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Master thesis

”Ti på Topp”: A public health perspective on trail users and their use of trails

“Ti på Topp”: Et folkehelseperspektiv på tursti-brukere og deres bruk av turstier

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Abstract in English

Aim: There are concerns existing around lifestyle-diseases, mental illness and somatic illness in Norway, and additionally inequalities in health. Physical activity and nature experiences are associated with health benefits, both mental and physical. A public health-, low- threshold offer focusing on physical activity and nature experiences are “Ti på Topp”, and their easily accessible trails. Trail use can be promoted as an activity for a wide array of the population. Its easy implementation, accessibility, low cost, alleged health effect and environmental friendliness make trail use a highly attractive strategy for improving public health. Against this backdrop the aim of the study was to examine patterns of participation in “Ti på Topp”, by socio-demographic profile of participants, their physical activity level and patterns of trail usage. In addition, the aim was to see if there were any associations existing between participant’s socio-demographic profile and activity level and trail use.

Method: 151 respondents registered at “Ti på Topp” included in this quantitative descriptive, case- study. An internet survey with a self-completion questionnaire compounded of four parts was used. Statistically analysis was performed using Microsoft Excel (2007) and MYSTAT. Chi-square for independence was used for finding association between socio-demographic profile and activity level and trail use.

Result: The socio-demographic profile of users of “Ti på Topp” characterised a typical trail user as an adult, Norwegian woman with higher levels of education and middle-to high levels of income. The socio-demographic profile also showed that the typical trail user had a partner and lived in a municipality with more than 20 000 inhabitants. “Ti på Topp”-users were characterised as sufficiently or moderate active and used 15-29 minutes to travel to a trail from their home, by car or other motor vehicle. It was also showed that “Ti på Topp”-users preferred walking for 1-2 hours when in trail. There were not many significant associations for socio-demographic profile found. Associations were found for sex and activity level, education and time usually spent on getting to a trail, and place of living and time usually spent on getting to a trail and distance to trail. Most significant associations were found for socio-demography and company in trails.

Conclusion: Summarised there was inequalities in who participants in “Ti på Topp” were, according to their generally high socio-economic status, sex, ethnicity and age difference. However, there were small inequalities within the sample of participants with different socio-economic status and socio-demography.

Implications: Findings from this study cannot be generalised but may contribute with a snapshot on trail users and patterns of trail use. It also gives implications for further research and express a need for more focus on groups that are not well enough represented in “Ti på Topp”, such as older people and people from different cultures and with different ethnicity. “Ti på Topp” have a great public health potential and by reaching out to more groups the public health effects can be immense.

Norsk sammendrag

Formål: Livsstilssykdommer, mentale- og somatiske sykdommer er helsetilstander gjeldende i Norge, i tillegg til ulikheter i helse. Fysisk aktivitet og naturopplevelser er forbundet med både psykiske og fysiske helsefordeler. Et folkehelse- og lavterskeltilbud som fokuserer på fysisk aktivitet og naturopplevelser er ”Ti på Topp”, og deres lett tilgjengelige turstier. Bruk av turstier eller løyper kan bli promotert som en aktivitet for nesten hele befolkningen. Enkel implementering, tilgjengelighet, lavkostnad, antatte helsefordeler og miljøvennlighet gjør bruk av turstier til en svært attraktiv strategi for å bedre folkehelsen. På bakgrunn av dette er formålet med denne studien å undersøke deltakelse i ”Ti på Topp”: sosio- demografisk profil, fysisk aktivitetsnivå og mønstre av bruk av turstier. I tillegg er formålet å se om det eksisterer sammenhenger mellom deltakeres sosio- demografiske profil og deres aktivitetsnivå og bruk av turstier.

Metode: 151 respondenter registrerte i ”Ti på Topp” var inkludert i denne kvantitative, deskriptive, case- studien. Et spørreskjema på internett bestående av fire deler ble brukt. Statistiske analyser ble utført ved å bruke Microsoft Excel (2007) og MYSTAT. Kji- kvadrat for uavhengighet ble benyttet for å finne eventuelle sammenhenger mellom sosio- demografisk profil og aktivitetsnivå/ bruk av turstier.

Resultat: Den sosio- demografiske profilen karakteriserte en typisk bruker av ”Ti på Topp” som en voksen, norsk kvinne med utdanning på høyere nivå og med middels- til høyt inntektsnivå. Den sosio- demografiske profilen viste også at den typiske brukeren av ”Ti på Topp” var i et forhold og bodde i en kommune med mer enn 20 000 innbyggere. ”Ti på Topp”-brukere ble karakterisert som tilstrekkelig eller moderat aktive, reiste hjemmefra ved hjelp av bil eller andre motorkjøretøy til løypene, brukte 15-29 minutter for å reise til en løype og foretrakk å gå i en til to timer når de var i løypene. Det ble ikke funnet mange signifikante sammenhenger for den sosio- demografiske profilen. Sammenhenger ble funnet for kjønn og aktivitetsnivå, utdanning og tid vanligvis brukt for å komme seg til en løype, og bosted og tid vanligvis brukt for å komme seg til en løype og distanse til løypene. De mest signifikante sammenhengene ble funnet for sosio- demografi og hvem deltakere eventuelt deltok med.

Konklusjon: Oppsummert er det ulikheter i hvem deltakere i ”Ti på Topp” er, i forhold til deres generelle sosio- økonomiske status, kjønns-, etnisitets- og aldersulikheter. Likevel var det små ulikheter innad i utvalget av deltakere med ulik sosio- økonomisk status og sosio- demografisk bakgrunn.

Implikasjoner: Funn fra denne studien kan ikke generaliseres, men kan bidra som et øyeblikksbilde på hvem brukere av turstier er og mønstre av bruk av løypene. Det kan også gi implikasjoner for videre forskning og uttrykker et behov for mer fokus på grupper mindre representert i ”Ti på Topp”, som eldre og ikke-etnisk norske. ”Ti på Topp” har et stort folkehelsepotensial og ved å nå ut til flere grupper kan folkehelseeffektene bli svært store.

1.0 Introduction

Public health is defined as the health status of the population and how the health in a population is distributed (Mæland, 2012; Saunes, Helgeland & Lindahl, 2014). In general the health status in Norway is good (Saunes, Helgeland, & Lindahl, 2014). As it is known, Norwegians have higher life expectancy as well as lower rates of morbidity and mortality than many other European OECD countries (Saunes, Helgeland, & Lindahl, 2014). Norwegians health habits are also better than the average with lower consumption of both alcohol and tobacco (Saunes, Helgeland, & Lindahl, 2014). However, there are still many challenges concerning people's health condition and health habits in Norway. These concerns especially involves around lifestyle-diseases, mental illness and somatic illness such as muscle and skeletal disorders (Mæland, 2012). The society's aim to affect on factors that promote health and wellbeing, preventing illness and reducing inequalities regarding health is referred to as public health work (Saunes, Helgeland, & Lindahl, 2014).

Even though some diseases and health conditions are known to be public health issues, they are not equally widespread among the population (Mæland, 2012; Mæland, Elstad, Næss, & Westin, 2012). Statistics reveals a social gradient in health, where those with low income and low education, also called low socioeconomic status, tend to be more prone to lifestyle diseases, sedentary behaviour, less physical activity and have a higher risk of mental illnesses compared to those with higher levels of education and income (Dahl, Bergsli, & van der Wel, 2014; Helsedirektoratet, 2014; Mæland, 2012). Having a high income and education is typically referred to as high socioeconomic status (Mæland, 2012). In addition to the prominent socioeconomic status, other elements of socio-demographic status are associated with health. Such socio-demographic factors can be life-stage, social class, sex, place of living

and ethnicity (Jenum, 2012; Piro, Madsen, & Næss, 2012; Price & Reed, 2014; Sundt & Jørgensen, 2012).

Compared to many other countries Norway is an egalitarian society with smaller differences between rich and poor, women and men and a higher degree of social mobility- the ability to move up or down between social layers (Wilkinson & Pickett, 2010). Despite the comparison there are still social inequalities in Norway and these inequalities appear especially in health (Dahl et al., 2014).

It is clear that sedentary lifestyles, mental and somatic illnesses are damaging for health and that the uneven distribution of such health related problems across the socio-demographic groups is a public health challenge. Factors that influence health can be important information when working for improving the overall health of the population. Several measures have been utilised and many strategies have been implemented in an effort to tackle these issues.

1.1 Factors that influence health

Factors that influence health, also called the determinants of health, are many and varied. The fact that what influences on health are multi-factorial, has been recognised for many years (Earle & O'Donnel, 2007). Interconnections between diverse factors that influences health have been highlighted both on an individual level, social level, community level and political level (Earle & O'Donnel, 2007). In order promote health and to tackle social inequalities in health one has to improve access to health promoting facilities and services in local areas. However this should not be the only focus; one also has to strengthen both individuals and communities(Earle & O'Donnel, 2007).

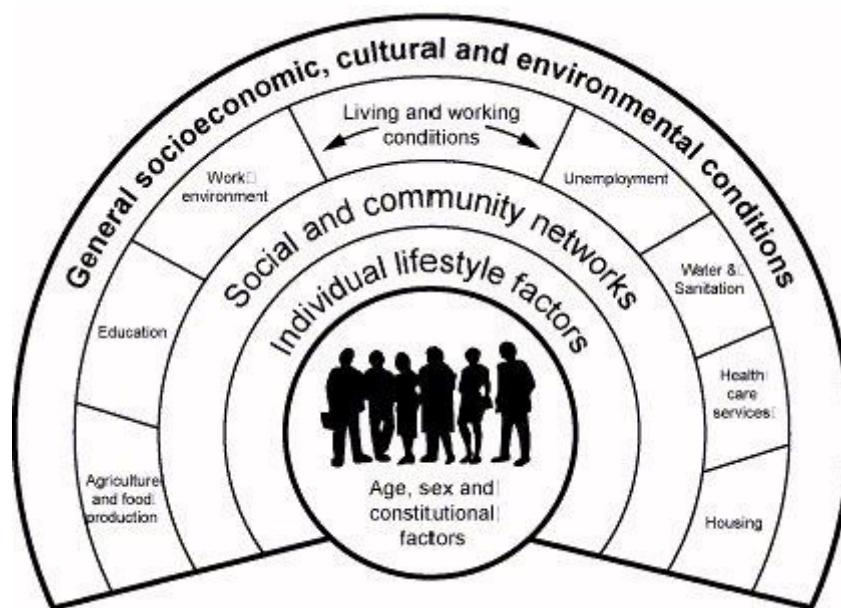


Figure 1: The socio-ecological model. The socio-ecological model shows a multifactoral illustration of what influences a person's health, also called health determinants. From S. Earle & T. O'Donnel, 2007, *Theory and research in promoting public health*, p. 72. Copyright 2007 from Sage Publications.

1.2 Strategies towards promoting health

During the first international conference on health promotion in 1986, a charter referred to as the Ottawa Charter was developed as a guideline for health promotion as well as how to prevent physical and psychological diseases (Mæland, 2012; World Health Organization, 2015). Measures to create supportive environments and build healthy public policies are of central importance to these guidelines (Earle & O'Donnel, 2007; World Health Organization, 2015). Within these measures lies advice on facilitating the environment for health promoting activities and to reduce inequalities through policies that foster greater equity (Mæland, 2012; World Health Organization, 2015). To this matter the Norwegian government's goal is to reduce social inequality (Regjeringen, 2009b). This strategy requires that efforts target the population as whole, not just marginalized groups. Cooperation between government ministries, different sectors of society and private, public and voluntary actors are required in order to do so (Regjeringen, 2009b).

One of the strategies for improving public health and also to reduce social inequalities is to increase the amount of physical activity among the population (Regjeringen, 2009a).

Caspersen, Powell and Christenson (1985, p. 126) define physical activity as “any bodily movement produced by skeletal muscles that result in energy expenditure”. Physical activity is an important health promoting activity that can reduce the risk of lifestyle diseases and an early death (Henriksson & Sundberg, 2015).

An environmental-focused strategy to promote physical activity can be to develop trails for walking and cycling (Dunton et al., 2009). This is accepted by the government, as the current proposed government budget for 2016 shows a strong commitment to developing these kinds of trails (Regjeringen, 2015). Developing trails is therefore a topical measure to facilitate for more physical activity. Trails can be found in both rural and urban areas, but are often recognised by including landscapes such as woodlands, lakefronts or ocean shorelines (Reynolds et al., 2007). The trail is often marked in maps or alongside the trail on stones or trees. Trail usage are multiple but are most commonly used for walking, running or cycling (Reynolds et al., 2007).

Trail use, and especially walking, is proven to be a benefit for both physical and mental health (Barton, Hine, & Pretty, 2009). Physical activity in nature can also have a positive influence on mental health and reduce stress levels (Barton et al., 2009; Pretty, Peacock, Sellens, & Griffin, 2005). Walking is a gentle form of activity for both joints and muscles where the intensity can be adjusted to suit each individual (Torstveit & Bø, 2015). Walking is also the most popular physical activity among all ages (Statistisk Sentralbyrå [SSB], 2014a). The use of trails is free and easily accessible for almost everyone with a trail in the vicinity (Librett, Yore, & Schmid, 2006; Torstveit & Bø, 2015). Trail use can, therefore, be promoted as an activity for almost the whole population (Librett et al., 2006).

1.3 Background

With an education in sports and public health, I have a big interest in strategies towards better health in form of physical activity. Low threshold offers are in special interest due to the target group, economic aspect, availability and potential. Nature is free and easily accessible as an arena for almost all, no matter social demographics. With some facilitating in form of trails or maps this can be even more accessible. Last summer I discovered trails where users had the possibility to register their trip in a so-called “guestbook” when they reached the top or destination. This sparked my interest to look into such an offer in regards to the public health potential and easy, accessible and cheap way of being in physical activity. I reached out to a local organizer of such an offer in Elverum and that was the start of this project.

1.4 ”Ti på Topp”-an offer from Norwegian Company Sport

In Norway Company Sport started as a counter offer to bourgeois sport done by upper- and middle class (Eichberg, 2009). Company Sport was organized by socialist workers belonging to the working class. The beginning of Company Sport in Norway was in other words clearly marked by a strict class battle that divided sport by class (Eichberg, 2009). A current focus on public health has led Company Sport away from traditional working class sport and towards a focus on health and wellness (Eichberg, 2009).

Today the Company Sport in Norway is a branch of the central organization of Norwegian sports, *Norges idrettsforbund* (NIF). Company Sport consist of 3700 company sports team and about 300 000 members. In addition to the traditional offers with series and cups in several sports, the Company Sport also offer campaign such as “Sykle til jobben” (cycle to work), “Bli sterkere” (get stronger), “Aktiv bedrift” (active company) and “Ti på Topp” (Ten on Top). These numerous activities are covered by the motto “a healthier Norway”, and the

goal is to create motivation for an active lifestyle and promote physical activity that leads to greater health (Bedriftsidretten, s.a.-d).

The concept of “Ti på Topp” is run by the Company Sport and volunteers. “Ti på Topp” is a national campaign, but is operated in different regions and counties of Norway. The counties Hedmark and Oppland are one region and in this region “Ti på Topp” is offered in Elverum, Hamar, Gjøvik and Lillehammer (Bedriftsidretten, s.a.-c). Hedmark and Oppland were singled out to be the area targeted for this project.

“Ti på Topp” involves ten different trails in the local area marked for walking and cycling in the summer season, which is defined from the 10th May until the 10th October (Bedriftsidretten, s.a.-b). In Elverum there is also “Ti på Topp” during the winter season for cross-country skiing.

By paying a member fee of 150 kroner users receive a map booklet with route descriptions of all the trails available. At each destination there is a recognisable, red “Ti på Topp” -mailbox. In this mailbox there is a guestbook in addition to a special code for registering the trip. The registering can be done by logging on to the website, sending the code as a text message or mailing a registering card at the end of the season. One can choose to participate in an individual class, team class or in a company class. On the website there is an overview of how many and different trails the participant visited as well as a leading list for individuals, teams or company teams (Bedriftsidretten, s.a.-b). At the end of the season there are prizes for everyone that has registered at least seven trail visits. In addition there is a competition for the participants- and company of the year, a photo competition as well as some draw prizes (Bedriftsidretten, s.a.-b).

“Ti på Topp” is fronted as an offer for all age groups via a well facilitated campaign for trails and trail use (Bedriftsidretten, s.a.-b). They guarantee a great nature experience as well as the

possibility for getting in good physical shape, while doing so (Bedriftsidretten, s.a.-a). “Ti på Topp” ensure safety and accessibility alongside the trails by good marking, maps, different levels of difficulty, different length of trails and they also make sure that there is a trail in close proximity to where people live by spreading them all over the municipality (Bedriftsidretten, s.a.-b). “Ti på Topp” is facilitated for and by the Company Sport, but is an offer open to everyone. In addition, volunteers arrange communal trips to each trail to maintain the social aspect.

1.5 Purpose of the study

Trail use, and especially walking and cycling, can be promoted as an activity for almost the whole population. Its easy implementation, accessibility, low cost, alleged health effect and environmental friendliness make trail use a highly attractive strategy for improving public health (Librett et al., 2006). Against this backdrop, it would be interesting to examine patterns of participation in a public health oriented strategy towards physical activity in the form of the “Ti på Topp” scheme in Hedmark and Oppland. Analysis of the socio-demographic profile of participants in the scheme, for example, might provide insights into the public health potential of schemes such as this.

1.6 Research question

Based on the purpose of this study as well as the literature gap on the subject it is interesting to see if facilitating in form of trails has a public health potential for all, in which people they attract? This leads on to the research questions, as outlined below.

Main research question:

What characterizes users of “Ti på Topp” according to their socio-demographic profile, physical activity level and their use of the trails?

Secondary research questions:

- *Is there any association between socio-demographic factors and activity level/trail use?*

1.7 Explanation of the research questions

The main research question seeks an overview of participants in “Ti på Topp”, what characterizes them according to sex, age, socio-economic status, demography and activity level, and to see if there are any patterns. The use of trails refers to, access to trails and how they use the trails, among other things. If there exist any patterns in how users use the offer, is in central interest. The secondary question simply seeks to see if there are any association between any socio-demographic factors and participants’ use of trails and activity level.

2.0 Literature review

The literature chapter is divided into two different parts. The first part is a summary of literature and previous studies on physical activity, socio-demographic factors, social inequality and trail usage. Whereas the second part is a summary of a concept used in the same or other studies looking at the same topic. Explanations or ideas of socio-demographic differences, social inequality and sport participation are looked at through the concept of social class.

2.1 Summary of previous findings

2.1.1 Physical activity and social inequality

According to SSB (2014a), there is a visible connection between activity level, amount of activities and education level. The statistics show that the higher the level of education, the higher the levels and more varied the forms of physical activity among the Norwegian population (Breivik & Rafoss, 2012; SSB, 2014a). There is, in short, a clear social gradient where social mobility, with just a little climb on the “social ladder”, increases the likelihood of more forms and higher levels of physical activity (SSB, 2014a). Furthermore the statistics also reveal differences in participation and level of physical activity when it comes to work, type of preferred physical activity, marital status, age and sex (SSB, 2014a; Vaage, 2009). An example is that people that are young, employed and/or in a relationship are more physically active than people that are old, unemployed, retired, disabled and/ or single (SSB, 2014a). When it comes to age there are clear distinctions in which activities the different age groups prefer and the level of physical activity decrease with age (SSB, 2014a). In general, numbers from SSB show that couples are more physically active in comparison to singles. To be in a relationship was especially important for physical activity when it came to those older than 67 years (SSB, 2014a).

There are differences in participation and type of physical activity between men and women, but the inequality between sexes are decreasing (SSB, 2014a). The differences in types of activities preferred are also decreasing, but there is a tendency that skiing and hiking are more popular activities among those with high socioeconomic status than for those with low socioeconomic status (Vaage, 2009).

2.1.2 Socio-demographic profile of trail users

Age, class, sex and ethnicity are variables often used in studies to find socio-demographic characteristics (Price & Reed, 2014; Troped, Whitcomb, Hutto, Reed, & Hooker, 2009). In this section factors such as age, class and sex are highlighted. Initially marital status and place of living are looked at.

According to Price and Reed (2014) age, education and sex were important when it came to trail use in the USA. Adults (aged 18-64 years) were more likely to use the trail than older adults (65+ years). Also, the likelihood of using the trails were higher for those with a high school- or college degree than for those with lower education (Price & Reed, 2014). There was also a higher degree of women using the trails compared to men. A typical trail user according to Price and Reed (2014), was a white, adult female with higher education.

Several studies on demographic characteristics of trail users confirmed that age, class and sex were important factors and predictors of trail use (Price & Reed, 2014; Price, Reed, Grost, Harvey, & Mantinan, 2013; Reed, Ainsworth, Wilson, Mixon, & Cook, 2004). Further research reveals that age and education are the most significant predictors of trail use (Price & Reed, 2014). Several studies have established that trail users typically have higher education (Dunton et al., 2009; Price & Reed, 2014; Price et al., 2013; Reed et al., 2004). When it comes to age, the research indicates that the most regular trail users tend to be younger than the average country population (Reed et al., 2004), young to middle-aged (Reynolds et al.,

2007), adults (Price, Reed, & Muthukrishnan, 2012), and below 60 years old (Price et al., 2013). Furthermore, the existing research also shows different results when it comes to sex. Some studies indicates that most trail users are women (Price & Reed, 2014; Price et al., 2013; Reed et al., 2004), but more studies reveals that most trail users are men (Dunton et al., 2009; Lindsey, Yuling, Wilson, & Jihui, 2006; Price et al., 2012; Reynolds et al., 2007). Both results regarding sex are shown as significant in each study. This means that there can be a clear pattern between sex and trail usage, but that the nature of the studies and populations might be different from each others.

Income tends not to be as significant for trail use as education. However, some studies have indicated that persons with higher levels of income are more likely to utilize trails (Brownson et al., 2000; Dunton et al., 2009). A study found that trail users mainly had middle income levels, but that the importance of income diminished as income increased (Lindsey et al., 2006). Reed et al. (2004) found no correlation between trail use and income.

In studies characterising trail users and ethnicity it has been found that almost all trail users are white (Brownson et al., 2000; Dunton et al., 2009; Price et al., 2012; Price & Reed, 2014; Price et al., 2013; Price, Reed, & Hooker, 2012; Troped et al., 2009).

Moudon et al. (2005) looked at cycling in the built environment, including trails. They found that cycling tends to be dependent on age and sex. There was a much higher proportion of middle-aged and young adults than older adults cycling in trails (Moudon et al., 2005). As for the sex, males were more represented as cyclists in these trails compared to females. Moudon et al. (2005) described a cyclist as middle-aged or young adult, male and white. Cyclists were also more likely to be single compared to non-cyclists, and less likely to be widowed or divorced/separated (Moudon et al., 2005).

In a study on the epidemiology of walking in the USA, Eyster, Brownson, Bacak, and Housemann (2003) found a connection between education level and walking level; in other words, the higher the level of education- the lower was the prevalence of never walking. Eyster et al. (2003) identified those most likely to be regular walkers in the USA as young, white, and more educated. Even though the strongest difference of walking level in any group is shown by education level (Eyster et al., 2003), the socio-demographic profile of walkers seems to be multi-faceted.

SSB have ascertained the extent of outdoor activity in the population in a mapping exercise called *Levekårsundersøkelsen*. According to the results of this mapping it was those with the highest levels of education that had the highest levels of physical activity and were the most eager hikers, especially in the mountains and the woods (SSB, 2014a). It also showed that hiking in a day or more attracts a higher amount of men than women, but women are more eager when it comes to shorter trips (SSB, 2014a).

As for marital status it seems like being in a couple can affect trail use; especially for elderly people over 67 years. According to numbers from SSB, twice as many that was in a relationship compared to singles, had been hiking in the mountains or woods within one year (SSB, 2014a).

Brownson et al. (2000) studied trail use and physical activity in rural communities and found that those living in rural communities were more eager and accepted to travel greater distances to get access to a trail. Other studies have shown that the distance to trails can affect trail usage and that proximity to trails can increase the probability of use (Abildso, Zizzi, Abildso, Steele, & Gordon, 2007; Troped et al., 2001).

A summary of studies on trail use and demographic characteristics show that a typical trail user is adult/ middle aged, white, with higher levels of education.

2.1.3 Facilitating trail usage

To increase physical activity Sallis et al. (2006), highlights access and maintenance of a natural environment, and recommends that this should be assured through policy and infrastructural interventions, as well as through information such as social campaigns. The importance of attractive views of nature and accessibility to nature within short distance in a persons' environment are also emphasized by Calogiuri and Chroni (2014), and highlighting trail features preferred by trail users can be an effective strategy to increase physical activity (Price & Reed, 2014). Walker, Evenson, Davis, Bors, and Rodríguez (2011) studied two successful community trail initiatives, using the Active Living by Design (ALBD) Community Action Model. They concluded that facilitating on a multi-level by including health advocates in the trails initiatives from planning, implementation, programming and promotion was a good way to increase participation. Targeting multiple levels of influence, such as influence based on a social-ecological model, are emphasized by Price and Reed (2014) as important when promoting physical activity.

Trails can bring noteworthy economic benefits for surrounding areas through a multiplier effect with trail users spending money in the locality, and can therefore be cost effective (Starnes, Troped, Klenosky, & Doehring, 2011). Brownson et al. (2000) argue that establishing trails for walking is a low-cost alternative that can reduce barriers associated to accessibility, convenience and maintenance of physical activity because trails tend to be permanent in the community. In a similar vein Eyler et al. (2008) claim that trails are recommended as a means of increasing physical activity through the provision of access to a place for recreation in a variety of settings.

Research suggests that efforts to promote physical activity among older adults and people with low education is needed (Brownson et al., 2000; Price & Reed, 2014). Facilitating and promoting for physical activity on trails can be an aid for increasing physical activity among

older adults (Price & Reed, 2014). Also promoting for active transportation on trails can increase physical activity level among people with lower levels of education, when research show that this group use trails most for transportation reasons (Brownson et al., 2000). When facilitating walking as a mean of transport, Cerin, Leslie, and Owen (2009) found that they could reduce social inequalities in socioeconomic status with participation in physical activity. Focus on immigrants is also important, as research show that they use trails in very small extent (Price et al., 2013).

However, an important part of trail use promotion is to understand patterns of current trail use (Price & Reed, 2014; Price et al., 2013). Efforts to increase physical activity and promotion of trails for physical activity should therefore be based on knowledge about both use and non-use of trails (Price & Reed, 2014; Price et al., 2013).

Facilitating trail usage needs policy changes at a local level and multileveled facilitating, with focus on maintenance of natural environments (Price & Reed, 2014; Reed et al., 2004; Sallis et al., 2006). In addition, marketing campaigns on awareness and trail features preferred are needed especially targeting older adults, people with low education and immigrants (Price et al., 2013; Reed et al., 2004).

2.1.4 Trail use

Different studies have used a validated brief intercept survey as a template for studying trail use behaviours (Price & Reed, 2014; Price et al., 2013; Troped et al., 2009). This survey consist of items of socio-demographic characteristics, trail use patterns and frequency and duration of trail use for both recreation and transportation (Troped et al., 2009).

Price and Reed (2014) examined trail use behaviour and found that 89, 5 % reported using the trail for recreation purposes, compared to 2, 2 % for transportation purposes and 8, 3 % for both recreation and transportation purposes. Within those 89 % using the trail for recreation

purposes 67, 8 % reported being in the trail for 60 minutes or more (Price & Reed, 2014).

When it came to safety and maintenance perceived in the trail the main answer were either *excellent* or *good* (Price & Reed, 2014).

Price et al. (2013) also used this questionnaire-template and found that males with less than a high school degree were those who regularly used the trails for transportation reasons.

Recreational reasons for trail use were typical for those with a college education (Price et al., 2013). Males and whites had greater odds for using trails for recreational purposes compared to females and non-whites (Price et al., 2013). Using the trail for transportation purposes was associated with less time spent on the trail. Differences between the sexes were salient when it came to the social aspect of trail usage. While men often used the trail alone, women in general preferred using the trail with others as company (Price et al., 2013). Findings from this study also show that walking was the preferred and most common choice of activity, similar to the findings of Price et al. (2012). In addition, trail users usually travelled to the trail from their home, instead of from work (Price et al., 2013).

According to Price et al. (2012), more females than males preferred walking as an activity on the trail, while more males were cycling in the trail compared to females. When it came to age, older adults mostly reported walking as activity on the trail, while adults reported jogging more than older adults (Price et al., 2012). Most of the trail users reported using the trail for recreational purposes where walking was the most popular activity (55,5 %) followed by cycling (24,6 %) and then jogging/ running (15,5 %) (Price et al., 2012).

Price et al. (2013) suggests that less active people, traditionally seen as those with low education levels, could favour from trails as location for physical activity. Furthermore, Brownson et al. (2000), suggest that introducing trails to those with low socioeconomic status

could be an advantageous measure for promoting physical activity and a potentially effective public health initiative to reduce social inequalities in health related to class.

2.1.5 Trail users' activity level

Eyler et al. (2003) found that among those who walked regularly and occasionally, almost 50% said that they walked more after being introduced to a walking trail or another resource facilitated for walking. This is also emphasised by Brownson et al. (2000), concluding with a common increased amount of walking among people with access to a walking trail in a rural community, who had started using the trail. Nevertheless, people with lower education were more than twice as likely to have increased their amount of walking since they started to use the walking trails, even though people with higher education and income were more likely to use the trail (Brownson et al., 2000). It seems like people with high socioeconomic status use the trails to maintain their activity, but not to increase it. In contrast, those with low socioeconomic status appear to likely increase their activity level when trails are available (Brownson et al., 2000).

According to Librett et al. (2006), recommendations of physical activity are more likely to be met by trail users than people not using trails. This is also highlighted by Reed et al. (2004), saying that community trail users were more regularly in physical activity than the county population. Dunton et al. (2009) found that trail users are more engaged in vigorous activity, also confirmed by Price et al. (2012). A study by Moudon et al. (2005) implied that those who are cycling in trails are generally physically active and in good shape. There has also been found positive associations between people living close to trails and their physical activity-habits such as frequency and duration (Brownson et al., 2000). However, this is debatable, as a study from Evenson, Herring, and Huston (2005) showed that building a multi-use trail did not affect or increase physical activity level among those who lived close to the trail (Evenson et al., 2005).

2.1.6 Summary of literature

There are visible connections between socio-economic status and physical activity, especially when it comes to educational background (SSB, 2014a). There is a clear social gradient where social mobility increases the likelihood of more forms, as well as higher levels of physical activity (Breivik & Rafoss, 2012; SSB, 2014a).

When it comes to socio-demographic profile of trail users, research show that the average trail user is middle-aged, white and has higher levels of education (Brownson et al., 2000; Dunton et al., 2009; Price & Reed, 2014; Price et al., 2013; Price et al., 2012; Reed et al., 2004). Price and Reed (2014) found that factors such as education and age were of great importance for trail use. In addition, several researchers also found that marital status and place of living can affect trail use (Abildso et al., 2007; Brownson et al., 2000; SSB, 2014a, 2014b; Troped et al., 2001). When facilitating for trails, research showed that it was important to facilitate on a multi-level from a policy- to an individual focus (Walker et al., 2011). Furthermore, it is important to promote physical activity and trail use, and especially to those groups less represented in trails (Brownson et al., 2000; Price & Reed, 2014; Price et al., 2013). Important for promotion of trails is to understand patterns of current use, and facilitating should be based on such knowledge (Price & Reed, 2014; Price et al., 2013).

Research on trail use behaviour show that trails are mostly being used for recreational purposes (Price & Reed, 2014). Trail users regularly spend more than 60 minutes in trails and they evaluate safety and maintenance as good (Price & Reed, 2014). Company and the social aspect in trails are more important for women than men, while walking is the preferred form of activity for all (Price et al., 2012; Price et al., 2013).

Trail users are in general quite active and often meet recommendation for physical activity (Librett et al., 2006). People with high socio-economic status use trails to maintain their

activity level, while people with low socio-economic status increase their activity level when using trails (Brownson et al., 2000).

2.1.7 Gap in the literature and my contribution to the field

A lot of research exists on the individual- and public health effects of walking. Lately there has also been a focus on facilitating for walking and physical activity, in form of multi-use trails.

Owen, Humpel, Leslie, Bauman, and Sallis (2004), for example, point to a need for more research on providing trails, in particular related to the question of whether or not they can increase the probability of active behavioural choices and health promotion. Walker et al. (2011) confirm that the relationship between trails and physical activity still remains unclear. In a similar vein, Brownson et al. (2000) conducted a study where they examined the descriptive characteristics, correlates, and effects of walking in relation to trail development. They called for research and literature to compare results with. In addition, research on trail use might also give health educators a direction to better promote physical activity on trails (Price & Reed, 2014).

Against this backdrop, it is worthy of note that, while there is a good deal of research on walking trails, nothing has been done specifically on the concept “Ti på Topp”, where a multi-level facilitating, and not just the development of trails has occurred.

This project aims to contribute a snapshot of characteristics of participants in “Ti på Topp”. It can be used as comparison to other studies on the field and give ideas for further research. It can be useful for those facilitating for walking, as knowledge about whom the concept attracts, can be important for further development.

2.2 Concept of social class

In this section the concept of social class is being presented, in regard to socio-demographic differences, social inequality and sport participation. Concepts can provide explanations and can be used in social research to explain certain aspects of the social world (Bryman, 2012).

2.2.1 Social inequalities and social class

To understand social inequalities one has to identify causes of such inequality. As mentioned in chapter one, looking at health determinants can contribute to explain social inequalities in health. Uneven distribution of resources, such as material goods, income, power, control and social support leads to a different base for the determinants and can result in inequalities (Coalter, 2007; Dahl, Bergsli, & van der Wel, 2014). People with lower socio-economic status often have fewer resources, while people with higher socio-economic status have more (Dahl et al., 2014). Important factors for inequalities is the social gradient; where people stand compared to others in the society, and social mobility; the ability to move up or down alongside the social gradient (Wilkinson & Pickett, 2010).

Socio-economic status and social class are descriptions used interchangeably even though socio-economic status often is preferred by sociologists to avoid cultural, social and political features (Roberts, 2009). Nonetheless, these cultural and social dimensions are of significant importance, and they are central factors when speaking about differences (Roberts, 2009). The central base for classes are economic, but social and cultural dimensions are important as well (Roberts, 2009). The term *class* has been used for a long time, but Karl Marx is maybe most known for using the term with a base in class-battle and a stratification based on production funds (Roberts, 2009; Østberg, 2012).

In modern times, social class is illustrated as the foremost form of social stratification, but is also described as almost impossible to define accurately (Roberts, 2009). Social class can be

grouped into several schemes, but most frequently used are the terms; working class and middle class (Roberts, 2009). In addition to working class and middle class, there is also a group defined as an upper-class, but this is a relative minor group (Roberts, 2009). The distinction between working class and middle class are almost impossible to see clearly, but are used when people put a label on where they feel they belong. In the UK, language is described as a way to distinguish working class from middle class (Wilkinson & Pickett, 2010).

Important for class theory is that people with the same economic, social and cultural background often develop common outlooks and taste and thereby associate with others with the same background. People from the same class seek together instead of across class lines (Roberts, 2009). Social class tends to create an hierarchically stratification with inequalities between classes (Jacobsson, Thelander, & Wästerfors, 2011). Class distinctions are also traditionally seen as recurring as children “inherit” a base for class from their parents (Roberts, 2009). How strong this inherit turns out to be is influenced by degree of social mobility in the society (Wilkinson & Pickett, 2010). It is shown that in more unequal countries the social mobility is lower than in more equal countries (Wilkinson & Pickett, 2010). In this way, the maintenance and reaffirming of class positions become more applicable for countries with a strong social hierarchy and a lower degree of social mobility (Wilkinson & Pickett, 2010).

Trends within social class show that the working class are shrinking, while the middle class is expanding and becoming more diverse as a majority (Roberts, 2009) . The middle class are doing more and are also represented in more arenas, such as sports (Roberts, 2004).

2.2.2 Social class and sport participation

As mentioned, there is a strong indication that social class and social inequalities are connected. The indications also include that social class can be significant as an outcome for sport participation.

Roberts, Brodie, Asturias, Campbell & Chadwich mention patterns or “habitus” of sports participation as early being formed from the “family culture”, where different bases of social, cultural and financial support are being shaped (as cited in Wheeler & Green, 2014, p.280).

Roberts et al. emphasise values, attitudes and motivations to be a part of an early socialization that parents pass on to their children, in which all are important foundations for being physically active adults later in life (as cited in Green, 2002, p.175). People with low socio-economic status are less likely to be physically active and involved in sports, and this is a repeating cycle, as it is also transferred down to their children (Coalter, 2007). Parents work as role models for their children, and this is especially noticeable in this retrospect. Parent’s economic, social and cultural capital can facilitate for their children’s sports participation, through primary socialisation (Roberts, 2009). In addition to a primary socialisation, a secondary socialisation with friends, peers and school mediate social and cultural class and can therefore affect behaviour (Green, 2011; Roberts, 2009). Sport is said to be a way of expressing and reaffirming class differences, and people from the same classes develop similar tastes and outlooks and thereby seek together (Coalter, 2007; Roberts, 2009). In a way, class cultures tend to be self-fulfilling (Green, 2011).

Roberts (2004) thought of sport participation is inspired by the theories of Bourdieu, however, he also criticizes these theories for their lack of views on social mobility. Throughout ages lower classes has tried to copy high class’ activities. When a high-class activity becomes popular to lower social layers, high class quit such activities and retreat to their own exclusive

“clubs” or activities. Leisure activities acquire economic, social and cultural resources (Roberts, 2004).

According to Roberts (2004) the best predictors of how people spend their leisure time are age and social class. Where people live, sex, ethnicity and religion are also related to leisure. Roberts (2004) state that nowadays, the middle-class is over-represented in activities that earlier was represented by the upper- class. Higher education levels, childhood socialization, higher levels of income and more spare-time results in middle-class doing more (Roberts, 2004). A high level of participation in one type of activity by the middle class leads to increased participation levels in other activities as well (Roberts, 2004).

Even though class has shown to be self-fulfilling, there are many exceptions. It is important to notice that class and sport participation is not straightforward. There are many examples of opposite class patterns where for instance working-class families are involved in a variety of sports (Birchwood, Roberts, & Pollock, 2008). According Roberts (1996) differences in sports participation are blurring with less class and socio-demographic differences. Social class differences in sports participation are now in coherence with frequency and diversity instead of type of activity and whether people are in activity, as the middle-class and upper-middle class are more physically active and participate in more different activities compared to the working class (Stempel, 2005). According to Vaage (2004) the perception of “a healthy life and body” is more applicable among people with higher levels of education. People with high socio-economic status tend to do physical activity with a health aspect in mind, while people with lower socio-economic status perceive their body as a tool (Stempel, 2005). When people with different class-background already participate in the same sport the effects of social class becomes minimal. Differences are restricted to amounts and types of participation (Roberts, Brodie, Asturias, Campbell, & Chadwick, 1992). This is also emphasized by Green (2002), indicating that when people from the working-class manage to engage in sport throughout

their youth, when the risk of quitting is at top , they have almost the same chances to continue with sports in their adulthood as people from middle-class. Due to this, the class-distinctions are becoming less visible (Green, 2002).

According to Coalter (2013), one can explain social inequality in sport and physical activity by using the same explanations as for all social inequalities. Coalter (2013) presented a study where he questioned the comparison with Scandinavian countries and the use of these countries as an inspiration in the work of increasing sport participation in UK. According to Coalter (2013), such a comparison would be difficult because of the differences in social inequalities, the distribution of wealth, social mobility and sex between UK and the Scandinavian countries. Coalter (2013) suggested that sport participation could be reflecting on fundamental structures and processes in the society. Sport participation could be a secondary phenomenon with a secondary set of social practices that occur in parallel to the situation elsewhere in the society. This secondary phenomenon is referred to as an epiphenomenon (Coalter, 2013). The idea of sport participation as epiphenomenal is supported by Green, Thurston, Vaage, and Moen (2015). They also elucidate the thought of sport participation as multidimensional and that there will be needed multifactoral explanations for inequality in sport participation.

All in all, the social class stratification has diminished, but social class is still correlated with sports participation and persists as a form of inequality (Roberts, 1996; Scheerder, Taks, Vanreusel, & Renson, 2005). Due to the blurred class-differences one can describe sports participation as class-related rather than class-based (Green, Thurston, & Vaage, 2015).

The patterns for social inequalities seem to be similar regardless if one look at health, habits, mortality or sport participation. Material goods, economic, social and cultural recourses are necessary for being on top of the “social ladder”. Social inequality is a common characteristic

for issues for the society, and therefore efforts to decrease social inequality are needed (Wilkinson & Pickett, 2010).

3.0 Methods

A study design or a research strategy answering the question “how”: that is, how the process of research or approach should be conducted (Bell, 2014; Dalland, 2012). A study design involves general guidelines on how to do research and moves from broad assumptions to a more detailed plan regarding the specific methods (Bryman, 2012; Creswell, 2014). In this chapter the move from broad assumptions to a more detailed plan will follow presenting the overarching research strategy. Then the design and specific method will appear.

3.1 An overarching study design

In this project the study was descriptive, the approach was quantitative and the design involved a case-study. A descriptive study describe characteristics of people, situations, products or phenomenon (Sue & Ritter, 2011). Descriptive studies answer the question “what?” and simply describe the data and the analysis stops there (Creswell, 2014; Sue & Ritter, 2011). An additional analysis was done for this study in order to see associations. Descriptive statistics were needed to answer the main research question. The aim of this study was to find characteristics as well as a description of *who* the participants in “Ti på Topp” were. A descriptive research approach was therefore appropriate.

3.1.1 Choice of approach and strengths and weaknesses of the approach

An inquiry with specific directions for actions and procedures to follow are needed in a research project, and a research approach provide this (Creswell, 2014). The research approach for this project was quantitative. A quantitative research approach often makes use of numbers rather than words, and uses close-ended questions with pre- set answer alternatives, rather than open-ended questions where the respondents are free to answer whatever they want (Bryman, 2012; Creswell, 2014). Considering the descriptive approach, a quantitative research approach was the most appropriate for the aim of answering the research

questions. According to Roberts (2015) the only way to measure differences between socio-demographic groups is quantitatively, and this supports the choice of approach for this project.

There are advantages and disadvantages with all research approaches. The strengths of choosing a quantitative approach was that it was best suiting the way to answer the current research question and that it can provide a useful snapshot and directions for further research on the area of trail-use and multi-level interventions. The limitation is that one cannot find a deeper answer by exploring the perspectives of those involved, and it is difficult to understand the phenomenon (Bryman, 2012; Roberts, 2009). For this project that means that the overview provided will not give any answer on questions like why people participate or what their specific feelings are when, for example, walking. This limitation can cause a need for further research. The interest in a large sample also matches the quantitative approach. A large sample with results presented in numbers can also be easy to understand and effective when presenting for public health promoters or stakeholders, among others. A descriptive, quantitative research on the topic might provide those facilitating in concepts like “Ti på Topp” a useful overview of the different groups of people they attract, which can be useful in further developing, commitment and investment to the concept. A descriptive quantitative approach might also provide entirety and possibly a representative result for the “Ti på Topp” users, something, due to the research question, a qualitative approach cannot provide. For this study the sample was not representative, but the results can be compared to similar studies and might be used by similar concepts.

3.1.2 Research design and strengths and weaknesses of the design

Within a research approach there are different designs. A quantitative design can comprise of either experimental designs or non-experimental designs (Creswell, 2014). In this project the design was non-experimental. The people participating at “Ti på Topp” in a specific

geographical area was, in this project, investigated. In this matter people participating acted like a “case”, and the design was therefore a case study. A case study design investigates one single case, and is often associated with a location or organization (Bryman, 2012). Case studies are often being associated with qualitative studies, but are actually being used both in qualitative and quantitative research (Bryman, 2012). In this study an organization was contacted for research and this is compatible with a *typical case*. When using a typical case the aim is to capture circumstances of an ordinary situation, not necessary because the conditions are unusual, but the conditions might characterise a broader category of cases (Bryman, 2012). The type of case can also be compatible with a *revelatory case* since the phenomenon has not been investigated before. The basis for a revelatory case is analysing uninvestigated phenomenon (Bryman, 2012). A disadvantage of this case study design is that it cannot be generalized and representative for other cases. Still it can provide interesting implications.

In many instances within quantitative research it can be difficult to decide whether the design should be a case study or cross-sectional research design (Bryman, 2012). A cross-sectional study can also be called a survey design, meaning that data is collected at once with the relationship between variables examined (Bryman, 2012). A disadvantage with cross-sectional design is that one cannot capture a pattern over time such as in longitudinal studies (Bryman, 2012; Creswell, 2014). It is important to notice that the design in this study was a case-study, but the nature of the data was also cross-sectional. A study can often have both case study and cross-sectional elements (Bryman, 2012).

Disadvantages with cross-sectional data imply that a pattern over time of socio-demographic characteristics, trail use or activity level cannot be described. This might be a limitation to the study knowing nothing about if the result will be the same or changed within for example a year, which could be known in a longitudinal study.

3.2 Details within the study design, specific method

In this part of the chapter a more detailed description of the research strategy is provided.

Details of sampling, instruments, data collection and ethical considerations are presented. For gathering data, a survey was chosen. The advantages of using a survey is the aspect of economy and the relatively quick turnaround on the collection of the data (Bryman, 2012). In this project the time was limited and therefore a cross-sectional survey was expedient.

3.2.1 Sample and sampling strategy

The sample in this project was people participating in “Ti på Topp” in Hedmark and Oppland counties. The inclusion criteria was that respondents had to be registered online for “Ti på Topp” during the summer season, as well as the area where they were registered was restricted to Elverum, Gjøvik, Hamar or Lillehammer. All those registered with an e-mail address was invited to respond to the questionnaire. The sample strategy was simply to get as many respondents as possible from the population users of “Ti på Topp”. On the basis of the goal to include as many participants as possible there were therefore no other exclusion criteria. The sampling strategy was to include as many as possible mainly because there are little to none registered information about the respondents from the Company Sports. Little information about participants from before can be a significant limitation, but with little information one also has to start from scratch (Bryman, 2012).

Company Sport indicated that there were about 860 registered participants at “Ti på Topp” in Hedmark and Oppland, as of summer 2015. Among these there was estimated that about 200 of these were kids or under 18 years old. Hence, there were approximately 660 participants that received the invitation. In the early autumn of 2015 there was 765 registered participants divided into 270 in Elverum, 260 in Lillehammer, 120 in Hamar and 115 in Gjøvik. An important limitation for the study was that these numbers of participants was vague.

3.2.2 Collection of data

Due to the fact that the participants were already registered online, the availability of sampling frames was therefore through access to participants' e-mail addresses. The access of the population was given through Company Sports via a database with all the e-mail addresses of those registered at "Ti på Topp" online. A contact working with "Ti på Topp" helped recruiting participants by sending out e-mails and encouraging participation through social media and newsletters. Access to mass mailing equipment made the process much easier.

The e-mail that was sent out to participants contained an introduction to the study in addition to a link to the online survey. The participants were informed about the time it would take to finish the survey, as according to Bryman (2012) it could help to reduce the risk of losing participants. Both the invitation and information about the study sent out to the respondent are attached as an appendix to this paper (see appendix: 1 and 2). According to Bryman (2012) following up non-respondents at least once can increase the response rate. Heerwegh and Loosveldt (2008) investigated web-surveys in relation to face-to face interviews and found a lower response rate in web surveys. Their recommended way of doing the data collection in the web survey was to first send out an invitation via e-mail, then an additional two reminder-e-mails to those who did not respond (Heerwegh & Loosveldt, 2008). In this study there were two follow-ups. Two weeks after receiving the invitation e-mail, the link to the study was posted on Facebook in the group for participants at "Ti på Topp". This post also contained a short version of the information about the study and also a part that aimed to encourage people to participate added by the Company Sport. Three and a half weeks after the first e-mail, another e-mail was sent to all the registered participants with a link to the questionnaire. It was highlighted that one could only participate once. This was also administered at the web-survey page, in order to make sure people could only participate once.

Data collection through an online survey is debated in the literature (Sue & Ritter, 2011).

There are some evident disadvantages, one is the probability of low response rates (Bryman, 2012). There is also a risk of a biased sample of the population because young people and people with higher socio-economic background are more likely to respond due to access and computer skills (Bryman, 2012).

Even though the online survey methods are discussed there are some profitable advantages as well. An online survey was appealing to the time and cost aspect through low cost and a faster response (Bryman, 2012). Also, people often find the formats of online surveys more attractive, there will be fewer unanswered questions, errors can more easily be avoided and there are often better data accuracy compared to surveys that are not conducted online (Bryman, 2012).

3.2.3 Anonymity of data

The anonymity of respondents was very important to safeguard (Bryman, 2012). The use of a recognised, secondary person for sending out invitations to participate in the survey assured participants' anonymity since the researcher could not track respondent's email-addresses. By using a programme made for online-surveys there was no way to trace the respondents. Their e-mail addresses were used for sending out invitations, but the person with access to the e-mail addresses never saw the data and could not make any connections. In the survey there was no information gathered that could be used to trace the participants. In addition to this, the questionnaire was put into a coding system with numbers instead of words. Raw data and processed data were stored in a password-protected computer. It was also saved safely online with a password. The data will be stored safely during the research process and until the end of the project. All data will be deleted when the project is finished, also from the data-processor as a data-processing agreement has been signed (Appendix: 3).

3.3 Instruments

The data collection in this project was performed using self-completion questionnaires. A questionnaire contains a set of questions given to respondents. Self-completion questionnaire is the name given to a questionnaire when it is used on its own, meaning that the respondents complete the questionnaire by themselves (Bryman, 2012). Self-completion questionnaires include mainly close-ended questions and, sometimes, open-ended questions. It is an easy-to follow design and is shorter than, for example, a structured interview so that the risk of respondents abandoning the survey midway is reduced (Bryman, 2012). Advantages of selecting self-completion questionnaires are that they are cheap and quick to administer, and that the researcher cannot influence or judge the participants (Bryman, 2012). Additionally the respondents can answer whenever they have the time, and the order of questions will be the same for every participant (Bryman, 2012). Disadvantages of selecting self-completion questionnaires might be that no one can guide the participants if they do not understand the questions. There is no possibility to add extra questions or collect additional data, as well as people with limited literacy cannot participate and there are often a risk of low response rates (Bryman, 2012).

The questionnaire developed in the project was comprised of four different parts (Appendix: 3). The reason for using parts from several instruments was to get the best answer for the research question. All instruments used in this project had previously been validated. This was strength, as it gave higher chance to obtain valid outcomes. Questions of socio-demographic information and additional items were not pre-validated. Close-ended questions were mostly used in this questionnaire and the format was both horizontal and vertical. The questionnaire consisted mostly of categorical variables as response options. When “other” was included as an option, a comment section was opened.

Part 1- Socio-demographic characteristics: The first section in the questionnaire assessed questions regarding background and socio-demographic profile and it included ten items. All response options were coded into numbers and rated for priority. Questions regarding socio-demographic profile are outlined in bold. The first item was the consent form, with YES as the only answer option. If participants did not answer YES on this item, they were not able to move on with the questionnaire.

Sex: Item number two referred to sex. The question contained categorical nominal answer options. Where the number 1= female and 2= male.

Age: Item number three referred to age. The question contained numeric continuous answer options. 1=<20, 2=21-29, 3=30-39, 4= 40-49, 5= 50-59, 6= 60-69, 7= 70-79, 8= >80.

Ethnic origin: Item number four referred to ethnic origin. The purpose was to see if the participants were Norwegian or not. However, there was no question to follow up what country they were from if they were not Norwegian. The question contained categorical nominal answer options. 1= Born in Norway with one or both parents born in Norway, 2= Other nationality, have moved to Norway, 3= Born in Norway, but have parents that were born in another country, 4= Other.

Work situation: Item number five referred to employment status. The question contained categorical nominal answer options. 1= Employed fulltime, 2= Employed part time, 3= Retired, 4= Student, 5= Not working, 6= Other.

Education: Item number six referred to highest fulfilled education. The question contained categorical ordinal answer options. 1= Middle school/elementary school, 2= High school/secondary school, 3= College/ university (1-3 years), 4= College/university (more than 4 years).

Income: Item number seven referred to gross income per year in NOK [kr] (one person). The question contained categorical ordinal answer options. 1= <100 000 kr, 2= 100 000-299 000 kr, 3= 300 000-499 000 kr, 4= 500 000-699 000 kr, 5= > 700 000 kr, 6= I do not know.

Marital status: Item number eight referred to marital status. The question contained categorical nominal answer options. 1= Married, 2= Cohabitant/partner, 3= Divorced/separated, 4= Widowed, 5= Not married/single.

An additional two items were added to the first section, and that was questions related to responsibility of children under the age of eighteen and the population of their municipality. Both items had categorical answer options.

When completing the survey, the respondents only had the opportunity to tick one of the alternatives for each question. Questions that consist of only two categories, such as sex, are called dichotomous variables (Bryman, 2012). Variables called ordinal, such as income, are variables where the answer alternatives can be categorised and rank ordered (Bryman, 2012).

An alternative of “I do not know” was provided on some answer options to reduce risk of incorrect data.

Part 2- Leisure time exercise questionnaire (LTEQ): The next section was measuring frequency, duration and intensity of physical activity, and was taken from Godin and Shephard (1997). The questionnaire consisted of two items that assessed activity level, asking how many times in the last week one does listed activities for more than 15 minutes, and about the intensity. In the first item there was a blank space to fill in how many times, divided in three activity levels – strenuous exercise, moderate exercise and mild exercise. The variables were numeric and continuous. The second item was answered with one out of three answer alternatives measuring attitude, and consisted of categorical ordinal answer options. These questions were used as a part of describing participants and their activity levels and

habits. The answers were ranked into units that matched to Metabolic Equivalent Task [MET], a measure for energy expenditure. Strenuous activity was multiplied with nine, moderate activity was multiplied with five and light activity was multiplied with three (Godin, 2011).

This leisure-time exercise questionnaire had been validated and tested for reliability by several studies (Amireault & Godin, 2015; Jacobs Jr, Ainsworth, Hartman, & Leon, 1993; Miller, Freedson, & Kline, 1994), and validity evidence from testing compared to the questionnaire support the classification system of the questionnaire on healthy adults (Amireault & Godin, 2015). The questionnaire was translated into Norwegian and adapted to Norwegian conditions by cutting out the examples of activities that are not familiar in Norway.

Part 3- Trail use behaviour: The next items were used from a trail intercept survey that had been tested for reliability of Troped et al. (2009), using test-retest on a sample. The majority of questions had a high test-retest reliability (Troped et al., 2009). The questions were about trail use behaviours (Troped et al., 2009). It included eleven items. Most answers were answered with categorical variables as answer options, both ordinal and nominal. One question was an open question about the distance to trail in kilometres, with numeric continuous answer options.

The questionnaire was translated into Norwegian and there were done some changes to make the questions more suitable for the concept of “Ti på Topp”. Where the word “trails” was used in the original survey, it was changed into “Ti på Topp- trails” in the translated version.

Also added was an answer option such as “I do not know” and “other” to some of the questions, in order to prevent and limit inaccuracy. In two items the questions surrounded “What type of activity do you usually do when you are on this trail for recreational reasons”

and “How much time do you usually spend per visit, when using the trail for recreational purposes”. In this case the *recreational purpose* was removed because participants could answer other reasons for using the trails as an earlier question.

Part 4: Additional questions: The last item included a few questions related to “Ti på Topp” in specific, with the intention to provide more information about and for the scheme. This section had not been validated. Still, these questions were not of great importance in order to answer the research questions, and therefore not validated questions can be legitimated. The section included 12 items and all answer options was categorical, either nominal or ordinal. The items comprised of questions regarding which place participants belongs to and register their trips, how they register their trips and if they participate alone or with someone. Also questions regarding if their workplace participate at “Ti på Topp”, if they participate through their workplace and if they can participate during work hours was added. In addition questions regarding if the opportunity for competition motivates them, if they have been more familiar in their vicinity and if “Ti på Topp” made them seek out new hiking destinations. There were also questions regarding whether or not they utilize the maps, if they have participated in the winter campaign and where they heard of “Ti på Topp”. All questions had more than one answer alternative, where one answer per question was possible. However, the section also included two multi-choice answers, regarding who they possibly participated with, and where they heard of “Ti på Topp”. In items regarding workplace and participation there was added an extra answer alternative “not relevant”, intended for students, those retired or those currently not in work.

Possible limitations regarding translation and reduced validity are acknowledged. Small changes on the items were done so that they suited the research questions and the topic. Terms that could be difficult to understand for participants were defined and an introduction to each section of the questionnaire was provided.

The questionnaire was pre-tested in a small sample of friends and family to get feedback on its user friendliness and to see if everything was easy to understand. Based on this feedback, small changes, such as more detailed explanations of the questions and sections, were made.

The major content sections for this instrument were socio-demographic profile, activity level and trail use behaviour. The instrument was made using the software Questback; a user friendly online survey software. Advantages of using an online survey software were wider diversity of possible appearance such as formatting, colour and response styles (Creswell, 2014). Another advantage was that the likelihoods of errors could be reduced (Creswell, 2014). The software was also automatically programmed to download the answers into a database.

The questionnaire was to participants only available in Norwegian. The questionnaire, a Norwegian and an English version are attached to this paper (Appendix: 4 and 5).

3.4 Reliability and validity

In quantitative research validity and reliability are important aspects of the ethical consideration. A research is valid when it measures what it is supposed to measure, also called construct validity (Bryman, 2012). A research is reliable when results are repeatable (Bryman, 2012). Validity and reliability are often focused around the measures used and an important part of ethics is that the measures and results are valid and reliable (Bryman, 2012).

In order to ensure reliability and validity it was important that the instruments used in this project had been validated. Amireault and Godin (2015) tested the Godin Shepard leisure-time physical activity questionnaire for validity. They used a multivariate analysis of covariance (MANCOVA) and an analysis of covariance (ANCOVA), where both indicated that people with higher VO₂ max and higher electronic records of fitness centre attendance was in the group of respondents classified as active in the LTEQ (Amireault & Godin, 2015). Amireault

and Godin (2015) rated the LTEQ as valid as the classification system in the questionnaire was supported by the results in their study. The LTEQ had also been tested for reliability and validity by several studies, as mentioned earlier (Jacobs Jr et al., 1993; Miller et al., 1994).

Troped et al. (2009) concluded that the Brief Intercept Survey for Trail Use Behaviours had overall high reliability. They used a test-retest and assessed it with Spearman rank correlation coefficients and Kappa coefficients. Spearman rank correlation coefficient ranged from 0,62 to 0,93. Kappa coefficients were ranged from 0,65 to 0,96 for nine categorical items. Percent agreement ranged from 64,0 % to 98,2 % (Troped et al., 2009).

Furthermore, both the instruments had been used in similar projects before. The LTEQ had been used frequently and in different languages (Godin, 2011). The Brief Intercept Survey for Trail Use Behaviours had also been used in several studies (Price & Reed, 2014; Price et al., 2013). The first section in the questionnaire regarding background information was similar to many other studies. Still, this was a case study, and external validity and generalizability of the study are often difficult to reaffirm (Bryman, 2012).

3.5 Ethical considerations

An important part to consider when doing research is ethics (Bryman, 2012; Creswell, 2014). There are certain codes of practise and ethical principles that should be followed to protect both the research participants and the researcher (Bryman, 2012; Creswell, 2014). The ethical considerations were considered through the whole process of the study, both prior to the study, in the beginning of the study, during the data collection and the analysis and considerations of data material after the study was done (Creswell, 2014).

Prior to the study, a project description in addition to an application was sent to an institutional review board in Norway called NSD (Appendix: 6), in order to ensure that the ethics was being safeguarded.

Participants at “Ti på Topp” received, as mentioned, a written consent form, with information about the study and how the data would be processed. An important factor on this consent form was to inform about the participants anonymity, emphasizing that the completion was voluntary and that the respondents would not be compensated (Bowles, Rissel, & Bauman, 2006; Creswell, 2014). The participants needed to sign this consent form by “clicking” “yes” on the webpage.

4.0 Data analysis

This chapter provides an overview of the process of analysing the data. It includes the preliminary explorative analysing process, coding and use of variables, statistical process and analysing techniques used. The statistical process with descriptive data was used to answer the main research question, while analysing for associations was used to answer the secondary research question.

4.1 Preliminary explorative analysis

The data collection program Questback provided results with basic descriptive statistics, portrayed in graphs, standard deviation, mean and range. The graphs were used for a preliminary explorative analysis of the distribution of data, missing data and outliers. The data for the individual respondents were exported in an excel sheet. Microsoft Excel (2007) was used for further explorative analysis of the raw data by marking outliers, sorting and categorizing variables. Missing data was coded as either zero or removed (Bryman, 2012). During this process, a research diary was written to keep record of the analysing process and to ensure all work being documented.

4.2 Recoding of variables

In the process of analysing the raw data in Microsoft Excel, all the data was coded into numbers as opposed to words. This was done so the statistical tests could be conducted. In addition to the coding, some variables were recoded. Recoding means changing values for variables (Johannessen, 2007), and is used to for example group people (Bryman, 2012). All variables were recoded to be categorical variables.

Age: The variable age was recoded into adult (<20-59) and older adult (60->80). This was done to compare the results to other studies more easily. In the study to Price and Reed (2014) a similar grouping found place, categorizing adults as 18 years old to 64 years old, and older

adults were categorized as 65 years old or older. Since the age intervals were different in this study a third age category was made categorizing younger adults to (<20-39), middle aged (40-59) and older adults (60->80).

Education: The variables for education were recoded to dichotomous variables, dividing high (college/university 1-3 years and 4 years or more) and low (middle school, high school, other) education. This was done to set a distinction between high and low education, which was important for classifying socioeconomic status.

Income: The variable income was also recoded into four groups dividing high (over 500 000 kr), medium (300 000-499 000 kr) and low (under 299 0000 kr) income, and a group for “I do not know”.

Marital status: Marital status was recoded to dichotomous variables, divided to partner and not partner.

MET: The three categories from the questionnaire were multiplied with three different values, as mentioned earlier (Godin, 2011). If a respondent had written for example 4-5 times, a value of 4, 5 (median) was used instead. A validated classification scheme was used for classifying participants as active or insufficiently active (Amireault & Godin, 2015). Score index for 24 or more was classified as active, 14-23 as moderately active, while score index for 13 or less was classified as insufficiently active, using only strenuous and moderate scores (Amireault & Godin, 2015).

To be able to run the statistical test, answer options with fewer than five answers were merged with another category (McHugh, 2013). For population in municipality the category of “less than 5000 “were recoded to “less than 20 000”. For time usually spent on a visit, the category “less than 30 minutes” were recoded to “less than 44 minutes”. For employment status “other”

was recoded to “not in work”, due to answers referring others to disability benefits. For the question on how participants usually get to the trail, “jog or run” were recoded and grouped together with “walk”. The answers from the category “other” were removed from education, where participants usually come from and how participants travel to the trail. “Other” was removed because it was less than five that had answered this. “I do not know” and “less” was removed from “activity level after being introduced to trail” because there were only a total of four respondents that chose this answer option. “I do not know” was also removed from income, population in municipality and from the question of maintenance.

5.3 Statistical analysis

To address the main research question, the statistical analysis of data was performed using the basic descriptive statistics’ report from Questback and by calculating frequency and percentages within each category, using Microsoft Excel (2007).

To address the secondary research question, the statistical analysis of data was performed using a statistical computer program, MYSTAT, version 12. The distribution free, non-parametric Chi-square test of independence was used for the statistical analysis. The Chi-square test of independence is an analysing tool applied when the aim is to analyse group differences when the dependent variable can be measured at a nominal level (McHugh, 2013). The Chi-square test is used for testing whether there is a relationship between two categorical variables based on the frequency distribution in the population (Bjørndal & Hofoss, 2015).

One of the requirements to the test are that the variables needs to be either nominal or ordinal (Johannessen, 2007; McHugh, 2013). In addition, the Chi-square test does not require equal sample sizes of the groups, nor does it require normal distribution of the data (McHugh, 2013). Since almost all the variables were categorical the Chi-square test was appropriate.

With the research question of association in mind (RQ2), the Chi-square test was suitable to

assess statistical significance (Bjørndal & Hofoss, 2015). Furthermore the Chi-square test is also the most popular test for assessing the correlation in cross distributed data with categorical variables (Bjørndal & Hofoss, 2015).

The Chi-square test was done with the socio-demographic factors sex, age, education, income, marital status and place of living. The socio-demographic factors were tested for associations with physical activity level and questions regarding trail use. To be significant, the p-value needs to be 0,05 or smaller (Pallant, 2010). P-values more than 0,05 were evaluated as not significant. The minimum expected cell frequency should be no lower than 5 for Chi-square (Pallant, 2010). To avoid vague results, effect size was calculated using phi coefficient (0-1). Cohen's criteria was used where scores 0,10 showed a small effect, 0,30 a medium effect and 0,50 large effect (Pallant, 2010).

5.0 Findings

In this chapter the key findings and results from the analysis are presented. The main focus of the findings is a description of the socio-demographic profile of the sample, alongside the activity levels and trail use. This involves describing significant results from the statistical analysis in relation to associations of socio-demographic profile, and trail use/activity level.

5.1 Sample description

After the first invitation there were 81 registered answers. After the reminder on social media there was an additional 12 answers. Furthermore, the last follow-up e-mail resulted in 58 new answers. All-in-all there were a total of 151 respondents (n=151).

The number of invitations sent out was uncertain, therefore it was not possible to calculate a response rate. This was a result relating to the fact that the Company Sport did not have accurate numbers of the amount of participants or the amount of sent out invitations.

However, assumptions of the amount of registered respondents over 18 years old in “Ti på Topp” can give an estimated response rate of 23 %. This is not a particularly high response rate, but self-completion internet survey often receives lower response rates than postal surveys, for instance (Bryman, 2012).

5.1.1 Demography of sample

The majority of the sample were women (74, 2 %). The categories of the interval variable age were normally distributed, with most respondents in the age group 50-59 years old (29, 1%).

Almost all respondents were Norwegian, with one or both parents born in Norway (95, 4%).

Most respondents were employed full-time or part-time (77, 4%), had higher education level (70, 8%) and middle to high levels of income (82, 2%). Half of the respondents were married and combined with the respondents with a partner, this amounted the majority of the sample (73, 5%). A higher percentage of respondents did not have responsibility for children younger

than 18 years old (65, 6%), compared to those who had responsibility for children younger than 18 years old (34, 4%). Respondents generally lived in municipalities with a population of 20 000 or more (74, 2%). An overview of the descriptive data is presented in table 1.

All in all the socio-demographic profile of trail users indicate the typical trail user to be an employed Norwegian woman, 50-59 years old, with higher education levels and middle-to high income levels. The typical trail user also has a partner and lives in a municipality with 20 000 inhabitants or more.

Table 1: Descriptive data of the sample of “Ti på Topp”-respondents. The total n=151, respondents who selected the answer alternative “other” or “I do not know” were removed.

| Variable | Category | N (%) |
|----------------------------|---|--------------|
| Sex (n=151) | 1) Female | 112 (74,2) |
| | 2) Male | 39 (25,8) |
| Age (n=151) | 1) Adults (18-59 years old) | 115 (76,1) |
| | 2) Older adults (60 + years old) | 36 (23,9) |
| Ethnicity (n=150) | 1) Norwegian, with one or both parents born in Norway | 144 (95,4) |
| | 2) Other nationality | 6 (4,0) |
| Work status (n=151) | 1) Employed fulltime | 97 (64,2) |
| | 2) Employed part-time | 20 (13,2) |
| | 3) Retired | 18 (11,9) |
| | 4) Student | 7 (4,6) |
| | 5) Not in work | 9 (5,9) |

| | | |
|--------------------------------------|---------------------------------|------------|
| Highest fulfilled education (n=149) | 1) Low | 42 (27,8) |
| | 2) High | 107 (70,8) |
| Gross income per year in NOK (n=146) | 1) Low | 22 (14,5) |
| | 2) Middle | 72 (47,7) |
| | 3) High | 52 (34,5) |
| Marital status (n=151) | 1) Partner | 111 (73,5) |
| | 2) Not partner | 40 (26,4) |
| Population of municipality (n=133) | 1) Less than 20 000 inhabitants | 21 (13,9) |
| | 2) More than 20 000 inhabitants | 112 (74,2) |

5.1.2 Activity level of sample

Most of the respondents were categorised as either substantial (55%) or moderately active (27%). The prevalence of respondents with insufficiently physical activity levels was rather low (19%). An overview of the activity level in percent is presented in table 2. Frequency of activity is presented in figure 2. All in all, respondents of “Ti på Topp” were a physically active group on their spare time.

Table 2: Activity level of respondents, Activity level after calculations, using MET-scores.

| Activity level after calculations | N(%) |
|--|---------|
| 3)Substantial active (24 MET's or more) | 82(55) |
| 2)Moderately active (14-23 MET's) | 40 (27) |
| 1)Insufficiently active (Less than MET's) | 28 (18) |

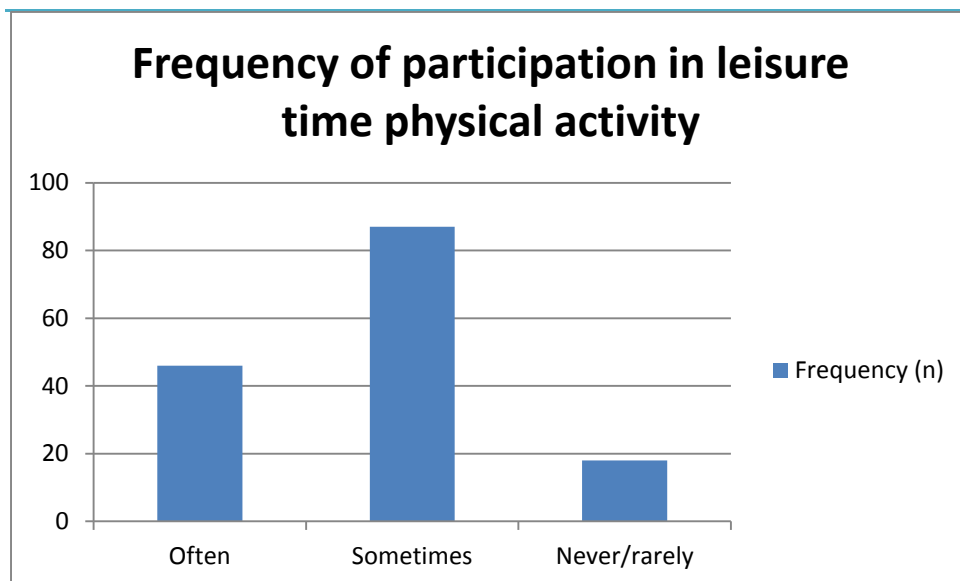


Figure 2: Frequency of participation in leisure-time physical activity in 151 adults registered in “Ti på Topp”. The respondents described themselves as often, sometimes or never/rarely in activity enough to get sweaty during a week. The three frequency-alternatives were not defined.

5.1.3 Trail use

Half of the respondents (50, 3%) said they used the “Ti på Topp”-trails for the first time around 4-11 months ago, while 45 % of the respondents had used the trails for a longer period of time, with the first time being a year ago or more. Only 4, 6 % had used the trails for the first time within the last three months. The majority of the respondents (78, 1%) were coming from home when they were using the trails, and used 15-29 minutes to get to a trail (60, 3%). The respondents usually travelled to the trails by car or another type of motor vehicle (72, 2%), while 20, 5 % walked, jogged or ran to the trail, and only 6, 6 % used bicycle.

Respondents’ main reason for using the trails were training or recreation (77, 5%), while only 1, 3 % used the trails for transportation reasons. The majority of the respondents (86, 1%) reported walking as a usual activity in trails. 6 % reported jogging or running and 4, 6 % reported cycling as their activity on the trail. Half of the respondents (50, 3 %) usually spent

1-2 hours in trail, while 29, 1 % spent 45-59 minutes. Only 6, 6 % spent more than two hours in the trail and 13, 9 % spent less than 44 minutes in the trails. Most respondents (71, 5 %) reported their activity level as the same after they started participating in “Ti på Topp”. 25,8% reported their activity level as increased and 1, 3 % reported it to decrease. Maintenance (69, 5%), safety and security (66, 2%) alongside the trails were mostly reported as good.

All in all, the typical user of the “Ti på Topp”- trails came to the trails from their home by car or other motor vehicle, chose walking, for about one to two hours, as main form of training or recreation activity. Furthermore, they assessed their activity level as the same as before they started using the trails and evaluated maintenance, safety and security along the trails as good.

Some of the most relevant results are outlined in the graphs below (Figure 3, 4 and 5).

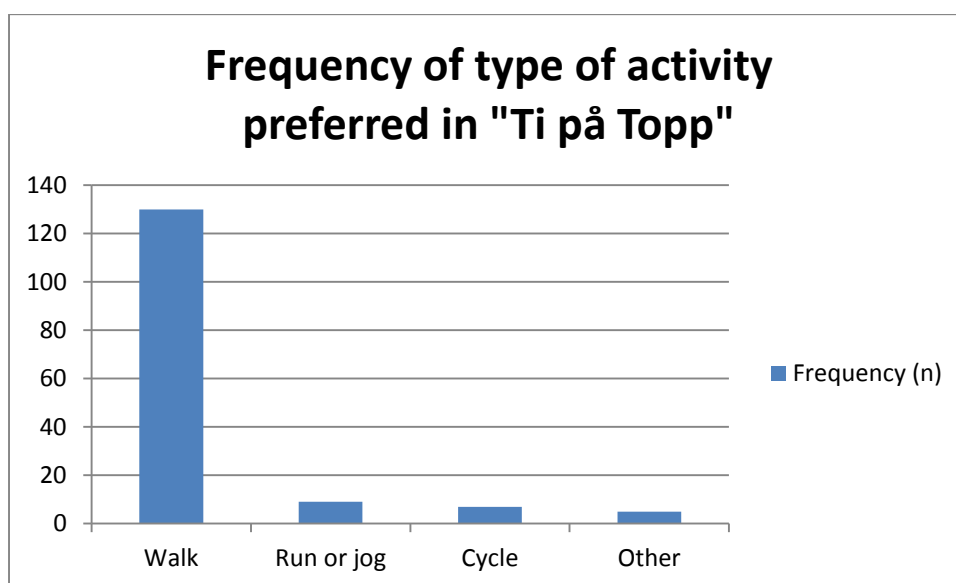


Figure 3: Frequency of activity preferred in “Ti på Topp”. Respondents reported their preferred activity when in “Ti på Topp”-trails.

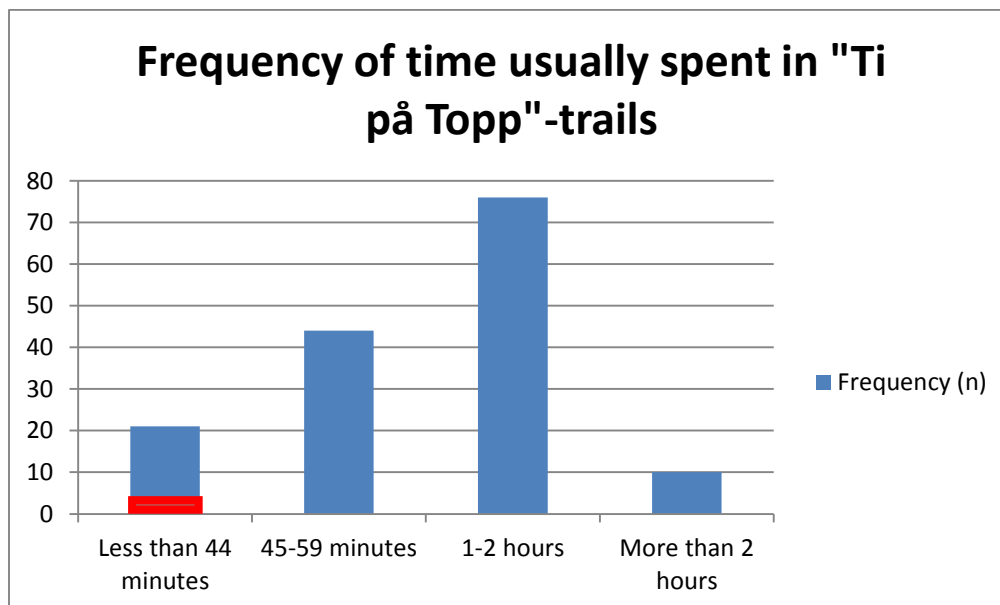


Figure 4: Frequency of time respondents usually spend when in trail. The respondents reported frequency of time typically spent in “Ti på Topp”-trails. Area marked in red represent the amount (n=2) of respondents that reported being in the trail less than 30 minutes. Due to the small amount, this variable was categorised with 30-44 minutes and amounted “less than 44 minutes”.

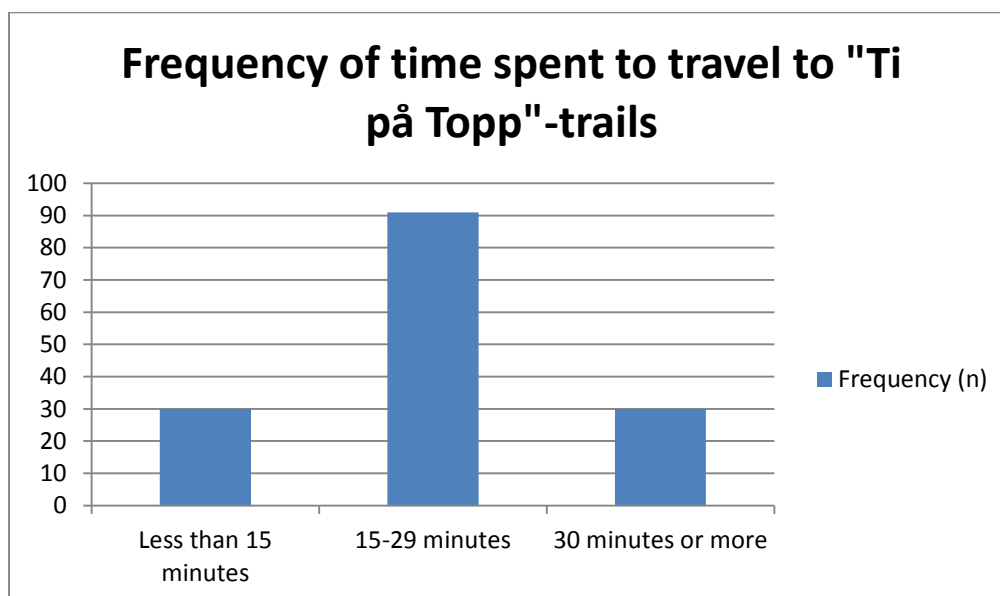


Figure 5: Frequency of time usually spent on travel to a “Ti på Topp”-trail. Respondents reported time they usually spent on travel to get to a “Ti på Topp”-trail.

5.1.4 Characteristics of “Ti på Topp”-trails

From the sample there was notably higher response rates from Lillehammer (49,7%), followed by Gjøvik (21,2 %), Hamar (20,5 %) and Elverum (8,6 %). In general, respondents reported family as their usual companions on the trails, followed by friends, colleagues and pets (multiple answers possible). Almost half of the sample also reported being alone when in trails. 38,4 % participate at “Ti på Topp” through their workplace, while 49 % does not participate through their workplace. Only 9,3 % out of the 38,3 % were able to participate at “Ti på Topp” during work- hours. The possibility for competition against others in “Ti på Topp” obtained a vast variety of answers, but most respondents agreed or slightly agreed (49,6%) that this possibility motivated them to be physically active. 21,2 % disagreed or slightly disagreed that the possibility of competition motivated them. There was, however, an overall agreement that “Ti på Topp” contributes to get more familiar in the vicinity (90,1%), and that participation makes people seek out hiking destinations they would not otherwise have visited (89,4%). Most respondents utilize the maps in the map folder often (64,2%) or sometimes (31,1%).

Overall, characteristics of “Ti på Topp”-trails showed that the typical user came from Lillehammer, participated alone or with family and friends, utilized the map folder, participated via other instances than their workplace and evaluated “Ti på Topp” as an arena to get more familiar with the vicinity.

5.2 Association between socio- demographic profile and activity level/ trail use

For answering the secondary research question associations were investigated using chi-square for independence, reporting values in p, chi-square and phi. In this part sex, age, education, income and additionally marital status were used as measures for the socio-demographic profile. Ethnicity and job situation were not presented due to small variances in sample. There were also few respondents from municipalities with less than 20 000

inhabitants so those results should be treated with caution. Nevertheless, there were some interesting results showing associations with population and these are outlined below in chapter 5.2.6.

5.2.1 Sex

31% of the women reported they became more active after being introduced to “Ti på Topp”, as opposed to men (13 %). A Chi-squared test for independence showed a significant association between sex and reporting increased activity levels ($p=0,030$, $\text{chi-square}=4,702$, $\text{phi}=0,179$). A bigger proportion of women reported that they were participating with friends in “Ti på Topp” (42%) as opposed to men (15%), and the association between sex and participating with friends was significant ($p= 0,003$, $\text{chi-square}= 8,97$, $\text{phi}=-0,244$). A larger proportion of men reported that they participated with their families (74%) , compared to women (47%). Chi-squared for independence showed a significant association between sex and participation with family ($p=0,004$, $\text{chi-square}= 8,522$, $\text{phi}=0,238$). Although there was little difference between the proportion of men (9%) and women (4%) using the trails for biking, the Chi-squared found no significant association for type of activity ($p=0,486$, $\text{chi-square}=1,442$, $\text{phi}=0,099$). A small difference was also found for the proportion of women (9%) and men (0%) that reported spending more than two hours in the trails, but the Chi-squared found no significant association ($p=0,104$, $\text{chi-square}=6,171$, $\text{phi}=0,202$). More women (18%) than men (5%) reported participating in “Ti på Topp” with pets, but the Chi-squared found no significant association ($p=0,052$, $\text{chi-square}=3,766$, $\text{phi}=-0,158$).

A larger proportion of women than men participated in Elverum (women =10%, men =5%) and in Lillehammer (women = 54%, men = 36%), while a larger proportion of men (38%) than women (15%) participated in Gjøvik. The Chi-squared showed a significant association between sex and place registered for “Ti på Topp” ($p=0,017$, $\text{chi-square}= 10,147$, $\text{phi}=0,259$).

On the whole, significant associations for sex were found when reporting increased activity levels, participating with friends, participating with family and place registered for “Ti på Topp”. A higher proportion of women reported increased activity levels and participating with friends compared to men, while a higher proportion of men reported being with family when in “Ti på Topp”-trails.

Table 3: Overview of associations between sex and trail use/activity level: An overview of results from test for association between sex and trail use/activity level. *n.s = no significance.

| Variable | Sex (n=150) | | P | χ^2 | Φ |
|---|---------------------|------------------|-------|----------|--------|
| | Female (n =112) | Male (n =39) | | | |
| Activity level (%) | | | | | |
| Substantial active | 50 | 68,5 | n.s | - | - |
| Moderately active | 29 | 18,5 | | | |
| Insufficiently active | 21 | 13 | | | |
| Where respondents usually come from when using trails (%) | | | | | |
| Home | 79 | 77 | n.s | - | - |
| Work | 5 | 8 | | | |
| Both home and work | 15 | 15 | | | |
| Time usually spent on getting to a trail (%) | | | | | |
| Less than 15 minutes | 19 | 23 | n.s | - | - |
| 15-29 minutes | 61 | 59 | | | |
| 30 minutes or more | 20 | 18 | | | |
| How respondents get to the trail (%) | | | | | |
| Walk, jog or run | 23 | 13 | n.s | - | - |
| Bicycle | 5 | 13 | | | |
| Car or motor vehicle | 72 | 74 | | | |
| Distance to trail from home (%) | | | | | |
| Less than 10 km | 76 | 85 | n.s | - | - |
| 10 km or more | 24 | 15 | | | |
| Type of activity preferred in trail (%) | | | | | |
| Walk | 90 | 86 | n.s | - | - |
| Jog or run | 6 | 6 | | | |
| Cycle | 4 | 8 | | | |
| Time usually spent on trail visit (%) | | | | | |
| Less than 44 minutes | 14 | 13 | n.s | - | - |
| 45-59 minutes | 31 | 23 | | | |
| 1-2 hours | 46 | 64 | | | |
| More than 2 hours | 9 | 0 | | | |
| Activity level after being introduced to “Ti på Topp” (%) | | | | | |
| More | 31 | 13 | 0,030 | 4,702 | 0,179 |
| Same | 69 | 87 | | | |
| Who respondents participate with (%) | | | | | |
| Alone | 49 | 51 | n.s | - | - |
| Not alone | 51 | 49 | | | |

| | | | | | |
|--------------------------------------|----|----|-------|--------|--------|
| With friends | 42 | 15 | | | |
| Not with friends | 58 | 85 | 0,003 | 8,97 | -0,244 |
| With family | 47 | 74 | | | |
| Not with family | 53 | 26 | 0,004 | 8,522 | 0,238 |
| With colleagues | 26 | 21 | | | |
| Not with colleagues | 74 | 79 | n.s | - | - |
| With pet(dog) | 18 | 5 | | | |
| Not with pet | 82 | 95 | n.s | - | - |
| Place registered for "Ti på Topp"(%) | | | | | |
| Elverum | 10 | 5 | | | |
| Gjøvik | 15 | 38 | | | |
| Hamar | 21 | 21 | 0,017 | 10,147 | 0,259 |
| Lillehammer | 54 | 36 | | | |

5.2.2 Age

Results from this study showed no significant association between age and type of activities chosen ($p=0,810$, $\text{chi-square}=0,421$, $\text{phi}=0,054$). A larger proportion of adults (30%) as opposed to older adults (6%) participated with colleagues. The only significant association found for age was participating with colleagues ($p=0,003$, $\text{chi-squared}=8,835$, $\text{phi}=-0,243$).

Other results showed that a higher proportion of older adults travelled to the trails by walking, running or jogging (33%), compared to adults (17%). However, the Chi-squared found no significant association between age and how respondents travelled to the trail ($p=0,076$, $\text{chi-square}=5,159$, $\text{phi}=0,186$). A larger proportion of adults reported walking alone (54%) in comparison to older adults (36%). Despite this difference, the Chi-squared found no significant association ($p=0,069$, $\text{chi-square}=3,313$, $\text{phi}=-0,149$). In addition, more adults reported participating with a pet (18%) compared to older adults (6%), but no significant association was found ($p=0,076$, $\text{chi-square}=3,142$, $\text{phi}=-0,145$).

The proportion of older adults' participation in Gjøvik and Hamar was somewhat higher compared with the proportion of older adults participating in Elverum and Lillehammer. The

Chi-squared showed however no significant association ($p=0,077$, $\chi^2=6,854$, $\phi=0,214$).

When dividing age into three categories instead of two, there were no more significant associations found. Only participating in organised groups were significant ($p=0,006$, $\chi^2=10,294$, $\phi=0,262$), where the youngest group (20-39 years) were more likely to participate in a group (12%), compared to middle aged (40-59 years) (0%) and older adults (older than 60 years) (3%). Literature often categorise age into adults and older adults, therefore these categories were used.

All in all, significant associations for age were found only for participating with colleagues, which is not surprising, as most people older than 60 years would be retired. Even though it was not a significant association, there were a larger proportion of adults than older adults reporting participating alone.

Table 4: Overview of associations between age and trail use/activity level.

| Variable | Age (n=150) | | P | χ^2 | Φ |
|---|----------------|---------------------|-----|----------|--------|
| | Adults (n=114) | Older adults (n=36) | | | |
| Activity level (%) | | | | | |
| Substantial active | 51 | 66 | | | |
| Moderately active | 29 | 20 | n.s | - | - |
| Insufficiently active | 20 | 14 | | | |
| Where respondents usually come from when using trails (%) | | | | | |
| Home | 76 | 86 | | | |
| Work | 7 | 3 | n.s | - | - |
| Both home and work | 17 | 11 | | | |
| Time usually spent on getting to a trail (%) | | | | | |
| Less than 15 minutes | 23 | 11 | | | |
| 15-29 minutes | 60 | 64 | n.s | - | - |
| 30 minutes or more | 17 | 25 | | | |
| How respondents get to the trail (%) | | | | | |
| Walk, jog or run | 17 | 33 | | | |
| Bicycle | 8 | 3 | n.s | - | - |
| Car or motor vehicle | 75 | 64 | | | |
| Distance to trail from home (%) | | | | | |
| Less than 10 km | 77 | 83 | n.s | - | - |
| 10 km or more | 23 | 17 | | | |

| | | | | | |
|---|----|-----|-------|-------|--------|
| Type of activity preferred in trail (%) | | | | | |
| Walk | 88 | 91 | | | |
| Jog or run | 6 | 6 | n.s | - | - |
| Cycle | 6 | 3 | | | |
| Time usually spent on trail visit (%) | | | | | |
| Less than 44 minutes | 17 | 5,5 | | | |
| 45-59 minutes | 29 | 28 | | | |
| 1-2 hours | 47 | 61 | n.s | - | - |
| More than 2 hours | 7 | 5,5 | | | |
| Activity level after being introduced to "Ti på Topp" (%) | | | | | |
| More | 25 | 33 | n.s | - | - |
| Same | 75 | 67 | | | |
| Who respondents participate with (%) | | | | | |
| Alone | 54 | 36 | | | |
| Not alone | 46 | 64 | n.s | - | - |
| With friends | 34 | 39 | | | |
| Not with friends | 66 | 61 | n.s | - | - |
| With family | 55 | 53 | | | |
| Not with family | 45 | 47 | n.s | - | - |
| With colleagues | 30 | 6 | | | |
| Not with colleagues | 70 | 94 | 0,003 | 8,835 | -0,243 |
| With pet(dog) | 18 | 6 | | | |
| Not with pet | 82 | 94 | n.s | - | - |
| Place registered for "Ti på Topp" (%) | | | | | |
| Elverum | 11 | 3 | | | |
| Gjøvik | 18 | 33 | | | |
| Hamar | 18 | 25 | n.s | - | - |
| Lillehammer | 53 | 39 | | | |

5.2.3 Education

Results from this study did not show many significant associations for education and trail use. However, a slight difference was found where a higher proportion of people with low education were insufficiently active (25%) compared to people with higher education level (16%). Despite the difference, Chi-squared did not show any significant association ($p=0,326$, $\text{chi-square}=2,239$, $\text{phi}=0,122$).

A larger proportion of people with high education spent more than two hours in trail (8%), compared to those with lower education (2%). Chi-squared, however, showed no significant association for time spent in trail ($p=0,366$, $\text{chi-square}=3,174$, $\text{phi}=0,366$). A larger proportion

of those with high education reported their activity level as the same (77%) compared to people with low education (65%), and a larger proportion of people with low education reported increased activity level (35%) than those highly educated (23%). Chi-squared for activity level did not show any significant association ($p=0,140$, $\chi^2=2,176$, $\phi=-0,122$). Significant association was found for time usually spent on getting to a trail ($p=0,034$, $\chi^2=6,791$, $\phi=0,212$), where a higher proportion of those with high education level used less than 15 minutes (25%), compared to those with lower education level (7%).

Overall, significant associations for education were only found for time spent on getting to a trail, where those with higher levels of education spent less time on getting to a trail, compared to those with low education. Activity level, time spent in trail and activity level after being introduced to trails did not show any significant associations. However, people with high levels of education were less insufficiently active, spent more than two hours in trails and a higher proportion reported their activity level as the same, compared to those with low education.

Table 5: Overview of associations between education and trail use/activity level.

| Variable | Education (n=150) | | P | χ^2 | Φ |
|---|-------------------|----------------|-------|----------|--------|
| | High (n =106) | Low (n =44) | | | |
| Activity level (%) | | | | | |
| Substantial active | 55 | 55 | | | |
| Moderately active | 29 | 20 | n.s | - | - |
| Insufficiently active | 16 | 25 | | | |
| Where respondents usually come from when using trails (%) | | | | | |
| Home | 78 | 79 | | | |
| Work | 5 | 9 | n.s | - | - |
| Both home and work | 17 | 12 | | | |
| Time usually spent on getting to a trail (%) | | | | | |
| Less than 15 minutes | 25 | 7 | | | |
| 15-29 minutes | 57 | 68 | 0,034 | 6,791 | 0,212 |
| 30 minutes or more | 18 | 25 | | | |
| How respondents get to the trail (%) | | | | | |
| Walk, jog or run | 22 | 18 | | | |
| Bicycle | 7 | 5 | n.s | - | - |
| Car or motor vehicle | 71 | 77 | | | |

| | | | | | |
|---|----|----|-----|---|---|
| Distance to trail from home (%) | | | | | |
| Less than 10 km | 80 | 73 | | | |
| 10 km or more | 20 | 27 | n.s | - | - |
| Type of activity preferred in trail (%) | | | | | |
| Walk | 89 | 88 | | | |
| Jog or run | 7 | 5 | n.s | - | - |
| Cycle | 4 | 7 | | | |
| Time usually spent on trail visit (%) | | | | | |
| Less than 44 minutes | 12 | 18 | | | |
| 45-59 minutes | 31 | 25 | n.s | - | - |
| 1-2 hours | 49 | 55 | | | |
| More than 2 hours | 8 | 2 | | | |
| Activity level after being introduced to "Ti på Topp" (%) | | | | | |
| More | 23 | 35 | n.s | - | - |
| Same | 77 | 65 | | | |
| Who respondents participate with (%) | | | | | |
| Alone | 50 | 45 | | | |
| Not alone | 50 | 55 | n.s | - | - |
| With friends | 34 | 39 | | | |
| Not with friends | 66 | 61 | n.s | - | - |
| With family | 56 | 50 | | | |
| Not with family | 44 | 50 | n.s | - | - |
| With colleagues | 24 | 25 | | | |
| Not with colleagues | 76 | 75 | n.s | - | - |
| With pet(dog) | 12 | 20 | | | |
| Not with pet | 88 | 80 | n.s | - | - |
| Place registered for "Ti på Topp" (%) | | | | | |
| Elverum | 8 | 11 | | | |
| Gjøvik | 19 | 27 | | | |
| Hamar | 23 | 14 | n.s | - | - |
| Lillehammer | 50 | 48 | | | |

5.2.4 Income

A higher proportion of people with medium (44%) and low income (36%) reported being with friends, than people with high income (21%). Those with a high income rather reported being with colleagues (33%), compared to those with middle income (26%) and those with low income (0%). A much higher proportion of people with low income reported being with pet (41%) in trails, compared to those with middle income (11%) and those with high income (10%). Chi-squared for independence showed significant association with income in relation

to whom people participated with; friends ($p=0,027$, $\chi^2=7,229$, $\phi=0,223$), colleagues ($p=0,010$, $\chi^2=9,123$, $\phi=0,250$) and pets ($p=0,001$, $\chi^2=13,568$, $\phi=0,305$).

A higher proportion of people with high income reported coming from work (10%) or both home and work (25%), when participating in “Ti på Topp”. People with middle income reported coming from home (3%) and both home and work (10%), and for people with low income the numbers were 5% and 14%. According to chi-squared, however, there was not a significant association ($p=0,062$, $\chi^2=8,961$, $\phi=0,249$).

All in all, significant associations for income were found for participating with friends, colleagues and pets, where those with medium or low income reported being with friends rather than with colleagues as those with higher levels of income reported. People with low levels of income reported being with pets more often than people with middle- and high levels of income.

Table 6: Overview of associations between income and trail use/activity level.

| Variable | Income (n=145) | | | P | χ^2 | Φ |
|--|----------------|-------------------|----------------|-----|----------|--------|
| | Low (n =22) | Medium (n =71) | High (n=52) | | | |
| Activity level (%) | | | | | | |
| Substantial active | 63,5 | 53 | 52 | | | |
| Moderately active | 13,5 | 30 | 29 | n.s | - | - |
| Insufficiently active | 23 | 17 | 19 | | | |
| Where respondents usually come from when using trails (%) | | | | | | |
| Home | 5 | 3 | 10 | n.s | - | - |
| Work | 14 | 10 | 25 | | | |
| Both home and work | | | | | | |
| Time usually spent on getting to a trail (%) | | | | | | |
| Less than 15 minutes | 23 | 11 | 29 | | | |
| 15-29 minutes | 54 | 68 | 54 | n.s | - | - |
| 30 minutes or more | 23 | 21 | 17 | | | |
| How respondents get to the trail (%) | | | | | | |
| Walk, jog or run | 23 | 22 | 16 | | | |
| Bicycle | 4 | 6 | 10 | n.s | - | - |
| Car or motor vehicle | 73 | 72 | 74 | | | |
| Distance to trail from home (%) | | | | | | |
| Less than 10 km | 84 | 75 | 78 | | | |
| 10 km or more | 16 | 25 | 22 | n.s | - | - |

| | | | | | | |
|---|-----|----|----|-------|--------|-------|
| Type of activity preferred in trail (%) | | | | | | |
| Walk | 86 | 91 | 88 | | | |
| Jog or run | 14 | 3 | 6 | n.s | - | - |
| Cycle | 0 | 6 | 6 | | | |
| Time usually spent on trail visit (%) | | | | | | |
| Less than 44 minutes | 32 | 8 | 15 | | | |
| 45-59 minutes | 27 | 31 | 29 | | | |
| 1-2 hours | 32 | 54 | 52 | n.s | - | - |
| More than 2 hours | 9 | 7 | 4 | | | |
| Activity level after being introduced to "Ti på Topp" (%) | | | | | | |
| More | 29 | 31 | 20 | | | |
| Same | 71 | 69 | 80 | n.s | - | - |
| Who respondents participate with (%) | | | | | | |
| Alone | | | | | | |
| Not alone | 36 | 44 | 58 | n.s | - | - |
| | 64 | 56 | 42 | | | |
| With friends | | | | | | |
| Not with friends | 37 | 44 | 21 | | | |
| | 63 | 56 | 79 | 0,027 | 7,229 | 0,223 |
| With family | | | | | | |
| Not with family | 45 | 57 | 56 | | | |
| | 54 | 43 | 44 | n.s | - | - |
| With colleagues | | | | | | |
| Not with colleagues | 0 | 26 | 33 | | | |
| | 100 | 74 | 67 | 0,010 | 9,123 | 0,250 |
| With pet(dog) | | | | | | |
| Not with pet | 41 | 11 | 10 | | | |
| | 59 | 89 | 90 | 0,001 | 13,568 | 0,305 |
| Place registered for "Ti på Topp" (%) | | | | | | |
| Elverum | 23 | 7 | 6 | | | |
| Gjøvik | 23 | 19 | 21 | | | |
| Hamar | 13 | 25 | 17 | n.s | - | - |
| Lillehammer | 41 | 49 | 56 | | | |

5.2.5 Marital status

Results from this study showed that a higher proportion of people with a partner were substantial active (56%), than people without a partner (50%), and a smaller proportion of people with a partner were insufficiently active (15%) compared to people without a partner (28%). Still, activity level show only minor differences and there were no significant association ($p=0,240$, $\chi^2=2,852$, $\phi=0,138$).

Results showed that a higher proportion of people without a partner reported participating with friends (50%), compared to those with a partner (30%). The strongest association was

found for family where people with a partner reported walking with family (63%) compared to those without a partner (30%). Also organised groups showed a significant association where those without a partner were more likely to participate in organised groups (10%) compared to those with a partner (1%). For the social aspect in trails Chi-squared found significant associations for marital status and participating with friends ($p=0,021$, $\chi^2=5,304$, $\phi=0,187$), participating with family ($p=0,000$, $\chi^2=12,953$, $\phi=0,293$) and participating in organised groups ($p=0,006$, $\chi^2=7,604$, $\phi=0,224$).

A higher proportion of those without a partner (65%), compared to those with a partner (44%), participated in “Ti på Topp” in Lillehammer. In Gjøvik the situation was different with a higher proportion of respondents with a partner (27%), compared to without a partner (5%). Place registered for “Ti på Topp” showed significant association ($p=0,023$, $\chi^2=9,488$, $\phi=0,251$).

Overall, significant associations for marital status were found for participating with friends, families, organized groups and place registered for “Ti på Topp”. People with a partner reported being more with family while people without a partner reported being with friends and in organised groups. Even though activity level did not show any significant association, there were less people with a partner categorised as insufficiently active, than people without a partner.

Table 7: Overview of associations between marital status and trail use/activity level.

| Variable | Marital status (n=150) | | P | χ^2 | Φ |
|---|------------------------|-------------------------|-----|----------|--------|
| | Partner (n =110) | Not partner (n =40) | | | |
| Activity level (%) | | | | | |
| Substantial active | 56 | 50 | | | |
| Moderately active | 28 | 23 | n.s | - | - |
| Insufficiently active | 16 | 27 | | | |
| Where respondents usually come from when using trails (%) | | | | | |
| Home | 79 | 77,5 | | | |

| | | | | | |
|---|----|------|-------|--------|--------|
| Work | 6 | 5 | n.s | - | - |
| Both home and work | 15 | 17,5 | | | |
| Time usually spent on getting to a trail (%) | | | | | |
| Less than 15 minutes | 23 | 10 | | | |
| 15-29 minutes | 58 | 67,5 | n.s | - | - |
| 30 minutes or more | 19 | 22,5 | | | |
| How respondents get to the trail (%) | | | | | |
| Walk, jog or run | 21 | 20 | | | |
| Bicycle | 7 | 5 | n.s | - | - |
| Car or motor vehicle | 72 | 75 | | | |
| Distance to trail from home (%) | | | | | |
| Less than 10 km | 81 | 71 | | | |
| 10 km or more | 19 | 29 | n.s | - | - |
| Type of activity preferred in trail (%) | | | | | |
| Walk | 86 | 97,5 | | | |
| Jog or run | 7 | 2,5 | n.s | - | - |
| Cycle | 7 | 0 | | | |
| Time usually spent on trail visit (%) | | | | | |
| Less than 44 minutes | 14 | 15 | | | |
| 45-59 minutes | 32 | 22,5 | | | |
| 1-2 hours | 50 | 50 | n.s | - | - |
| More than 2 hours | 4 | 12,5 | | | |
| Activity level after being introduced to "Ti på Topp" (%) | | | | | |
| More | 25 | 32 | | | |
| Same | 75 | 68 | n.s | - | - |
| Who respondents participate with (%) | | | | | |
| Alone | 46 | 57,5 | | | |
| Not alone | 54 | 42,5 | n.s | - | - |
| With friends | 30 | 50 | | | |
| Not with friends | 70 | 50 | 0,021 | 5,304 | 0,187 |
| With family | 63 | 30 | | | |
| Not with family | 37 | 70 | 0,000 | 12,953 | -0,293 |
| With colleagues | 27 | 17,5 | | | |
| Not with colleagues | 73 | 82,5 | n.s | - | - |
| With pet(dog) | 13 | 20 | | | |
| Not with pet | 87 | 80 | n.s | - | - |
| In organized groups | 1 | 10 | 0,006 | 7,604 | 0,224 |
| Place registered for "Ti på Topp" (%) | | | | | |
| Elverum | 9 | 7,5 | | | |
| Gjøvik | 27 | 5 | | | |
| Hamar | 20 | 22,5 | 0,023 | 9,488 | 0,251 |
| Lillehammer | 44 | 65 | | | |

5.2.6 Place of living

In rural areas with less than 20 000 inhabitants, a higher proportion used more than 30 minutes to get to a trail (43%) compared to urban areas with more than 20 000 inhabitants (15%). 0 % of respondents from municipalities with less than 20 000 inhabitants reported

using less than 15 minutes to getting to a trail. Chi-squared for time usually spent on getting to a trail showed significant association ($p=0,003$, $\chi^2=11,863$, $\phi=0,299$). A higher proportion of people living in rural areas reported a distance of more than 10 kilometres to a trail (43%), compared to those from urban areas (19%). Chi-squared for place of living and distance to trail did not surprisingly show a significant association ($p=0,018$, $\chi^2=5,641$, $\phi=0,208$). How respondents travel to the trail showed a difference where all those living in rural areas used car or other motor vehicle (100%), compared to those living in urban areas (66%). Thereby, how respondents get to the trail showed significant association ($p=0,006$, $\chi^2=10,095$, $\phi=0,277$).

Summarized, people from rural areas used more time, travelled longer distances and always used cars or other motor vehicle to get to the trails, compared to people from urban areas.

5.7 Summary of the findings

The socio-demographic profile of “Ti på Topp”-trail users characterised a typical user as an adult, Norwegian woman, employed with higher levels of education and middle-to high levels of income. She lived in a municipality with more than 20 000 inhabitants and had a partner. Characteristics of physical activity level showed that users of “Ti på Topp” were categorised as sufficiently or moderate active, and that they reported themselves as sometimes being in activity enough to get sweaty.

Characteristics of trail use show that a typical “Ti på Topp”-trail user entered the trails for the first time in the topical season (4-11 months ago), came from their home by car or other motor vehicle and using 15-29 minutes to get to a trail. The typical user also reported using the trails for training or recreational reasons and preferred walking for 1-2 hours, when in trails.

Activity level was reported as the same as before the typical user started using trails in “Ti på Topp” and maintenance, safety and security alongside the trails was reported as good.

In addition, the typical “Ti på Topp”-trail user were participating in Lillehammer, alone or with family, friends, colleagues or pets.

Significant associations found for socio-demographic profile and trail use/activity level was limited. Associations were found for sex and activity level, sex and participation with friends and family, age and participation with colleagues, education and time usually spent on getting to a trail, income and participation with friends, colleagues and pets, marital status and participation with friends, family and organised groups, place of living and time usually spent on getting to a trail and distance to trail.

6.0 Discussion

In this chapter findings of socio-demographic profile, activity level, trail use and associations are being discussed, referred to the research questions. Findings are being compared to the current literature and possible causal explanations are being discussed, based on the concept of class. In addition, the specific concept of “Ti på Topp” and possible measures are being addressed. Possible limitations are acknowledged and discussed, as also the need for further research on this area.

6.1 Socio-demographic profile

The current literature on socio-demographic characteristics summarises the typical trail user as adult-to -middle-aged, white, with higher levels of education. Education level and age were highlighted as the most significant factors for trail use (Price & Reed, 2014). Factors such as sex and income varied in different studies. Findings from this study correlated with the current literature, as findings characterised the typical “Ti på Topp”-trail user as ethnic Norwegian, adult/middle-aged woman, with higher levels of education. There was clear compliance with the literature, as people with higher levels of education and those in the age-group “adult” were overrepresented. The fact that women were overrepresented in this study conforms to other studies (Price & Reed, 2014; Price et al., 2013; Reed et al., 2004). Still, there are multiple studies that do not comply with this finding regarding sex, and it is therefore difficult to say if findings regarding sex complies with the literature or not. The mapping from SSB can, however, provide insight limited to Norwegian conditions. The fact that women prefer shorter trips, while men prefer longer trips can be a suitable explanation for the inequality between sexes in participation in “Ti på Topp” (SSB, 2014b). As for income, findings in this study indicated that the typical trail user was characterised with middle-to high income levels. This is in consistent with findings from Lindsey et al. (2006), where trail users often had middle income levels, and Brownson et al. (2000) and Dunton et al. (2009),

saying that trail users had high levels of income. Statistics from SSB revealed that being in a relationship could positively affect trail use, especially for older people (SSB, 2014a). This can be interpreted as relevant for this study as well in view of that the majority of respondents were in a relationship. Based on findings regarding education and income, and findings regarding sex and marital status there can be differences in those participating and not participating. In other words, there are indications of social inequalities in “Ti på Topp”-participation based on the socio-demographic profile of users of “Ti på Topp” in Hedmark and Oppland. Patterns of socio-demographic factors are similar to general participation patterns in sports and other social arenas as well.

An important note is the fact that explanations of social-inequalities and socio-demographic differences in participation can be multi-faceted. Due to the proportions of high- educated respondents with middle-to high levels of income in this study, the concept of class can contribute with a possible explanation of participation.

Age and social class have been emphasized by Roberts (2004) as predictors of leisure spending. The fact that people with low socio-economic status are less likely to be physically active and involved in sport (Coalter, 2007), seems to be accurate for this study as well, due to higher amounts of respondents with high socio-economic status. As this also are the tendencies in other arenas in the society, the explanations of Coalter (2013), where sport participation can be seen as a epiphenomenon, can be applicable for participation in “Ti på Topp” as well. There is also possible that “Ti på Topp” is a way for those with higher socio-economic status to express and reaffirm class differences, as stated by Coalter (2007), that sport is. The thought of people from the same classes seeking together based on the same outlook and tastes can, additionally, be applicable for “Ti på Topp”.

Even though “Ti på Topp” is a low threshold offer, it is those with more resources that participate. Stempel (2005) and Vaage (2004) highlights the ideal of a healthy life and body as more appealing to people with higher socio-economic status. It can simply be that the thought of the alleged effect of nature on body and mind fits with the ideal of health on those with higher socio-economic status. Considered the thought of lower classes copying higher classes (Roberts, 2004), it can be possible that there will be an increase in participation from people with lower socio-economic status in the future. It is important to notice that this just is a wild guess, based on the concept of class.

The public health perspective of an offer such as “Ti på Topp” can be discussed on the basis of the socio-demographic profile of users and who “Ti på Topp” attracts. If there are a majority of adult, Norwegian women, with high socio-economic status participating, the public health potential for such an offer is maybe not reached. Still there are people with other socio-demographic background and especially with low socio-economic status participating, even though they are a small number. In this way one can say that there is a public health effect since “Ti på Topp” not only attracts people with high socio-economic status, but some people with low socio-economic status find it appealing as well. The question will be, what can be done to increase the number of those groups less represented at “Ti på Topp”, especially people with low socio-economic status, older people and those who are not ethnic Norwegian?

6.2 Activity level, trail use and associations to socio-demographic profile

Findings from this study show that respondents are categorised as mostly substantial or moderately physically active. This is compatible with the current literature saying that recommendations of physical activity are often met by trail users (Librett et al., 2006), and that trail users are more regularly physically active than others (Reed et al., 2004).

Respondents of this study, however, did not rate their activity level as *more* after starting using the trail. According to Brownson et al. (2000) there was a difference in participation and socio-economic status, saying that those with low socio-economic status used trails to increase their activity level, while those with high socio-economic status used the trails to maintain their activity level. This difference was not so compatible with findings from this study. Even though there was a little difference, it was not enough to say there was an association found for activity level and socio-economic status. There was, however, found associations for activity level and sex, where results indicated that men used trails to maintain their activity level, while women increased it.

Findings from this study on trail use are pretty much similar to the current literature. Most people reported walking for recreational purpose, for 60 minutes or more and travelled from their home instead of work as same as the literature. Price et al. (2012) reported that a higher proportion of women preferred walking as trail-activity, while a higher proportion of men preferred cycling as trail-activity. Findings from this study had a little higher proportion of men preferring cycling than women, but this was not significant and therefore one cannot say that current literature on this area were similar to findings in this study.

Price et al. (2013) found that using the trails for recreational reasons were typical for people with higher levels of education, males and whites. In this study there were a high amount of respondents reporting recreational or training reasons for participating in “Ti på Topp”. There were also, as mentioned, a higher proportion of people with higher levels of education in this study. This can have a possible connection using the current literature as explanation.

Education showed significant associations with time spent on travel to trails, where people with high levels of education used less time than those with low levels of education. There were also significant associations found for place of living and time spent on getting to a trail,

distance to trail and how respondents travelled to the trails. Based on this it can seem like people with higher levels of education live closer to a trail, and that people living in municipalities with more than 20 000 inhabitants live closer to the trails. All municipalities investigated in this study have more than 20 000 inhabitants, and therefore it is not surprising that people living in municipalities with less than 20 000 inhabitants travel longer to get to a trail. It can be that “Ti på Topp” attracts some people from neighbour municipalities, by their work-place or for other reasons.

According to Stempel (2005) the inequalities in sport participation today, can be explained with frequency and diversity instead of type of activity and whether people are in activity. This allegation is difficult to conclude with since there were no significant association for socio-economic status and activity level/increased activity level. Diversity of activities respondents are participating in was not investigated in this study. There was therefore no findings of diversity from this study, so the idea from Stempel (2005) cannot be rejected. What we also do not know is if the sample was biased and the possibility for only those most active responding must be considered.

Even though there are social inequalities in participation in trails, little association were found for socio-demographic factors and activity level/ trail use, in other words there were not many significant inequalities within those who already used trails. It can seem like the differences might be for those who participate and those who not participate in trails, rather than within the participation. Roberts et al. (1992) and Green (2002) highlighted that class-distinctions becomes less visible when people from different classes already participate in an activity, providing a possible explanation for this study. One can speculate if those participating from lower socio-economic positions have been active all their life. The thoughts of Roberts et al. (1992) can contribute as a possible explanation to equal trail -patterns between people with different socio-economic status. Class differences becomes blurred within a participation-

group (Roberts et al., 1992). The reproduction of social class-stratification will not be as applicable when people managed to continue sports after their youth, regardless social class (Green, 2002).

Using concepts of social class does not provide any explanations for other socio-demographic differences than class. The significant association for sex and activity level after being introduced to the trails, found in this study, for instance, are difficult to find any possible explanations to. It can be that males participating have higher socio-economic status or one can speculate around the disadvantages of self-completed questionnaires, with respondents rating a higher or lower level of activity than is the reality. As mentioned earlier the possibility of a biased sample makes it hard to make any conclusions. The questions for possible explanations surround those not responding to the study. As emphasised by Price and Reed (2014) it is important to have knowledge about both use and non-use of trails.

6.5 The concept of “Ti på Topp” and measures

The most significant associations for socio-demographic profile and trail use were found for whom respondents participate with in “Ti på Topp”. A higher proportion of women reported being with friends, while a higher proportion of men reported being with family when participating in “Ti på Topp”. The aspect of friends are somewhat similar to findings from Price et al. (2013), saying that women often prefer company, such as friends, when they are in trails. Price et al. (2013) also found that men more often preferred being alone than women in trails. This was not similar to findings from this study where there was no significant association for sex and being alone. One can speculate if there are any correlations in that more women participate in “Ti på Topp” than men, most participants has a partner and that men often are with their families when in trail. This can be linked to the significant

associations for that those with a partner participate with their families, while people without a partner participate alone, with friends or in organised groups.

As for the socio-demographic factor income, significant associations were found for participation with friends, colleagues and pet. There were those with higher levels of income that reported being with colleagues in “Ti på Topp”-trails. A higher proportion of people with medium and low income reported being with friends than people with high levels of income, and a much higher proportion of people with low income reported being with their pet in “Ti på Topp”, compared to those with middle and high levels of income. These findings can be important for developing further measures for increasing participation in “Ti på Topp” and should be further investigated.

A larger proportion of adults than older adults reported participating alone in “Ti på Topp”. This was not a significant association but it can indicate that older people prefer being with someone when they are in trails. On the base of these findings, measures specifically targeting older people with a focus on social interactions might be important. As emphasised by Brownson et al. (2000) as well as Price and Reed (2014), there is a need for efforts to promote physical activity among older adults and persons with lower levels of education. As suggested by Price and Reed (2014) promoting and facilitating for physical activity on trails can be an aid for increasing physical activity among older adults. In addition measures targeting groups less presented in “Ti på Topp”, such as people with low socio-economic status and immigrants, for instance, can be important. A focus on marginalised groups such as immigrants are important when it comes to trail use (Price et al., 2013).

Accessibility to nature within short distance are important and a strategy to increase physical activity can be to focus on features preferred by trail users (Calogiuri & Chroni, 2014; Price & Reed, 2014). The fact that the majority of “Ti på Topp” –trail users travel less than 30 minutes

to get to a trail might strengthen this assertion about the importance of accessibility within short distance. In addition the safety, security and maintenance alongside the trails can be important and was also reported as good both in literature and in this study.

On the base of that “Ti på Topp” originally is a concept offered from Company Sport, it is worth noting that only 38,4 % of the sample reported that they participated in “Ti på Topp” through their workplace. It can therefore seem like “Ti på Topp” attracts people not affiliated to the Company Sport and the public health effort to this concept therefore seems to have an effect.

6.6 Summary

To summarise this discussion chapter it is important to highlight that participation in “Ti på Topp” are mostly similar to the current literature on trail use. The fact that people with higher levels of socio-economic status participate is also similar to, and can be explained by concepts surrounding sports participation. The ideas of Coalter (2013), sports participation as an epiphenomenon, can be applicable for “Ti på Topp”, as well. Since there are exceptions with some participants with low socio-economic status the thought of sports participation as class-related rather than class-based seems appropriate (Green, Thurston, & Vaage, 2015).

Even though there are inequalities in participation, there are smaller differences between different socio-economic status-groups or classes within the sample of “Ti på Topp”-respondents. A possible explanation to small differences within the sample can be that class distinctions becomes less visible when people from different classes already participate in an activity (Roberts et al., 1992).

As for association for socio-demographic profile these were most current in whom respondents participated with, and such information can be important for efforts to increase participation among groups that are less represented in “Ti på Topp”.

6.7 Limitations and the need for further research

There are important to acknowledge the limitations for this study. The method-chapter addresses some important possible limitation due to self-evaluation of activity level, self-completion questionnaire and biased sample. Measures have been done to try to reduce possibilities for limitations.

On the basis of not knowing much about participants in “Ti på Topp” from before there are difficult to say if the sample is biased or not. There are chances that there are more people with higher socio-economic status responding in this study because they more often respond to such studies, have access to a computer or have better computer skills. This can also be the case for age and ethnicity (Bryman, 2012). In addition ethnicity and language can be a limitation. What we do not know in this study is simply if there were more women participating in “Ti på Topp”, or if there are more women responding to surveys. The same can be applicable for age and ethnicity. On the base of the use of the same questionnaire-item and that the findings from this study mostly were similar to the literature, this can be a strength in relation to that the sample might not be biased. It is also worth repeating that findings in this study not can be generalized but can work as a snapshot on participation in a concept like “Ti på Topp”.

The findings from this study leaves some questions that can be further investigated. The sample of this study was registered participants in “Ti på Topp”, but there might be many people using the trails that are not registered. It would be of interest to see the socio-demographic profile of those participating that are not registered. The public health potential might be even bigger, and research on this could see if “Ti på Topp” attracts more diverse groups. In addition it would be interesting to see, in a bigger sample, if there are any associations between socio-economic status and place of living regarding trails, accessibility

to nature or recreational areas. To see in what amount the social aspect has for participation would also be of interest and more research on the importance of social support for trail use are needed.

A bigger sample and more information on the size of the population would be significant for further research. Longitudinal studies on the same topic could also provide more than just a snapshot on who participants are. Research on “Ti på Topp”- trails in other municipalities would be of great interest for comparison. This study limits the results to be quantitative, and there is therefore a need for a qualitative study about motives for participating in a scheme like “Ti på Topp”.

7.0 Conclusion

This project can provide a snapshot of the socio-demographic profile, activity level and trail usage of “Ti på Topp”-participants. The results of this study can be significant for those working with “Ti på Topp”, but also stakeholders and politicians in their work of promoting physical activity in the population and improving public health. Information about participants can be important in further work for facilitating. Due to limitations of this study the results cannot be generalised, but still, it can provide important information since there exists no other research on “Ti på Topp”-trails specific. However, the findings of this project were, in a large extent, similar to the literature on trail use and this can plausibly strengthen the reliability of the study.

Summarised, results of the main research question showed that a typical “Ti på Topp”-trail user was an adult, Norwegian women, with high levels of education and middle-to high levels of income. In addition she lived in a municipality with more than 20 000 inhabitants and she was in a relationship. The “Ti på Topp”-trail user was sufficiently or moderate active, travelled to the trails from her home in a car or other motor vehicle and used 15-29 minutes to get to a trail. Walking for 1-2 hours was preferred and activity level after joining “Ti på Topp” was the same as before.

A summary of findings of the secondary research question showed that there were little associations for socio-demographic profile of users and their activity level and trail use. The associations was only significant for sex and activity level, education and time usually spent on getting to a trail, and place of living and time usually spent on getting to a trail and distance to a trail. In addition, most significant associations were found for socio-demography and company in trails.

Public health work concerns promoting health, preventing illness and reducing inequalities in health (Saunes, Helgeland & Lindahl, 2014). In this regard, “Ti på Topp” has a major public health potential with small inequalities within the group of participants. In addition the concept is a low-threshold offer that is cheap, easily accessible and with different levels of difficulty. However, there is, for now, mostly participants with high socio-economic status that participate in “Ti på Topp”. With more facilitating and focus on elderly and people that are not ethnic Norwegian, among others, the public health effects can be immense.

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Appendix 1: Invitation and information about the study

This year is called “Friluftslivets år” and outdoor recreation is popular as never before.”Ti på Topp” is a popular concept that many utilize. In a public health perspective this could be a good arena for promoting physical activity and preventing lifestyle diseases. Does it attract individuals represented by the whole population and are there typical factors that characterises users of this offer?

I am a master student at Hedmark University College, currently working on my master’s project. I have a bachelor degree in sports and public health.

The aim of this project is to get an overview over who participants at “Ti på Topp” are. To be able to get this overview I ask all people that are registered as users of “Ti på Topp” in Hedmark and Oppland to answer a survey. The questionnaire will take proximately 5 minutes to answer and the items cover background information about yourself, questions about current physical activity level and trail use. The survey takes place on internet; just follow the link in the e-mail.

The survey will be anonymous and data will be confidentially treated. The survey is voluntary. Your response to the answers will not be recognisable in any publications and your answers can not be traced back to you. The study is planned to be finished in May 2016, and after submission all data will be deleted.

If you know someone registered for “Ti på Topp” in Hedmark/Oppland, it would be a great help if you inform them about this study and encourage to answer the survey.

Thank you!

Liv Brekka, responsible for the research project.

If you have any questions about the project you can contact me at: liv-brekka@hotmail.com

Appendix 2: Invitation and information about the study (Norwegian)

Dette året blir kalt "friluftslivets år" og friluftsliv er populært som aldri før. "Ti på Topp" er et populært tur- konsept som mange bruker. I et folkehelseperspektiv kan dette være en god arena for å fremme fysisk aktivitet og å forebygge livsstilssykdommer. Tiltrekket dette konseptet folk fra hele befolkningen, og er det typiske faktorer som karakteriserer brukerne?

Jeg studerer til en mastergrad i folkehelsevitenskap ved Høgskolen i Hedmark, og jobber nå med mitt masterprosjekt. Fra tidligere har jeg en bachelorgrad i folkehelsearbeid og idrett.

Målet med dette prosjektet er å få en oversikt over hvem de registrerte deltakerne ved "Ti på Topp" er. For å kunne få denne oversikten vil jeg spørre alle som er registrerte som brukere av "Ti på Topp"-løypene i Hedmark og Oppland om å svare på en spørreundersøkelse. Det vil ta omtrent 5 minutter å fullføre spørreskjemaet og spørsmålene dekker bakgrunnsinformasjon om deg selv, ditt nåværende fysiske aktivitetsnivå og din bruk av "Ti på Topp"-løypene. Undersøkelsen vil foregå på internett, du finner den ved å følge linken som står i e-posten.

Spørreundersøkelsen vil være anonym og data vil bli behandlet konfidensielt. Å delta på spørreundersøkelsen er frivillig. Dine svar vil ikke kunne være gjenkjennbare og vil ikke kunne spores tilbake til deg på noe tidspunkt. Studien er planlagt å være ferdig i mai 2016, og etter innlevering vil all data bli slettet.

Hvis du kjenner noen som er registrerte for "Ti på Topp" i Hedmark/Oppland, vil det være til stor hjelp om du oppmuntrer til deltakelse.

Takk!

Mvh. Liv Brekka, ansvarlig for forskningsprosjektet.

Hvis du har spørsmål om prosjektet kan du kontakte meg på mail: liv-brekka@hotmail.com

Appendix 3: Data processing agreement



Levrekkløys gate 28
0360 Oslo
Norge
Tel: +47 21 62 70 70
Fax: +47 21 62 70 71

DATABEHANDLERAVTALE

I henhold til personopplysningslovens § 15, jf. § 13 og personopplysningsforskriftens kapittel 2.

mellom

Høgskolen i Hedmark

.....
BEHANDLINGSANSVARLIG

og

QuestBack AS

.....
DATABEHANDLER

1. Avtalens hensikt

I henhold til avtale QuestBack kontrakt av 28.01.2008 (AVTALEN) mellom Questback AS og Høgskolen i Hedmark behandler Questback AS personopplysninger hvor Høgskolen i Hedmark er behandlingsansvarlig.

Dette bilaget gjelder personopplysninger som Questback AS ("DATABEHANDLER") behandler på vegne av Høgskolen i Hedmark ("BEHANDLINGSANSVARLIG") som et ledd i gjennomføring av AVTALEN.

Databehandleravtalen skal sikre at personopplysninger ikke brukes urettmessig eller kommer uberettigede i hende.

2. Formål

Databehandleravtalen har til formål å klargjøre DATABEHANDLERs og BEHANDLINGSANSVARLIGES ansvar i henhold til Lov om behandling av personopplysninger (POL) og Forskrift om behandling av personopplysninger (POF) for gjennomføring av AVTALEN, slik at krav til konfidensialitet, integritet, tilgjengelighet og kvalitet ivaretas.

DATABEHANDLER leverer internettbaserte tjenester for undersøkelser og dialog, med funksjonalitet til å designe og distribuere informasjon og undersøkelser. Tjenestene gjør det mulig for BEHANDLINGSANSVARLIGE å samle, analysere og følge opp tilbakemeldinger fra interessenter, samt eksportere resultater.

I forhold til den aktuelle avtale kan det være snakk om følgende personopplysninger:

- Direkte identifiserbare opplysninger.
 - Opplysninger med navn, fødselsnummer eller andre opplysninger som entydig identifiserer enkeltpersoner, herunder også e-post adresser.
- Avdekkerte personopplysninger
 - Personopplysninger/helseopplysninger der navn, fødselsnummer og andre direkte personentydige kjennetegn er fjernet og erstattet av en kode, slik at opplysningene ikke umiddelbart kan knyttes til en enkeltperson.
- Pseudonymiserte opplysninger
 - Personens navn er erveis kodet slik at det ikke er mulig å finne tilbake til navnet på den registrerte.
- Anonyme data
 - Data som er umulig å knytte til enkeltperson regnes ikke som personopplysninger. Anonyme data har ingen lovregulering eller begrensninger i bruk eller lagring og vil ikke omfattes av denne avtale.

Opplysningene skal bare brukes i nødvendig utstrekning i forbindelse med gjennomføring av AVTALEN og kun i de prosesser nevnt ovenfor.

3. Plikter

BEHANDLINGSANSVARLIG skal påse at personopplysningene lovlig kan behandles, bl.a. gjennom å sikre at det foreligger nødvendig behandlingsgrunnlag i hht. POL § 8 og evt. § 9. BEHANDLINGSANSVARLIG plikter å innhente og lagre kun slike personopplysninger som er tillatt under relevante lovbestemmelser og i henhold til eventuelle konsesjoner og meldinger.

DATABEHANDLER kan kun behandle BEHANDLINGSANSVARLIGES personopplysninger for å gjennomføre oppgaver som er beskrevet i AVTALEN. BEHANDLINGSANSVARLIG skal, med mindre annet følger av avtale eller

lovbestemmelser, ha rett til tilgang til/ innsyn i de personopplysninger som behandles og systemene som DATABEHANDLER benytter til dette formål.

DATABEHANDLER er pålagt å følge BEHANDLINGSANSVARLIGES retningslinjer og prosedyrer for behandling av personopplysninger i forbindelse med BEHANDLINGSANSVARLIGES bruk av QuestBacks tjenester, innenfor de rammene som er definert i QuestBack AS' standard betingelser for behandling av data.

Den BEHANDLINGSANSVARLIGE og DATABEHANDLEREN skal gjennom planlagte og systematiske tiltak sørge for tilfredsstillende informasjonssikkerhet med hensyn til konfidensialitet, integritet og tilgjengelighet ved behandling av personopplysninger.

For å oppnå tilfredsstillende informasjonssikkerhet skal den BEHANDLINGSANSVARLIGE og DATABEHANDLEREN dokumentere informasjonssystemet og sikkerhetstiltakene. Dokumentasjonen skal være tilgjengelig for medarbeiderne hos den BEHANDLINGSANSVARLIGE og hos DATABEHANDLEREN. Dokumentasjonen skal også være tilgjengelig for Datatilsynet og Personvernemnda.

DATABEHANDLER plikter å ha systemdokumentasjon og rutinebeskrivelser som er relevante i forbindelse med behandling av personopplysninger etter AVTALEN. Med dokumentasjon menes rutiner for autorisasjon og bruk, ulike tekniske og organisatoriske sikkerhetstiltak etc. DATABEHANDLER er ansvarlig for at dokumentasjonen er tilgjengelig for BEHANDLINGSANSVARLIG, og at dokumentasjonen oppdateres ved endringer. Denne dokumentasjonen skal kunne legges frem for BEHANDLINGSANSVARLIG på forespørsel. Innsyn i dokumentasjonen skal reguleres (gje til et begrenset antall autoriserte personer) slik at dette ikke svekker sikkerhetsnivået. Dokumentasjonen skal også være tilgjengelig for Datatilsynet og Personvernemnda.

Hvis det forekommer avvik fra etablert informasjonssikkerhetsnivå skal DATABEHANDLER som en del av avvikrutinen sende avviksrapporter til BEHANDLINGSANSVARLIG for avvik som har betydning innenfor avtaleområdet. Dersom det avdekkes fare for at personopplysninger kan komme på avveie, skal det treffes straksiltak for å forhindre dette, samt variales i henhold til forrige punktum. DATABEHANDLER skal etter at avvik er oppdaget sende rapport til BEHANDLINGSANSVARLIG der årsaken til avviket fremgår og hvilke korrigerende tiltak som er iverksatt.

DATABEHANDLER plikter å gjennomføre årlige sikkerhetsrevisjoner knyttet til behandlingen av personopplysninger etter denne avtale, jf. POF § 2-5.

4. Bruk av underleverandører

BEHANDLINGSANSVARLIGE er innforstått med at enkelte av tjenestene under AVTALEN leveres av andre selskaper innenfor QuestBack-konsernet, i eller utenfor Norge. DATABEHANDLER kan overlata BEHANDLINGSANSVARLIGES personopplysninger til slike konsensselskaper, dersom dette er nødvendig for å kunne levere tjenestene under AVTALEN.

Ved bruk av underleverandører til levering av tjenester som nevnt, eller til vedlikehold og oppdatering av registre, databaser med mer, plikter DATABEHANDLER å sørge for at disse leverandørene etterlever de samme krav til informasjonssikkerhet som hviler på DATABEHANDLER, slik at sikkerhetsnivået, som er beskrevet ovenfor, ikke blir svekket. Om personopplysningene stals overføres i eksterne nettverk, skal disse krypteres med tilstrekkelig sikkerhetsnivå.

Samtlige som på vegne av DATABEHANDLER utfører oppdrag der bruk av de aktuelle personopplysningene inngår, skal skriftlig tilfå DATABEHANDLERs avtalemessige og lovmessige forpliktelser og oppfylle vilkårene etter disse.

DATABEHANDLER vil ikke uten særskilt samtykke fra BEHANDLINGSANSVARLIGE overføre personopplysninger til mottakere i land som ikke sikrer en forsvarlig behandling av personopplysningene, ref. POL § 29.

5. Avviksmeldinger

DATABEHANDLER skal melde fra til BEHANDLINGSANSVARLIG om eventuelle avvik som har oppstått hos DATABEHANDLER, ref. POF § 2-6. BEHANDLINGSANSVARLIG har ansvaret for å vurdere om avviksmelding skal sendes til Datatilsynet, og for evt. å sende slik melding.

6. Sikkerhetsrevisjoner

BEHANDLINGSANSVARLIG har rett til å foreta sikkerhetsrevisjon av DATABEHANDLERS systemer som benyttes til behandling av personopplysninger. BEHANDLINGSANSVARLIG har rett til å la en tredjepart foreta denne sikkerhetsrevisjonen på sine vegne. Kostnadene for dette skal dekkes av BEHANDLINGSANSVARLIG.

7. Avtalens varighet

Databehandleravtalen gjelder så lenge DATABEHANDLER behandler personopplysninger på vegne av BEHANDLINGSANSVARLIG.

Ved brudd på databehandleravtalen eller personopplysningsloven med forskrifter, kan BEHANDLINGSANSVARLIG pålegge DATABEHANDLER å stoppe den videre behandlingen av opplysningene med øyeblikkelig virkning.

8. Ved opphør

Ved opphør av AVTALEN, er BEHANDLINGSANSVARLIG selv ansvarlig for å slette alle personopplysninger innhentet av BEHANDLINGSANSVARLIGS brukere og lagret på eget område i tjenestene. DATABEHANDLER kan eventuelt bistå med slettingen fra databasen mot et honorar avtalt partene i mellom.

DATABEHANDLER vil ved opphør av avtalen følge rutiner og prosedyrer som dokumentert for behandling av data. DATABEHANDLER vil oppbevare sikkerhetskopier av data i en periode på opp til 12 måneder etter utløp av AVTALEN.

9. Meddelelser

Meddelelser vil sendes til kontaktperson oppført i AVTALEN.

10. Lovvalg og verneting

Avtalen er underlagt norsk rett og partene vedtar Oslo tingrett som verneting. Dette gjelder også etter opphør av avtalen.

Denne avtale er i 2 - to eksemplarer, hvcrav partene har hvert sitt.

Sted og dato

Behandlingsansvarlig

Datahandler

Pal E. Deibichs

(underskrift)



(underskrift)

Appendix 4: Questionnaire English



Survey

This questionnaire is sent to you, as a registered participant at "Ti på Topp" in Hedmark and Oppland season 2015. It will take approximately 5 minutes to complete the survey and it should only be answered once.

This is an anonymous survey and all data will be treated confidentially. Your answers will not at any time be connected / traced back to you. The researcher will be given data from QUESTBACK without connection to e-mail / IP address. All collected data will be deleted when the project is completed, expected in May 2016. It is voluntary to participate in the study. More information about the study can be found as an attachment to the e-mail you received.

Answer as honestly and sincerely as you can.

Thank you!

Your identity will be concealed. Read about privacy policies. (Open in new window).

Consent form

1)* I have received information about the study, and I am willing to participate. I understand that participation is voluntary and that I may withdraw at any time.

Yes

First you will be asked to provide some basic information about yourself. Tap the appropriate option. Only one answer option is possible per question, unless otherwise is stated.

2)* Sex

- Female
- Male

3)* Age

- 20 years or younger
- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- 80 years or more

4)* What is your ethnic origin?

- I am born in Norway, with one or both parents born in Norway
- Other nationality, I have moved to Norway
- I am born in Norway, but have parents that were born in another country (2.generation Norwegian)
- Other _____.

5)* Work situation

- Employed -fulltime
- Employed- part time
- Retired
- Student
- Not working
- Other _____,

6)* Highest fulfilled education

- Middle School / elementary school

- High School/ secondary school
- College/ University (1-3 years)
- College/ University (more than 4 years)
- Other_____.

7)* Your gross income per year in NOK

- Less than 100 000 kr
- 100 000-299 000 kr
- 300 000-499 000 kr
- 500 000-699 000 kr
- More than 700 000 kr
- I do not know

8)* Marital status

- Married
- Cohabitant/ partner
- Divorced/ separated
- Widowed
- Not married/ single

9)* Do you have responsibility for children younger than 18 years old, that lives with you often or mostly?

- Yes
- No

10)* What is the population of your municipality?

- Less than 5000 inhabitants
- 5000-19 999 inhabitants
- 20 000 inhabitants or more
- I do not know

Now you will be asked some questions about your physical activity habits.

During a typical 7-Day period (a week), how many times on the average do you do the following kinds of exercise for more than 15 minutes during your free time (write on each line the appropriate number).

11)* a) STRENUOUS EXERCISE (HEART BEATS RAPIDLY) (e.g., running, jogging, hockey, football, soccer, squash, basketball, cross country skiing, judo, roller skating, vigorous swimming, vigorous long distance bicycling). Times per week (type only NUMBERS): _____.

12)* b) MODERATE EXERCISE (NOT EXHAUSTING) (e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, easy swimming, alpine skiing, popular and folk dancing). Times per week (type only NUMBERS):_____.

13)* c) MILD EXERCISE (MINIMAL EFFORT) (e.g., yoga, archery, fishing from river bank, bowling, horseshoes, golf, snow-mobiling, easy walking). Times per week (type only NUMBERS):_____.

Select the best suited option.

14)* During a typical 7-Day period (a week), in your leisure time, how often do you engage in any regular activity long enough to work up a sweat (heart beats rapidly)?

- Often
- Sometimes
- Never/ rarely

Now you will be asked some questions about your use of the “Ti på Topp”-trails. It is important that the responses refer to the summer season only, which is from May to October.

15)* When was the first time you used one of these trails from “Ti på Topp”?

- 3 months or less 4-11 months 1-3 years more than 3 years ago I do not know

16)* Where are you usually coming from when you use the “Ti på Topp”- trails?

- Home
 Work
 Both home and work
 Other

17)* How much time does it usually take you to get to a “Ti på Topp”-trail from your home?

- Less than 15 minutes 15-29 minutes 30 minutes or more

18)* How do you usually get to this “Ti på Topp”-trail?

- Car or motor vehicle
 Walk, bicycle
 Jog or run
 Other _____.

19)* How far do you usually travel to get to a Ti på Topp”-trail from home (in kilometres).

- _____.

20)* What is your usual reason for using “Ti på Topp”-trails?

- To exercise or do recreational activity
- To travel somewhere (transport)
- Both for recreation and transportation purposes
- Other

21)* What type of activity do you usually do when you are on this trail?

- Walk
- Jog or run
- Bicycle
- Other _____.

22)* How much time do you usually spend per visit, when using “Ti på Topp”-trails?

- Less than 30 minutes
- 30-44 minutes
- 45-59 minutes
- 1-2 hours
- more than 2 hours

23)* How is your activity level (are you walking, biking, etc. more, less, or the same) since you began using trails in “Ti på Topp”?

- More
- Same
- Less
- I do not know

24)* How do you experience the maintenance of the “Ti på Topp”-trails?

- Excellent
- Good
- Fair
- Poor
- I do not know

25)* How do you experience the safety and security alongside the “Ti på Topp”-trails?

- Excellent
- Good
- Fair
- Poor
- I do not know

At the end there are some additional questions.

In Hedmark and Oppland “Bedriftsidretten” offer “Ti på Topp” in Elverum, Gjøvik, Hamar and Lillehammer.

26)* Where are you using/ registered for the ”Ti på Topp” -offer?

- Elverum
- Gjøvik
- Hamar
- Lillehammer

27)* How do you register your trips?

- Via the “Ti på Topp”-website
- Per SMS
- I send the control card via mail
- Other _____.

28)* When I participate at “Ti på Topp”, I am.....? (more answer options possible).

- ..Alone
- .. With friends
- .. With colleagues
- .. With family
- .. With pet (dog)
- .. In organised groups

29)* My workplace participate at “Ti på Topp”?

- Yes
- No
- Not relevant
- I do not know

30)* I participate at “Ti på Topp” through my workplace?

- Yes
- No
- Not relevant

31)* My workplace allows me to participate at “Ti på Topp” during work hours?

- Yes
- No
- Not relevant
- I do not know

“Ti på Topp” is a concept facilitated by “Bedriftsidretten”, but is open to all. One can choose to compete against friends, colleagues or other businesses in the community.

32)* I feel that the opportunity for competition against others through “Ti på Topp” motivates me to be in physical activity

- Agree
- Slightly agree
- Neither agree nor disagree
- Slightly disagree
- Disagree

33)* “Ti på Topp” contribute to me being more familiar in my vicinity?

- Agree
- Slightly agree
- Neither agree nor disagree
- Slightly disagree
- Disagree

34)* Participation at “Ti på Topp” makes me seek out hiking destinations I would not otherwise have visited?

- Agree
- Slightly agree
- Neither agree nor disagree
- Slightly disagree
- Disagree

35)* I avail myself of the maps in the map folder?

- Often
- Sometimes
- Rarely/ never

36)* Have you participated in “Ti på Topp”’s winter campaign (January-April), and have you used some of these facilitated ski-trails?

- Yes
- No
- Winter campaign does not exist where I live

37)* How did you hear of “Ti på Topp”? (More answer options possible).

- Through friends
- Through family
- Through job
- Through campaigns/ commercials
- Through facebook
- Through “Bedriftsidretten”
- Through the municipality
- Other _____.

Appendix 5: Questionnaire Norwegian

26.2.2016

www.questback.com - print preview



BEDRIFTSIDRETTE TI PÅ TOPP

Spørreundersøkelse

Dette spørreskjemaet er sendt til deg, som registrert deltaker på "Ti på Topp" i Hedmark og Oppland sesongen 2015. Det vil ta omtrent 5 minutter å gjennomføre spørreundersøkelsen, og den skal kun besvares én gang.

Dette er en anonym spørreundersøkelse og all data vil bli behandlet konfidensielt. Dine svar vil ikke på noe tidspunkt kunne kobles/spores tilbake til deg. Forsker får utlevert data fra QUESTBACK uten tilknytning til e-post/IP-adresse. All innsamlet data vil bli slettet når prosjektet er ferdigstilt, forventet i mai 2016. Det er frivillig å delta i studien. Mer informasjon om studien finner du som vedlegg i e-mailedu mottok.

Svar så ærlig og oppriktig som du kan.

Takk!

Din identitet vil holdes skjult.

Les om retningslinjer for personvern. (Åpnes i nytt vindu)

Samtykkeerklæring

1) * Jeg har mottatt informasjon om studien, og sier meg villig til å delta. Jeg har forstått at deltakelsen er frivillig og at jeg når som helst kan trekke meg.

Ja



Først vil du bli spurt om å oppgi noe grunnleggende informasjon om deg selv. Trykk på det riktige alternativet. Kun et svaralternativ er mulig per spørsmål, med mindre noe annet er oppgitt.

2) * Kjønn

Kvinne Mann

3) * Alder

Under 20 år 20-29 år 30-39 år 40-49 år 50-59 år
 60-69 år 70-79 år 80 år eller mer

4) * Hva er din etniske opprinnelse?

Jeg er født i Norge med en eller begge foreldre født i Norge

Annen nasjonalitet, har flyttet til Norge

Jeg er født i Norge, men har foreldre som er født i et annet land (2.generasjon norsk)

Annet

5) * Din arbeidssituasjon

- Ansatt- fulltid
- Ansatt- deltid
- Pensjonist
- Student
- Ikke i jobb
- Annet

6) * Høyest fullført utdanning

- Ungdomsskole/realskole/grunnskole
- Videregående skole (gymnas)
- Høgskole/universitet (1-3 år)
- Høgskole/universitet (mer enn 4 år)
- Annet

7) * Din brutto inntekt per år i NOK

- Under 100 000 kr
- 100 000 - 299 000 kr
- 300 000 - 499 000 kr
- 500 000 - 699 000 kr
- Mer enn 700 000 kr
- Vet ikke

8) * Sivilstatus

- Gift
- Samboer/partner
- Skilt/separert
- Enke/ enkemann
- Ugift/Singel

9) * Har du ansvar for barn yngre enn 18 år, som bor med deg ofte eller mesteparten av tiden?

- Ja
- Nei

10) * Hva er innbyggertallet i din bostedskommune?

- Under 5000 innbyggere
- 5000- 19 999 innbyggere
- 20 000 innbyggere eller flere
- Vet ikke



Nå vil du bli spurt noen spørsmål om dine fysiske aktivitetsvaner.

Gjennom en vanlig 7-dagers periode (en uke), hvor mange ganger i gjennomsnitt gjør du følgende typer trening i mer enn 15 minutter når du har fri. Skriv på hver linje det riktige antallet.

11) * a) Anstrengende trening (hjertet slår fort). (F.eks.: løping, jogging, ishockey, fotball, squash, basketball, langrenn, judo,

rutleskøyter, aktiv svømming, langtur sykkel). Antall ganger per uke (skriv kun TALL):

12) * b) Moderat trening (ikke utmattende). (F.eks.: hurtig gåtur, tennis, lett sykling, volleyball, badminton, lett svømming, alpint, dans). Antall ganger per uke (Skriv kun TALL):

13) * c) Lett trening (minimal innsats). (F.eks.: Yoga, fiske, bowling, golf, lett gåtur). Antall ganger per uke (skriv kun TALL):

Merk av det alternativet som passer deg best.

14) * Under en typisk 7- dagers periode (en uke), hvor ofte deltar du i en fysisk aktivitet på fritiden din, lenge nok til at du blir svett (hjertet slår fort)?

- Ofte
 Noen ganger
 Aldri/sjelden



Nå vil du bli spurt noen spørsmål om din bruk av "Ti på Topp" -løypene. Det er viktig at svarene dine refererer til sommersesongen, altså kun fra mai til oktober.

15) * Når var den første gangen du brukte en av "Ti på Topp"-løypene?

- 3 måneder eller mindre siden 4-11 måneder siden 1-3 år siden Mer enn 3 år siden Vet ikke

16) * Hvor kommer du vanligvis fra når du bruker "Ti på Topp"-løypene?

- Hjemme
 Jobb
 Både hjemme og jobb
 Annet

17) * Hvor lang tid tar det deg vanligvis å komme til en "Ti på Topp"-løype fra hjemmet ditt?

- Mindre enn 15 minutter 15-29 minutter 30 minutter eller mer

18) * Hvordan kommer du deg vanligvis til denne "Ti på topp"-løypa?

- Bil eller annet motorkjøretøy
 Gå

- Sykle
- Jogge eller løpe
- Annet

19) * Hvor langt fra hjemmet ditt reiser du vanligvis for å komme til en "Ti på Topp"-løype? (I kilometer).

20) * Hva er din hovedgrunn for å bruke "Ti på Topp"-løypene?

- Trening eller rekreasjon
- For å reise et sted (transport)
- for både trening/rekreasjon og transport
- Annet

21) * Hvilken type aktivitet driver du vanligvis med når du bruker "Ti på Topp"-løypene?

- Gå
- Løpe eller jogge
- Sykle
- Annet

22) * Hvor lang tid bruker du vanligvis i løypa per tur, når du bruker "Ti på Topp"-løypene?

- Mindre enn 30 minutter
- 30-44 minutter
- 45-59 minutter
- 1-2 timer
- Mer enn 2 timer

23) * Hvordan er aktivitetsnivået ditt (går du, sykler du, eller utøver du andre aktiviteter mer/mindre) etter at du begynte å bruke "Ti på Topp"-løypene?

- Mer
- Det samme
- Mindre
- Vet ikke

24) * Hvordan opplever du vedlikeholdet i "Ti på Topp"-løypene?

- Utmerket
- Godt
- Middels
- Dårlig
- Vet ikke

25) * Hvordan opplever du trygghet og sikkerhet langs "Ti på Topp"-løypene?

- Utmerket
- God
- Middels
- Dårlig
- Vet ikke



Tilslutt er det noen tilleggsspørsmål.

I Hedmark og Oppland tilbyr bedriftsidretten "Ti på Topp" i Elverum, Gjøvik, Hamar og Lillehammer.

26) * Hvor benytter du deg av/er du registrert for "Ti på Topp"-tilbudet?

- Elverum
- Gjøvik
- Hamar
- Lillehammer

27) * Hvordan registrerer du turene dine?

- Via "Ti på Topp"-nettsiden
- Per SMS
- Jeg sender inn kontrollkortet i posten
- Annet

28) * Når jeg deltar på "Ti på Topp", er jeg....? (flere alternativer mulig).

- ..Alene
- ..Med venner
- ..Med kolleger
- ..Med familie
- ..Med kjæledyr (hund)
- ..I organiserte grupper

29) * Min arbeidsplass deltar på "Ti på Topp".

- Ja
- Nei
- Ikke relevant
- Vet ikke

30) * Jeg deltar på "Ti på Topp" gjennom min arbeidsplass.

- Ja
- Nei
- Ikke relevant

31) * Min arbeidsplass tillater meg å delta i "Ti på Topp" i arbeidstiden.

- Ja
- Nei
- Ikke relevant
- Vet ikke

"Ti på Topp" er et konsept som legges til rette av Bedriftsidretten, men er åpent for alle. Man kan velge å konkurrere mot venner, kolleger eller andre bedrifter i nærmiljøet.

32) * Jeg følger muligheten for konkurranse mot andre gjennom "Ti på Topp" motiverer meg til å være i fysisk aktivitet.

- Enig

- Litt enig
- Hverken enig eller uenig
- Litt uenig
- Uenig

33) * "Ti på Topp" bidrar til at jeg blir mer kjent i mitt nærområde.

- Enig
- Litt enig
- Hverken enig eller uening
- Litt uenig
- Uenig

34) * Deltakelse i "Ti på Topp" gjør at jeg oppsøker turmål jeg ellers ikke ville besøkt.

- Enig
- Litt enig
- Hverken enig eller uenig
- Litt uenig
- Uenig

35) * Jeg benytter meg av kartene i kartappen.

- Ofte
- Noen ganger
- Sjelden/aldri


36) * Har du deltatt på "Ti på Topps" vinterkampanje (1.-6.april), og har du benyttet deg av disse tilrettelagte skiløypene?

- Ja
- Nei
- Finnes ikke vinterkampanje der jeg bor

37) * Hvordan hørte du om "Ti på Topp"? (Fiere alternativer mulig).

- Gjennom venner
- Gjennom familie
- Gjennom jobben
- Gjennom kampanjer/reklame
- Gjennom facebook
- Gjennom bedriftsidretten
- Gjennom kommunen
- Annet

Appendix 6: Permission from Norwegian Social Science Data Services

| | | | |
|--|---|--|------------|
| Norsk samfunnsvitenskapelig datatjeneste AS NORWEGIAN SOCIAL SCIENCE DATA SERVICES | |  | |
| Kenneth Stanley Green Institutt for idrett og aktiv livsstil Høgskolen i Hedmark, campus Elverum Postboks 400 2418 ELVERUM | | Flisli 2 Hårlagen gate 2 01-5807 Bergen Norway Tel: +47-55 58 21 07 Fax: +47-55 58 96 58 post@nsd.uib.no www.nsd.uib.no Org nr: 985 321 984 | |
| Vår dato: 26.11.2015 | Vår ref: 45495/13/HIT | Deres dato: | Deres ref: |
| TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER | | | |
| Vi viser til melding om behandling av personopplysninger, mottatt 03.11.2015. Meldingen gjelder prosjektet: | | | |
| 45495 | <i>10 på fopp: a public health perspective on the socio-demographic profile and use of walking trails</i> | | |
| Behandlingsansvarlig | <i>Høgskolen i Hedmark, ved institusjonens øverste leder</i> | | |
| Daglig ansvarlig | <i>Kenneth Stanley Green</i> | | |
| Student | <i>Liv Brøkka</i> | | |
| Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres. | | | |
| Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondansen 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/meldeplikk/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://pro.nsd.no/prosjekt/ . | | | |
| Personvernombudet vil ved prosjektets avslutning, 30.06.2016, rette en henvendelse angående status for behandlingen av personopplysninger. | | | |
| Vennlig hilsen | | | |
| Katrine Utaaker Segadal | | Hildur Thorarensen | |
| Kontaktperson: Hildur Thorarensen tlf: 55 58 26 54 | | | |
| Dokumentet er elektronisk produsert og godkjent ved NSDs netter for elektronisk godkjenning. | | | |
| Audiingskontor / Dattm Office OSLO: NSD, Universitet i Oslo, Postboks 1055 Blindern, 0316 Oslo, Tel: +47 22 85 52 11, ad@nsd.uib.no TRONDHEIM: NSD, Høgen tallteknologivitenskapelige universitet, 7801 Trondheim, Tel: +47 73 58 19 03, trondheim@nsd.uib.no TROMSØ: NSD, Universitet i Tromsø, 9017 Tromsø, Tel: +47 77 64 40 36, tromso@nsd.uib.no | | | |

Personvernombudet for forskning



Prosjektvurdering - Kommentar

Prosjekt nr: 45495

Prosjektets formål er å undersøke kvantitativt mønstre ved deltakelse i en folkehelse-orientert strategi for gåing, i form av "10 på topp".

Utvalget informeres skriftlig om prosjektet og samtykker til deltakelse. Informasjons-skrivet er godt utformet.

Det behandles sensitive personopplysninger om etnisk bakgrunn og helseforhold.

Personvernombudet legger til grunn at forsker etterfølger Høgskolen i Hedmark sine interne rutiner for datasikkerhet. Dersom personopplysninger skal lagres på privat pc/mobile enheter, bør opplysningene krypteres tilstrekkelig.

Questback er databehandler for prosjektet. Høgskolen i Hedmark skal inngå skriftlig avtale med Questback om hvordan personopplysninger skal behandles, jf. personopplysningsloven § 15. For råd om hva databehandleravtalen bør inneholde, se Datatilsynets veileder: <http://www.datatilsynet.no/Sikkerhet-internkontroll/Databehandleravtale/>.

Forventet prosjektslutt er 30.06.2016. Ifølge prosjektmeldingen skal innsamlede opplysninger da anonymiseres. Anonymisering innebærer å bearbeide datamaterialet slik at ingen enkeltpersoner kan gjenkjennes. Det gjøres ved å:

- slette direkte personopplysninger (som navn/koblingsnøkkel)
- slette/omskrive indirekte personopplysninger (identifiserende sammenstilling av bakgrunnsopplysninger som f.eks. bosted/arbeidssted, alder og kjønn)

Vi gjør oppmerksom på at også databehandler (Questback) må slette personopplysninger tilknyttet prosjektet i sine systemer. Dette inkluderer eventuelle logger og koblinger mellom IP-/epostadresser og besvarelses.