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Motivational Profiles of Young Norwegian Swimmers

A cross-sectional study of motives, self-determined motivation, goal orientation, and perceived motivational climate in a group of 11-13-year-old Norwegian swimmers, and their parents

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Abstract

Motivation is important for enjoyment, skill development, and persistence in swimming. The quality and direction of motivation is influenced by a swimmer's perceived motivational climate, which is created by coaches and parents. The theoretical framework combines self-determination theory and achievement goal theory, to analyze the motivational profiles of swimmers and the influence of social climate on the profile. Parental influence has a great impact on young children's participation motives and motivation, but previous research has so far not asked parents of their beliefs of their child's motives and motivation. Online questionnaires were distributed to 11-13-year-old swimmers (n = 69) and their parents (n = 88). The children responded to five questionnaires measuring sport participation motives (PMQ), self-determined motivation (BRSQ), goal orientation (POSQ), coach-initiated motivational climate (PMSCQ), and parent-initiated motivational climate (MCISCQ-Parent). Parents responded to the PMQ and BRSQ indicating their belief of their child's motives and self-determined motivation. Results showed that swimmers are predominantly intrinsically motivated, task oriented, and perceive a mastery climate from coaches and parents. Parents' belief of their child's motives and self-determined motivation matched the self-report of the swimmers. Coaches are shown to impact self-determined motivation and goal orientations to a greater extent than parents. In conclusion, coaches and parents should aim to maintain their current focus on mastery and enjoyment. This can ensure longer participation in and greater enjoyment of the sport, which would lead to further development and improved performance.

Sammendrag

Motivasjon er viktig for idrettsglede, utvikling og langsiktig deltakelse i svømming. Både kvaliteten og retningen på motivasjonen påvirkes av svømmerens opplevde motivasjonsklima, som skapes av trenere og foreldre. Det teoretiske rammeverket kombinerer Selvbestemmelsesteorien og Målorienteringsteorien, for å analysere svømmernes motivasjonsprofiler og påvirkningen av sosialt klima på profilen. Foreldre har stor innvirkning på yngre barns motiver for deltakelse og motivasjon, men tidligere forskning har så langt ikke spurt foreldre om hva de tror barnets motiver og motivasjon er. Online spørreskjemaer ble distribuert til 11-13 år gamle svømmere (n = 69) og deres foreldre (n = 88). Barna svarte på fem spørreskjemaer som målte motiver for deltakelse i konkurransesvømming (PMQ), selvbestemt motivasjon (BRSQ), målorientering (POSQ), trenerinitiert motivasjonsklima (PMSCQ) og foreldreinitiert motivasjonsklima (MCISCQ-Parent). Foreldre svarte på PMQ og BRSQ og indikerte hva de tror barnets motiver og selvbestemt motivasjon er. Resultatene viste at svømmere i hovedsak er indre motivert, oppgaveorienterte og oppfatter et mestringsklima fra trenere og foreldre. Foreldres tro på barnets motiver og selvbestemte motivasjon samsvarte med svømmernes selvrapporterte motiver og selvbestemte motivasjon. Trenere viste seg å påvirke selvbestemt motivasjon og målorientering i større grad enn foreldre. Derfor bør trenere og foreldre ha som mål å opprettholde sitt nåværende fokus på mestring og glede. Dette kan sikre lengre deltakelse i og større glede av sporten, noe som vil føre til videre utvikling og økt prestasjon.

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List of Abbreviations

- SDT – Self-Determination Theory
    - OIT – Organismic Integration Theory
    - BPNT – Basic Psychological Needs Theory
        - BPN – Basic Psychological Needs
    - CET – Cognitive Evaluation Theory
    - COT – Causality Orientation Theory
    - GCT – Goal Contents Theory
    - RMT – Relationships Motivation Theory
- AGT – Achievement Goal Theory
- PMQ – Participation Motivation Questionnaire
    - CompTrain – Sport Specific Characteristics
    - SigOther Significant Others
- BRSQ – Behavioural Regulation in Sport Questionnaire
    - IM – Intrinsic Motivation

    - ID – Identified Regulation
    - IJ – Introjected Regulation
    - EX – External regulation
    - EXpres – External regulation pressure
    - EXrew – External regulation rewards
    - AM – Amotivation
- POSQ – Perception of Success Questionnaire
    - Ego – Ego Orientation
    - Task – Task Orientation
- PMCSQ – Perceived Motivational Climate in Sports Questionnaire-Short
    - Coach Perf – Coach Performance Climate
    - Coach Mast – Coach Mastery Climate
- MCISCQ-Parent – Parent-Initiated Motivational Climate in Individual Sport Competition Questionnaire
    - Mother Perf – Mother performance climate
    - Mother Mast – Mother mastery climate
    - Father Perf – Father performance climate
    - Father Mast beha – Father mastery behaviors
    - Father Mast val – Father mastery values

Dear reader,

In this document you will first find an extended version of the theoretical background and method for the research project. The first part elaborates the definitions and discussion on participation motives, both self-determined motivation and achievement goal orientations, and influences from the social environment. This section proves a detailed rationale for the theoretical foundation of the research approach as well as an in-depth presentation of the two most popular motivation theories in sport psychology, self-determination theory and achievement goal theory. These are further discussed in terms of compatibility. The section ends with a brief review of research on motives, motivation, and climate in swimming before presenting the objectives of the master thesis. The extended theoretical background is followed by an extended method section. The ethics chapter is the longest compared to the following method section of the article. The second part of the thesis is the article written for publication in the Journal of Applied Sport Psychology, in accordance with the journal's guidelines. The appendices have not been translated into English for this thesis and are attached in Norwegian as they are distributed to the participants, or received from research instances for approval.

Enjoy!

Definitions and Theoretical Background

Why do you do what you do?

What drives you to continue?

Motives and Motivation

Motives can be defined as classes of reasons for an action, and are be separated into primary and secondary motives (Madsen, 1968; Peters, 1960). The word motive originates from the Latin word 'motivus' which means to move. Thus, motives are the 'movement' causing actions. In a synthesis of motives and motivation theories Madsen (1968) describes primary and secondary motives. Primary motives are considered the basic needs of the body such as food and water, while secondary motives relate to social needs, growth, and performance. Having defined a motive as a reason for an action, motivation is usually thought to be the force that arouses, regulates, and maintains behavior (Madsen, 1968; Roberts et al., 2018). Over the past decades theories of motivation have developed to explain the underlying mechanisms and processes of the phenomenon. These theories comprehensively explore aspects of "why individuals behave as they do" in learning and achievement situations (Hattie et al., 2020, p. 2). Motivation is an important factor for both predicting and explaining persistence in organized sport, e.g. swimming (Monteiro et al., 2018a). It can be regarded as a social construct of the reasons for behavior and defined as a psychological "force that energizes and directs behavior" (Clancy et al., 2017, p. 1).

Hence, motivation describes the psychological process of behavior while motives are understood as the specific reasons for engaging that behavior, or in an activity. This inner force to complete actions has both a strength and a direction, which can be both internal and external (Ryan & Deci, 2020). Internal motivation implies that the drive comes from one's own wishes and internal forces while external motivation comes from outside forces, for example incentives or to be yelled at. There are many theories of motivation, and the two most popular in sport psychology are Self-Determination Theory (SDT) and Achievement-Goal Theory (AGT) (Teixeira et al., 2020). Ryan and Deci's theory (SDT) explains the motivational force using the terms intrinsic and extrinsic motivation. They highlight that intrinsic motivation is based on the wish to do something for the sake of the activity, or "for one's owns sake" (p. 2). External motivation, on the other hand, is divided into four types of behavioural regulations, which are further explained in the section on SDT (Ryan & Deci, 2020). AGT is based on a

theory of achievement orientation, which can be influenced by both internal and external factors, as well as perception of success and competence (Nicholls, 1989).

Together motives and motivation provide a stable foundation for meaningful actions. Motivation ensures a drive towards goals and proficiency, and is necessary to maintain persistence, development, and performance in any activity. People can have multiples motives at the same time, both internal and external motives. The same applies to intrinsic and extrinsic motivation which, together with motives, will influence the motivation people experience (Ryan & Deci, 2020). The following sections will present the theoretical background of the thesis starting with a short chapter of self-determination theory, followed by achievement-goal theory, including motivational climate. Then the compatibility of the two theories is discussed and finally research on swimmer's motives and motivation present the context of the present research.

Self-Determination Theory

Self-determination theory (SDT) is an organismic theory inspired by humanistic psychology. It highlights psychological growth and integration (e.g. mastery, learning, development) as important aspects of motivation, and claims that a healthy development requires the support of three basic psychological needs (autonomy, relatedness, competence) (Ryan & Deci, 2002, 2020). As an organismic theory SDT assumes that human behavior is driven in pursuit of satisfying fundamental psychological needs, with the ultimate goal of developing a sense of self (Deci & Ryan, 2004). The theory consists of six mini-theories which conceptualize the psychological process of motivation through intrinsic and extrinsic motivation, the specific psychological needs, and environmental influences. Two of the six mini-theories are essential for the present study and are therefore presented first; Organismic Integration Theory and Basic Psychological Needs Theory. The final four, Cognitive Evaluation Theory, Causality Orientations Theory, Goal Contents Theory, and Relationships Motivation Theory are then shortly presented in random order.

Organismic Integration Theory

The Organismic Integration Theory (OIT) presents motivation on a continuum according to level of integration, type of regulation, and self-determination (Ryan & Deci, 2000). It distinguishes two forms of motivation, intrinsic and extrinsic. Intrinsic is autonomous while extrinsic is generally considered controlled the forms of motivation. The highest form of self-determined motivation is intrinsic and is fully autonomous. A person engaged in an activity for the enjoyment of the activity itself is said to be intrinsically motivated. They experience the

activity as free, self-endorsed, and with internal control (Deci & Ryan, 2000). Extrinsic motivation is divided into four forms of external regulation. This is further defined as either an autonomous or a controlled form. Integrated and identified regulation are considered autonomous forms of extrinsic motivation. These are considered as higher forms of self-determined motivation compared to introjected and extrinsic regulation, which are controlled forms of extrinsic motivation. Amotivation, or lack of motivation, can be considered the lowest form of extrinsic regulation and is treated as a separate construct of the continuum (Figure 1) (Roberts et al., 2018; Ryan & Deci, 2020). Integrated regulation explains motivation to be driven by personal values and importance. This type of regulation is thought to develop later than age 11, as motivation is integrated into ones identity (Viladrich et al., 2013). Identified motivation regulates behavior through what is deemed important though not necessarily interesting or enjoyable (Deci & Ryan, 2000). The two forms of controlled extrinsic motivation, introjected and external regulation, are similar in the sense that behavior is driven by a type of pressure. The former explains behavior driven by inner pressure such as avoidance of guilt, while the latter describes motivation driven by external factors such as reward or punishment. Amotivation is the lowest form of motivation and is unregulated. It is characterized by unmotivated behavior and lack of intention. At this level of motivation, one does not always connect the reason and outcomes of their actions, and perceived locus of control is external (Ryan & Deci, 2000).

Basic Psychological Needs Theory

The basic psychological needs theory (BPNT) states that people's basic needs are competence, autonomy, and relatedness, and that motivation is dependent on the level of satisfaction of these needs (Ryan & Deci, 2000). If satisfied, the needs ensure experience of mastery through high perception of competence, of being in control of one's life and actions, and meaningful interactions. A high level of satisfaction in the three psychological needs is considered essential for maintaining intrinsic motivation and autonomous forms of extrinsic motivation (integrated and identified regulation, Figure 1). Thwarting of these needs can negatively affect wellbeing while a need-supportive environment will foster both wellbeing and intrinsic motivation (Deci & Ryan, 2000). The level of need-satisfaction further affects development which is influenced by the psychosocial environment. This theory proposes that a person develops most effectively in a need-supportive environment compared to a need-thwarting environment.

Cognitive Evaluation Theory

The Cognitive Evaluation Theory (CET) precede OIT as it exclusively focus on intrinsic motivation (Deci & Ryan, 2004). This type of motivation is considered to be high in internalization, hence not driven by external forces, and is believed to enhance well-being. Basically, this theory explains motivation that is based on the enjoyment of the activity itself (Deci & Ryan, 2000), which BPNT and OIT proposes as dependent on satisfaction of the three psychological needs (Mertens et al., 2018). To maintain and build this type of motivation both coaches and parents can contribute with autonomy support and competence, in addition to providing a climate that fosters friendship (Cerasoli & Ford, 2014; Chatzisarantis & Hagger, 2007; Fransen et al., 2018; Jõesaar et al., 2012).

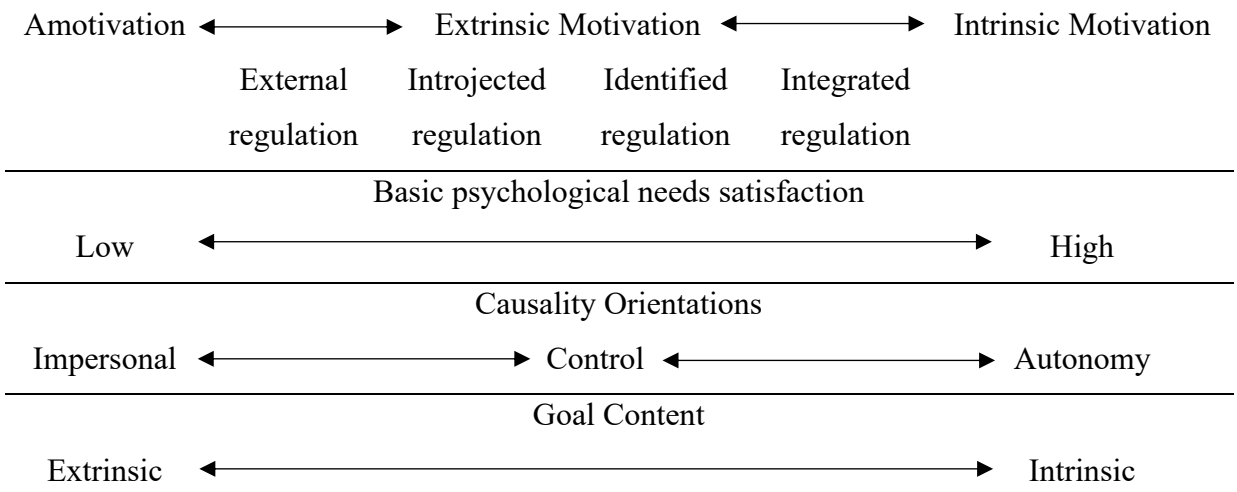
Causality Orientation Theory

The Causality Orientation Theory (COT) describes why people seek different environments and how they regulate behavior. It proposes three different types of causality orientations, namely autonomy, control, and impersonal orientation. These explains the underlying causes of an individual's behavior, and their experience of control over one's own actions (Ryan & Deci, 2000). An *autonomy-oriented* individual is motivated by internal interests, similar to intrinsic motivation. *Control-oriented* people choose actions, situations or activities based on the potential gains, such as rewards and appraisal. This type of causality orientation is comparable to several types of extrinsic motivation. The final type of orientation is *amotivated* or *impersonal*. People with this type of orientation usually experience low levels of needs satisfaction, which increases levels of anxiety (Center for Self-Determination Theory, 2021). The causality orientations can be placed along the same continuum of motivation OIT proposes, and the different orientations correspond with similar levels of motivation and internalization (Figure 1).

Goal Contents Theory

The Goal Contents Theory (GCT) proposes two types of goals based on the previous mini-theories: intrinsic and extrinsic (Deci & Ryan, 2000). Intrinsic goals involve relationships and personal improvement. Extrinsic goals focus on external rewards such as objective success or fame. Intrinsic goals are associated with higher levels of intrinsic motivation and well-being (Figure 1). These goals compare to the achievement goal theory presented in the next section (Cerasoli & Ford, 2014).

Figure 1. Continuum of Self-Determination Theories



Relationships Motivation Theory

The Relationships Motivation Theory (RMT) further explores and explains the need for relatedness (Deci & Ryan, 2014). It aims to discover the reality of healthy relationships and personal experience of needs satisfaction in such a relationship. This is an important topic as social cohesion increases BPN satisfaction (Erikstad et al., 2018). It is particularly important for team sports, but also individuals invested in their training group. Coaches and parents contribute with BPN satisfaction through their relations with the child, and their support mediate the relationship between self-efficacy and physical activity (Gillison et al., 2017).

Achievement-Goal Theory

Achievement-goal theory (AGT) is a social cognitive theory of motivation originally developed for educational settings, and later applied in performance situations for sports (Nicholls, 1989; Roberts et al., 2018). Its success in the classroom and during performance situations such as exams, has grounded the pertinence of this theory in sports. AGT is based on a belief that human behavior is rational and intentional. This leads the theory to explain the purpose of action through achievement-goals. The motivational forces of actions are explained with cognitive schemas of achievement goals, which can be considered a different program for goals, situations, and activities. A person's cognitive schema is influenced by their perception of success and differentiation between effort and ability. This results in either an *ego orientation* or *task orientation*. AGT explains the motivational forces behind human behavior by explaining how people engage in different tasks to achieve the desired goal, i.e. competence. The theory considers states of involvement and individual predispositions, as well as social climate, which are presented accordingly.

An individual's state of involvement depends on their conception of ability, which can be undifferentiated or differentiated (Nicholls, 1989). An undifferentiated conception of ability assumes that effort equals ability, while a differentiated conception of ability separates effort and ability as two different capacities (Roberts et al., 2018). Whether one has a differentiated or undifferentiated conception of ability it will affect the person's judgement of success. An individual's understanding of a situation will affect their investment of effort, talent, and time in that activity, depending on their state of involvement (Duda, 1987; Roberts et al., 2018). AGT labels the first conception of ability as being *ego-involved* and the latter as *task-involved*. An ego involved person will experience success as dependent on their performance compared to others'. They seek superior performance or equal performance with less effort to feel competent (Duda, 1987). Hence, they experience success when demonstrating superiority. For these people competence is other-referenced and external. This can lead to what is considered maladaptive behaviors in a performance situation as they tend to avoid challenges, perform with less effort, or even dropout (Monteiro et al., 2018b; Nicholls, 1989). They avoid activities if they cannot demonstrate superiority, especially if their perception of ability is low (Roberts et al., 2018). Task-involved people are striving for personal mastery of a skill. This mastery or learning increases such people's perception of competence and success. For a task involved person competence is self-referenced, internal, and autonomous. They experience success when mastering a new skill or improving an old one, and are more likely to persist in challenging situations, seek challenges, and be intrinsically interested in tasks (Roberts et al., 2018). In other words, the perception of success is either based on the performance of those around you (ego-involved) or past performance (task-involved). In an achievement-situation, a person can be more or less ego- or task-involved, but not both at the same time since the two states of involvement range on a continuum and are considered mutually exclusive (Roberts et al., 2018).

The states of involvement are considered situational, domain specific, individual, and can change over time (Roberts et al., 2018). An athlete can start a competition by focusing on their person goals or improving their personal best time, but throughout the day shift focus towards wanting to outperform their competitors. As a result of, and affected by previous experiences and socialization through ego- or task-involving contexts, athletes develop what is called an goal orientation (Nicholls, 1989). AGT suggests two goal orientations based on the two conceptions of ability: *ego-orientation* and *task-orientation*. A task-oriented person has a less differentiated conception of ability, and success is self-referenced. They aim to improve skills or learn, as they believe success comes from hard work, knowledge, and collaboration.

In contrast, an ego-oriented person believes that success is other-referenced, e.g., demonstrate superior ability, and they avoid situations or activities which could result in displaying incompetence (Duda & Nicholls, 1992).

Young children operate with an undifferentiated concept of ability until around the age of 11. Around this age they reach a level of cognitive development enabling them to differentiate ability and effort (Horn, 2008; Ntoumanis, 2001; Roberts et al., 2018). From this age children can therefore be separated into being primarily ego- or task-oriented (Duda, 1987; Roberts et al., 2018). The two orientations are considered orthogonal, and the most adaptive profiles are considered high task and high ego, or high task and low ego (Roberts et al., 2018; Roberts et al., 1996). While young children, with an undifferentiated concept of ability, will be considered and benefit from being task-oriented, elite athletes are shown to benefit from being high in both ego and task orientation (Pensgaard & Roberts, 2000). Typically, the literature support a positive relationship between task-orientation and intrinsic motivation. Smith et al. (2006a) found that higher task goal orientation increased adaptive motivational responses such as enjoyment, satisfaction, and perceived ability in a group of 9-12-year-olds.

Motivational Climate

How people interpret their motivational climate is influenced by their leader's conception of ability (undifferentiated or differentiated), and how individual success is evaluated by them (e.g. coach or parent) (Buch et al., 2017). The judgement of success, either self-referenced or other-referenced, will contribute to develop a specific type of climate. This is either a performance climate promoting ego orientation or a mastery climate promoting task orientation (Nicholls, 1989). In a mastery climate success is defined as enjoyment of the activity, self-improvement, and effort. This type of climate increase satisfaction of the basic psychological needs (Rodrigues et al., 2020b), enjoyment, and self-determined motivation of swimmers (Monteiro et al., 2018a). Thereby promoting task orientation and intrinsic motivation through a focus on self-improvement, which is shown to ensure persistence in challenging tasks or training (Woolger & Power, 2000). Contrastingly, a performance climate defines success as winning and avoidance of mistakes. This climate is negatively correlated with intrinsic motivation (Haugen et al., 2020), and promotes ego orientation and extrinsic motivation (O'Rourke & Smith, 2013; Trenz & Zusho, 2011). A performance climate is perceived as controlling, thereby lowering the levels of self-determined motivation (Buch et al., 2017). Failure in such an environment can lead to undermining of one's own competence, if one is ego-oriented (Roberts et al., 2018). Coaches and parents should therefore aim to create

mastery-climates. Specifically because a performance-climate has a greater impact on changes in ego orientation than the influence a mastery-climate has on task orientation (Smith et al., 2009).

Both coaches and parents are considered to have a long-lasting, existential relationship with young athletes (Storm et al., 2014). They influence effort, enjoyment, and competence, resulting in self-determined motivation and continued participation (Chan et al., 2012). Long-lasting relations impact an athlete's values, philosophies, and serve as a source of competence (Duda, 1998). As presented in the following paragraphs, coaches seem to have a greater influence on competence, while parents' involvement and behavior impact effort and enjoyment.

Coach Initiated Motivational Climate

Throughout a season coaches are essential for persistence and motivation. By providing support and knowledge they ensure development and performance (Rocchi et al., 2020). Coaches provide the competence athletes acquire, which would satisfy the athletes' needs for competence and maintain engagement in activity. This would particularly influence ego-oriented children because with increased competence a performance situation would no longer pose as a threat to their competence (Chan et al., 2012). In this way coaches influence motivational patterns during childhood. They can influence athletes in both positive and negative ways, and their behavior can result in dropout (Rocchi et al., 2020) or burnout (Barcza-Renner et al., 2016), and increase enjoyment (Scanlan & Lewthwaite, 1986) and group cohesion (Eys et al., 2013). In addition, coaches create the motivational climate at training and in clubs, thereby guiding athletes towards either ego or task orientation (Haugen et al., 2020; McLaren et al., 2015; Trenz & Zusho, 2011). Rodrigues et al. (2020b) highlight that the motivational climate influences the satisfaction of basic psychological needs. In a mastery climate coaches provide support for the basic psychological needs, thereby increasing intrinsic motivation. Research confirms the association between a mastery climate and task orientation, which provides positive health outcomes and increased intrinsic satisfaction in a mastery climate (Haugen et al., 2020; Trenz & Zusho, 2011). A performance climate can potentially thwart the satisfaction of basic needs, which in turn will decrease levels of self-determined motivation (Bartholomew et al., 2011).

Parent Initiated Motivational Climate

At the age of 11-12 parents are still the main caregiver. They play an important role in young athletes' lives as they provide support and opportunity for participation in training and

competition (Harwood & Knight, 2009; O'Rourke et al., 2014). Parents pay, drive, organize, and volunteer, in addition to ensure social, cognitive, and physical development. Through this effort they create and affect the environmental influences on their children. The younger the child, the greater the influence parents seem to have. Particularly mothers affect children's motivation (Chan et al., 2012; Ullrich-French & Smith, 2009). Contrastingly, slightly older swimmers, or youth, rate peers as their most important "other" in their swimming lives, highlighting the importance of peer relationships for motivation and sport continuation through adolescents (Smith et al., 2006).

There are qualitative differences between children's relationships with mothers and fathers (O'Rourke et al., 2014). In general, mothers seem to have a stronger predictive influence on intrinsic motivation (Woolger & Power, 2000), participation (Ullrich-French & Smith, 2009), competence, effort, and enjoyment (Chan et al., 2012). High maternal goals can predict intrinsic motivation (Woolger & Power, 2000), and their interpersonal style can neutralize negative effects of performance oriented fathers (Alvarez et al., 2021). A parent-initiated mastery climate ensures intrinsic motivation, enjoyment of activity, and increased effort of young swimmers (O'Rourke & Smith, 2013), which are central factors for both persistence and performance (Vink et al., 2015). The qualities of this climate and focus on self-improvement is positively associated with children's intrinsic motivation (Woolger & Power, 2000).

Compatibility of AGT and SDT

This section will argue for the combination of AGT and SDT as a holistic and unifying theoretical framework capturing both the quality of motivation and achievement goals, as well as mental health aspects necessary for continued participation and enjoyment of swimming. A fundamental difference is that AGT explains behavior as governed by the perception of demands and meaningfulness, while SDT sees behavior as an act to satisfy the three basic needs. Yet, I would argue that the two overlap in the sense that motivation is regulated by perception of demands, meaningfulness, competence, and thus the potential of needs satisfaction.

A unifying element is the focus on and importance of competence. Competence is developed when seeking and mastering optimal challenges for ones capacities (Deci & Ryan, 2004). An ego-oriented person will choose an activity in which they are guaranteed to outperform their opponents, hence increase their experience of competence through superiority. While a task-oriented person will choose activities in which they can develop, grow, and master. Hence, both goal orientations will lead to satisfaction of the need for

competence, and increase the potential for intrinsic motivation (Duda & Nicholls, 1992; Roberts et al., 2018; Salguero et al., 2004). Demonstration of incompetence will consequently fail to satisfy the need for competence and is therefore avoided by individuals with a differentiated conception of ability. Success can thus be obtained through satisfying the need of competence in situations in which you gain experience or demonstrate competence. In this way, the two theories complement each other in aiding people to avoid incompetence or activities that do not increase competence. AGT argues that people are motivated to appear successful and demonstrate competence, while SDT holds the solution by satisfying the need for competence to a level required to avoid situations which would be deemed unsuccessful.

The compatibility could be supported by Roberts et al.'s (2018) discussion of similarities between the two theories (p. 20-23). They argue that task involvement is important in both theories, as it resembles intrinsic motivation in achievement situations. Roberts et al. (2018) also argue that the two theories have conceptual differences, such as their understanding of the human psyche, and therefore do not mix well. O'Rourke et al. (2011) argue for the combination of these theories as both are based on the drive to demonstrate or elevate competence, and Ryan and Deci (2020) highlight the significance of achievement goals, both performance and mastery, within their own theory of motivation (SDT). They compare mastery goals to the higher levels of self-determined motivation, intrinsic and autonomous, and performance goals with extrinsic and controlled motivation. In addition, the similarities between a mastery climate and an autonomy-supportive climate are striking (O'Rourke & Smith, 2013). This is supported by Monteiro et al. (2018a) connecting a mastery climate and task orientation with enjoyment and participation through basic psychological needs satisfaction and self-determined motivation. Similarly, Kolayiş and Çelik (2017) argues that a mastery climate increases self-determined motivation, as such a climate is related to enhanced levels of enjoyment. In their study with 799 swimmers aged 12-22, Monteiro et al. (2018a) also argue that a mastery climate increases the satisfaction of basic psychological needs, which in turn foster intrinsic motivation. This leads to higher chances of continuation in competitive swimming. In a similar sample Teixeira et al. (2020) mapped the motivational patterns in persistent swimmers, mirroring the results of Monteiro et al. (2018a).

Thus, the liaison between AGT and SDT will be advantageous and provide detailed insight to young Norwegians swimmers motivation, and the relationship between goal orientations and self-determined motivation. In addition, a mastery climate will support the fulfilment of the basic psychological needs and hence achieve intrinsic, self-determined motivation or autonomous forms of extrinsic motivation.

Motives and Motivation of Swimmers

Swimmers' motives have been extensively studied, involving more than 700 male and female swimmers of all ages (Black & Weiss, 1992; Brodkin & Weiss, 1990; Edelbrock et al., 2016; Gould et al., 1985; Salguero et al., 2004). Together they identified seven motives for participation in swimming which varied between both gender and age. These motives are (1) competence / skill / the sport, (2) health / fitness, (3) affiliation / friendship, (4) enjoyment / fun, (5) competition, (6) status, and (7) significant others. Younger swimmers, aged 6-14, tended to rate "fun", "friendship", "skill development", and "significant others" as more important motives compared to older swimmers (Brodkin & Weiss, 1990; Salguero et al., 2004). 11- to 13-year-old Spanish swimmers rated "competition/skills", "health" and "fun" as most important (Salguero et al., 2004). These studies utilized the Participation Motivation Questionnaire (PMQ) to measure motives, which is further discussed in the methods section.

Coaches can influence self-determined motivation through needs satisfaction with the quality of coaching feedback (Black & Weiss, 1992) or how a training is designed (Fernandez-Rio et al., 2014). A medium hard training increased the feeling of competence compared to harder training sessions. Satisfaction of this need is, as previously presented, important for autonomous motivation which increases performance, adherence, and enjoyment (Monteiro et al., 2020). A mastery climate is also associated with increased task orientation among swimmers aged 11-18 Trenz and Zusho (2011), which is in line with the results of O'Rourke and Smith (2013) in a slightly younger group, age 9-14. The latter underlines the importance of mastery for persistence in young swimmers, which is influenced by both a mastery involving climate and the satisfaction of basic psychological needs (Teixeira et al., 2020). To uncover the best race conditions for improving performance, Fouad Kamal (1989) conducted an experiment with 80 swimmers completing a race in six conditions (three social environments; alone, non-competitive and competitive, and two incentive conditions; intrinsic or extrinsic). This study highlights extrinsic incentives (rewards) and competition as important for younger swimmers. However, with age the importance of extrinsic rewards was gradually replaced by intrinsic motivation obtained from improvement and success. In a longitudinal study Stoa et al. (2020) researched changes in intrinsic motivation throughout a season. The lowest level of intrinsic motivation was measured at the beginning of the season and increased towards the competitive seasons. This study also revealed that coach influence can explain 11.7 % of the variance in amotivation throughout a season, highlighting the importance of environment and climate for participation and sport enjoyment. Larson et al. (2019) found that lack of motivation was a more influential factor for dropout than early specialization, and Teixeira et al. (2020)

discovered enjoyment as the most important factor for persistence in swimming. This emphasizes the importance of ensuring high levels of self-determined motivation to ensure development and performance in swimming.

Objectives of Master Thesis

As I argue for a successful liaison of AGT and SDT, the use of both theories is advantageous in a study concerning motivational profiles of young swimmers. This liaison provides an opportunity to study the relationship between intrinsic motivation and goal orientations, for the first time in a sample of young Norwegian swimmers. With the extensive research and development of the two theories, they provide a holistic context for research the quality and direction of young swimmers' motives, self-determined motivation, goal orientations, and motivational climate. The purpose of the current study was threefold. First, to understand the motivational profiles of young Norwegian swimmers, in terms of participation motives, quality of motivation (self-determined motivation) and goal orientations towards competitive swimming. This profile will include associations between the variables. Particularly intrinsic motivation and task orientation have previously shown to covary (Ntoumanis, 2001). Second, the young Norwegian swimmers' motives and self-determined motivation will be compared with what parents believe the children's motives and self-determined motivation are. Finally, the perceived motivational climate (performance or mastery) created by coaches, mothers, and fathers is mapped and the influence of motivational climate on goal orientations and intrinsic motivation is tested.

Method

Research Approach and Design

The research approach is directed by the ontological and epistemological positioning of the researcher (Bryman, 2016). Ontology is a field of philosophy questioning the nature of reality and how the world is perceived. Reality can be considered stable with a universal set of laws. This view implies that reality can be objectively studied, and scientific methods can be used to establish truths. Or reality is understood as dynamic and flexible and depends on how individuals perceive it and their interpretations. The topic of epistemology concerns the process of retrieving or discovering knowledge, and questions how reality can be understood. There are two main paradigms which directs the positioning of researchers and their understanding of reality and knowledge (Chalmers, 1995). Namely, positivism and interpretivism. Positivism is the paradigm that sees reality as independent from people's perspectives and is objectively

available through scientific methods. The ontological perspective of positivism is often *realism* which assumes that reality is governed by a set of universal laws and is independent of subjective meaning. The most common epistemological view is *objectivism*, which advocates for neutrality and distance in collection of data. There should be no influence from the researcher on the nature of the data collected. The other paradigm, interpretivism, values subjectivity, understanding, and searches for the reality that is out there which we try to understand and interpret. In this paradigm the ontology of *relativism* is common which sees reality as relative. There is not one true reality waiting to be discovered, but there are multiple realities created by people's reflections and experiences. In terms of epistemology *subjectivism* is most common. This explains knowledge as being individual and co-constructed within the reality that exist when people meet. As a researcher it is impossible not to influence the situation, hence the reality is created and shared in the meeting between the two. Hence, it is up to researchers to understand the reality created. There are many philosophical perspectives ranging between the two extreme forms of realism and relativism (Gilje & Grimen, 1993). At the far end, realism argues that there is only one reality which "comes from outside knowledge", while relativism claims there are many realities which are "created with knowledge from within". Though they seem opposites, these ontological positions can complement each other (Moon & Blackman, 2014).

A researchers ontological and epistemological views will guide their research in terms of questions and data collection methods. For example, a structural realist will believe there is one true reality but accept that the nature of that reality can change, while relativists assume that e.g., emotions, culture, and experience interact with an individual's understanding of reality and truth. To approach the psychological phenomena of motive and motivation, a position between realism and relativism was adapted, with a constructionistic epistemology (Bryman, 2016; Moon & Blackman, 2014). Constructionism assumes meaning is created in the interplay between subject and object and generates contextual understanding of the psychological phenomena, motives and motivation. This epistemological view lies between realism and relativism, creating truth or meaning through engagements with realities (Bryman, 2016). Constructionists emphasize how interaction between people and their environment creates meaning and knowledge within a context.

As a cross-sectional study, the research aimed to describe the population. Every variable was measured at the same time, and groups within the sample were compared (Omair, 2015). This provides data to determine the prevalence, or number of cases in a population at a given point in time (Mann, 2003) and detect patterns of association (Bryman, 2016). The cross-

sectional design can describe associations between variables, hence infer relationships, though it is not possible to determine causation with this type of data (Mann, 2003; Omair, 2015). With the use of an online survey, in SurveyExact by Ramboll (SurveyXact, n.d.), and Likert-scales, the research assumes that the responses to the research questions are quantifiable, and therefore meaningful for each participant (Levin, 2006). Hence, the data collection and analyses have a positivistic nature, while the interpretation of the data leans towards social constructivism (Bryman, 2016; Moon & Blackman, 2014).

Participants

Sample 1: The first participant group consisted of young swimmers aged 11 to 13. They participate in a longitudinal study on performance and health determining factors in swimming at the Norwegian School of Sport Sciences (NIH). They were recruited the year they turned 11 and are currently from swimming clubs in the eastern, western, and southern parts of Norway. Inclusion criteria were that the swimmer had to be able to swim 50 m in all four competitive strokes (front crawl, backstroke, breaststroke, and butterfly) and train swimming for a minimum of three sessions per week. Of a total of 93 children, 81 handed in updated consent to complete the online survey. Of these, three swimmers never replied to the questionnaire, nine only provided age and gender, and four completed the survey twice (full or parts of it). For the last group, their full questionnaire or the last completion from the participants were included. This left 65 valid replies (16 boys, 49 girls) and a response rate of 80.3 %. The sample size was limited to the participants of the longitudinal study. The uneven gender balance mimics the gender balance of swimming in Norway in general. Before puberty there are more girls than boys participating in competitive swimming, while after this balance changes. This limitation of participants is also the reason power analyses were not conducted and because the sample was already recruited prior to the start of the present study.

Sample 2: The second sample was the parents of these swimmers (N: unknown). With a total of 88 complete responses, 55 mother-figures and 33 father-figures participated. The total number of parents is unknown. Stepparents were possibly included and knowledge of divorcees or number of single parents was not known.

Procedures

This research added psychological factors, i.e. motives and motivation, to the longitudinal study at NIH. Information and consent forms were updated to include the questionnaire and information on its topic. Existing ID-codes were used in the present study to ensure anonymity of the children. In cases where personal identification number or birthdate were provided

instead of the ID-number, the value was deleted and replaced with a zero. A pilot-study was conducted to evaluate young athletes' (below the age of 13) understanding and experience with the questionnaire. Five participants from synchronized swimming and handball pre-tested the questionnaire between June and August 2021. No distress was communicated, and they used an average of 15 minutes to complete the survey. A few adjustments to the five questionnaires were implemented after the pilot-study to further simplify the survey for the young swimmers (eliminated a few questions).

Amendment notification forms were submitted to the national data protection agency for research (NSD) and the local ethical committee for approval of the changes in the project (NSD: 58608; local ethical committee: 215 – 47) (appendix 4 and 5). Following approval from the local ethical committee and NSD, the legal guardian of participants returning for year two and three were contacted by email with information containing the questionnaire on motives and motivation. New participants were recruited through a post on the Norwegian Swimming Federation's website and their Facebook page, the swimming coaches page on Facebook, e-mails were sent to clubs and coaches, and parents and coaches contacting the project leader. Prior to participation, the legal guardian provided written informed consent. The parents of participants were e-mailed two hyperlinks to the online survey, one for the swimmer and one for parents. The hyperlinks were distributed to all available e-mail addresses for each participant. Some provided e-mail addresses for two or more parents, others just one e-mail. They also had the opportunity to ask for the questionnaire in paper-form. Participants were advised to complete the questionnaire between day one and two of physical testing (in the longitudinal study) to allow both parents and swimmers to ask questions to the test leader on day two. Follow up e-mails were sent out 4-5 weeks after the final day of testing. This was done on two occasions during autumn of 2021 and once during the spring of 2022, following the test schedule of the longitudinal study. The final day for completing the questionnaire was 15. March 2022. The information distributed to the participants is attached in appendix 1a, 1b, 2 and 3.

Instruments

The survey consisted of five questionnaires with a total of 92 items for children and 60 items for parents (appendix 6 and 7, respectively). They spent between 10-30 min and 5-15 min to complete it, respectively. The PMQ and Parent-Initiated Motivational Climate in Individual Sport Competition Questionnaire questionnaires were translated to Norwegian using the translation and back-translation method (Behr, 2017). Two master students at NIH (one native

English speaker, one C2 proficiency), one certified translator (Norwegian-English), and a Canadian researcher (Norwegian speaker) translated the items either into Norwegian, or back to English. The translations were synthesized considering the young age of the participants.

Participation Motivation Questionnaire

To measure motives of participation in competitive swimming the PMQ was chosen. It was originally developed by Gill et al. (1983), and adapted to swimming by Gould et al. (1985). This scale was chosen for its applicability in swimming and wide use in sports (Jones et al., 2006; Kondric et al., 2013; Panagiotis, 2020). Studies have shown satisfactory validity of this instrument and it is deemed reliable in samples with children as young as 10 (Garyfallos & Asterios, 2011; Guedes & Silvério Netto, 2013). The present study utilized the version used by Brodkin and Weiss (1990). This questionnaire consists of 35 items, unevenly split between seven factors, i.e. motives, measured with different subscales. Previous measured internal consistency of the subscales showed varying reliability, and the factors are *health/fitness (health)* (α = .87), *fun* (α = .70), *sport specific characteristics (comp/train)* (α = .95), *significant others* (*sigother)* (α = .53) *affiliation* (α = .55), social *status (status)* (α = .88), and *energy release (energy)* (α = .67) (Brodkin & Weiss, 1990). Eleven items were removed to limit the extensiveness of the survey for the young participants (some translated into the same, some were deemed redundant). These items were "I like to go to meets", "I like the team spirit", "I like the excitement", "I like being on a team", "I like to meet new friends", "I like the challenge", "I like the action", "I like to feel important", "I want to stay in shape", "I like to get rid of energy", and "get rid of frustrations".

Participants were presented with the stem "I swim because…" and rate the importance of items using a 5-point Likert-scale ranging from (1) not at all important to (5) extremely important. The strength of the scale was moderated to (1) not important to (5) very important when translating into Norwegian. The following items represent each of the subscales: "I like the exercise"; "I like the teamwork"; "I want to improve my skills"; "friends want me to practice"; "I want to be with friends"; "I want others to notice me", and "something to do", presented in the same order as above.

For the parents' questionnaire, the stem was changed to "My child swims because … (he or she…)", as previously done by Marsh et al. (2015).

Behavioural Regulation in Sport Questionnaire

The Behavioural Regulation in Sport Questionnaire (BRSQ) developed by Lonsdale et al. (2008), measures degrees of self-determined motivation according to SDT. The BRSQ is a 32-

item scale measuring three factors of intrinsic motivation and five regulations of extrinsic motivation. This scale is widely used to measure motivation regulation (De Francisco et al., 2020; Haraldsen et al., 2021; Stenling et al., 2018) and it is specific to the competitive sports context compared to for example the The Behavioural Regulation In Exercise Questionnaire (BREQ) (Rodrigues et al., 2020a). The BRSQ was deemed superior to the Sport Motivation Scale (SMS) by Lonsdale et al. (2008). However, the discussion between Lonsdale and Pelletier on whether the SMS or BRSQ is superior in measuring motivation regulation is not concluded and both instruments have their strengths and weaknesses (Lonsdale et al., 2014; Pelletier et al., 2019; Pelletier et al., 2013).

The present study utilized a short 23-item version of BRSQ used in the PAPA-study (Viladrich et al., 2013). This measures one factor of intrinsic motivation (general), excludes internal regulation due to the young age of the participants, and was already translated into Norwegian. The initial validation of the subscales showed Cronbach's alpha between .79 and .92 for all subscales (Lonsdale et al., 2008); *Intrinsic motivation – general* (IM) (α = .92), *Identified regulation* (ID) (α = .82), *Introjected regulation* (IJ) (α = .88), *External regulation* (EX) (α = .93), and *Amotivation* (AM) (α = .90). This validation was done with a sample of children as young as 14, and the questionnaire has also showed satisfactory validity in samples with children as young as nine (Guedes et al., 2019; Monteiro et al., 2019; Viladrich et al., 2013). Viladrich et al. (2013) added three questions specifically targeting extrinsic motivation such as rewards by adding a second factor for measuring external regulation rewards (EXrew) (three items), combined with the original external regulation pressure items (EXpres) (seven items). Each of the following items represent the five subscales of motivation; "because it's fun", "because it teaches me self-discipline", "because I feel obligated to continue", "to satisfy people who want me to play", and "but I wonder what's the point". The items followed the stem "I swim…" and participants are asked to rate their agreement with each item using a 5-point Likert-scale ranging from (1) strongly disagree to (5) strongly agree.

Parents respond to this questionnaire on their belief/experience of their child's motivation, i.e. "My child swims…".

Perception of Success Questionnaire

The Perception of Success Questionnaire (POSQ) is a 12-item scale designed to measure individual goal orientation, based on the Achievement Goal Theory (Roberts et al., 1998). This questionnaire measures six items for each goal orientation (ego and task orientation) and questions are answered on a 5-point Likert scale ranging from (1) strongly disagree to (5)

strongly agree. The present study utilized the Norwegian version (Roberts & Ommundsen, 1996). The internal consistency of the two subscales were: *ego orientation* $\alpha = .89$, and *task orientation* $\alpha = .95$. This version has provided measures of satisfactory construct validity and is deemed reliable in research with young children (Appleton et al., 2009; Ommundsen et al., 2005; Ommundsen & Roberts, 1996). The POSQ has shown better reliability compared to the Task and Ego Orientation in Sport Questionnaire (TEOSQ) which also measures goal orientation in sport (Clancy et al., 2017). Originally the scale asks "when playing sport, I feel most successful when" which in this study was adjusted to "when swimming, I feel most successful when" for the children and "when I engage in my favorite activity, I feel most successful when" for the parents. "I win" and "I show good effort" are examples of items measuring ego orientation and task orientation, respectively.

Perceived Motivational Climate in Sport Questionnaire-short

The Perceived Motivational Climate in Sport Questionnaire (PMCSQ) captures the perception of motivational climate created by a coach or leader of a group. It is based on AGT and measures mastery and performance climates separately. The original questionnaire consist of 21 items (Seifriz et al., 1992), and was translated into Norwegian by Ommundsen and Roberts (1996). The instrument has demonstrated satisfactory construct validity and deemed reliable in previous research including young children aged 12 (Ommundsen et al., 2010; Ommundsen & Roberts, 1996; Seifriz et al., 1992; Walling et al., 1993). The current study utilized an 11-item Norwegian short-version (Ommundsen et al., 2010). This short version showed good reliability with Cronbach's alpha coefficients of $\alpha = .86$ and $\alpha = .77$ for *mastery climate* (five items) and *performance climate* (six items), respectively. Following the question "How do you experience the social environment in your swimming group?" participants were asked to rate items on a 5-point Likert scale ranging from (1) completely disagree to (5) completely agree. These items represent the two subscales of motivational climate: "It is important to perform better than others" (performance climate) and "Participants are encouraged to practice what they are not good at" (mastery climate).

Parent-Initiated Motivational Climate in Individual Sport Competition Questionnaire

The Parent-Initiated Motivational Climate in Individual Sport Competition Questionnaire (MCISCQ-Parent) developed by Harwood et al. (2019) assess the influence of parents in competitive situations specifically for individual sports such as swimming. This scale is one of its kind as it addresses each parent separately and specifically for individual sports. There are other questionnaires measuring parent-initiated motivational climate, for example the Parent-

Initiated Motivational Climate Questionnaire (PIMCQ) presenting 14 identical items for mothers and fathers (White et al., 1992; White et al., 1998). However, this instrument is quite broad and generic for sports (Harwood et al., 2019). The MCISCQ-Parent presents 10 items measuring mothers' (1) *ego promoting values and behaviors* (five items, α .90, mother performance climate) and (2) *task promoting values and behaviors* (five items, α .85, mother mastery climate). The items concerning fathers are split into three subscales: (1) *ego promoting values and behaviors* (four items, α .88, father performance climate), (2a) *task promoting behaviors* (four items, α .87, father mastery behaviors), and (2b) *task promoting values* (three items, α .81, father mastery values), adding up to 11 items. In its process of development, the questionnaire demonstrated satisfactory validity and was deemed reliable in three separate samples of children, aged 13-17 (Harwood et al., 2019). Items are scored on a 7-point Likert scale ranging from (1) never occurs to (7) always occurs. Examples of items include: (1) "For me to beat an opponent is something that is important to my mother/father", (2; 2a) "Before competition, my mother/father reminds me of the importance of me trying my best", and (2b) "My father views mistakes as part of learning". The participants were informed they could answer with a parent of choice in their mind, for this part of the questionnaire. It could be a stepparent or a person with strong familiar bonds they considered a mother- or father-figure.

Statistical Analysis

All statistical analyses were performed using Statistical Package for Social Sciences (SPSS) version 28.0.0.0 (190) (IBM Corp, Armonk, NY, United States). The mean score of subscale items was calculated for further analyses. This was done to encounter missing cases, as all items were voluntarily for the children to respond to. Those who only provided sex, age, or age of child were excluded from the analyses (nine children, three parents). Of the participating athletes, one did not complete the full motives questionnaire (four of seven motives missing), and four did not want to answer questions concerning their father. One parent did not finish the full motives questionnaire (four of seven motives missing), four did not complete the BRSQ and five did not respond to the POSQ. Their responses are still included in the analyses, as their contribution is still valuable for the aim of the study. The internal consistency of the subscales was assessed by examining Cronbach's alpha coefficients.

Descriptive statistics and the samples size showed the distribution to be suited for parametric tests (kurtosis and skewness < 1.96) (Skovlund & Fenstad, 2001). Assumption of homogeneity of variance was determined using the Kolmogorov-Smirnov test ($p > .05$) as suggested by Ntoumanis (2001). Mean differences across gender and participant group

(swimmer vs parents), were compared using Independent Samples T-Tests. Level of significance was set at .05 (O'Donoghue, 2012). For variables violating the assumption of homogeneity of variance (Levine's test <.05), the Welch Test was used to correct for unequal variance (Skovlund & Fenstad, 2001). This test is automatically computed when running Independent Samples T-Test in SPSS. The overall differences between the subgroups (girl vs boy, and mother vs father) were calculated with Multiple Analyses Of Variance (MANOVA) for each group (children and parents) (O'Donoghue, 2012). Relationships between the different variables (motives, self-determined motivation, goal orientations, and perceived motivational climate) were examined using Pearson's Correlation Coefficient (*r*). Both parametric and non-parametric correlations were computed showing insignificant differences between the coefficients. Due to the samples size Pearson Correlation was used in this study (Skovlund & Fenstad, 2001). The threshold for small, medium and large correlations were set at .1, .3 and .5, respectively (Cohen, 2013). To examine the impact of perceived climate on achievement orientation and self-determined motivation, regression analyses were conducted.

Research Ethics

The research was approved by the local ethical committee and the national data protection agency for research and conducted in accordance with the Helsinki Declaration (The Norweigan National Research Ethics Committees, 2020). Due to the young age of the participants' consent was provided by a parent or legal guardian. Both parents and children received information regarding the study procedures, benefits and risks associated with participation adjusted to the age of the athletes. As informed consent was not possible to obtain from the children, all items in the questionnaire were made optional and three additional consent-questions were added in the online survey: at the beginning and before questions concerning mother and father. The ethical committee made a note of the conflict-of-interest children may experience when answering questions concerning their parents. Therefore, it was clearly stated that it was optional to respond to the final questionnaire involving each parents' behavior. The final page provided contact information to mental health organizations in case the questions caused any discomfort. Parents had the opportunity read the questions in advance. This allowed them to make an informed decision on whether they wanted their child to answer questions about themselves.

[Who <u>really</u> consents?]

To obtain informed consent from the children a consent-question at the beginning of the questionnaire was added. Here the child answered yes (or no) to whether they wanted to

continue to the questions. The formal consent was obtained from a legal guardian who were encouraged to talk about the project with their child before giving written informed consent for participation. Deliberately placing this information responsibility on parents can be both an advantage and a disadvantage. It can be a security for the child to have a close relationship with the person who consents on their behalf, but it can also be more difficult for the child to oppose participation if they want to do the "right" thing or what they think the parent wants them to do. By adding a question regarding their participation at the beginning of the survey the child have a chance to express their own opinion, which will be important in case of a conflict of interest between the child and parents (Fossheim, 2013). It must be made clear to the child that their participation is voluntary and that they have the right and opportunity to withdraw at any time if they want to. Experience from previous research in classrooms showed that no children withdraw from surveys once they started and had their whole class in the same room. It can thus be an advantage that this form is "brought" home and carried out in the child's safe environment or place of preference, and in their own time (Backe-Hansen, 2019).

The following sections include parts of the arguments for conducting this research with children presented to the local ethical committee. It includes a discussion of the importance of conducting research with children, who benefit from this research, and the cognitive development of children until the age of 11.

Research with Children and Adolescent

[Is it ethical to ask these questions? How important is it to get an answer?]

Considering the purpose of the research it is important that children's and adolescent's voices are the main data source in the project. With the increase of knowledge on children's competence and cognitive development the past centuries and decades, opportunities for participation in research projects, concerning children's lives and opinions, are encouraged as their opinions are considered important and their ability to comprehend is understood as closer to that of adults (Fossheim, 2013). Article 12 of the Convention on the Rights of the Child highlights the importance of children's freedom of expression and the opportunity to form their own views and express themselves in relation to matters which concern them directly (Fossheim, 2013; OHCHR, 2022). This research project can be an opportunity to fulfil and secure children's rights by listening to their voices regarding what they think about their motives and motivation for participating in competitive swimming. The Convention on the Rights of the Child gives children the right to, among other things, participation, protection, access to health services, and the right to freedom of thought and conscience (Backe-Hansen,

2009; Fossheim, 2013; OHCHR, 2022). These are rights that can and wore safeguarded throughout this project and ensured ethically sound research in compliance with Norwegian law. The National Research Ethics Committee for the Social Sciences and Humanities (NESH) further clarifies the importance of the child's right to expression and that research should guarantee the opportunity to express oneself relative to age and maturity. Furthermore, emphasis is placed on the child's ability to convey knowledge and that they have unique competence on their own lives. In child welfare cases, children at the age of seven have the right to be heard. Parents should therefore experience it as positive that the child is allowed to express their opinions through participation in research (Backe-Hansen, 2009). In this project, it is therefore necessary to include the children and give them the experience that their voice is important (Child Ethics, 2019).

The child's right to protection, their needs and interests must be safeguarded. Due to their young age, this must be done in other ways than in research with adults (Bell, 2008). The information letter was adapted to the age of the participants. Several information pages were developed for the questionnaire, so that the participants along the way received information on how to answer the questions. Examples were added to ensure understanding and clarity of the questions (see Appendix 6). It was important to address the sensitivity of the questions and how invasive they could be experienced. The questionnaire does not ask about violence or abuse, but some of their closest and most important relationships. It could be uncomfortable to answer these questions. Especially if the child experiences a conflict of loyalty when answering questions concerning their mother's and father's behavior and values. In the present study, the children should not have any particular relationship with the researchers, though they might still feel that they need to complete the full questionnaire as part of the longitudinal study. The questions might also become too invasive concerning their private lives (Fossheim, 2013). There may be cultural differences in how much privacy legal guardians desire, and the privacy they have between themselves and their children. This raises questions on what can be demanded in the survey. Parents were given the opportunity to see the questions before they consent to their child's participation, but will they have the right to see what the children answer? In line with the principle of confidentiality, the children's answers will not be shared with parents. However, both children and parents were encouraged to talk about topics addressed in the survey (Backe-Hansen, 2009).

For some it can be uncomfortable to deal with the question itself, while for others it can be challenging to deal with questions regarding things that have not happened (Fossheim, 2013). Hence, it is important to consider the children's cognitive development and ability to

imagine different situations, and further place themselves in those situations. Stefansen (2007) conducted a pilot study to discover whether sensitive questions led to negative reactions. Only 6% reported being uncomfortable when answering sensitive questions, but also expressed the importance of the topics being addressed (Fossheim, 2013). The study provided contact information to mental health services the participants could contact afterwards. This was also included at the end of the questionnaire in the present study, and the children were encouraged to contact an adult they trust. In this way, the children get help to help themselves reduce any discomfort as a result of the questions. In addition, a contingency plan was prepared to ensure follow-up for children and young people based on participation and responses that provided a basis for concern, as recommended by the local ethical committee.

In this project, the children are given the opportunity to carry out the survey where they want to, and when it suits them. Giving children this opportunity helps to minimize potential negative consequences through the child being able to choose to answer the questions in a place where they feel safe (Child Ethics, 2019). This strengthens the child's right to self-determination (Fossheim, 2013) and should not go beyond the rights of both participant groups (children and parents), because it is valued more than the opportunity to carry out the research. The opportunity to decide whether parents should be present also gives the children themselves the possibility to choose whether they want to share their answers with their parents. This set up also places more responsibility on the parents to inform the children about the questionnaire, compared to the researcher. When conducting the survey without the researcher present, the power relationship between the researcher and the participant will not affect the situation to the same extent. Nevertheless, children may still feel obligated to 'help' or 'carry out their duty' as research participants. Possibly, the power relationship between parent and child can be a factor if the child chooses to bring someone with him/her. It can be both an advantage and a disadvantage to allow parents to be present while the child responds to the survey (Child Ethics, 2019). This will mainly depend on whether the child wants to have a parent present or not. It will be necessary and important to ask the supervisor not to interfere in the investigation and possibly ask them to leave the room when questions on parent-initiated climate are answered. This is emphasized in the information letter to parents, and they are requested to ask their child if he/she wants to complete the survey alone or not.

Confidentiality is especially important in research with children and was safeguarded by reusing the ID-codes of the participants in connection with the longitudinal project on performance and health determining factors. Access to information that links the code to the specific participant's name is restricted. The code ensures anonymity when presenting the

results, where individuals will not be recognizable. Nor will results be presented individually. It will only be necessary to find the name of the specific participant if there is cause for concern or situations where the researcher is obliged to report confidential information (Backe-Hansen, 2009; Barne- og Familiedepartementet, 1993). In this project, sensitive information such as abuse and mistreatment is not included. However, the likelihood that causes of concern can emerge as a result of the questions asked cannot be ruled out (Fossheim, 2013). For unexpected information, researchers have the same responsibility to report, and in such cases the contingency plan will ensure action.

Children's Cognitive Development and Ability to Reflect

Children's development is an individual process that is determined by complex interactions between nature and nurture. There are many perspectives and theories on development from infancy until a person is considered fully developed, on the social, cognitive, and personal level (Tetzchner, 2012). The different perspectives highlight important factors for children's development and the interaction between children and adults and their social arena. The following text is mainly based on the theories of Piaget (in Tetzchner, 2012).

At the age of 11, most children are in the initial phase of thinking like adults which develops until the age of 15. During this period children develop the ability to combine different elements (such as thoughts, knowledge, and experiences from different domains), and include both abstract and hypothetical problems in operations. This is defined as formal operations, i.e. thinking about thinking. Whether a child masters formal-operational tasks depends on both experience with, and knowledge of, the topic. If you adapt the tasks according to age or level, for example by using objects that children have experience with (mountains vs teddy bears). Younger children will also show the same ability to master the tasks and thus also perceive the question as intended. The formal-operational level coincides with the transmorphic level in Piaget's new theory, in which young people around the age of 14 begin to master the generalization of knowledge about morphisms (correspondences that go beyond identical similarity) that they can also be transformed into abstract correspondences. This involves processing of thought content which can be rare at the age of 11 when it is more common to coordinate simple morphisms and make correspondences of them (intermorphic level). At this level children coordinate previously acquired knowledge and they show a greater degree of mastery in tasks they are already familiar with. It is not certain that all participants in this study are familiar with the topics of motives and motivation, but it does not necessarily mean that the children will not master understanding and answering the questions. Children

begin to understand other people's motives around the age of 11 as part of the development of social and communicative activities (Tetzchner, 2012). This means that the children themselves understand their own motives earlier.

The development of hypothetical-deductive reasoning begins in full at the age of 11-12. Prior to this, children reason incorrectly because they do not master the logical rules. This may be due to less knowledge of and experience with topics, which lowers their level of mastery. Regardless, hypothetical-deductive thinking is not needed to answer the questionnaires of the present study. It requires to a lesser extent the ability to understand logic, but to a greater extent an understanding of the self and the environment around oneself. From an early age, children can distinguish between different people's perspectives (approximately four years). Around the same age they develop an understanding of what it means to know, think, and believe. In addition, one begins to develop an understanding of what one thinks about others' thoughts (smarties experiments) (Tetzchner, 2012). At the age of seven-eight, children understand that two people can perceive the same information differently, and from the age of 10-11 they understand that the mind is an intangible source of action.

The development of self-perception also develops early, and both the environment and other people's reactions provide a basis for the child's self-assessment; parents with realistic goals for their own children have children with a more positive self-image. Guilt and negative emotions accompany the development of morality, which are important to consider when children are asked to answer questions about their parents. This place the children in a special situation, perhaps difficult for some, and one must consider what is right and wrong. It is wrong to lie, but it might also feel wrong to answer these questions concerning your closest relationships. In addition, cultural and social norms can be highlighted as important elements that shape children's cognitive development and understanding of society. What is expected of children in Norway is different from other cultures. In Norway, greater demands are made on independence and the focus is on the child's own will and individuality. Obedience and respect, for example, are stronger in other cultures (Tetzchner, 2012).

No one other than the children themselves can answer the questionnaire of this study. Their own thoughts are of interest and how their motives and motivation affect sports enjoyment and participation. If this project also creates dialogue between children and parents, new and interesting questions may also arise from both children and parents who are participants in the longitudinal study (Flewitt, 2005).

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Motives, Motivation, and Motivational Climate of Young Swimmers, and their Parents

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Motives, Motivation, and Motivational Climate of Young Swimmers, and their Parents

Abstract

Motivation is important for enjoyment, skill development, and persistence in swimming. The quality and direction of motivation is influenced by a swimmer's perceived motivational climate, which is created by coaches and parents. The theoretical framework combines self-determination theory and achievement goal theory, to analyze the motivational profiles of swimmers and the influence of social climate on the profile. Parental influence has a great impact on young children's participation motives and motivation, but previous research has so far not asked parents of their beliefs of their child's motives and motivation. Online questionnaires were distributed to 11-13-year-old swimmers (n = 69) and their parents (n = 88). The children responded to five questionnaires measuring sport participation motives (PMQ), self-determined motivation (BRSQ), goal orientation (POSQ), coach-initiated motivational climate (PMSCQ), and parent-initiated motivational climate (MCISCQ-Parent). Parents responded to the PMQ and BRSQ indicating their belief of their child's motives and self-determined motivation. Results showed that swimmers are predominantly intrinsically motivated, task oriented, and perceive a mastery climate from coaches and parents. Parent's belief of their child's motives and self-determined motivation matched the self-reported motives and self-determined motivation of the swimmers. Coaches are shown to impact self-determined motivation and goal orientations to a greater extent than parents. In conclusion, coaches and parents should aim to maintain their current focus on mastery and enjoyment. This can ensure longer participation in and greater enjoyment of the sport, which would lead to further development and improved performance.

Keywords: Participation Motives, Self-Determined Motivation, Intrinsic Motivation, Ego and Task Orientation, Coach-Initiated Motivational Climate, Parent-Initiated Motivational Climate.

Lay Summary

Young Norwegian swimmers (aged 11-13) are shown to be predominantly motivated by the enjoyment of the activity and focus on self-improvement. Their environments encourage personal development and mastery, from both coaches and parents. This increases their intrinsic (internal) motivation, which leads to longer participation and persistence when facing challenges.

Practical Implications

- Coaches and Parents should maintain the mastery climate they already create in order to uphold the intrinsic motivation and task orientation of the swimmers.

Swimmers specialize early (Larson et al., 2019). They participate from around age six, and join extensive training at age nine (Baxter-Jones & Maffulli, 2003). At this age children's motivational processes are influenced by coaches as well as parents and friends (Brustad, 1992; Ullrich-French & Smith, 2009). Most athletes are introduced to swimming through their parents, but they are encouraged into intensive systematic training by their coaches (Baxter-Jones & Maffulli, 2003). This shows the importance of understanding both parents and coaches' influence on young swimmers' motives and motivation for participation. In Norway, the possibility of early specialization is regulated by the "Children's Rights in Sports" (NIF, n.d.), constraining a competitive focus before the year an athlete turns 11. Due to this cultural difference and emphasis on sports enjoyment in Norway it is important to understand young swimmers' motives and motivation for participation in competitive swimming at a young age, and their perception of motivational climate. In swimming, enjoyment is the most important

factor for persistence (Teixeira et al., 2020), while extrinsic motivation and lack of motivation are important factors causing dropout compared to for example early specialization (Larson et al., 2019).

This following presents definitions and theories on motives and motivation, solely with a focus on swimmers and research on swimming.

Motives, Motivation, and Motivational Climate

Motives are defined as classes of reasons for an action, and can be separated into primary and secondary motives (Madsen, 1968; Peters, 1960). Primary motives are considered basic needs of the body such as water and sleep, while secondary motives relate to social needs, growth, and performance. Swimmers' motives have been extensively studied, involving more than 700 male and female swimmers of all ages (Black & Weiss, 1992; Brodkin & Weiss, 1990; Edelbrock et al., 2016; Gould et al., 1985; Salguero et al., 2004). Seven main motives for participation in swimming, were identified, varying between gender and age. Younger swimmers, aged six to fourteen, tended to rate "fun", "friendship", "skill development", and "significant others" as more important motives compared to older swimmers (Brodkin & Weiss, 1990; Salguero et al., 2004). Spanish swimmers, aged 11-13, also highlighted "competition" and "health" as important motives (Salguero et al., 2004). These studies emphasize that people can have multiple motives at the same time, both intrinsic and extrinsic (Ryan & Deci, 2020).

Motivation is an important factor for both predicting and explaining persistence in organized training, (Larson et al., 2019; Monteiro et al., 2018a), and motives are understood as the specific reasons for engaging in that activity. Motivation is the inner force which arouses, regulates, directs, and maintains behavior (Clancy et al., 2017; Madsen, 1968; Roberts et al., 2018). Theories of motivation describe and explain the underlying psychological mechanisms and processes that leads to actions. These refer to needs, dispositions, social variables, and/or

cognitions that come into play when a person undertakes a task which is evaluated, enters into competition with others, or attempts to attain some standard of excellence (Roberts et al., 2018). Self-determination theory (Deci & Ryan, 1985) and achievement-goal theory (Nicholls, 1989) are two of the most popular theories of motivation in sport which comprehensively explore the aspects of why individuals behave as they do in learning and achievement situations – i.e. the social aspects of motives and motivation (Hattie et al., 2020). The compatibility of these two theories is questioned due to their conceptual differences (Roberts et al., 2018). However, it can be argued for the use of both theories in research involving motivation in sport (Ntoumanis, 2001). This has already been successful in swimming in many countries, but not yet in Norway (Monteiro et al., 2018a; O'Rourke & Smith, 2013; Rodrigues et al., 2020b; Teixeira et al., 2020).

Self-Determination Theory

Self-determination theory (SDT) is an organismic theory inspired by humanistic psychology, highlighting psychological growth and integration as important aspects of motivation (e.g. mastery, learning, development). It claims that healthy development requires the support of three basic psychological needs (autonomy, relatedness, competence), which fosters intrinsic or extrinsic motivation (Deci & Ryan, 1985; Ryan & Deci, 2002, 2020). Intrinsically motivated people are engaged in an activity for the sake of the activity itself, while extrinsic motivation comes from other, external, reasons than the enjoyment of the activity (Deci & Ryan, 2000). Within the framework of SDT there are four specified types of extrinsic motivation. Integrated and identified regulation are considered autonomous forms of extrinsic motivation and are considered higher forms of self-determined motivation. Compared to introjected and extrinsic regulation which are controlled forms of motivation. Amotivation, or lack of motivation, can be considered the lowest form of extrinsic regulation or treated as a separate construct (Roberts et al., 2018; Ryan & Deci, 2020). A high level of satisfaction of the three psychological needs

is considered essential for maintaining intrinsic motivation, or autonomous forms of motivation, which increases performance, adherence, and enjoyment in swimming (Monteiro et al., 2020). For younger swimmers, Fouad Kamal (1989) highlighted extrinsic incentives and competitions to improve younger swimmers' performance. As the children grow older the importance of extrinsic rewards is gradually replaced with intrinsic motivation obtained from improvement and success.

Achievement-Goal Theory

Achievement-goal theory (AGT) is a social cognitive theory of motivation originally developed for educational settings, and later applied in performance situations for sports (Nicholls, 1989; Roberts et al., 2018). This theory explains the motivational forces of actions through cognitive schemas of achievement goals. A schema can be considered a different program for goals, situations, and activities. It is influenced by person perception of success and differentiation between effort and ability, resulting in either an *ego orientation* or *task orientation*. A task-oriented person has a less differentiated conception of ability, and perceived competence is self-referenced. They aim to improve skills or learn, as they believe success comes from hard work, knowledge, and collaboration (Duda & Nicholls, 1992). Ego-oriented people believe that success is other-referenced, e.g., demonstrate superior ability, and they try to avoid situations or activities which could result in displaying incompetence. Until around the age of 11, most children do not differentiate between effort and ability (Ntoumanis, 2001; Roberts et al., 2018). Around this age, most children reach a level of cognitive maturity enabling them to differentiate the concepts of ability and effort (Horn, 2008), potentially adapting a normative evaluation of competence; i.e. ego-involved/oriented. While children maintaining an undifferentiated concept of ability will be considered task-oriented, elite athletes are shown to benefit from being high in both ego and task orientation (Pensgaard & Roberts, 2000). This combination is considered adaptive as the two orientations are considered

orthogonal. The other preferred profile is high task and low ego (Roberts et al., 2018; Roberts et al., 1996). Typically, the literature supports a positive relationship between task orientation and intrinsic motivation (Ntoumanis, 2001). In a study of 223 9- to 12-year-old football players it was found that higher task goal orientation led to more adaptive motivational responses such as enjoyment, satisfaction, and perceived ability, which in turn increased intrinsic motivation (Smith et al., 2006a).

Compatibility of SDT and AGT

An important factor in both theories is competence, which is believed to ensure longer-lasting motivation and involvement in sport (Roberts et al., 1981). AGT highlights demonstration of competence as a goal of behavior, and SDT underlines the importance of competence as a need for maintaining motivation and thereby engagement. Different goal orientations can enhance both learning and development when mastering a task or demonstration superiority, as this is considered success. Activities in which one experience success support the need for competence which will enhance self-determined motivation (Duda & Nicholls, 1992; Roberts et al., 2018; Salguero et al., 2004). Particularly task orientation can satisfy both the need for autonomy and competence (Ntoumanis, 2001). Ryan and Deci (2020) highlight the significance of performance and mastery goals (AGT) for their own theory (SDT). They pair mastery goals with intrinsic motivation and autonomous forms of extrinsic regulation, and performance goals with controlled forms of extrinsic regulation.

Motivational Climate

In addition to individual orientation and self-determined motivation, the perception of the environment is also of great importance for continued participation and sport enjoyment. How people perceive their motivational climate is influenced by the leaders conception of ability (undifferentiated or differentiated), and how individual success is evaluated by them (coach or parent) (Buch et al., 2017). In a mastery climate, success is defined as enjoyment of the activity,

self-improvement, and effort. This type of climate is shown to increase satisfaction of the basic psychological needs (Rodrigues et al., 2020b), enjoyment, and self-determined motivation of swimmers (Monteiro et al., 2018a). In this climate success is self-referenced and based on mastery of tasks, promoting task orientation and intrinsic motivation (Haugen et al., 2020). Contrastingly, a performance climate defines success as winning and avoidance of mistakes. This negatively correlates with intrinsic motivation, thereby promoting ego orientation and extrinsic motivation (O'Rourke & Smith, 2013; Trenz & Zusho, 2011). A performance climate is perceived as controlling, hence lowering the level of self-determined motivation (Buch et al., 2017).

Social Climate of Young Swimmers

Both coaches and parents have existential relationships with young athletes (Storm et al., 2014). This influences effort, enjoyment, and competence and results in higher self-determined motivation and continued participation (Chan et al., 2012). Coaches seems to have a larger influence on competence, while parental involvement and behavior have a greater impact on effort and enjoyment. Coaches affect the motivational climate as they provide for example the competence an athlete acquire, which in turn satisfies basic psychological needs (Bartholomew et al., 2011; Haugen et al., 2020; McLaren et al., 2015; Trenz & Zusho, 2011). They can influence athletes in both negative and positive ways. Their behavior can, for example, result negatively in drop-out (Rocchi et al., 2020), and burnout (Barcza-Renner et al., 2016), or positively in enjoyment (Scanlan & Lewthwaite, 1986) and increased group cohesion (Eys et al., 2013). Throughout a season, coaches are essential for persistence and motivation by providing autonomy and relatedness support, thereby ensuring development and performance (Rocchi et al., 2020). They are also shown to influence variance in amotivation throughout a season (11.7 %) (Stoa et al., 2020).

At the age of 11-12 parents are still the main caregiver and therefore play an important role in young athletes' lives as they provide both support and opportunity for participation in training and competition (Harwood & Knight, 2009; O'Rourke et al., 2014). Parents pay, drive, organize, and volunteer, in addition to ensure social, cognitive, and physical development. Through this effort they create and affect the environmental influences of their children. A parent-initiated mastery climate is shown to increase intrinsic motivation, enjoyment of activity, and effort of young swimmers aged nine to fourteen (O'Rourke & Smith, 2013). Similar studies with athletes from other sports show similar results (Kavussanu et al., 2011; Kolayiş & Çelik, 2017). The younger the child, the greater influence parents seem to have and there are differences between children's relationship with mothers and fathers (Alvarez et al., 2021; Baxter-Jones & Maffulli, 2003; O'Rourke et al., 2014; Ullrich-French & Smith, 2009). Particularly mothers seem to affect the children's motivation (Chan et al., 2012; Ullrich-French & Smith, 2009). In general, mothers are shown to have a stronger predictive influence on intrinsic motivation (Woolger & Power, 2000), participation (Ullrich-French & Smith, 2009), competence, effort, and enjoyment (Chan et al., 2012) than fathers. High maternal goals can predict intrinsic motivation, of young swimmers (Woolger & Power, 2000), and their interpersonal style can neutralize negative effects of performance oriented fathers (Alvarez et al., 2021).

Objectives

As the liaison of AGT and SDT is deemed advantageous it can enhance the understanding of young swimmers' motivational profiles. The two theoretical perspectives will provide a holistic context for researching the quality and direction of young Norwegian swimmers' motives, self-determined motivation, and goal orientations. The purpose of the current study was threefold. First, to understand the motivational profiles of young Norwegian swimmers, in terms of participation motives, quality of motivation (self-determined motivation) and goal orientations

towards competitive swimming. Second, the young Norwegian swimmers' motives and self-determined motivation will be compared with what parents believe the children's motives and self-determined motivation are. Finally, the perceived motivational climate (performance or mastery) created by coaches, mothers, and fathers is mapped and the influence of motivational climate on goal orientations and intrinsic motivation is tested.

Method

Research Approach

To approach the psychological phenomena of motives and motivation, a position between realism and relativism was adapted, with a constructionistic epistemology (Bryman, 2016; Moon & Blackman, 2014). A structural realist will accept one true reality and that the nature of that reality can change, while relativists assume that e.g., emotions, culture, and experience interact with an individual's understanding of reality and truth (Moon & Blackman, 2014). This cross-sectional research was conducted using an online survey design, prepared in SurveyXact by Ramboll.

Participants

Sample 1: The first participant group consisted of young swimmers aged 11 to 13. They are participants in a longitudinal study on performance and health determining factors in swimming at the Norwegian School of Sport Sciences (NIH). Out of 81 swimmers 49 girls and 16 boys completed the questionnaire (response rate 80.3%). Three never replied to the questionnaire, nine only provided age and gender, and four completed the survey twice (full or parts of it). They were recruited the year they turn 11 and are currently from swimming clubs in the eastern, western, and southern parts of Norway. Inclusion criteria were that the swimmer had to be able to swim 50 m in all four competitive strokes (front crawl, backstroke, breaststroke, and butterfly) and train swimming for a minimum of three sessions per week.

Sample 2: The second group was 55 mothers and 33 fathers of the parents of the swimmers.

Procedures

The research was approved by the local ethical committee (Ref# 215 – 47) and the national data protection agency for research (Ref# 58608) and conducted in accordance with the Helsinki Declaration (The Norweigan National Research Ethics Committees, 2020). Following approval, the legal guardian(s) of the swimmers returning for year two and three were contacted by email with information containing the questionnaire on motives and motivation. New participants were recruited through a post on the website of the Norwegian Swimming Federation and their Facebook page, the coaches page on Facebook, e-mails to clubs and coaches, and parents and coaches contacting the project leader. Both parents and children received information about the study adjusted to the age of the swimmers. The cognitive development of 11-13-year-olds was addressed by the local ethical committee and following an elaborate discussion the questionnaire and items were deemed appropriate for their age. A pilot test of the online survey was completed with five athletes below the age of 13. They reported no mentionable difficulties with the questions and used an average of 15 minutes to complete the survey.

Prior to participation, the legal guardian provided written informed consent for their own and their child's participation. The parents were e-mailed two hyperlinks to the online survey, one for the swimmer and one for parents, and they were advised to complete the questionnaire between day one and two of physical testing of the longitudinal study. This would allow both parents and swimmers to ask questions to the test leader on day two.

As informed consent was not collected from the children, all items were made optional and three additional consent-questions were added in the online survey: at the beginning and before questions concerning mothers and fathers. Parents were informed of all questions in

advance of consenting to participation of their child. This gave the parents the opportunity to make an informed decision on whether they wanted their children to answer questions about themselves.

Instruments

The survey consisted of five questionnaires with a total of 92 items for children and 60 items for parents. The participants spent between 10-30 min and 5-15 min to complete it, respectively. The Participation Motivation Questionnaire and Parent-Initiated Motivational Climate in Individual Sport Competition Questionnaire were translated to Norwegian using translation and back-translation method (Behr, 2017). Two master students at NIH (one native English speaker, one C2 proficiency), one certified translator (Norwegian-English), and a Canadian researcher (Norwegian speaker) translated the items either into Norwegian, or back to English. The translations were synthesized considering the young age of the participants. Mean scores for each subscale of the five questionnaires were calculated and used in the analyses to encounter missing cases.

Participation Motivation Questionnaire

Motives of participation in competitive swimming were assessed using the Participation Motivation Questionnaire (PMQ). It was developed for competitive swimming by Gould et al. (1985) and retrieved from Brodkin and Weiss (1990). It consists of 35 items, unevenly split between seven factors, i.e. motives. The internal consistency of the original subscales show varying reliability; *health* (α = .87), *fun* (α = .70), *sport specific characteristics* (comp/train) (α = .95), *significant others* (sigother) (α = .53) *affiliation* (α = .55), *status* (α = .88), and *energy* (α = .67) (Brodkin & Weiss, 1990). Eleven items were removed to limit the extensiveness of the survey for the young participants (some translated into the same and some were deemed redundant). Participants were presented with the stem “I swim because…” and rated the importance of each item using a 5-point Likert Scale ranging from (1) not at all

important to (5) extremely important (Brodkin & Weiss, 1990). The strength of the scale was moderated to (1) not important to (5) very important when translating to Norwegian.

For the parents' questionnaire, the stem was changed to "My child swims because … (he or she…)", as previously done by Marsh et al. (2015).

Behavioural Regulation in Sport Questionnaire

The Behavioural Regulation in Sport Questionnaire (BRSQ) developed by Lonsdale et al. (2008) measures the degree of self-determined motivation. It is a 32-item questionnaire including three factors of intrinsic motivation and five regulations of extrinsic motivation. The present study utilized a short 23-item version used in the PAPA-study (Viladrich et al., 2013), as this measures one factor of intrinsic motivation (general) and excludes integrated regulation due to the young age of the participants. The initial validation of the subscales, showed Cronbach's alpha between .79 and .92 for all subscales; *Intrinsic motivation – general* (IM) (α = .92), *Identified regulation* (ID) (α = .82), *Introjected regulation* (IJ) (α = .88), *External regulation* (EX) (α = .93), and *Amotivation* (AM) (α = .90) (Lonsdale et al., 2008). Viladrich et al. (2013) added three items in the PAPA-study specifically targeting extrinsic motivation such as rewards. These items measured external regulation rewards (EXrew), and the original items measuring external regulation, which focused more on external pressure, were still included (EXpres). Each item follows the stem "I swim…" and participants are asked to rate their agreement using a 5-point Likert scale ranging from (1) strongly disagree to (5) strongly agree.

Parents respond to this questionnaire on their belief/experience of their child's motivation, i.e. "My child swims…".

Perception of Success Questionnaire

The Norwegian version of the Perception of Success Questionnaire (POSQ) was used to measure individual goal orientations (Roberts & Ommundsen, 1996; Roberts et al., 1998). It is

a 12-item questionnaire, with six items for each goal orientation (ego and task). Questions are answered on a 5-point Likert-scale ranging from (1) strongly disagree to (5) strongly agree. The internal consistency of the two subscales were good: *ego orientation* α = .89, and *task orientation* α = .95. Originally the scale presents the stem "When playing sport, I feel most successful when". In this study, this was adjusted to "When swimming, I feel most successful when".

Perceived Motivational Climate in Sport Questionnaire-short

The Perceived Motivational Climate in Sport Questionnaire (PMCSQ-short) captures the perception of motivational climate created by a coach (Seifriz et al., 1992). The present study utilized an 11-item scale of the translated version by Ommundsen and Roberts (1996). This showed good internal validity: α = .83 and α = .81 for *performance climate* (six items) and *mastery climate* (five items), respectively (Ommundsen et al., 2010). Following the question, "How do you experience the social environment in your swimming group?" participants were asked to rate items on a 5-point Likert scale ranging from (1) completely disagree to (5) completely agree.

Parent-Initiated Motivational Climate in Individual Sport Competition Questionnaire

The Parent-Initiated Motivational Climate in Individual Sport Competition Questionnaire (MCISCQ-Parent) developed by Harwood et al. (2019) assess the influence of parents in competitive situations specifically for individual sports such as swimming. It was utilized to measure parent-initiated motivational climate and it showed good internal validity. This scale presents 10 items measuring mothers' *ego promoting values and behaviors* (five items α = .90; mother performance climate) and *task promoting values and behaviors* (five items α = .85; mother mastery climate). The items concerning fathers are split into three subscales: *ego promoting values and behaviors* (four items, α = .88; father performance climate), *task promoting behaviors* (four items, α = .87; father mastery behaviors), and *task promoting values*

(three items, α = .81; father mastery values), adding up to 11 items. Items are scored on a 7-point Likert scale ranging from (1) never occurs to (7) always occurs.

Statistical Analysis

Statistical analyses were performed using Statistical Package for Social Sciences (SPSS) version 28.0.0.0 (190) (IBM Corp, Armonk, NY, United States). The mean score of subscale items was calculated to encounter missing cases, as all items were voluntarily for the children to respond to. Internal consistency was assessed by examining Cronbach's alpha coefficients (Table 1). Descriptive statistics, and the samples size showed the distribution to be suited for parametric tests (kurtosis and skewness < 1.96) (Skovlund & Fenstad, 2001). Assumption of homogeneity of variance was determined using the Kolmogorov-Smirnov test (p > .05) as suggested by Ntoumanis (2001). Mean difference between gender and participant group (swimmers vs parents) were compared using Independent Samples T-Tests. Level of significance was set at $p > 0.05$ (O'Donoghue, 2012). For variables violating the assumption of homogeneity of variance (Levine's test < .05), the Welch Test was used to correct for unequal variance (Skovlund & Fenstad, 2001). The overall differences between the subgroups (girl vs boy, and mother vs father) were calculated with Multiple Analyses Of Variance (MANOVA) for each variable (O'Donoghue, 2012). Relationships between the different variables (motives, self-determined motivation, goal orientations, and perceived motivational climate) were examined using Pearson's Correlation Coefficient (r). The threshold for small, medium and large correlations were set at .1, .3 and .5, respectively (Cohen, 2013). To examine the impact of perceived climate on achievement orientation and self-determined motivation, regression analyses were computed.

Results

The results are presented in the following order: motives, self-determined motivation and goal orientations, including parents' belief of the children's motives and self-determined

motivation. Then the motivational profiles are presented, combining the three elements. This is followed by motivational climate, including its influence on the motivational profiles. The overall differences between boys and girls, and mothers and fathers showed no significant differences. The results, therefore, only present results of children and parents.

Motives

The two most important motives of the swimmers were "fun" and "sport specific characteristics" (comp/tran). Children rated "fun" and "health" as more important compared to what parents believe (Table 1) ($t(151) = -3.2$, $p = .002$, d = .52 and $t(151) = -4.9$, $p < .001$, respectively). Similarly, "significant others" (sigother) and "status" were rated the least important motives for both children and parents.

Table 1. *Descriptive Statistics and Cronbach's Alpha for Motives of Children and Parent's Belief of Children's Motives*

	Children		Parents	
Variable	*M* (*SD*)	Cronbach's alpha (α)	*M* (*SD*)	Cronbach's alpha (α)
Health (six items)	4.17 (.51)**	.59	3.72 (.59)**	.73
Fun (three items)	4.51 (.51)*	.49	4.24 (.53)*	.37
Sport specific characteristics (comp/train) (six items)	4.21 (.61)	.80	3.98 (.66)	.61
Significant other (sigother) (three items)	3.40 (.83)	.53	3.16 (.69)	.34
Affiliation (two items)	4.17 (.73)	.53	4.14 (.69)	.58
Status (three items)	3.12 (.87)	.63	3.18 (.89)	.73
Energy (two items)	4.06 (.73)	.31	3.18 (.99)	.68

Note. Significant differences *$p < .05$; **$p < .01$.

There were only positive correlations between the motives. "Health" showed large and medium correlations with all other motives ($r = 31$-50, $p < .01$), except "affiliation" for children and "significant others" (sigother) for parents' belief ($p > .05$). Higher scores on "sport specific characteristics" (comp/train) correlated with higher importance of "status" ($r = .52$ and $.62$, p

< .01, children and parents respectively) and "fun" (r = .56, p < .01, children only). Parents seemed to believe that children who valued "comp/train" also rated "sigother" as important (r = .35, p < .01).

Motivation

Children scored higher on intrinsic motivation, compared to extrinsic motivation and amotivation (Table 2). The second highest was identified regulation followed by external regulation rewards. Parents showed similar results. Children showed higher levels of identified regulation compared to parent's belief (t(116) = -2.4, p = .017, d = .65). Parents believed the children would score higher on external regulation rewards (t(113) = -2.9, p = .005, d = 1.0).

Table 2. *Descriptive Statistics and Cronbach's Alpha of Self-Determined Motivation of Children and Parent's Belief.*

	Children		Parents	
Variable	*M* (*SD*)	Cronbach's alpha (α)	*M* (*SD*)	Cronbach's alpha (α)
Intrinsic Motivation (IM)	4.48 (.56)	.80	4.45 (.46)	.68
Identified Regulation (ID)	3.71 (.74)*	.68	3.45 (.56)*	.49
Introjected Regulation (IJ)	1.79 (.82)	.82	1.91 (.78)	.84
External regulation pressure (EXpres)	1.53 (.60)	.77	1.72 (.75)	.71
External regulation (EX)	2.17 (.67)	.74	2.49 (.57)	.86
External regulation rewards (EXrew)	3.02 (1.21)**	.93	3.52 (.89)**	.85
Amotivation (AM)	1.73 (.89)	.89	1.68 (.74)	.87

Note. Significant differences *p < .05; **p < .01.

Intrinsic motivation of children showed medium correlations with identified regulation (r = .38, p < .01) and external rewards (r = .35, p < .01), and negative correlations with introjected regulation (r = -.48, p < .01), external pressure (r = -.39, p < .01), and amotivation (r = -.54, p < .01). Both children and parents, showed and believed external pressure to be positively correlated with amotivation (r = .51 and .68, p < .01, children and parents). Amotivation showed strong correlations with introjected regulation (r = .58 and .63, p < .01,

children and parents), while introjected regulation showed large correlation with external pressure for both children and parents (r = .68 and .79, p < .01, children and parents). In general children scored higher on task orientation, compared to ego orientation, see Table 3.

Table 3. *Descriptive Statistics and Cronbach's Alpha of Goal Orientations of Children*

Variable	M (SD)	Cronbach's alpha (α)
Ego orientation	3.30 (1.01)	.91
Task orientation	4.52 (.44)	.70

Motivational Profiles

Children's ego orientation showed large correlations with rewards and the combined EX variable, see Table 4. Task orientation of children showed a large correlation with intrinsic motivation and medium with external rewards. Children's task orientation also had a medium correlation with identified regulation.

Children's task orientation showed large and medium correlations with "health" (r = .56, p < .01), "fun" (r = .46, p < .01), "sport specific characteristics" (comp/train) (r = .57, p < .01) and "energy" (r = .37, p < .01). Their ego orientation had medium correlations with "fun" (r = .32, p < .01), "comp/train" (r = .37, p < .01), and "status" (r = .49, p < .01). Children with higher levels of self-determined motivation (Intrinsic motivation, IM, and identified regulation, ID) showed large and medium correlations with "fun" (r = .47 and .32, p < .01, IM and ID respectively), "comp/train" (r = .53 and .45, p < .01; IM and ID), "status" (r = .36, p < .01, ID), and "health" (r = .42, p < .01, ID). Parents who believed the children had this level of self-determined motivation only showed medium correlation with "comp/train" (r = .37, p < .01).

Children with high external regulation pressure showed a medium correlation with "significant others" (r = .47, p < .01), as did parental belief (r = .41, p < .01). This motive (sigother) positively correlated with extrinsic motivation and amotivation (r =.29, p < .01, parents). External regulation reward showed large correlations with "sport specific

characteristics" (comp/train) (r = .72 and .70, p < .01, children and parents respectively). "Status" was also largely correlated with external rewards (r = .60, p < .01, children), as do parents believe (r = .47, p < .01, parents).

Table 4. *Correlations of Self-Determined Motivation and Goal Orientations of Children*

Variable	IM	ID	IJ	EXpres	EX	EXrew	AM
Ego orientation	.14	.01	.17	.30*	.64**	.62**	-.16
Task orientation	.60**	.59**	-.21	-.24	.17	.38**	-.21

Note. IM: intrinsic motivation; ID: identified regulation; IJ: introjected regulation; EXpres: external regulation pressure; EX: external regulation; EXrew: external regulation reward; AM: amotivation; *p < .05; **p < .01.

Motivational Climate of Children

Children perceived a mastery climate created by coaches, mothers, and fathers to a greater extent than a performance climate (Table 5). A coach performance climate had a medium correlation with both mother and father performance climates (r =.40 and .43, p < .01, mother and father respectively). Mother and father performance climates were largely correlated (r = .74, p < .01). A coach mastery climate showed small and medium correlations with father mastery behavior (r = .28, p < .05) and values (r =.31, p < .05). A mother mastery climate only correlated with father mastery behaviors (r = .65, p < .01), not with a coach mastery climate or father mastery values (p > .05).

Table 5. *Descriptive Statistics and Cronbach's Alpha of Children's Perceived Motivational Climate*

	Children	
Variable	*M* (*SD*)	Cronbach's alpha (α)
Coach performance climate	2.17 (.80)	.78
Coach mastery climate	4.42 (.50)	.76
Mother performance climate	1.91 (1.13)	.85
Mother mastery climate	5.60 (1.07)	.75
Father performance climate	1.95 (1.26)	.86
Father mastery behaviors	5.52 (1.21)	.78
Father mastery values	6.11 (.98)	.65

Correlations between goal orientations and perceived motivational climate were medium and large between ego orientation and all performance-initiated climates (Table 6). Task orientation showed small to large correlations with coach and mother mastery climates, as well as father mastery behavior.

Table 6. *Correlations of Coach- and Parent-Initiated Climate and Goal Orientations of Children*

Variable	Ego orientation	Task orientation
Coach performance climate	.54**	.13
Coach mastery climate	.11	.55**
Mother performance climate	.44**	.01
Mother mastery climate	-.12	.35**
Father performance climate	.41**	.10
Father mastery behavior	.02	.28*
Father mastery values	-.04	.18

Note. *$p < .05$; **$p < .01$.

Intrinsic motivation showed medium and large correlations with both coach and father mastery climates (both behavior and values), though not with a mother mastery climate (Table 7). The only significant correlation with a mother mastery climate was identified regulation. External pressure was medium correlated with coach and father performance climates. External reward showed medium correlations with coach- and mother-initiated performance climates, as well as a coach mastery climate. Father mastery values were negatively correlated with EX pressure, and amotivation was negatively correlated with a coach mastery climate.

Regression analyses showed that 35% of variation in a child's ego orientation could be explained by a coach performance climate. When adjusting for mother and father performance climates (non-significant) (adjusted $R^2 = .35$, $F(3, 57) = 11.55$, $p < .001$, $Y = 1.7 + .58x$ (coach performance), $p < .001$). Variance in task orientation could be explained by a coach mastery climate (33%), mother and father mastery climates non-significant (adjusted $R^2 = .33$, $F(4, 56) = 8.2$, $p < .001$, $Y = 2.1 + .47x$ (coach mastery), $p < .001$). Coach and father mastery climates

could explain 28% of the variance in intrinsic motivation, mother mastery climate non-significant (adjusted R^2 = .28, $F(4, 56)$ =6.9, $p < .001$, Y =1.8 +.4x (coach mastery) (p = .003) + .17x (father mastery behavior), p = .020).

Table 7. *Correlations of Coach- and Parent-Initiated Climate and Self-Determined Motivation of Children*

Variable	IM	ID	IJ	EXpres	EX	EXrew	AM
Coach performance climate	.01	.19	.35**	.36**	.47**	.34**	.02
Coach mastery climate	.50**	.28*	-.26*	-.23	.16	.35**	-.32*
Mother performance climate	.20	.06	.21	.18	.33**	.29*	.03
Mother mastery climate	.18	.34**	.04	.01	.03	.03	.10
Father performance climate	.09	.17	.28*	.27*	.30*	.19	.20
Father mastery behavior	.42**	.30*	-.23	-.17	.10	.23	-.11
Father mastery values	.35**	-.10	-.32*	-.44**	-.21	.02	-.16

Note. IM: intrinsic motivation; ID: identified regulation; IJ: introjected regulation; EXpres: external regulation pressure; EX: external regulation; EXrew: external regulation reward; AM: amotivation; *$p < .05$; **$p < .01$.

Discussion

The aims of the present study were threefold; first to map the motivational profiles of young Norwegian swimmers in terms of motives, self-determined motivation and goal orientations. Secondly, to compare parents' belief of the child's motives and self-determined motivation with the responses of the children. Further, to understand how these young Norwegian swimmers perceive their motivational climate (performance or mastery) created by coaches, mothers, and fathers, and combine the different factors to examine how motivational profiles are influenced by the motivational climate.

The main results indicated that these children participate in competitive swimming because it's fun. They are mainly intrinsically motivated, task-oriented, and perceive a mastery-climate from coaches and both parents. The parents understand the children's motivation overall well, and the coach seems to create the most influential motivational climate.

Motivational Profiles

In terms of motives, children rate "fun", "sport specific characteristics" (comp/train), "health", and "affiliation" as more important (in this order), compared to "significant others" and "status". These results are in line with those of Brodkin and Weiss (1990) and Salguero et al. (2004), underlining the similarity of this sample with international swimmers of similar age. The present study shows that young swimmers have different motives for participating in competitive swimming, rating "fun" as the most important motive. The correlations indicate that these young swimmers have many and different motives for participating in competitive swimming, and there are no consistent patterns. Those who swim because of "sport specific characteristics" (comp/train) also seemed to engage because they enjoyed it (large correlation with "fun"). "Comp/train" was also largely correlated with external rewards, emphasizing the competitiveness of the sample. This resembles the results of Fouad Kamal (1989) that young swimmers were more extrinsically motivated, particularly by going to competitions. However, the results clearly show the children to be more intrinsically motivated compared to extrinsic.

Ego orientation showed a medium correlation with "comp/train". This implies that they participate because of the sport and for what it gives. This can highlight the connection between extrinsic motivation and ego orientation. However, task orientation had a large and medium correlation with several motives, including "comp/train". This shows that these children had various motives for participating in competitive swimming, and that motives and goal orientations show no consistent patterns. "Fun" had a medium relationship with the highest forms of self-determined motivation, intrinsic motivation, while "health" had a medium relationship with identified regulation in line with SDT. This implies that this group of athletes enjoy the sport while being aware of the benefits of staying physically active. This could predict longer enjoyment and participation in the sport (Monteiro et al., 2020; Smith et al., 2006a). The covariation of "significant others" and "status" with external pressure and ego orientation,

strengthens the (theoretical) relationship between extrinsic motivation and ego orientation. This in line with the theory of Nicholls (1989), as ego-oriented children seemed to care more about external motives and show stronger relationships with less self-determined motivation compared to children with higher task orientation. Task orientation also had large correlations with higher self-determined motivation, emphasizing the connection between task orientation and intrinsic motivation (Smith et al., 2006a). As the children showed higher levels of task orientation compared to ego orientation, they are shown to have adaptive profiles of goal orientation (high task, low ego) (Roberts et al., 2018). The children's level of ego orientation might also be beneficial for their long term sport career, as elite athletes are shown to benefit from being high in both orientations (Abrahamsen et al., 2008). The only negative significant correlation was between amotivation and "sport specific characteristics", which is understandable as one would probably lack motivation for competitive swimming if the sports characteristics were not important to them, and vice versa.

Parent's Understanding of Children's Motives and Motivation

The lack of studies comparing parental belief of children's motives and motivation with the self-reported motives and motivation of the children provides few empirical sources for this discussion. Parents mainly understood the motives of the children, though there were a few exceptions ("health" and "fun"). These exceptions were rated as more important to the children than what parents believed they would be. This discrepancy can come from parents not completely understanding the child's motives, the size of the sample might be too small, or different types of bias (Thomas et al., 2015). The only significant correlation with "fun" was "affiliation". This shows that parents' who believed the children participated because it was fun connected this to social aspects of sport participation, compared to for example sport characteristics. Compared to Marsh et al. (2015) the present study found more differences

between the children and the parents. However, this study highlights that parents in general understand the children's motives, similar to the present one.

External reward was an important drive for the children, yet the parents believed this to be even more important. Considering that they are parents of competitive young swimmers it is understandable they assume this is a large part of their motivation. It would be natural to assume that they were motivated by competition, also considering their young age (Fouad Kamal, 1989). The culture or climate in the training group could direct the focus away from competitions in such a way that children rate this as less important (NIF, n.d.). Contrastingly, parents believed that the children would score lower of identified regulation, hence not participating for the health benefits of being physically active. This difference could come from media or a culture emphasizing health aspects of being active, which children adapt and include as a part of their motivation. In general, there are fewer significant correlations between parents' beliefs of the children's motives and self-determined motivation. Although there are similar correlations these do not match in strength. It is always difficult to judge someone else's motives or motivation, which could create this difference between children and parent's belief. The inconsistent pattern of motives and motivation, emphasize they have multiple motives regardless of the quality of their motivation or goal orientation. This would be a difficult pattern for parents to pick up on. There is also the chance of the sample size being too small to show significant differences or relationships. Finally, parents interestingly seem to understand their own, or friends', influence on motivation as the motive "significant others" is positively correlated with the belief of children lacking motivation or high levels of external regulation pressure. As parents introduce swimmers to the sport (Baxter-Jones & Maffulli, 2003), the children might feel obliged to continue and parents seem to understand this influence they have on their own children.

Motivational Climate and its Influence of Motivation

The present study found medium and large correlations between mastery climates and more self-determined motivation (IM, ID). This indicates that coaches and parents positively influence intrinsic motivation and enjoyment for these young Norwegian swimmers. The perception of a mastery climate positively correlates with task orientation, and a performance climate with ego orientation, which is in line with what Nicholls (1989) suggested. Children perceive, to a greater extent, a mastery climate rather than a performance climate initiated by coaches, mothers, and fathers. This is a positive finding and argues for continued participation (O'Rourke & Smith, 2013; Teixeira et al., 2020), positive health outcomes (Pensgaard & Roberts, 2000), increased task orientation (Trenz & Zusho, 2011), and basic psychological needs satisfaction, hence increased self-determined motivation (Rodrigues et al., 2020b; Teixeira et al., 2020), of these young swimmers. In congruence with previous research, performance-initiated climates by coach, mother, and father positively correlated with lower self-determined motivation (IJ, EX) and ego orientation. This confirms the connection between goal orientations, self-determined motivation, and motivational climate. Parent-initiated mastery climates positively correlated with each other (mother and father), and a coach-initiated climate correlated with a father-initiated mastery climate. However, a mother-initiated mastery climate did not significantly correlate with a coach-initiated mastery climate. The correlation is positive, though too weak to reach a level of significance (r .22). The difference between a coach vs father climate and a coach vs mother climate is not large. Father mastery behavior had a small correlation (r .28) with a coach mastery climate, and father mastery values a medium (r .31). This difference could be due to coincidences in the sample, or perhaps the children perceive slightly stronger support from fathers compared to mothers. Chan et al. (2012) also found a slightly smaller correlation coefficienst for mothers compared to fathers. However, their sample was approximately four times bigger than that of the present study.

The present study found the coach-initiated climate to be the most influential on young swimmers self-determined motivation, task and ego orientation. This is in contrast with the results of O'Rourke et al. (2014) who found parents as the most influential significant other for this age group. This difference could be a cultural difference, or a change in the swimming culture over the past years. It is also noteworthy that the sample of O'Rourke et al. was slightly younger (M_{age} 11) than that of the present study (M_{age} 12.2). Previous studies have shown mothers and coaches to be more influential on motivation and participation compared to fathers (Chan et al., 2012; Ullrich-French & Smith, 2009; Woolger & Power, 2000). Contrastingly, we found coaches to be most influential, and parents almost equal. That Norway is reaching equality between parents, could contribute to explaining the small difference between parents, and overall (Singer, 2014). Both parents usually engage in their children's extracurricular activities. They follow up on goals, cheer, and invest their time in the sporting career of their child.

The present study found that a coach mastery climate could explain 33% of the variance in task orientation and 28% of the intrinsic motivation, while mother and father mastery climates had no significant impact. This shows that coaches have an important relation with young swimmers, who are previously found to explain 11.7% of the variation in amotivation throughout a season (Stoa et al., 2020). These results emphasize the importance of the coaching role and the influential factor they have on young swimmers' motivation, including their responsibility for future participation and development of the children that they coach (Black & Weiss, 1992; Rocchi et al., 2020). A coach performance climate explained 35% of the variance in ego orientation after adjusting for a mother and father performance climate (non-significant). This highlights that a performance climate has a greater influence on ego orientation compared to a mastery climate on task orientation (Smith et al., 2009).

Practical Implications

This study provides insight into young Norwegian swimmers' reasons for swimming and what drives them to continue, which are mainly influenced by a coach created motivational climate. The young swimmers' motives and motivation are mainly intrinsic, they are more task-oriented than ego-oriented and perceive their climates to be mastery focused. As previous research has established the importance of a mastery climate, intrinsic motivation, and task orientation for positive health outcomes, persistence, and performance development, this study emphasizes the importance of coaches and parents to maintain this quality of motivation and goal orientation (task) of their athletes/children. In addition, they should maintain the mastery climate they are already initiating. This will uphold the intrinsic motivation and task orientation of the swimmers.

This study can be a platform for the development of knowledge in the children's inner lives, their family, and the environment around them, for coaches, parents, and the child themselves. Development of self-competence is valuable for the child's future progress in sports and in general for personality and self-image (Tetzchner, 2012). For some, it can build a basis for future understanding of their own wishes and the importance of motivation for development and performance. It can be an advantage for parents and coaches to understand the child better, but also to help the child understand their own motivation and wishes for the future.

The data on parents' belief of the children's motives and motivation shows that parents in general understand the motives and self-determined motivation of the children. However, they do not see the same connection between the two as the children. Swimmers, parents, and coaches would all benefit from a better understanding of the qualities provided from the different motivational profiles, and their potential to affect motivation in either a positive or negative way. This knowledge can help coaches and parents in the process of guiding young swimmers and aid them in their pursuit of their goals and future aspirations.

Limitations and Future Directions

The findings of the present study must be considered in the context of its limitations. First, it must be acknowledged that a cross-sectional study cannot infer causation between any of the variables (Wang & Cheng, 2020). To do so, it is necessary to continue with a longitudinal approach which can also reveal changes in goal orientations due to different motivational climates and the development of motivational profiles with age. The present study did not ask parents to provide the ID-number of their child. Therefore, it is not possible to directly connect the parents with their own child(ren). If future studies did this, it would be possible to provide further details on the parent-child relationships in sport as the children grow and develop. It could provide insight into young athletes' experience of being either similar or different to their own parents, and how their motivation and goal orientations might change due to parents' goal orientations or perceived motivational climate. Continuing over years, it would provide data regarding how a performance climate affects ego-oriented swimmers compared to a mastery climate, and the same for task-oriented swimmers.

Second, an online survey design will have both positive and negative impacts. It is a fast, easy, and inexpensive method, which allows for several outcomes to be measured at the same time (Thomas et al., 2015). It can also increase chances of social desirability, and if parents' hopes for their child's motives and motivation influence their judgement of what they believe their child's motives and motivation is. The seriousness of the participants must be judged as well. Bias due to conflict of loyalty when answering questions concerning their coach, mother, and father could occur. This might be the case as fewer children answered the questionnaire for fathers compared to mothers. As this was the final part of the questionnaire it could also be due to tiredness, that mothers were more engaged in the children answering the questionnaire than fathers, that mothers are more engaged in the children's extracurricular activities, or more single mothers. The internal reliability measures of the PMQ shows that it

might not be the best measure for motives of sport participation, and other options should be explored.

As the participants in this study were children the design of the online questionnaire used smiley-face "buttons". This could lead to a bias when answering and in the interpretation of the results (Wu & Leung, 2017). Another sources of bias could be the parents themselves, if they were watching their child completing the survey. The understanding of the questions could be difficult for some of the children as their cognitive development could be at different levels. In such cases the children had to ask their parents or wait for test day two and ask the test leader. To accommodate a written explanation of how to answer the questions with examples was added prior to each questionnaire. The language was as simple as possible. Ninety-seven percent (97%) of the participants found it easy to complete the survey. Regardless of its downfalls, this design and research approach was deemed the best for the present study considering the young age of the participants.

Future research could aim at revealing cultural differences between parents' belief of their child's motives and motivation, and possibly differences throughout the child's swimming career. A peer-initiated motivational climate should be added because it could have a larger influence than coaches and parents, even among young children (Smith et al., 2006b). Even though swimming is an individual sport, athletes have training groups with peers of their own age who create a social environment in the group. Peers influence motivation through competitive behavior, evaluative communication and their social relationships (Keegan et al., 2010), and a peer-initiated task-involving motivational climate influence persistence and motivation through perceived needs satisfaction (Jõesaar et al., 2011). Peer relationships affect motivation and adaptive peer relations might result in higher competence, enjoyment, and self-determined motivation (Smith et al., 2006b). Their sense of belonging ensures further

participation while the quality of the relation affect their motivation through the motivational climate perceived.

Conclusion

The swimmers show stronger task orientation than ego orientation, and higher levels of self-determined motivation. With one exception, extrinsic motivation regulated by rewards. Their motivational profiles show consistency with the two theories. Intrinsic motivation covaries with task orientation, and the perception of a mastery-initiated climate. While extrinsic motivation covaries with ego orientation, and the perception of a performance-initiated climate. In general, parents understand the motives and self-determined motivation of the children. Coaches seem to have the biggest impact on self-determined motivation and goal orientation, hence enjoyment, persistence, and skill development in swimming.

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The authors report there are no conflict of interests to declare.

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Appendices

Appendix 1a Information Letter Children

Vedlegg 2c: Prestasjonsbestemmende faktorer i svømming
Forsøksperson Under 16 år

NIH NORGES IDRETTSHØGSKOLE

INFORMASJONSSKRIV TIL BARN/UNGDOM UNDER 16 ÅR

PRESTASJONSBESTEMMENDE FAKTORER I SVØMMING

BAKGRUNN OG HENSIKT

Dette er et spørsmål til deg om å delta i et forsøksprosjekt som undersøker hva som bestemmer prestasjonen i svømming.

Prestasjonen i svømming vil avhenge av mange forskjellige ting, blant annet fysisk form (styrke, utholdenhet og bevegelighet), mentale faktorer (f.eks. motivasjon, hvordan lykkes, treningsmiljø), svømmeteknikken din og taktiske valg. Vi ønsker å forske på disse tingene og spørsmålene vi ønsker å svare på er:

- *Hvordan de ulike delene som bestemmer svømmeprestasjonene forandrer seg med alder, kjønn og trening.*
- *Hvordan de ulike delene henger sammen og påvirker hverandre.*
- *Hva er viktigst i forskjellige distanser og svømmearter.*

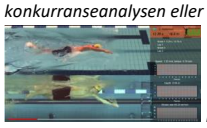
For å kunne være med i prosjektet så må du være jente eller gutt mellom 11-15 år og drive med konkurransesvømming. I tillegg må du også være vant til å trene og konkurrere deg selv til utmattelse (så sliten som du kan bli) slik at du allerede vet hvor harde noen av testen vil være.

HVA INNEBÆRER STUDIEN?

I prosjektet vil vi skrive ned noen opplysninger om deg; alder, kjønn, høyde, vekt, kroppsmål (f.eks. hvor lange armer og ben har du), hvor mye du trener, hvilken klubb du svømmer for og personlige rekorder.

I dette prosjektet vil du som forsøksperson møte til testing ved flere anledninger over flere år. Dette skjer når du, klubben eller laget ditt er på avtalt testing i svømmelaboratoriet ved Norges idrettshøgskole. Testingen består av en eller flere tester og du kan selv velge hvor mange du vil være med på.

1. *Konkurranseanalyse av din favorittøvelse(r) foregår ved at du skal svømme et konkurranseløp med maksimal innsats der vi måler blant annet hastighet, takfrekvens, taklengde, start og vending, undervannsarbeid og andre ting med videoanalyse (bilde 1). Et konkurranseløp med 25 til 1500m distanse starter med en konkurransestart og gjennomføres i 25m bassenget ved Norges idrettshøgskole etter at du har gjennomført en god oppvarming. Noen ganger blir også teknikken din analysert ved at du har på deg treghetsmålere (bilde 2 viser et eksempel), enten samtidig med konkurranseanalysen eller under vanlig svømming.*


Bilde 1

Bilde 2

2. *Hvor sterk du er på forskjellige hastigheter eller motstander vil testes ved flere gjentagelser hvor du svømmer festet til en vinsj (bilde 3). Her kan vi måle styrken du utvikler på forskjellige hastigheter og hastigheten din på forskjellige motstander. Vi kan også måle hastighets- og styrkevariasjoner innenfor en og mellom svømmesykluser og hvor mye styrke som utvikles fra bensparket og armtaket hver for seg og ved vanlig svømming. I disse testene får du et belte rundt magen/livet og i beltet er det festet en snor som går til vinsjen (bilde 3). Testene gjennomføres ved at du svømmer med maksimal innsats i 25 m. Det er minimum 2 min pause mellom hvert forsøk og til sammen gjennomføre du 3-9 forsøk.*

Bilde 3


Bilde 4

3. *Din vannmotstand vil også måles med samme apparat ved at du slepes gjennom vannet. Her ligger du i linjeholdning og vinsjen vil dra deg gjennom vannet i ca. 20m, du må holde pusten så godt du kan. Til sammen 8 slepinger kan gjennomføres.*

Vedlegg 2c: Prestasjonsbestemmende faktorer i svømming
Forsøksperson Under 16 år

NORGES IDRETTSHØGSKOLE

4. *Din styrke på land vil også måles med styrketester der du skal løfte så tungt du klarer en eller flere ganger samt etterligne svømmetaket på land i en svømmebenk/apparat der vi måler styrken i armene og bena dine. Disse resultatene kan sammenlignes med målingene gjort i test 2 for å se hvor godt den styrken du har på land blir overført til svømmebevegelsene dine i vannet.*
5. *Bevegelighets og mobilitetsøvelser vil teste hvor myk du er i ulike kroppsdeler.*
6. *Hvor mye og hva du trener hver dag skriver du ned i treningsdagboken din sammen med treneren din. Dette gjør du for å se hvordan treningen din påvirker svømmeprestasjonen din. Hvor mye og hva du trener skriver du sammen med treneren din i en treningsdagbok slik at man kan analysere hvordan prestasjonen din endrer seg med hva slags trening du gjennomfører.*
7. *Motivasjon og grunner for at du svømmer vil måles gjennom et online spørreskjema. Her vil du få spørsmål om hvorfor du svømmer og hva som er viktig for at du holder på med konkurransesvømming. I tillegg vil vi spørre deg om hva som gjør at du synes svømming er gøy. Vi vil også spørre din mamma og/eller pappa om hva de tror er grunnen til at du liker svømming. Til sist lurer vi på hvordan du synes foreldrene dine er med på å skape motivasjon. Du vil bruke ca. 20 minutter på å gjennomføre spørsmålene. Før hvert tema gis det informasjon om hvordan du skal svare på spørsmålene, med eksempler.*
   Hvis foreldrene dine også deltar i studien, vil vi spørre de om hvorfor de tror du svømmer og hva de tror er viktig for å lykkes og føle deg bra med svømmingen.

MULIGE FORDELER OG ULEMPER

Ved å delta i dette prosjektet vil du få se og oppleve hvordan forskning gjøres og få mulighet til å gjennomføre målinger som vanligvis er dyre eller vanskelig å få gjennomført. Du vil få vite hvordan din svømmeprestasjon påvirkes av forskjellige ting, og du vil kunne følge disse målingene over tid for å registrere forbedringer. Du kan også bruke disse resultatene til å jobbe med de viktigste tingene i din daglige trening slik at du kan bli en bedre svømmer. Fra konkurranseanalysen vil du også kunne få med filmen din som viser din teknikk både over og under vann fra siden og forfra under vann.

Testene tar ikke lang tid og er heller ikke vanskelige å gjennomføre. Flere av testene krever at du svømmer til utmattelse, og tar i maksimalt, og vil kunne føles som svært slitsomt. Testene er derimot relativt korte. Noen av testene kan du også gjennomføre i løpet av en vanlig treningsøkt sammen med svømmeklubben din.

Spørreskjemaet kan være tidkrevende, men skal ikke være vanskelig å svare på. Noen av spørsmålene om foreldrene dine kan kanskje være litt vanskelig å svare på. Du velger selv om du svarer på dem, og du kan velge om du vil ha med deg mamma eller pappa når du svarer på undersøkelsen. Du kan også velge om du ønsker å være alene når du svarer på spørsmål om mappa og pappa (foresattes påvirkning på motivasjonsmiljø). Før du starter får du spørsmål om du har lyst til å være med.

Spørsmålene om motiver og motivasjon kan videreutvikle din egen forståelse for hvorfor du trives med svømming som konkurranseidrett, som også gir et godt utgangspunkt for videre utvikling og trening av mentale ferdigheter.

DELTAKELSE

Det er frivillig å delta i prosjektet. Om du har lest denne informasjonen og ønsker å delta som forsøksperson ber vi deg om å få mamma eller pappa til å skrive under på skjemaet de har fått og returnere det til oss. Det er helt frivillig å delta i prosjektet og du kan når som helst og uten å oppgi noen grunn trekke deg fra prosjektet uten at det får noen betydning for deg. Du kan også velge hvilke deler av prosjektet du deltar i.

Hvis du ønsker å trekke deg eller har spørsmål til prosjektet så kan du ta kontakt med prosjektleder doktor Bjørn Harald Olstad, 930 61 946, bjornho@nih.no. Han vil gjennomføre testingen i prosjektet sammen med ansatte og studenter ved Norges idrettshøgskole. Ansvarlig for studien er Norges idrettshøgskole.

HVA SKJER MED PRØVENE OG INFORMASJONEN OM DEG?

Informasjon og resultater på testene dine blir tatt godt vare på og du har rett til å se hvilke opplysninger vi har om deg. Alle disse opplysningene vil bli behandlet uten navn og fødselsnummer eller andre opplysninger som gjør at noen vet hvem du er. Vi samarbeider også med andre personer i utlandet så resultater og målinger fra testene kan bli delt med dem, men de vil ikke vite hvem du er. Informasjonen om deg må oppbevares i 5 år etter at prosjekt er ferdig for kontroll før det slettes. Informasjonen om deg vil bli slettet innen 31.12.2038.

Appendix 1b Information Letter Parents (Legal Guardians) and Informed Consent Form

Vedlegg 2b: Prestasjonsbestemmende faktorer i svømming
Foresatt til forsøksperson Under 16 år

NIH NORGES IDRETTSHØGSKOLE

FORESPØRSEL OM DELTAKELSE I FORSKNINGSPROSJEKTET (FORESATT TIL BARN UNDER 16 ÅR)

PRESTASJONSBESTEMMENDE FAKTORER I SVØMMING

Dette er et spørsmål til deg om barnet ditt (alle punkter i skrivet) og du (kun punkt 7) ønsker å delta i et forskningsprosjekt hvor formålet er å kartlegge hvilke faktorer som bestemmer prestasjonen i svømming. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for barnet ditt og deg. Det er også viktig å understreke at disse faktorene for de yngste utøverne er knyttet til utvikling av mestringsfølelse (utover de rent prestasjonsfremmende faktorer), (ref. Idrettens barnerettigheter og bestemmelser om barneidrett).

Prestasjonen i svømming vil avhenge av mange forskjellige faktorer, blant annet fysisk form (styrke, utholdenhet og bevegelighet/mobilitet), kroppsmål, mentale faktorer, tekniske ferdigheter (svømmeteknikk) og taktiske valg. Vi ønsker å forske på disse faktorene og spørsmålene vi ønsker å svare på er:

- *Hvordan faktorene som bestemmer svømmeprestasjonene forandrer seg med alder, kjønn og trening.*
- *Hvordan disse faktorene henger sammen og påvirker hverandre.*
- *Hvilke faktorer som er viktigst i forskjellige distanser og svømmearter.*

Problemstillingene over ønsker vi å besvare gjennom forskningsprosjektet. På grunn av forskningsprosjektets omfang så vil dataene som samles inn også kunne bli brukt i doktorgradsstudier, bachelor-/master- og andre studentoppgaver for å besvare formålet med studiet.

Bjørn Harald Olstad (bjornho@nih.no, 930 61 946) er prosjektleder og ansvarlig for studien er Norges idrettshøgskole. Ved å delta i prosjektet, samtykker du også til at opplysninger (resultater og målinger fra prosjektet) kan utleveres til forskere vi samarbeider med i utlandet. Dette gjøres kun når vi ser det som hensiktsmessig for å kunne besvare problemstillingene på en best mulig måte. Koden som knytter deg til dine personidentifiserende opplysninger vil ikke bli utlevert.

Vi søker til denne studien gutter og jenter i alderen 11-15 år, som driver med konkurransesvømming og som er vant til å trene og konkurrere med maksimal belastning. Om du har lest denne informasjonen og ønsker å samtykke til ditt barns deltagelse som forsøksperson ber vi deg skrive under og returnere den siste siden til oss. Du kan når som helst i etterkant trekke samtykket uten å oppgi noen grunn.

HVA INNEBÆRER PROSJEKTET?

I prosjektet vil vi innhente og registrere opplysninger om barnet; alder, kjønn, høyde, vekt, kroppsmål (f.eks. arm- og benlengde, omkrets rundt bryst og midje), treningshistorikk, klubbtilhørighet og personlige rekorder.

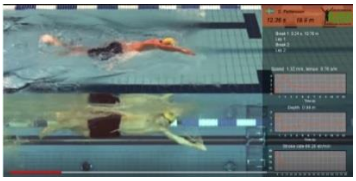
I dette prosjektet vil forsøkspersonene møte til testing ved flere anledninger over flere år. Dette skjer når de, klubben eller laget er på avtalt testing i svømmelaboratoriet ved Norges idrettshøgskole. Testingen består av en eller flere tester og dere kan selv velge hvor mange tester man vil være med på. Opplysningene som samles inn vil bli registrert elektronisk og det vil også bli gjort videopptak.

1. *Konkurranseanalyser foregår ved at svømmeren skal svømme et konkurranseløp med maksimal innsats der vi måler hastighet, takfrekvens, taklengde, start og vending, undervannsarbeid og andre parametere i løpet med videoanalyse (bilde 1). Et konkurranseløp med 25 til 1500m distanse starter med en konkurransestart og gjennomføres i 25m bassenget ved Norges idrettshøgskole etter en god oppvarming. Noen ganger blir også*

Vedlegg 2b: Prestasjonsbestemmende faktorer i svømming
Foresatt til forsøksperson Under 16 år

NIH NORGES IDRETTSHØGSKOLE

teknikken analysert ved at barnet har på seg treghetsmålere (bilde 2), enten samtidig med konkurranseanalysen eller under vanlig svømming.



Bilde 1

Bilde 2

2. *Hvor sterk svømmeren er på forskjellige hastigheter eller motstander vil testes ved flere gjentagelser hvor svømmeren er festet til en vinsj (bilde 3) der vi kan måle styrken som utvikles på forskjellige hastigheter eller hastigheten som oppnås på forskjellige motstander. Vi kan også måle hastighets- og styrkevariasjoner innenfor en og mellom svømmesykluser og hvor mye styrke som utvikles fra bensparket og armtaket hver for seg og ved vanlig svømming. I disse testene får utøveren et belte rundt magen/livet og i beltet er det festet en snor som går til vinsjen (bilde 4). Testene gjennomføres ved svømming med maksimal innsats i 25 meter. Det er minimum 2 minutters pause mellom hvert forsøk og til sammen gjennomføres det 3-9 forsøk.*

Bilde 3

Bilde 4

3. *Vannmotstanden vil også måles med samme apparat ved sleping gjennom vannet. Liggende i linjeholdning vil vinsjen dra svømmeren gjennom vannet i ca. 20m, mens man holder pusten. Til sammen 8 slepinger kan gjennomføres.*

4. *Styrke på land vil også måles med styrketester der man skal løfte så tungt man klarer en eller flere ganger, isokinetiske øvelser, samt etterligne svømmetaket på land i en svømmebenk/apparat der vi måler styrken i armene og bena. Disse resultatene kan sammenlignes med målingene gjort i test 2 for å se hvor godt styrken man har på land blir overført til svømmebevegelsene i vannet.*

5. *Bevegelighet vil testes i øvelser som måler evnen til bevegelsesutslag i ledd og leddkjeder, mens mobilitet vil måle den funksjonelle bevegelighet over flere ledd i en arbeidskjede.*

6. *Treningshistorikk*
   Hvor mye barnet trener og hva barnet trener loggfører de sammen med sin trener i treningsdagboken som vil bli brukt for å analysere hvordan prestasjonen endrer seg med treningen som gjennomføres.

7. *Mentale ferdigheter*
   Motivasjon og motiver vil måles gjennom et online spørreskjema. Her vil barnet/ungdommen få spørsmål om hvorfor han eller hun svømmer og hva som er viktig for at de holder på med konkurransesvømming. I tillegg vil vi spørre barnet/ungdommen om hva som gjør at de synes svømming er gøy. Vi vil også spørre deg som foresatt om hva du tror er grunnen(e) til at de liker svømming. Til sist lurer vi på hvordan de synes foreldre bidrar til å skape motivasjon. Det antas å ta ca. 20 minutter å gjennomføre hele spørreskjemaet. Før hvert tema gis det informasjon om hvordan spørsmålene skal svares på, med eksempler.

   Foresatte som deltar vil som deltager få noen spørsmål om hva de tror er sine barns motiver for å svømme (hvorfor barnet/ungdommen svømmer) og om sin egen målorientering (hva som er viktig for å lykkes). Det antas å ta ca. 10 minutter å gjennomføre hele spørreskjemaet.

Vedlegg 2b: Prestasjonsbestemmende faktorer i svømming
Foresatt til forsøksperson Under 16 år

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MULIGE FORDELER OG ULEMPER

Ved å delta i dette prosjektet vil svømmeren få et innblikk i hvordan forskning bedrives og få mulighet til å gjennomføre flere avanserte tester og målinger som vanligvis er kostbare. Man vil få et vitenskapelig innblikk i hvordan svømmeprestasjonen påvirkes av forskjellige faktorer, og man vil kunne følge disse målingene over tid for å registrere forbedring. Man kan også bruke disse resultatene til å jobbe med de viktigste faktorene i den daglige trening slik at man kan bli en bedre svømmer. Fra konkurranseanalysen vil man også kunne få med seg filmen som viser teknikken både over og under vann fra siden og forfra under vann.

Testene er ikke spesielt tidkrevende eller vanskelige å gjennomføre, men ved flere tester på samme dag, kan det gå med noe tid. Noen av testene kan også gjennomføres i løpet av en vanlig trening sammen med svømmeklubben til utøveren. Flere av testene krever at deltakerne svømmer til utmattelse og tar i maksimalt. Disse vil kunne oppfattes som anstrengende. Testene er derimot relativt korte, og vil for friske personer normalt ikke medføre noen risiko.

Spørreskjemaet kan være tidkrevende, men skal ikke være vanskelig å svare på. Du kan også avstå fra å svare på spørsmål du ikke forstår eller synes er vanskelige å svare på. Foresatte vil få mulighet til å se spørsmålene før signering av samtykke, og barnet får mulighet til å velge om hun eller han vil ha med seg noen når de svarer på spørsmål. Dersom du som foresatt er til stede er det viktig at du ikke blander deg eller påvirker svarene til barnet, men stiller som støtte og hjelp dersom barnet ikke forstår noe. De får også spørsmål om de ønsker å være alene når de svarer på spørsmål om deg (foresattes påvirkning på motivasjonsmiljø). Spørreskjemaet barnet skal svare på ligger vedlagt i dette informasjonsskrivet slik at foresatte kan se spørsmålene før dere tar beslutningen om barnet skal delta eller ikke. Vennligst ikke del dette med barnet/ungdommen.

Vi oppfordrer foresatte til å snakke med barnet/ungdommen om undersøkelsen og motivasjon generelt, for å videreutvikle sin egen forståelse for hvorfor man trives med svømming som konkurranseidrett. Dette gir et godt utgangspunkt for videre utvikling og trening av mentale ferdigheter.

FRIVILLIG DELTAKELSE OG MULIGHET FOR Å TREKKE SITT SAMTYKKE

Det er frivillig å delta i prosjektet. Dersom du ønsker at ditt barn skal delta undertegner du samtykkeerklæringen på siste side. Hvis barnet ditt deltar, kan dere når som helst trekke samtykke tilbake uten å oppgi noen grunn. Alle opplysninger om barnet vil da bli anonymisert. Det vil ikke ha noen negative konsekvenser for dere hvis barnet ikke vil delta eller senere velger å trekke seg. Du kan også velge hvilke deler av prosjektet du deltar i. Dersom barnet trekker seg fra prosjektet kan du kreve å få slettet innsamlede prøver og opplysninger med mindre opplysningene allerede er inngått i analyser eller brukt i vitenskapelige publikasjoner. Dersom du senere ønsker å trekke ditt samtykke eller har spørsmål til studien, kan du kontakte Bjørn Harald Olstad (bjornho@nih.no, 930 61 946). Han vil gjennomføre testingen i prosjektet sammen med ansatte og studenter ved Norges idrettshøgskole. Ansvarlig for studien er Norges idrettshøgskole.

BARNETS PERSONVERN - HVA SKJER MED INFORMASJONEN?

Informasjonen som registreres skal kun brukes slik som beskrevet i hensikten med studien. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Det vil ikke være mulig å identifisere barnet i resultatene av studien når disse publiseres. Alle opplysningene vil bli behandlet uten navn og fødselsdato eller andre direkte gjenkjennende opplysninger. En kode knytter barnet til opplysninger gjennom en navneliste. Det betyr at denne informasjonen er avidentifisert. Det er kun autorisert personell knyttet til prosjektet som har adgang til navnelisten og som kan finne tilbake til barnet. Denne oppbevares innelåst i en safe som bare prosjektleder har tilgang til.

Vedlegg 2b: Prestasjonsbestemmende faktorer i svømming
Foresatt til forsøksperson Under 16 år

NIH NORGES IDRETTSHØGSKOLE

Ansatte ved NIH og studenter som arbeider med prosjektet vil også kunne få tilgang til deres e-post (hvis de trenger å kontakte dere i forbindelse med testing og for distribusjon av testresultater/informasjon i etterkant) og videomateriale for behandling av testresultater. Tilgang til videomateriale gjelder også internasjonale samarbeidsforskere i prosjektet når dette er nødvendig for å behandle testresultatene. Dere kan til enhver tid få tilsendt en oversikt over hvem disse er ved å kontakte prosjektleder.

Deres rettigheter
Så lenge barnet kan identifiseres i datamaterialet, har dere rett til:

- innsyn i hvilke personopplysninger som er registrert om barnet,
- å få rettet personopplysninger om barnet,
- få slettet personopplysninger om barnet,
- få utlevert en kopi av barnets personopplysninger (dataportabilitet), og
- å sende klage til personvernombudet eller Datatilsynet om behandlingen av personopplysningene.

Prosjektleder har ansvar for den daglige driften av forskningsprosjektet og at opplysninger om deg blir behandlet på en sikker måte. Informasjonen om barnet vil bli oppbevart i 5 år etter prosjektslutt (31.12.2033) for etterprøvbarhet og kontroll før det slettes. Informasjonen vil bli slettet innen 31.12.2038.

FORSIKRING

Norges idrettshøgskole er statlige institusjon og er derfor selvassurandør i forhold til studien.

GODKJENNING

På oppdrag fra Norges idrettshøgskole har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket (referansenummer 922504). Det forskningsetiske vedrørende studien er behandlet og godkjent og av intern etisk komite ved Norges idrettshøgskole (saksnummer 47).

FORESATTES SAMTYKKE TIL BARNETS DELTAKELSE I PROSJEKTET

Jeg har mottatt informasjon om studien, og godkjenner som barnets foresatt deltagelse i studiet.

---------- ----------
Sted og dato Foresattes signatur

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Barnets navn med blokkbokstaver Foresattes navn med blokkbokstaver

FORESATTES SAMTYKKE TIL Å DELTA I PROSJEKTET

Jeg har mottatt informasjon om studien, og godkjenner at jeg som barnets forelder deltar i studiet.

---------- ----------
Sted og dato Foresattes signatur

Foresattes navn med blokkbokstaver

Appendix 2 Information Concerning the Questionnaire

Informasjon spørreundersøkelse om motivasjon og motiver for deltagelse i konkurransesvømming

Barnet/foresatte deltar også i en spørreundersøkelse om motiver og motivasjon, i tillegg til motivasjonsklima (miljø). Her sendes det ut to skjemaer, ett til foresatte og ett til utøveren. Utøveren skal svare på spørsmål om sine egne motiver for deltakelse i konkurransesvømming, motivasjon for å holde på med denne idretten, individuell målorientering og tre ulike skjemaer for motivasjonsklima. Det første handler om hvordan de opplever miljøet i treningsgruppen sin, mens de to andre stiller spørsmål om hvordan foresatte påvirker miljøet i forbindelse med stevner. Her er det ett skjema om hver av de foresatte. Barnet vil få spørsmål før hvert skjema om de samtykker til å svare på spørsmål om hver av de foresatte. Totalt er det 91 spørsmål og barnet skal svare ved å klikke på ulike smilefjes som representerer hvor viktig noe er for dem.

Som foresatt kan du se igjennom spørsmålene til barnet før dere signerer samtykkeskjemaet. Disse er i **vedlegg 7** og vi ber dere om å ikke dele dette med barnet. Barnet skal få se undersøkelsen for første gang når de skal gjennomføre den.

Skjemaet til de foresatte består av de to første skjemaene om motiver og motivasjon, hvor vi ber dere svare så godt dere kan om hva dere tror er viktig for deres barn. I tillegg får foresatte spørsmål om egen individuell målorientering.

Målet med prosjektet er å utvikle forståelse og kunnskap om unge svømmeres motiver og motivasjon for å fortsette (eller ikke) med konkurransesvømming. Resultatene av studien kommer ikke til å presenteres enkeltvis, men gruppevis basert på alder og eventuelt kjønn.

Hvis du har mulighet for å sende oppdatert samtykke-skjema med signatur via epost, kan vi sende barnet undersøkelsen i forkant av test-dagene på NIH. Da kan dere også samle opp spørsmål og stille de ved ankomst i bassenget, og fullføre undersøkelsen mellom test-dag 1 og dag 2. Har du spørsmål før du signerer det oppdaterte samtykke-skjemaet er det bare å ta kontakt med Bjørn Harald Olstad på e-post: bjornho@nih.no.

Appendix 3 Approval from NSD

Meldeskjema / Longitudinell utvikling av prestasjonsbestemmende faktorer i svømm... / Vurdering

Vurdering

Dato
07.06.2021

Type
Standard

Referansenummer
922504

Prosjekttittel
Longitudinell utvikling av prestasjonsbestemmende faktorer i svømming

Behandlingsansvarlig institusjon
Norges idrettshøgskole / Institutt for fysisk prestasjonsevne

Prosjektansvarlig
Bjørn Harald Olstad

Prosjektperiode
01.04.2018 - 31.12.2033

Meldeskjema

Kommentar
NSD har vurdert endringen registrert 03.06.2021.

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet med vedlegg den 07. 06.2021. Behandlingen kan fortsette.

Endringene gjelder at det er lagt til en ny datakilde i prosjektet. Det skal nå innhentes opplysninger gjennom et spørreskjema om motivasjon for å drive med svømming. Det skal også innhentes opplysninger gjennom et skjema til foresatte, foresatte er derfor lagt til som et nytt utvalg (utvalg 4).

SurveyExact er i sammenheng med spørreundersøkelsen lagt til som databehandler i prosjektet. NSD legger til grunn at behandlingen oppfyller kravene til bruk av databehandler, jf. art 28 og 29.

LOVLIG GRUNNLAG
Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og art. 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake.

Lovlig grunnlag for behandlingen vil dermed være den registrertes uttrykkelige samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a, jf. art. 9 nr. 2 bokstav a, jf. personopplysningsloven § 10, jf. § 9 (2).

OPPFØLGING AV PROSJEKTET
NSD vil følge opp underveis (hvert annet år) og ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet/pågår i tråd med den behandlingen som er dokumentert.

Lykke til videre med prosjektet!

Kontaktperson hos NSD: Jørgen Wincentsen
Tlf. Personverntjenester: 55 58 21 17 (tast 1)

Appendix 4 Approval from Local Ethical Committee

Bjørn Harald Olstad
Institutt for fysisk prestasjon

OSLO 21. juni 2021

Endringsmelding – 192-170621 – 47 - 060218
Prestasjonsfremmende faktorer i svømming - Utvikling av fysisk form, treningsbelastning, skader/sykdom og psykososiale elementer i ungdomsidretten

Vi viser til endringsmelding, prosjektbeskrivelse, informasjonsskriv og innsendt melding til NSD. I henhold til retningslinjer for behandling av søknad til etisk komite for idrettsvitenskapelig forskning på mennesker, ble det i komiteens møte av 17. juni 2021 konkludert med følgende:

Vurdering

Hovedendringen i prosjektet innebærer at det skal innhentes data om barn og unge svømmeres motiver, motivasjon og motivasjonsklima. Utvalgets alder er 11-16 år. Begrunnelsen for å inkludere disse dataene i prosjektet er at det vil gi trenere og foresatte både innsikt og en dypere forståelse for de ulike faktorene som holder en ung utøver motivert og hvordan de kan være involvert i å skape miljøer som fremmer hensiktsmessig utvikling. Videre vises det til at barn og unges motivasjon påvirkes av miljøet rundt dem, og at både trener og foresatte er en viktig og stor del av miljøet. For å få kunnskap om hvilken påvirkning foresatte har eller kan ha på en utøvers motivasjon skal også foresatte inkluderes i prosjektet. Fra dette utvalget skal det innhentes data fra de foresatte om hva de opplever er viktig for deres barn, og vurdering av egen rolle rundt målorientering og forståelse av idrettstalent.

Av mulige ulemper ved omsøkte endringer angis blant annet at for barn og unge som inkluderes kan være ukomfortabelt å svare på spørsmål som berører egne foresatte. De skal derfor bli informert om at de ikke trenger å svare på alle spørsmål. Utvalgets alder fra 11-16 år innebærer et spenn i grad av modenhet. Spørreskjema og informasjonsskriv skal derfor tilpasses utvalgets alder. Foresatte kan oppleve det som ubehagelig å svare på spørsmål som beskriver sitt barn.

Komiteen er av den oppfatning at prosjektet og de endringer som nå søkes er egnet til å besvare viktige spørsmål av både vitenskapelig men også samfunnsmessig karakter. Komiteen anerkjenner også forskningsgruppens bruk av validerte spørreskjemaer som åpenbart bidrar til å styrke kvaliteten på forskningen. Sett fra et forskningsetisk ståsted er komiteen opptatt av ivaretagelse av de yngste i utvalget. Det siktes her særlig til de spørsmål som berører barn og unges motiver, motivasjon og motivasjonsklima ut fra et prestasjonsperspektiv. Komiteen savner en etisk refleksjon rundt barns evne til å reflektere over denne type spørsmål og hvorvidt dette kan ha noen negative sideeffekter med hensyn til andre aspekter ved idrett i yngre alderstrinn; som lek, samhold og moro. Komiteen etterspør på denne bakgrunn prosjektledelsens vurderinger og egne etiske refleksjoner om rammene

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og formålet med prosjektet kan ha negative konsekvenser gitt et for stort fokus på rene prestasjoner. Komiteen mener det samtidig er viktig at de foresatte, som skal samtykke til sitt barns deltakelse, også får anledning til å se spørreskjemaene før de tar beslutning om barnet skal delta eller ikke.

I forlengelse av ovennevnte, så mener komiteen at det til prosjektet bør utarbeides en beredskapsplan som sikrer oppfølgning av barn og ungdom med bakgrunn i deltagelse og svar som gir grunnlag for bekymring og med behov for særskilt oppfølgning. En slik beredskapsplan bør blant annet innebære at prosjektledelsen etablerer en form for kontakt med det øvrige hjelpe- og støtteapparat som er etablert rundt den organiserte idretten. Dette for å sikre at eventuelle sårbare barn gis en forsvarlig oppfølgning.

Når det gjelder forelagte utkast til informasjonsskriv for nytt utvalg, så har komiteen noen konkrete forslag til justeringer:

I informasjonsskrivet til deltakerne under 16 år står det «*Spørreskjemaet kan være tidkrevende, men skal ikke være vanskelig å svare på. Noen av spørsmålene om foreldrene dine kan kanskje være vanskelig å svare på. Du velger selv om du svarer på dem.*» I tråd med komiteens merknader over foreslås følgende omformulering; ««*Spørreskjemaet kan være tidkrevende, men skal ikke være vanskelig å svare på. Du kan også avstå fra å svare på spørsmål du ikke forstår eller synes er vanskelige å svare på*».

Videre står det i informasjonsskrivet under punktet «Hva innebærer det for deg å delta»: «I tillegg *spør vi om når du føler deg vellykket* og «*Mamma og/eller pappa vil også få noen spørsmål om hva de tror er dine grunner for å svømme og hva de tror er viktig for at du skal føle at du lykkes med svømmingen*». Komiteen mener det bør utvises varsomhet med å bruke formuleringer som «vellykket» og «lykkes med» overfor et de yngste deltakerne. Vi vil foreslå følgende endring «*I tillegg vil vi spørre deg om hva som gjør at du synes svømming er gøy. Vi vil også spørre din mamma og/eller pappa om hva de tror er grunnen til at du liker svømming*».

Komiteen ber videre om at det i informasjonsskrivet fremgår at det er mamma eller pappa som, etter å ha lest informasjonsskrivet, skal signere på samtykke. Videre at dersom barnet motsetter seg deltagelse, så vil dette ikke bli akseptert.

Vedtak

På bakgrunn av forelagte dokumentasjon finner komiteen at prosjektet er forsvarlig og at det kan gjennomføres innenfor rammene av anerkjente etiske forskningsetiske normer nedfelt i NIHs retningslinjer. Til vedtaket har komiteen lagt følgende forutsetning til grunn:

- *Vilkår fra NSD følges*
- *Informasjonsskrivet til utøverne under 16 år justeres i tråd med komiteens vurdering og konkrete forslag til justeringer og sendes komiteen til orientering*
- *En nærmere redegjørelse for de forskningsetiske vurderinger som er gjort som følge av omsøkte endringer og i lys av komiteens ovennevnte vurderinger, sendes komiteen til orientering*
- *Etterspurte informasjon sendes innen 20. august*

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Komiteen gjør oppmerksom på at vedtaket er avgrenset i tråd med fremlagte dokumentasjon. Dersom det gjøres vesentlige endringer i prosjektet som kan ha betydning for deltakernes helse og sikkerhet, skal dette legges fram for komiteen før eventuelle endringer kan iverksettes.

Komiteen forutsetter videre at prosjektet gjennomføres på en forsvarlig måte i tråd med de til enhver tid gjeldende tiltak ifbm Covid-19 pandemien.

Med vennlig hilsen

Ellen Berg

Førsteamanuensis Ellen Berg
Stedfortredende leder, Etisk komite, Norges idrettshøgskole

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Appendix 5 The Online Survey (child version)

Hei!

Takk for at du har valgt å svare på denne undersøkelsen om grunner for deltakelse og motivasjon i svømming. Vi anbefaler at det gjennomføres på laptop eller pc. eventuelt nettbrett. Du kan også velge om du vil ha en av foreldrene dine i samme rom mens du svarer på spørsmålene, men de har ikke lov til å svare for deg. Dersom det er noe du ikke skjønner kan du spørre om hjelp til å forstå.

I dette skjemaet vi du først få noen enkle spørsmål om hvilket kjønn og hvor gammel du er.

Videre får du spørsmål om hva som er grunnene for at du svømmer. Så spør vi om din motivasjon, altså hvorfor du fortsetter å svømme. Deretter får du spørsmål om når du føler deg mest vellykket, din mening om idrettstalent, og hvordan du opplever miljøet i treningsgruppa di. Du får også noen spørsmål om hvordan foreldrene dine oppfører seg når du skal prestere.

Til slutt vil du få mulighet til å skrive dine tilbakemeldinger før du sender inn skjemaet.

Husk:
Det finnes ingen riktig eller feil svar.
og
svar så ærlig som mulig.

Dersom du ikke ønsker å svare på alle spørsmålene er det bare å hoppe over de. Og du kan når som helst velge å trekke deg fra undersøkelsen dersom du ønsker det.

Takk!

Vil du fortsette til spørsmålene?

☐ Ja

☐ Nei

Hva er ditt IDnummer?

____

Hvor gammel er du?

https://www.survey-xact.dk/servlet/com.pls.morpheus.web.pages.Core...false&printbackground=false&printing=true&printVariableName=false Side 1 av 9

- ❑ 11 år
- ❑ 12 år
- ❑ 13 år
- ❑ 14 år
- ❑ 15 år
- ❑ 16+ år

Er du jente eller gutt

- ❑ Jente
- ❑ Gutt

Først kommer det noen spørsmål om hvorfor du driver med svømming. Her skal du lese ulike utsagn og svare hvor viktig dette er for deg.

For eksempel:
"Jeg liker aktiviteten/det som skjer på trening"

Hvis dette er veldig viktig for deg trykker du på det største og grønneste smilefjeset, er det bare ikke viktig trykket du på den sureste munnen. Du har også svar alternativer mellom veldig viktig og ikke viktig som du velger dersom det er mindre viktig for deg, eller bare litt.

Og husk, det finnes ingen riktige eller gale svar.

Hvor viktig er det å...?

	 Veldig viktig	 Ganske viktig	 Nøytral	 Litt viktig	 Ikke viktig
Få bedre helse	❑	❑	❑	❑	❑
Like å konkurrere	❑	❑	❑	❑	❑
Like aktiviteten/det som skjer på trening	❑	❑	❑	❑	❑
Like lagarbeid	❑	❑	❑	❑	❑
Ønske å lære nye ferdigheter	❑	❑	❑	❑	❑
Like øvelsene / treningen	❑	❑	❑	❑	❑
Like å ha det gøy	❑	❑	❑	❑	❑
Like å svømme i bassenget	❑	❑	❑	❑	❑
Være aktiv	❑	❑	❑	❑	❑
Konkurrere på høyere nivå	❑	❑	❑	❑	❑
Hvordan kroppen min ser ut eller føles	❑	❑	❑	❑	❑
Forbedre ferdighetene mine	❑	❑	❑	❑	❑

Komme i form eller bli sterkere	❑ ❑ ❑ ❑ ❑

Hvor viktig er det å...?

	 Veldig viktig	 Ganske viktig	 Nøytral	 Litt viktig	 Ikke viktig
Familien vil at jeg skal øve	❑	❑	❑	❑	❑
Motta medaljer og trofeer	❑	❑	❑	❑	❑
At andre skal legge merke til meg	❑	❑	❑	❑	❑
Gjøre noe jeg er god i	❑	❑	❑	❑	❑
Være populær hos andre	❑	❑	❑	❑	❑
Vil være sammen med venner	❑	❑	❑	❑	❑
Like å vinne	❑	❑	❑	❑	❑
Lagmiddag/piknik/sosiale aktiviteter	❑	❑	❑	❑	❑
Komme meg ut av huset	❑	❑	❑	❑	❑
Venner vil at jeg skal øve	❑	❑	❑	❑	❑
Like trenerne	❑	❑	❑	❑	❑
Noe å gjøre	❑	❑	❑	❑	❑

Motivasjon

De neste spørsmålene handler om din motivasjon, altså hvorfor du fortsetter å gjøre det du gjør.

Du får spørsmål om hvorfor du svømmer og skal svare på hvor enig eller uenig du er i grunnene, på en skala fra svært enig til svært uenig.

For eksempel:
"Jeg svømmer fordi jeg mener det er bra for meg"
Er du svært enig i dette trykket du på det store, grønne smilefjeset, er du uenig trykker du på det sure fjeset. Husk å vurderer hvor enig/uenig du er i påstanden og bruk hele skalaen av smilefjes.

Og husk, det finnes ingen riktige eller gale svar.

Jeg svømmer...

	 Svært enig	 Enig	 Hverken uenig eller enig	 Uenig	 Svært uenig
fordi noen presser meg til å svømme	❑	❑	❑	❑	❑
selv om jeg egentlig ikke vet hvorfor jeg gjør det	❑	❑	❑	❑	❑

fordi jeg synes at det er moro	❑	❑	❑	❑	❑
fordi jeg mener det er bra for meg	❑	❑	❑	❑	❑
fordi jeg ville fått dårlig samvittighet hvis jeg sluttet	❑	❑	❑	❑	❑
for å vinne medaljer	❑	❑	❑	❑	❑
fordi jeg vil vinne på stevner	❑	❑	❑	❑	❑
men jeg lurer på hvorfor jeg fortsatt er med	❑	❑	❑	❑	❑
fordi jeg liker det	❑	❑	❑	❑	❑
fordi jeg mener det er mange fordeler ved å svømme	❑	❑	❑	❑	❑
fordi jeg ville følt meg flau hvis jeg sluttet	❑	❑	❑	❑	❑
for å gjøre andre fornøyd	❑	❑	❑	❑	❑

Jeg svømmer...

	Svært enig	Enig	Hverken uenig eller enig	Uenig	Svært uenig
fordi jeg har lyst på premier	❑	❑	❑	❑	❑
selv om jeg ikke aner hvorfor lenger	❑	❑	❑	❑	❑
fordi jeg ville følt meg mislykket hvis jeg ikke var med	❑	❑	❑	❑	❑
fordi andre ville bli misfornøyd med meg hvis jeg lot være	❑	❑	❑	❑	❑
fordi jeg er nødt til å fortsette	❑	❑	❑	❑	❑
fordi det lærer meg å ha kontroll over meg selv	❑	❑	❑	❑	❑
fordi jeg lærer ting som er nyttig for meg i livet	❑	❑	❑	❑	❑
fordi noen tvinger meg til å fortsette	❑	❑	❑	❑	❑
fordi det er gøy	❑	❑	❑	❑	❑
fordi jeg synes det er spennende	❑	❑	❑	❑	❑
men jeg lurer på hva poenget med det er	❑	❑	❑	❑	❑

Målorientering

De neste spørsmålene handler om din målorientering, og du får spørsmål om når du føler deg mest vellykket.
De ulike spørsmålene er ulike situasjoner hvor vi spør om hvor vellykket du føler deg.

For eksempel: Når jeg svømmer føler jeg meg mest vellykket når:
"Jeg når et mål"
Er du enig i dette, altså at du føler deg mest vellykket når du når et mål,

trykker du på det grønne smilefjeset. Er du uenig trykker du på det sure fjeset, eller vurderer hvor enig/uenig du er i påstanden og trykker på ett av de andre fjesene.

Og husk, det finnes ingen riktige eller gale svar.

Når jeg svømmer føler jeg meg mest vellykket når:

	Svært enig	Enig	Hverken uenig eller enig	Uenig	Svært uenig
Jeg slår andre (vinner over)	❑	❑	❑	❑	❑
Jeg vinner	❑	❑	❑	❑	❑
Jeg viser personlig fremgang	❑	❑	❑	❑	❑
Jeg overvinner vanskeligheter	❑	❑	❑	❑	❑
Jeg når et mål	❑	❑	❑	❑	❑
Jeg gjør så godt jeg kan	❑	❑	❑	❑	❑
Jeg får vist andre at jeg er best	❑	❑	❑	❑	❑
Jeg gjør det bedre enn konkurrentene mine	❑	❑	❑	❑	❑
Jeg gjør en god innsats	❑	❑	❑	❑	❑
Jeg når mine personlige mål	❑	❑	❑	❑	❑
Jeg er den beste	❑	❑	❑	❑	❑
Jeg er helt overlegen	❑	❑	❑	❑	❑

Treningsmiljø

Nå får du noen spørsmål hvor vi ber deg vurdere hvordan du opplever miljøet i <u>din treningsgruppe</u> i klubben du svømmer i.

Du skal svare på hvor enig eller uenig du er i ulike situasjoner, handlinger eller opplevelser som kan skje i en treningsgruppe.

For eksempel:
"Treneren gir mest oppmerksomhet til de beste"
Dersom du synes dette stemmer for din treningsgruppe trykker du på det grønne smilefjeset, dersom det ikke gjør det det sure. Eller midt i mellom dersom det noen ganger stemmer.

Og husk, det finnes ingen riktige eller gale svar.

Hvordan opplever du miljøet i svømmegruppa?

Svært enig	Enig	Hverken uenig eller enig	Uenig	Svært uenig

Vi oppmuntres til å øve på det de ikke

er så flinke til	❑	❑	❑	❑	❑
Treneren vil at vi skal prøve ut nye ferdigheter	❑	❑	❑	❑	❑
Vi prøver å lære oss nye ferdigheter	❑	❑	❑	❑	❑
Treneren gir mest oppmerksomhet til de beste	❑	❑	❑	❑	❑
Bare noen få svømmere kan være best	❑	❑	❑	❑	❑
Treneren er opptatt av å utvikle / bedre ferdigheter	❑	❑	❑	❑	❑
Det er viktig å svømme bedre enn de andre	❑	❑	❑	❑	❑
Vi får en god følelse når vi gjør det bedre enn de andre	❑	❑	❑	❑	❑
Fremgang hos hver enkelt svømmer er viktig	❑	❑	❑	❑	❑
Treneren favoriserer noen svømmere	❑	❑	❑	❑	❑
Det er viktig å gjøre det bedre enn andre	❑	❑	❑	❑	❑

Treningsmiljø - foreldre

Nå får du noen spørsmål om hvordan din mamma og/eller pappa oppfører seg når du er på stevner.
Her ber vi deg svare på hvor ofte noe skjer eller du opplever at mamma eller pappa oppfører seg på en bestemt måte.

For eksempel:
"At jeg slår en konkurrent noe som er viktig for moren min"
Dersom dette er noe som alltid skjer på stevner velger du det største smilefjeset, eller finner det alternativet som passer best for deg og din mamma.

Du får først spørsmål om mamma, så om pappa.

Hvis du ikke vil at mamma eller pappa skal være tilstede mens du svarer på disse spørsmålene, sier du bare i fra.

Og husk, det finnes ingen riktige eller gale svar.

Vil du gå videre til spørsmål om din mamma?

❑ Ja

❑ Nei

Treningsmiljø - Mamma

	Skjer alltid	Skjer veldig ofte	Skjer litt ofte	Nøytral	Skjer litt sjeldent	Skjer veldig sjeldent	Skjer aldri
Å gjøre det bedre enn en motstander eller konkurrent er viktig for moren min, og det gjenspeiles i måten hun snakker til meg på	❑	❑	❑	❑	❑	❑	❑
Moren min er bekymret for om jeg kommer til å slå konkurrentene eller ikke	❑	❑	❑	❑	❑	❑	❑
Før jeg starter konkurransen gir moren min meg den følelsen av at å lykkes handler om å jobbe hardt, lære og vise ar jeg har gjort framskritt	❑	❑	❑	❑	❑	❑	❑
Før konkurranser minner moren min meg på at det er viktig at jeg prøver å gjøre mitt beste	❑	❑	❑	❑	❑	❑	❑
Moren min sammenlikner min prestasjon med andre svømmeres prestasjon	❑	❑	❑	❑	❑	❑	❑
For moren min er suksess å være bedre enn motstanderen eller andre konkurrenter	❑	❑	❑	❑	❑	❑	❑
Moren min er ivrig etter å få vite om jeg presterte bra eller forbedret meg	❑	❑	❑	❑	❑	❑	❑
Moren min oppmuntrer meg til å gå igjennom prestasjonen min for å hjelpe meg å lære av konkurransen	❑	❑	❑	❑	❑	❑	❑
At jeg slår en konkurrent noe som er viktig for moren min	❑	❑	❑	❑	❑	❑	❑
Moren min tror hardt på å hjelpe meg til å forstå styrkene mine for å gjøre framskritt	❑	❑	❑	❑	❑	❑	❑

Vil du gå videre til spørsmål om din pappa?

❑ Ja

❑ Nei

Treningsmiljø - Pappa

	Skjer alltid	Skjer veldig ofte	Skjer litt ofte	Nøytral	Skjer litt sjeldent	Skjer veldig sjeldent	Skjer aldri
Faren min tror hardt på å hjelpe meg til å forstå styrkene mine for å gjøre framskritt	❑	❑	❑	❑	❑	❑	❑
Faren min gir meg følelsen av at å være bedre enn konkurrentene er noe som er viktig for ham	❑	❑	❑	❑	❑	❑	❑
Faren min oppmuntrer meg til å gå igjennom prestasjonen min for å hjelpe meg å lære av konkurransen	❑	❑	❑	❑	❑	❑	❑

Faren min ser på feil som en del av det å lære	❑	❑	❑	❑	❑	❑	❑
Før konkurranser minner faren min meg på at det er viktig at jeg prøver å gjøre mitt beste	❑	❑	❑	❑	❑	❑	❑
At jeg slår en konkurrent noe som er viktig for faren min	❑	❑	❑	❑	❑	❑	❑
Faren min er den type person som bare vil at jeg skal prestere så godt jeg kan	❑	❑	❑	❑	❑	❑	❑
Faren min er bekymret for om jeg kommer til å slå konkurrentene eller ikke	❑	❑	❑	❑	❑	❑	❑
Faren min er glad på mine vegne hvis jeg har prøvd det beste jeg kan, uavhengig av resultat	❑	❑	❑	❑	❑	❑	❑
Før jeg starter konkurransen gir faren min meg den følelsen av at å lykkes handler om å jobbe hardt, lære og vise at jeg har gjort framskritt	❑	❑	❑	❑	❑	❑	❑
Å være bedre enn motstanderne er viktig for faren min, og dette gjenspeiles i hva han sier til meg	❑	❑	❑	❑	❑	❑	❑

Til slutt lurer jeg på om du har tilbakemeldinger

Var det greit å svare på spørsmålene?

❑  Helt enig (ja, det gikk fint)

❑  Litt enig

❑  Litt uenig

❑  Helt uenig (nei, det gikk ikke fint)

Har du noen tilbakemeldinger? Var det noen spørsmål du ikke forsto? Var det vanskelig å svare?

Tusen takk for at du gjennomførte undersøkelsen!

Har du spørsmål ta kontakt med XXX eller spør oss når du kommer på test dagene på Norges Idrettshøgskole.

Vil du ha kopi av spørsmålene:

Har disse spørsmålene gitt deg nye tanker og spørsmål? Trenger du noen å snakke med om dette?

Kan du snakke med treneren din?
Spør om tillitsvalgte utøver har tid
Snakk gjerne med helsesykepleier på skolen.

Eller ta kontakt med for eksempel

- https://www.ung.no/chat/
- https://korspaahalsen.rodekors.no
- https://www.helsenorge.no/psykisk-helse/her-far-du-hjelp/#andre-hjelpetilbud
- https://www.sidetmedord.no/Aktuelt2/Velkommen-til-Sidetmedord-Chat
- https://www.barneombudet.no

https://www.survey-xact.dk/servlet/com.pls.morpheus.web.pages.Core...false&printbackground=false&printing=true&printVariableName=false Side 9 av 9

Appendix 6 The Online Survey (adult version)

09.09.2021, 12:20

Hei!

Takk for at du har valgt å svare på denne undersøkelsen om motiver og motivasjon i svømming.

I dette skjemaet vi du først få noen enkle spørsmål om hvem du er og hvor gammelt barnet ditt er, dette skal vi bruke for å sammenligne alder og kjønn.

Videre får du spørsmål om hva du opplever er ditt barns motiver, når du selv føler deg mest vellykket og hva din mening om idrettstalent er.

Til slutt vil du få mulighet til å skrive dine tilbakemeldinger før du sender inn skjemaet.

Husk:
Det finnes ingen riktig eller feil svar.
og
svar så ærlig som mulig.

Takk!

Er du

- ❑ Mor (morsfigur)
- ❑ Far (farsfigur)

Hvor gammelt er barnet ditt?

- ❑ 11år
- ❑ 12 år
- ❑ 13 år
- ❑ 14 år
- ❑ 15 år
- ❑ 16+ år

Motiver

På de neste spørsmålene skal du svare på hva tror / opplever du er motivene for at ditt barn holder på med konkurransesvømming.

Du presenteres ulike påstander for hva som kan være viktig for deltakelse og svarer på en skala fra ikke viktig til veldig viktig. Hvor 1 er ikke viktig og 5 er veldig viktig.

09.09.2021, 12:20

For eksempel:
På en skala fra 1-5 hvor viktig opplever du at følgende er for ditt barn?
"få bedre helse"

Hvor viktig er det å...?

	Ikke viktig	Litt viktig	Nøytral	Ganske viktig	Veldig viktig
Like aktiviteten/det som skjer på trening	❑	❑	❑	❑	❑
Få bedre helse	❑	❑	❑	❑	❑
Like å ha det gøy	❑	❑	❑	❑	❑
Like å svømme i bassenget	❑	❑	❑	❑	❑
Ønske å lære nye ferdigheter	❑	❑	❑	❑	❑
Hvordan kroppen min ser ut eller føles	❑	❑	❑	❑	❑
Konkurrere på høyere nivå	❑	❑	❑	❑	❑
Like lagarbeid	❑	❑	❑	❑	❑
Komme i form eller bli sterkere	❑	❑	❑	❑	❑
Like øvelsene / treningen	❑	❑	❑	❑	❑
Være aktiv	❑	❑	❑	❑	❑

Hvor viktig er det å...?

	Ikke viktig	Litt viktig	Nøytral	Ganske viktig	Veldig viktig
Venner vil at jeg skal øve	❑	❑	❑	❑	❑
Like trenerne	❑	❑	❑	❑	❑
At andre skal legge merke til meg	❑	❑	❑	❑	❑
Være populær hos andre	❑	❑	❑	❑	❑
Komme meg ut av huset	❑	❑	❑	❑	❑
Noe å gjøre	❑	❑	❑	❑	❑
Like å vinne	❑	❑	❑	❑	❑
Familien vil at jeg skal øve	❑	❑	❑	❑	❑
Vil være sammen med venner	❑	❑	❑	❑	❑
Gjøre noe jeg er god i	❑	❑	❑	❑	❑
Lagmiddag/piknik/sosiale aktiviteter	❑	❑	❑	❑	❑
Motta medaljer, diplomer og trofeer	❑	❑	❑	❑	❑

Motivasjon

De neste spørsmålene handler om ditt barns motivasjon, altså hvorfor barnet ditt fortsetter med konkurransesvømming.

Spørsmålet har et stamme "jeg svømmer..." også skal du svare på ulike påstander om hvorfor du svømmer. Du skal svare hvor enig eller uenig du tror ditt barn er i de ulike grunnene, på en skala fra svært enig til svært uenig.

For eksempel:
"Jeg svømmer fordi jeg mener det er bra for meg"

Jeg svømmer...

	Svært enig	Enig	Hverken enig eller uenig	Uenig	Svært uenig
fordi jeg mener det er bra for meg	❑	❑	❑	❑	❑
fordi jeg vil vinne på stevner	❑	❑	❑	❑	❑
fordi jeg ville fått dårlig samvittighet hvis jeg sluttet	❑	❑	❑	❑	❑
men jeg lurer på hvorfor jeg fortsatt er med	❑	❑	❑	❑	❑
fordi jeg liker det	❑	❑	❑	❑	❑
for å gjøre andre fornøyd	❑	❑	❑	❑	❑
fordi jeg ville følt meg flau hvis jeg sluttet	❑	❑	❑	❑	❑
for å vinne medaljer	❑	❑	❑	❑	❑
fordi jeg mener det er mange fordeler ved å svømme	❑	❑	❑	❑	❑
fordi noen presser meg til å svømme	❑	❑	❑	❑	❑
selv om jeg egentlig ikke vet hvorfor jeg gjør det	❑	❑	❑	❑	❑
fordi jeg synes at det er moro	❑	❑	❑	❑	❑

Jeg svømmer...

	Svært enig	Enig	Hverken enig eller uenig	Uenig	Svært uenig
fordi jeg er nødt til å fortsette	❑	❑	❑	❑	❑
fordi andre ville bli misfornøyd med meg hvis jeg lot være	❑	❑	❑	❑	❑
fordi jeg ville følt meg mislykket hvis jeg ikke var med	❑	❑	❑	❑	❑
fordi jeg har lyst på premier	❑	❑	❑	❑	❑
fordi jeg synes det er spennende	❑	❑	❑	❑	❑
fordi det er gøy	❑	❑	❑	❑	❑
men jeg lurer på hva poenget med det er	❑	❑	❑	❑	❑
fordi noen tvinger meg til å fortsette	❑	❑	❑	❑	❑
fordi jeg lærer ting som er nyttig for meg i livet	❑	❑	❑	❑	❑
selv om jeg ikke aner hvorfor lenger	❑	❑	❑	❑	❑
fordi det lærer meg å ha kontroll over meg selv	❑	❑	❑	❑	❑

Målorientering

I de neste spørsmålene skal du svare om deg selv, og når du føler deg mest vellykket.
Her presenteres du for ulike situasjoner eller opplevelser og avgir svar på en skala fra svært enig til svært uenig.

For eksempel:

Jeg føler meg mest vellykket når: "jeg når et mål".

Når jeg drive med favorittaktiviteten min føler jeg meg mest vellykket når:

	Svært enig	Enig	Hverken enig eller uenig	Uenig	Svært uenig
Jeg viser personlig fremgang	❑	❑	❑	❑	❑
Jeg får vist andre at jeg er best	❑	❑	❑	❑	❑
Jeg vinner	❑	❑	❑	❑	❑
Jeg gjør det bedre enn konkurrentene mine	❑	❑	❑	❑	❑
Jeg er helt overlegen	❑	❑	❑	❑	❑
Jeg er den beste	❑	❑	❑	❑	❑
Jeg overvinner vanskeligheter	❑	❑	❑	❑	❑
Jeg gjør en god innsats	❑	❑	❑	❑	❑
Jeg slår andre (vinner over)	❑	❑	❑	❑	❑
Jeg når et mål	❑	❑	❑	❑	❑
Jeg når mine personlige mål	❑	❑	❑	❑	❑

Mindset - talent

De neste fire spørsmålene handler om hvordan du ser på idrettstalent og du skal svare med utgangspunkt i din egen mening.

Svar alternativene graderes fra veldig uenig til veldig enig.

En utøver har en viss mengde idrettstalent, og i realiteten kan han/hun ikke endre dette så mye

Veldig uenig Uenig Delvis uenig Delvis enig Enig Veldig enig

❑ ❑ ❑ ❑ ❑ ❑ ❑

Et idrettstalent er noe ved utøveren som han/hun i liten grad kan endre

Veldig uenig Uenig Delvis uenig Delvis enig Enig Veldig enig

❑ ❑ ❑ ❑ ❑ ❑ ❑

For å være helt ærlig, så kan ikke utøveren endre så mye på hvor stort talent han/hun har

Veldig uenig Uenig Delvis uenig Delvis enig Enig Veldig enig

❑ ❑ ❑ ❑ ❑ ❑ ❑

En utøver kan lære seg nye idrettslige ferdigheter, men han/hun kan i liten grad endre sitt grunnleggende talent

Veldig uenig Uenig Delvis uenig Delvis enig Enig Veldig enig

❑ ❑ ❑ ❑ ❑ ❑ ❑

Til slutt ønsker vi å vite ca hvor lang tid det har tatt deg å gjennomføre denne spørreundersøkelsen og hvis du har noen tilbakemeldinger setter vi

pris på det.

Tid?

- ❑ 5-10 min
- ❑ 10-15 min
- ❑ 15-20 min
- ❑ 20-25 min
- ❑ 25-30 min
- ❑ 30 min eller mer

Tilbakemeldinger?

_____

Takk for din deltagelse!

Har du spørsmål ta kontakt med HVEM, eller spør oss når dere kommer på test dagene på Norges Idrettshøgskole.

Vil du ha kopi av svarene dine: