and stressors, their disability status may not be a discriminating factor, and sometimes they may even exhibit superior emotion regulation skills, hope levels, and flow experiences. Other research and the findings of this study highlight critical of tailored psychological support that promotes adaptive emotion regulation strategies, enhances hope, and increases flow experiences for all athletes. The reason why the findings of this study are in the opposite direction of the studies conducted in terms of disability status may be due to the global COVID-19 pandemic process and the living conditions created by Turkey's economic prosperity in recent years. To make sense of the source of the difference, clearer conclusions can be reached by continuing the research among different populations and branches. Or, considering the existing studies, the disability status of the athletes may not be focussed in the next studies.

5.1.5. Discussion of Findings on Emotion Regulation Skills, Hope Levels and Flow Experiences of Athletes According to Training Frequency

Flow Experience and sub-dimension scores, Emotion Regulation Reapraisal sub-dimension score and Hope and sub-dimension scores show a statistically significant difference according to the training frequency of the athletes. Looking at the averages, the scores of those who train 4 or more times a week are significantly higher than the scores of those who train 3 or less times a week. When we look at the Emotion Regulation Suppression sub-dimension scores, the scores of those who train 3 or less times a week are higher than the scores of those who train 4 or more times a week, contrary to the other averages.

When the studies on flow experience were analysed, researchers found a positive relationship between the frequency of flow experiences and the time spent on training, which supports this study (Jackson et al., 1998; Kaya et al., 2015; Swann et al., 2012). Jackson et al. (1998) suggested that more training can increase athletes' skills and self-confidence, thus enabling them to focus more on their performance and experience flow more frequently.

Regarding emotion regulation, higher reappraisal scores among those who train more frequently and higher suppression scores among those who train less frequently overlap with Gross and John's (2003) study, although it is not an evaluation made directly for athletes. Athletes who train more frequently may have more opportunities to improve their cognitive reappraisal skills by confronting and reappraising stressors more frequently, thus increasing their use of cognitive reappraisal. While suppression, which is considered a less adaptive strategy, may lead to worse emotional outcomes, athletes who train less frequently may face more external stressors (work, academics, etc.) and thus resort to suppression more frequently.

In terms of hope, there is no study in the literature that explains the contribution of training frequency to the level of hope. In their study with Wushu athletes, Yelken et al. (2021)

concluded that the positivity levels of athletes increased as the weekly training days and duration increased during the COVID-19 pandemic. Considering that there is a high level of positive correlation between positive mood and hope, it can be considered that the studies conducted are supportive of the results of this research, if not directly (Mutlu, 2017). On the other hand, training frequency is mostly evaluated within the framework of exercise addiction (Batuhan & Aydın 2020; Cicioğlu et al., 2019; Koçyiğit et al.; 2022).

According to a study conducted on paragliders, an individual cannot enjoy her activity unless she improves her skills, so the difficulty-skill balance of experience and flow experience seems to move together (Ayazlar, 2015). As a result, it underlines the importance of regular training not only for physical performance but also for psychological well-being within the framework of athletes' emotion regulation skills, hope levels and flow experiences.

5.1.6. Discussion of Findings on Relationship Between Emotion Regulation Skills, Hope Levels, and Flow Experiences of Athletes

Flow is a heightened experience described by Csikszentmihalyi (1975/2000), that enhances an individual's capability to concentrate, work actively and concentrate all their efforts towards accomplishing their aspirations. Meanwhile, hope motivates individuals to pursue the best alternative paths, resulting in increased determination and effectiveness (Snyder, 1994; Yotsidi et al., 2018). Therefore, comprehending the potential of flow and hope as buffers against work challenges was deemed crucial to gain novel insights into how athletes can adequately prepare for training or matches and effectively deal with daily challenges. As expected, there is a high positive correlation between Hope and its sub-dimensions (Pathways and Agency Thinking) and Flow Experience and its sub-dimensions (Balance and Absorption in the Activity). These findings are in line with previous studies revealing the positive effect of flow and hope (Csikszentmihalyi, 1975/2000; Mouton, 2015; Snyder et al., 2002; Yotsidi et al. 2018). In a study conducted with 184 firefighters (175 men and 5 women), Yotsidi et al.

(2018) found a significant positive relationship between the flow experiences of firefighters measured after the fire and their hope levels.

There is a strong positive relationship between the Emotion Regulation Reapraisal sub-dimension, Flow Experience and its sub-dimensions (Balance and Absorption in the Activity), and Hope and its sub-dimensions (Pathways and Agency Thinking). There is a high-level negative relationship between the Emotion Regulation Suppression sub-dimension, Flow Experience and its sub-dimensions (Balance and Absorption in the Activity), and Hope and its sub-dimensions (Pathways and Agency Thinking). Also, there is a medium-level negative relationship between Flow Experience Absorption in the Activity and Hope. Unfortunately, there are not enough studies examining the relationship between emotion regulation and hope, emotion regulation and flow experience. These studies were conducted with non-athlete adult groups. The finding that the Reappraisal skill differs depending on the level of hope was also revealed in the studies conducted by Halperin and Gross (2011), and Peh et al. (2017) and supports the results of this study. Halperin and Gross (2011) conducted a study by contacting male and female Israeli citizens one week after the outbreak of the war between Israelis and Palestinians and found that cognitive reappraisal is an effective emotion regulation strategy with a wide range of benefits and that even in one of the most complex and emotionally charged situations imaginable (fighting during war), Reappraisal skills can enable people to maintain a positive sense of hope for the future. Peh et al. (2017) concluded in their study with 144 adult cancer patients that higher reappraisal skills were associated with lower anxiety/depression and hope mediated the relationship between reappraisal and anxiety/depression. In contrast to the findings of this study, they reported that they did not share a relationship between hope and suppression. The finding that reappraisal skill differs according to the level of hope was also revealed in the studies conducted by Knapp (2023), Xie (2022) and Fritz, & Avsec (2007) and supports the results of this study. Knapp (2023) conducted two separate pilot and primary

studies in his experimental study in which he introduced the new concept of emotion regulation flow. Both studies provide evidence supporting the notion that individuals can achieve a state of flow through the regulation of their emotions. Xie's (2022) investigation involved the recruitment of full-time customer service employees from a medium-sized retail chain based in China. The study, comprising of 452 participants (24 males and 428 females) from 112 teams, discovered that team mindfulness enhances flow at the team level and promotes members' participation in team activities, owing to an upsurge in interdependent interactions (voice) and improved skills in emotional regulation. Fritz and Avsec (2007) concluded in their study of 84 students, 28 of whom were male and 56 female, at the Music Academy that the experience of flow correlates with aspects of subjective well-being.

The fact that athletes have good emotion regulation skills, high levels of hope and being in the flow have a positive effect on the mental health of individuals, in general, which may be the reason for the findings of this study. It is possible to regulate situations such as increasing, decreasing and maintaining positive and negative emotions with emotion regulation skills. Hope, which is considered a positive emotion, is a factor that shows people ways to cope with the fear and anxiety caused by bad situations and problems that may occur in moments of distress and uncertainty and enables them to evaluate and reinterpret the current situation. Suppressing emotions hinders this process. Considering that "going with the flow" requires a balance of challenge-skill, clear goals, high concentration and a sense of control, these findings shed light on the role of flow in increasing work engagement, especially in high-stress activities. Likewise, considering that people with positive emotions are more in a state of flow, the inevitable connection between emotion regulation skills, hope level and flow experience confirms the findings (Csikszentmihalyi, 1975/2000; Gross J., 1998; Halperin & Gross, 2011; Snyder et al., 2002; Talay, 2021).

5.1.7. Discussion of Findings of the Predictive Power of Emotion Regulation Skills and Hope Levels on Flow Experience of Athletes

The third research question aimed to determine whether emotion regulation and hope level predicted the state of flow experience. Looking at hierarchical regression results, it was found that hope and subscales of emotion regulation significantly predicted the state of flow experience.

In the first step of the hierarchical regression analysis, age, gender, branches and disability status as dummy variables were added to the analysis. According to the result of the first model, age, gender and branches of the athletes were not significant predictors of flow experience state. A similar conclusion was found in some research in the literature (e.g., Kaya et al., 2015; Boyd et al., 2018; Jackson, 1995). Although age, gender, branches, and disability status effective factors for flow experience in some studies, flow experience may also be affected by personal experiences, cultural factors, or social values. Moreover, the unequal sample distribution may also be a reason why age, gender, branches, and disability status are not a significant factor for flow experience. On the other hand, athletes' training was found to be a significant positive predictor of flow experience. The results found in the literature on the relationship between flow experience and training are similar (e.g., Jackson, & Eklund, 2002; Swann et al., 2012). This may be because the frequency of training allows athletes to have more experience and opportunities to develop the necessary skills and control to achieve flow.

In the second step of the hierarchical regression analysis, emotion regulation sub-dimensions of Reappraisal and Suppression were added to the analysis. According to the results of the second model, emotion regulation was found to be a significant positive predictor of flow experience in athletes. The results found in the literature on the relationship between emotion regulation and flow experience in athletes are similar (e.g., Lane et al., 2012; Puente-Díaz & Anshel, 2005). The reason for this situation may be that athletes' emotion regulation

skills make it more likely for them to direct their attention more effectively and maintain their focus, increase their belief in their abilities, cope with stressful and anxiety-provoking situations, and experience flow experience due to performance increases (Bandura, 1977; Gross, 1998; Jones et al., 1994; Muraven & Baumeister, 2000). The predictive power of athletes' training frequency on flow experience decreased when the athlete developed emotion regulation skills.

In the last step of the hierarchical regression analysis, hope level was added to the analysis. The results showed that hope level was a significant positive predictor of flow experience in athletes. There are a limited number of studies examining the relationship between hope level and flow experience in athletes and similar results were found in these studies (Chen & Kee, 2017; Schmid et al., 2020). The fact that level of hope athletes has the motivation to find and follow the necessary ways to achieve goals, cope better with stress and anxiety, develop more effective adaptation and problem-solving strategies in the face of difficulties and problems, and be more flexible in the face of difficulties can explain the relationship with flow experiences (Chen & Snyder, 2010; Gallagher & Lopez, 2009; Gustafsson et al., 2010; Snyder et al., 1991). The development of emotion regulation skills and the increase in the level of hope in athletes have caused demographic variables to lose their importance. This situation reveals the importance of psychological factors for athletes.

5.1.8. Implications and Recommendations for Practitioners

The results of the study showed that emotion regulation skills and hope levels of athletes were predictors of flow experiences. In addition, similar results were observed in the correlational analysis. To enhance athletes' emotion regulation skills and increase levels of hope, psycho-educational groups, group counselling, group guidance, individual counselling, seminars, and workshop sessions could be organized by competent field professionals, such as sports psychologists, in institutions that have access to athletes, such as schools, clubs, and

public institutions affiliated with the Ministry of Youth and Sports. The adaptation of similar studies for coach education can contribute to the development of the psychological skills of athletes by improving the athlete-coach climate. For example, in emotion regulation, Suppression may occur late in the emotion generation process, requiring the athlete to control her behavioural emotional response tendencies with effort. Otherwise, it depletes cognitive resources by lowering the level of hope that can be used for task success and optimum performance and may affect the ability to stay in the flow. Therefore, coaches need to be particularly aware that performance climate can lead to maladaptive emotion regulation and dysfunctional anger in their athletes. It is thought that if these planned interventions are implemented effectively, athletes' emotion regulation skills will improve their hope levels will increase and their flow experiences will increase.

Sports psychologists can include mindfulness exercises, emotion-focused therapy techniques such as emotion diary, goal-setting techniques, positive psychology techniques and inventories in their work to improve the emotion regulation skills of athletes and increase their hope levels. Trainers and experts should also consider the training frequency factor, as it increases the chances of practice and therefore can equally support the development of their skills. Determining the individual and external factors that affect the emotion regulation skills and hope levels of the athletes and conducting studies on these may also be important to improve their flow experiences. Findings from the results of the study underline the importance of specific psychological interventions and support in sports settings. In addition, the employment of sports psychologists and the support of in-house specialist training will allow the development of the psychological skills of the athletes.

5.1.9. Recommendations and Implications for Field Researchers

Considering the limitations of this study, it is suggested that the study be conducted with the same variables by including a larger group of participants and different sports

branches. In addition to the frequency of training can also be analysed like training content, such as mental and physical. More comprehensive qualitative and quantitative research can be conducted to understand the flow experience process in athletes in depth. Especially, since there are very few studies in the field of positive psychology and emotion regulation in the sports literature, it can be said that more studies on the determinants of flow experience in athletes may be useful. Lastly, for the development of sports psychologists and academicians, theoretical and practical training should also incorporate approaches from positive psychology and emotion-focused therapy.

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APPENDICES

Appendix 1: Personal Information Form

Bu anket formu, Yeditepe Üniversitesi Eğitim Bilimleri Enstitüsü Psikolojik Danışmanlık ve Rehberlik Anabilim Dalı yüksek lisans tez çalışması kapsamında hazırlanmıştır. Çalışma, lisanslı sporcuların duygu düzenleme becerileri ve umut düzeylerinin akış deneyimlerini yordama gücünü saptama üzerinedir. Çalışmaya 18-29 yaş aralığında yer alan ve aktif spor yaşantısına devam eden lisanslı sporcular katılabilmektedir.

Bilimsel nitelik taşıyan bu araştırmanın, idari, ticari veya siyasi herhangi bir yönü yoktur. Elde edilecek olan bilimsel bilgiler sadece bilimsel yayınlarda, sunumlarda ve eğitim amaçlı çevrimiçi bir ortamda paylaşılacaktır.

Bu çalışmaya katılımınız gönüllülük esasına dayanmaktadır. Sorulara eksiksiz, gerçekçi ve içtenlikle cevap vermeniz, bu araştırmanın amacına ulaşmasına katkıda bulunacaktır.

Yaklaşık 20 dakika sürecek olan bu uygulamada yer alan hiçbir aşama, kişisel rahatsızlık verecek nitelikte değildir. Ancak herhangi bir nedenden ötürü kendinizi rahatsız hissederseniz, nedenini açıklamaksızın çalışmayı yarıda bırakıp, istediğiniz zaman sonlandırabilirsiniz. Çalışmadan ayrılmanız durumunda sizden toplanan veriler çalışmadan çıkarılacak ve imha edilecektir.

Lütfen anket formuna adınızı, soyadınızı veya kimliğinizi belirten hiçbir şey yazmayınız.

Bu ankette, 43 adet soru bulunmaktadır. Soruları, parantez içindeki boşluklara X işareti koyarak, verilen boşluğa yazarak cevaplandırınız. Örnek: (X). Verilen şıklarda, size uygun cevaplar olmadığı takdirde, "Diğer (BELİRTİNİZ) ….." şeklindeki boşluklara yanıtınızı yazabilirsiniz. Cevap için ayrılan kısımlar yetmediği takdirde, anket formunun boş kısımlarını da yanıt için kullanabilirsiniz.

Sorulara vereceğiniz cevaplarla yapacağınız değerli yardım ve katkılarınız için şimdiden teşekkür ederim. Çalışma hakkında daha fazla bilgi almak ve yanıtlanmasını istediğiniz sorularınız için **********@********** adresi üzerinden iletişim kurabilirsiniz.

Saygılarımla,

Araştırmacı

Psk. Dan. Belgin Özçelik

Kişisel Bilgi Formu

1-Yaşınız?

……

2-Biyolojik cinsiyetiniz?

( ) Kadın ( ) Erkek

3-Spor branşınız?

……..

4-Herhangi bir engeliniz var mı?

( ) Bedensel Engel

( ) İşitsel Engel

( ) Görme Engeli

( ) Diğer (BELİRTİNİZ) ……..……

5- En az bir yıldır spor psikoloğu ile çalışıyorum.

( ) Evet.

( ) Hayır

6-Antrenman sıklığınız?

( ) Haftada 3 veya daha az

( ) Haftada 4 veya daha fazla

Appendix 2: Flow State Questionnaire

1	**2**	**3**	**4**	**5**
Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Oldukça Katılıyorum

Lütfen, az önce yapmış olduğunuz aktiviteyi göz önünde bulundurarak, ölçeğin maddelerinde yer alan ifadelere katılma düzeyinizi, her maddenin karşısında bulunan numaralardan birini yukarıdaki düzeylere göre işaretleyerek belirtiniz.						
1.	Zihnim bedenimle tamamen uyumlu olarak çalıştı.	1	2	3	4	5
2.	Aktiviteyi yaparken dikkatim hiç dağılmadı.	1	2	3	4	5
3.	Bu iş çok zor değildi.	1	2	3	4	5
4.	Ne yapmam gerektiğini tam olarak biliyordum ve o şekilde davrandım.	1	2	3	4	5
5.	Bu işi ilgi çekici buldum.	1	2	3	4	5
6.	Aktivite dikkatimi tamamen çekti.	1	2	3	4	5
7.	Bu durum hakkında kontrolün tamamen bende olduğunu hissettim.	1	2	3	4	5
8.	Becerilerim aktivitenin zorlayıcılığı karşısında dengeliydi.	1	2	3	4	5
9.	Zorluklara ayak uydurabildim.	1	2	3	4	5
10.	Görevi halledebileceğimi biliyordum.	1	2	3	4	5
11.	Benim için sıkıcıydı.	1	2	3	4	5
12.	Zamanın geçişini unuttum.	1	2	3	4	5

Appendix 3: Emotional Regulation Scale of Athletes

1	**2**	**3**	**4**	**5**	**6**	**7**
Kesinlikle katılmıyorum	Katılmıyorum	Biraz katılmıyorum	Kararsızım	Biraz katılıyorum	Katılıyorum	Kesinlikle katılıyorum

Lütfen, ölçeğin maddelerinde yer alan ifadelere katılma düzeyinizi, her maddenin karşısında bulunan numaralardan birini yukarıdaki düzeylere göre işaretleyerek belirtiniz.								
1.	Müsabakada ya da antrenmanda yaşadığım duyguları kendime saklarım.	1	2	3	4	5	6	7
2.	Müsabakada ya da antrenmanda olumlu duygular hissettiğimde onları ifade etmemeye özen gösteririm.	1	2	3	4	5	6	7
3.	Müsabakada ya da antrenmanda stresli bir durumla karşılaştığımda sakin kalmama yardımcı olacak biçimde düşünmeye çalışırım.	1	2	3	4	5	6	7
4.	Müsabakada ya da antrenmanda yaşadığım duyguları onları açıklamayarak kontrol ederim.	1	2	3	4	5	6	7
5.	Müsabakada ya da antrenmanda daha fazla olumlu duygu hissetmek istediğimde durum hakkındaki düşünme biçimimi değiştiririm.	1	2	3	4	5	6	7
6.	Müsabakada ya da antrenmandaki duygularımı içinde bulunduğum durumla ilgili düşünme biçimimi değiştirerek kontrol ederim.	1	2	3	4	5	6	7
7.	Müsabakada ya da antrenmanda olumsuz duygular hissediyorsam kesinlikle onları ifade etmem.	1	2	3	4	5	6	7
8.	Müsabakada ya da antrenmanda daha az olumsuz duygu hissetmek istediğimde durumla ilgili düşünme biçimimi değiştiririm.	1	2	3	4	5	6	7

Appendix 4: Dispositional Hope Scale

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Kesinlikle yanlış	Çoğunlukla yanlış	Oldukça yanlış	Biraz yanlış	Biraz doğru	Oldukça doğru	Çoğunlukla doğru	Kesinlikle doğru

Lütfen, ölçeğin maddelerinde yer alan ifadelere katılma düzeyinizi, her maddenin karşısında bulunan numaralardan birini yukarıdaki düzeylere göre işaretleyerek belirtiniz.									
1.	Sıkıntılı bir durumdan kurtulmak için pek çok yol düşünebilirim.	1	2	3	4	5	6	7	8
2.	Enerjik bir biçimde amaçlarıma ulaşmaya çalışırım.	1	2	3	4	5	6	7	8
3.	Çoğu zaman kendimi yorgun hissederim.	1	2	3	4	5	6	7	8
4.	Bir problemin birçok çözüm yolu vardır.	1	2	3	4	5	6	7	8
5.	Tartışmalarda kolayca yenik düşerim.	1	2	3	4	5	6	7	8
6.	Hayatta önem verdiğim şeylere ulaşmak için pek çok yol düşünebilirim.	1	2	3	4	5	6	7	8
7.	Sağlığım için endişelenirim.	1	2	3	4	5	6	7	8
8.	Başkalarının ümitsizliğe kapıldığı durumlarda bile sorunu çözecek bir yol bulabileceğimi bilirim.	1	2	3	4	5	6	7	8
9.	Geçmiş yaşantılarım beni geleceğe iyi hazırladı.	1	2	3	4	5	6	7	8
10.	Hayatta oldukça başarılıyım.	1	2	3	4	5	6	7	8
11.	Genellikle endişelenecek bir şeyler bulurum.	1	2	3	4	5	6	7	8
12.	Kendim için koyduğum hedeflere ulaşırım.	1	2	3	4	5	6	7	8