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Attitudes Toward Physical Activity Among Military Recruits

Holdninger til fysisk aktivitet blant militærrekrutter

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Abstract

Background: The benefits from physical activity behaviour are well argued in existing research, yet, a non-desirable decrease in physical activity-levels appears to take place in the group of 19-year olds. The Ministry of Health and Care Service states that the main challenge is to increase the group's level to meet the requirements for physical activity (PA), while at the same time reduce sedentary behaviours. During the compulsory military service in The Norwegian Armed Forces, fitness is emphasized for a large number of 19-year-old men and women. **Aim:** The present study aimed to explore young male Norwegian recruits' attitudes toward PA as well as how these attitudes are affected by the military recruit period. Changes in their attitudes toward PA were explored in relation to changes in their physical condition (aerobic capacity). **Method:** Qualitative in-depth interviews were conducted with eight 19-year-old military recruits one month after completing the recruit period. **Results and conclusion:** The military recruit period appeared to be experienced as a setting where attitudes toward PA are under influence from significant others (fellow recruits and officers). Facilitation for PA was also reported as an attractive factor to PA, along with their perceptions of mastery in PA increased during the recruit period. However, limited time and low energy levels are experienced as obstacles for PA behaviour. Furthermore, enjoyment in PA appeared to relate with changes in the recruits physical performance; recruits with a decrease in aerobic capacity experience less joy, while recruits who improved, experienced increased enjoyment from PA. Lastly, increased levels of PA appeared to associate with improved physical performance. These findings are discussed in relation to the existing literature and their implications are interpreted with regard to public health in Norway.

Key word: military recruits, attitudes, physical activity, TPB- model, public health

Sammendrag

Bakgrunn: En rekke fordeler med å være fysisk aktiv (FA) er godt beskrevet og dokumentert gjennom forskning. I Norge er det imidlertid en uønsket nedgang i fysisk aktivitetsnivå blant 19-åringene, og Helse og Omsorgsdepartementet slår fast at det er en viktig oppgave å øke andelen som møter anbefalingene om fysiske aktivitet, samtidig som man reduserer stillesittende atferd. I Forsvaret tillegges det å holde seg i form et betydelig fokus, og Forsvaret kan dermed potensielt påvirke FA blant 19 år gamle rekrutter. **Formål:** Denne studien forsøkte å undersøke unge norske rekrutters holdninger til FA, og påvirkningen rekruttperioden kunne ha på deres holdninger. Endringer i holdninger til FA ble videre undersøkt i forhold til endring i fysisk form (aerob kapasitet). **Metode:** Kvalitative dybdeintervjuer ble gjennomført på åtte 19 år gamle militærrekrutter en måned etter fullført rekruttperiode. **Resultat og konklusjon:** Forsvarets rekruttperiode er erfart som et sted der holdninger til fysisk aktivitet er under påvirkning fra signifikante andre (medrekrutter og offiserer). Tilrettelegging for FA ble erfart som en positiv faktor for å være fysisk aktiv, og oppfattelse av mestring i FA var noe som økte i løpet av perioden. Begrenset med tid og lavt energinivå ble erfart som hindringer for å være FA. Det kom frem at hvor mye rekruttene likte å være FA er avhengig av endringen i den fysiske prestasjonen; rekrutter med en nedgang i aerob kapasitet opplevde mindre glede, mens rekrutter som hadde forbedret seg opplevde økt glede av FA. Videre kom det frem at økt mengde FA er forbundet med forbedret fysisk prestasjon. Disse funnene er diskutert i forhold til tidligere litteratur og betydningen er tolket i forhold til folkehelsen i Norge.

Stikkord: militærrekrutter, holdninger, fysisk aktivitet, TPB, folkehelse

1.0 Introduction

Physical activity (PA) is an important factor in the prevention and treatment of over 30 different diagnoses and health conditions (e.g. type 2 diabetes, stroke and ischemic heart disease) and there is good evidence supporting physical activities' association with health benefits at all ages (The Norwegian Directorate of Health , 2014). The World Health Organization (WHO, 2010) estimates physical inactivity to be the fourth largest risk factor for global mortality as well as the cause of six percent of deaths globally. The Norwegian Ministry of Health and Care Services (HOD, 2013) states in a public health report that sickness in Norway is increasingly related to lack of PA.

In Norway, approximately 2.5 million people, half of the 5 million inhabitants, do not meet the requirements for physical activity, and are thus defined as physically inactive (HOD, 2013). Within this group characterized as inactive, there is a steady decline in the level of PA among children and adolescents. Recently, Kolle, Stokke, Hansen and Anderssen (2012) objectively recorded the PA- levels of children and adolescents in Norway. Their work revealed a decrease of 21 % for the 6 to 9 years old children, a decrease of 40 % for the 9- to 15-year-olds and a decrease of 31 % for the group of 15- to 20-year-olds. Requirements for PA from The Norwegian Directorate of Health (2014) are set at a minimum of 60 minutes per day of PA for children and adolescents, and 150 minutes per week for adults over 18, while being physically active above and beyond these standards will give additional health benefits. The foundation of a person's PA and health habits is built in childhood and adolescent years (HOD, 2013), which consequently makes this decline that ranges from 21% - 40 % a public health issue due to the risks that inactivity entails.

The law of compulsory military service in Norway states that Norwegian citizens are characterized as *conscripts* from January 1st of the year they turn 19, until the end of the year they turn 44 (Vernepliktsloven [Law of compulsory military service], 1953). This law further

entails that all 19-year-olds in Norway are obliged to meet at a military selection process. In 2014, 8.000 out of 74.000 19-year-olds were selected to do military service. From January 2015, Norway introduced conscription for both genders (The Norwegian Armed Forces, 7th January 2015a). While the level of PA is decreasing for the 15- to 20-years age group nationally (31 % according to Kolle et al., 2012), the military service is still a setting where fitness is emphasized for the large number of young male and female recruits. On this basis it is important to assess how the military service impacts the physical activity behaviour of the 19 years old citizens of Norway.

A report from HOD (2015) underlines that public health politics are a responsibility across the different sectors in the society. They state that focus should be directed at PA and conditions that improve health in the society. In addition, The Norwegian Armed Forces aims to stimulate soldiers to a lifelong physically active lifestyle (The Norwegian Defence University College (NDUC), 2006). Military service could therefore be an arena where improvement of attitudes toward PA can take place in a population (19 year olds) where the level of PA is nowadays decreasing. Specifically, the present study aimed to explore young Norwegian recruits' attitudes toward PA, and any impact that the period of basic training could have on their attitudes. In this study, the participants' physical condition prior to and after the recruit period was of importance as physical shape and changes in physical shape was hypothesized to impact attitudes toward PA

2.0 Literature review

Numerous studies have assessed changes that take place in the physical fitness and performances of recruits and soldiers during recruitment period, military training period or the military service (e.g., Dyrstad, Soltvedt, & Hallen, 2006; Wyss, Beuchat, Zehr, Schori, & Mader, 2009; Sharp, et al., 2000; Marcinik, Hodgson, & Vickers, 1985). The overall trend in the existing research is that the level of the physical condition of military recruits improves

after the period of basic training but not after the completion of military service (Sharp, et al., 2000; Vogel, Crowdy, Amor, & Worsley, 1978; Brock & Legg, 1997). Another trend in the existing research reveals that only recruits with low scores on physical tests prior to the period of military training or military service (i.e., those who were not very physically active at start) show an increase in their aerobic capacity (Dyrstad, et al., 2006; Sharp, et al., 2000).

2.1.1 Changes during Basic Training

The effect of basic training period on the recruits' physical condition has been examined in studies worldwide. Williams, Rayson, and Jones (1999) investigated the effect of basic training in British army recruits and found an increase in VO₂max, an increase in fat-free body mass and a reduction in body fat after completion of the recruit period. More recently, Williams (2005) conducted a study in England on 25 British army recruits, which supported his previous findings in that the army recruits improved their aerobic fitness and body composition during the recruit period. Stacy, Hungerford, and McMahon (1982) assessed the physical fitness level of 50 male recruits in New Zealand army before and after ten-weeks of basic training. They measured the recruits' VO₂max from a 2.4 km run and body fat levels using a three-skinfold measurement. Their results report an increase of 16.2 percent in estimated VO₂max and a 2.2 percent decrease in body fat. In accordance with these findings, an earlier study from England reported that the military training period led to an increase in VO₂max and a decrease in body fat without a decrease in the body weight of the recruits (Vogel, et al., 1978). More recently, the results in Sharp, et al. (2000) show that the training of American recruits also led to improved aerobic endurance and body composition. Several other studies also suggest an increase in military recruits' physical condition between initial tests and tests done upon the completion of recruit period (e.g., Knapik, Wright, Kowal, & Vogel, 1980; Williams, et al., 2002). However, it exists articles concluding with no change in the recruits' physical condition during the recruit period. A study by Marcinik, Hodgson

and Vickers (1985) on the effect of a standard recruitment period on 224 US Navy recruits' physical form (aged 17 - 30 years old) showed no significant improvement for the average recruit. The augmented training program that was implemented on the US Navy recruits led to an increase in the recruits' stamina but not in their muscular strength.

2.1.2 Changes during Basic Training in relation to initial level

Dyrstad, et al. (2006) examined changes in Norwegian recruits' physical conditioning both after the recruit period and after 12 months of military service. The findings showed that recruits with low VO₂max prior to the study increased their VO₂max during the recruit period. Recruits with medium initial VO₂max had no change, while recruits with high initial scores tended to have a decrease. Gordon, et al. (1986) had earlier found similar numbers in a South African military study. Their analysis showed that the effect of endurance training in the basic training period was limited for the recruits with average and above average level of fitness. These results are in line with Rosendal, Langberg, Skov-Jensen, and Kjær's (2003) analysis from investigating the adaptations of physical performance in 349 healthy males during a period of 12 week basic military training in Denmark. They found an improvement in aerobic capacity only in the previously untrained group of soldiers. Knapik and colleagues (1980) investigated the influence of a US Army basic entry training on the muscular strength of men and women, and their results showed a significant increase in lean body mass and strength for both genders. However, women improved significantly more than men in the two between the tests, which was attributed by the researchers to their lower initial strength level. The fact that those recruits with low baseline results show an increase, is a finding in multiple studies (Patton, Daniels, & Vogel, 1980; Sharp, et al., 2000; Legg & Duggan, 1996; Faff, Satora, & Stasiak, 2002; Dyrstad, et al., 2006; Myles & Allen, 1979; Vogel, Patton, Mello & Daniels, 1986; Song & Moore, 1989; Vogel, et al., 1978; Rudzki, 1989). A study from Singapore on the effect of a 20-week basic military training program on 40 of the most obese

recruits showed an improvement in their body composition, VO₂ max and aerobic fitness, which again supports the general finding that recruits with low initial scores tend to show improvement (Lim & Lee, 1994).

2.1.3 Changes during 12 months of service or training period

In addition to the effect of the basic training period on the recruits' physical condition research has been done on the effect of a complete conscription period on the conscripts' physical condition. Gordon et al. (1986) investigated the effect of 12 months military service on South African conscripts and found no changes in their VO₂max. They found, as mentioned above, an enhancement during the recruit period, but their endurance was back to their pre-test level 12 months after the military service started. Dyrstad et al. (2006) found also a decrease in the recruits' physical performance measured from the end of the recruit period to the end of their 12-month military service. He found a decrease in VO₂max from the end of the recruit period to the end of 12 months of military service among all soldiers, independently of their initial scores. Mattila, Tallroth, Martinen, Ohrankamen, and Pihlajamaki (2009) examined the effect of a 6-month conscription period with respect to physical fitness and body composition in 140 healthy male recruits of the Finnish army. They reported an increase in strength and aerobic endurance, and a decrease in body fat and body weight. However, similar to the findings in the studies reported above, they also found a change after the first period (3 months). The conscripts' body fat and body weight decreased between months one and three and increased between months three and six of the military service.

Existing literature has also examined differences in physical performance in men and women in the military. Daniels, Kowal, Vogel, and Stauffer (1979) investigated the effects of a training program for male and female cadets in the USA. They found a significant increase in VO₂max in women but not in men. Brock and Legg (1997) later supported the findings of

increased VO₂max in women. The results of a six-week basic training period showed a significant increase in VO₂max, reduced percentage of body fat and an increase in physical strength in females. Protzman (1979) also compared male and female cadets' physiological performance in an environment of equal physical training in the USA military academy concluding that men achieved higher physical performance.

2.1.4 The search for relevant literature

In the search for literature relevant to the research topic of the present study, I have not found studies specifically examining the impact of the recruitment period on the recruits' attitude toward physical activity (PA). Physical activity attitudes, intentions and behaviours were researched in Scotland for civilians aged from 18 to 25 years of age (Poobalan, Aucott, Clarke, & Smith, 2012). The researchers conducted a survey that was underpinned by the theory of planned behaviour and the social cognitive theory. In their findings, they reported that a positive attitude towards PA was a predictor of being physically active and less sedentary. Even though the study did not explicitly cover the military arena the survey had participants within the same age as the military recruits in my study and was underpinned by the theory of planned behaviour, which is the theory also chosen to inform my study. How the military recruit period can impact the attitudes and possibly the motivation of 19 year old Norwegian recruits toward PA has not been explored to this day. Rather recently, Wyss and colleagues (2009) looked at the physical performances of Swiss conscripts in the period between 1982 and 2005. The researchers concluded that aside from studying physical fitness changes, research that explores the recruits' motivation for PA is necessary. This remark laid the ground for the present study.

2.2 Theory of planned behaviour

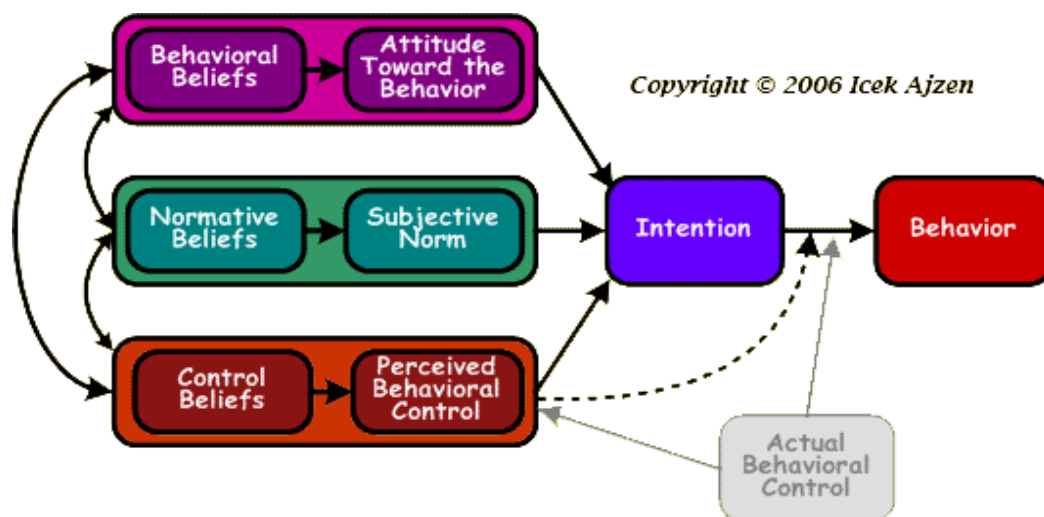
The theory of planned behaviour (TPB) was developed by Izek Ajzen, and is an extension of the theory of reasoned action (Biddle, Mutrie, & Gorely, 2015). The TPB

explains how behaviour can be understood as a consequence of the individual's intention to do something. According to the TPB the intentions a person may hold are then predicted by three independent factors: perceived behavioural control, subjective norm, and attitude toward the behaviour.

Ajzen (1991) explained these determinants of intention; "The first is the attitude toward the behaviour and refers to the degree which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question" (p. 188). This predictor is determined by behavioural beliefs, which is a person's expectancy for the outcome of the behaviour, and by the person's value regarding the expected outcome(s) (Ajzen, 2006b.). The subjective norm is a social factor, and "...it refers to the perceived social pressure to perform or not to perform the behaviour" (Ajzen, 1991, p. 188). This predictor is determined by normative beliefs, which entail "... the perceived behavioural expectations of such important referent individuals or groups..." (Ajzen, 2006a), combined with how strongly the person wants to comply with these referents (Ajzen, 2006c.). The last determinant of intention is perceived behavioural control. This determinant "...refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experiences as well as anticipated impediments and obstacles" (Ajzen, 1991, p. 188). This predictor is determined by control beliefs, which is "... the perceived presence of factors that may facilitate or impede performance of a behaviour" (Ajzen, 2006d) combined with how strongly the person perceives that he/she controls these factors (Ajzen, 2006d).

According to Ajzen (2006f), there is a direct relationship between one's perceived behavioural control and one's actual behaviour (see Figure 1). This means that the factor of perceived behavioural control is the most important one when it comes to understanding a person who fails to do something. Perceived behavioural control was also reported as a strong

predictor of healthy behaviour in some of the existing studies (e.g., Terry & O’leary, 1995; Theodorakis, 1994; Godin & Kok, 1996).



(Figure 1. The theory of planned behaviour showing predictors of intention and behaviour, from Ajzen, 2006, *TPB Diagram*. Copyright 2006 Icek Ajzen).

The TPB was deemed of relevance and a good fit in the present study for understanding and explaining military recruits’ attitudes for PA after their recruit period experience. According to Downs and Hausenblas (2005), the TPB effectively explains exercise intentions and behaviour. In their meta-analytic review they found that intention and perceived behavioural control were associated with exercise; intention predicted exercise behaviour, while attitude and perceived behaviour control predicted intention. They also found that intention was most strongly associated with the individual’s attitude. This relation was also reported by Theodorakis (1994) in his study of the relationship between attitude and exercise behaviour in relation to the TPB. He found that “... individuals with positive attitudes, and who feel more confident about their attitudes and intention for exercise and who perceive their behaviour as controllable are more likely to adopt an active lifestyle” (p. 159).

Ajzen (1991) emphasized the high degree of accuracy of using the TPB to predict behavioural intentions: “Attitudes toward the behaviour, subjective norms with respect to the behaviour, and perceived behavioural control over the behaviour are usually found to predict behavioural intentions with a high degree of accuracy” (p. 206). Godin and Kok’s (1996) work supported that the TPB is relevant in predicting intentions of health related behaviours. Their findings supplemented the literature claiming that perceived behavioural control was as important as attitude in the predictions. Earlier, a study was done on 146 undergraduate students aiming to investigate the utility of the TPB, and intention’s predictive strength for engaging in regular PA (Terry, & O’leary, 1995). They found that perceived behavioural control had no influence on intentions, but that it was a significant predictor of the behaviour. Theodorakis (1994) found that perceived behavioural control was a strong predictor for PA. He also reported that this was the strongest predictor for women’s participation in a physical fitness program. TPB was also used to predict total PA among members in a health club in England (Smith & Biddle, 1999). They also found that both attitude and perceived behavioural control predicted PA in their participants. When it comes to the subjective norm construct, research shows that this is the least important predictor of intention, and when the subjective norm “... does contribute to prediction, its weight is lower than the other two constructs” (Godin, & Kok, 1994, p. 94). Armitage and Conner (2001) supported this when they reported that “...the subjective norm construct generally is a weak predictor of intention” (p. 471). Overall, the existing literature on TPB and PA supports that the person’s attitude toward the behaviour and perceived behavioural control are the most credible determinants when predicting intention of the behaviour.

2.3 Relevant literature outside the military

Due to lack of research in the area of attitudes toward PA among military recruits, the researcher was forced to look into existing research outside the military setting. Ajzen and

Driver (1991) found that normative beliefs from important others were important for college students' participation in activities. Later on, Rhodes and Courneya (2003) further investigated the components of the TPB model in the exercise domain, and added that social pressure is something that also influences prediction of intention in the setting of exercise. Regarding social support, Courneya, Plotnikoff, Hotz, and Birkett (2000) tested the utility of this factor and the component of subjective norm in the prediction of exercise intention, and found that social support is an important factor for the intention of PA behaviour in adults. Courneya further supported this finding with colleagues (Rhodes, Jones, & Corneya, 2002), and Downs and Hausenblas (2005) stated more recently in their review that lack of social support obstructs the intention of exercise. Another finding in the existing literature is that adolescents who are highly socializing are more likely to engage in PA than the ones who are not (Kirby, Levin, & Inchley, 2011). It appears, in the same study, that peers have an important influence on adolescents' level of PA. Adolescents' motives to engage in PA were also addressed in existing research, where it was found that male college students are motivated toward PA by challenging and competing activities (Pauline, 2013; Egli, Bland, Melton, & Czech, 2011).

A trend in the existing literature shows that facilitation, or better said lack of facilitation for PA, is a limiting factor for physical activity behaviour. Downs and Hausenblas (2005) found in their review of exercise beliefs that lack of access to facilities is one of the most common control beliefs, which in turn determines one's perceived behavioural control (Ajzen, 2006d). This was also reported by Humpel, Owen and Leslie (2002) who found that satisfactory exercise facilities are positive for physical activity behaviour. Another study that investigated how the built environment affects PA, adds that barriers to be physically active could be reduced if there is facilitation for walking and bicycling as well as improved street-connectivity (Handy, Boarnet, Ewing, & Killingsworth, 2002). Small amount of time and low

energy levels were additional limitations for physical activity behaviour. Carron, Hausenblas and Estabrooks (2003) reported that lack of time and low energy levels are the most limiting factors for exercise, while Downs and Hausenblas (2005) found that low energy levels is one of the most common control belief along with facilitation as mentioned above. Recently Calogiuri and Chroni (2014) in an integrative systematic review, reported availability of a natural environment (NE) and attractive views of nature within one's living environment to be contributors toward PA. They proposed that "availability of NEs can increase motivation to engage in PA via intention and affective beliefs such as positive emotions and stress relief. Positive PA experiences can enhance attitudes toward PA and perceived behavioral control, leading to firmer intentions to engage in PA. Individual and environmental barriers, as expressions of one's actual behavioural control and social support, influence the process via perceived behavioural control and subjective norm. Instrumental beliefs such as expected health benefits and the desire to enjoy nature also impact the process via behavioural attitudes." (p. 22). They concluded though that individual characteristics and environmental barriers might influence the relationship between availability of NEs and PA behaviours.

Lastly, relevant literature relating to attitudes toward the behaviour also exists. Downs and Hausenblas (2005) emphasized the importance of identifying peoples' behavioural beliefs in order to be able to address the issue: "Identifying people's behavioural beliefs is an important step in determining the factors that may promote or restrict attitudinal changes toward exercise" (p. 24). They further stated that the most common positive behavioural belief was the health benefits of exercise. This was also found in earlier studies (Collette, Godin, Bradet, & Gionet, 1994; Terry & O'Leary, 1995). Lewis, Williams, Frayeh, and Marcus (2015) investigated the relation between enjoyment and PA in young adults. They found that greater enjoyment in PA leads to increased chance for the PA behaviour to be exhibited. In relation to performance, Puente- Diaz (2012) found that enjoyment had a

positive effect in a group of athletes' performance in their sport. Additionally, Sallis, et. al. (1986) found that self- efficacy was a predictor of maintenance of PA in a community sample of American adults. It emerged as well that attitudes toward PA was a predictor of vigorous PA.

The TPB along with the studies reviewed in this chapter, provided a clear and sound theoretical framework to the researcher of the present study to explore and interpret the attitudes of Norwegian recruits toward PA, as well as how these attitudes may be impacted during the basic military training period. The behaviour under study in the present research is the recruits' PA (and/or inactivity). The underlying beliefs of the three TPB factors (attitude toward the behaviour, subjective norm, and perceived behavioural control) were explored looking to understand how these may influence the recruits' intentions toward being physically active.

2.4 Research question

Previous studies have not explored how the recruit period can possibly impact 19-year-old recruits' attitudes toward PA and this gap in the literature is addressed in the study. The main research question to be answered is: Do military recruits experience the basic military training period as a time that has any impact on their attitudes toward physical activity?

3.0 Method

3.1 Worldviews

When conducting research, the researcher needs to explore his or her philosophical worldview. Creswell (2014) uses the term 'worldview' to describe the researchers' orientation about the world that he/she brings into the study. This worldview is based on the researcher's previous experiences, student's advisors and discipline orientations. The selection of a design is related to the researcher's worldview, and is usually qualitative, quantitative or mixed

methods. Following this exploration, the researcher chooses a specific method or procedure to employ to approach the research topic.

Post-positivism and constructivism are two distinct worldviews that researchers usually bring into their work (Creswell, 2014). The post-positivist worldview has been called ‘the scientific method’ and represents the traditional way of conducting research. Knowledge coming from a post-positivist worldview is observed carefully and it is measured objectively. In this worldview, the researcher begins with a theory, and this theory is supported or rejected based on the collected data. This type of orientation most often leads to a quantitative research approach (Creswell, 2014). The constructivist worldview is a rather different one and most often related to qualitative research approaches. Creswell (2014) describes the constructivist worldview as: “The process of research involves emerging questions and procedures, data typically collected in the participant’s setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data” (p. 4). According to Creswell (2014), this worldview is based among others, on Lincoln and Guba’s (1985) work on naturalistic inquiry, and is the worldview chosen to guide this qualitative project thus presented in details below. The constructive worldview and thus a qualitative research approach was chosen here on the premise that previous research does not exist on the question asked to be answer in this study. According to Patton (2015), people, events, relationships, phenomena and real-world conditions that are subject to change and constantly evolving cannot be truly appreciated, investigated and explained with the use of a quantitative methodological approach. He suggested that a qualitative research methodology allows the researcher to go in-depth, to explore in greater detail different people and their behaviors, relationships, and experiences (Patton, 2015).

Worldviews or paradigms matter when conducting research because they distinguish between objective and subjective studies. They also disclose the researcher’s prejudices to the

study (Patton, 2015). Denzin and Lincoln (2005) described the qualitative method as a complex one: “Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (p.3). It is thus the researcher who treats the data and as such the researcher’s worldview will have an impact on the work done. The worldview assumptions that are brought into the study, justify why a qualitative, quantitative or mixed methods approach are chosen for the research (Creswell, 2014).

Lincoln and Guba (1985) saw the naturalistic inquiry in relation to constructivism. Naturalistic inquiry was defined by Guba (1978; referred in Patton, 2015) “as a ‘discovery-oriented’ approach that minimizes the investigator’s manipulation of the study setting and it places no prior constraints on what the outcomes of the research will be” (p. 48). When qualitative research is done in real-world settings and there are no forces that influence what is unfolding naturally, the research is naturalistic. In using interviews as a form of naturalistic inquiry data collection, questions are open-ended in order to give the interview-object opportunity to answer freely. This is in contrast to the post-positivist worldview with the experimental design, where the researcher has the opportunity to control the study and only a few variables are investigated. Qualitative data are the major focus in naturalistic inquiry and quantitative data are the primary focus in controlled experimental designs (Patton, 2015). On the other hand, the constructivist worldview is a perspective where people seek to understand their own lived world. Individuals also ascribe subjective meanings to different objects, and they have subjective meanings of their experiences (Creswell, 2014). In constructivism, the “truth” is a result of the shared meaning of several sophisticated constructors, there is no such thing as an objective assessment and “cause and effect” do not exist. Also, phenomena can only be understood in the given context it is studied and cannot be generalized to another (Guba & Lincoln, 1989; referred in Patton, 2015).

In the present study, via the constructivist worldview, in-depth interviews with recruits will provide information about the phenomenon under study. This phenomenon can only be understood within the context it is studied. This means that findings of the interviews only can be seen in the context of military recruits at one military camp in Norway, and can not be generalized to other settings. Regarding the constructivist worldview, the sophisticated constructors are the military recruits, and their shared meanings will be “the truth” in the study.

3.2 Epistemology and ontology

According to Creswell (2014) the researcher’s worldview leads to the choice of a research method. The research in the present study adopted a constructivist worldview, which lead to specific epistemological and ontological fundamental ways informing the study (Guba & Lincoln, 1994). “Ontology is the philosophical study of the nature of being and ways of being; it is directed against questions related to the fundamental nature of existence” (Kvale & Brinkmann, 2015, p. 356, own translation). Guba and Lincoln (1994) discussed both epistemology and ontology in relation to the different worldviews. Ontology in the constructivist worldview is relativist, meaning that realities are socially and experientially based, and the individual who holds the construction depends on this reality. Epistemology is the study of knowledge and it questions what we accept as a truth and how this truth has been constructed (Grbich, 2007). The epistemological position in the constructivist worldview is subjectivist. The object of investigation and the investigator are interacting and this leads to created findings.

In the present study, the qualitative research interview were used as a tool to produce knowledge. The interview-object (i.e. interviewee) has knowledge of interest for the researcher, and this knowledge emerges through the use of leading questions during the interview (Brinkmann & Kvale, 2015). They emphasize further that “...this knowledge

nuggets remain constant through the transcription from an oral conversation to a written transcript” (p. 57). When the transcript is complete, the researcher extracts meanings from the interview. This interaction between the interview-object and the researcher is shaping the knowledge, and this was an epistemological issue that came up in my study. This interaction was also supported by Grbich (2007) when describing the ‘literally created findings’ as a result from the interaction between the investigator and the object of investigation. My approach as the investigator was to look at the interview-object’s meaning as a subjective reality. This was because individuals ascribe subjective meanings to different objects, while also hold subjective meanings of their experiences (Creswell, 2014). I also looked at the “truth” as a result of the shared meaning of the military recruits who were interviewed.

3.3 Research design: Phenomenological

There exist a number of different designs within the qualitative research realm. One of these designs is the phenomenological and it was used in the present study. In qualitative research, phenomenology is a term interested in understanding a phenomenon from the participants’ perspective, from their perception and understanding of the world (Kvale & Brinkmann, 2009). Patton (2015) wrote that “Various phenomenological approaches share in common a focus on exploring how human beings make sense of experience and transform experience into consciousness, both individually and as shared meaning” (p. 115). The aim in phenomenology is to gain a deeper understanding of the nature or meaning of each person’s experiences. The researcher describes experiences of several individuals about a phenomenon they have in common (Creswell, 2014). According to McCaslin and Scott (2003), phenomenology is a suitable method when looking at experiences of several individuals of a given phenomenon, which in this case was the military recruits’ experiences of the recruit period.

3.4 Strengths and weaknesses in chosen research approach

There are strengths and weaknesses in choosing a research method. The purpose of this study was to learn about how a group of people (young Norwegian military recruits) experience the phenomenon of the military recruit period and how this phenomenon may have impacted their attitudes on PA. To do this, it was necessary to talk to these people and collect information by asking questions. This was something that could not be accomplished through the use of quantitative measures as the researcher could miss important information not covered in standardized questionnaires, for instance. Having some interaction and talking to people face-to-face is a major characteristic of qualitative research (Creswell, 2014). Conducting interviews was one way to do this as it provided the researcher with relevant in-depth data, on how the military recruits experienced the recruit period as a time that may have had an impact on their attitudes toward PA. This method was therefore considered suitable for gathering information about the recruits' common experience.

This is also supported by Anderson (2010) who highlighted the strengths and weaknesses of qualitative research. She emphasized that data based on human experiences is powerful and can often be more compelling than quantitative data. Issues of *in detail* and *in depth* data can be dealt with when doing qualitative research. Interviews are not restricted to specific questions and can be redirected by the researcher during the interview (Anderson, 2010). In addition to this, the use of an interview-guide can provide some structure while at the same time give the interviewee the opportunity to answer freely (Ryen, 2002).

Anderson (2010) also identified some weaknesses in using a qualitative method, as interviews are dependent on the skills of the researcher and the study is more influenced by the researcher's personal biases than in the quantitative method. The fact that the researcher has to be present during the interview can also affect the participants' answers. Qualitative research has also been criticized for not being scientific, and according to Berg (2007) it is

important to address this charge against the qualitative method. However, both quantitative and qualitative research are science, based on the definition of Berg (2007):

Although various technologies may be used by different researchers, it turns out that everyone is doing science, provided that science is defined as a specific and systematic way of discovering and understanding how social realities arise, operate, and impact on individuals and organizations of individuals (p. 14).

To conclude, choosing the qualitative method of phenomenology and in-depth interviews to collect data was the best fit for this study, considering my interest in a group of people's experience over a lived phenomenon.

3.5 Sampling strategy and participants

The purpose of a qualitative study is not necessarily to provide data to generalize to a population as it is in quantitative research. There was thus no need to choose a representative sample from a population (Hellevik, 1980; referred in Ryen, 2002). On the other hand, it was important to select participants who had the relevant experience to perform the interviews for this study. This method is known as purposeful sampling and is a strategy in the selection of informants to the research (Patton, 2015). "Cases for study (e.g., people) are selected because they are 'information rich' and illuminative, meaning that they can offer useful manifestations of the phenomenon of interest" (Patton, 2015, p. 46). Sampling, in the present study was done considering the interviewees' insight about the phenomenon, while did not aim to reach any empirical generalizations from a sample to a population.

The present study used a purposeful sampling of participants, using information on 2015 recruits' results on the baseline- and post-test done before and after the recruit period at a military camp in Norway. This provided an opportunity to the research to collect information from participants with potentially different experiences considering that some of the interviewed recruits had a decrease in their physical performance from baseline- to post-test, while others increased their physical performance between the two tests. My objective

was to explore if and how their attitude toward PA was impacted during the recruit period, yet different performances in the physical test provided me with potential variety in the lived experience. Hence, I decided to talk to both recruits who improved their physical performances and those who did not aiming to capture all different aspects of the phenomenon.

Kvale and Brinkmann (2015) recently argued that the number of participants in a qualitative interview-study should be enough to find out what the research needs to know, but not too many. This was important for me as researcher in order to collect enough data to go in depth in the analyses of the interviews. They also suggest that the number of participants often is 15(+10) based on how much time and resources the researcher has for conducting the investigation. The present study has 8 participants, all recruits selected from one military camp. The participant selection process for this study was based on their progression on a 3000-meter running test conducted at the onset and the end of the recruit period. Four of the invited recruits decreased their performances between the two tests, while the other four had an increase in their test results. Seven out of eight participants were 19 year old, while one was 20 year old. All of the participants were men. They were chosen based on their test results and the fact that only men participated was random, as the list only contained numbers. The overall list was divided into two smaller lists; one with decreased performances and one with increased performances between tests. I picked a person's code number every five codes from each list. I aimed for four participants from each condition.

3.6 Procedure

The first step was to contact the military camp. Contact with one officer was established, and this is the only person from the camp that had any relation to the study. We had one face-to-face meeting and then communicated via phone and e-mail. I got a list (anonymized with code numbers) with test results of the 3000-meter tests (baseline and post).

Based on this list, I selected eight (8) participants and the officer contacted the military camp where the intended participants were stationed after the recruit period. I was then put in touch with one officer at the intended participants' current military, who contacted the recruits. All of them accepted the invitation and confirmed via the officer that they would participate. At that time all invited participants signed the consent form for voluntary participation (Appendix A). Upon receiving the confirmation from the officer that all invited recruits agreed to participate, I scheduled a time plan for interviews when I would visit the military camp where they were stationed to interview them face-to-face. Until that point in time I had no knowledge of the invited participants' names, gender or any other personal information. The interviews took place at the military camp a month after they were transferred there following the 10-week recruit period at the military camp where baseline and post-tests were conducted. The interview was my first contact with the interviewees. My second and final contact with them was by e-mail, which I used to send them the transcription of the interview and asking them to confirm the data. This is called member checking and it is considered the most important measure to ensure a study's data credibility (Lincoln & Guba, 1989; in Shenton, 2004). When this step was concluded the interviewees' electronic addresses were deleted, while all interview transcripts and analyses texts were saved with a code name.

Two pilot interviews were conducted three weeks ahead of the actual interviews. This is an important step during preparations for a qualitative interview (Dalen, 2011). This was done to test if the questions in the interview guide were understandable, if they extracted in-depth information, and if they were asked in an order that made sense for collecting information, but also to test myself as the interviewer. The interviewees gave me feedback on the interview experience and on how the questions were perceived. This was also an opportunity to test my technical equipment used to audio-record the interviews. The pilot interviews were transcribed immediately after the interviews in order to get a clear view of the

information the informants gave (Dalen, 2011). Upon reading the transcripts, refinements were made in the interview guide; few redundant questions were deleted and the order of the questions was improved (the content of interview guide is discussed in details in section 3.9).

3.7 Semi-structured, in-depth interviews

The aim in this study was to gain insight on how a group of individuals experienced a phenomenon; specifically how the military recruit period is experienced by 19 year old recruits. More specifically, I aimed to learn whether the military experience had any impact on these recruits' attitudes toward PA. It was important to capture how the recruits perceived, described, felt about, judged, remembered, made sense of, and talked about the military experience in relation to their attitude for PA. To do this, in-depth interviews were carried out with selected military recruits (Patton, 2015)

Conducting a semi-structured interview is one form of doing a research interview. Brinkmann and Kvale (2015) defined semi-structured interview as; "... an interview with the purpose of obtaining descriptions of the live world of the interviewee in order to interpret the meaning of the described phenomena" (p. 6). Characteristics of semi-structured interviews are that they are more or less structured, questions can be reordered during the interview, the way of asking questions is flexible, language may be adjusted to the interviewee, while the interviewer may answer questions and make clarifications during the interview. The interviewer may also add or delete probes to the interview between subsequent interviewees (Berg, 2007). A semi-structured interview includes questions that are standardized yet the researcher is allowed and expected to go beyond these questions when it is convenient (for instance when there is need for follow-up-questions). An argument for conducting an unstructured or semi-structured interview is that a rigid structure can blind the researcher from the respondent's meanings. This approach to the interview can lead to a mechanic interaction, and the researcher may be less aware of phenomena that are important to the

interviewee (Ryen, 2002). It was important that the language and the words that were used in the interview were understandable for the respondent (Berg, 2007). This means that questions were adjusted based on the person I was interviewing. I also had in mind that different people have different perceptions of the world when I made the standardized questions to the interview-guide. The interview was therefore approached from the subject's perspective (Berg, 2007). For instance, the follow-up-questions I asked depended on how much each and one of them talked about the themes from the beginning. It was therefore important to start off with broad questions. In this way I could better see from the interviewee's perspective and easier find the appropriate follow-up-questions.

In addition to the interviews, the present study looked into the participants' results on physical tests from the beginning of and after the recruit period was completed. This was done for the purpose of identifying the best informants for the study as it is discussed earlier here (see participants section above), and these data provided by the military was a source of information also considered in the analysis of the interviews to help me understand and then interpret what they shared.

3.8 Researcher as instrument

As a researcher, I brought my own assumptions and predispositions to the study. "All understanding is based on a pre-understanding or insights. This includes meanings and perceptions we have in advance in relation to the phenomenon that is studied" (Dalen, 2011, p. 16). It was important that I was aware of my assumptions as a researcher throughout this project, from its inception to conclusion, which I share and discuss here, as suggested by Dalen (2011). First of all, I am enrolled at a master's degree program in public health due to my general interest for health promotion and especially for PA among the Norwegian people. The steady decline in the PA levels among young Norwegians intrigues me because of the significant health consequences that inactivity entails. I was formerly educated as a physical

education (PE) teacher and I have background from different sports, such as biathlon, cross country skiing, running and football. As a PE teacher, I know that schools are seen as an arena where positive attitudes toward physically activity can be implemented. However, I believe it is important to look at the time following the years in school and see how other settings, such as the military, can be used to enhance attitudes toward PA. I have also served the conscription at His Majesty The King's Guard myself, which means that I have completed the same recruit period as the young men in this study. At that time I was 19 years old, like the interviewees, and this is now seven years ago. I was back then an active biathlon athlete and experienced the recruit period as a challenge considering time, energy, and other people's attitude toward PA. Another reason for disclosing my own predispositions is to enhance my study's trustworthiness in terms of confirmability, as this personal disclosure is a key criterion for ensuring confirmability, according to Shenton (2004).

3.9 Interview guide

Most researchers agree that an interview-guide should be used in an interview (Ryen, 2002). The issues often discussed among researchers concern the formality and structure of the interview-guide. If the purpose of the study is to find out about the respondents perspective, less structure in the guide is preferable. This will give the respondent the opportunity to influence the interaction (Ryen, 2002). The purpose of the use of an interview-guide is to lead the conversation to predetermined themes (Kvale & Brinkmann, 2015). Though I sought an open conversation where the participants would answer freely, this guide kept the conversation focused on the topic of my study. The interview guide I used was developed considering the existing literature. More specifically, as Smith and Biddle (1999) did when they explored attitude change through a physical activity intervention, the interview guide was

...constructed around the Theory of Planned Behaviour and asked the participants about their intentions, attitudes and experiences of the course. In addition, the participants were asked about how

the course had changed their attitude towards exercise, if at all, and their future intentions to be physically active” (p. 278).

The interview-guide used was constructed around the three factors that influence a person’s intention to do something according to the TPB (attitude toward the behaviour, subjective norms and perceived behavioural control), and adapted to the context of PA during the military recruit period in Norway. The interview guide is presented in Appendix B.

4.0 Data analysis: Thematic

Qualitative research uses different approaches in the analysis of the empirical material, but all of these approaches commonly seek to interpret the collected data. A qualitative approach assumes that people shape or create their own social reality and gives meaning to their own experiences. This means that different people experience different realities (Dalen, 2011).

The collected data from the interviews were in audio format. The audio files from the interviews were transcribed verbatim and then analysed. There are in turn several approaches to interpretation of a text’s meaning (Kvale & Brinkmann, 2015), and in the present study I chose to use a thematic analysis following the guidelines of Braun and Clarke (2006). Braun and Clarke (2006) stated that the thematic analysis has been widely used in qualitative research and psychology, and that it is a fundamental method for analysis that seeks to identify themes and patterns related to the variety of epistemological and ontological positions in the complex qualitative approach. These themes and patterns are searched across a dataset, which in this case are the transcribed interviews.

A strength of the thematic analysis is its flexibility, which can help to provide rich data to the study. This flexibility allows research to be done either with an essentialist/realist worldview or a constructionist one. A thematic analysis is also flexible in the way that it can be independent of theory and epistemology. Another strength of the thematic analysis is that it

provides skills that a young researcher can learn (Braun & Clarke, 2006). This is therefore another reason to do a thematic analysis considering that this is a master dissertation.

4.1 Analytical approach

The present study used a thematic analysis and one of the decisions that I, as the researcher, had to make was on the issue of the paradigm used to inform this research. “Thematic analysis can be conducted within both realist/essentialist and constructionist paradigms” (Braun & Clarke, 2006, p. 85). This study attempted to answer whether military recruits experience military service as a period that has any impact on their attitudes toward PA. An essentialist/realist approach can according to Braun and Clarke (2006, p. 85) be to “theorize motivations, experience and meaning in a straightforward way”. Analysis at a latent level comes often from a constructionist paradigm, where meanings and experience are produced and reproduced instead of being a part of the individual. “Thematic analysis conducted within a constructionist framework cannot and does not seek to focus on motivation or individual psychologies” (Braun & Clarke, 2006, p. 85). This means that a constructionist paradigm was unsuitable for the analysis as the purpose was to look at a group of people’s attitudes toward a behaviour. On the other hand, the essentialist/realist approach assumes that there is a relationship between meaning/experience and language and that language makes it possible to bring out meaning and experience (Braun & Clarke, 2006). Considering that the collected data were based on conversations with people in semi-structured interviews, this was the appropriate paradigm to inform my analysis.

4.2 Decisions guiding my analysis

Braun and Clarke (2006) emphasize the importance of making certain choices and decisions before conducting a thematic analysis. These choices and decisions for the present study are discussed below. Initially I had to decide which type of analysis that would best suit my study. A central question was whether the analysis should be a rich description of the data

set or a detailed account of one particular aspect. A rich description of the data set is suitable when doing research where there is a small amount of previous research in the field under study (Braun & Clarke, 2006). There are several studies that have looked into changes in physical performance during a recruit period or military service, but to my knowledge there is no research investigating the exact field of how the recruit period influences a recruit's attitude toward PA. Having that said, this type compromises the depth of the analysis, especially when the final report has a word-restriction with regard to its length. An alternative within thematic analysis is a more detailed consideration of one theme or a group of themes in the data set. This is preferable when the researcher is looking to go in depth within a specific area of interest in the data set (Braun & Clarke, 2006). Considering that this study has one specific research question to answer, this stood out as the best alternative. The recorded and transcribed interviews constitute the data corpus of the study. To find the data set, which is all the data from the data corpus used in the analysis, a choice between the two different approaches had to be made. This study had a specific research question: *Do military recruits experience the basic military training period as a time that has any impact on their attitudes toward physical activity?* This research question aims to find something specific, which led to choice of a more detailed consideration of one theme. The parts of the data set that related to this research question were thus essential in the development of a theme.

Another decision that had to be made was whether the analysis would follow an inductive or deductive approach. An inductive approach is a "bottom up" way to do the analysis. This means that the questions asked to the participants had little relation to the developed themes in the analysis. The investigator's theoretical interest in advance of the research was not of importance when the themes were constructed. This means that the researcher's preconceived perceptions were set aside in the coding process and the coding went without the attempt of fitting into a previously used coding frame (Braun & Clarke,

2006). That being said, Braun and Clarke (2006; p. 84) points out that "...the researchers cannot free themselves of their theoretical and epistemological commitments, and data are not coded in an epistemological vacuum". The inductive approach fits when the research question develops in the process of making the themes (Braun & Clarke, 2006). A deductive approach has on the other hand a purpose of using the researcher's theoretical and analytic interest in the analysis. Braun and Clarke (2006) talked about this approach as 'the theoretical thematic analysis', and this form gives a more detailed analysis of some of the themes in the dataset. When the themes are made based on a specific research question, the theoretical thematic approach is more suitable.

The decision between the approaches was therefore made on the basis of whether the researcher is coding for a specific research question or if the research question is developed during the process of coding (Braun & Clarke, 2006). The coding process in this study was conducted without trying to fit the information into some previously used coding frame, which corresponds to the inductive way of doing the analysis. Another argument for the inductive approach is the small amount of previous research on the area. However, this study was informed by a specific theory, the theory of planned behaviour. The themes developed in the analysis, as well as the questions asked to the participants were based on this theory, which coincides with a deductive approach. Additionally, Braun and Clarke (2006) states that the choice is based on how the data are coded. A deductive approach is suitable when the coding are done on the basis of the research question instead of having the research question evolve through analysis. The present study had a research question to begin with along with the TPB- model, and the coding was done based on this. The analysis did therefore use a deductive approach.

Then, there was the decision regarding the level at which themes are identified. In thematic analysis, themes can be identified at a semantic level as well as at a latent level.

Themes can be identified by looking at explicit meanings in the dataset, which is at a semantic level and the researcher does not look any further than what the participant said or wrote. Yet, a thematic analysis can also focus its search for themes at a latent level.

A thematic analysis at the latent level goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions and conceptualizations- and ideologies- that are theorized a shaping or informing the semantic content of the data” (p. 84).

The analysis in the present study was conducted at the semantic level and the decision was made based on the paradigm adopted in the study (Braun & Clarke, 2006). The last but fundamental decision in doing thematic analysis concerned the paradigm. According to Braun and Clarke (2006), “thematic analysis can be conducted within both realist/essentialist and constructionist paradigms” (p. 85). This study attempted to answer if military recruits experience military service as a period that has any impact on their attitudes toward PA. An essentialist/realist approach can according to Braun and Clarke (2006, p. 85) “...theorize motivations, experience and meaning in a straightforward way”. Analysis at a latent level often come from a constructionist paradigm, where meanings and experience are produced and reproduced instead of being a part of the individual. “Thematic analysis conducted within a constructionist framework cannot and does not seek to focus on motivation or individual psychologies” (Braun, & Clarke, 2006, p. 85). This means that a constructionist paradigm was unsuitable for my analysis as my purpose was to look at a group of people’s attitudes toward a behaviour. The alternative, the essentialist/realist approach assumes that there is a relationship between meaning/experience and language and that language makes it possible to extract meaning and experience (Braun & Clarke, 2006). Considering that the collected data were based on conversations with people in semi-structured interviews this was the most suitable paradigm to inform my analysis.

4.3 Procedure in the analysis

The detailed guidelines from Braun and Clarke (2006) were followed, guiding my work from the transcription of the data until producing my final report. The first step was to familiarize myself with the data. The purpose of this was to get familiar with the depth and all the aspects of the data and begin my search for meanings and patterns. This was done by transcribing data, reading the scripts closely and repeatedly, and by taking notes. The close reading was also important to facilitate for phases later in the analysis. Bird (2005; referred in Braun & Clarke, 2006) argued for the transcription of the data as a key phase in qualitative analysis.

The next step addressed the issue of generating initial codes. This phase started when I was familiarized with the data and had an overview of what was important and interesting in the data set. Initial codes were produced based on their relevance and importance to the phenomenon under study. The purpose of coding was to organize the data into meaningful groups, which made it more manageable in the upcoming phases of the analysis. In the coding process I identified parts of the data on a semantic level as I was looking at the participants' explicit meanings. This was a criterion when identifying codes. Coding can be conducted manually or by the use of a software programme. Saldana (2013) argue that coding manually on paper gives control and ownership to the data and therefore recommend this approach to inexperienced analysts. Hence, the present analysis was performed manually by taking notes, highlighting with different colours, and the use of "post-it notes" for finding patterns and segments within the data.

When all of the coding was done, phase three began. This phase aimed to search for themes by sorting different codes into themes. The codes that were developed in the previous phase were now placed into potential themes, meaning that all data relevant to a specific theme were put together. Each code was written down on a separate piece of paper for making

it easier to see where it belonged. Mind-maps were also used to get an overview of the relationships between codes and between themes. This process formed my preliminary themes.

The purpose of phase four was to review the preliminary themes developed in phase 3 and to refine these. Some of the themes turned out not to qualify as themes, other ones were merged, while some were split up into separate themes. According to Patton (1990; in Braun & Clarke, 2006) it is important to ensure that data within a theme have a clear connection in meanings and that there is a clear distinction between themes in terms of meanings. This phase consisted of two stages. First, the data extracts in each theme were reviewed, and I had to find out whether there was a coherent pattern within the theme or not. I moved on to the next level when the theme made a pattern. When it did not, I went back and to find another place for the data extract or I created a new theme. In the next stage I dealt with the entire dataset. The purpose of this stage was to look at each theme and consider its validity in relation to the data, and if it reflected some meanings within the dataset. This is also the phase where any data that had been missed from earlier were coded into themes. In the end, the themes made a thematic map reflecting the dataset. The coding was ongoing and during this process, new themes came up. This process ended when nothing more substantial to be added. In the end of the phase, the purpose was to become familiar with the themes, how they fit and how they reflected the data set (Braun, & Clarke, 2006).

In phase five I defined and named the previously themes. It started when the thematic map was at a satisfactory level, and its purpose was to identify the essence of what the themes were about and the reason why the theme was addressed in the study. A detailed report was written about each theme to describe its position in relation to the overall data. This was done to control that the themes did not overlap and to see them in relation to the research question. The themes were also checked for potential sub-themes, which are themes within a theme and

help give a complex theme structure. Themes were given names and in the end of the phase, themes were clearly defined and described.

The last phase was to produce the report. Braun and Clarke (2006) point out several issues of consideration when telling a complicated story. The reader must be convinced of the validity of the analysis, the analysis has to be concise and interesting, the writing has to give evidence of the themes and examples should capture the essence of what's being demonstrated. They emphasize that the writing should provide more than just a description of the data. It was thus required that the analytic narrative of the story being told, went beyond this, and was argued in relation to the research question.

5.0 Trustworthiness

Lincoln and Guba (1985: referred in Patton) presented four constructivist criteria for establishing trustworthiness in a research study. These are credibility, transferability, dependability and confirmability, and different techniques in order to be achieved. Credibility addresses the issue of how the participants' view of the world fits with the researchers' reconstruction of this view. Dependability is close to reliability and focuses on the process and the researcher's responsibility to make the process logical, traceable and documented. The criterion of transferability focuses on the issue of generalization to another case. The researcher should give information that illuminates the similarity between the presented study and other studies. The last criterion is about confirmability, which is there to ensure that the collected data and interpretations done in a study are more than the researcher's thoughts (Lincoln & Guba, 1985; referred in Patton, 2015).

Shenton (2004) presented certain strategies to ensure these criteria. Member checking is considered the most important measure to ensure a study's credibility (Lincoln & Guba, 1989; referred in Shenton, 2004). Checking involves letting the participants read the transcripts after the interview to ensure that the words match with their views (Shenton,

2004). The researcher's reconstruction of the data will be confirmed if the data are consistent with the informants actual intention. The participants in the purposed study received the transcripts after the interviews were conducted and verified the text. Thick description is a strategy that promotes transferability and this is achieved when a phenomenon and the way it was studied is described in detail. This makes the results in a study transferable to other settings, situations and people (Lincoln & Guba, 1985). Dependability addresses the issue of reliability and a detailed description of the methods used and their effectiveness is a way to give the reader an understanding of what has been done. According to Shenton (2004), this description should include the research design and the implementation, details about research done on the field and an evaluation of the effectiveness of the process in the study. Lastly, confirmability addresses the importance of objectivity. This means that the findings of the study should reflect the participants' experiences more than the investigator's preferences. For this to be achieved the investigator's bias must be reduced, which adds strength to the research (Shenton, 2004). "Miles and Huberman consider that a key criterion for confirmability is the extent to which the researcher admits his or her own predispositions" (Shenton, 2004, p. 72). In the present study, all of the abovementioned techniques for ensuring trustworthiness were employed.

6.0 Ethical considerations

Last but not least, as the researcher, I had to take into account some ethical guidelines while carrying out this project. Dalen (2011) presented five areas the researcher has to consider when conducting research based on the guidelines developed by The Norwegian National Research Ethics Committee (NESH).

First is the requirement of informed and free acceptance. An informed acceptance means that the informant should be informed of everything that concerns his or her participation in the research project before it starts, and free acceptance means that there is no

pressure to participate. It is important that the first letter with information is written in a way that informs the informants of everything that is going to happen. In addition to this, it is important that this information is given in a way that is understandable to the informants. Because of the limited amount of information the researcher can give prior to the interview in qualitative studies, the researcher must constantly consider if there is a need to give further information during the project (Dalen, 2011).

There is also a requirement to inform the ones who are investigated and this has to be seen in context to the requirement of informed and free acceptance. Dalen (2011) emphasizes the importance of the first e-mail or postal letter to the participants and the explanation of the aim of the study. This letter and the interview-guide are something that the office of the Norwegian Social Science Data Services (NSD) considers very meticulously when approving an application prior to a research project.

Furthermore, the requirement of confidentiality states that those who become objects of research should be ensured that the personal information they give is treated confidentially. The research-material must be anonymized, and the researcher must prevent conveying information that could harm the informant. This is important when conducting an interview because the informant should feel confident that the information that is shared during the interview is kept confidential (Dalen, 2011). Creswell (2014) also emphasizes that the participants should be provided with the results, and the participants in the proposed study did receive copies of the final written product.

The present study contains limited personal details on the participants. Prior to initiation the project was approved by the Norwegian Centre for Research Data (NSD). Upon reviewing the project, the NSD forward the application to the Norwegian Data Protection Authority if necessary (Dalen, 2011). The Regional Committees for Medical and Health Research Ethics (REK) has also been informed. This is a committee that consider medical and

health research projects, general thematic research biobanks and dispensation from professional secrecy requirements for other types of research.

Lastly, according to Anders Aandstad, researcher at The Norwegian Defence University College, any research done on The Norwegian Armed Forces follows civilian guidelines for reporting research (personal communication, October 29, 2015). He suggested however, to inform The Norwegian Armed Force's Sanitary (FSAN) about the study because they are keeping an overview over ongoing projects. This step was also taken.

7.0 Results

This chapter presents the findings in the study. According to Kvale and Brinkmann (2009), there are no standards for how a researcher should present the results from qualitative interviews. However, Braun and Clarke (2006) describe the importance of presenting compelling and vivid data extracts while the analysis relates back to the research question and literature when producing the report of a thematic analysis. The chosen data extracts here reflect the essence of the themes identified, and relate the recruits' experiences of the recruit period and its influence on their attitude toward PA.

During the analysis, it felt natural to organize the data into two umbrella clusters of categories; one presenting the results with regard to the theory that informed the study and the second cluster of categories presenting organized all other themes that were identified and classified in categories. This organization of the data was chosen as most suitable with the intention of using the theory of planned behaviour (TPB) to understand the phenomenon of interest--the recruits' experiences of the recruit period. As mentioned, the TPB entails three different predictors of intention, which in turn is the determinant of behaviour. These predictors are subjective norm, attitude toward the behaviour and perceived behavioural control, and constitute some of the categories in this presentation of findings (Biddle, Mutrie, & Gorely, 2015). Other categories, not directly fitting in the TPB, also were identified based

on themes that often occurred across the interviews and are presented in the second cluster of my results. All categories presented below are divided into subthemes. Themes were initially identified for each participant during the analysis of each interview transcript. Yet, I further looked for patterns and/or interrelationships across the individually developed themes, which according to Bazely (2013) is called a cross-case analysis. The purpose of doing such an analysis "...is to establish if there are patterns of association within cases that hold true across cases, without losing sight of the particularities of each case" (Bazely, 2013, p. 285). All categories with their subthemes are portrayed in Table 1 at the end of this chapter, to give the reader a summary view of what the findings of the present study entailed.

Categories within the Theory of Planned Behaviour

7.1 Subjective norm

In the interviews several themes came up referring to subjective norm, which according to Ajzen "... refers to the perceived social pressure to perform or not to perform the behaviour" (Ajzen, 1991, p. 188). The behaviour in this case is physical activity.

7.1.2 Influence from other recruits

Seven out of eight participants reported a positive influence from fellow recruits toward being physically active in their spare time outside the military training. There was consensus among these seven interviewees that the other recruits who were physically active themselves influenced them in a positive way. One reported even that he was motivated to be active by the ones that were inactive because he saw an opportunity to get better than them. One reported that he wasn't influenced in any way because he would have been physically active regardless of the others. Another one was motivated to be physically active by fellow recruits who were of assistance in the execution of physical exercises. One of the recruits describes how others who had a positive attitude toward PA influenced him:

We were a group of guys that were great at pushing each other. If someone did not have the energy or had other excuses, we pushed each other. That worked well. I felt that I had to join them. Could not be

lazy! Everyone was focusing on working out. Everyone was `addicted to working out`. You felt that you had to work out in order to keep up with the others (R.8).

Three of these seven recruits emphasized in particular the effect that roommates' attitude toward PA had on their own level of PA. An example of this was regarding a challenge called "*beast challenge*". This was a challenge that was given from the officers with the intention to increase the recruits' level of PA in their own time. It consisted of different physical challenges as for example running a given route, complete a steeplechase run or do exercises with military equipment on. One of the interviewees explains how the roommates encouraged him to carry out this challenge. We should do an exercise every week that was quite heavy in our own time. Often I wanted to skip it, but there were 4 others in my room who encouraged me to join. We did these exercises together. If they did it, I had to join them. I switched rooms during the RP! I ended up with someone who did not take this challenge at the evenings. That led to that I dropped it as well. They were nice guys, but they were lazy (R.4).

One of the other interviewees tells about how he experienced "*beast challenge*" and the other recruits' participation at this challenge as a motivating factor for him to get outside and be physically active:

We had a session at the evening every week called `beast challenge`. This was a contest within the troop initially but within the company after a while. This was all about finding motivation to get yourself outside and do an effort. We should do different exercises, for example some kind of lifting, steeplechases or things like that. It was no pressure from anyone but we did it to get to know our limits and to see if we had learned anything from this. It was all about our own motivation and this motivated me really to get outside. The fact that it was great participation from the other recruits motivated me especially. Go through that contest and show that... yeah... and the winner got bragging rights within the troop and within the company. (R.7)

However, some recruits experienced a negative influence on their level of PA as well. Four of the interviewees reported that they were affected when other recruits had a negative attitude toward being physically active. When they were asked if there was under any

circumstances that they were influenced to be inactive, three of them responded that when other recruits did not want to work out at the evenings it resulted in them skipping it as well. One said that he would have worked out if everyone else were working out. A quote from one of these recruits illustrates that other recruits can have a negative influence and the importance of spending time with recruits that had the right attitude:

It was a bit like... `ok you do not want to work out today? Then I will not either`. Most often it tipped the other way that we did work out. So we affected each other. Eh... but after a while I think people just accepted that they would not be able to maintain their shape, and then it got more relaxing.....The people I was around had no problems with anything. It is important to be around those recruits who does not whine when there is PA. So I tried to hang out with these people. I had my partner, and the closest recruits on my room were positive (R.2).

To conclude, the interviewees reported that the other recruits' attitude toward PA had both a positive and a negative influence on their own level of PA, dependent on whether the other recruits' attitude were positive or negative. In addition to this influence from other recruits' attitude toward PA, one of the interviewees reported that he was motivated by one of the officers:

Absolutely! [motivated by others] We had an officer that I talked to who was focused on physical training. He was very concerned that we should maintain our PA-level the periods were we did not have much physical training. We also had another officer who was really focused on our motivation, intrinsic motivation and ways that we could motivate ourselves. He was the one behind "beast challenge. Absolutely great motivation from the officers (R.7)

As mentioned, perceived social pressure is a central part of the subjective norm. How the recruits perceived pressure (direct and/or indirect) from anyone or from any other conditions during the recruit period to be physically active or physically inactive came up in some of the interviews as well as how they experienced influence from other recruits. Two of the interviewees reported perceived pressure to be physically active, partially from other recruits. One of them said that he felt that he had to join because everyone else was being

physically active. He follows up with saying that ‘it was kind of a pressure but there was no one standing there with a whip’. The other one said: “It was pressure from the other guys. They said: ‘now you are joining the gym, if not, no one will’. Then I joined instead of lying in bed and relax.” (R.6).

This was a pressure with positive impact on the recruits that reported it, because it resulted in an increased level of PA.

7.1.3 Be part of a group

The concern of how they experienced being physically active in a group was also addressed in the interviews, and can as well be related to subjective norm as a predictor of the intention to be physically active. Out of the seven interviewees who spoke about how they experienced being physically active in a group, all seven reported that this was positive regarding their own attitude toward PA. One said:

That is something you feel right away. If someone stands up and says ‘come on guys, this is not that bad’, or ‘hang in there’. This motivated me. When this happened, I often got the extra guts to help the ones who were struggling. (R.6).

Another one appreciated the variety between being physically active individually and in a group. The remaining five interviewees reported that the competitive focus that occurred when they were working out in a group was of a positive influence, and they emphasized that they made an extra effort as a consequence of not wanting to be *the slowest* or *the weakest*.

I felt that when I was tired and not interested in running, that when I got started, I became competitive and ran what I was good for. That is how it is.... The competitive instinct hits in here. You want to be the first of all of the others. So it helps you to get going. You know, you don’t want to be the one in the last place. You will do anything that you are capable of to avoid that” (R.1).

Another recruit illustrates how the others attitude toward the activity influenced the effort that was made in the group, and that there was a difference between the ones that had

been more physically active before the recruit period. He experienced as well the competitive focus as something positive for the effort that was made:

You can find motivation in others. You will run 1 km/h faster if you run together with 30 other recruits. No one wants to be the slowest. It can also be the other way. If you are out running and 20 recruits decides that they will walk, but it was not often like that. It was mostly the other way. Someone did not give a fuck, but mostly there was a competitive instinct in the other recruits. It was easy to notice the ones that had been active before the recruit period. They wanted to be the best. (R.4).

7.1.4 Social reasons

A frequently reported motive for being physically active was socializing with friends. Five out of five who had experiences regarding the social part of PA, reported that this was a reason for them to engage. One said that it is easier to stay motivated, and the activity gets more fun if you have someone besides you. Two of the interviewees emphasized being part of a team as a reason and being together about doing something. Another one tells about how he engaged in both football and joined gym because his friends were there:

It was really a social thing [why he was physically active before the recruit period]. I started to play football because all my friends did. Many of my friends started to work out at the gym and they liked it. That is why I signed up as well (R.4).

Another one tells about factors that have influenced him to be physically active, and how the gym is as a meeting place for him:

I have also other factors. Look good, and eat properly besides exercising. I have to do that. Eh, so it is mainly progress and I also like hanging out with friends when I work out. The gym is kind of a meeting place. It is social. It is something about that fellowship (R.2).

To sum up, the interviewees experienced influence toward PA from the other recruits. This influence was both positive and negative, and depended on the other recruits' attitude. One of the interviewees experienced a positive influence from the officers as well. There were also experienced a social pressure to be physically active in the recruit period. Regarding being part of a group, there was a broad agreement across the interviews that this had a

positive influence on their attitude toward PA. Lastly, the recruits' values being with friends when they are physically active, and this is a reason for them to take part in PA.

7.2 Perceived behavioural control

The next predictor of intention to the behaviour, and with a direct link with the behaviour, is perceived behavioural control. Several themes during the interviews referred to this predictor which according to Ajzen "...refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (Ajzen, 1991, p. 188).

7.2.1 Energy level

One of these themes was the recruits' energy level, which is related to the perceived behavioural control in that energy is a factor for the perceived ease or difficulty to perform the behaviour. Out of seven interviewees who talked about their energy level and its effect on their level of PA, six said that they had limited energy to be physically active in their spare time. The last one reported that he managed to work out in his spare time despite of a low energy level after military training. One of the interviewees explains how he spent the evenings in the recruit period:

Some of the days ended at 18.00. That was considered early. The rest of the days ended between 18.00 and 21.00. We often got tasks to do at the evenings. When those were done, we had time... but we did not have the energy... we did not do much besides the military training except from getting the energy back and be ready for the next day. Relaxing. (R.4).

Another interviewee said that there were other things more important to do than PA and that he had to prioritize differently than he wanted:

I was not [satisfied with his level of PA during RP]. Because I felt that it took so much energy. It was always focus on being prepared for the next day. Having clothes folded in the closet and having the bed stretched and things like that. Being physically active was given lower priority (R.2).

One of the other interviewees emphasized how the total daily amount of duties affected whether he was physically active or not in his spare time:

I would say that it got much worse [PA-level during the recruit period in relation to before], because then it was... I had less energy to work out. I was exhausted and wanted to go to bed. Because you do not get much sleep, you go to bed 23.00 and wake up at 06.00. And then you are outside until 16.00-17.00 in the afternoon, which makes you tired, and then it is not tempting to come back and exercise right away. Even though you are not physically active all day, you are getting tired by having someone talk to you all day” (R.1).

7.2.2 Limited time to be physically active

The limited amount of energy was related to the fact that they had little time to spare after the daily compulsory military service as they were given tasks to prepare for the next day. These tasks were regarding personal equipment as oiling the weapon, folding clothes, ironing of clothes or getting the room ready for the next day’s inspection. Five of the interviewees reported that the long days and the tasks that had to be done before the next day were limitations for engaging in PA in their spare time. The remaining three interviewees did not mention time as a limitation for their PA. One said that he had to use the time to get KTS (ready for combat) for the next day, another one said that he prioritized to recover for the next day, one said that the days ended between 18.00 and 21.00 and that he did not do much besides the military training because of this. Another one emphasized that he had the next day in mind and prioritized to sleep. The following quote from the last one who responded that there was little time to spare, describes the issue of how limited time influenced his attitude toward PA during the recruit period.

It was not like I did not want to work out. It was just that I did not have the time. I felt like I had no time. It did not have the priority among other things that I had to do. So, with that perspective, it has changed my attitudes. You are put in a dilemma and you have to choose. You know what would be the right thing to do. You want to be physically active, but then it goes to hell the next day with the military training. So yes, in that way it did affect my attitude toward physical activity. (R.2).

The same interviewee pointed out that the military did not take into account that they should be given time to work out on their own:

At [Place X] we had days that lasted from 06.00-18.00. That was a normal day. And when we were up at 06.00, we went to bed around 22.00. And you have to make time for washing, ironing and folding clothes. And then you... and then you have to take a shower. It probably would take us an hour to work out and thirty minutes to get there and back again. It was therefore limited time and energy to exercise... eh, it is not like they [the military] are taking into account that should have energy at the end of the day so we can work out at our own. In that way, it was not well facilitated. (R.2).

7.2.3 Self-confidence and feeling of mastery

Self-confidence and feeling of mastery in the behaviour are related to the perceived behavioural control. This was themes that also came up in some of the interviews. Two out of three interviewees who had experiences regarding self-confidence reported that their self-confidence for PA had increased during the recruit period. Common for these two recruits was that both of them finished the recruit period with better scores on their final 3000 meter test than the initial test. Both of them pointed that a consequence of their increase in physical shape resulted in better self-confidence. One of them said: "I feel in better shape than I was before and that gives me more confidence. I have to say that"

Another one also experienced that the recruit period did have a boost on his self-confidence:

I wasn't at my best when I came in here. Regarding my endurance... that was quite poor. I felt a lot better at the end of the recruit period. That gave me a boost. [was this something that affected anything else beyond your physical shape?] Yes, actually. I got more confident in myself. (R.8).

Two other recruits reported a decrease in their self-confidence in PA. This was related to their decrease in physical performance and the lack of opportunity to maintain their level of PA in the same way as before the recruit period. One of them said: "I have not competed lately and my self-confidence have maybe decreased a bit. Poor shape is something that is related to my self-confidence". (R.3). The finding that their self-confidence decreased is

something that is related to a drop in feeling of mastery in the behaviour, due to poorer physical shape.

Concerning the recruit period's influence on the interviewees' feeling of mastery, five out of five who talked about this reported that their feeling of mastery in PA had increased during the recruit period. One said that he experienced mastery by working out with other recruits at the same and on a higher level than himself alone. He said that he became eager and motivated by closing up the gap to others who were in better initial shape.

The feeling of mastery. I became quite eager. `I am not many push ups behind him` or `I am not far behind him in the bench press` or things like that. So you get the sort of new challenges every day. New things to strive for. And that is just cool. I came into the military with the feeling that I mastered PA in a good way. Also, I see here that there are people who are better than me and then I feel that `maybe I did not master it that well after all?` But it is only motivation. (R.2).

Two of the others said that they were surprised to see how far they were able to push themselves, and that this influenced their feeling of mastery. Another reported that the feeling of being tougher and the increased physical performance were factors that influenced his feeling of mastery in a positive way. The last one of these five expressed that his increased feeling of mastery in PA was a consequence of the challenges he went through in the recruit period:

The physical challenges in the recruit period gave me the feeling of mastery. Many things you feel that you could not manage from the beginning. For example when we were marching and you think that you are tired but you manage to push further. The next time, you can push even further and so it goes on. You become capable of master it yourself. I would say that the challenges that I met during the recruit period were fine. Some of them were maybe to hard but somehow you find power to come through anyway. (R.8).

One of the recruits who reported increased feeling of mastery during the recruit period experienced a positive change in motivation as well:

Maybe the intrinsic motivation counts more after the recruit period. That the influence from the surroundings do not mean as much as it did before. I have become stronger as an individ. You do not get stronger if your friend works out. You have to do it yourself (R.4).

Based on these experiences, it appears that military recruits find the recruit period as an experience with positive influence on their intrinsic motivation, feeling of mastery and of self-confidence in PA.

7.2.4 Facilitation

Another theme that came up in relation to the perceived behavioural control was the facilitation for PA. How the recruits experienced the facilitations for PA in the recruit period is related to how Ajzen described this predictor as something that "... refers to the perceived ease or difficulty to perform the behaviour" (Ajzen, 1991, p. 188). Out of five interviewees who spoke about the facilitation for PA, five reported that the facilitations for being physically active were satisfactory. Two of them appreciated the short distances from the military camp to the locations of the running track, the football field and the gym.

There were however reported some negative remarks on the facilities for PA. One mentioned the traffic outside of the camp as a negative factor for him to be PA, due to his interest with roller skiing. The same interviewee also pointed out that a lot of people in the gym had a negative influence on whether he was physically active or not:

We could use the gym as much as we wanted. But, eh, it was originally not ours to use, therefore it was a lot of people there, mostly students I think. This led to a lot of queue. That does not help when you already are low on energy (R.2).

To sum up the chapter of perceived behavioural control, low energy level was a common reason to not be physically active. Duties that had to be done got priority over PA, and the total daily amount of tasks were tiring. The feeling of mastery is something that increased for several of the interviewees, and the self- confidence in PA for some of them. The recruits were also satisfied with the facilitation for PA, yet with a few exceptions.

7.3 Attitude toward the behaviour

The third and last predictor of intention to the behaviour is a person's attitude, which Ajzen referred to as "the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question" (Ajzen, 1991, p. 188). As with previous predictors, themes from the interviews also related to this one, which in this case was the recruits' favourable or unfavourable evaluation and appraisal of being physically active.

7.3.1 Enjoyment

Enjoyment of physical activity was such a theme as the sense of enjoyment or the absence of it can have a role in one's attitude toward a behaviour (Lewis, et. al., 2015). The interviewees were asked if their enjoyment in PA had changed in any way during the recruit period. Three of the interviewees reported that the enjoyment was the same. One of them said that it fluctuated during the recruit period but that it in total was the same as before he came in. Another one said that he enjoyed PA to the degree that the recruit period was unable to influence him in any way. The last one argues with the cohesion in the group when explaining why the enjoyment stayed at the same level:

[PA before the recruit period]. I liked it very much. [At the end of the recruit period]. I would have to say the same. We became a great group of guys. It was social. It was nice to work out with the guys. (R.4).

Two of the interviewees reported a decrease in how much they enjoyed being physically active. One of them said that it was a consequence of less time to be physically active than before. The other one said:

Eh, that would be less [enjoyment of PA than before the recruit period]. But that is because I do not get to work out on my own as I want to. And when I am physically active, I felt that I was doing it for no use. It felt like a waste of time. I could have done something else instead (R.2).

Two of the other interviewees reported an increase in how much they enjoyed being physically active. Both of them argued that this was because of the cohesion they felt in the

group, and one of them also pointed out the progress he experienced in his own physical performance. The last interviewee did not talk about his enjoyment, but he reported an increased feeling of mastery during the recruit period.

A pattern was observed between the different experiences. Of the four recruits that had an improvement in their test results during the recruit period, the following was reported: two reported an increased feeling of enjoyment; one said that it was the same, and the last one reported a greater feeling of mastery. Of the four recruits that had a decrease in test results during the recruit period, the following was reported: two said that the enjoyment of PA was unchanged, and the two others reported a decrease in their feeling of enjoyment along with their decrease in physical performance. This shows that the perceived enjoyment of PA may somehow be related to whether the physical performance was improved or not. Of course this is only an observation based on a small qualitative dataset and warrants further research.

7.3.2 Attitude toward physical activity

Attitudes toward physical activity is central to the research question of this study, and according to the literature a predictor toward the behaviour. This theme looks at how the participants experienced the recruit period as something that could influence attitudes toward PA. Seven out of the eight interviewees reported that the recruit period could be of influence on their current PA- level or their future PA- level, yet in different ways. One of them talked about the fellowship among the guys:

Since the recruit period, I have been working out with some of the other guys! The recruit period did have an influence on us. [In which way?] I do not know... it is just me and the rest of the guys that I hang out with who decided to step it up. The rest of the troop is not like this at all. We are about eight guys who exercise every day. The rest of them are struggling. Of course, some of them exercise, but many of them are just relaxing (R.4).

Two of the recruits experienced that the recruit period influenced them to run more. One of them also added that the recruit period gave him a boost:

I am more eager to exercise now than I was before the recruit period. I have got a wake- up call, and that is actually what I have learned in here. That wake- up call on exercising in a balanced way. That is something that I want to build upon. Sounds maybe a little nerd to say it... But I have got kind of a drive... I am more aware of the benefits of having stamina as well. That is something that I have felt myself. Because now, since the recruit period, I have started to run in the weekends. I have become more aware of the benefits of being more versatile. The recruit period gave me a wake- up call on where I should be (R.6).

Another one said that the feeling of progress during the recruit period motivated him to be physically active in the future: “I got really motivated by getting the results that I did. Progress. I doubled everything on my tests so I was quite happy about that. That is something that I will bring along in the future”.

Two of the others experienced the recruit period as something that influenced them positively as well, but pointed out that the effect depended on their initial attitude and physical performance. One of them said:

Yes absolutely [experience the recruit period as something that has the opportunity to influence]. It depends of course on which level and attitude you have when you show up there. Of course, if you have been active in sports, not necessarily on a professional level, but been active in sports, you can easily see that it is the same attitudes as this they are trying to teach us in the recruit period. If you show up there without any relation to PA or sports, you will see that it takes a lot more from you. It is expected things from you (R.7).

Another one reported as well that the recruit period had a positive influence, and argued that the people he met in there was obsessed with trying to maintain their physical shape. He emphasized on the other hand the negative influence by seeing his performance decrease and that low energy level. The last one did not experience the recruit period as something with influence on his attitude for PA, and said that he kept on in the same way as before once the recruit period was over.

7.3.3 Attitude toward military service and PA

An issue that was addressed in some of the interviews was how their motivation or lack of motivation for military service influenced their attitude toward PA. Seven out of eight interviewees were positive to undertake military service. The one who responded negatively said that this lack of motivation did not affect his level of PA in any way. Three of the ones who were positive did not talk about it. The remaining four talked about being positive to conduct military service and that this motivation was vital for their attitude toward PA. One of them said the following regarding the importance of motivation for military service on his attitude toward PA:

If I had been demotivated, I would have become depressed. And when you are, you just do not care. You get into your own bubble and everything gets wrong... and you just do not want to do anything. Your energy level gets low when everything feels like shit. Struggle through the military service and then try to be physically active... I think it is important to enjoy being here. If you feel ok during the days, it will be easier to do that extra work out (R.2).

One of the others said: “If I had not had the motivation to be here, I would have given up working out. I would have given up entirely. Skipped working out and I would not have cared at all” (R.8).

The last one pointed out that he would have prioritized differently if he had been out of motivation for military service:

Yes, I would say that [the motivation for military service was of influence]. You are able to do more. Use the energy that you have on something else than hating. If you were in here and hating constantly, I would probably have used the computer or something in the evenings instead of being physically active (R.4).

To sum up, a pattern was seen in the recruits’ enjoyment of PA. The recruits that had a decrease in their test results reported lower enjoyment in PA than before, while the ones with an increase in test results reported a greater enjoyment of PA. The interviewees said further that they were of the opinion that the recruit period is a place

where their PA- level of future PA- level are under influence. They also said that a positive attitude toward military service is important for their attitude toward PA during the recruit period.

Other emerging category

7.4.1 Physical activity and fitness test

As well as their experiences regarding the phenomenon, the recruits also reported the change in their level of PA after they had attended the recruit period. This was asked with the intent to see any connection between the change in levels of PA and the recruits' experiences of the recruit period.

Three of the interviewees shared that their level of PA was lower in the recruit period than before. One said that it was a lot of PA in the beginning of the recruit period but that there was a decline after a week, due to the other training they did that was not physical. One said that the level declined a lot because of his low energy level and the long lasting days. The last one was a former cross country skier and he reported that it became less training during the recruit period because he was used to working out twice a day.

The remaining five reported that the level of PA was higher during the recruit period than before. One of them said:

I have to say, it became a lot more [physical activity]. I looked at a long march as a work out, and these long marches were nothing that I would have done at home... It was a lot more physical activity in the recruit period than before (R.4).

Another one said that the activities were more related to improving their endurance than what he was used to. One of the others emphasized the stable PA level during the day:

It increased quite much during the daytime. We also worked out after the military training... I have to say that it was quite much [amount of PA during a full day]. It was physically demanding to be here. It was marching and that was exhausting, and the long lasting days of course (R.5).

Another one said that his level of PA increased during the recruit period, and that the activities were tougher than what he was used to from before. The last one pointed out the variety in the activities he did during the recruit period:

If you look at an entire day, I would have to say that it was higher during the recruit period than what I was used to. It was a lot of walking, about 12000 – 13000 steps every day. And that was just for walking around. Other days were hard physical training. It was a lot of different training (R.7).

The same interviewee also said that the recruit period was tougher than he had imagined in advance:

It has to be said that I have not talked to anyone about it [how physically tough the military service would be], but I had the impression that it would be a lot more focus on how we should look. We had a lot of focus on that as well, but that was only a part of it. Especially after 22th of July, we have become a greater reaction force in Oslo. I was under the impression that it would be a lot easier physically to be here than it actually has been. I did not think it would take this much of me. That was a positive surprise (R.7).

There is a pattern within their change in PA- levels in relation to their change in physical performance during the recruit period. Out of the five who reported a higher level of PA in the recruit period than before, four of them improved their test results during the recruit period. The last one argues that even though he had poorer test results, he had become tougher in another way than before. The three interviewees, who reported lower PA levels during the recruit period than before, had a decrease in their physical performance as well. This is consistent with that a decrease in PA levels leads to a drop in physical performance, and that an increase in PA levels leads to better physical performance.

7.4.2 The recruit period's influence on their 3000 meter test results

Four of the interviewees also talked about the reasons for their improvement or decrease in physical performance during the recruit period. One of the recruits who had a decrease considered the participation in the recruit period as the reason for this. He mentioned his stress related to military training and the limited amount of time to rest and work out.

Three of the other respondents had improved during the recruit period. They all shared the perception that this improvement was related to their participation in the recruit period. Three out of three said that the training they did during the recruit period was different than what they were used to, and that there was more endurance training. One said:

It is of course because we have done training related to the test. 3000 meter has to do with endurance. It is because I have been more physically active and because it is training almost every day. There are no days without physical activity. It is something every day. It is simply more physical activity than before. If I had been sitting in school in this period, I would definitely been less physically active (R.7).

Another one stated also that there was more PA than before, and emphasized weight loss as an additional reason:

More endurance training... More... what should I say... Something is going on all the time. The weight went down. That is of course one explanation, that you are losing weight. In addition to a lot of endurance training. [has the participation in the recruit period led to this improvement?] Yes, it is no doubt. It is no initiative from me. It is simply because of the program we had (R.6).

The last one supported more PA as one reason, but also the change of diet:

I have got more enduring muscles. Used my legs more. Also, we have had a lot of intervals that have had an effect I think. We also ate very healthy. We ate regularly. I was not that good at doing that before. Both training and the food we ate. I am sure that is some of the reasons for my improvement (R.8).

Table 1: Cross- case table

Themes	Subthemes
Level of PA in the RP	<ul style="list-style-type: none"> - An increase in level of PA among recruits with improved test results during RP. - A Decrease in level of PA among recruits with decrease in test results.
Facilitation for PA	<ul style="list-style-type: none"> - Satisfactory facilitations for being PA. - Opportunity to be PA.
Energy	<ul style="list-style-type: none"> - Low energy level was a limitation for PA.
Time	<ul style="list-style-type: none"> - Lack of time was experienced as a limitation for PA.
Motivating factors for PA	<ul style="list-style-type: none"> - Fellow recruits' positive attitudes toward PA. - Socializing with friends. - Progress. - Competitive focus. - Positive climate in the RP - Officers. - Being part of a group.
Demotivating factors for PA	<ul style="list-style-type: none"> - Fellow recruits' negative attitudes toward PA.
Enjoyment	<ul style="list-style-type: none"> - Less enjoyment in PA among recruits with decrease in test results. - Increased enjoyment in PA for recruits with improved test results.
Attitude toward military service	<ul style="list-style-type: none"> - Positive attitudes toward military service. - A positive attitude toward military service is important for attitude toward PA in the RP.
Perception of RP	<ul style="list-style-type: none"> - RP perceived as a place where military recruits' attitudes are under influence.
Self- confidence	<ul style="list-style-type: none"> - Increase in test results are positive for self-confidence in PA. - Decrease in test results are negative for self-confidence in PA.
Mastery	<ul style="list-style-type: none"> - The RP led to increased feeling of mastery in PA.

8.0 Discussion

The purpose of this study was to investigate 19-year old military recruits' experiences of the recruit period in Norway as a lived experience that may have had any impact on their attitude toward PA. The study additionally aimed to explore if these experiences might associate with the recruits' levels of PA post the recruit period. The findings were presented in the previous chapter and are discussed here in relation with the existing literature and the theory of planned behaviour, before their public health implications are addressed. This chapter also deals with the study's limitations and some suggestions for further research.

8.1.1 Subjective norm

According to Ajzen (1991), subjective norm is one of the independent predictors of intention of the behaviour, and deals with perceived social pressure against the behaviour. Normative beliefs, which also has been presented earlier, is something that determines the subjective norm. These normative beliefs, "... in combination with the persons' motivation to comply with the different referents- determine the prevailing subjective norm" (Ajzen, 2006a). Some of the findings were related to how the interviewees experienced influence from fellow recruits on their own level of PA, and on their attitude toward PA. The military recruits experienced a positive influence from fellow recruits toward being physically active in their spare time outside the military training. This influence from other recruits was negative on their attitude toward PA as well, if the fellow recruits had a negative attitude. Recruits experienced also a social pressure toward being physically active. These findings indicate that military recruits perceive social pressure from fellow recruits to engage or not engage in PA, which means that this influence is something that can contribute to their intentions for being physically active. This further signifies that the recruit environment is a place where recruits' attitudes toward PA can be influenced, and in turn increase their level of PA. The present finding specifically identified that there exist positive attitudes toward PA

among fellow recruits, and in particular among roommates. Existing literature (Rhodes & Courneya, 2003), where subjective norm was examined in the field of exercise, tells us that social pressure is a factor with influence on the prediction of intention. This underpins the finding in the present study that military recruits experience social pressure toward being physically active. Other studies showed as well that support from others to exercise is something that can be positive for both the person's intention and actual PA behaviour (Rhodes, et al., 2002; Courneya, et. al., 2000). Social support is a social influence that refers to help from others to conduct the behaviour, in contrast to Rhodes and Courneya, (2003) who dealt with social pressure. It emerged from the results in my study that help from fellow recruits in the execution of physical exercises motivated the participants. This goes into the social support category, and the finding that this support was experienced as a motivational factor toward exercise behaviour adds to the existing research (Rhodes, et al., 2002; Courneya, et al., 2000). In contrast, Downs and Hausenblas (2005) found that lack of social support was something that obstructed the intention of exercise.

Interestingly, experiences of social pressure in the military setting were reported by the participants regarding expectancy from fellow recruits to be physically active. According to Ajzen (2006a), it could on the other hand be of negative influence if the recruits perceived that there were no expectations from the referents (fellow recruits), to perform the behaviour. These findings reveal that the recruits were also affected when their fellow recruits showed a negative attitude toward PA. It is likely to believe that this lack of motivation among the referents entailed low expectations to the interviewee's behaviour. As mentioned earlier, the interviewees' perceived expectations from referents to perform the behaviour or not, reveals the role of subjective norm in the TPB. This indicates that attitudes toward PA among fellow recruits had the role of a determinant for their subjective norm, which in turn according to the TPB is a determinant for their intention to be physically active. Rhodes and Courneya (2003)

found that social pressure was a factor with influence on the intention of the behaviour in the field of exercise. The present study found that there was social pressure toward being inactive as well as being physically active, which adds to previous findings that social pressure is something with influence on the intention of behaviour.

In this study, the officers were viewed as other normative beliefs. Normative beliefs include "...teacher, doctor, supervisor and co-workers" (Ajzen, 2006a), but who these are depends on the field that is under study. Military recruits are the population under study here, and military officers can therefore be viewed as important referents for the recruits. It is thus interesting to see how the recruits experienced the officers' expectations of their PA level. It was reported that the military did not take into account that the interviewees should have energy and time to work out on their own after the military training. It seems like there were no expectations from the officers with regard to the recruits' PA-level in their spare time, which is a determinant for their intention of being PA (Ajzen, 2006c.). There were however reported other expectations from the officers by the interviewees. Duties like oiling weapons, folding clothes, ironing and getting the room ready for the next day's inspection, instead of being PA in their spare time. These duties were considered as something the officers expected them to do, and these expectations are important for the recruits' subjective norm because the officers are important referents to them. Considering that the officers are important referents for the recruits, it seems like the recruits were of the perception that they were expected to do the military duties at the expense of being physically active. This is supported by Ajzen and Driver (1991) who found that normative beliefs about what important others are expecting, are important for college students' participation in leisure activities. The present study found that there were no expectations from the military officers (important others) regarding the recruits' PA-level, but there were expectations to have completed their military duties in the spare time. The recruits' willingness to comply with the officers' expectations was thus

negative for their PA level in their spare time, but positive for the completion of other military duties. There is reason to believe that this willingness to comply with officers may be due to the construct of power between officers and recruits, but is not further explored discussed as it did not emerge in the themes of the interviews.

Another motive that influenced the recruits to be physically active was socializing with friends. Exercising together with someone, being part of a team and looking at the gym as a meeting place were elements that motivated the recruits to engage in PA. Existing literature (Kirby, et al., 2011) states that high socializing adolescents are more likely to engage in PA than those who are not much into socializing, and that peers have an important influence on adolescents' PA level. This support the finding from the present study and signifies that military recruits' value PA as something social, and this is a reason for them to take part in PA. This (social reasons to be PA) may be of value for the Norwegian Armed Forces in the facilitation of PA, when they know that the social aspect of the activity is something that intrigues the recruits to be physically active. Especially because the recruits live at the same place, using this as motivation for PA is something to consider for the facilitation of PA during the recruit period.

Military recruits experienced that being part of a group is something that had a positive influence on their attitude toward PA. If the attitude among fellow recruits is positive toward PA, it is likely to believe that this can lead to expectancy in the group to be PA. Perceived behavioural expectation is another factor in the TPB that determines subjective norm, and possibly an element that could influence the recruits' behaviour (Ajzen, 2006a). Beyond this, internal competition was a theme that was often talked about across the interviews. A competitive focus in the group was reported as something with positive influence, and as something that made them exert extra effort. These findings that focus directly at the competitive aspect of the activities, can indicate that the Norwegian Armed

Forces has the opportunity to influence the recruits through emphasizing competing activities in the physical training. Previous literature done in the population of college students supports the finding that adolescent males are motivated by competition and challenges (Pauline, 2013; Egli, et. al, 2011).

Previous literature showed that basic training leads to improved physical condition among military recruits, but not after completed military service (Sharp, et al., 2000; Vogel, et al., 1978; Brock, & Legg, 1997). Even though this is not in relation to attitudes and motivation, these findings can also be helpful when discussing the findings in the present study. Findings in this study revealed factors that affected the recruits' attitudes toward PA during the recruit period. Positive attitudes toward PA among other recruits, socializing with friends and be part of a group was factors in relation to subjective norm that helped to improve level of PA and attitudes toward PA. When previous literature shows that there is a decline in physical condition after the basic training, these factors could be helpful for maintaining the recruits' PA level steady until the completion of basic training (Sharp, et al., 2000; Vogel, et al., 1978; Brock, & Legg, 1997). These factors are reported here as having positive influence on the recruits, and is therefore something that can be emphasized for fostering further improvement in the military service beyond the recruit period.

8.1.2 Perceived behavioural control

Another component of the TPB is the perceived behavioural control (PCB) variable, which according to Ajzen (1991) "... refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (p. 188). Beyond being a predictor of intention, perceived behavioural control is a direct predictor of behaviour (Ajzen, 1991), and this variable was found to have a strong influence on the actual physical activity behaviour (Terry & O`leary, 1995; Theodorakis, 1994; Smith & Biddle, 1999). A finding in the present study was experiences of increased

self-confidence in PA among interviewees who improved physical performance, and a decrease in self-confidence in recruits who had a decrease in 3000-meter test results. Ajzen (2006d) says that “control beliefs have to do with the perceived presence of factors that may facilitate or impede performance of a behaviour”. Self-confidence is such a factor that gives a belief of control over the behaviour, which in turn is a determinant for the PCB. There is a trend in existing literature as mentioned above, that there is a drop in military recruits’ physical condition by the time they have completed basic training (Sharp, et al., 2000; Vogel, et al., 1978; Brock, & Legg, 1997). The findings in the present study add that recruits’ self-confidence in PA is dependent on their improvement or decrease in 3000-meter test results. There are reasons to believe that we need to further explore if there is a drop in conscripts’ self-confidence in PA after the recruit period is completed, because there is a drop in physical performance as it would give us one more element (self-confidence based on fitness level) through which we could intervene. To build upon the TBP, Ajzen (2006e) says “... that the perceived behavioural control is determined by the total set of accessible control beliefs”. The PCB is determined by self-confidence as an accessible belief, which in this case has decreased as a result of drop in physical performance.

Independently of the recruits’ initial physical condition, feeling of mastery were experienced as something that increased during the recruit period. According to HOD (2004), PA is something that can lead to increased feeling of mastery in PA, which is consistent with the finding in the present study. NDUC (2006) aims to stimulate soldiers to a lifelong physical active lifestyle. Perceived mastery is an important factor for being able to establish and maintain PA behaviour (Sallis, et. al., 1986), and findings in the present study shows that military recruits experience the recruit period as a place where this is increased. The reported reasons regarding why increased mastery was perceived is not consistent with previous research. The recruits experienced competing activities, physical challenges, being pushed by

fellow recruits and striving for improved performance as factors that influenced them in a positive way. A review of motivational climate in PA, done by Ntoumanis and Biddle (1999) revealed that a performance climate was associated with less motivation than a mastery-oriented climate. It seems that military recruits are intrigued by a performance-oriented climate, in contrast to other groups that have been investigated in the existing literature reviewed for this study. A motivational factor that is worth noting is the *beast challenge*. This was a positive PA experience, which according to Calogiuri and Chroni (2014) is something that “can enhance attitudes toward PA and perceived behavioural control, leading to firmer intentions to engage in PA” (p. 22).

Another reported theme that can be seen as a control belief that determines the recruits' PCB is energy and time. Limited time and low energy were common reasons for not being physically active in the spare time. This is a determinant of the perceived behavioural control, and because the recruits experienced their energy level and time as obstacles for PA, this can be seen as such a belief. The recruits reported also that the reason to their low energy level was due to the exhausting military training program and the long lasting days. This is something to address when the question to be answered in the present study is whether the recruits experienced the recruit period as something with impact on their attitude toward PA or not. One can say that the finding that they were tired after the military service influenced their attitude toward PA, and toward not being PA in their spare time. On the other hand as an opposing argument, this military training was PA in itself, which means that perhaps there was no need for additional PA in their spare time. However, low energy level and limited time can be seen as obstacles for the recruits' perceived behavioural control, and in turn for their intention and physical activity behaviour in their spare time, in line with the TPB model. Energy and time are also reported in existing literature (Downs & Hausenblas, 2005; Carron, et al., 2003) to be important limiting factors for exercise participation.

Facilitation for PA is another theme that can be seen as an “anticipated impediment or obstacle” (Ajzen, 1991, p. 188). How it is facilitated can make a difference in the recruits’ perception of how difficult it seems to be physically active. There was a common agreement among the recruits that there were satisfactory facilities for PA in the recruit period they lived, which again is of positive influence on the PCB. Humpel and colleagues (2002) similarly report with the present study that satisfactory facilities are positive for physical activity behaviour. They found that the physical environment, including accessibility and opportunities, is associated with physical activity behaviour. A few issues were however experienced regarding the facilitations for PA in the present study. Car traffic outside the military camp was one of them. Handy and colleagues (2002) found that physiological and psychological barriers to walk and cycle could be reduced, if increased street connectivity and good design are addressed. Car traffic outside the camp was something that was experienced as a barrier to be physically active, and this barrier could according to Handy, et. al (2002) be reduced if the street connectivity and design were improved. Furthermore, I ought to also consider here the environment of the recruit period since Calogiuri and Chroni (2014) found natural environments of green spaces and accessibility to have a positive effect on PA. It is a possible limitation that the environment (e.g., accessibility, car traffic) did not facilitate the recruits’ PA along with the fact that data collection took place in the month of January when the days in Norway are rather short and all is covered with snow, thus green spaces are not available. The queue at the gym was another issue that was mentioned as an anticipated obstacle toward PA. Both of these issues affects what Ajzen (1991) refers to as the perceived ease to perform the behaviour, and is something that influence the PCB in a negative way. Downs and Hausenblas (2005) found in their review that lack of access to exercise facilities was one of the most common control beliefs impeding exercise. Despite the findings revealing a few issues regarding the facilities, the recruits were all over satisfied. The

facilitation for being physically active was therefore not experienced as a control belief that obstructed the military recruits' perceived ease to perform the behaviour.

8.1.3 Attitude toward the behaviour

Attitude toward the behaviour (ATB) is the last of the three predictors of intention in the TPB model. This predictor is, according to Ajzen (1991), referred to as "... the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question" (p. 188). He says that behavioural beliefs are something that determines the ATP, along with the recruits' values of the expected outcome of the behaviour (Ajzen, 2006b). Downs and Hausenblas (2005) emphasized the importance of investigating peoples' behavioural beliefs in order to find the best way to influence their attitudes.

Enjoyment is such a behavioural belief among the recruits. The recruits have beliefs regarding the experience of being physically active as something enjoyable (or not). This, along with how they value this experience, determines their ATB. While three of the interviewees said that they had the same enjoyment of PA after the recruit period as before, four reported a change; two said that they experiences less enjoyment of PA and two that they enjoyed it more. As mentioned in the results, a pattern was observed in these experiences in relation with change in physical performance. Recruits with a decrease (more time spent) on the 3000 meter test reported a decreased level of enjoyment of PA, while recruits with improved results reported a greater degree of enjoyment in PA. Based on this observed pattern, one can say that military recruits' enjoyment of PA is something that may be related to their physical condition. Puente-Diaz (2012) found that enjoyment had a positive effect on athletes' performance, which is rather consistent with the finding in the present study that enjoyment appeared to be associated to performance. Lewis and colleagues (2015) reported that enjoyment in PA leads to increased chance of PA behaviour, which supports the finding that there could be a link between the recruits' enjoyment and physical performance. Beyond

this, in the field of military, there is a trend in the literature that only recruits with low scores on physical tests prior to the military training or military service show an increase in their aerobic capacity (Dyrstad, et. al., 2006; Sharp, et al., 2000). The present study dares to add that recruits who increase their aerobic capacity also increase or at least maintain their initial degree of enjoyment in PA, while recruits with a decrease in aerobic capacity experience an equal or lowered degree of enjoyment in PA than before. Taking the existing literature and this finding into consideration, we suggest that the recruit period may be a time and place where 19-year-old men of poor physical shape can experience improvement in their physical performance accompanied by increased feelings of enjoyment.

It was commonly experienced that the recruit period did have a positive influence on their attitude toward PA or on their future PA level. They reported increased motivation for being physically active because of fellow recruits' attitude, more focus on running and having progress. Previous research (Poobalan, et. al., 2012) done on the same age group shows that positive attitudes towards PA is a predictor of being physically active and less sedentary. The present study adds that military recruits experience the recruit period as something that has a positive impact on their attitudes toward PA. This means that the recruit period is experienced as a milieu where positive attitudes toward PA can be shaped, which in turn may impact the physical activity behaviour among 19-year-olds (Poobalan, et. al., 2012). The recruits experienced that they were under influence during the recruit period in one way or another. The ATB depends on the degree that a person finds a behaviour favourable (Ajzen, 1991), and the finding above can signify that military recruits experience the recruit period as something with influence on whether they find PA favourable or not. Knowing that military recruits' attitudes are possible to influence gives The Norwegian Armed Forces the opportunity to further pursue this period to be used in a positive way with regard to their attitude toward PA.

8.3 Implications for public health

This section addresses implications of the findings for professionals on the field under study through a public health perspective. As mentioned in the previous section, there are factors that appeared to have an influence on the recruits' attitudes toward PA. The stakeholders and professionals on this field are The Norwegian Armed Forces and the personnel that work with the military recruits. The present findings can be of significance for their work, when the aim is to stimulate soldiers toward a lifelong physically active lifestyle (NDUC, 2006). Findings in the present study reveal different factors in the recruit period that the military recruits experienced as influential on their attitudes toward PA, and their PA-level. Knowing what is experienced as something with positive influence, and what is not, can aid The Norwegian Armed Forces to implement measures that will maintain and/or improve military recruits' attitudes toward PA. Furthermore, the findings in this study are in agreement with Ajzen's (1991) three independent determinants of intention to be physically active.

Moreover, the law of compulsory military service concerns all citizens between 19 and 44 (Vernepliktsloven [The law of compulsory military service], 1953), yet there are no demands on these conscripts' physical condition. However, The Norwegian Armed Forces (28th November 2015b), does a total evaluation of candidates with health complaints (these are listed at their web site, <https://forsvaret.no/karriere/krav/medisinske-krav>). It emerges that candidates are not called in if among other issues they have Body Mass Index (BMI) above 35 or lower than 18, diabetes with need of insulin, have gone through a weight loss surgery, or have any kind of eating disorder. Hence, the one's chosen as military recruits are more likely to meet the Norwegian Directorate of Health's requirement for PA if compared to the average 19-year-old in Norway. Although the military recruits may not represent the average 19-year-olds of Norway, findings in the present study can be useful for public health personnel when policies and measures for PA among 19-year-old Norwegians are developed.

For instance, the recruits' experience of increased feeling of mastery during the recruit period is such a finding. An implication of this finding for the professionals in the area is to maintain and attach importance to the factors that they reported as influential. The Norwegian Armed Forces should therefore seek to involve exercises in groups and physical challenges with the purpose of maintaining or increasing the feeling of mastery. Mastery is something that in turn is important for lifelong PA, and increased levels of PA leads to several health benefits at all ages (Norwegian Directorate of Health, 2014). This finding should be of importance for The Norwegian Armed Forces as they aim to stimulate soldiers to lifelong PA (NDUC, 2006). A measure that is connected to this this is the *beast challenge* that was experienced as a positive PA experience. Positive PA experiences is something that can lead to enhanced attitudes toward PA (Calogiuri & Chroni, 2014), and in turn for future PA. The Norwegian Armed Forces should thus emphasize measures like this to provide the recruits positive experiences in PA with the aim of enhancing attitudes toward PA. This is in turn beneficial for the public health in Norway and an implication from the findings in the present study.

Another finding that is of relevance for The Norwegian Armed Forces is related to how the recruits perceive the military's expectations of their behaviour. It is previously discussed that the recruits perceived that the officers expected military duties to be done on the expense of PA in their spare time. Expectations from the military is something that according to Ajzen (2006a) influences the recruits' intentions, which means that what they are requiring is of important influence on what the recruits give priority in their leisure time. The Norwegian Armed Forces should therefore have expectations to the recruits' PA level in order to influence their intention of being physically active. However, this is a prioritization that has to be done by The Norwegian Armed Forces, and may be problematic due to the wide range of skills that are to be learned during the recruit period.

Existing literature (Poobalan, et. al., 2012; Theodorakis, 1994) shows that attitude is a predictor of PA. Downs and Hausenblas (2005) stated that identifying the behavioural beliefs of the people of interest is important for practitioners on the field in order to be able to make attitudinal changes. The present study found that military recruits experience the recruit period as a place where their attitudes are under influence. An implication based on this is that The Norwegian Armed Forces has the opportunity to influence in a positive way, by emphasizing the reported motivational factors that were; focus on progress, being with fellow recruits and focus on running in the military training.

A final implication of the findings in the present study is regarding enjoyment and PA. It is argued in existing research that enjoyment influence to engage in PA in areas outside the military (Lewis, et al., 2015). The present study found that physical performance is related to the recruits' perception of enjoyment, which means that keeping the joy in the activity entails maintained or improved physical performance. Improved physical performance is something that will influence the expected outcome of being physically active, which in turn determines the attitude toward the behaviour (Ajzen, 2006b). This is of value in a public health-perspective beyond the benefits from increased PA level in the recruit period, because expecting a positive outcome of the behaviour is something that reduces the barrier for future PA according to the TPB-model (Ajzen, 2006b). Enhancing or at worst maintaining the attitudes toward PA for 8000 Norwegians of 19-years old (number of recruits in 2015), is not only a gain for the Norway's military. It should be viewed as an overall gain for the population of Norway, since most of them will not stay in the military past the service period but will return into civilian life carrying with them more positive attitudes toward PA that according to the literature translate into actual PA behaviours.

8.4 Limitations and suggestions for further work

This last part of the discussion chapter deals with the present study's limitations and suggestions for further research. The purpose of the study was to investigate how military recruits experienced the recruit period in relation to being physically active. As described in the method section, the study includes only male recruits. This means that the female recruits' perspectives were not explored, which narrows the extent of the findings. This is an important limitation especially now that The Norwegian Armed Forces introduced compulsory military service for both genders from January 1st 2015 (The Norwegian Armed Forces, 2016). Translation can be another limitation to address in this study. The interviews were done in Norwegian language while the analysis and development of themes were done in English. There is a risk that the themes do not reflect the exact interviewee experience when concepts and phrases are translated from the original language (Squires, 2009).

The selection of participants in this study was made on the basis of anonymous 3000 meter test results. Whether the recruits had an improvement or a decrease in these results pre-versus post-recruit period was also touched in the analysis and discussion of the findings. It is therefore worth noting that two of the interviewees mentioned that a change in weather conditions between the tests had an impact on their performance. Dependability is an aspect of the trustworthiness in the study, which is a parallel to reliability in quantitative research (Bryman, 2012). The different weather conditions between the two tests is something that can threaten the reliability in the test results, and are noted here as they were used to invite participants. One should also be aware that the present study only looked into 3000 meter test results, and that the recruits' physical condition concerns more than aerobic capacity. This further means that the recruits could have had changes in other aspects of their physical fitness that was not explored in this study (e.g. strength). Lastly, due to lack of research in the area of attitudes toward PA in the military, research literature from other populations were

used to compare the findings from this study. Although this literature was of relevance, it was outside the military setting and this can potentially add more limitations to the discussion of my findings.

Suggestions for further research are offered based on the trend in existing literature, the findings of the present study, and the abovementioned limitations. Female recruits should be interviewed in future studies. Further research regarding change in military recruits' attitudes toward PA over a period of military service, is something that could fill a gap in the literature and add to the findings of the present study. Existing research shows that physical performance is something that improves during the recruit period, but not after 12 months of military service (Sharp, et al., 2000; Vogel, et al., 1978; Brock, & Legg, 1997). The present study adds that enjoyment and self-confidence in PA follows the recruits' level of physical condition during the recruit period. Research dealing with conscripts' enjoyment and self-confidence in PA from the end of the recruit period until completed military service is thus something to address in future studies. Last but not least, future research should consider exploring the natural environment and climate conditions as factors that may impact recruits' physical performance in tests and consequently enjoyment, self-confidence and of course attitudes toward PA.

9.0 Conclusion

By conducting this study, findings have showed that military recruits' intentions for being PA are influenced in multiple ways. For example, fellow recruits can have an influence in a twofold way, depending of the fellow recruits' positive or negative attitudes toward PA. It also appears that military recruits' normative beliefs can be weakened, due to military officers expectations on prioritizing military duties over PA in their spare time. Findings in the present study further indicate that military recruits experience the social and competitive aspect of PA, and a performance oriented climate as motivating for engaging in the behaviour.

Furthermore based on the findings, the conscripts' self-confidence in PA are likely to decrease after the recruit period, due to a drop in their physical performance. A common experience in the recruits was the increased feeling of mastery in PA during the recruit period, which is something that makes the recruit period important for 19-year-olds future PA level. In addition, it appears that limited time and low energy levels played a role in controlling their beliefs regarding the PCB, and had a negative influence on intention and PA behaviour. Facilitation for PA as a control belief was not an obstruction in their perceived ease to be PA, due to satisfactory exercise facilities. Based on all of the above, it is concluded here that the recruit period is a time and place where 19 years old men with poor aerobic capacity can experience an increased feeling of enjoyment and improved aerobic capacity. On the other hand, it is possible that 19-year-old men who go into the recruit period with a high aerobic capacity may experience less enjoyment in PA and a decrease in aerobic capacity as their spare time may not be enough to keep up with their usual level of PA before they entered the military. Overall, the recruit period is experienced by Norwegian 19-year-olds as a period with impact on their attitudes toward PA in different directions and of different reasons, which in turn makes it an important milieu for stakeholders to intervene in order to positively impact their future PA level.

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Appendix A: Information letter

Forespørsel om deltakelse i forskningsprosjektet

Holdning til fysisk aktivitet blant militærrekrutter

Bakgrunn og formål

Dette er en masteroppgave i folkehelsevitenskap ved Høgskolen i Hedmark. Bakgrunnen for denne studien er at det er en nedgang i fysisk aktivitetsnivå blant unge i Norge. Kolle, Stokke, Hansen & Anderssen (2012) viser at det er en nedgang på 31 % i fysisk aktivitetsnivå fra 15 års alder til 20-årene. Formålet med denne studien er å se hvordan/om militærrekrutter opplever rekruttperioden som noe med innvirkning på deres holdning til fysisk aktivitet.

Problemstilling

Hovedproblemstillingen i oppgaven er om militærrekrutter opplever militærtjeneste (rekruttperiode) som en periode med innvirkning på deres holdning til fysisk aktivitet? Det vil også bli sett på hvordan/om holdningene til fysisk aktivitet er påvirket, i forhold til eventuelle endringer i fysisk form i løpet av perioden. Dette vil bli gjort ved å se på resultater på to fysiske tester som er gjennomført i løpet av rekruttperioden.

For å finne ut hvordan militærrekrutter opplever rekruttperioden som noe med innvirkning på holdning til fysisk aktivitet må det samles inn informasjon fra denne gruppen. Utover dette er utvalget basert på endring i fysisk form i løpet av rekruttperioden.

Hva innebærer deltakelse i studien?

Deltakelse i studien innebærer at deltakeren må delta på et intervju som tar omtrent 45-60 minutter. Her vil det bli gjort lydopptak og dette vil seinere bli transkribert (opptakene blir ført ned til tekstform). Utover dette vil testresultater fra fysiske tester gjennomført i rekruttperioden bli samlet inn. Deltaker, intervju og testresultater vil bli anonymisert.

Hva skjer med informasjonen om deg?

Alle personopplysninger vil bli behandlet konfidensielt. Student og veileder vil ha tilgang til personopplysninger og innsamlet data (intervju og testresultater). Lydopptak, testresultater og personopplysninger vil være beskyttet med passord og bli oppbevart adskilt for å ivareta konfidensialitet.

Deltakerne vil ikke kunne gjenkjennes i oppgaven. Prosjektet skal etter planen avsluttes juni 2016 og personopplysninger og innsamlet data vil da bli slettet.

Frivillig deltakelse

Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du trekker deg, vil alle opplysninger om deg bli anonymisert.

Dersom du ønsker å delta eller har spørsmål til studien, ta kontakt med Trym Hals Gurigard, tlf 90065561, e-post: trymgurigard@hotmail.com

Veileder

Stiliani Chroni

Tlf: 97631001

E-post: stiliani.chroni@hihm.no

Studien er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Samtykke til deltakelse i studien

Jeg har mottatt informasjon om studien, og er villig til å delta

(Signert av prosjektdeltaker, dato)

Appendix B: Interview guide

Introduction

Thank you for taking the time to do this interview. This interview is a part of my master thesis in public health at HiHm. I would like us to talk about your views toward physical activity now that you have completed your military recruit-period. I will ask you to reflect about physical activity before the recruit-period, during the period as well as now that is over. Your participation is voluntary and you can withdraw from the project at any time, without any consequences. Along with me, only my supervisor will have access to the transcribed material from the interview, which will be treated confidentially. Your name or any other personal information that could make you recognizable will not appear in any document or publication, and the raw data (audio file of this interview and transcription) will be deleted when the project is completed. I will use a recorder to record the interview today. During the project, this recording will be stored in a locker, and the transcribed data will be saved on a password protected memory stick.

Interview questions

1. How old are you?
2. When I say the term physical activity, what comes into your mind?
 - a. What is physical activity for you?
3. I would like you to think back before the military period. Can you tell me about how you were physically active prior to the recruit period? What forms of physically activity were you doing on a regular basis in your daily life?
 - a. Why did you choose to be involved with these forms of PA?
 - i. What did you like about these?
 - ii. Anything that you disliked when doing your PA?
 - b. Over all, did you enjoy being PA before the military period?

- i. If yes, what were your reasons for being physically active (e.g., the onsite experience, the benefits from being active, the potential to socialize with others during it, etc.)
 - ii. If no, why not?
 1. What made it non-enjoyable? What would you rather do?
 - c. On a scale from 0-10, how do you think your level of being physically active was like before you entered the recruit period?
 - i. Were you satisfied with your level of physical activity?
 1. If no, what were you aiming for to be satisfied?
 2. Why were you not satisfied?
4. Now let's move forward in time and concentrate on the time you spent in the recruit period. On a scale from 0-10, please tell me what you think your physical activity level was like during the recruit period.
 - a. Were you satisfied with your level of physical activity?
 - i. If yes, then move to next question
 - ii. If no, what were you aiming for and why were you not satisfied?
 1. Why you were not satisfied?
 - b. Tell me about the amount of PA and the forms of PA that you did during the recruit period.
 - i. How was this in relation to before? (what was similar and what was different)
5. Let's focus a little bit more on the physical activity experience during the recruit period. How did you experience the facilitation for physical activity in your leisure time when you were off duty?
 - a. Tell me about the time you had at evenings or after compulsory military training.

- b. What were the opportunities for you to engage in PA considering arenas and equipment?
 - i. Was this something you took advantage of?
 - c. How did you feel that the activities matched your interests?
 - d. Did the military training have any impact on your energy to be physically active in your own time?
 - i. If yes, how?
 - ii. If no, why not?
 - e. Did you perceive that the facilitations for PA influenced your attitude toward PA in any way?
 - i. If yes, how?
 - ii. If not, then what would it take for you to change your attitude for PA?
6. Can you tell me about the climate in your military group for being physically active during your leisure time?
- a. How was the other recruits attitude toward PA?
 - i. Did their attitudes affect you in any way?
 - 1. If yes, how?
 - a. And why you think it affected you?
 - 2. If no, why you think it did not affect you?
 - b. How was the atmosphere in the troop for the physical parts of the military training?
 - i. Did this atmosphere influence your view in any way toward the physical training? Tell me about it.
7. Where you encouraged by others during the recruit period to be physically active?
- a. If yes, who were you encouraged by- and in what way?

- b. Did you feel discouraged by any person or by any conditions you experienced during the recruit period?
 - c. Can you reflect on the military leaders (officers) and share with me if and how they motivated or stimulated you to be physically active?
- 8. Did you feel any pressure from others to engage or to not engage in PA during the recruit period?
- 9. Tell me about how you experienced being physically active in a group with others.
 - a. Did this affect your motivation for PA?
 - i. If yes, how did it impact your motivation?
 - ii. If no, why not?
- 10. Now, I would like you to reflect over your confidence in relation to PA. Can you tell me about how your confidence in PA was in the time before you came to Elverum?
(Perceived behavioural control).
 - a. Do you feel that the recruit period is something that in any way have had an impact on this?
 - i. If yes, how did it impact?
 - ii. If no, why do you think it didn't impact?
 - b. How did you experience the physical challenges during the recruit period?
 - i. How were these challenges in relation to your own physical condition?
 - ii. Did these challenges or lack of challenges have any impact on your motivation for PA? How?
 - c. How was your perception of mastery (“mestring”) in PA in the time before your recruitperiod?
 - i. In which way, if any, have the recruitperiod affected your perception of mastery in PA?

11. Would you describe the recruit period as an arena where attitudes toward PA are influenced in any way?

- a. If yes- in which way?
- b. If no, why do you think it doesn't influence?
- c. In which way- if any, would you say that the recruit period had an influence on your attitude toward physical activity?

12. I would like you to talk more about your experience in the recruit period. Can you tell me about your motivation for military service?

- a. Did this motivation/lack of motivation affect your attitude toward physical activity in any way? How?

13. Now, I would like us to focus on your degree of enjoyment in PA (Behavioural attitudes)

- a. On a scale from 0-10, how much did you enjoy being physically active in the time before the recruitperiod?
 - i. On a scale from 0-10, how much do you like being physically active now?
 1. In which way, if any, do you feel that the recruit period have affected this?
- b. What was your reasons for being physically active/not being physically active before you joined the military?
 - i. Do you feel that this have changed during the recruit period?
 1. If yes, in which way?
 2. If no, why?

Either 14 or 15.

14. You have had a decrease in your test result (3000meter) during the recruit period.

- a. What do you think is the reason to this?

i. Do you think that participating in the recruit period has caused this decrease?

1. If yes, in which way?

2. If no, what do you think is the reason?

15. You have improved your test results (3000 meter) during the recruit period.

a. What do you think is the reason to this?

i. Do you think that participating in the recruit period has caused this increase?

1. If yes, in which way?

2. If no, what do you think is the reason?

Closing

Thank you very much for your time. Could you please give me your email address to send you the transcript of this interview? I want you to read and confirm that this is your experience. After that I will delete your email address.

Appendix C: NSD

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Stillani Chroni
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Vår dato: 01.12.2015

Vår ref: 45417 / 3 / 101

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 29.10.2015. Meldingen gjelder prosjektet:

45417	<i>Attitudes toward physical Activity in military recruits.</i>
Behandlingsansvarlig	Høgskolen i Hedmark, ved Institusjonens øverste leder
Daglig ansvarlig	Stillani Chroni
Student	Trym Gurgard

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, ombudets kommentarer samt personopplysningsloven og 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/meldeplikt/skjema.html>. 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://pvo.nsd.no/prosjekt>.

Personvernombudet vil ved prosjektets avslutning, 20.06.2016, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Katrine Utaaker Segadal

Kjersti Haugstvedt

Kontaktperson: Kjersti Haugstvedt tlf: 55 58 29 53

Vedlegg: Prosjektvurdering

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

Aukningskontor / District Office

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Personvernombudet for forskning



Prosjektvurdering - Kommentar

Prosjektnr. 45417

Personvernombudet legger til grunn at prosjektet er klarert av ledelsen ved den eller de aktuelle militærleirenes ledelse. Vi har videre lagt til grunn at kontaktpersonen i leiren(e) har tilgang til rekruttene testresultater i kraft av sin stilling, og at taushetsplikten ikke er til hinder for rekrutteringen. Kontaktpersonen(e) formidler forespørsel om deltakelse i studien til rekruttene, på vegne av Trym Gurigard. Rekruttene informeres skriftlig om prosjektet og samtykker til deltakelse. Informasjonsskrivet er tilfredsstillende utformet.

Personvernombudet tar høyde for at det innhentes sensitive opplysninger om helseforhold, jf. personopplysningsloven § 2 punkt 8 c.

Personvernombudet legger til grunn at data oppbevares i tråd med Høgskolen i Hedmark sine retningslinjer for datasikkerhet.

Oppgitt prosjektslutt er 20.06.2016. Innsamlte opplysninger anonymiseres.

Anonymisering innebærer å bearbeide datamaterialet slik at ingen enkeltpersoner kan gjenkjennes. Det gjøres ved å:

- slette direkte personopplysninger (som navn/koblingsmekkel)
- slette/omskrive indirekte personopplysninger (identifiserende sammenstilling av bakgrunnsopplysninger som f.eks. navn på leir, alder og kjønn)
- slette opptak

