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Motivation, participation and performance in physical education:

A self-determination approach.

Amund Langøy
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A self-determination approach.

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Breistein

Amund Langøy
Abstract

Introduction: Within the academic field there has been given increasing attention to motivation in physical education (PE). In the current study a Self-Determination Theory (SDT) model was tested in which (1) perceived autonomy support from teachers were hypothesized to be positively associated with students’ needs satisfaction, (2) which was expected to be positively associated with autonomous motivation and (3) negatively associated with amotivation. Further, (4) autonomous motivation was hypothesized to positively predict both a) participation and b) grades in Physical Education (PE), whereas (5) amotivation was expected to predict both these outcomes negatively.

Method: The analyses were based on a survey conducted in 2013 on two high schools in Hordaland County in Norway. The total sample was 204 students in junior high school. Bivariate correlation and linear regression analyses were performed in SPSS version 21.

Results: Both bivariate correlations and linear multiple regression models supported the hypotheses in the SDT model.

Discussion: The results are discussed in relation to SDT and previous research conducted in physical education. Results underlines the importance of teachers interpersonal style as this influences students motivation, mediated through satisfaction of the need for competence, autonomy and relatedness. Motivation is of interest as it correlates to participation and grade in PE. As motivation has been proven to be associated with student leisure time physical activity and their lifelong enjoyment for being physical active it is of importance to study. Specially attention should be paid to those students who is amotivated in PE as this seems to be associated with absence from PE and as mentioned their LTPA.

Keywords: Physical education, motivation, self-determination, autonomy support, need satisfaction, participation in physical education, grade in physical education
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Introduction

Study aim
This study utilized a Self-determination motivation framework (Deci & Ryan, 2000; Deci & Ryan, 1985) to investigate students’ motivation in physical education (PE) classes in senior high school. The attention was given to the association between students’ perceived autonomy support from teacher, their need satisfaction, motivation, participation and grades in PE.

Background
A significant proportion of Norwegian adolescents do not meet the recommendations regarding daily physical activity, and their average weight is increasing (Anderssen et al., 2008). Time spent on leisure time physical activities among adolescents decreases with increasing age (Standage et al., 2005) and simultaneously time spend on sedentary screen activities increases (Hein et al., 2012). Participation in youth sports has shown to positively predict adult physical activity (Telama et al., 2006), and studies has demonstrated that participation in PE has the same potential (Trudeau & Shephard, 2005).

One purpose of the PE subject in Norway is to inspire physical activity in all aspects of life and inspire lifelong enjoyment of being physical active (Ministry of Education and Research, 2012, p. 2). PE is also supposed to help pupils acquire knowledge about exercise and training, lifestyle and health, and motivate them to have an active life and continue physical training into adulthood (Ibid, p. 2). Research indicates that motivation for PE is of significance for leisure time physical activity (LTPA) (Bagøien et al., 2010; Ommundsen & Kvalø, 2007; Ntoumanis, 2001). Students’ motivation toward PE for high school students is particularly interesting as previous research has shown that their motivation toward PE declines with age (Ntoumanis et al., 2009; Kimm et al., 2005).

There is an ongoing discussion among students, teachers and politicians regarding PE as a subject in the Norwegian school system. It concerns the content, distinctiveness and especially the assessment criteria (Lyngstad et al., 2011). The report Kroppsøving i skolen (PE in school) (Ibid) outlines, among other, the importance of giving students opportunity to choose among the huge variance of movement cultures available nowadays (Säfvenbom, 2010). At the same time it is of importance to raise the students in a historical movement culture present in the Norwegian PE subject (Lyngstad et al., 2011). National representative data from junior high schools in Norway (8. Grade), indicates that 74,9% of the boys and 55,1
% of the girls strongly agree/ agree to the question: “I would like more PE classes at school” (Haug et al., 2008). Studies from Swedish secondary schools have indicated that about 2/3 of the students wants more scheduled time in PE and on the other hand 4-5% wants less scheduled time in PE (Redelius, 2004). Academic publications on Norwegian PE in general is limited (Jonskås, 2010), and there is a lack of research on Norwegian high school students’ motivation for PE and LTPA. This study aims to start filling this gap by examining the motivation for PE among senior high school students.
Theory

Self-determination theory (SDT)

Behavioristic, cognitive and other reductionist theories all try to explain human behavior based on external factors. However, these theories do not take into account that much of human action can be spontaneous and emerge from within the organism (Ryan & Deci, 2007).

The self-determination theory views humans as organisms who will engage in interesting activities, practice skills and seek relatedness in social groups (Deci & Ryan, 2000). Central to SDT is the premise that humans actively pursue the satisfaction of three basic psychological needs, named autonomy, competence and relatedness (Hagger & Chatzisarantis, 2007).

When they developed intrinsic motivation as a cornerstone in their theory, Deci and Ryan used the work of Harlow (1950), the primatologist, who they believed created the term. They also based their work on White (1959) who linked the ideas of Harlow to his concept of, *effectance motivation*, the inborn tendency to grow competencies (Ryan & Deci, 2007). Intrinsic motivation refers to doing an activity «for its own sake» (Deci & Ryan, 2000).

Which is in opposition to the thoughts of Skinner about human behavior being under the control of reinforcers in the environment (Williams et al., 1996), or the thoughts of Hull about human motivation controlled by reinforcements linked directly or derivatively to primary drives (Ryan & Deci, 2007).

SDT is a multidimensional approach that looks into the complexity of intrinsic motivation. Another theory, the self-efficacy theory, explores one factor, perceived competence, which must be present to achieve intrinsic motivation. Csikszentmihalyi suggest that *flow*, a subjective experience associated with intrinsic motivation, will occur when there is equilibrium between skills and task difficulty (Ibid). Such an optimal challenge is important for the development of intrinsic motivation, but will according to the SDT not alone be sufficient to experience persistence and development of intrinsic motivation (Vlachopoulos & Michailidou, 2006). From a SDT perspective, this optimal challenge must occur in a context were the individual also perceive support for relatedness and autonomy.

By looking into how perception of the need for competence, autonomy and relatedness influence motivation, SDT includes the social environment in which the individual act. From an SDT perspective, elements in the environment will both be able to facilitate or to weaken an intrinsic motivation trough the level of satisfaction of the three psychological needs. This
underscores the organic view of SDT, expressing that the environment, such as teacher behavior, by itself cannot cause intrinsic motivation, there is also individual factors that make up the current (Ryan & Deci, 2007). In the SDT framework motivation is divided into three main categories; intrinsic motivation, extrinsic motivation and amotivation (Ntoumanis, 2001). SDT views intrinsic motivation as:

This inherent propensity to actively develop skills, engage challenges, and take interest in new activities even in the absence of external prompts or rewards is what in self-determination theory is termed intrinsic motivation (Ryan & Deci, 2007).

Deci and Ryan (1985) described four types of extrinsic motivation: external regulation, introjected regulation, identified regulation and integrated regulation:

- External regulation is behaviors regulated through external means, such as punishment or rewards; “I take part in PE because I’ll get into trouble if I don’t”
- Introjected regulation is behaviors which are starting to be internalized, but not fully self-determined. This kind of behaviors may be performed, in order to gain social recognition or to avoid intrinsic pressures and feelings of guilt; “I take part in PE because I would feel bad about myself if I didn’t”.
- Identified regulation, behavior becomes more self-determined. The outcomes of the behavior are highly valued and the latter is performed with less pressure even if it is not particularly pleasant; “I take part in PE because I want to improve my sport skills”
- Integrated regulation represents the most self-determined form of the internalization process. It refers to behaviors which are executed out of choice in order to harmonize and bring coherence to different parts of the self; “ I take part in PE because it is very important for me to have healthy life style”

(Ntoumanis, 2001).

In addition to intrinsic motivation and the four forms of extrinsic motivation, SDT also include amotivation. Amotivation is a category of motivation that occur in situations where students is literally without motivation for an activity. It can be in situations where students feel incompetent and do not feel that they can influence the outcome of the situation (e.g., the assessment in PE). Further they can feel that their actions have no value, either instrumental or intrinsic. Such students are potential drop out candidates because they seem to have no motivation for PE at all (Ryan & Deci, 2007; Ntoumanis, 2001).
The different motivation categories can be organized along a self-determination continuum. From higher to lower degree of self-determination, intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation and amotivation (Ntoumanis, 2001). According to SDT, students’ self-determined motivation is positively related to satisfaction of the three psychological needs.

This perceived satisfaction will be influenced by a number of social factors such as feelings of success or failure, as well as their teachers’ interpersonal style (see Figure 1) (Ntoumanis, 2001; Vallerand, 1997).

**Model of SDT**

Vallerand (1997) proposed a hierarchical model of motivation based on the self-determination theory framework. It was further developed by Vallerand and Losier (1999) and can be illustrated by the following model:

<table>
<thead>
<tr>
<th>Social factors =&gt;</th>
<th>Psychological factors =&gt;</th>
<th>Motivation =&gt;</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success/failure</td>
<td>Perceived:</td>
<td>Intrinsic motivation</td>
<td>Affect</td>
</tr>
<tr>
<td>Competition/Cooperation</td>
<td>- Competence</td>
<td>Integrated regulation</td>
<td>Persistence</td>
</tr>
<tr>
<td>Coaches’ behavior</td>
<td>- Autonomy</td>
<td>Identified regulation</td>
<td>Passion</td>
</tr>
<tr>
<td></td>
<td>- Relatedness</td>
<td>Introjected regulation</td>
<td>etc</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>External regulation</th>
<th>Amotivation</th>
</tr>
</thead>
</table>

Figure 1: The motivational sequence involving social factors, psychological mediators, motivation and consequences (Vallerand & Losier, 1999).
**Need satisfaction**

White (1959) suggested that it is not biological needs, which are attached to motivation, but psychological needs and especially the need for perceived competence. DeCharms (1968), on the other hand, later added the need for being a mediator or an initiator as a fundamental psychological need to achieve intrinsic motivation (Ryan & Deci, 2007). SDT includes these needs and expresses, especially in one of its sub theories *cognitive evaluation theory* (CET), that the perception of competence and autonomy both are necessary factors to maintain and enhance intrinsic motivation (Ibid). In the same way as an environment which support perception of competence and autonomy will foster intrinsic motivation, an environment which prevents the perception of these two needs will forestall the development of an intrinsic motivation. The last factor Deci and Ryan state must be present to develop an intrinsic motivation is social relatedness (Deci & Ryan, 2000). Perceived relatedness is not as proximal as the perception of competence and autonomy, nonetheless to feel rejected and unloved tends to undermine intrinsic motivation (Ibid).

Deci and Ryan state that the context is crucial in order to decide which of the three psychological needs in the SDT framework being most important (Deci & Ryan, 1985). However, the three needs in SDT have no hierarchical structure, they must all be met to allow an individual to experience well-being, psychological growth and integrity (Hagger et al., 2006; Ryan & Deci, 2000).
Previous research

To use a metaphor, the development of SDT is similar to the construction of a puzzle. Over the years, new pieces have been added to the theory once they first was determined. At present dozens of scholars throughout the world continue to add their pieces to the “SDT puzzle”, and hundreds of practitioners working with all age groups, and in various domains and cultures, have used SDT to inform their practice (Vansteenkiste et al., 2010, p. 151).

In the following relevant pieces from the “SDT puzzle” will be presented to give a research foundation for this project.

Research on teachers interpersonal style in PE
Research in the educational setting (Lonsdale et al., 2008) suggest an interpersonal teaching style to consist of autonomy support, structure and interpersonal involvement (Tessier et al., 2010). Teacher autonomy support is shown through listening to the students’ perceived barriers and challenges according to physical activity and to manifest their emotions and perspectives. It is also important to discuss students’ perceptions of goals and outcomes regarding physical activity (Bagøien et al., 2010). Structure and involvement is introduced above as important components in a teachers’ interpersonal style. Standage et.al (2007) views the terms as degree of feedback, clear expectations and understandable behavior-outcome contingencies (structure) and degree to which significant others such as a physical education teacher devote energy and interest to the relationship (involvement).

This gives recommendations for PE teachers on how to meet their students in PE classes. From an STD perspective, these recommendations will help the teachers to practice an interpersonal style which will encourage student intrinsic motivation in PE classes.

Several studies have investigated the relationship between the teachers’ interpersonal style and the perception of basic need satisfaction and motivation in the PE setting.

Hagger et al. (2003) found that perceived autonomy support in PE positively predicted students intrinsic and identified motivation.

Moreover Taylor and Ntoumanis (2007) investigated the association between teachers’ motivational strategies and how they affected the students’ motivation in PE. In this study
students reported that perception of autonomy-support, structure and interpersonal involvement caused an autonomous motivation in PE. This prevailed through satisfaction of the need for autonomy and perceived competence. In the same study a discrepancy was revealed between teacher and student perceptions of autonomy support and structure. An increasing use of motivational strategies from the teacher’ perspective were not always perceived by the students. This seems crucial because teachers have reported (Taylor et al., 2009) that they chose motivation-strategies based on how they perceived the students motivation in PE. Hence, teachers may choose the wrong motivational-strategies in PE (Ntoumanis & Standage, 2009; Tessier et al., 2008).

Standage et al. (2007, 2006) indicated that perception of autonomy support leads to a self-determined form for motivation trough covering the needs for autonomy, competence and relatedness. This makes sense as an autonomy-supportive environment gives the students an experience that their learning is caused by themselves.

Furthermore, researchers (Hagger et al., 2005; Hagger et al., 2003) have proved a positive association between an autonomy-supportive context and each of the three psychological needs in the SDT framework of Deci and Ryan (2000). Standage et al. (2007) argues that we need to develop specific valid and reliable instruments for PE to be able to understand more of how the students perceive the subject.

Research presented above indicates that teachers’ interpersonal style, and especially autonomy support, may be of importance for students’ motivation in PE often mediated through the needs of autonomy, competence for and relatedness. Thus, research suggests that teachers’ interpersonal styles are associated with the students’ motivation in PE. Ntoumanis & Standage (2009) found that by having an interpersonal style which communicates autonomy, structure and involvement the teacher are able to optimize student motivation in PE.
Research on students need satisfaction in PE

Several researchers have investigated the mediating effect of psychological need satisfaction for predicting motivational regulation and well-being in PE. Some of these studies have addressed the needs separately (Standage et al., 2006; Ntoumanis, 2001), and others as a composite variable labeled psychological need satisfaction (Hagger et al., 2006; Ntoumanis, 2005; Standage et al., 2005). Need satisfaction has also been showed to have indirect effects on reported behavioral outcomes, cognitive responses as well as psychological well-being in general (Standage et al., 2006, 2003; Standage, Duda, & Pensgaard, 2005).

Ntoumanis’ (2001) study outlined perceived competence as the most important variable to predict student motivation in PE. Research has also showed that as much as 68% of the variance in intrinsic motivation, by British PE students, can be explained by perceived competence in PE (Jaakkola et al., 2013).

Moreover students who perceive themselves as competent in PE will less likely develop external regulated motivation or amotivation. Conversely, students who experience a lack of competence in PE, more likely will develop external regulated forms of motivation or amotivation. They will, if they participate, only participate because it is mandatory (Ntoumanis, 2001).

Furthermore, studies have documented that perceived competence in PE is crucial for motivation in PE (Vallerand & Pelletier, 1992). Researchers (Taylor et al., 2010) have shown that PE students reporting high levels of competence need satisfaction, at the same time scored high on effort in PE, and on intention to be physically active and on self-reported LTPA. Whereas studies have shown that both autonomy support and perceived competence is positively associated with effort in PE. External regulation, on the other hand, is a negatively predictor of effort (Viira & Koka, 2012) in (Rosenkranz et al., 2012).

The Norwegian study of Ommundsen and Kvalø (2007) showed that motivation climate, teachers’ autonomy-support and perceived competence play an important role for the students’ motivation in PE. The survey, on junior high school students in Norway, outlined that a task-oriented climate and the teachers’ autonomy-support positively were associated with students’ intrinsic motivation and negatively associated with amotivation. Perceived competence without perceived autonomy partly had the same effect on students’ motivation. The lack of perceived competence in a performance-oriented climate was positively associated to amotivation (Ibid).
As mentioned above, competence need satisfaction have been proven to positively predict three physical activity outcomes, effort in PE, intention to be physically active and self-reported LTPA. In contrast students’ feelings of relatedness were not central in prediction of these three outcomes (Taylor et al., 2010).

Cox et al. (2008) studied middle-school students’ psychological need satisfaction, self-determined motivation, and LTPA. They followed the students over a period of 1 year. Through their study they found autonomy and relatedness satisfaction positively predicting LTPA behavior via students’ self-determined motivation and physical activity in PE.

Several studies on PE supports a mediation model in which perceived autonomy, competence and relatedness relate indirectly to outcomes such as intention to LTPA, effort and boredom through self determined motivation (Standage et al., 2003; Ntoumanis, 2001). However few studies have investigated the direct relationship between needs and consequences (Cox et al., 2008). This direct relationship would support the basic need sub-theory of SDT (Ryan & Deci, 2007) and would contradict the order in Vallerands’s model (Vallerand, 1997), which outlines only indirect paths from need satisfactions to various consequences through motivation (Cox et al., 2008).

**Research on students motivation in PE**

As mentioned above Deci and Ryans’ (2000, 1985) SDT proposes that intrinsic motivation and autonomous types of motivation led to positive functioning, improved learning and enhanced well-being (Standage et al., 2007). Empirical work has supported this proposition by showing that self-determined form of motivation positively corresponds to a number of desirable responses in physical education. These correlates includes higher levels of reported positive affect (Standage et al., 2005; Ntoumanis, 2005), greater concentration, higher effort (Ntoumanis, 2001), increased interest (Goudas et al., 1994) and a preference for attempting challenging tasks (Standage et al., 2005).

Moreover Hagger and Chatzisarantis (2007) demonstrated that motivational regulations in the PE domain are also related to self-reported physical activity in leisure-time context. Students’ motivational regulations have previously been associated with leisure-time intentions and physical activity, as well as effort in PE (Hagger et al., 2005; Standage et al., 2003; Ntoumanis, 2001).
Furthermore research has shown autonomy motivation in PE positively predicting teachers’ ratings of students’ effort and persistence (Standage et al., 2006).

Empirical work has shown amotivation for PE to positively correspond with unhappiness and boredom (Standage et al., 2005; Ntoumanis, 2001) and to negatively correspond to students’ intention to participate in LTPA (Standage et al., 2003; Standage et al., 2007). Ntoumanis (2001) points out how important it is to pay special attention to the students who feel pressured to participate in PE. These students often perceive themselves as incompetent in PE and are top candidates to drop out and live a sedentary life. It has been suggested that interventions should be developed to increase their perceived competence and intrinsic motivation for PE (Ibid).

**Research on students PE participation**

One of the outcomes of students motivation in PE investigated is their participation in PE. From the motivation model of Vallerand & Losier (1999) (see Figure 1) some consequences of motivation is named: Affect, persistence, passion and etc. In the PE context a consequence of students’ motivation will be their participation in the PE classes. Research shows various reasons as to why students don’t participate in PE (Strandmyr, 2013; Samdal et al., 2012; Wabakken, 2010). The reasons are for example: distance to the sport facilities, when the PE classes are scheduled, perception of incompetence, the main focus on body and movement, lack of social relatedness, assessment and lack of autonomy (Strandmyr, 2013). A recent survey (Wabakken, 2010) showed that almost one-third of the students in high-school reported occasional absence from PE classes. This is of particular interest because it is a tendency that the students who occasionally participate in PE seldom participate in leisure time physical activities (Wabakken, 2010; Ntoumanis, 2001).

Furthermore there are some gender differences when it comes to absence from PE. Some research shows that there are more girls than boys that sometimes don’t take part in PE (Strandmyr, 2013; Munk & von Seelen, 2012; Wabakken, 2010) and some states a tendency of the opposite (Samdal et al., 2012). The HBSC (Health Behavior in School-aged Children) report in Norway (Ibid) also shows that participation in PE varies based on socioeconomic class.
Grade in PE

Based on the review from Jonskås (2010) the report *Kroppsøving i skolen* – (PE in school) (Lyngstad et al., 2011), states that the knowledge foundation about PE in Norway is inadequate. One of the fields where the inadequate knowledge is noted particularly is in the field of assessment. Research on assessment after the National Curriculum for Knowledge Promotion in Primary and Secondary Education and Training, 2006 indicates a gap in which assessment criteria the PE teachers sees as important. Criteria as participation, presence and effort is more or less emphasized. Moreover normative standards for achievement, such as muscular strength and running endurance, is differently accentuated as important in the PE teachers’ assessment. When it comes to feedback and evaluation on their students’ future learning progress, PE teachers in Norway experience to have limited time. Over 50% of the teachers don’t give their students feedback on where they stand compared to the learning goals in the curriculum. Hence there is a discussion around the main goal of the subject (Lyngstad et al., 2011).

Recent research (Moe, 2013; Lomsdal, 2012; Mørken, 2010) underlines the mentioned discrepancy and the challenge when it comes to how PE teachers assess their students. The challenge when it comes to assessment in PE is further outlined in a resent published book about assessment for learning (Engvik, 2010). The chapter regarding PE in this book only uses Swedish research data (Annerstedt & Hermundstad, 2010) to present our challenges regarding assessment in PE here in Norway, as Norwegian data are lacking.

PE research from the Norwegian context

Jonskås’ (2010) has reviewed the PE research conducted in Norway from January 1978 to December 2010, and it can be concluded that, beside some Phd- and master- theses there were only a few publications on motivation, physical activity and PE (Bagøien et al., 2010; Ommundsen & Kvalø, 2007; Ommundsen, 2006; Bagøien & Halvari, 2005; Ommundsen, 2001). After 2010 there has been some more publications (Waaler et al., 2012; Halvari et al., 2011). Jonskås views this as a challenge and comments that in Sweden the research in PE is more extensive. Furthermore internationally there is significantly more research focusing on the physical education setting (Jonskås, 2010).
The review presented above gives an indication that there is limited knowledge about several important aspects of the Norwegian PE subject, among these teachers autonomy support, students need satisfaction as well as their motivation, participation and grade in PE.

**Hypotheses**

The aim of the study was to examine autonomy support, need satisfaction, motivation, participation and grade in PE. Based on the SDT theory, and previous research, the following five hypotheses were addressed.

1: It is a positive relationship between teachers’ autonomy support and students’ needs satisfaction.

2: It is a positive relationship between students’ need satisfaction and autonomous motivation.

3: It is a negative relationship between students’ need satisfaction and amotivation.

4: It is a positive relationship between students’ autonomous motivation and a) participation in PE, and b) grades in PE.

5: It is a negative relationship between students’ amotivation and a) participation in PE, and b) grades in PE.
Method

Participants
The informants were recruited from two high schools in Hordaland County, in Norway. The entire sample consisted of 204 students (114 male, 87 female, 3 did not specify gender) all attending the first year on high school. Altogether nine different education programs were represented in the study, divided into: Education programme for utilization of natural resources (22.5%), Education programme for technical skills and industrial production (15%), Education programme for building and construction technology (14%), Education programme for sports subjects (13%), Education programme for service and travel (12%) and four other programmes (together 23.5%).

Procedures
The participating schools were chosen from the University of Bergen network partner schools. There was one urban city school with the majority of students assumed to be from high social economic background, and one suburban school with students assumed to be of lower social economic background. These schools represent the ordinary schools in the county.

The criteria for choosing the days when we conducted the survey, were that we could meet as many students as possible at the same day, and that as many education programs as possible should be represented in the survey.

For the study a questionnaire was conducted containing 43 items all together (Appendix), of which 34 items have been included in this thesis. Some of the participants (n=49) used an audience response system (Kay & LeSage, 2009) to answer the questions. The rest of the students filled out the questionnaire by paper.

The survey was administered by the members of the research group. Two of the researchers distributed the questionnaire and were available to help any participant who had questions pertaining to the wording or the meaning of the items. It took approximately 15 minutes to complete the form.

The participants responded anonymously. No names were put on the forms and no codes were used to identify individual students. The teachers did not have access to the completed
questionnaires. Questionnaire responses were punched into an excel worksheet and transformed to an SPSS version 21 data file. The guidelines for the coding of scales are found in appendix.

**Ethical considerations**

The project has been approved by The Norwegian Social Science Data Services (Appendix). Our application form makes it certain that the completed forms and the statistics information about each teacher and school will be treated confidentially.

Prior to the survey permission was given from the PE teachers and the school leader to conduct the survey during PE classes. Before handing out the forms, a short introduction letter was handed out for all the participants to sign (Appendix). Participants were asked to answer honestly and were assured that their responses were confidential. The students were offered the option either not to take part in the survey, or to withdraw from the survey at any time. Some students chose not to take part, but no one withdraw during the session.

**Instruments**

The questionnaire that was applied in the present study was based on items selected from standardised scales that were translated into Norwegian. In addition, questions tapping participation and grade in PE were formulated specifically for this survey (all presented below). The questionnaire was piloted on 10 sport subject students on NLA University College. This was to make sure the wording and the questions were understandable and to investigate how long time the students used to complete the questionnaire. Furthermore the survey was presented to a group of high school PE teachers. They were asked to comment on the wording or the meaning of questions. Only a few small changes were made after these pilot sessions.

**Autonomy support**

A Norwegian version of the Health Care Climate Questionnaire (HCCQ) (Williams et al., 1996) was used. The short 6-item version of the scale was applied. A sample item was: “I feel that the PE teacher provides us with choices and options”. Participants responded to the items using a Likert-type scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). The Cronbach’s alpha for autonomy support for the present study was .91 which is acceptable and consistent with other studies (Edmunds et al., 2006).
Need satisfaction

A Norwegian version of the Basic Psychological Needs in Exercise Scale (BPINES) (Vlachopoulos & Michailidou, 2006) was used. The BPINES was adapted to a Physical education context. This 12 items scale consisted of three subscales tapping: autonomy, competence and relatedness, with 4 items for each need. Sample items were: Autonomy: “The PE classes are in agreement with my choices and interests”, Competence: “I feel that I do very well in PE class” and Relatedness: “My relationship with the other students in PE classes are very friendly”. The questionnaire used a Likert scale ranging from 1 (Not at all true) to 7 (Very true). Three new variables were computed based on the average for each subscale. The Cronbach’s alpha for the subscales were as follows: need satisfaction for autonomy .88, need satisfaction for competence .81 and need satisfaction for relatedness .87. In the statistical analyses one composite variable named Need satisfaction was used. The Cronbach’s alpha for this composite variable was .88. This is acceptable and consistent with other studies (Vlachopoulos et al., 2010).

Autonomy motivation in PE

The autonomy motivation in PE was based on the Self Regulation Questionnaire (SRQ) (Ryan & Connell, 1989). We did not get acceptable Cronbach’s alpha values for all the four motivation categories (external, introjected, identified, and intrinsic) in the SDT framework (Deci & Ryan, 1985). This could be due to some items that was lacking in our questionnaire. Therefore we only incorporate one composite variable named Autonomy motivation. This variable consisted of four items from the Self Regulation Questionnaire (SRQ) (Ryan & Connell, 1989) measuring Identified regulation and Intrinsic regulation. Sample items were: Identified regulation: “I take part in PE class because PE is important for me” and Intrinsic regulation “I take part in PE class because PE is fun” The questionnaire used a Likert scale ranging from 1 (Strongly agree) to 4 (Strongly disagree). A new variable was computed for the average score of Identified regulation and intrinsic regulation named Autonomy motivation in PE. The Cronbach’s alpha for Autonomy motivation for the present study was .81 which is acceptable.

Amotivation in PE

Four items from the Norwegian version of The Behavioral Regulation in Sport Questionnaire (BRSQ) (Lonsdale et al., 2008) were used. A sample item was: “I take part in PE but I don’t really know why”. The questionnaire used a Likert scale ranging from 1 (Strongly agree) to 4
(Strongly disagree). A new variable was computed for the average score of Amotivation. The Cronbach’s alpha for Amotivation for the present study was .83 which is acceptable and consistent with other studies (Moreno-Murcia et al., 2013).

**Participation in PE**

One out of three items tapping participation in PE was used. Participants were asked “How often do you participate in PE?” The item used a Likert-type scale ranging from 1 (Every time) to 5 (less than once in every six months). It was reversed and computed into a new dichotomous variable divided into 1 (participate less than every time in PE) and 2 (participate every time in PE). Skewness went from -5.09 to -2.58. The new dichotomous variable was used in the further analyses.

**Grade in PE**

The participants were asked what grade they were given in PE last semester. In Norway the grade scale range from 6 (the best) to 1 (not approved).
Data preparation and steps of analysis

The analytical software Statistical Package for the Social Sciences, IBM SPSS Statistics version 21, was used to perform the statistical analyses. Next follows a presentation of the steps taken to analyze the data.

1. Descriptive statistics / Frequencies analyses were made to check the variables for skewness, maximum and minimum score to find any wrong values. Some wrong values were found and corrected.
2. Items that were worded in a certain way to avoid response bias were reversed.
3. New variables were computed where appropriate and average scores for scales were calculated.
4. Variables and scales were reliability checked by Cronbach’s alpha (see table 1)
5. Bivariate correlation analyses were made on following variables, autonomy support, need satisfaction, autonomy motivation, amotivation, participation in physical education, grade in PE. Gender is included in the same table (see table 1).
6. Linear regression analyses were made on the same variables (see figure 2).
Results

Descriptive statistics and reliability
Table 1, presented below, shows the means, standard deviations, ranges, Pearson’s correlations and reliabilities for all variables. The Cronbach’s alpha coefficients (Cronbach, 1951) were above suggested limits of .70 indicating good reliability of the scales (Cortina, 1993). The means of autonomy support, need satisfaction and autonomy motivation was positively skewed towards the highest value. Amotivation had a mean skewed towards the lowest value. Pearson’s correlations for the investigated associations were all significant at the .01 level.

Hypothesis testing
I hypothesized that 1: It is a positive relationship between teachers’ autonomy support and students’ needs satisfaction. 2: It is a positive relationship between students’ need satisfaction and autonomous motivation. 3: It is a negative relationship between students’ need satisfaction and amotivation. 4: It is a positive relationship between students’ autonomous motivation and a) participation in PE, and b) grades in PE. 5: It is a negative relationship between students’ amotivation and a) participation in PE, and b) grades in PE. Hypotheses 1-5 is supported by the correlations presented in Table 1 as well as the regressions presented in Figure 1.

Correlation
Correlation analyses revealed weak to moderate relationships (Vincent, 2005) for all the variables included in the hypotheses (Table 1), and the directions of the correlations were as expected according to the theory. Interestingly the correlation of gender and participation in PE indicated that there were more boys than girls who now and then were absent from PE. The strongest correlations was observed between the constructs of Autonomy support and Need satisfaction (r = .52) and between Need satisfaction and Autonomy motivation in PE (r = .58, ). In contrast, the strongest negative correlation was found between the constructs of Amotivation in PE and Participation in PE (r = -.26). The weakest correlation was between Autonomy motivation and Participation in PE r = .20. These correlations were significant.

Linear regressions
Multiple regression analyses tested the hypothesized SDT process model in PE as illustrated in Figure 1. The regression of need satisfaction as a function of autonomy support had a
beta value of .52 (p < 0.001). Testing the next hypothesized sequence of the model, autonomy motivation as a function of need satisfaction gave a beta value of .53 (p < 0.001). Next, amotivation as a function of need satisfaction gave a value of β = .32, (p < 0.001). The last sequence included the testing of two independent outcome variables, participation in PE and grade in PE. The regression of participation in PE as a function of autonomy motivation gave a beta value of .20, p < 0.01 and for amotivation β = - .26 (p < 0.001), whereas grade in PE gave values as follows; autonomy motivation β = .19, (p < 0.01) and amotivation β -.21, (p < 0.01).
<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>Observed range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Autonomy support</td>
<td>4.50</td>
<td>1.34</td>
<td>1.5-7.0</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Need satisfaction</td>
<td>5.04</td>
<td>0.95</td>
<td>1.9-6.9</td>
<td>.52</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Autonomy motivation</td>
<td>3.23</td>
<td>0.67</td>
<td>1.0-4.0</td>
<td>.38</td>
<td>.58</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Amotivation</td>
<td>1.59</td>
<td>0.74</td>
<td>1.0-4.0</td>
<td>-.26</td>
<td>-.36</td>
<td>.48</td>
<td>.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Participation</td>
<td>1.89</td>
<td>0.31</td>
<td>1.0-2.0</td>
<td>.02</td>
<td>.31</td>
<td>.41</td>
<td>-.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Grade</td>
<td>4.13</td>
<td>0.93</td>
<td>1.0-6.0</td>
<td>.03</td>
<td>.38</td>
<td>.20</td>
<td>-.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Gender</td>
<td>1.43</td>
<td>0.49</td>
<td>1.0-2.0</td>
<td>.01</td>
<td>.02</td>
<td>.16</td>
<td>-.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Correlations in bold are significant at the .01 level, two tailed tests. N varies from 171-201
Figure 2: Linear Multiple Regressions Testing the SDT Model in PE, * p < .05; ** p < .01; *** p < .001
Discussion

The purpose of this study was to examine the relations between autonomy support, need satisfaction, motivation and participation in PE as well as grade in PE. I found teachers’ autonomy support positively predicting students’ need satisfaction (hypothesis 1). In turn students’ need satisfaction positively predicted students’ autonomous motivation (hypothesis 2) and in contrast students’ need satisfaction negatively predicted amotivation (hypothesis 3). Furthermore students’ autonomous motivation positively predicted both a) participation in PE and b) grade in PE (hypothesis 4). On the other hand students’ amotivation negatively predicted a) participation in PE and b) Grade in PE. These findings support the theoretical tenets of self-determination theory (Ryan & Deci, 2007, 2000). This consistent pattern of intercorrelations between the independent and dependent variables and the directions of correlations was expected. Both the bivariate correlations and the linear multiple regression models supported the hypotheses.

Autonomy support and need satisfaction

The findings suggest that students experiencing an autonomy supportive teacher may have a higher satisfaction of their basic needs in PE. These findings are in line with the findings of several studies (Tessier et al., 2010; Ntoumanis et al., 2009; Standage et al., 2007; Taylor & Ntoumanis, 2007; Standage et al., 2006) documenting a predictive relationship between an autonomy supportive environment in PE and its positive associations with students satisfaction of autonomy, competence and relatedness.

Reeve et al. (2002) lists several educational benefits for students with autonomy-supportive teachers, e.g. higher perceived competence and higher academic achievement. Autonomy supportive teachers were by Taylor and Ntoumanis (2007) shown to predict students autonomous motivation in PE mediated by satisfaction of autonomy and competence. This study on English secondary students found a strong predicative effect of autonomy support on students perceived need satisfaction. The strongest relationship was found with students need for competence. This research suggested the importance of PE teachers who shows both structure and involvement to support students’ perception of autonomy support (Ibid).

Teachers’ autonomy support may also be showed through listening to students’ perceived barriers and challenges regarding physical activity. A PE teacher may also recognize students’
emotions and perspectives, while at the same time welcoming a discussion regarding their perceptions of goals and outcomes in physical education (Bagøien et al., 2010).

Furthermore to facilitate autonomy, students may be provided with required information concerning a skill or approach, but then experience choice regarding the way they want to perform the task or the game plan decisions. Peer learning groups where students e.g. demonstrate skills to each others and/or act as co-instructors to one another may also support their perception of autonomy. To help students perceive competence in PE a learning environment promoting self-referenced standards and indicators of improvement may be helpful. This as opposed to a competitive environment which focuses on interpersonal competition, normative comparisons and entails punishment of mistakes (Standage et al., 2007; Ames, 1992). Relatedness, on the other hand, may be nurtured by using small-group activities and use incentives which rewards cooperation such as group level outcomes (Standage et al., 2007).

The research and findings presented above recommend PE teachers, who would like to satisfy their student psychological needs, to emphasis an interpersonal style based on autonomy, structure and involvement. To perceive their teacher as autonomy supportive, students would like to feel understood, listened to and encouraged to ask questions.

Teachers who uses specific autonomy-supportive motivational strategies, has been proven to perceive satisfaction of their own psychological needs (Ntoumanis & Standage, 2009). Factors who emphasize teachers own motivation and which motivation strategies they express has been proven to be assessment, evaluation of their own achievements, pressure to cope with their colleagues methods as well as perceived cultural norms and time limitation (Taylor et al., 2009). Another study (Taylor et al., 2008, p. 18) revealed that: perceived job pressure, teachers’ autonomous orientation, and teachers’ perception of student self-determined motivation predict teacher psychological need satisfaction and self-determined motivation.

Research also indicated that the more controlled teachers perceive to be, the more controlling they were in their behavior towards their students. Factors teachers perceived as controlling were colleagues (complaining on their teaching), school management (e.g. controlling curriculum) and students (not motivated for school) (Pelletier, Sèguin-Lèvesque and Leagult, 2002 in Russel & Chase, 2008).
How PE teachers in Norway perceive the curriculum and especially the content of the subject and assessments criteria is, as mentioned earlier, debated (Lyngstad et al., 2011). We may see teachers own need satisfaction being important both for their interpersonal teaching style and furthermore their students need satisfaction. This association should be of interest for school administration as well as responsible bureaucrats. When the curriculum states a lifelong healthy lifestyle as an aim of PE (Ministry of Education and Research, 2012) it may be necessary to pay attention to both students as well as PE teachers need satisfaction.

**Need satisfaction and autonomy motivation**

The findings further suggest that students who perceives satisfaction of their basic needs for competence, autonomy and relatedness in their PE classes, may develop autonomy motivation in these classes. As PE is a mandatory subject which include activities that are desirable but not always intrinsically interesting to all students, a teacher faces a challenge in motivating students toward uninteresting tasks. This process is by Deci and Ryan (2007) named internalization and defined as a progressive process by which external regulations are transformed into internal regulations as the person “takes inn” the value and integrates the activity into his or her repertoire of need-satisfying behaviors” (Standage et al., 2007). The goal of this internalization process is to get students autonomy motivated for PE. In this survey autonomy motivation is a composite variable of identified regulation and intrinsic regulation. Student with this kind of motivation will look upon PE as important for their health and will experience enjoyment in doing the activities and to master new skills, which suits well with the main purpose of the PE subject.

*Teaching in the subject shall contribute to helping the pupils experience joy, inspiration and a sense of mastery by being physically active and by interacting with others* (Ministry of Education and Research, 2012).

My results gave an indication that to some extend students need satisfaction can predict their motivation in PE. This is in line with tenets in the SDT framework (Ryan & Deci, 2007; Deci & Ryan, 2000) as well as previous findings of e.g. Standage et al. (2005). They found need satisfaction directly predicting autonomous motivation and indirectly predicting positive outcomes in PE, such as students’ preference for challenging tasks, concentration and positive affect. Students who perceive satisfaction of their three psychological needs are more likely to develop an intrinsic motivation towards PE and have also been proved to more likely participate in optional PE classes the subsequent school year (Ntoumanis, 2005).
Furthermore earlier studies have proven the three psychological needs to predict autonomous forms of motivation both independently (Standage et al., 2003) and when combined (Standage et al., 2006) (Ntoumanis, 2005). Even though researchers have investigated the needs separately the three needs have according to the SDT no hierarchical structure. If an individual should experience well-being, psychological growth and integrity, the individual must experience competence, autonomy and relatedness (Hagger et al., 2006). At the same time Deci and Ryan (2000) states that autonomy and competence have been found as the two most powerful influences when it comes to predicting intrinsic motivation.

This suggest that to get autonomous motivated students, that experience PE as a fun and exciting, PE teachers could for instance facilitate classes were students’ experience to have a say regarding what skills to be practiced and to ensure that they can manage these skills after some practice. This suits the Norwegian guidelines of adapted training (Ministry of Education and Research, 2006) and the crucial part will be if the PE teachers are able to fulfill these requirements.

Furthermore findings also suggests the importance of feeling valued, listened to and to be able to communicate well with fellow students in PE classes. To be able to fulfill these requirements it is of importance that a PE teacher is a well-planned organizer and facilitator, who also pay attention to the students’ needs.

**Need satisfaction and amotivation**

Students’ need satisfaction negatively predicted their amotivation in PE. Even though the relationship is week (Vincent, 2005), this result may indicate that a PE teacher, who wants to prevent her students becoming amotivated, should pay attention to students’ need for competence, relatedness and autonomy. As PE in Norwegian high-school is a mandatory subject it is important to be aware of how teachers can ensure that as few students as possible ends in a state where they don’t see any reason to participate in PE.

When focusing on settings where an activity may not be voluntary (e.g. mandatory PE), some researchers have treated amotivation as a suboptimal state which falls at the low end of the continuum of relative autonomy (Yli-Piipari et al., 2009).

This negative relationship between need satisfaction and amotivation is in line with earlier research in Norway (Ommundsen & Kvalø, 2007). Ommundsen and Kvalø (2007) found that
the lack of perceived competence had a positive effect on amotivation. To avoid this they suggested PE teachers to reinforce a mastery climate and to provide positive feedback to stimulate competence perceptions.

A learning environment who allows students to for example a) take part in decision-making regarding which activities the PE class should attend, may satisfy their needs for autonomy, b) participate in discussions and interaction regarding the content of activities, may satisfy their need for relatedness and c) themselves set learning goals where the main focus is evaluation of self-improvement, may satisfy their need to feel competent (Bagøien et al., 2010; Hagger & Chatzisarantis, 2007; Standage et al., 2007).

**Autonomy motivation, participation and grade in PE**

Autonomy motivation was found to positively predict both participation as well as grade in PE. Both relationships were week (Vincent, 2005)- To my knowledge, other studies documenting such a relationship with grade has not earlier been studied, which makes this an important finding. They may indicate that students who have an autonomous motivation for PE, and participate in PE because they like it, are less likely to drop out of the PE classes, than students who are more extrinsic motivated. A study of Vallerand et al. (1997), support this notion. He found that, 9th and 10th grade French-Canadian drop-out students, perceived themselves as being less competent and autonomous at school activities, than students who stayed in school. As presented earlier the need for competence and autonomy is of importance for the motivation developed.

It has been found that lack of social relatedness, assessment and lack of autonomy is some of the reasons why students don’t take part in PE in Norway (Strandmyr, 2013). Seen together with the association between satisfaction of basic needs and motivation, this may confirm this indirect relationship between need satisfaction and participation.

Another study (Vallerand & Losier, 1999) stated that consequences of motivation can be affect, persistence and passion. In the PE area these consequences could influence students’ effort, both related to students engagement in practical activities but also their effort in learning the theoretical parts of the subject, with the outcome of a less good grade.

Girls were shown to be more present in PE than boys. This is in line with the findings of Samdal et al. (2012) with a representative sample of Norwegian junior high school, students but contrast to the findings of other Norwegian studies with smaller samples (Munk & von
Seelen, 2012; Strandmyr, 2013; Wabakken, 2010). Reasons for this may be found in the sample of education programs and more research is needed to add more knowledge to this indicated gender difference.

**Amotivation, participation and grade in PE**

The regression analyses of participation in PE as a function of amotivation in PE showed a negative relationship. A negative relationship was also found between amotivation in PE and grade in PE. These findings implicate that students who develop a amotivation towards their PE class will a) more often be absent from physical education and b) less likely get good grades in the same classes. My results along with the findings of Vallerand et al. (1999, 1997) should implicate that PE teachers need to be aware of their students motivation regarding physical education classes if they want to secure adherence to the subject and are interested in the students performing their best.

When it comes to this relationship both the results of amotivation as well as the discussion regarding assessment and effort in PE may play a central role. The practical implication of these findings may suggest the PE teacher’s responsibility to pay special attention to amotivated students. It is of importance to provide a meaningful rationale for PE to amotivated students. Standage et al. (2007) suggests that PE teachers start an internalization process to get such students to adapt the value of PE and to integrate the activity into their repertoire of need-satisfying behaviors. It is also possible to use the student evaluation talks as an opportunity to get a better insight in amotivated students’ feelings and experiences, and more in-depth knowledge of their perceived competence, autonomy and relatedness. This knowledge could be used to adjust the tasks, goals and expectations of both the teacher and student, which would be in line with the objectives of adapted education (Ministry of Education and Research, 2006).

Ntoumanis (2001) underlines how important it is to pay attention to students who may develop amotivation for PE. It they end up with no good answers to the question: Why do you participate in PE? They are most likely top drop out candidates. Students who drop out of PE are more likely to live sedentary lives in their leisure time. Even though this article focuses entirely on the PE subject, and not on students’ leisure time, it is worth mentioning this indicated relationship between motivation in PE and leisure time physical activity. This is of importance especially as the curriculum in Norway has as lifelong perspective in its wording of the competence aims (Ministry of Education and Research, 2012).
Amotivated students are as Ntoumanis stated it in 2001 top candidates to drop out and live a sedentary life. Interventions should be developed to increase their perceived competence and intrinsic motivation for PE (Ntoumanis, 2001). Empirical work has shown amotivation for PE to positively correspond with unhappiness and boredom (Standage et al., 2005; Ntoumanis, 2001) and to negatively correspond to students’ intention to participate in LTPA (Standage et al., 2007; Standage et al., 2003).

It is interesting to note that the teachers’ perception of students’ motivation in PE only related moderately to students’ own reports of their motivation (Ntoumanis & Standage, 2009). This is of interest because teachers’ perception of their students’ motivation in PE has shown to be related to teachers’ use of autonomy supportive teaching strategies (Taylor et al., 2009).

Influence from the environment is essential for how the students interpret and act in an achievement situation. During the last two decades two terms have been broadly used to describe and to categorize the perceived motivational climate in PE. The first, Mastery climate, focuses on effort, learning and cooperation. The second, Performance climate, focuses on interpersonal competition, normative comparisons and entail the punishment of mistakes (Standage et al., 2007). Researchers have wanted to investigate how these social contexts influence students’ assessment of goal achievement, behavior and affective responses (Ibid). Results shows (Parish & Treasure, 2003; Biddle, 2001; Ntoumanis & Biddle, 1999) that a performance oriented climate may undermine both motivation and persistence for PE. Even if those students who experience success in a performance oriented climate, will be more intrinsically motivated, a climate with this basic tone will be detrimental to intrinsic motivation in general (Parish & Treasure, 2003). This contextual or perceived motivation climate is important.
Conclusion
The findings in this thesis support the theoretical tenets of self-determination theory and international research in the PE domain. This indicates that motivation in PE in Norwegian high school is congruent with international research on SDT in the PE area. These findings and the theory suggest that to increase students’ motivation in PE it is essential to adopt an autonomy supportive teaching style. Autonomy support will, mediated through the needs of competence, autonomy and relatedness, be able to nurture autonomy motivation in physical education. As a positive outcome of autonomy motivation students will feel more enjoyment in PE classes and more frequently participate.

Limitations
Because of the limited sample of 204 students, this study cannot generalize the findings on a nationally basis. However, the study uses standardized scales that all had a high Cronbach’s alpha which is a strength of this study. In addition as described above it is in line with earlier findings in the PE area. Furthermore the cross-sectional design of the study implicates that the relationships does not necessary say anything about causality. Nevertheless this indicates associations that should be further explored.
Further directions

As presented above the presented findings supported all five hypotheses. All the hypotheses were built on established thoughts in the SDT framework, and on earlier SDT based research on the physical education subject.

In addition to this quantitative research, it would be useful to perform complementary qualitative research, to get more in-depth understanding of more specific contextual factors influencing high-school students’ motivation in PE. This would allow for targeted interventions studies for this age group. Student interviews were carried out simultaneously to this research with the aim to capture students specific taught and experiences towards PE.

It would also be of importance to investigate the motivation in PE among students graduating high-school, to see if both psychological need satisfaction and motivation in PE changes during the years in high school. This should be carried out on the same students.

As presented, teachers state that their own need satisfaction influences their use of an autonomy supportive teaching style. Therefore it would be interesting to investigate how controlled Norwegian PE teachers perceive themselves from the curriculum, and how this perception may influence their interpersonal teaching style.

As teacher interpersonal style has been shown to be malleable (Tessier et al., 2010; Ntoumanis & Standage, 2009) it would be interesting to develop an intervention study with a goal to influence PE teachers interpersonal style toward a more need supporting style. It would be of importance to notice that there has been shown limited correspondence between teacher and student reports on autonomy support, structure and involvement (Taylor & Ntoumanis, 2007). Therefore it may be of importance to incorporate objective measures regarding teachers’ interpersonal style. Furthermore such an intervention study should utilize a control group as well as a time frame reaching for a longer follow up period of effects.

At last it is of importance to bring these and future findings into the education program of PE teachers. Educators who train PE teachers should pay attention to educate teachers who uses autonomy-supportive teaching styles and who nurture their students basic psychological needs.
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Appendix

1.0 Guidelines for coding values in scales

Following guidelines were used when coding the values in scales.

- From top to bottom: 1,2,3,4,5 ....
- From left to right: 1,2,3,4,5,.....
- Question not answered: missing (BLANK=SYSMIS)
- Guidelines when more than one tick (x in a box) appears
  - Two ticks next to each other:
    - on «dichotomous» variables: MISSING
    - on «nominal» variables: MISSING
    - on «ordinal» variables with implicative categories: Choose the most positive value
    - opposite categories: Choose the most extreme value
    - (in the middle of the scale: missing)
    - on «ratio» variables: Choose the lowest value
    - Two ticks which are not next to each other: MISSING
    - More than two ticks: MISSING
2.0 Norwegian questionnaire

Spørreskjema kroppssøving, Vg.1.

1. Er du gutt eller jente?
   
   Gutt ☐
   Jente ☐

2. Hvilket programfag går du på?
   
   Helse- og oppvekstfag ☐
   Medier og kommunikasjon ☐
   Naturbruk ☐
   Restaurant- og matfag ☐
   Service og samferdsel ☐
   Teknikk og industriell produksjon ☐
   Idrettsfag ☐
   Musikk, dans og drama ☐
   Studiespesialisering ☐
   Bygg- og anleggsteknikk ☐
   Design og håndverk ☐
   Elektrofag ☐
3. Hvor god økonomi har din familie?

- svært god
- god
- middels god
- ikke særlig god
- dårlig

4. Hvilken karakter fikk du i kroppsøving i første termin dette skoleåret?

- iv
- 1
- 2
- 3
- 4
- 5
- 6
Aktiviteter på fritiden

5. **Utenom skoletid:** Hvor mange GANGER i uka driver du idrett, eller mosjonerer du så mye at du blir andpusten og/eller svett?

- Hver dag [ ]
- 4-6 ganger i uka [ ]
- 2-3 ganger i uka [ ]
- En gang i uka [ ]
- En gang i måneden [ ]
- Mindre enn en gang i måneden [ ]
- Aldri [ ]

6. **Utenom skoletid:** Hvor mange TIMER i uka driver du idrett, eller mosjonerer du så mye at du blir andpusten og/eller svett?

- Ingen [ ]
- 1/2 time [ ]
- 1 time [ ]
- 2-3 timer [ ]
- 4-6 timer [ ]
- 7 timer eller mer [ ]
Deltakelse i kroppsøvingsfaget

7. Hvor ofte har du ikke møtt til kroppsøvingstimene uten godkjent grunn?

- Hver gang
- Annenhver gang
- En gang i måneden
- En gang i halvåret
- Sjeldnere
- Aldri

8. Hvor ofte er du til stede i kroppsøvingstimene uten å delta?

- Hver gang
- Annenhver gang
- En gang i måneden
- En gang i halvåret
- Sjeldnere

9. Hvor ofte deltar du i kroppsøvingstimene?

- Hver gang
- Annenhver gang
- En gang i måneden
- En gang i halvåret
- Sjeldnere
Se nøye på hver av påstandene, og tenk på hvordan dette passer for deg i kroppsøvingstimen. Indiker på skalaen hvor enig eller uenig du er i påstandene.

10. Jeg føler at læreren gir meg muligheter og valg
   1. Sterkt uenig
   2. 
   3. 
   4. 
   5. 
   6. 
   7. Sterkt enig

11. Jeg føler at læreren forstår meg
   1. Sterkt uenig
   2. 
   3. 
   4. 
   5. 
   6. 
   7. Sterkt enig

12. Læreren gjør meg trygg på at jeg klarer å gjøre det bra i timene
   1. Sterkt uenig
   2. 
   3. 
   4. 
   5. 
   6. 
   7. Sterkt enig

13. Læreren oppmuntrer meg til å stille spørsmål
   1. Sterkt uenig
   2. 
   3. 
   4. 
   5. 
   6. 
   7. Sterkt enig
14. **Læreren hører på hvordan jeg vil gjøre ting**

1. Sterkt uenig
2.  
3.  
4.  
5.  
6.  
7. Sterkt enig

15. **Læreren prøver å forstå hvordan jeg ser ting, før han eller hun foreslår en ny måte**

1. Sterkt uenig
2.  
3.  
4.  
5.  
6.  
7. Sterkt enig

16. **Kroppsøvingstimene passer i stor grad sammen med mine valg og interesser.**

1. Ikke sant i det hele tatt
2.  
3.  
4. Noe sant
5.  
6.  
7. Veldig sant

17. **Jeg føler sterkt at kroppsøvingstimene passer mitt ønske om fysisk aktivitet**

1. Ikke sant i det hele tatt
2.  
3.  
4. Noe sant
5.  
6.  
7. Veldig sant

18. **Måten kroppsøvingstimene er lagt opp på er helt klart et uttrykk for hvordan jeg ønsker timene skal være.**

1. Ikke sant i det hele tatt
2.  
3.  
4. Noe sant
5.  
6.  
7. Veldig sant
19. Jeg føler sterkt at jeg har mulighet til å gjøre valg i forhold til hva jeg vil gjøre i kroppsøving

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant

20. Jeg føler jeg har stor fremgang i forhold til målet mitt med kroppsøvingstimene

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant

21. Jeg føler jeg utfører øvelsene i timene veldig effektivt

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant

22. Jeg føler at kroppsøving er noe jeg får til bra

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant
23. Jeg føler jeg klarer de oppgavene lærer legger opp til i kroppsøvingstimen

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant

24. Jeg føler meg vel sammen med de andre elevene

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant

25. Jeg føler jeg kan omgås de andre elevene på en vennlig måte

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant

26. Jeg føler jeg har god og åpen kommunikasjon med de andre elevene

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant
27. Jeg føler meg veldig fortrolig med de andre elevene

1. Ikke sant i det hele tatt
2.
3.
4. Noe sant
5.
6.
7. Veldig sant
**Hvor sanne eller usanne er følgende påstander for deg?**

28. Jeg føler meg trygg på mine ferdigheter til å utøve fysisk aktivitet i fritiden

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ikke sant i det hele tatt</td>
<td></td>
<td></td>
<td>Noe sant</td>
<td></td>
<td></td>
<td>Veldig sant</td>
</tr>
</tbody>
</table>

29. Jeg klarer å mestre mine fysiske aktiviteter i fritiden

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ikke sant i det hele tatt</td>
<td></td>
<td></td>
<td>Noe sant</td>
<td></td>
<td></td>
<td>Veldig sant</td>
</tr>
</tbody>
</table>

30. Jeg klarer å nå målene jeg setter meg for fysisk aktivitet i fritiden

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ikke sant i det hele tatt</td>
<td></td>
<td></td>
<td>Noe sant</td>
<td></td>
<td></td>
<td>Veldig sant</td>
</tr>
</tbody>
</table>

31. Jeg føler meg i stand til å kunne møte utfordringene fysisk aktivitet gir meg i fritiden

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ikke sant i det hele tatt</td>
<td></td>
<td></td>
<td>Noe sant</td>
<td></td>
<td></td>
<td>Veldig sant</td>
</tr>
</tbody>
</table>
Hvorfor er du med i kroppsøvingstlimene?

32. Jeg er med fordi læreren skal tro jeg er en flink elev.

☐ meget enig ☐ litt enig ☐ litt uenig ☐ helt uenig

33. Jeg er med, men jeg lurer på hvorfor jeg fortsetter å delta

☐ meget enig ☐ litt enig ☐ litt uenig ☐ helt uenig

34. Jeg er med fordi jeg får bråk om jeg lar være.

☐ meget enig ☐ litt enig ☐ litt uenig ☐ helt uenig

35. Jeg er med fordi det er gøy.

☐ meget enig ☐ litt enig ☐ litt uenig ☐ helt uenig

36. Jeg er med fordi jeg vil få dårlig samvittighet om jeg lar være.

☐ meget enig ☐ litt enig ☐ litt uenig ☐ helt uenig
37. Jeg er med selv om jeg egentlig ikke vet hvorfor jeg gjør det

☐ meget enig  ☐ litt enig  ☐ litt uenig  ☐ helt uenig

38. Jeg er med fordi jeg vil lære og forstå kroppsøving.

☐ meget enig  ☐ litt enig  ☐ litt uenig  ☐ helt uenig

39. Jeg er med fordi det forventes av meg.

☐ meget enig  ☐ litt enig  ☐ litt uenig  ☐ helt uenig

40. Jeg er med men jeg lurer på hva poenget med det er

☐ meget enig  ☐ litt enig  ☐ litt uenig  ☐ helt uenig

41. Jeg er med fordi jeg liker kroppsøving.

☐ meget enig  ☐ litt enig  ☐ litt uenig  ☐ helt uenig

42. Jeg er med fordi kroppsøving er viktig for meg.

☐ meget enig  ☐ litt enig  ☐ litt uenig  ☐ helt uenig
43. Jeg er med selv om jeg ikke aner hvorfor lenger

☐ meget enig  ☐ litt enig  ☐ litt uenig  ☐ helt uenig
### 3.0 Notification form Norwegian social science data services

<table>
<thead>
<tr>
<th>1. Prosjektittel</th>
<th>Titte</th>
<th>Motivasjon, innsats og mestring i kroppssvingsfaget i den videregående skole</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Behandlingsansvarlig institusjon</td>
<td>Institusjon</td>
<td>Universitetet i Bergen</td>
</tr>
<tr>
<td></td>
<td>Avdeling/Fakultet</td>
<td>Det psykologiske fakultet</td>
</tr>
<tr>
<td></td>
<td>Institutt</td>
<td>Institutt for pedagogikk</td>
</tr>
<tr>
<td>3. Daglig ansvarlig (forsker, veileder, stipendiat)</td>
<td>Fornavn</td>
<td>Hege</td>
</tr>
<tr>
<td></td>
<td>Etternavn</td>
<td>Eikeland Tjomsland</td>
</tr>
<tr>
<td></td>
<td>Akademisk grad</td>
<td>Doktorgrad</td>
</tr>
<tr>
<td></td>
<td>Stilling</td>
<td>1 amanuensis</td>
</tr>
<tr>
<td></td>
<td>Arbeidssted</td>
<td>Bergen</td>
</tr>
<tr>
<td></td>
<td>Adresse (arb. sted)</td>
<td>Vektergården 5020 Bergen</td>
</tr>
<tr>
<td></td>
<td>Postnr./tlf (arb. sted)</td>
<td>55532399 / 48280906</td>
</tr>
<tr>
<td></td>
<td>Telefon/mobil (arb. sted)</td>
<td><a href="mailto:psplt@uib.no">psplt@uib.no</a></td>
</tr>
<tr>
<td></td>
<td>E-post</td>
<td></td>
</tr>
<tr>
<td>4. Student (master, bachelor)</td>
<td>Studentprosjekt</td>
<td>Ja ○ Nei ●</td>
</tr>
<tr>
<td></td>
<td>Rediger kort for prosjektets formål, problemstilling, forskningsspørsmål etc.</td>
<td>Med samarbeidsprosjekt menes prosjekt som gjenomføres av flere institusjoner samtidig, som har samme formål og hvor personopplysninger utvikles.</td>
</tr>
<tr>
<td></td>
<td>Maks 750 tegn.</td>
<td></td>
</tr>
<tr>
<td>6. Prosjektomfang</td>
<td>Velg omfang</td>
<td>● Enkel institusjon</td>
</tr>
<tr>
<td></td>
<td>Oppgi øvrige institusjoner</td>
<td>○ Nasjonalt samarbeidsprosjekt</td>
</tr>
<tr>
<td></td>
<td>Oppgi hvordan samarbeidet foregår</td>
<td>○ Internasjonalt samarbeidsprosjekt</td>
</tr>
<tr>
<td></td>
<td>Med samarbeidsprosjekt menes prosjekt som gjenomføres av flere institusjoner samtidig, som har samme formål og hvor personopplysninger utvikles.</td>
<td></td>
</tr>
<tr>
<td>7. Utvalgsbeskrivelse</td>
<td>Utvalgt</td>
<td>Elever på 1. trinn i to videregående skoler, og til kroppssvingslærere fra fem videregående skoler i Bergen.</td>
</tr>
<tr>
<td></td>
<td>Med utvalg menes dem som deltar i undersøkelsen eller dem det inntar oppsikten om. F.eks. et representativt utvalg av befolkningen, skolelever med rese- og skivevanoder, patienter, ansatte.</td>
<td></td>
</tr>
<tr>
<td>Rekruttering og trekking</td>
<td>De fem skolene som inngår i prosjektet deltar i ett partnerskap med læresamfunnene på UIB.</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Førstepdagkontakt</td>
<td>Første kontakt vil bli foretatt av Hage E. Tjomsland, og den vil bli røtet til UB/Lærerutdanningsens kontaktpersoner på skolene. Derefter vil kontaktpersonene invitere kroppsøvingstærere og elever på Yg. 1, til å delta i prosjektet.</td>
<td></td>
</tr>
</tbody>
</table>
| Alder på utvalget | - Barn (0-15 år)  
- Ungdom (16-17 år)  
- Voksne (over 18 år) |
| Antall personer som inngår i utvalget | 500-600 elever og 10 lærenere. |
| Inkludere det myndige personer med redusert eller manglende samfunnkompetanse | Ja ☑ Nei ● |
| Hvis ja, begrunn | Begrunn hvorfra det er nødvendig å inkludere myndige personer med redusert eller manglende samfunnkompetanse. |

8. Metode for innsamling av personopplysninger

- **Kryss av for hvilke datainningsmetoder og datakilder som vil benyttes**
  - Spørreskjema
  - Personlig intervju
  - Gruppiintervju
  - Observasjon
  - Psykologiske/pedagogiske tester
  - Medisinske undersøkelser/tester
  - Journaldata
  - Registerdata
  - Annen innsamlingsmetode

- **Kommentar**

9. Datamaterieltalets innhold

- **Rediger for hvilke opplysninger som samlbes in**
  - Et elev-sporreskjema samt intervjuulider (en til elever og en til lærene) vil bli brukt for å undersøke elevers og lærenes opplevelser og erfaringer knyttet til kroppsøvingssøgel.

- **Samles det inn direkte personidentifiserende opplysninger**
  - Ja ☑ Nei ●
  - Spørreskjema, intervju, testere, og observer utmatiser m.m. sendes inn sammen med meldingsmed.
  - NAV, E-welder, og/eller opplysningsregister.

- **Hvis ja, hvilken**
  - 11-sifret fødselsnummer
  - Navn, fødselsdato, adresse, e-postadresse og/eller telefonnummer

- **Spesiﬁker hverke**

- **Samles det inn indirekte personidentifiserende opplysninger**
  - Ja ☑ Nei ●
  - En person vil være indirekte identiﬁserbar dersom det er mulig å identifisere vedkommende gjennom bakgrunnsopplysninger som for eksempel bostedsdokument, arbeidsplass/telestskul tilbakestilt med opplysninger fra adler, kjønn, yrke, diagnose, etc.

- **Kryss også av dersom e-post adress registreres.**
<table>
<thead>
<tr>
<th>Samles det inn sensitive personopplysninger?</th>
<th>Ja ○ Nei ●</th>
</tr>
</thead>
</table>
| **Hvis ja, hvilke?** | ☐ Rasemessig eller etniske bakgrunn, eller politisk, filosofisk eller religiøs oppfatning  
☐ At en person har vært mistenkt, siktet, tiltalt eller dømt for en straffbar handling  
☐ Helseforhold  
☐ Seksuelle forhold  
☐ Mediamskap i fagforening |
| Samles det inn opplysninger om tredjeperson? | Ja ○ Nei ● |
| **Hvis ja, hvem er tredjeperson og hvilke opplysninger registreres?** |  |
| **Hvorfor informeres tredjeperson om behandlingen?** | ☐ Skriftlig  
☐ Muntlig  
☐ Informeres ikke |
| Ingenere ikke, begrunn |

10. Informasjon og samtykke

| Oppgi hvordan utvalget informeres | Skriftlig  
Muntlig  
Informeres ikke |
|-----------------------------------|-------------|
| **Begrunn** | Vennligst send inn informasjonsskivet eller mail for muntlig informasjon sammen med meldeskjema.  
NB! Vedlegg lastes opp til sist i meldeskjemaet, se punkt 16 Vedlegg.  
Dersom utvalget ikke skal informeres om behandlingen av personopplysninger må det begrunnnes.  
Les mer om krav til samtykke |

| Oppgi hvordan samtykke fra utvalget informeres | Skriftlig  
Muntlig  
Innhenettes ikke |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Innhenettes ikke, begrunn</strong></td>
<td>Dersom det innhenettes skriftlig samtykke anbefales det at samtykkeavklaringen utføres som en svært opp eller på eget act. Dersom det ikke skal innhenettes samtykke, må det begrunnes.</td>
</tr>
</tbody>
</table>

11. Informasjonssikkerhet

<table>
<thead>
<tr>
<th>Direkte personidentifiserende opplysninger erstattes med et referansenummer som viser til en utlånt navneliste (kollingsnøkkel)</th>
<th>Ja ○ Nei ●</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hvor er oppbevarede navneliste/kollingsnøkkelen og hvem har tilgang til dem?</strong></td>
<td></td>
</tr>
<tr>
<td>Direkte personidentifiserende opplysninger oppbevares sammen med det øvrige materialet</td>
<td>Ja ○ Nei ●</td>
</tr>
<tr>
<td><strong>Hvorfor oppbevares direkte personidentifiserende opplysninger sammen med det øvrige materialet?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Oppbevares direkte personidentifiserende opplysninger på andre måter?</strong></td>
<td>Ja ○ Nei ●</td>
</tr>
</tbody>
</table>

Spesialiseret
### Hvordan registreres og oppbevares datamaterialet?

- Fysisk isoppt datamaskin tilhørende virksomheten
  - Datamaskin i nettverkssystem tilhørende virksomheten
  - Datamaskin i nettverkssystem tilknyttet Internet tilhørende virksomheten
- Fysisk isoppt privat datamaskin
- Privat datamaskin tilknyttet Internet
- Videoopptak/fotografi
- Lydopptak
- Notater/papir
- Annen registreringsmetode

### Merk av for hvilke hjelpemidler som benyttes for registrering og analyse av opplysninger:

Dette krever flere kryss dersom opplysningene registreres på flere måter.

### Behandles lyd/videoopptak, og/eller fotografier ved hjelp av datamaskinbasert utstyr?

<table>
<thead>
<tr>
<th>Ja</th>
<th>Nei</th>
</tr>
</thead>
</table>

Kryss av for ja dersom opptak eller foto behandles som lyd-/bildet.

Les mer om behandling av lyd og bilde.

### Hvordan er datamaterialet beskyttet mot at uvedkommende får innsyn?

Datamaskinene vil være beskyttet med brukernavn og passord. Den bærbare datamaskinen vil oppbevares i et låsbart rom på UIB.

<table>
<thead>
<tr>
<th>Dersom det benyttes mobile lagringsenheter (bærbar datamaskin, minnekort, cd, ekstern harddisk, mobiltelefon) oppgi hvilke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ja</td>
</tr>
</tbody>
</table>

For eksempel: datamaskintilgangen beskyttet med brukernavn og passord, står datamaskinen i et låsbart rom, og hvordan sikres bærbare enheter, utskrifter og opptak?

### Er det en mobilt lagringsenheter bærbar datamaskin?

| Ja | Nei |

NBI Mobile lagringsenheter bærbar datamaskin.

### Vi medarbeidere har tilgang til datamaterialet på tilgang med daglig ansvarlig/tilhørende?

| Ja | Nei |

Amund Langøy (masterstudent) og Rune Krumsvik (professor) vil ha tillgang til det kvantitative materialet.

### Overfører personopplysninger ved hjelp av e-post/inntertnet?

| Ja | Nei |

F.eks. ved bruk av elektronisk spørreskjema, overføring av data til samarbeidspartner/databehandler mm.

### Vil personopplysninger bli utelivet til andre inn projektnettverket?

| Ja | Nei |

### Hvis ja, hvem?

Amund Langøy (masterstudent) og Rune Krumsvik (professor) vil ha tillgang til det kvantitative materialet.

### Overfører personopplysninger ved hjelp av e-post/inntertnet?

| Ja | Nei |

F.eks. ved bruk av elektronisk spørreskjema, overføring av data til samarbeidspartner/databehandler mm.

### Vil personopplysninger bli utelivet til andre inn projektnettverket?

| Ja | Nei |

### Hvis ja, hvem?

Dersom det benyttes eksterne helt eller delvis å behandle personopplysninger, f.eks. Questback, Synovate MIM. Nofilia eller medarbeidspartner eller folk, er dette å betrakte som en databehandler. Slike oppdrag må kontraktsreguleres.

Les mer om databehandlereavtaler her.

### 12. Vurdering/godkjenning fra andre instanser

<table>
<thead>
<tr>
<th>Søkes det om dispensasjon fra taushetspiklen for å få tillgang til data?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ja</td>
</tr>
</tbody>
</table>

For å få tillgang til taushetstilagt opplysninger fra t.eks. NAV, PPT, sykehus, må det søkes om dispensasjon fra taushetsplikten. Dispensasjon søkes vanligvis fra aktuelle departement.

Dersom personopplysninger skal for alle typer forskning søkes Regional komité for medisinsk og helsebelygg.

### Kommentar

### Søkes det godkjenning fra andre instanser?

| Ja | Nei |

F.eks. søke leverandører om tillgang til data, en ledelse om tillgang til forskning i virksomhet, skole, etc.

### Hvis ja, hvilken?

### 13. Prosjektperiode
<table>
<thead>
<tr>
<th>Hva skal skje med datamaterialet ved prosjektet?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Datamaterialet anonymiseres</strong></td>
</tr>
<tr>
<td><strong>Datamaterialet oppbevares med</strong></td>
</tr>
<tr>
<td><strong>personidentifikasjon</strong></td>
</tr>
<tr>
<td>Med anonymisering mener at datamaterialet</td>
</tr>
<tr>
<td>bestrives slik at det ikke lenger er mulig å forme</td>
</tr>
<tr>
<td>opplysningene tilbake til enkeltpersoner.</td>
</tr>
<tr>
<td><strong>Hvordan skal datamaterialet oppbevares, og hvordan?</strong></td>
</tr>
<tr>
<td><strong>Prosjektstart</strong></td>
</tr>
<tr>
<td><strong>Prosjektslutt</strong></td>
</tr>
<tr>
<td><strong>Antall vedlegg</strong></td>
</tr>
</tbody>
</table>

Prosjektstart: 02.02.2013
Prosjektslutt: 31.12.2015

Vennligst oppgi ikke punktet for når førstegangskontakten med utvaget opprettes og/eller datamanningen starter.

Vennligst oppgi ikke punktet for når datamaterialet enten skal anonymiseres/nietes, eller ankeres i påværende oppfølgingstusider eller annet. Prosjektet anses vanligvis som avsluttet når det oppgitte analyser er terdet og resultatene publisert, eller oppgave/avhandling er mottatt og satt i.

Les mer om anonymisering.

Hovedregelen for videre oppbevaring av data med personidentifikasjon er samtykke fra det registrerte.

Ansaker til oppbevaring kan være planlagte oppfølgingstusider, undersøkningsformål eller annet.

Datamaterialet kan oppbevares ved egen institusjon, offentlig arv eller annet.

Les mer om ankering hos NSD.

Vert fagfolk vil bli slettet når lydopptakene er transkribert. Det transkriberte materialet vil bli slettet ved prosjektslutt.

Prosjektet finansieres gjennom prosjekt deltakeres stillinger ved UiB.

Les mer om prosjekt.

Tilleggsopplysninger

Antall vedlegg: 3
4.0 Consent statement (Samtykkeerkläring)

UNIVERSITETET I BERGEN
Det psykologiske fakultet
Institutt for pedagogikk

INFORMASJON OM SAMTYKKE

Motivasjon, innsats og mestring i kroppsøvingsfaget

Kjære elev

Forskningsgruppen DLC ved Universitetet i Bergen ønsker å undersøke hvordan elever på 1. trinn i videregående opplæring trives med kroppsøvingsfaget på skolen. Målet med studien er å få mer kunnskap om hvilke faktorer som fremmer og hemmer gode opplevelser og erfaringer i kroppsøvingen på skolen.


Videre kommer vi til å invitere ca. 20 elever til å delta i et fokusgruppeintervju. Et fokusgruppeintervju innebærer at 6-7 elever deltar i en gruppesamtale sammen med to forskere fra Universitetet i Bergen. Samtalen vil vare i ca. 35-45 min, og i løpet av samtalen vil vi snakke om erfaringene deres knyttet til kroppsøvingsfaget i den videregående skole.

Din deltakelse i studien er frivillig, og all informasjon du gir vil bli behandlet konfidentielt og materialet vil bli anonymisert. Dette betyr at verken dine foreldre, læreren eller andre i klassen som ikke har deltatt i spørreundersøkelsen eller i intervjuet vil få vite hva du har svart eller hva vi har snakket om i intervjuet. Dette innebærer også at de elevene som deltar i intervjuet ikke kan fortelle til andre elever som ikke har deltatt, hva medelever fortalte i
intervjuet. Lydfilene fra intervjuet vil bli slettet så snart datamaterialet er transkribert, og det transkriberte materialet vil bli slettet ved prosjektslutt i desember 2015.

Dersom du velger å delta i studien, men på et senere tidspunkt ikke ønsker å delta lenger, kan du informere oss direkte eller via læreren din slik at vi kan slette den informasjonen som du allerede har gitt i undersøkelsen. Selv om det hjelper prosjektet at alle spørsmålene i spørreskjemaet besvares, er du ikke forpliktet til å svare på alle spørsmålene. Dersom du jar spørsmål angående prosjektet, ta kontakt med Hege E. Tjomsland (48 28 09 06).

Din deltakelse i studien er høyt verdsatt, og vi ser fram til å treffe deg!

Vennlig hilsen

Hege E. Tjomsland
Rune J. Krumsvik
1. amanuensis, UIB
Professor, UIB

ELEVENS SAMTYKKEERKLÆRING

Studie: Motivasjon, innsats og mestring i kroppsøvingsfaget

Prosjektansvarlig: Hege E. Tjomsland

Jeg,_________________ har lest informasjonsarket, og jeg forstår hensikten med prosjektet. Undersøkelsen har blitt forklart for meg, og jeg forstår at all informasjon jeg gir fra meg vil bli behandlet konfidentielt. Jeg vet at jeg når som helst kan trekke meg fra studien uten å oppgi noen grunn eller uten at det vil få konsekvenser, ved å informere lederen av studien eller læreren min.

Signatur: ________________________________

Dato: ________________________________