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Encouraging sustainable mobility: community case study on workplace initiatives in Lahti, Finland

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The transport sector represents about 30 per cent of all carbon dioxide (CO2) emissions in developed countries. Developing sustainable transport and mobility play a central role in reducing greenhouse gas emissions. Sustainable mobility means a mind shift where transport in private cars is replaced by different modes of more sustainable mobility, such as, walking, biking, and public transport. The transformation toward more sustainable mobility plays a key role in reaching CO2 emission reduction goals. However, in addition to the environmental perspective, also social and economic aspects are interconnected in the change. In this sustainability shift, employers can encourage the employees through offering and supporting new alternatives for mobility. This article aims to study how different sustainable mobility initiatives provided by an employer are adopted by employees. This case study presents a set of pilots implemented at a workplace in Lahti, Finland in May-October 2022. The mobility forms offered for commuting were fringe benefits from employment, that is, employer-subsidized commuter tickets and employer-provided bicycle benefits. Travel during the workday was supported through introducing the use of shared electric city bikes and scooters. The research data consisted of short surveys before ($n = 70$) and at the end of the pilots ($n = 66$), and thematic interviews ($n = 8$) during the implementation period. The pilots were implemented in collaboration with the employer and two local universities. Before the pilots, the main part of the employee participants was using private cars for commuting and travel during the workday. Results show that the pilots were successful in introducing more sustainable ways of mobility. However, the employer's role in preparing, supporting, and planning the continuation of support for sustainable commuting and mobility is essential.

KEYWORDS

sustainable mobility, workplace, commuting, employer initiatives, case study

Introduction

Population growth, industrialization, urbanization, and prosperity has increased people's mobility with motorized means and characterized the development of society since the middle of the 20th century. Currently, transport represents about 30% of all carbon dioxide (CO2) emissions in developed countries (UNECE, 2022). The European Union has set a target for 2030 of reducing greenhouse gas emissions by at least 55% compared to the levels in 1990 (EU, 2021). Furthermore, the transport sector has an

objective to deliver a 90% reduction in emissions by 2050. This requires not only development of sustainable and smart mobility and transport systems, but also engaging citizens and communities in the sustainability shift. For citizens, sustainable mobility means a mind shift where transport in private cars is replaced by different modes of more sustainable transport, such as, walking, biking, and public transport. A transformation toward more sustainable mobility plays a key role in reaching CO2 emission reduction goals.

Sustainable mobility originates from the concept of sustainable development, a well-known paradigm popularized in the 1980s through the Brundtland report published by the United Nations (WCED, 1987; Gallo and Marinelli, 2020). A few years later, sustainable transport, associated with sustainable mobility, was introduced (EC, 1992). Referring to its origin, the concept of sustainable mobility points out the importance of environmentally friendly transport, including the social, and economic factors. Furthermore, the concept presently includes a broader set of transport impacts on society including social equity, health, quality of life and economic aspects (Berger et al., 2014). A related term is micromobility, a growing new trend that includes the utilization of human-powered micro-vehicles such as bicycles, as well as new micro-vehicles such as e-scooters and e-bikes (Oeschger et al., 2020). Micromobility has the potential to help solve many of the transport related challenges that cities worldwide are facing and can provide a solution for the modal shifts away from private motorized vehicles (Oeschger et al., 2020). However, it is important to keep in mind that most travel, in everyday life, is embedded in broader routines and habits that help people to organize their daily lives (Berger et al., 2014). Thus, the social perspectives of sustainable mobility are crucial.

Mobility is not gender neutral. Significant differences between men and women can be found (Kawgan-Kagan, 2020). According to research implemented in Spain, women's choice is greatly influenced by, for example, their income, family, and household structure, while men's choice of transport is more resistant to changes (Sánchez and González, 2016). This is related to women taking care of a larger share of organizing family life. Also, Kawgan-Kagan (2020) confirms the same findings in Germany. Statistics collected in Finland (Statistics Finland, 2021) show that although the differences between genders have leveled out over the decades, there is still variation between women and men in the way they travel. Men make most of their daily journeys as car drivers, whereas for women daily trips are more evenly divided between driving a car, being a passenger in a car and walking. Furthermore, many different aspects promote car traffic. Cities are planned for cars, the main users of which are men. Car traffic is prioritized, for example in the maintenance of roads, whereas the maintenance of bike lanes and sidewalks comes only after the roads have been cleared (Heinrich Böll Stiftung, 2021).

Sustainable mobility supports and improves people's wellbeing (Bartle and Chatterjee, 2019). According to the World Health Organization (2023), chronic diseases and conditions are major public health issues: cardiovascular diseases, diabetes, memory disorders, musculoskeletal diseases and mental disorders. A sedentary lifestyle is a risk factor for the mentioned chronic diseases (World Health Organization, 2023). Therefore, commuting and sustainable mobility enhance and promote physical activity and health among the working age population, decrease days of absence from work and minimize the health care and social benefit costs.

Previous studies have shown that employers can support sustainable transport alternatives among employees (e.g., Vanoutrive et al., 2010; Van Malderen et al., 2012; Bartle and Chatterjee, 2019; Ramesh and Colby, 2019). Employers means of promoting sustainable mobility are, for example, subsidizing public-transport passes, and investing in infrastructure (e.g., bike sheds, showers, preferred parking for those who car-pool). Furthermore, awareness-raising initiatives with respect to benefits of sustainable transport modes are other possible methods. This includes improving the mobility culture. Another key issue is also to assign a responsible person with enough resources to support the sustainable commuting measures at the workplace (Hoerler et al., 2019). However, in rural areas, where mobility relies heavily on individual car usage, the situation can be different. Soder and Peer (2018) claim that from both societal and business perspectives, it is actually not efficient to promote sustainable mobility in rural areas via employers, because employers have little incentive to implement measures for supporting sustainable mobility among their employees. The costs related to implementing such measures exceed the corresponding benefits. Moreover, free car parking at work is related to more driving (Hamre and Buehler, 2014; Hoerler et al., 2019). To conclude, however, the relationship between commuter benefits and the likelihood to walk and cycle has been scarcely explored (Bueno et al., 2017), and, also, the interaction effects among commuter benefits have received relatively little attention in the literature (Hamre and Buehler, 2014). This case study aims to find out how different sustainable mobility initiatives provided by an employer are adopted by employees. The study was implemented at the Wellbeing services county of Päijät-Häme, which is a public authority providing health care and social services in Päijät-Häme region in Finland. The authority employs ~7,600 persons in ten municipalities. The share of women among the employees is 89 per cent. In its new strategy 2023–2025, Wellbeing service county of Päijät-Häme aims to be economically, ecologically, and socially sustainable and responsible, thus more sustainable commuting is one of the focus areas (Wellbeing service county of Päijät-Häme, 2022). A transformation toward more sustainable mobility and reducing CO2 emissions is set as part of corporate responsibility and sustainable development in the strategy, and in the environment programme of the Wellbeing services county of Päijät-Häme. Based on a study made in 2018, in Wellbeing service county of Päijät-Häme about 60 per cent of employees use cars for commuting (Päijät-Häme Joint Authority for Health Wellbeing, 2018). The potential to reduce commuting related emissions was estimated to be about 25% based on the opinion of employees. This case study confirms the same level of private car use (61%).

The structure of the remaining part of the manuscript begins with presenting the context of the research including methods used. This is followed by a presentation of the results and a discussion. At the end, the outcomes of the research are concluded, and limitations and possibilities for future research in the area are pointed out.

Context

Setting

This community case study was carried out as part of the "By bike, scooter, and bus in Wellbeing services county of Päijät-Häme" (PPBP) project. The aim of the project was to promote sustainable commuting and to support the wellbeing and resilience of the Wellbeing services county of Päijät-Häme's employees. The project was implemented between February and December 2022, while the pilots were operated between May and October. The project targeted especially private car users. The project was initiated to promote the employer's strategy and goals of the environment program. In addition to promote sustainable mobility also increase in daily activity to bring health benefits and to improve overall wellbeing of the employees was emphasized. The project strengthened local cooperation and utilized new mobility services such as city-e-bikes and e-scooters. Based on the experiences of the pilots, the Wellbeing services county of Päijät-Häme aimed to build recommendations to provide occupational benefit packages for employees. The pilots were expected to provide information on short-term, intermediate, and long-term outcomes for planning, developing and selecting further actions on sustainable mobility. PPBP was a collaborative project managed by the Wellbeing services county of Päijät-Häme carried out in cooperation with LAB University of Applied Sciences, LUT University, the City of Lahti, and several service providers.

The project involved several pilots, of which this article will focus on four more in detail (Table 1). In two pilots, the employer's measures were aimed at sustainable commuting. Activities in focus were employer-subsidized commuter tickets for local transport and employer-provided bicycle benefits. In Finland, employer-subsidized commuter tickets are personal tickets meant for commuting. They are classified as tax-fee income up to 3,400 €/year. An employer-provided bicycle benefit is a bicycle intended for the employee's personal use for commuting. In Finland, the bicycle benefit is deductible income up to 1,200 euros a year (Tax Administration, 2022). In the other two pilots, measures for increasing sustainable mobility by shared city e-bikes and e-scooters during the working day were supported. Units of the Wellbeing services county of Päijät-Häme located in the city center of Lahti tested shared city-e-bikes and e-scooters.

Study design

A case study method can be used when conducting qualitative, applied comprehensive research for investigating complex phenomena that are closely linked to real-world contexts (Yin, 2018). The case study is typically suitable when the research involves several actors and perspectives. A case should cover an entire process and allow the observation of how the phenomenon developed over time (Eisenhardt and Graebner, 2007). To increase the validity of a case study, it is important to include several data collection methods to enable the in-depth understanding (Eisenhardt and Graebner, 2007). The strength of a case study is the depth, as it explains details within the case variance (Flyvbjerg, 2011). On the other hand, the case-study method can be criticized as being too descriptive, as it can be challenging to gather all available data (Lune and Berg, 2017). Moreover, the case study does not explain how widespread a phenomenon is (Flyvbjerg, 2011). Thus, based on understanding one specific case, other similar cases can be better comprehended and implemented in new contexts. Several data collection methods were used in this study: discussions and meetings with the employer, small-scale surveys and interviews with the employees involved, desktop research and participatory observation.

A small-scale survey studies the relationships between variables. In this method a sample of people is measured through a number of variables and relationships between the variables are studied based on the resulting data (Punch, 2003). In this case study, the number of participants in the surveys were rather small, therefore the data analysis is descriptive. Moreover, the surveys were targeted to the employees involved in the pilots, thus the small sample size was determined by external limitations. The interviews conducted with the employees were semi-structured. This means that the researcher orients herself according to a predefined frame, but the core message of the replies is necessarily not found in the direct context of each question asked (Schmidt, 2004). This enables concentration on a specific theme but allows for discussion. Together, the surveys and interviews form the main data source for the case study.

The joint initial survey was conducted online before the start of the pilots in May 2022. The survey mapped the participants' expectations, motivations, background information about the commuting habits, such as the method of travel, the length of the trip and the time spent. The survey also included more general questions related to values and environmental awareness. Finally, the respondents were also asked if they would be willing to participate in an online interview.

During the pilot period online interviews were carried out with eight participants who, through the survey, expressed their willingness to participate (June–August 2022). The aim of these interviews was to collect more in-depth information about employees' experiences during the pilots.

At the end of the piloting period (October–November 2022) the user experiences were collected from different pilot groups though separate surveys. This enabled shorter questionnaires to ensure greatest possible number of respondents. Though, most of the questions were same for all the pilots, only few questions were prepared especially for certain groups. Such were, for example, questions about feeling of safety that was asked of e-scooter users.

Results

All together 83 participants signed up for participating in the pilots, however, 70 actually enrolled the pilots and replied to the initial survey. The research data consisted of short surveys before ($n = 70$) and at the end of the pilots ($n = 66$), and thematic interviews ($n = 8$) during the implementation period. In the following, the most interesting points of the surveys and interviews will be highlighted.

TABLE 1 Description of the four pilot groups: number of participants (initial survey), number of respondents (final survey), number of private car users (final survey), overall satisfaction rating (grade average from final survey), and age group (initial survey).

	Pilot groups				
	Employer-subsidized commuter ticket	Employer-provided bicycles	City-e-bikes	E-scooters	All
Number of participants (initial survey)	13	14	22	21	70
Number of respondents (final survey)	13	13	21	19	66
Private car users (respondents, final survey)	6	11	13	12	42
Overall grade average (grades 4–10)	9.3	8.5	8.5	8.7	8.7
Age group					
18–29 yrs.	0	1	2	3	6
30–39 yrs.	2	3	9	7	21
40–49 yrs.	4	4	7	5	20
50–59 yrs.	6	6	3	6	21
60–69 yrs.	1	0	1	0	2

The four pilots and their respective number of participants are presented in Table 1. The pilot groups were: (1) employer-subsidized commuter tickets for local transport, (2) employer-provided bicycle benefit, (3) city e-bikes, and (4) e-scooters. Pilots 1 and 2 focused on commuting, while pilots 3 and 4 focused on mobility during the working day.

The initial survey collected background information from the participants including age group. Participants in the pilots were evenly representing three age groups: 30–39 years, 40–49 years, and 50–59 years. There were only a few participants in the youngest (18–29 years) and oldest (60–69 years) age groups. When reviewing the different pilots by age groups, it can be seen that city-e-bikes and e-scooters were of more interest to younger age groups than employer- subsidized commuter ticket.

The participants were asked to evaluate their satisfaction with the pilot period on a scale of 4–10, 4 representing the failed and 10 the excellent review. This scale was used because it corresponds to the Finnish primary school assessment and is therefore familiar to everyone regardless their age and educational background. All four pilots received good or very good overall ratings. Satisfaction with the pilots was also widely expressed in the answers to open ended questions. Many of the respondents praised the opportunity to participate in the pilots:

> *"The pilot was a very positive experience as a whole and I hope that electric scooters could become a permanent form of mobility during the working day." (Electric scooter)*
>
> *"There are only roses and positive feedback to give for this pilot. All in all, a good action which, in addition to increasing work motivation, reduced the carbon footprint and saved money on fuel costs. I hope from the bottom of my heart that the same experiment will continue next year, and if that doesn't happen, I would probably pay for the use of the city-e-bike myself." (Employer-provided bicycle benefit)*
>
> *"An absolutely profitable pilot and the opportunity to get employer-provided bicycle benefit should be extended to all employees. There were a lot of interested colleagues, who would also be interested to have this opportunity. Only good things to say." (Employer-provided bicycle benefit)*
>
> *"All in all, a positive pilot. The employer could continue to support the use of employer-subsidized commuter ticket." (Employer-subsidized commuter ticket)*

The original goal of the PPBP project was to involve especially private car users to participate into the pilots. This goal was well-achieved in the pilot groups employer-provided bicycle benefit (11/13, 85%), city-e-bikes (13/21, 62%), and e-scooters (12/19, 63%). Only in the pilot group employer-subsidized commuter ticket less than half (6/13, 46%) of the respondents mentioned private car as the main mode of transport before the pilot.

When reviewing the two pilot groups, employer-subsidized commuter ticket and employer-provided bicycles, aimed at sustainable commuting (Table 2), it can be seen that a clear majority (11/14) of the participants in the employer-provided bicycle group spent no more than half an hour on their one-way commute before the pilot period. Their one-way commuting distance was also shorter than in the group of employer-subsidized commuter ticket users. The participants of the employer-subsidized commuter ticket pilot spent slightly longer time on commuting as almost half of them traveled over 30 min. Private car was the most common mode of transport before the pilot period in both groups, although in the employer-subsidized commuter ticket group bus was equally common. Walking and cycling did not receive any mentions from the employer-subsidized commuter ticket users and only two from the employer-provided bicycle group.

Almost all participants in the employer-provided bicycle pilot (10/13) replied that they used the new way of commuting most of the time during the pilot period. When participants were asked why they did not use their employer-subsidized bicycle, the main reason given was weather conditions (7/13 mentions). Other reasons were insecure and poor bicycle parking conditions, inadequate dressing rooms, missing lockers (6/13 mentions).

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TABLE 2 Background information on commuting before the pilot period (time spent commuting one-way, commuting distance one-way and most common mode of commute before the pilot period) and the impact of the pilot period on participant's travel time and wellbeing.

	Employer-subsidized commuter ticket Initial survey $n = 13$	Employer-provided bicycles Initial survey $n = 14$
Initial—survey time spent commuting one-way before the pilot period		
<10 min	1	2
10–20 min	5	5
20–30 min	1	4
30–40 min	2	2
>40 min	4	1
	Employer-subsidized commuter ticket Final survey $n = 13$	Employer-provided bicycles Final survey $n = 13$
Final survey—Commuting distance one-way before the pilot period		
<5 km	1	2
5–9 km	7	9
10–15 km	3	1
>15 km	2	1
Final survey—Most common mode of commute before the pilot period		
Walking	0	0
Cycling	0	2
Bus	5	0
Private car	6	11
Other	2	0
Final survey—Impact on travel time. Comparing the chosen mode of commute in the pilot period to the mode of commute before the pilot period, it was		
Faster	0	7
As fast	7	3
Slower	6	3
Final survey—Impact on wellbeing		
Significant positive impact	2	5
small positive impact	5	6
No impact	6	2
Negative impact	0	0

> *"I think the hardest part was the dressing rooms, possibility to dry clothes, old bike racks where you can't lock the bike from the frame."* (Employer-provided bicycle benefit)

All participants in the employer-subsidized commuter ticket pilot (13/13) reported that they used mainly public transport, that is, bus, for commuting. The most common reason for not using the bus was being in a hurry (5/13). Other reasons mentioned were the need to move from one place to another during the working day, where the private car was necessary.

In the initial survey many participants mentioned travel speed and getting quickly from one place to another as the reason for using a private car for commuting. However, in the final survey, especially the employer-provided bicycle users were of the opinion that cycling was a faster way to travel to work (7/13).

A significant majority of the employer-provided bicycle pilot (11/13) were of the opinion that cycling had a positive impact on their wellbeing: six participants felt that cycling had a small positive impact and five felt that it had a significant positive impact. This same result did not emerge as strongly in the employer-subsidized commuter ticket group, although a majority (7/13) felt at least a small positive impact on their wellbeing.

Figure 1 shows the participants' reasons for taking part in the pilots. This was asked in the initial survey through a multiple-choice question where it was possible to choose 1–3 motives. The desire to try something new received the most mentions (44%). Also matters related to health benefits (33%), increased daily

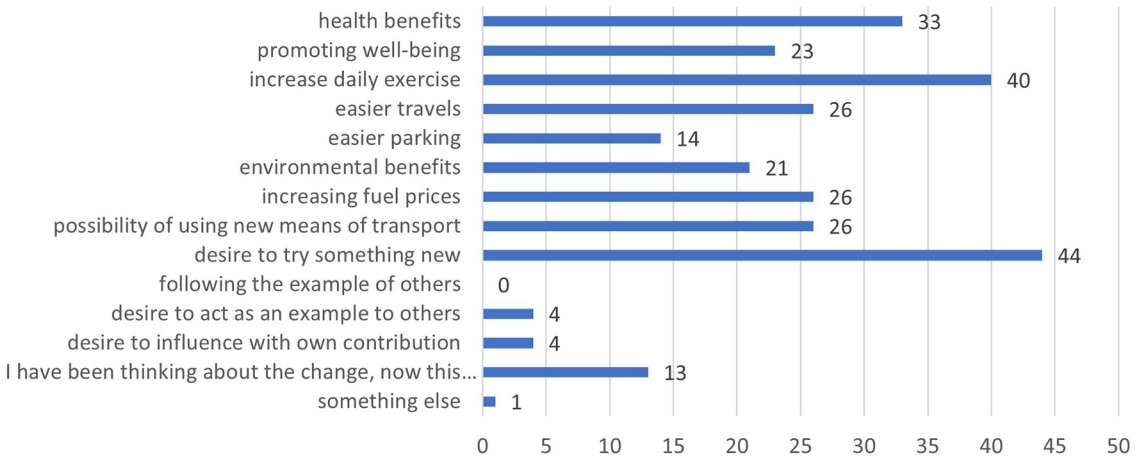

FIGURE 1
Reasons to participate (initial survey, responses in %).

exercise (40%), and promoting wellbeing (23%) were considered as important reasons to participate. Issues related to driving private cars, such as the increasing fuel price (26%), making parking easier (14%), and making traveling easier (26%), were also mentioned. The environmental issues did not receive particularly many mentions, personal reasons seem to be more important according to the respondents.

> *"To walk at least part of the journey, that is, it's a personal advantage to be able to move around a bit. In addition to the health motive, also the desire to try something new." (Employer-subsidized commuter ticket)*

When the participants were asked how often they did use their chosen mode of transportation during the pilot period, most respondents answered either mainly or occasionally (Figure 2). Only three respondents (city-e-bikes 2, e-scooters 1) did not really participate in the pilots. These three people mentioned that they had many difficulties using the operating applications and therefore were unable to use the device. Other reasons that reduced usage were the limits of the geographical area in which the city-e-bikes and e-scooters could be used, availability and parking spaces, weather related issues (e.g., heavy rain), or other work-related matters such as the need to transport a large number of medical devices for the home care service customers.

In the final survey, all participants were asked if the pilot had any impact on their actions or way of thinking in general. Different statements were given as possible answer options. As Figure 3 shows, the statement "I have reduced the use of my private car" got the most mentions. The answers also show that the chosen mode of transport has influenced the way people travel in their free time; cyclists' cycle more, e-scooter users use scooters also in their free time and commuter ticket users travel more by bus. Based on the answers, it seems that the pilot period had positive effects on the participant's overall physical activity: increasing exercise, traveling more by bicycle, and walking more. The respondents were almost without exception willing to continue using their chosen mode of transportation also in the future.

> *"[When traveling by bus] I liked the fact that there's also a little bit of walking and I got useful exercise at the same time." (Employer-subsidized commuter ticket)*
>
> *"It's new and positive thing that using e-scooter is fun, so this pilot has added an extra fun element to going to work, you can also be outside, instead of sitting in the car." (Electric scooter)*
>
> *"The best employee benefit so far in my career." (Employer-provided bicycle benefit)*
>
> *"Much more pleasant way to commute, stress decreased both during and after commuting, also more pleasant working days, and beneficial exercise at the same time." (Employer-provided bicycle benefit)*

Social facilities at the workplace and bicycle parking were pointed out as shortcomings at the workplace, both in the interviews and in the open-ended answers of the surveys. These were, for example, lack of lockers for clothes and other equipment, lack of place to dry wet clothes, low number of showers and lack of safe bicycle parking facilities.

In the employer-subsidized commuter ticket pilot, the employer financially supported the purchase of a season ticket for public transport. Some of the comments in the interviews and open-ended questions clearly highlighted financial reasons for participation:

> *"Honestly, the fact that I got a little bit money back from the employer for the bus ticket price, so it was financial." (Employer-subsidized commuter ticket)*
>
> *"Money was the biggest motivation for participating. Getting support for commuting costs." (Employer-subsidized commuter ticket)*

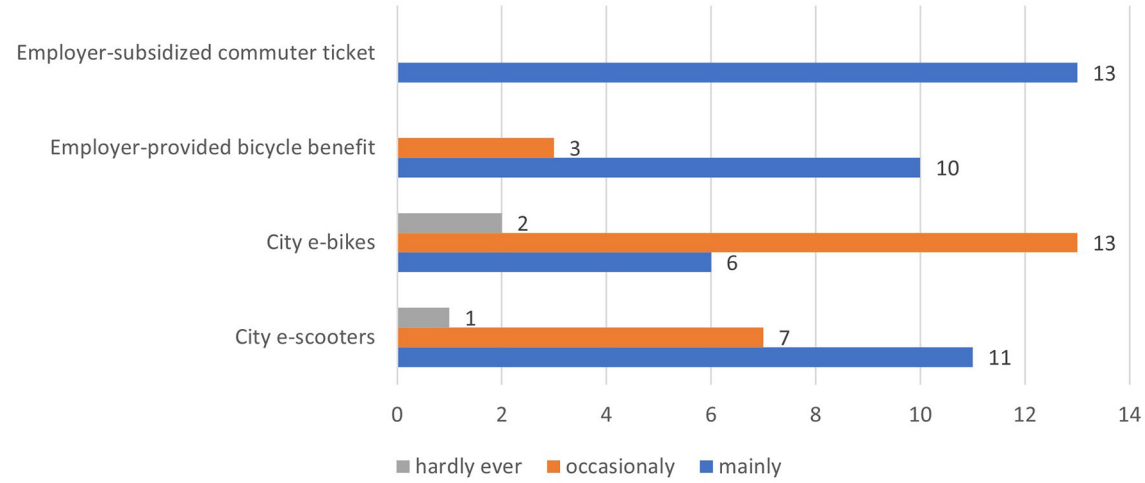

FIGURE 2
How often the chosen mode of transport was used (final survey, responses in number of people).

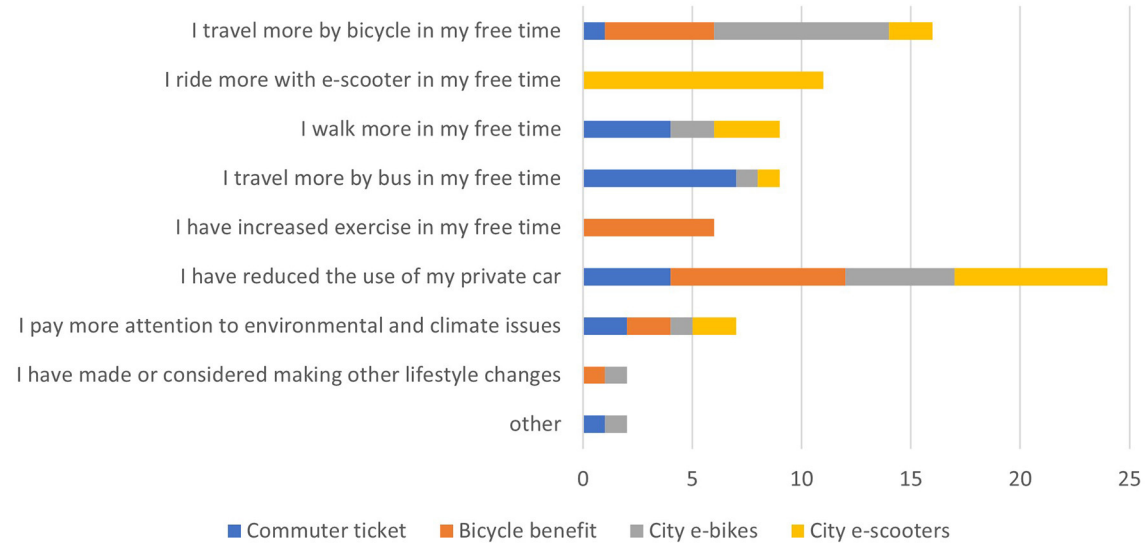

FIGURE 3
The impact of the pilot on participants' way of thinking (final survey, responses in number of people).

> *"The employer's support is very important. We have at the workplace discussed about the benefit, which is certainly important for both everyday exercise and environmental issues." (Employer-provided bicycle benefit)*

All in all, the employer's support for sustainable commuting provided during the pilot period was seen as important and highly valuable. The support included, in addition to financial benefits, also human resources for guidance and information. All pilot groups were highly satisfied with the provided support (employer-subsidized commuter ticket 11/13, employer-provided bicycle benefit 10/13, city e-bikes 21/21, e-scooters 19/19).

Discussion and conclusion

Basically, mobility can become more sustainable in several ways: people can travel more efficiently, they can travel differently, or they can travel less. This case study focused on employer's ways to encourage toward sustainable mobility, more precisely, on how different sustainable mobility initiatives provided by an employer were adopted by employees. The study provided new aspects on the relationship between commuter benefits and actual change in commuting habits that has been scarcely studied (e.g., Hamre and Buehler, 2014; Bueno et al., 2017).

Despite the limited number of participants and relatively short time, all the implemented pilots show positive results. The

participants were loyal to utilizing the piloted sustainable mobility forms and eager to continue the new ways of mobility also after the pilot period. As also Ramesh and Colby (2019) have confirmed, encouraging employers to offer free or subsidized commuter tickets have major effects on employees utilizing public transport. Furthermore, the results support earlier findings in the literature that suggest commuter benefits for walking, cycling, and public transportation may be effective at supporting more sustainable mobility. Decreasing the use of private cars has an impact on reducing transport-based greenhouse gas emissions, that is one of the central goals of the European Union (EU, 2021).

The pilot was successful in involving private car users. In addition, the participants' commuting distances were short enough to allow them to switch to alternative modes of transport. However, the results are based on pilots in a strongly female-dominated workplace. Previous research has shown that women usually utilize more diverse means of mobility (Sánchez and González, 2016; Kawgan-Kagan, 2020). Thus, the positive results may partly be explained by the fact that the pilots were implemented in a female-dominated workplace.

This study confirms, as also pointed out by Bartle and Chatterjee (2019) that sustainable mobility supports people's wellbeing. The interest to participate seemed to be strongly based on personal motives linked to wellbeing and economic issues. These were for example, increased daily exercise and decreased costs related to private car use. Overall, participating in a sustainable mobility pilot can be a significant gamechanger in mobility habits, also affecting free time mobility. In the future, it would be worthwhile to consider, if sustainable mobility should be promoted more through emphasizing personal benefits rather than cutting CO2-emissions. Employers have an active role in both implementing sustainable mobility incentives and in supporting the continuation. This includes provision of sustainable mobility services for employees as well as appropriate facilities, such as, safe and covered well-located bicycle parking, dressing rooms, lockers, and showers. These initiatives show an employer's commitment to the mobility shift and corporate responsibility. As Hoerler et al. (2019) point out it is important to assign a responsible person supporting the sustainable commuting measures at the workplace. In this pilot, the support provided by the employer was perceived as sufficient and positive. The Wellbeing services county of Päijät-Häme will continue to support the employer-provided bicycle benefit, city-e-bikes and e-scooters. Moreover, developing bicycle parking and social facilities will be improved.

The short time period, small number of participants and female dominated workplace formed limitations of this study. A follow-up study would provide interesting information of continuation of sustainable mobility services and behavior in the Wellbeing services county of Päijät-Häme. Furthermore, a longer piloting period and widening the study to several workplaces would form an interesting set up for future studies. Also, the gender aspect would be worth a further investigation: would the implementation of a sustainable mobility pilot give different results in a male dominated or other types of workplaces?

This article studied the employer's role in supporting different forms of sustainable mobility. As a conclusion the results confirm that employer can have an active role in enabling sustainable mobility and introducing incentives. Furthermore, the ways of commuting can affect the overall mobility behavior. The case study shows that a change in commuting ways have an impact also on general mobility habits and increases the level of daily physical activity. This underlines the positive impacts of sustainable mobility both from health and environmental aspects.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

Author contributions

MV, SV, and R-MH contributed to conception and design of the study. R-MH originated and conceptualized the pilot project for the employees. MV collected and processed the data. MV and SV designed the manuscript and wrote the first draft. All authors contributed to article writing, manuscript revision, and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

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