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**Motivation for Physical Activity among Norwegian Youth.  
Does Context Matter?**

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## Foreword

It is hard to believe that four years of studying Physical Activity and Health at the Norwegian School of Sport Sciences has come to an end. Working on my master's thesis has been a lot of hard work, but most of all it has been both interesting and exciting, and I have learned more than I ever thought possible. When this is said there are some people who really deserve my gratitude for making this possible.

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Marte Bulie, Oslo 30<sup>th</sup> May 2011

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# 1. Article

## ***Motivation for Physical Activity among Norwegian Youth. Does Context Matter?***

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## **Abstract**

*Aims:* The aim of the present study was to identify the proportional distribution of a sample of adolescents in four different activity groups and to examine the effect of activity contexts (organized sport vs. unorganized physical activity contexts) on the adolescents' motivation for participation. *Methods:* A total of 2,116 adolescents (1,020 males and 1,085 females), mean age 15.3 years, completed a self-report questionnaire during school time. The Situational Motivation Scale (SIMS) was used to evaluate the adolescents' situational motivation in the two different activity contexts. *Results:* 1- The relative number of adolescents who reported involvement in organized sport only and involvement in both organized sport and unorganized physical activity decreased with age, and the relative number of non-active adolescents and adolescents participating in unorganized physical activity only increased with age. 2- Adolescents involved in both types of activity contexts (Org&Unorg) expressed a more self-determined motivational profile when operating in organized contexts compared to unorganized physical activity contexts. 3- Adolescents who participated in the unorganized physical activity context only did not express a more self-determined motivational profile compared to adolescents who participated in the organized sport context only. 4- Adolescents reporting from lifestyle oriented unorganized contexts expressed a more self-determined motivational profile compared to adolescents who reported from health oriented or sport performance oriented unorganized contexts. *Discussion:* The contradiction between the high self-determination scores and the decrease in organized sport participation is discussed; and the paper concludes that comparing organized sport vs. unorganized physical activity contexts on motivation for participation in physical activity is an oversimplification which could potentially lead to invalid results. The results give further rise to the importance of recognizing more lifestyle oriented unorganized physical activity contexts.

**Keywords:** *Adolescents, self-determination, physical activity, context, lifestyle sport*

## Introduction

Habitual physical activity has been recognized as an important component of a “healthy” lifestyle as it is related to a variety of positive physiological (Cavil et al., 2006) and psychological health outcomes (Calfas & Taylor, 1994; Callaghan, 2004; Saxena et al., 2005). This knowledge is frequently communicated to adolescents in Norway; yet despite this, Kolle et al. (2009) found that while four out of five children in Norway meet current physical activity guidelines only half of the adolescents do. Kolle et al.’s study corresponds with statistics from The Norwegian Sport Federation that shows that about 80% of all people in Norway have been a member of at least one sport club during their childhood, yet that the number of participants decreases significantly with age. Less than 60% of teenagers are active in sport clubs; and by the time young people turn 18, only about 40% are still members of the club (Krange & Strandbu, 2004; Skille & Säfvenbom, 2011).

Adolescence has been described as a critical period regarding a long lasting physically activity lifestyle (Mota & Esculucas, 2002). Adolescence is seen as the second decade of life; a period of biological, psychological, social and economic transitions; where self-determination and exploration of possible selves and redefinition of actual self are major projects (Steinberg, 2011). Prior research on youth development emphasize that adolescents interact and develop in context (Lerner & Steinberg, 2009) and that perceived quality of the contexts seems crucial for further action, and thus also for development and health. Meaningful everyday life interactions are seen as fundamental assumptions for the enjoyment of life (Baumeister, 1989, 1991; Frankl, 1992) and the personal experience of a meaningful everyday life is often seen as the immediate precursor to behaviour, and a predictor for health for adolescents (Lewthwaite, 1990; Maehr & Braskamp, 1986). If a certain activity adds meaningfully to everyday life one probably wants more of it (Säfvenbom, 2000). Understanding the motivational factors associated with physical activity contexts in youth is therefore of huge importance; as research on motivation can promote a better understanding of adolescents decisions regarding their sport and physical activity behavior (Wang & Biddle, 2001). Self-determined Motivation is a most important variable in sport and represents one key element that facilitates performance, and maybe most important, positive experiences in the sport and the area of physical activity (Vallerand, 2004).



Age and gender are the two most studied biological covariates of participation in physical activity in youth. Research shows that males tend to be more active than girls in childhood and in adolescence (Sallis, Prochaska, & Taylor, 2000; Vilhjalmsson & Kristjansdottir, 2003; Mota & Esculcas, 2002) and as previously mentioned, physical activity participation tends to decline with age. However, in order to get a more comprehensive understanding of motivational regulation for physical activity participation, it would seem important to take into account contextual characteristics of the activity as each context might capture unique features of youth's participation experiences (Denault, Poulin, & Pedersen, 2009). The influence of participation in organized (in this study, sport club contexts) or unorganized sport programs has not been well quantified throughout adolescence (Mota & Esculcas, 2002). Therefore the aim of the present study was to identify the proportional distribution of a sample of adolescents in four different activity groups and to examine the effect of activity contexts on the adolescents' motivation for participation.

#### *Self-Determination Theory and the contribution of motivational regulators*

Self-Determination Theory (SDT) embrace both an organismic and a dialectical framework for the study of personality growth and development (Vallerand, 1997; Vallerand et al., 2008). Social contexts catalyse both within – and between – personal differences in motivation and personal growth; which results in people being more self-motivated, energized, and integrated in some situations, domains, and cultures than in others (Ryan & Deci, 2000). However, it should be underscored that in SDT, it is postulated that it is not the environment, per se, that matters, rather, what it means functionally in terms of supporting peoples psychological needs. Thus, to the extent that the environment allows one to experience feelings of competence (the belief that one can efficaciously interact with the environment), autonomy (the belief that one is the origin and regulator of his or her actions), and relatedness (the seeking and development of secure and connected relationships with others in one's social context), the persons motivation to a given task will be optimal (Vallerand et al., 2008). Contexts supportive of autonomy, competence, and relatedness have been found to foster greater internalization and integration than context that thwart satisfaction of these needs (Ryan & Deci, 2000).

According to SDT (Deci & Ryan, 1985, 1991), different types of motivation underlie human behaviour and are posited to differ in their inherent levels of self-determination. Self-determination involves a true sense of choice: a sense of feeling free in doing what one has chosen to do. Listed on a continuum from high to low levels of self-determination, these motivations are intrinsic motivation, extrinsic motivation, and amotivation (Guay et al., 2000). *Intrinsic motivated* behaviours are those that are engaged in for their own sake, meaning the pleasure and satisfaction derived from performing them (Guay et al., 2000; Vallerand, 2007). *Extrinsic motivation* on the other hand applies to a wide variety of behaviours where the goals of action extend beyond those inherent in the activity itself. The different types of extrinsic motivations can also be ordered along the self-determination continuum. From high to lower levels of self-determination and are referred to as identified and external regulation (Guay et al., 2000). *Identified regulation* involves a conscious acceptance that the behaviour is important in order to achieve personally valued outcomes (Deci & Ryan, 1985; Guay et al., 2000) while *external regulation* occurs when behaviour is regulated by rewards, or in order to avoid punishment (e.g. “I play soccer because my parents force me to”) (Ryan & Deci, 2002). Finally, *amotivated behaviours* (the state of lacking the intention to act) are initiated and regulated by forces beyond the person’s intentional control (Deci & Ryan, 1985).

#### *Outcomes of motivational regulation*

Because different motivational regulations fluctuate in their inherent levels of self-determination; and because motivation is an interactive relationship; motivational regulation affects both cognitive and emotional behavioral aspects of human life (Guay et al., 2000). In line with this, self-determination has been hypothesized to be associated with enhanced psychological functioning (Deci & Ryan, 1985; Guay et al., 2000), and that intrinsic motivation corresponds with more positive outcomes (e.g., persistence) followed by identified regulation (Guay et al., 2000). In contrast, amotivation has been expected to correspond with more negative outcomes (e.g., depressive states) followed by external regulation (Guay et al., 2000). These expected patterns of outcomes has been demonstrated in sport environments by examining dependent variables such as persistence, positive emotions, interest, and sport satisfaction (Pelletier et al., 1995;

Vlachopoulos et al, 2000; Craike, 2008; Tsorrbatzoudis et al., 2006; Thøgersen-Ntoumani & Ntoumanis, 2006; Vallerand, 1997, 2007; Vallerand & Ratelle, 2002).

As stated above, regulation of motivation influence aspects of health in both a direct and an indirect way through behavior, and Ryan and Deci (2000) claim that no single phenomenon reflects the positive potential of human nature as much as intrinsic motivation. They refer to developmentalists that acknowledge that from the time of birth, children, in their healthiest states, are active, inquisitive, curious, and playful; even in the absence of specific rewards. However, despite the fact that humans are born with intrinsic motivational tendencies, the evidence is clear that the maintenance and enhancement of intrinsic motivation requires supportive conditions as it can be easily disrupted by various non-supportive conditions (Ryan & Deci, 2000). Research has found that rewards, as well as threats, deadlines, directives, pressured evaluation, and imposed goals can all diminish intrinsic motivation because they contribute towards an external perceived locus of causality (Deci & Ryan, 1985; Ryan & Deci, 2000). In contrast, choice, acknowledgement of feelings and opportunities for self-direction enhance intrinsic motivation because they allow people greater feelings of autonomy (Deci & Ryan, 1985; Ryan & Deci, 2000).

However, much of what people do is not necessarily intrinsically motivated; especially after early childhood when the freedom to be intrinsically motivated is increasingly restricted by social pressures to do activities that are not interesting and to assume a variety of new responsibilities (Ryan & La Guardia, 2000; Ryan & Deci, 2000). Ryan and Deci (2000) refer to studies that demonstrate more autonomous extrinsic motivation was associated with more engagement (Connell & Wellborn, 1991), better performance (Miserandino, 1996), and lower dropout rates (Vallerand & Bissonnette, 1992) among other outcomes. In addition, Vallerand et al. (2008) show that Eudemonic well-being (well-being derived from ones self-growth or self-realization) that results from autonomous forms of motivation positively contributes to one's physical health. That means that mental health can contribute to physical health and that self-determined motivation triggers this positive interaction.

#### *Do physical activity contexts matter?*

According to SDT, changes in motivational regulation during the life course rely on which contexts a person is involved in. Persons who operate in autonomous contexts

develop, on average, an autonomous motivational style and freely choose to adopt suggested behavior because they find the behavior intrinsically rewarding or because they perceive that the suggested behavior is important and meaningful (Deci & Ryan, 1985, 1991; Ryan & Deci, 2000). Hence, Ryan and Deci (2008) propose that environment that supports ones autonomy facilitates change toward more self-determined motivation. In contrast, individuals that operate in controlling contexts develop, on average, a controlling motivational style and tend to more often adopt suggested behavior because they feel pressured or coerced to do so by significant others; or because they feel that they should (Deci & Ryan, 1985, 1991; Chatzisarantis & Hagger, 2009). Several studies have shown that contextual differences affect motivation. Säfvenbom & Samdal (1998) found that what adolescents do, with whom, and in which arenas, represent the contextual dimensions of adolescents' daily free-time and that two different groups of adolescents responded differently to different types of activity depending on where-, and with whom, the activities were performed. Guay et al., (2008) found that while a true self-determined motivational profile was found within university students, this was not found within high school students who study in a more mandatory and "controlling" context with fewer choices. In line with this, Säfvenbom et al., (2005) found that Norwegian soldiers reported significantly higher scores on intrinsic motivation; and significantly lower on extrinsic motivation and amotivation when they reported from physical activity contexts outside their service as compared to in service.

#### *Organized vs. unorganized physical activity context*

Organized youth sport is one of the most common leisure-time activities during adolescence in Norway (Kjønniksen et al., 2009). Norwegian organized sport is voluntarily conducted, and participation is based on individual memberships. Activities are provided in local sports clubs, which are organized within the national non-governmental sports association (the Norwegian Olympic and Paralympic Committee and Confederation of Sports - NIF). A national representative study of youths in Norway between 1992 and 2002, showed stability in regards to exercise within sports clubs and exercise on an individual level, and a slight increase in exercise inside fitness centres (Krange & Strandbu, 2004). In addition, a study of youth in Oslo showed an increase in all the measured forms of exercise between 1996 and 2006; yet that the

strongest increase was seen in the use of fitness centres (Strandbu & Bakken, 2007). However, even if the popularity of these commercial arenas is increasing, the number of youths, and especially children, that take part in these activities is small when compared to the activities offered in sport organizations (Støckel et al., 2010).

Research concludes that participation in organized leisure-time activities by young people is associated with positive developmental outcomes such as; healthier performance, academic achievement, educational attainment, and psychological adjustment (Mahoney et al., 2006). However, there is an inherent strain in organized sport – which is particularly present for children and youth. On one side sport is considered to be a social arena with integration and social and physical benefits from participation. On the other, the inherent logic of competition in sport potentially creates losers and dissatisfaction (Støckel et al., 2010). Organized youth sports vary considerably in terms of the requirements for physical skills (e.g., running vs. throwing the javelin), cooperation (e.g., team vs. individual sports), competition level (elite vs. moderate activity), and other factors. It is also characterized by several features, such as regular participation schedule, rule-guided engagement directed by one or more adult leaders, and high degree of social commitment (Kjønniksen et al., 2009). Further, the explicit goals of the majority of local sport clubs are recognized in terms of ability, performance, competence, and success (Skille & Säfvenbom, 2011). The competition one can find in the organized sport context that emphasizes the win at all costs mentality represents a situational factor that has been found to decrease intrinsic motivation. With the focus on winning, or beating someone else, which is extrinsic to the activity itself, individuals in competition adopt an external locus of causality, and thus leads to a decrease in thoughts of self-determination and consequently, a loss of intrinsic motivation (Deci & Ryan, 1985, 1991; Fortier et al., 1995).

Little research has been conducted with respect to unorganized leisure-time activities from an intrinsic-extrinsic motivation perspective. Most people assume that these contexts are strongly linked to the development of intrinsic motivation, and internalized state of motivation (Vallerand, 1997; Watts & Caldwell, 2008), that in turn may be the reason for the neglect of studies on unorganized leisure activities (Vallerand, 1997). The unorganized context may be seen as important for the experience of personally meaningful activity, enjoyment, autonomy, self-determination, development of competence and self-validation (Caldwell & Smith, 2006; Larson & Seepersad,

2003). In the physical activity domain the literature indicates severe contextual differences with regard to how they might affect motivational regulation. While physical fitness contexts to some extent are described as determined and controlling regarding the outcome (Dworkin & Wachs, 2009), life-style activities “are characterized by a relative lack of regulation and a customary refusal by participants to follow regulatory codes (Green 2010; 112). Lifestyle sport, also known as “alternative” sports represent a category of “new” or contemporary activities such as break dance, skateboarding, tricking, parkour, surfing and more advanced risk sports such as skydiving and white-water river paddling. Each lifestyle sport has its own history, identity and developmental patterns; yet there are also many similarities in their ethos and ideologies. They have characteristics that are different from the traditional rule-bound, competitive, “dominant” institutionalized, western “achievement” sport cultures (Wheaton, 2010). The body is used in non-aggressive ways, mostly without bodily contact and the focus is on personal challenges and goals without direct competition against others. In addition, the locations where these sports are practiced are often new or re-appropriated (urban and/or rural) spaces, without fixed or “controlled” boundaries (Wheaton, 2010). Many life style activities, and the characteristic styles associated with them, are closely related to youth identities and the emergence of these sporting activities, and the subcultures and lifestyles that develop around them, have been predicted as a new phase in the development of sport (Wheaton, 2010).

## **Aims and hypotheses**

The aim of the present study was twofold: a) to identify the proportional distribution of a sample of adolescents in four different activity groups (1 - adolescents whom participate in both organized sport- and unorganized physical activity contexts [Org&Unorg], 2 - adolescents whom participate in organized sport contexts only [OrgOnly], 3 - adolescents whom participate in unorganized physical activity contexts only [UnorgOnly], and 4 – adolescents whom report no activity [NonActive]) and b) to examine the effect of activity context (organized sport contexts vs. unorganized physical activity contexts) on the adolescents’ motivation for participation. It was hypothesized that a) the relative number of adolescents that participate in both organized and unorganized activities, and in organized sport only, decreases with age,

and thus that the relative number of non-active and the relative number of adolescents that participate in unorganized activity only increases with age; b) when they report from unorganized physical activity contexts adolescents convey a more self-determined motivational profile compared to when they report from organized contexts; and c) adolescents that report from a lifestyle oriented unorganized contexts report a more self-determined motivational profile compared to adolescents who report from health oriented or sport performance oriented unorganized contexts.

## **Methods**

### *Participants*

This cross-sectional study was conducted as part of the “Goodness of fit in Norwegian Youth Sport” study. A total of 2,971 pupils from 38 different schools in Norway were invited and stratified in accordance to school level and geographical area. A total of 2,116 (71%) adolescents (1,020 boys and 1,085 girls) from the ages of 12 to 19 (mean age 15.3 years) completed the self-report questionnaire during school time. Omitted data results in actual sample sizes in the analyses vary in relation to the variables included. The Norwegian Social Science Data Service (NSD) approved the study, and parents and children gave their written informed consent before their participation in the study.

### *Measures*

***Physical Activity.*** Participation in and the amount of physical activity was reported in two different contexts: organized sport and unorganized physical activity. The adolescents were asked a similar question in both contexts: *How many hours per week do you play or exercise enough to make you sweat or breathe hard?*; 0, 1-2, 3-4, 5-7, 8-10 or 11 hours or more per week. The sum score of the two variables indicates the total amount of physical activity (TOTAMOUNT). This index is regarded as continuous data.

***Situational Motivation Scale (SIMS).*** The 16-item SIMS (see full scale in Guay et al., 2000) was used to evaluate the adolescents’ situational motivation in the organized sport context and unorganized physical activity context. The SIMS has been shown to be a valid and reliable tool for measuring self-determination index on many

accounts (factor validity, internal consistency, and multigroup invariance), and in many physical activity contexts (Stantage et al., 2003).

The respective sub-dimensions of the measure were assessed as following based on the stem “why do you participate in this main activity within the organized sport context?” and on the stem “why do you participate in this main activity within the unorganized physical activity context?”: 1. Intrinsic motivation (e.g., because I think this activity is interesting, 2. Identified regulation (e.g., because I am doing it for my own good, 3. External regulation (e.g., because it is expected that I do so), and 4. Amotivation (e.g., I don’t know; I don’t see what this activity does for me). Responses were measured on a 7-point likert scale from (1) completely untrue to (7) completely true. Analyses showed satisfactory alpha values in all four dimensions in both the organized sport context (0.90/0.82/0.79/0.82) and the unorganized physical activity context (0.90/0.85/0.81/0.88).

In order to use a single motivation score, a self-determined index (SDI) was constructed by a summation of specifically weighted scores from the different motivational subscales in accordance to their position on the self-determination continuum. Specifically, data were reduced as specified by Vallerand & Ratelle (2002) by first calculating each subscale score via the mean of its items and then further reduction by calculating the SDI-score via the following formula:  $[SDI = +2 (IM) + 1 (IDR) - 1 (ER) - 2 (AM)]$ , [see Vallerand & Ratelle 2002 for support for the validity of the index]. The SDI, representing the strength of one’s self-determination, is a straightforward weighting – the higher the number, the stronger the self-determination. The scores for the SDI can vary from +18 to -18.

### *Statistical analyses*

All statistics were calculated using SPSS (Statistical Package for the Social Sciences) version 18.0. Mean and Standard Deviation are used when presenting central tendencies and dispersion. Independent-samples t-tests were used when testing potential gender differences (Table 1). One-way analysis of variance and Two-way between-groups ANOVA with Bonferroni post hoc test were used when testing potential group differences in major study variables (Table 1 and 3). Paired-samples t-tests were used when testing potential within-group differences. In addition, Hierarchical multiple

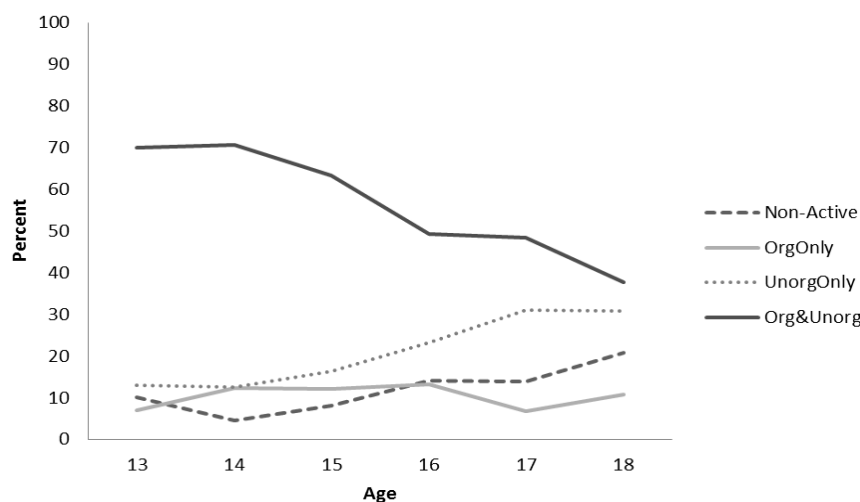


regression analysis was conducted to test the effect of age, gender, amount of physical activity, and context affiliation on the Self- determination index (SDI) (Table 2).

## Results

### *Descriptive analyses*

Descriptive analyses (Table 1) showed that 57.5% (n= 937) of the sample (n=1640) reported that they were physically active in both organized (sport club)- and unorganized physical activity contexts (Org&Unorg). A smaller group (20.3% / n= 335) reported involvement in unorganized physical activity contexts only (UnorgOnly), while a minor group of the sample (10.8% / n=180) reported involvement in organized sport contexts only (OrgOnly). In addition, 11.3% (n= 188) of the adolescents did not participate in leisure-time physical activity.



**Figure 1:** *The relative distribution of adolescents in the four groups according to age differences.*

*Note.* Non-Active = adolescents who are not participating in any forms of physical activity, OrgOnly = adolescents participating in the organized context only, UnorgOnly = adolescents participating in the unorganized context only, Org&Unorg = adolescents participating in both contexts.

The analyses showed that adolescents in the UnorgOnly group and the non-active group are significantly older ( $m= 15.8$ ) than the adolescents in the OrgOnly- ( $m= 15.3/p<.05$ ) and the Org&Unorg group ( $m= 15.0/p<.001$ ) and that the adolescents in the OrgOnly group are also significantly older than the adolescents in the Org&Unorg group ( $p<.05$ ). The relative distribution of the adolescents in the four groups according to age is presented in Figure 1.

Adolescents in the Org&Unorg group reported a significantly higher total amount of physical activity (TOTAMOUNT) per week ( $m= 5.00$ ) compared to the adolescents in the OrgOnly group ( $m= 2.60/p<.001$ ), and the UnorgOnly group ( $m= 2.14/p<.001$ ). Additionally, the OrgOnly group reported significantly higher amount of physical activity compared to the UnorgOnly group ( $p<.05$ ). When we divided the AMOUNT variable into AMOUNT-ORGSport and AMOUNT-UNORGPA, the adolescents in the Org&Unorg group reported significantly higher amount of physical activity in organized sport contexts ( $m= 2.80$ ) compared to unorganized physical activity contexts ( $m= 2.19/p<.001$ ). However, no difference was found in amount of physical activity in the organized sport context between the Org&Unorg group ( $m= 2.80$ ) and the OrgOnly group ( $m= 2.60$ ).

Of the adolescents who participate in both organized sport and unorganized physical activity contexts 57.8% perceived themselves as highly skilled, and 40.2% perceived themselves as average, while only 2% ranged themselves as poorly skilled. Similar results were seen within the OrgOnly group, here 52% of the adolescents perceived themselves as highly skilled, and 44.4% as average, while 3.5% perceived themselves as poorly skilled. Only 5.7% of adolescents who participate in both organized and unorganized sport contexts had considered leaving their main sport activity, 33.1% did sometimes think about it, while 61.2% had never thought about leaving. Within the OrgOnly group, 7.6% of the adolescents had thought about leaving their main sport activity, 38.8% did sometimes think about it, and 53.5% had never thought about leaving.

**Table 1: Means and Standard Deviation for Major Study Variables According to Gender and Physical Activity Participation.**

	Males	Females	Org&Unorg	OrgOnly	UnorgOnly	Non-Active
n (%)	995	1060	937 (57.5)	180 (10.8)	335 (20.3)	188 (11.3)
% Male (Female)†	48.4	(51.6)	47 (53)	41 (59)	45 (55)	46 (54)
TOTAMOUNT	4.42 (2.40)**	3.75 (2.05)	5.00 (2.08) <sup>a</sup>	2.60 (1.32) <sup>a</sup>	2.14 (1.15) <sup>a</sup>	
AMOUNT-ORGsport (AMOUNT-UNORGPA)			2.80 (1.25)** (2.19 (1.22))			
Age	15.30 (1.51)	15.29 (1.51)	15.0 (1.5) <sup>bc</sup>	15.3 (1.4) <sup>bc</sup>	15.8 (1.5) <sup>b</sup>	15.8 (1.6) <sup>c</sup>
<b>SDI ORGSport</b>	<b>9.46 (6.59)</b>	<b>12.13 (5.50)**</b>	<b>11.00 (6.06)<sup>d</sup></b>	<b>10.99 (6.26)<sup>h</sup></b>		
Intrinsic motivation	5.88 (1.42)	6.26 (1.09)**	6.13 (1.21) <sup>e</sup>	6.05 (1.31)		
Identified regulation	5.77 (1.30)	6.04 (1.12)**	5.96 (1.16) <sup>f</sup>	5.84 (1.22)		
Extrinsic motivation	3.12 (1.67)**	2.62 (1.44)	2.88 (1.58) <sup>g</sup>	2.59 (1.49)		
Amotivation	2.51 (1.57)**	1.91 (1.20)	2.18 (1.40)	2.17 (1.35)		
<b>SDI UNORGPA</b>	<b>8.82 (6.56)</b>	<b>10.10 (6.22)**</b>	<b>9.57 (6.41)<sup>d</sup></b>		<b>9.49 (6.39)<sup>h</sup></b>	
Intrinsic motivation	5.58 (1.52)	5.52 (1.48)	5.62 (1.48) <sup>e</sup>		5.37 (1.51)	
Identified regulation	5.73 (1.35)	5.98 (1.22)**	5.87 (1.30) <sup>f</sup>		5.90 (1.21)	
Extrinsic motivation	3.21 (1.68)	3.08 (1.66)	3.12 (1.70) <sup>g</sup>		3.15 (1.58)	
Amotivation	2.46 (1.62)**	1.92 (1.30)	2.20 (1.53)		2.02 (1.29)	

**Note.** TOTAMOUNT = total amount of physical activity per week, AMOUNT-ORGsport = amount of physical activity per week in the organized sport context, AMOUNT-UNORGPA = amount of physical activity per week in the unorganized physical activity context, SDI ORGSport = Self-determination index in the organized sport context, SDI UNORGPA = Self-determination index in the unorganized physical activity context, OrgOnly = adolescents participating in the organized context only, UnorgOnly = adolescents participating in the unorganized context only, Org&Unorg = adolescents participating in both contexts, Non-Active = adolescents who are not participating in any forms of physical activity.

†Gender reported in per cent.

\* Statistically significant higher values compared to opposite gender; Independent Samples t-test (\* $p < .05$ , \*\*  $p < .01$ ).

<sup>a-c</sup> Equal letters indicate significant differences, using One-Way Anova, Bonferroni post hoc test ( $p < .05$ ).

<sup>d-g</sup> Equal letters indicate significant differences, using Pared samples t-test ( $p < .05$ ).

<sup>h</sup> Equal letters indicate significant differences, using Independent samples t-test ( $p < .05$ ).

### Testing effects of organized vs. unorganized contexts on motivation

To test the effect of activity contexts on adolescents' regulation of motivation two different analyses were performed. To test the effect of participation in organized sport contexts vs. unorganized physical activity contexts within the group of adolescents who reported involvement in both types of activity contexts (Org&Unorg) a paired-samples t-test was performed. Results showed a significant difference in SDI-scores between the two contexts ( $p < .001$ ). The highest SDI-score was found in the organized sport context ( $m = 11.00$ ) compared to the unorganized context ( $m = 9.57$ ). When looking

at the motivational profile (IM, IDM, EM, AM) beyond the SDI –scores the analyses showed that when operating in the organized sport context, the adolescents reported significantly higher levels of intrinsic motivation ( $t=6.13/ p<.001$ ) and identified regulation ( $t=5.96/ p<.05$ ), and significantly lower levels of external regulation ( $t=2.88/ p<.001$ ) compared to the unorganized context. No difference was found in amotivation (see table 1).

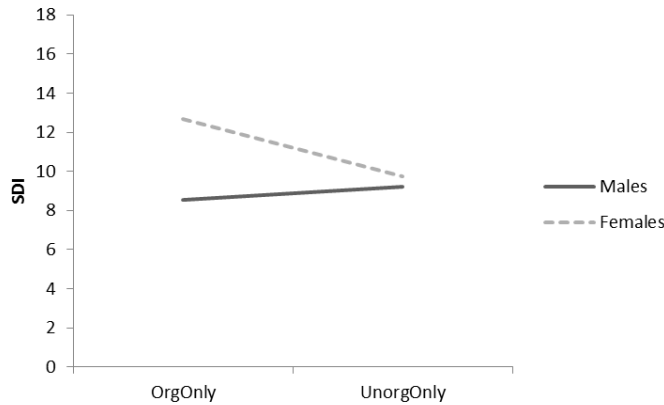
**Table 2: Testing Effects of Age, Gender, Amount of Physical Activity and Group Affiliation (OrgOnly vs. UnorgOnly) on the Self-determination Index (SDI).**

Independent(s)	Dependent	R Square	R Square change	Standardized Regression Coefficient	P
<i>Step 1</i>					
Age	SDI	.004	.004	.064	n.s.
<i>Step 2</i>					
Age		.026	.021	.074	n.s.
Gender				.147	.001
<i>Step 3</i>					
Age		.081	.055	.065	n.s.
Gender				.163	.001
TOTAMOUNT				.237	.001
<i>Step 4</i>					
Age		.086	.005	.076	n.s.
Gender				.163	.001
TOTAMOUNT				.222	.001
OrgOnlyvsUnorgOnly				-.075	n.s.
<i>Interaction effects</i>					
gender x OrgOnlyvsUnorgOnly		.056	.017	-.566	.005

**Note.** Self-determination index, TOTAMOUNT = total amount of physical activity per week, OrgOnlyvsUnorgOnly = adolescents participating in the organized context only versus adolescents participating in the unorganized context only, n.s. = not significant.

To test the hypotheses that individuals in the UnorgOnly group exhibit a more self-determined motivational profile than individuals in the OrgOnly group, a hierarchical regression analyses with age, gender, and amount of physical activity per week as control variables was performed. The model explained 8,6%, ( $F=11.383/p<.001$ ) of the total variance in SDI. Two of the three control variables showed a significant impact on the dependent variable. Amount of physical activity (TOTAMOUNT) recorded the highest contribution ( $\beta=.222/ p<.001$ ), followed by gender ( $\beta=.163/p<.001$ ). No difference was found between the adolescents that

report from organized sport contexts vs. the adolescents that report from unorganized physical activity. However, an interaction effect ( $\beta = -.566/p < .01$ ) was identified between gender and context participation that shows females in the OrgOnly group reported significantly higher SDI-scores ( $m = 12.65$ ) compared to females in the UnorgOnly group ( $m = 9.75$ ) while no differences were seen among the males ( $m = 8.53$  /  $m = 9.21$ ). The interaction effect is visualized in Figure 2.



**Figure 2:** The effect of context participation on motivation by gender.

**Note:** SDI= Self-determination index, OrgOnly= adolescents participating in the organized context only, UnorgOnly= adolescents participating in the unorganized context only.

#### Testing effects of different unorganized physical activity contexts on motivation

**Table 3:** Means and Standard Deviation for Major Study Variables According to Physical Activity Participation in the Unorganized Physical Activity Context.

	Team - Sport	Endurance - Training	Strength - Training	Recreation Activities	Lifestyle Sports	Other	Non-Sports
% (n)	9 (115)	33.3 (424)	15 (191)	16.7 (213)	7.4 (94)	2.7 (34)	2 (26)
% males (females)	73.7 (26.3)	39.6 (60.4)	50.8 (49.2)	35.8 (64.2)	37.2 (62.8)	52.9 (47.1)	57.7 (42.3)
% Org&Unorg (UnorgOnly)	84.3 (15.7)	76.2 (23.8)	60.7 (39.3)	73.2 (26.8)	69.1 (30.9)	70.6 (29.4)	73.1 (26.9)
LOPUNORGSport	2.40 (1.35) <sup>a</sup>	1.95 (1.04) <sup>ab</sup>	2.40 (1.16) <sup>b</sup>	2.18 (1.17)	2.31 (1.37)	2.15 (1.41)	
Age	14.95 (1.53) <sup>a</sup>	14.95 (1.48) <sup>b</sup>	16.14 (1.22) <sup>abcde</sup>	15.03 (1.56) <sup>c</sup>	15.20 (1.58) <sup>d</sup>	15.47 (1.64)	14.96 (1.25) <sup>e</sup>
SDI UNORGSport	9.69 (6.83) <sup>a</sup>	9.63 (5.69) <sup>b</sup>	10.48 (5.77) <sup>c</sup>	10.08 (6.46) <sup>d</sup>	13.18 (5.44) <sup>abcde</sup>	7.30 (6.64) <sup>e</sup>	9.93 (8.40)
Intrinsic motivation	6.18 (1.19) <sup>abc</sup>	5.32 (1.45) <sup>ade</sup>	5.66 (1.40) <sup>f</sup>	5.61 (1.50) <sup>bg</sup>	6.45 (.86) <sup>efgh</sup>	5.15 (1.48) <sup>ch</sup>	6.28 (1.43) <sup>d</sup>
Identified regulation	5.88 (1.27) <sup>a</sup>	6.06 (1.05) <sup>bc</sup>	6.33 (1.01) <sup>acf</sup>	5.68 (1.35) <sup>bcd</sup>	6.12 (1.10) <sup>d</sup>	5.40 (1.50) <sup>ef</sup>	5.95 (1.51)
External regulation	2.26 (1.94) <sup>a</sup>	3.08 (1.54) <sup>b</sup>	3.29 (1.61) <sup>c</sup>	3.04 (1.71) <sup>d</sup>	2.20 (1.64) <sup>abcdef</sup>	3.53 (1.58) <sup>e</sup>	3.48 (2.04) <sup>f</sup>
Amotivation	2.64 (1.81) <sup>abcd</sup>	1.97 (1.23) <sup>a</sup>	1.97 (1.47) <sup>b</sup>	1.88 (1.25) <sup>c</sup>	1.82 (1.51) <sup>d</sup>	2.44 (1.34)	2.56 (1.95)

**Note.** SDI UNORGPA = Self-determination index in the unorganized physical activity context, Team-Sport = Football, Handball, Volleyball, etc., Endurance Training = Running, Cycling, Spinning, Strength Training = Fitness, Aerobic, etc., Recreation Activities = Walking, Cross-Country Skiing, Swimming, Horse Back Riding, Outdoor-Activities, etc., Lifestyle Sport = Skating, Snowboard, Parkour, Dancing, etc., Other = undefined movement activities, Non-Sports = Acting, Music, Art, etc.

Activities reported in per cent.

Equal letters indicate significant differences, using Two-Way Anova, Bonferroni post hoc test ( $p < .05$ )

\* Statistically significant higher values compared to opposite gender; independent samples t-test (\*\* $p < .01$ , \* $p < .05$ ).

To test the effect of different unorganized physical activity contexts on adolescents' motivation, the reported unorganized contexts were categorized into seven different categories. The descriptive analyses (Table 3) showed that 33,3% of the adolescents reported involvement in different types of endurance training, 16,7% reported involvement in recreational activities, 15% reported involvement in strength training and 7,4 % reported that they were active in lifestyle sports.

To examine the effect of the seven unorganized activity contexts on motivation a two-way ANOVA was conducted, controlling for age, gender and amount of physical activity per week. The analysis showed that contexts variances ( $F=6.17 / p<.001$ ) and amount of physical activity per week ( $F=5.00 / p<.001$ ) had significant effects on the adolescents' motivation.

Post-hoc comparison using the Bonferroni test showed that the group of adolescents who reported participation in unorganized lifestyle activities reported significantly higher SDI-scores ( $m=13.18$ ) compared to all the other activity categories. When examining the respective sub-dimensions, adolescents in the lifestyle sport category expressed significantly higher levels of intrinsic motivation ( $m=6.45$ ) compared to individuals who endurance train ( $m=5.32/ p<.001$ ), strength train ( $m=5.66/ p<.001$ ), partake in recreation activities ( $m=5.61/ p<.001$ ), and "undefined" movement activities ( $m=5.15/ p<.001$ ). They also expressed significantly lower levels of external regulation compared to all the other activity groups in the unorganized physical activity context ( $p<.001$ ). There was a significant difference in identified regulation between this group ( $m=6.12$ ) and individuals in the recreation activities category ( $m=5.68/p<.05$ ). Additionally, individuals who choose lifestyle sport were significantly less amotivated ( $m=1.82$ ) compared to individuals who reported that their main activity was team-sport ( $m=2.64/p<.001$ ).

## **Discussion**

The main purpose of this study was to identify the proportional distribution of a sample of Norwegian adolescents in four different activity groups, and to examine the effect of activity context (organized sport contexts vs. unorganized physical activity contexts) on the adolescents' motivation for participation.

The study shows that the relative number of adolescents who reported involvement in organized sport only and involvement in both organized sport and unorganized

physical activity decreased with age, and thus that the relative number of non-active adolescents and adolescents who participate in unorganized physical activity only increased with age. These discoveries are in line with national surveys on physical activity among adolescents in Norway (Krange & Strandbu, 2004; Kolloe et al., 2009), yet they do also correspond with theories on how adolescence act and react throughout this period of life (Lerner & Steinberg, 2009).

Even though the relative number of adolescents that participate in both organized and unorganized contexts decreases from approximately 70% to less than 40% over five years, the adolescents in this group report to be the most qualified and most dedicated to what they do: they report to be significantly more active compared to rest of the adolescents in the sample, and they rate themselves as highly skilled or average skilled in terms of sport skills/athletic competence, and they never, or rarely, think about leaving their main sport activity.

Further analyses that examines the different activity contexts' effects on motivation support the indication that the group of adolescents that participate in organized sport club activities is highly dedicated and that organized sport contexts itself reinforce their positive relationship to their sport. The results showed that:

- 1) Adolescents who reported involvement in both types of activity contexts (Org&Unorg) expressed a more self-determined motivational profile when they operated in organized contexts compared to unorganized physical activity contexts. They reported higher levels of intrinsic motivation and identified regulation, and lower levels of extrinsic motivation when they reported from the organized context compared to when they reported from unorganized contexts.
- 2) Adolescents who participated in the unorganized physical activity context only did not express a more self-determined motivational profile compared to adolescents who participated in the organized sport context only. On the contrary, interaction effects showed that females who participated in the organized sport context only reported a more self-determined profile compared to females who participated in the unorganized physical activity context only.

Our results seem at the first glance to contradict previous research showing that competitions may harm intrinsic motivation (Deci & Ryan, 1985; 1991), that adolescents involved in organized or more competitive sport structures demonstrates less intrinsic motivation compared to adolescents involved in unorganized or recreational sport structures (Fortier et al., 1995), and that perceived freedom from constraining forces and freedom to become involved on one's own premises is the most important predictors for the experience of meaningful leisure activities (Säfvenbom, 2002).

#### *The diversity of Unorganized Physical Activity*

The final analysis in the study contributes to explain the contradiction between a dedicative attitude and self-determined motivational profile for continuous participation in organized sport, and the decrease in organized sport involvement in favour of an increase in unorganized activity involvement and inactivity. The analysis revealed significant differences between unorganized activity contexts in regards to their effect on motivational regulation and thus that it is most likely incorrect to expect that all unorganized physical activity contexts are linked to the development of intrinsic motivation and other forms of internalized states of motivation, as stated by Vallerand (1997). The results presented above appear to show that some unorganized physical activity contexts offer autonomy supportive environments and thus do facilitate development of intrinsic motivation and a more self-determined motivational profile, and conversely, some don't.

In light of the fact that adolescents do leave organized sport, our results give reason to argue that to be able to perform better in their organized sport activity highly dedicated and ambitious youth athletes perform additional unorganized extra-club training. This activity might be more extrinsically motivated as the goals of action extend beyond those inherent in the activity itself and it is reasonable to think that if the adolescents could choose, they would prefer to practice in the organized setting with their team- or club mates- instead of performing self-organized preparation; and that it is the demand of the self-organized preparation that might cause the withdraw from the organized sport context,



### *The role of Lifestyle sports*

In line with our hypothesis, the results revealed that adolescents who report from lifestyle oriented unorganized physical activity contexts reported a more self-determined motivational profile compared to adolescents who reported from health oriented or sport performance oriented unorganized contexts. This result is in line with prior research that shows lifestyle sports have experienced growth in their increased visibility worldwide, and is even outpacing the expansion of most traditional sports in many western countries (Wheaton, 2010). Lifestyle sport, also called alternative sport, represents an opposition to the dominant sport culture (Breivik, 2010): The peak outcome seems to be more related to experience than the outcome (Christensen, 2001), the activity is removed from traditional and designated sport fields to public streets (Kural, 2010) and the learning environment is based more on online or off line peer- to peer tutorials than on traditional coaching (Säfvenbom & Keinänen, 2011).

However, it should be noted that in spite of more external motivational profiles most adolescents were involved in health oriented, or sport performance oriented, contexts; and that only a minor group of adolescents reported from lifestyle activities. This might be due to the strong political position of organized sport in Norway (Skille & Säfvenbom, 2011; Skirstad, Säfvenbom & Waddington, 2011) and that the movement culture in Norway may be considered rather conservative (Säfvenbom, 2011). Thus, adolescents participate in extra-club unorganized activities as a mean to perform better in their organized sport activity. It is also reason to believe that lifestyle sports like skateboarding, parkour, and a diversity of dances and combination activities, such as tricking and down-hill biking, are not present outside the social media that adolescents interact with; this could mean that most adolescents are not encouraged to involve in these types of activity through e.g. physical education at school (Corneliussen Rustad, 2010; Säfvenbom 2010). In addition, there has also been a negative public perception of lifestyle sport – for example, that they involve high-risk and deviant behaviour (Weathon, 2010).

### **Conclusions and implications**

This study shows that comparisons between organized sport and unorganized physical activity contexts on motivation for participation in physical activity is clearly a simplification that might lead to invalid results. The study demonstrates that all

unorganized activities, or contexts, are not linked to the development of merely internalized states of motivation as hypothesised by Vallerand (1997), and that all organized sport activities/contexts are not linked to the development of extrinsic forms of motivation or amotivation. However, after a more thorough examination into the unorganized physical activity context, it appears that these contexts, and especially lifestyle oriented activity contexts, most likely offers the most autonomy supportive environment and facilitate the development of intrinsic motivation and a more self-determined motivational profile. In line with previous research that found that intrinsic motivation corresponds with more positive outcomes (e.g., persistence) (Guy et al, 2000; Pelletier et al., 1995; Vlachopoulos et al, 2000; Craike, 2008; Tsorbatzoudis et al., 2006; Thøgersen-Ntoumani & Ntoumanis, 2006; Vallerand, 1997, 2007; Vallerand & Ratelle, 2002), our results show that it is involvement in these contexts that increase with age. However, it is important to emphasize that adolescents who participate in extra-club unorganized activities as a mean to perform better in their organized sport activity are the adolescents with the biggest drop-out rate; as the results show that the Org&Unorg group decrease with age, while the Non-Active group increase with age.

The growth seen in many western countries, in lifestyle sport involvement, are likely to have significant implications for health promotion strategies aimed towards the increase of an active leisurely involvement. So far there is little evidence that previous approaches to advocate traditional sports will effectively encourage an active lifestyle among adolescents (Tomlinson, Ravenscroft, Wheaton, & Gilchrist, 2005; Dumas & Laforest, 2009; Säfvenbom , 2011). Dumas and Laforest (2009) argue, that in the present context, the implementation of these strategies will be difficult, even though public health institutions are engaged in unprecedented efforts to counter the sedentariness of youth; the promotion of lifestyle sports has been and remains tempered by the view of them as having high-risk injuries. However, it seems unlikely that the growth in sport participation required to reach the ambitious targets set out by many western governments can be reached without recognizing, or understanding, the importance of non-traditional informal sports (Wheaton, 2010). Our results give further rise to the importance of the recognition of more lifestyle oriented unorganized physical activity contexts, as adolescents who report from these contexts express a more positive self-determined motivational profile than adolescents that perform in other unorganized sport activities.

## References

- Baumeister, R.F. (1991). *Meanings of life*. NY: The Guilford Press.
- Baumeister, R.F. (1989). The problem of life's meaning. In Buss, D.M. & Contor, N. (Eds), *Personality psychology. Recent trends and emerging directions*. (pp.,139-149).NY: Springer Verlag.
- Breivik, G. (2010). Trends in adventure sports in a post-modern society. *Sports in Society*, 13 (2), 260 – 273.
- Caldwell, L.L. & Smith, E.A. (2006). Leisure as a context for youth development and delinquency prevention. *The Australian and New Zealand Journal of Criminology*, 39 (3), 398-418.
- Calfas, K.J. & Taylor, W.C. (1994). Effects of Physical Activity on Psychological Variables in Adolescents *Pediatric Exercise Science*, 6, 406-423.
- Callaghan, P. (2004). Exercise: a neglected intervention in mental health care? *Journal of Psychiatric and Mental Health Nursing*, 11, 476-483.
- Cavil, N., Kahlmeier, S., & Racioppi, F. (Eds). (2006) *Physical activity and health in Europe. Evidence for action*. World Health Organization, Danmark.
- Chatzisarantis, N.L.D. & Hagger, M.S. (2009). Effects of an intervention based on self-determination theory on self-reported leisure-time physical activity participation. *Psychology and Health*, 24(1), 29-48.
- Christensen, O. (2001). *Absolutt snowboard. Studier i sidelengs ungdomskulturer*. DoctoralThesis, University of Oslo.

Corneliussen Rustad, M. (2010). *"Det viser seg at mange ting er jo gøy!": en kvalitativ analyse av 8 elevers erfaringer med kroppsøvfaget: sett i lys av selvbestemmelsesteorien*. Master Thesis. Norwegian School of Sport Sciences.

Craike, M.J. (2008). Application of self-determination theory to a study of the determinants of regular participation in leisure-time physical activity. *World Leisure Journal*, 50 (1), 58-67.

Deci, E.L. & Ryan, R.M. (1991). A motivational approach to the self: integration in personality. In R.A. Dienstbier (Ed.), *Perspectives on motivation. Nebraska Symposium on Motivation*. (pp. 237-288). Lincoln: University of Nebraska Press.

Deci, E.L. & Ryan, R.M. (Eds.). (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.

Denault, A.S., Poulin, F., & Pedersen, S. (2009). Intensity of participation in organized youth activities during the high school years: Longitudinal associations with adjustment. *Applied Developmental Science*, 13 (2), 74-87.

Dumas, A. & Laforest, S. (2009). Skateparks as a health-resource: are they as dangerous as they look? *Leisure Studies*, (1), 19-34.

Dworkin, S.L. & Wachs, F.L. (2009). *Body panic: Gender, health and the selling of fitness*. NY: New York University Press.

Fortier, M., Vallerand, R.J., Briere, N.M., & Provencher, P.J. (1995). Competitive and recreational sport structures and gender: A test of their relationship with sport motivation. *International Journal of Sport Psychology*, 26, 24-39.

Frankl, V.E. (1992). *Man's search for meaning: An introduction to logotherapy* (4th ed.). Boston: Beacon Press.

Green, K. (2010). *Key Themes in Youth Sport*. London: Routledge.

Guay, F., Ratelle, C.F., & Chanal, J. (2008). Optimal learning in optimal contexts: the role of self-determination in education. *Canadian Psychology*, 49, 233-240.

Guay, F., Vallerand, R.J., & Blanchard, C. (2000). On the assessment of situational intrinsic and extrinsic motivation: the situational motivation scale (SIMS)1. *Plenum, Motivation and Emotion*, 23(3), 175-213.

Keinänen, M. & Säfvenbom, R. (2011) *Learning a physical skill through informal peer-to-peer learning online: A case of self-organized lifestyle sports youth group in Oslo, Norway*. Paper presented at the 3rd annual International Conference on Education and New Learning Technologies. Barcelona (Spain), 4<sup>th</sup> – 6<sup>th</sup> of July, 2011.

Kjønniksen, L., Anderssen, N., & Wold, B. (2009). Organized youth sport as a predictor of physical activity in adulthood. *Scandinavian Journal of Medicine and Science in Sports*, 19, 646-654.

Kolle, E, Steene-Johannessen, J., Andersen, L.B., & Anderssen, S.A. (2009). Objectively assessed physical activity and aerobic fitness in a population-based sample of Norwegian 9- and 15-year-olds. *Scandinavian Journal of Medicine and Science in Sports*, 20 (1), e41-e47.

Kränge, O. & Strandbu, Å. (2004). *Ungdom, idrett og friluftsliv. Skillelinjer i ungdomsbefolkningen og endring fra 1992 til 2002* [Youth, sport and outdoorlife]. Oslo: Nova.

Kural, R. (2010) Changing spaces for sports. *Sports in Society*, 13 (2) 300 – 313.

Larson, R.W. & Seepersad, S. (2003). Adolescents' leisure time in the United States: partying, sports, and the American experiment. In S. Verma & R.W. Larson (Eds.), *Examining Adolescent Leisure Time Across Cultures: Developmental Opportunities and Risks*. *New Directions for Child and Adolescent Development*, 99 (5), 53-64.

Lerner, R.M. & Steinberg, L. (2009). The scientific study of adolescent development: Historical and contemporary perspectives. In Lerner, R. M. & Steinberg, L. (Eds), *Handbook of Adolescent Psychology* (3<sup>rd</sup> ed) (Vol 1). (pp., 3-15). NJ: John Wiley & Sons.

Lewthwaite, R. (1990). Motivational considerations in physical activity involvement. *Physical therapy* 70. 62-74.

Maehr, M.L. & Braskamp, L.A. (1986). *The motivation factor. A theory of personal investment*. Mass: Lexington Books.

Mahoney, J.L., Harris, A.L., & Eccles, J.S. (2006). Directors of SRCD office for policy and communications. Organized activity participation, positive youth development, and the over-scheduling hypothesis. *Social Policy Report 2006*, 20, 3-32.

Mota, J. & Esculcas, C. (2002). Leisure-time physical activity behavior: Structured and unstructured choices according to sex, age, and level of physical activity. *International Journal of Behavioral medicine*, 9 (2), 111-121.

Pelletier, L.G., Fortier, M.S., Vallerand, R.J., Tuson, K.M., Briere, N.M., & Blais, M.R. (1995). Towards a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale. *Journal of Sport and Exercise Psychology*, 17, 35-53.

Ryan, R.M. & Deci, E.L. (2008). A self-determined theory approach to psychotherapy. The motivational basis for effective change. University of Rochester.

Ryan, R.M. & Deci, E.L. (2002). Overview of self-determination theory: An Organismic Dialectical Perspective. In E.L. Deci & R.M. Ryan (Eds.), *Handbook of Self-Determination Research*. (pp. 3-34). Rochester, NY: The University of Rochester Press.

Ryan, R.M. & Deci, E.L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *American Psychologist*, 55(1), 68-78.

Ryan, R.M. & La Guardia, J.G. (2000). What is being optimized over development?: A Self-determination theory perspective on basic psychological needs across the life span. In S. Qualls & N. Abeles (Eds.), *Psychology and the aging revolution* (pp. 145-172). Washington, DC: APA Books.

Säfvenbom, R. (2011). *Physical activity and youth. The need for a human development perspective*. Paper in progress.

Säfvenbom, R. (2002). Serving underserved Youth through Physical Activity. A Personal Inquiry Approach. *Sportwissenschaft* 32 (1) 16 – 33.

Säfvenbom, R. (2000). The “Goodness of Fit” in Norwegian Youth Sports. In Brackenridge, C., Howe, D. & Jordan, F. (Eds). *Just Leisure: Equity, Social Exclusion and Identity*. LSA Publication No. 72 119 – 130

Säfvenbom, R. (2010). Å lede de unge ut i fristelse - og det gode liv. I Steinsholt, K. & Pedersen Gurholt, K. (Eds), *Aktive liv. Idrettspedagogiske perspektiver på kropp, bevegelse og dannelse*. Trondheim: Tapir forlag.

Säfvenbom, R. & Samdahl, D.M. (1998). Involvement in and perception of the free-time context for adolescents in youth protection institutions. *Leisure Studies*, 17, (1) 1-20.

Sallis, J.F., Prochaska, J.J., & Taylor, W.C. (2000). A review of correlates of physical activity of children and adolescents. *Medicine and Science in Sport and Exercise*, 32, 963-975.

Saxena, S., Van Ommeren, M., Tang, K. C., & Armstrong, T. P. (2005). Mental health benefits of physical activity. *Journal of Mental Health*, 14(5), 445-451.

Skille, E. Å. & Säfvenbom, R. (in press). Norway – country profile of sport policy and organization. *International Journal of Sport Policy*.

Skirstad, B., Waddington, I. & Säfvenbom, R. (2011). Who takes care of children's sport in Norway? *Paper in review*.

Standage, M., Treasure, D.C., Duda, J.L., & Prusak, K.A. (2003). Validity, reliability, and invariance of the situational motivation scale (SIMS) across diverse physical activity contexts. *Journal of Sport & Exercise Psychology*, 25, 19-43.

Steinberg, L. (2011). *Adolescence*. NY: McGraw-Hill.

Strandbu, Å. & Bakken, A. (2007). Aktiv storbyungdom. En studie av idrett, minoritetsbakgrunn og kjønn [Active big city youth. A study of sport, minority background and gender]. Oslo: Nova-rapport no. 2.

Støckel, J.T., Strandbu, Å., Solenes, O. Jørgensen, P., & Fransson, K. (2010). Sport for children and youth in the Scandinavian countries. *Sport in Society*, 13(4), 625-642.

Thøgersen-Ntoumani, C. & Ntoumanis, N. (2006). The role of self-determined motivation in the understanding of exercise-related behaviours, cognitive and physical self-evaluations. *Journal of Sport Sciences*, 24 (4), 393-404.

Tomlinson, A., Ravenscroft, N. Wheaton, B., & Gilchrist, P. (2005). *Lifestyle sport and national sport policy: An agenda for research*. London: Sport England.

Tsorbatzoudis, H., Alexandris, K., Zahariadis, P., & Grouios, G. (2006). Examining the relationship between recreational sport participation and intrinsic and extrinsic motivation and amotivation. *Perceptual and Motor Skills*, 103, 363-374.

Vallerand, R.J. (2004). Intrinsic and extrinsic motivation in sport. *Encyclopaedia of Applied Psychology*, 2, 427-435.



Vallerand, R.J. (2007). Intrinsic and extrinsic motivation in sport and physical activity. A review and a look at the future. In G. Tenenbaum & R.C. Eklund (Eds.). *Handbook of sport psychology* (3rd ed.). (pp., 59-83). New Jersey: Wiley & Sons.

Vallerand, R.J. (1997). Towards a hierarchical model of intrinsic and extrinsic motivation. In Zanna, M.P. (Ed.), *Advances in experimental social psychology* (pp. 271-359). New York: Academic Press.

Vallerand, R.J., Pelletier, L.G., & Koestner, R. (2008). Reflections on Self-Determination Theory. *Canadian Psychology*, 49(3), 257-262.

Vallerand, R.J. & Ratelle, C.F. (2002). Intrinsic and extrinsic motivation: A hierarchical model. In Deci, M.R., & Ryan, E.L. (Eds). *Handbook of self-determination research* (pp., 37-64). Rochester, NY: The University of Rochester Press.

Vilhjalmsson, R. & Kristjansdottir, G. (2003). Gender differences in physical activity in older children and adolescents: the central role of organized sport. *Social Science & Medicine*, 56, 363-374.

Vlachopoulos, S.P., Karageorghis, I., & Terry, P.C. (2000). Motivation profiles in sport: A self-determination theory perspective. *Research Quarterly for Exercise and Sport*, 71(4), 387-397.

Wang, C.K.J. & Biddle, S.J.H. (2001). Young people's motivational profiles in physical activity: a cluster analysis. *Journal of Sport & Exercise Psychology*, 23, 1-22.

Watts, C.E. & Caldwell, L.L. (2008). Self-determination and free time activity participation as predictors of initiative. *Journal of Leisure Research*, 40(1), 156-181.

Wheaton, B. (2010). Introducing the consumption and representation of lifestyle sports. *Sport in Society*, 13(7/8), 1057-1081.

## 2. Theory and Methods

### 2.1 Introduction

As already explained in the article, adolescence has been described as a critical period regarding a long lasting physically activity lifestyle (Mota & Esculucas, 2002). Prior research on youth development emphasize that adolescents interact and develop in context (Lerner & Steinberg, 2009) and that perceived quality of the contexts seems crucial for further action, and thus also for development and health. Meaningful everyday-life interactions are seen as fundamental assumptions for the enjoyment of life (Baumeister, 1989, 1991; Frankl, 1992) and the personal experience of a meaningful everyday life is often seen as the immediate precursor to behaviour, and a predictor for health for adolescents (Lewthwaite, 1990; Maehr & Braskamp, 1986). Further, Säfvenbom (2011, Paper in progress) argues that adolescents developmental processes relies on a *goodness of fit*, between the person and the environment. This match or mismatch, will affect the interaction and the outcome of the interaction.

Understanding the motivational factors associated with physical activity contexts in youth is therefore of huge importance; as research on motivation can promote a better understanding of adolescents decisions regarding their sport and physical activity behavior (Wang & Biddle, 2001). “A widely accepted definition of motivation is that it represents the hypothetical construct used to describe the internal and/or external forces that lead to the initiation, direction, intensity, and persistence of behaviour” (Vallerand, 2004, p. 428). Self-determined Motivation is a most important variable in sport and represents one key element that facilitates performance, and maybe most important, positive experiences in sport and the area of physical activity (Vallerand, 2004). However, in order to get a more comprehensive understanding of motivational regulation for physical activity participation we wanted to take into account contextual characteristics of the activity as each context might capture unique features of youth’s participation experiences as the influence of participation in organized or unorganized sport programs has not been well quantified throughout adolescence (Mota & Esculcas, 2002). I hope this research will add meaningful value to the field of sport psychology and to the research on sport and physical activity behavior within adolescents.

Since my master's thesis is written in the form of a scientific article, an additional theory and methods section is required. Up to this date there are almost no guidelines to what this section should contain, except that it should explain theory and methods used in the study in greater detail than was possible in the article. I have chosen to write an overview of Self-Determination Theory, as my hypotheses are based on this theory alone.

## **2.2 Self-Determination Theory (SDT)**

SDT is a meta-theory comprising of different sub-theories that seek to explain human motivation and behaviour based on individual differences in motivational orientations, contextual influences on motivation, and the distinction between self-determined forms of motivation and non-self-determined forms of motivation (Hagger & Chatzisarantis, 2008).

The sub-theories all share organismic and dialectical assumptions and they all involve the concept of basic psychological needs. When coordinated, they cover all types of human behaviour in all domains (Ryan & Deci, 2002): *Cognitive Evaluation Theory* specifies factors that explain variability in intrinsic motivation. Hence, it explains environmental factors that facilitate versus undermine intrinsic motivation (Ryan & Deci, 2002). It addresses the effects of social contexts, or how factors such as rewards, interpersonal controls, and ego involvement impact intrinsic motivation and interest. The sub-theory describes contextual elements as autonomy supportive, controlling, and amotivating, and it links these types of contextual elements to the different motivations (Ryan & Deci, 2000; Ryan & Deci, 2002). *Organismic Integration Theory* concerns internalization of values and regulations, and was formulated to explain the development and dynamics of extrinsic motivation in its various forms. The more internalized the extrinsic motivation is the more autonomous the person will be (Deci & Ryan, 1985; Ryan & Deci, 2002). *Causality Orientations Theory* describes individual differences in people's tendencies to orient toward the social environment in ways that support their own autonomy, control their behaviour, or are amotivating (Deci & Ryan, 1985; Ryan & Deci, 2002). Finally, *Basic Needs Theory* explains the relation of motivation and goals to health and well-being. This theory argues that psychological

well-being and optimal functioning is predicted by autonomy, competence and relatedness (Ryan & Deci, 2000; Ryan & Deci, 2002).

### 2.3 Global, contextual, and situational effects on motivation

Vallerand (1997) argues that it is not sufficient to talk about motivation in general to describe a person, rather, one should refer to a collection of motivations that vary in types and levels of generality (Vallerand, 1997; Vallerand & Perreault, 1999). Research and theories on the self, have over the past few decades represented self-regulation processes at different levels of a hierarchy. Thus, intrinsic motivation, extrinsic motivation, and amotivation are represented within the individual at three hierarchical levels of generality: the global, the contextual, and the situational levels (Vallerand, 1997; Vallerand & Ratelle, 2002).

The model posits that one must consider motivation from a multidimensional perspective (Vallerand, 2001), and if we are to understand a particular individual, we need to take into consideration the different motivations that describe him or her. The model claims that motivation results from an ongoing transaction between the person and the environment. Furthermore, the model also integrates the personality and social psychological traditions of motivation (Vallerand, 1997; Vallerand & Perreault, 1999).

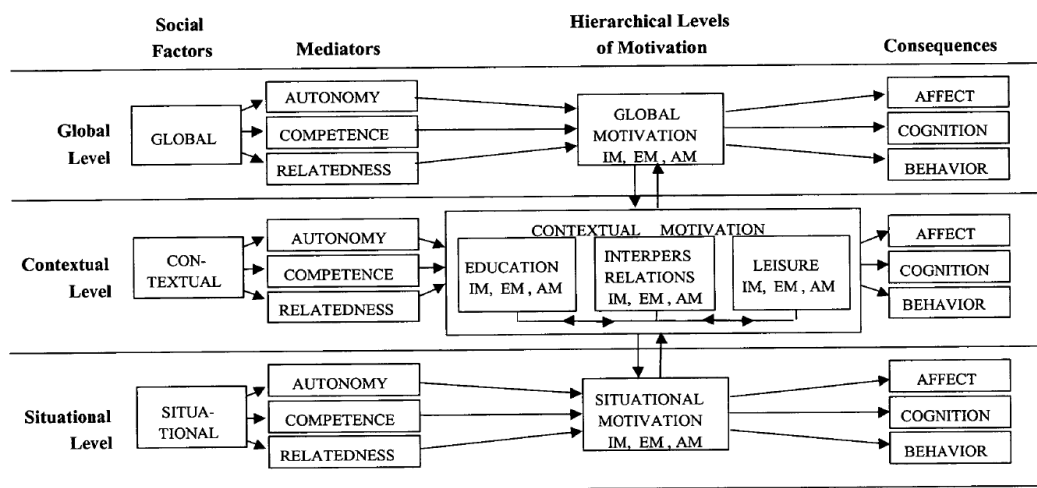


Figure 1 — Vallerand's (1997, 2001) hierarchical model of intrinsic and extrinsic motivation. Used with permission.

The Situational Motivation Scale / 21

**Figure 3: The Hierarchical Model of Intrinsic and Extrinsic Motivation (Standage, Treasure, Duda, & Prusak, 2003).**

Note. IM = Intrinsic motivation, EM = Extrinsic motivation, AM = Amotivation.

### 2.3.1 The different motivational regulations

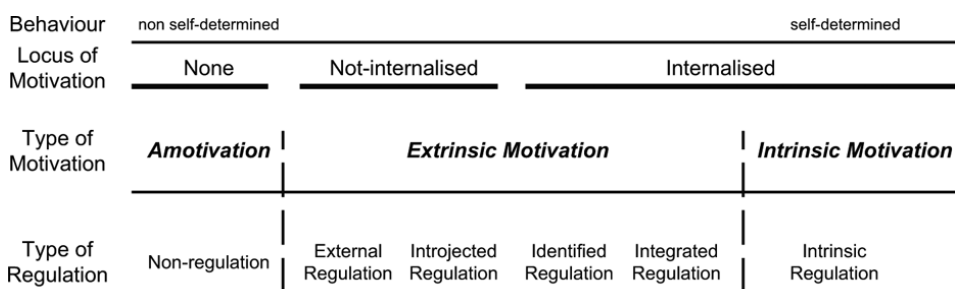
A major focus of SDT (Deci & Ryan 1985, 1991) has been to supply a more differentiated approach to motivation, by asking what kind of motivation is being exhibited at any given time. SDT has identified several types of motivation and each of them have consequences for learning, performance, personal experience, and well-being (Vallerand, 1997; Vallerand & Perreault, 1999).

As already mentioned, a complete analysis of motivation must deal with three concepts, namely intrinsic motivation, extrinsic motivation, and amotivation: “Intrinsic motivation refers to performing an activity for itself and the pleasure and satisfaction derived from participation” (Vallerand, 2007, p. 60). Vallerand et al. (Vallerand, Pelletier, Blais, Brière, Senécal, & Vallières, 1992, 1993; Vallerand, 2007) claims that three types of intrinsic motivation exist: intrinsic motivation to know, intrinsic motivation to accomplish things, and intrinsic motivation to experience stimulation. “Extrinsic motivation refers to engaging in an activity as a means to an end and not for its own sake” (Vallerand, 2007, p. 60). This doesn’t mean that extrinsic motivated behaviours are only performed in the absence of self-determination. Deci and Ryan (1985) proposed that different types of extrinsic motivation exist, some of them are even self-determined and may be performed through choice: *Integrated regulation* is quite similar to intrinsic motivation, however, this form of internalization is not truly self-determined because it is limited to the internalization of past external situations (e.g. “I play soccer because I would feel guilty if I didn’t”) (Vallerand & Perreault, 1999). *Identified regulation* is also an autonomous form of regulation, involving a conscious acceptance that the behaviour is important in order to achieve personally valued outcomes (Ryan & Deci, 2002). *Introjected regulation* is when external regulation have been internalized but not truly accepted as one’s own. It is within the person but is not considered part of the integrated self (Ryan & Deci, 2002). *External regulation* is the least autonomous form of extrinsic motivation and occurs when behaviour is regulated by rewards or in order to avoid punishment (e.g. “I play soccer because my parents force me to”) (Ryan & Deci, 2002).

Deci and Ryan (1985) also propose a third motivational concept, namely Amotivation

(the state of lacking the intention to act), to fully understand human nature. Amotivated behaviours are initiated and regulated by forces beyond the person’s intentional control. Behaviours are neither intrinsically nor extrinsically motivated in the sense that they are not intentional (Deci & Ryan 1985; Ryan & Deci, 2002). Thus, there is a relative absence of motivation (Vallerand, 2007).

SDT (Deci & Ryan, 1985, 1991) propose that these different types of motivation represent different levels of self-determination listed on a self-determination continuum.



Source: Adapted from Deci and Ryan (2000)

**Figure 4:** The Self-determination Continuum, with types of motivation and types of regulation (Deci & Ryan, 2000).

### 2.3.2 The three levels of generality

The *global level* represents the first and the most stable level in the hierarchy and it is proposed that the individual has developed a global and general motivation orientation to interact with the environment in an intrinsic, extrinsic, or amotivated way (Vallerand, 2007; Vallerand & Ratelle, 2002). Certain individuals may have a global external regulation orientation, leading them to have an external regulation toward several life contexts, including sport (Vallerand, 2004). At the second level, the *contextual level*, motivation is expected to be moderately stable (Vallerand & Ratelle, 2002). Here, context refers to a distinct sphere of human activity (Vallerand, 1997; Vallerand, & Perreault, 1999). Research has shown that the three most important contexts for young adults are education, interpersonal relationships, and leisure (Vallerand, 1997; Vallerand, & Perreault, 1999). Thus, individuals come to develop motivational orientations with respect to intrinsic and extrinsic motivation and amotivation in different contexts. A given contextual motivation always refers to one specific life

domain. However, a person's contextual motivational orientation may vary from context to context (e.g., an athlete may have a high level of contextual intrinsic motivation toward sport but a low level of contextual intrinsic motivation toward education) (Vallerand, 2004). Finally, the *situational level* represents the third and last level in the hierarchy. Motivation at this level refers to a motivational state. It is the motivation that people experience toward a given activity at a specific point in time (Vallerand, 2004). Motivation at this level is assumed to be unstable because of its responsiveness to the environment (Vallerand & Ratelle, 2002).

### **2.3.3 Social Factors and Basic Psychological Needs**

Social factors refers both to human and nonhuman factors found in our social environment such as comments from others (human) or instructions on a sign (nonhuman) (Vallerand, 2001; Vallerand & Ratelle, 2002). These factors can also be distinguished according to their level of generality: *Global factors* refer to social factors that are present in most aspects of the person's life (e.g., housing of elite athletes in one location. Being in such an environment for an extended period of time may have important consequences on an athlete's global motivation) (Vallerand, 2001; Vallerand & Perreault, 1999; Vallerand & Ratelle, 2002). *Contextual factors* represent variables that are generally present in one specific life context (e.g., having a controlling swimming coach) but not in another (e.g., the coach is part of the sport context, but not of the educational context). Finally, *Situational factors* refer to variables that are present at a given point in time but not on a permanent basis (e.g. receiving positive feedback at 3:45 in the second half of a soccer game). When distinguishing among the three types of social factors it becomes possible to make clearer hypotheses regarding which type of factor should influence motivation at the different levels of the hierarchy (Vallerand & Perreault, 1999; Vallerand & Ratelle, 2002).

Further, the impact of social factors on motivation is mediated by perceptions of competence, autonomy, and relatedness. This means that motivation is not directly influenced by social factors, but by the way individuals interpret those factors in terms of facilitating their needs for competence, autonomy and relatedness (Vallerand, 2007). According to the SDT definition, "basic needs are universal – that is, they represent

innate requirements rather than acquired motives” (Ryan & Deci, 2002, p. 7). They are therefore expected to be evident in all cultures and in all developmental periods. This is a very restricted definition, which is why the list of psychological needs within SDT is so short, including only three components (Ryan & Deci, 2002): *Competence*: The need for competence implies that individuals want to interact effectively with the environment in order to experience a sense of competence in producing desired outcomes and preventing undesired events (Deci & Ryan, 1985; Vallerand & Perreault, 1999). It leads people to seek challenges that are optimal for their capacities. However, it is not an attained skill or capability, but rather a felt sense of confidence and effectiveness in action (Ryan & Deci, 2002). *Autonomy*: The need for autonomy implies that individuals want to feel free from pressures and have the possibility to make choices among several courses of action (Guay et al., 2000). When autonomous, individuals experience their behaviour as an expression of the self, such that, even when actions are influenced by outside sources, the individual still feels both initiative and value with regard to them (Ryan & Deci, 2002). *Relatedness*: Finally, the need for relatedness refers to interpersonal attachments and bonds developed between individuals, and is based on a fundamental striving for contact with others (Guay et al., 2000).

From a motivational perspective, needs represent the energy underlying people’s behaviour, meaning people engage in certain activities in order to satisfy their needs. Needs also represent the process through which changes in motivation takes place. The fulfilment of our psychological needs is important because it orients us toward certain types of behaviours and activities in the hope that they will fulfil our needs. Thus, the social environment is both an opponent and an ally, at times leading us to activities that satisfy our needs and at other times leading us in directions that counter to the development of the self and the experience of positive outcomes (Vallerand, 2007).

#### **2.3.4 Contextual and situational motivation can influence each other through top-down and recursive effects**

In addition to the influence of psychological mediators, motivation at a given level also results from top-down effects from motivation higher up in the hierarchy (Vallerand &



Perreault, 1999; Vallerand & Ratelle, 2002). It is proposed that motivation should have stronger effects top-down on motivation at the next lower level than on motivation at the distal level. Thus, contextual motivation should have stronger impact on situational motivation than global motivation, and global motivation should have a stronger impact on contextual motivation (Vallerand & Perreault, 1999). It is also proposed that self-determination motivation at the higher level will facilitate self-determined levels of motivation at the next level down in the hierarchy (e.g., athletes who display a self-determined motivational profile in contextual motivation toward their sport are likely to display a similar motivational profile at the situational level while playing) (Vallerand & Perreault, 1999). The top-down hypotheses is important because it suggests how motivation at different levels of generality can be integrated and it explains the mechanics behind how intrinsic and extrinsic motivation can be influenced. Vallerand (2001) refers to the study by Chantal, Guay, and Vallerand (2000), which showed that contextual motivation towards leisure activities predicted situational motivation toward a specific leisure activity three months later. As hypothesized, individuals who had the most self-determined contextual motivation toward leisure displayed the most self-determined situational motivation toward their leisure activity (Vallerand, 2001).

Another type of motivational dynamics involves a recursive relationship or bottom-up effect. Hence, motivation at the lower level in the hierarchy can over time have some feedback effect on motivation at the next higher level (Vallerand, 2000, 2001). A real life example can be a soccer player who did not deliver a great performance in a quarter-final of a soccer tournament that the team lost. These represent two crucial situational factors that had a negative impact on the soccer player's situational motivation. These factors were much stronger than the impact of the player's intrinsic contextual motivation on the player's situational motivation and led him/her to experience low levels of intrinsic motivation and a high levels of amotivation at the situational level (near the end of the game). This low self-determined situational motivation had in turn a recursive negative effect on the player's contextual motivation towards soccer. This can also be applied in the next level. For example, if an individual display repeated high levels of intrinsic motivation toward sports, eventually such changes could lead to changes in intrinsic motivation at the global level (Vallerand & Perreault, 1999).

A final type of motivational dynamics refers to the interplay among the different types of contextual motivation and this may lead to compensation effects (Vallerand, 2000, 2001). From the model's perspective, losses in self-determined motivation in one context (e.g., education) can lead a person to compensate in another context (e.g., leisure) by becoming more intrinsically motivated there. It is hypothesized that such a phenomenon allows individuals to restore (or keep) their global motivation at a certain self-determined level (Vallerand, 2000, 2001). This runs contrary to SDT that posits that a loss in need satisfaction and motivation is compensated by engaging in activities that promote non-self-determined needs and outcomes. However, Vallerand (2000, 2001) claims, the compensation effect are only likely to take place in life domains in which people feel competent and that it therefore is possible that both positions are correct. Perhaps the first response to "need thwarting" is to try to restore the balance in the self and to enhance self-determined motivation in some other important contexts as proposed by the Hierarchical Model. However, if after a while this proves impossible, it is possible that people turn towards less optimal ways of functioning (e.g., external regulation and amotivation with subsequent negative outcomes), as proposed by SDT (Vallerand, 2000, 2001).

### **2.3.5 Motivation leads to important consequences**

Motivation has been a central and long lasting issue in the field of psychology as it is the core of biological, cognitive, and social regulation. However, perhaps more important, motivation is highly valued because of the consequences or outcomes it produces (Ryan & Deci, 2000). Vallerand (1997) proposes that we have at least three types of consequences: affective, cognitive, and behavioural. Affective consequences include interest, satisfaction, positive emotions, mood, and anxiety. Memory and conceptual learning, as well as concentration (or attention) are representative of cognitive consequences. Finally, persistence at the task, choice of behaviour, complexity, intensity, behavioural intentions, and performance are all examples of behavioural consequences (Vallerand, 1997; Vallerand & Losier, 1999).

In line with the hierarchical model, it is proposed that motivational consequences exist at the three levels of the hierarchy. The level of generality of the various consequences depends on the level of generality of the motivation that produce them (Vallerand & Perreault, 1999). Meaning, situational types of consequences, such as feeling momentarily disappointed and not wanting to play any more at that point in time, originate from situational motivation. More contextually generalized thoughts, feelings, and behaviours that goes beyond the moment and belongs to a specific area. Finally, broad level types of consequences, such as depression and apathy experienced across life domains, are typically a result of global motivation (Vallerand, 2004).

Consequences are decreasingly positive from intrinsic motivation to amotivation. The self-determined continuum proposed by Deci and Ryan (1985) is very useful in making predictions about motivational consequences. Because the different motivational regulations are hypothesized to be on a continuum from high to low self-determination (Deci & Ryan, 1985), and because self-determination is associated with enhanced psychological function (Deci & Ryan, 1985; Guay et al., 2000; Vallerand & Perreault, 1999), one would expect a corresponding pattern of consequences, expecting intrinsic motivation to have the most positive consequences, followed by identification. On the other hand, one might also expect external regulation and especially amotivation to be associated with negative consequences. Introjection should lead to consequences in between those produced by identification and external regulation (Guay et al., 2000; Vallerand & Perreault, 1999).

In sum, the Hierarchical Model shows that it is useful to study motivation at three different levels of generality and distinguishing among the different levels becomes important, especially when specifying determinants and consequences (Vallerand & Ratelle, 2002). Deci and Ryan (1985) propose that objective events may affect motivation and psychological outcomes or consequences, but they do not explicitly propose the nature of the causal sequence on how the environment affect outcomes, as well as the role of need satisfaction in the process. The Hierarchical Model posits the following causal sequence: the environment (social factors) influences perceived autonomy, competence, and relatedness (need satisfaction) that in turn influences motivation that in turn leads to outcomes. Thus, according to the Hierarchical Model,

need satisfaction plays an indirect role in the sequence, whereas motivation is hypothesized to play a much more direct role in the experience of psychological outcomes or consequences (Vallerand, 1997, 2000, 2001).

## **2.4 Methods**

The following section describes the methods used in this study in greater detail than was possible in the article, with discussion of our choice of methods when appropriate. Data was already collected when I started writing my master's thesis and have therefore not explained recruitment and data collection procedures as I was not part of this process.

### **2.4.1 Literature search**

The theoretical basis of this project was gathered primarily through searches of the SportDiscus database, although in some cases the search engine "Google Scholar" was also used. Initial searches included combinations of the terms "Self-determination", "adolescents", "organized sport", "unorganized physical activity", "structured and unstructured physical activity", "lifestyle sport", "motivational regulation", "motivational profile", "outcome", "consequences". Extensive hand searches of article reference lists were also a major means of identifying relevant literature.

### **2.4.2 Study design**

This cross-sectional study was conducted as part of the "Goodness of fit in Norwegian Youth Sport" study initiated by the Faculty of Health and Sport at the University of Agder, and developed and conducted in collaboration with the Norwegian School of Sport Sciences.

The major distinction between the two basic approaches in developmental studies is whether researchers follow the same participants over time (longitudinal design) or whether they select different participants at each age level (cross-sectional design). Longitudinal studies are powerful because changes in behaviour across the time span of interest are seen in the same people. However, longitudinal studies are time-consuming while cross-sectional studies on the other hand are usually less time-consuming to carry

out (Thomas, Nelson, & Silberman, 2005). Cross-sectional designs test several age groups at the same point in time and although cross-sectional studies are more time efficient than longitudinal studies, a limitation called the cohort problem exists: are all the age groups really from the same population? Asked differently, are the environmental circumstances that affect motivational regulation for 13-year-olds the same today as when the 18-year-olds were 13, or have the sport programmes improved over this 5-year span so that the 13-year-olds experience the organized sport context as more autonomy supportive than the 18-year-olds did when they were 13? (Thomas et al., 2005).

Another limitation is that we have used a questionnaire to obtain information by asking participants to respond to questions rather than by observing their behavior. Hence, the results consist simply of what people say they do or what they say they believe or dislike. However, certain information can only be obtained this way, so planning the questionnaire carefully to ensure the most valid results is of huge importance (Thomas et al., 2005).

### **2.4.3 Participants**

A total of 2,971 pupils from 38 different schools in Norway were invited and stratified in accordance to school level and geographical area. A total of 2,116 (71%) adolescents (1,020 boys and 1,085 girls) from the ages of 12 to 19 (mean age 15.3 years) completed the self-report questionnaire during school time. Omitted data results in actual sample sizes in the analyses vary in relation to the variables included.

### **2.4.4 Measures**

#### **The questionnaire**

The questionnaire consists of five sections with the total of 76 questions. In the first section, participants were asked about themselves and their family, grades, and how they perceive school and physical education. In the second section they were asked questions of a more personal characteristic. They were asked questions about how they think about themselves and their existence (e.g. psychological distress, loneliness, shyness). The third section had questions about their activity habits, amount of physical activity per week, and motivation for physical activity both in the organized sport

context and in the unorganized leisure-time physical activity context. In section four, the participants were asked about how they perceive the local sports club and their relationship towards physical activity, sports and play. In the last section, section five, the participants were asked questions about what they think is important if they were to be involved in some form of physical activity, exercise or sports. They were also asked if they were considering military duty, and what profession they could see themselves in later on.

Other measured variables: Age, gender, were also collected in the questionnaire.

The sections included in this master's thesis are section one (question 1 and 2) and section three (questions 48, 49, 50, 51, 53, 55, 56, and 57).

### **Physical Activity**

Participation in and the amount of physical activity was reported in two different contexts: organized sport and unorganized physical activity. The adolescents were asked a similar question in both contexts: *How many hours per week do you play or exercise enough to make you sweat or breathe hard?*; 0, 1-2, 3-4, 5-7, 8-10 or 11 hours or more per week. The sum score of the two variables indicates the total amount of physical activity (TOTAMOUNT). This index is regarded as continuous data.

### **The Situational Motivation Scale (SIMS)**

The 16-item SIMS (see full scale in Guay et al., 2000) was used to evaluate the adolescents' situational motivation in the organized sport context and unorganized physical activity context. The SIMS was developed by Guay et al. (Guay & Vallerand, 1995; Guay et al., 2000) to assess participants' immediate or current reactions toward a specific activity in which they were engaged.

To develop and validate the SIMS, Guay et al. (2000), conducted five studies. Overall, results showed that the SIMS was composed of four internally consistent factors. Standage et al. (2003), argues that no published research has examined the factor structure of the SIMS in the physical activity domain. In their research, they assessed

the reliability, presence of a proposed simplex pattern (construct validity), factorial validity, and multisample invariance of the SIMS. Their findings supported the findings of Guay et al. (2000), that the SIMS represents a very useful tool for studying situational motivation in laboratory and field settings (Standage et al., 2003).

The respective sub-dimensions of the measure were assessed as following based on the stem “why do you participate in this main activity within the organized sport context?” and on the stem “why do you participate in this main activity within the unorganized physical activity context?”: 1. Intrinsic motivation (e.g., because I think this activity is interesting, 2. Identified regulation (e.g., because I am doing it for my own good, 3. External regulation (e.g., because it is expected that I do so), and 4. Amotivation (e.g., I don’t know; I don’t see what this activity does for me). Responses were measured on a 7-point likert scale from (1) completely untrue to (7) completely true. Analyses showed satisfactory alpha values in all four dimensions in both the organized sport context (0.90/0.82/0.79/0.82) and the unorganized physical activity context (0.90/0.85/0.81/0.88).

In order to use a single motivation score, a self-determined index (SDI) was constructed by a summation of specifically weighted scores from the different motivational subscales in accordance to their position on the self-determination continuum. Specifically, data were reduced as specified by Vallerand & Ratelle (2002) by first calculating each subscale score via the mean of its items and then further reduction by calculating the SDI-score via the following formula:  $[SDI = +2 (IM) + 1 (IDR) - 1 (ER) - 2 (AM)]$ , [see Vallerand & Ratelle, 2002 for support for the validity of the index]. The SDI, representing the strength of one’s self-determination, is a straightforward weighting – the higher the number, the stronger the self-determination. The scores for the SDI can vary from +18 to -18.

#### **2.4.5 Treatment of sensitive personal information**

The Norwegian Social Science Data Service (NSD) approved the study, and parents and children gave their written informed consent before their participation in the study.

#### **2.4.6 Statistical Analyses**

All statistics were calculated using SPSS (Statistical Package for the Social Sciences) version 18.0. Mean and Standard Deviation are used when presenting central tendencies and dispersion. Independent-samples t-tests were used when testing potential gender differences (Table 1, see Article). One-way analysis of variance and Two-way between-groups ANOVA with Bonferroni post hoc test were used when testing potential group differences in major study variables (Table 1 and 3, see Article). Paired-samples t-tests were used when testing potential within-group differences. In addition, Hierarchical multiple regression analysis was conducted to test the effect of age, gender, amount of physical activity, and context affiliation on the Self- determination index (SDI) (Table 2, see Article).



## 2.5 References

- Baumeister, R.F. (1991). *Meanings of life*. NY: The Guilford Press.
- Baumeister, R.F. (1989). The problem of life's meaning. In Buss, D.M. & Contor, N. (Eds), *Personality psychology. Recent trends and emerging directions*. (pp.,139-149).NY: Springer Verlag.
- Deci, E.L. & Ryan, R.M. (1991). A motivational approach to the self: integration in personality. In R.A. Dienstbier (Ed.), *Perspectives on motivation. Nebraska Symposium on Motivation*. (pp. 237-288). Lincoln: University of Nebraska Press.
- Deci, E.L. & Ryan, R.M. (Ed.) (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Deci, E.L. & Ryan, R.M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, 11, 227-268.
- Frankl, V.E. (1992). *Man's search for meaning: An introduction to logotherapy* (4th ed.). Boston: Beacon Press.
- Guay, F., Vallerand, R.J., & Blanchard, C. (2000). On the assesement of situational intrinsic and extrinsic motivation: the situational motivation scale (SIMS)1. *Plenum., Motivation and emotion*, 23 (3), 175-213.
- Hagger, M. & Chatzisarantis, N. (2008). Self-determination Theory and the psychology of exercise. *International Review of Sport and Exercise Psychology*,1(1), 79-103.
- Lerner, R.M. & Steinberg, L. (2009). The scientific study of adolescent development: Historical and contemporary perspectives. In Lerner, R. M. & Steinberg, L. (Eds), *Handbook of Adolescent Psychology* (3<sup>rd</sup> ed) (Vol 1). (pp., 3-15). NJ: John Wiley & Sons.

Lewthwaite, R. (1990). Motivational considerations in physical activity involvement. *Physical therapy* 70. 62-74.

Maehr, M.L. & Braskamp, L.A. (1986). *The motivation factor. A theory of personal investment*. Mass: Lexington Books.

Mota, J. & Esculcas, C. (2002). Leisure-time physical activity behavior: Structured and unstructured choices according to sex, age, and level of physical activity. *International Journal of Behavioral medicine*, 9 (2), 111-121.

Ryan, R.M. & Deci, E.L. (2002). Overview of self-determination theory: An Organismic Dialectical Perspective. In E.L. Deci & R.M.. Ryan (Eds.), *Handbook of Self-Determination Research*. (pp. 3-34). Rochester, NY: The University of Rochester Press.

Ryan, R.M. & Deci, E.L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *American Psychologist*, 55(1), 68-78.

Säfvenbom, R. (2011). *Physical activity and youth. The need for a human development perspective*. Paper in progress.

Standage, M., Treasure, D.C., Duda, J.L., & Prusak, K.A. (2003). Validity, reliability, and invariance of the situational motivation scale (SIMS) across diverse physical activity contexts. *Journal of Sport & Exercise Psychology*, 25, 19-43.

Thomas, J.R., Nelson, J.K., & Silverman, S.J. (2005). *Research Methods in Physical Activity* (5th ed.). Champaign, IL: Human Kinetics.

Vallerand, R.J. (2000). Deci and Ryan's Self-Determination Theory: A view From the Hierarchical Model of Intrinsic and Extrinsic Motivation. *Psychological Inquiry*, 11, 312-318.

Vallerand, R.J. (2004). Intrinsic and extrinsic motivation in sport. *Encyclopedia of Applied Psychology*, 2, 427-435.

Vallerand, R.J. (2007). Intrinsic and extrinsic motivation in sport and physical activity. A review and a look at the future. In G. Tenenbaum, & R.C. Eklund (Eds.), *Handbook of sport psychology* (3rd ed.). (pp., 59-83). New Jersey. Wiley & Sons.

Vallerand, R.J. (1997). Towards a hierarchical model of intrinsic and extrinsic motivation. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 271-359). New York: Academic Press.

Vallerand, R.J. & Losier, G.F. (1999). An integrative analysis of intrinsic and extrinsic motivation in sport. *Journal of Applied Sport Psychology*, 11, 142-169.

Vallerand, R.J., Pelletier, L.G., Blais, M.R., Brière, N.M. Senécal, C., & Vallières, E.F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1019.

Vallerand, R.J., Pelletier, L.G., Blais, M.R., Brière, N.M. Senécal, C., & Vallières, E.F. (1993). On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the Academic Motivation Scale. *Educational and Psychological Measurement*, 53, 159-172.

Vallerand, R.J. & Perreault, S. (1999). Intrinsic and extrinsic motivation in sport: Toward a Hierarchical model. In R. Lidor, & M. Bar-Eli (Eds.), *Sport psychology: Linking theory and practise* (pp. 191-212). Morgantown, WV: Fitness Information Technology.

Vallerand, R.J. & Ratelle, C.F. (2002). Intrinsic and extrinsic motivation: A hierarchical model. In Deci, M.R., & Ryan, E.L. (Eds.), *Handbook of self-determination research* (pp., 37-64). Rochester, NY: The University of Rochester Press.

Wang, C.K.J. & Biddle, S.J.H. (2001). Young people`s motivational profiles in physical activity: a cluster analysis. *Journal of Sport & Exercise Psychology*, 23, 1-22.

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# Appendices

## Appendix A. The Questionnaire (section 1 and 3)

 10366	ID-skole: <input type="text"/> <input type="text"/> ID-nummer: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>Seksjon 1:</b> I denne første seksjonen ber vi deg besvare spørsmål omkring deg selv og din familie. Til slutt spør vi deg noen spørsmål om karakterer, om hvordan du trives på skolen og i kroppsvningsfaget.	
1. Kjønn: <input type="checkbox"/> Gutt <input type="checkbox"/> Jente	3. Høyde: <input type="text"/> <input type="text"/> <input type="text"/> cm
2. Fødselsår: 19 <input type="text"/> <input type="text"/>	4. Vekt: <input type="text"/> <input type="text"/> <input type="text"/> kg (eks. 076)
5. Innbyggere i bostedskommune, (spør andre om du er usikker):	
<input type="checkbox"/> Under 1000	<input type="checkbox"/> 11.000-20.000
<input type="checkbox"/> 1000-5000	<input type="checkbox"/> 21.000-30.000
<input type="checkbox"/> 6000-10.000	<input type="checkbox"/> mer enn 30.000
6a. Hvor mange år har du bodd i Norge? <input type="text"/> <input type="text"/> Antall år	6b. Hvor er dine foreldre vokst opp? <b>Far (ett kryss)</b> <input type="checkbox"/> Norge <input type="checkbox"/> Annet sted i Europa <input type="checkbox"/> Amerika <input type="checkbox"/> Asia <input type="checkbox"/> Afrika <input type="checkbox"/> Australia <input type="checkbox"/> Vet ikke <b>Mor (ett kryss)</b> <input type="checkbox"/> Norge <input type="checkbox"/> Annet sted i Europa <input type="checkbox"/> Amerika <input type="checkbox"/> Asia <input type="checkbox"/> Afrika <input type="checkbox"/> Australia <input type="checkbox"/> Vet ikke
7a. Hva slags skole går du på? <input type="checkbox"/> Ungdomsskole <input type="checkbox"/> Videregående skole	7b. Hvis du går på videregående skole. Hva slags linje/kurs går du på? <b>Studiespesialisering:</b> <input type="checkbox"/> VG1 <input type="checkbox"/> VG2 <input type="checkbox"/> VG3 <b>Yrkesfag:</b> <input type="checkbox"/> VG1 <input type="checkbox"/> VG2 <input type="checkbox"/> VG3 <b>Studieforberedende (Idrett):</b> <input type="checkbox"/> VG1 <input type="checkbox"/> VG2 <input type="checkbox"/> VG3 <b>Studieforberedende (andre):</b> <input type="checkbox"/> VG1 <input type="checkbox"/> VG2 <input type="checkbox"/> VG3
7c. Hva tror du at du vil gjøre etter videregående skole? (Skal besvares av alle). (Her kan du rangere fra 1 til 3. Bruk tallet 1 på det som er mest sannsynlig)	
<input type="checkbox"/> Folkehøgskole <input type="checkbox"/> Ta videre utdanning <input type="checkbox"/> Jobbe (gjelder også lærlinger) <input type="checkbox"/> Hvileår/reise/etc <input type="checkbox"/> Avtjene verneplikt <input type="checkbox"/> Starte utdanning i forsvaret <input type="checkbox"/> Vet ikke <input type="checkbox"/> Annet	



10366

**Seksjon 3:** I denne seksjonen får du spørsmål om en del av dine aktivitetsvaner. Først spør vi om aktiviteter du eventuelt gjør i idrettslag. Så stiller vi de samme spørsmålene om aktiviteter du eventuelt gjør utenom idrettslaget.

**Aktivitet i idrettslag**

48. Omtrent hvor mange timer pr uke trener eller konkurrerer du i regi av et idrettslag slik at du blir andpusten eller svett?

- 0 timer \*  
 1-2 timer pr uke  
 3-4 timer pr uke  
 5-7 timer pr uke  
 8-10 timer pr uke  
 11 timer eller mer pr uke

\*Dersom du svarer 0 timer på spørsmål 48 kan du hoppe til spørsmål 55.

49. Hvis du konkurrerer eller trener i regi av et idrettslag, hva vil du si er din hovedaktivitet? (oppgi bare den aktiviteten du gjør mest)

Hovedaktivitet:  
**HUSK BLOKKBOKSTAVER!**

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

50. Hvordan vurderer du dine egne ferdigheter i det du har oppgitt som hovedaktivitet? (se spm. 49)

- Jeg har gode ferdigheter  
 Jeg er sånn midt på treet  
 Jeg har ikke spesielt gode ferdigheter

51. Tenker du noen gang på å slutte med denne hovedaktiviteten?

- Tenker aldri på at jeg skal slutte  
 Tenker noen ganger at jeg kanskje skal slutte  
 Tenker ganske ofte at jeg kanskje skal slutte

52. Kommer du alltid til å drive med denne hovedaktiviteten slik du gjør nå?

- Akkurat nå tenker jeg at jeg alltid kommer til å trene/konkurrere slik jeg gjør nå  
 Kommer sikkert til å slutte en gang langt fram i tiden  
 Kommer trolig til å slutte i løpet av de nærmeste årene  
 Kommer trolig til å slutte i løpet av det neste året  
 Kommer trolig til å slutte i løpet av de nærmeste månedene

53. Hvorfor driver du egentlig med den hovedaktiviteten du har oppgitt? Kryss av for om du er enig med utsagnene som er listet under (Ett kryss for hvert utsagn)

	Fullstendig uenig				Fullstendig enig		
	1	2	3	4	5	6	7
a) Fordi jeg synes denne aktiviteten er interessant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Fordi jeg gjør det for min egen skyld.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Fordi det er forventet at jeg skal gjøre det....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Det er kanskje mange gode grunner til å gjøre denne aktiviteten, men personlig ser jeg ingen....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



10366

Fortsettelse fra spm nr. 53	Fullstendig uenig				Fullstendig enig		
	1	2	3	4	5	6	7
e) Fordi jeg synes denne aktiviteten er trivelig...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Fordi jeg tror denne aktiviteten er bra for meg.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Fordi det er noe jeg må gjøre.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Jeg gjør denne aktiviteten, men jeg er ikke sikker på om det er verdt det.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Fordi denne aktiviteten er artig/morsom.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Fordi jeg har valgt det selv.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) Fordi jeg ikke har noe valg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l) Jeg vet ikke. Jeg ser ikke helt hva denne aktiviteten gir meg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m) Fordi det føles godt å gjøre denne aktiviteten..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n) Fordi jeg mener denne aktiviteten er viktig for meg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o) Fordi jeg føler at jeg må gjøre det.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p) Jeg driver med denne aktiviteten nå, men jeg er ikke sikker på om det er riktig å fortsette.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**54. Hvordan er det med mobbing innenfor den hovedaktiviteten du driver?**  
Vi kaller det mobbing eller plaging når en eller flere utøvere eller trenere er uvennelige og ubehagelige med en utøver, som ikke så lett kan forsvare seg. Dette kan være ved at utøveren blir sparket, slått eller dyttet. Det er også mobbing når utøvere blir mye ertet eller når utøvere blir utestengt fra de andre.

	Aldri	Av og til uenig	Omtrent hver uke	Omtrent hver dag
<b>Hvor ofte har du siden sommerferien</b>				
a) Mobbet/plaget andre utøvere på trening eller i konkurranse?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Mobbet/plaget andre utøvere på trening eller i konkurranse ved å erte dem?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Mobbet/plaget andre utøvere på trening eller i konkurranse ved å isolere/stenge dem ute?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Mobbet/plaget andre utøvere på trening eller i konkurranse ved å slå, sparke eller dytte dem?....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Hvor ofte har du siden sommerferien blitt</b>				
e) Mobbet/plaget på trening eller i konkurranse?...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Mobbet/plaget på trening eller i konkurranse ved at du har blitt ertet?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Mobbet/plaget på trening eller i konkurranse ved at du ikke lenger får være med de andre, blitt isolert/utestengt fra de andre?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Mobbet/plaget på trening eller i konkurranse ved at du er blitt slått, sparket eller dyttet?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>







10386

Fortsettelse fra spm nr. 57	Fullstendig u enig				Fullstendig enig		
	1	2	3	4	5	6	7
n) Fordi jeg mener denne aktiviteten er viktig for meg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o) Fordi jeg føler at jeg må gjøre det.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p) Jeg driver med denne aktiviteten nå, men jeg er ikke sikker på om det er riktig å fortsette.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

58. Hvis du både er fysisk aktiv i et idrettslag, og utenom idrettslaget, hva opplever du som mest meningsfullt for deg?

Aktiviteten i idrettslaget oppleves for meg som mest meningsfull

Aktiviteten utenom idrettslaget oppleves for meg som mest meningsfull

Vet ikke

59. Hvis du verken er aktiv i idrettslag eller utenom idrettslag ("0 timer" på både spørsmål 48 og 55). Har du drevet noen form for trening/fysisk aktivitet på fritiden tidligere? (Her kan du sette to kryss)

Ja, i idrettslag

Ja, utenom idrettslag

Nei

60. Omtrent hvor mange timer bruker du foran TV eller PC-skjerm utenom skolen i løpet av en normal uke? (Skriv inn riktig antall timer for hver dag. Dersom du ikke bruker tid foran TV eller PC skriver du 00, bruker du tre timer skriver du 03.

<input type="text"/>	time(r) på mandag
<input type="text"/>	time(r) på tirsdag
<input type="text"/>	time(r) på onsdag
<input type="text"/>	time(r) på torsdag
<input type="text"/>	time(r) på fredag
<input type="text"/>	time(r) på lørdag
<input type="text"/>	time(r) på søndag

61. Hva slags forhold har du til sigaretter, snus og alkohol?

**a) Mine røykevaner**  
(Ett kryss som stemmer best med dine vaner)

Har aldri røykt

Har forsøkt en eller noen få ganger

Røyker noen ganger (mindre enn 10 i mnd)

Røyker nesten hver dag eller oftere

**b) Mine snusvaner**  
(Ett kryss som stemmer best med dine vaner)

Har aldri forsøkt snus

Har forsøkt snus en eller noen få ganger

Snuser noen ganger (mindre enn 10 doser pr mnd)

Snuser nesten hver dag eller oftere

## Appendix B. Authorization to complete the project from the Norwegian Social Science Data Services (NSD)

Norsk samfunnsvitenskapelig datatjeneste AS  
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårfagres gate 29  
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Bjørn Tore Johansen  
Fakultet for helse- og idrettsfag  
Høgskolen i Agder  
Serviceboks 604  
4809 ARENDAL

Vår dato: 30.10.2006

Vår ref: 15315/SM

Deres dato:

Deres ref:

### TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 01.09.2006. Meldingen gjelder prosjektet:

15315	<i>Moderne ungdom på fritiden (delstudie 1)</i>
Behandlingsansvarlig	<i>Høgskolen i Agder, ved institusjonens overste leder</i>
Daglig ansvarlig	<i>Bjørn Tore Johansen</i>

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

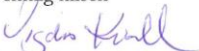
Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/endrings skjema>. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsd.uib.no/personvern/database/>

Personvernombudet vil ved prosjektets avslutning, 31.12.2012 rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

  
Vigdis Namtvedt Kvalheim

  
Siv Midthassel

Kontaktperson: Siv Midthassel tlf: 55 58 83 34

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