

Ethics in Workplace Health Promotion Financial Incentive Programs

Design A Guideline to Help Employers
Select, Evaluate, and Implement Ethically Sound Programs

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24th, October,

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Terminology

OHS	Occupational Health and Safety
WHP	Workplace Health Promotion
WHPPs	Workplace Health Promotion Programs
FI	Financial Incentives
WHPFI	Workplace Health Promotion Financial Incentives

1. Introduction

Why is it important to conduct the research on ethics in the context of workplace health promotion? This chapter introduces the background of the project, highlighting the ethical dilemmas associated with Workplace Health Promotion Programs (WHPPs) and Financial Incentives (FIs) in promoting employee health. It outlines the motivations behind the study and structures the specific research questions according to the tasks in each phase.

- 1.1 Background
- 1.2 Challenge
- 1.3 Project Approach

1. Introduction

1.1 Background

1.1.1 Workplace Health Promotion

"One-third of your life is spent at work," notes Andrew Naber (2007), with an average of 90,000 hours spent working. In 2023, EU data shows that weekly working hours range from 40 to 44.5 (EU-LFS, 2023). This time at work greatly impacts overall health and well-being (Edge et al., 2017). The time spent at work significantly impacts overall health and well-being (Edge et al., 2017). To address occupational hazards, many EU countries have implemented directives under Occupational Health and Safety (OHS) policies, which mandate employers to provide a safe and healthy work environment (Gagliardi et al., 2012). OHS practices typically encompass both preventive measures and health promotion strategies (Verra et al., 2019). These policies include risk assessments, protective equipment, accident monitoring, and safety training, defining employers' responsibilities to protect employees' physical, mental, and psychosocial health.

In addition to preventive measures, health promotion initiatives play a crucial role in improving employee well-being by fostering positive behavioral changes (Díaz-Benito et al., 2020). According to the European Network for Workplace Health Promotion (ENWHP, 2007), "Workplace Health Promotion (WHP) is the combined effort of employers, employees, and society to improve work organization and the working environment, promote active participation, and encourage personal development." Increasingly, employers invest in WHP programs not only to enhance their corporate image but also to boost productivity (ENWHP, 2009). A U.S. study by Baicker et al. (2010) demonstrated that every \$1 spent on WHP could reduce medical costs by \$3.72 and absenteeism by \$2.73, highlighting the financial benefits of integrating WHP into organizational strategies.

1.1.2 Financial Incentives

Employers are increasingly recognizing the value of employee health, resulting in the widespread adoption of Workplace Health Promotion Programs (WHPPs). However, employee participation in these programs, and their ability to implement health improvement strategies, is often influenced by individual circumstances.

The definition of present bias from behavioral economics suggests that people are more easily influenced by immediate outcomes, making long-term behavior changes, such as adopting healthier habits, challenging for most individuals (Laibson, 1997). This highlights the potential effectiveness of immediate financial incentives, which leverage present bias by offering directly available rewards—whether tangible or intangible, and in the form of rewards or penalties—to promote healthier behaviors (Buissonjé, 2024).

Financial Incentives (FIs) have emerged as an effective intervention to improve engagement. Studies show that incorporating FIs into WHPPs significantly increases cost-effectiveness, reducing healthcare expenses and absenteeism (Dallat et al., 2013). Many employers now offer incentives such as cash, vouchers, or insurance rewards to motivate employees to engage in WHPPs and improve their well-being.

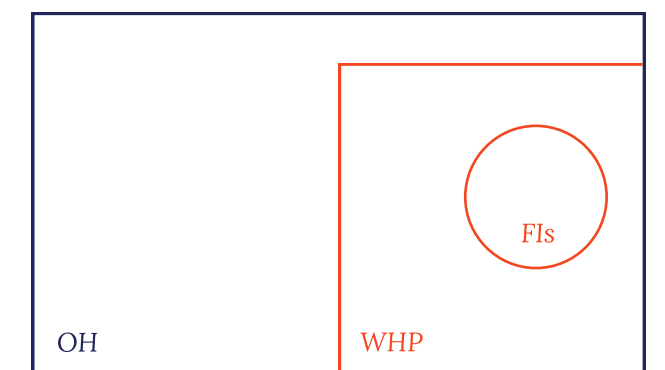


Figure 1.1 The positioning of WHPPs and FIs

1. 1. 2 Existing WHPPs

Worldwide

In the United States, interest in health programs and incentives has been growing steadily. A 2013 survey by the RAND Corporation on WHP revealed that nearly 50% of small businesses and over 90% of large businesses offered health promotion programs to their employees (Mattke et al., 2015). These programs typically include health risk screenings, immunizations, fitness activities, or healthy menu initiatives. However, the study found that only 20%-40% of eligible employees participated in these programs each year. To increase participation rates, most employers use financial incentives.

In Europe, a comparative study of WHP interventions across 33 companies found significant differences in program design between countries (Luisa et al., 2022). The most common WHP initiatives involved return-to-work programs for employees recovering from long-term illnesses and sports activities outside working hours. A statistical analysis by Van der Put and Van der Lippe (2020) on WHP programs across nine European countries found that healthy food menus at cafeterias, sports facilities, and health check-ups were the most commonly implemented measures.

The Netherlands

In the Netherlands, the WHP field has garnered attention from both the government and the market. The following examples illustrate the characteristics of WHPPs in the Netherlands (Image 1.1):

Without FIs

Two workplace health intervention programs certified by the Rijksinstituut voor Volksgezondheid en Milieu (RIVM)—“HealthyHuman” and “The Lab of Life”—focus on changing employees' health behaviors through health education and training sessions.

With FIs

In the Netherlands, financial incentives are often offered for behaviors such as physical exercise, healthy eating, and smoking cessation. Examples such as “fitcoins,” “fitterup,” and “a.s.r. Vitality” are primarily presented through digital platforms, offering virtual points or discounts as rewards to encourage healthy behaviors among employees.

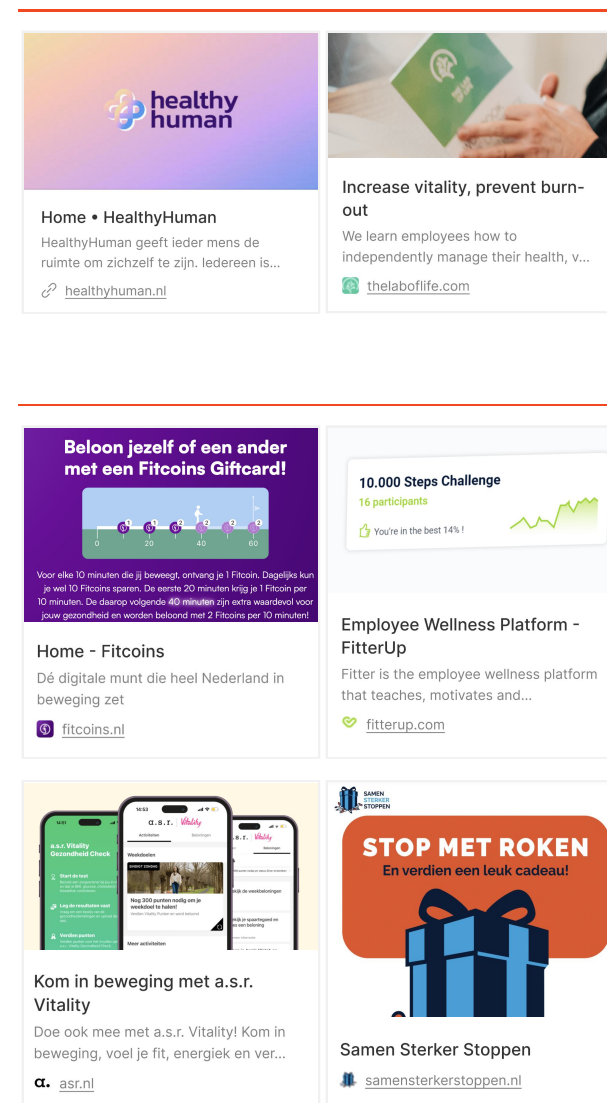


Image 1.1 The existing programs

1. 2 Challenge

1. 2. 1 Overview of Ethical Issues

The implementation of Financial Incentives (FIs) in Workplace Health Promotion Programs (WHPPs) has significant ethical risks, which may diminish the overall effectiveness of these programs and even lead to unintended negative consequences.

The Controversy of Financial Incentives

For those unable to decline the incentives due to financial constraints, FIs may become a coercive intervention, undermining their motivation to pursue other personal goals. This could lead to a form of undue influence, where the incentive overrides employees' genuine interests in their own well-being. Moreover, vulnerable employees—such as those with existing health conditions—may face discrimination through WHP interventions that target their specific health needs (Madison et al., 2011). There is also the risk that FIs could exacerbate inequalities in healthcare resource distribution (Long et al., 2008), as they may prioritize select employee groups while neglecting broader, more inclusive health needs across the workforce (Kuhn et al., 2020).

The Controversy of Employer Involvement

Beyond the ethical concerns surrounding FIs, the involvement of employers in health promotion initiatives introduces additional ethical considerations. Employers are uniquely positioned to provide accessible health support. However, health is often perceived as a deeply personal matter, with many employees maintaining a clear boundary between their professional and personal lives. This distinction raises questions about the justice of employer involvement in health matters, and whether such involvement encroaches on employees' privacy (Madison et al., 2011). Furthermore, employer-led health promotion programs assume excessive responsibility for employees' health decisions. This can create risks on harming employees' autonomy (Owens et al., 2019).

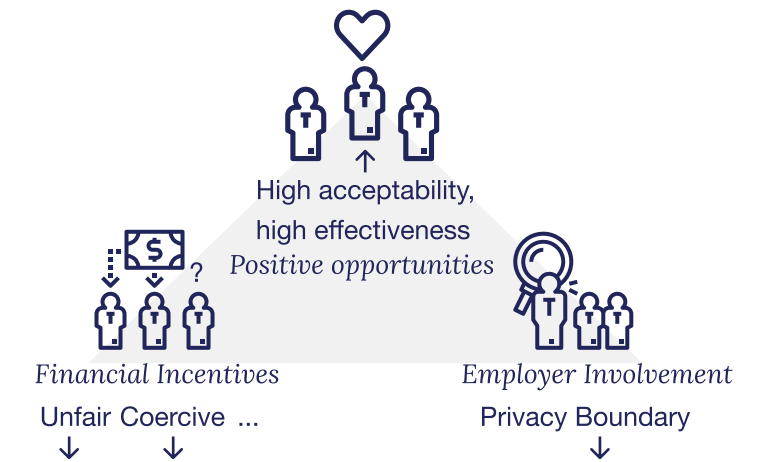


Figure 1.2 Challenge Mapping

Positive Opportunities of Ethical WHPPs and FIs

Thus, ethically sound WHPPs and FIs can help alleviate these tensions and translate into higher utilization rates, leading to more sustained effectiveness of the programs. Addressing ethical concerns in WHPPs and FIs can safeguard employees' experiences and rights within these programs, thereby increasing their acceptance and effectively enhancing health outcomes. For employers, such ethical approaches can foster a reputation of fairness and responsibility, contributing to a healthier and more supportive work environment.

1. 2. 2 Research Gaps

As WHP becomes increasingly adopted in both policy and corporate contexts, addressing and preventing the ethical issues associated with these programs will be crucial for maximizing company benefits and safeguarding employees' personal health. The question arises:

- How might we mitigate potential ethical risks in implementing WHPPs and Financial Incentives (FIs) while promoting the health and well-being of employees?

While ethical guidelines from medical and related fields provide some foundational insights (Kuhn et al., 2020), and frameworks have been developed for specific interventions, such as programs aimed at preventing obesity (Have et al., 2013), there remains a notable gap in ethical principles specifically tailored to Workplace Health Promoting Financial Incentive (WHPFI) programs.

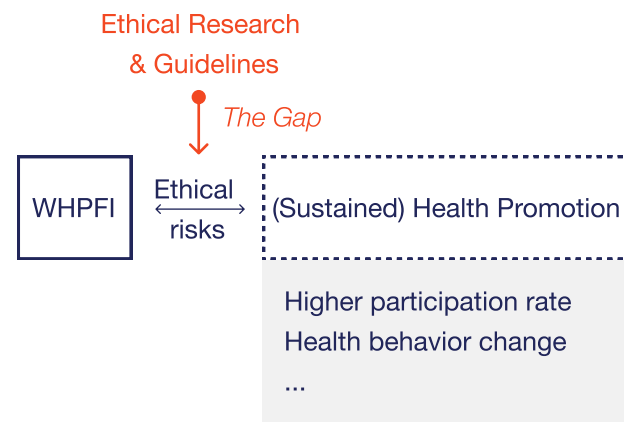


Figure 1.3 Research Gap

The current literature lacks comprehensive guidance that addresses the unique ethical challenges posed by these incentive-based health promotion strategies.

1. 3 Project Approach

1. 3. 1 Research Objective

To explore these ethical issues and provide actionable recommendations, both theoretical and practical research is essential. This project aims to investigate the ethical perspectives from both employers and employees, identifying the key concerns, needs, and desires of these critical stakeholders within the WHPFI context. Hence, this research seeks to offer guidelines that are relevant and applicable to real-world situations, thereby filling a crucial gap in the ethical framework for WHPFI programs.

1. 3. 3 Personal Motivations

This research has been conducted as part of my graduation project. With a background in design and user-centered research, I approach this project as an example of research through design, aiming to explore how design can address real-world challenges. I believe workplace health is a vital area of study, as most people spend a large portion of their lives in the workplace, making the impact of this research both socially relevant and meaningful. Through this project, I strive to become a socially responsible designer.

Ethical issues in workplace health promotion are

complex and multifaceted, influenced by various stakeholders. These challenges align with the concept of a "wicked problem" (Buchanan, 1992)—one that resists simple solutions. I am motivated to test my ability to navigate such complexity and to develop solutions that help mitigate ethical risks, aligning with my goal of addressing critical societal issues through design.

1. 3. 4 Project Overview

The project overview is illustrated in Figure 1.3. Chapter 2 and Chapter 3 present the findings from the preliminary research, mapping out the ethical issues and design factors in Workplace Health Promotion Programs (WHPPs) and Financial Incentives (FIs). These chapters contribute to the development of the co-creation interviews, addressing the following research questions from both theoretical and practical perspectives:

- RQ1: *What are the key ethical risks and design factors in WHPPs and FIs from both theoretical and practical perspectives?*
- RQ2: *Are there any existing ethical guidelines and practical recommendations?*

Chapter 4 details co-creation interviews with 8 employees and 5 employers, exploring their views on the ethical and unethical aspects of WHPPs and FIs. The central research question is:

- RQ3: *How do employees and employers perceive the ethical and unethical aspects of WHPPs and FIs? What are the commonalities and differences between these perspectives?*

Chapter 5 outlines the conceptualization of an ethical guideline for employers, synthesizing insights from the previous chapters and presenting the final guideline design.

The following Chapter 6 and 7 provides a reflection on the overall project, by discussing the main outcomes, limitations, and recommendations.



Figure 1.4The project overview

2. Literature review

This chapter reviews existing literature on the design of WHPPs and FIs, focusing on ethical risks such as autonomy, fairness, discrimination, and privacy, as well as current ethical guidelines. It also provides a synthesis of how specific program design factors may influence the ethicality and effectiveness of WHPPs.

2.1 *The Design of WHPFI*

2.2 *Ethical Risks*

2.3 *Ethical Guidelines*

Takeaways

2. Literature review

Goal of the Literature Review

In the preliminary phase of the project, the research context was ambiguous, and the identification of ethical risks and factors that may impact ethics required further investigation. A systematic literature review serves not only to help the researcher understand existing theoretical frameworks and practical experiences but also to provide foundational support for the entire research process. Therefore, the literature study aims to answer the following research questions:

- RQ1: *What are the key ethical risks and design factors in WHPPs and FIs from both theoretical and practical perspectives?*
- RQ2: *Are there any existing ethical guidelines and practical recommendations?*

2.1 The design of WHPFI

2.1.1 Elements of Financial Incentives

Domains & Dimensions

Before considering "how might we design and implement ethically sound financial incentive interventions in the context of Workplace Health Promotion Programs", we need to define financial incentives.

Abraham and Michie (2008) defined incentive interventions as rewards provided to encourage behavior change. In an effort to provide clearer guidance for studies focused on financial incentive interventions, Adams et al. (2013) introduced a comprehensive framework that categorizes financial incentive interventions aimed at promoting healthy behaviors. This framework helps researchers and policymakers better understand and be able to evaluate the effectiveness of different incentive configurations. In their article, Adams et al. (2013) identify 9 critical domains which are necessary to describe financial incentive interventions, which include direction, form, magnitude, certainty, target, frequency, immediacy, schedule, and recipient (Table 2.1). Building on this framework, the dimensions within the 9 domains are further classified.

This categorization provides the project with a fundamental and comprehensive understanding of the complexity of financial incentives and highlights the various design elements that can influence the success of financial incentive interventions in promoting healthy behavior changes.

The Complexity and Ethical Considerations

In addition to highlighting the complexity of financial incentive interventions, Adams et al. (2013) emphasize the need for further research on how these interventions can be configured for maximum effectiveness. Although ethical and

acceptability issues are not the primary focus of their study, the paper acknowledges these concerns, suggesting that they warrant further discussion and exploration. Similarly, Lynagh et al. (2013) explored the key conditions under which financial incentives are most likely to be effective and appropriate for improving public health outcomes. Their study places a greater emphasis on factors that may affect the "fairness" of these interventions and proposes how personal financial incentives can be designed to enhance participants' ethical acceptability.

Domain	Dimension
Direction	Positive rewards Avoidance of penalty
Form	Cash Vouchers
Magnitude	Continuous variable
Certainty	Certain Certain chance Uncertain chance
Target	Process Intermediate Outcome Proxy measures of behaviour
Frequency	All instances incentivized Some instances incentivized
Immediacy	Continuous variable
Schedule	Fixed Variable
Recipient	Individual Group

Table 2.1 Framework of 9 domains of health behavior change

2.1.3 The Context of Intervention

In a study on public health initiatives to prevent obesity in the U.S., Pratt et al. (2004) categorized the 24-hour day into five domains (Table 2.2): Sleep, Leisure, Occupation, Transportation, and Home. In each of these domains, except for sleep, individuals have the choice to be physically active or inactive. The decisions made in these areas are influenced by a combination of individual, social, and environmental factors, with economic forces playing a significant role in shaping these behaviors.

Furthermore, research on workplace health promotion (WHP) autonomy highlights how interventions not only impact employees' health-related behaviors at work but also extend their influence to behaviors at home. These studies underscore the diverse contexts in which Workplace Health Promotion Programs (WHPPs) and Financial Incentives (FIs) can be implemented, illustrating the broad range of factors—both within and beyond the workplace—that affect the effectiveness of these programs.

The context of intervention is thus a critical component to consider, as the environmental and social settings in which employees operate can significantly shape their responses to health initiatives. Understanding these contexts is essential for designing effective and ethical WHPPs and FIs that account for the various influences on individual health autonomy and behavior.

Channels
Sleep
Leisure
Occupation
Transportation
Home

Table 2.2 SLOTH

2. 1. 2 Stakeholders in the WHPPs

The Involvement of employers

Research indicates that employers are increasingly interested in launching Workplace Health Promotion (WHP) programs due to their potential to reduce costs associated with employee health (Madison et al., 2011). Employers, particularly larger organizations, often have the administrative capacity to effectively manage financial incentive programs. Additionally, employers can create a supportive environment that encourages healthy behaviors, which may include offering healthier food options in company cafeterias, providing on-site gyms or healthcare services, and promoting a culture of wellness through various workplace initiatives.

However, employers might face several challenges when implementing WHPPs, including resource constraints and ethical risks (Dallat et al., 2013). Smaller employers, for example, may lack the necessary resources and expertise to develop and sustain comprehensive wellness programs. Other notable yet unintended challenges are ethical dilemmas, such as potential discrimination or undue inducement, which can ultimately have a negative impact on the program's effectiveness and even damage the employer's reputation. These concerns may make employers hesitant to invest in WHPPs and FIs.

The barriers of employees

As the target group of Workplace Health Promotion (WHP) and Financial Incentive (FI) programs, employees play a crucial role in the success of employer-sponsored health initiatives. Their participation and engagement are essential for these programs to achieve their intended health outcomes.

However, many employees encounter significant challenges that hinder their ability to engage with these programs (Madison et al., 2011). Barriers such as pre-existing health conditions, present-biased preferences, logistical constraints, informational gaps, financial limitations, and ingrained personal health habits can negatively impact their willingness and ability to participate in and benefit from WHP programs.

Schmidt et al. (2011) identified 5 distinct groups of individuals in the context of incentive programs, each facing unique challenges (Table 2.3). Additionally, individual preferences significantly influence the effectiveness and participation rates of different programs or financial incentives (Stefan, 2024; Halpern et al., 2015).

These distinctions underscore the complexity of employee engagement in WHPP programs, highlighting the diverse needs, barriers, and preferences that must be carefully considered during the design phase.

Policy Options	Lucky Ones	Yes-I-Can	I'll-Do-It Tomorrow	Unlucky Ones	Leave-Me-Alone
Offer universally	Benefit	Benefit	Don't benefit	Don't benefit	Don't benefit
Offer universally, modified	Benefit	Benefit	May benefit	May benefit	Don't benefit
Targeted, not universal	Don't benefit	Benefit	Benefit	May benefit	Don't benefit
Abandon	Don't benefit	Don't benefit	Don't benefit	Don't benefit	Don't benefit

Table 2.3 Implications of Policy Responses to the 5 Groups Problem in Wellness

Conclusion

In conclusion, the research on the two core stakeholders—employers and employees—reveals that:

1. Employer's Perspective

As program initiators, employers hold a top-down role, offering and managing WHPPs. Their ethical viewpoints significantly influence the specific design of these programs.

2. Employee's Perspective

Employees, as recipients of these programs, represent the bottom-up perspective, directly experiencing and responding to the interventions. Their ethical perceptions and preferences directly impact participation rates and the success of health promotion efforts.

3. Both Perspective

Understanding both viewpoints is crucial because employers set the conditions while employees react and adapt. The balance between offering (employers) and consuming (employees) is key to designing fair, effective, and inclusive WHPPs.

Therefore, the research on specific designs and ethical issues from both viewpoints is crucial.

2.2 Ethical Risks

2.2.1 Autonomy

Limitation of financial Incentives

Autonomy is a fundamental ethical consideration in Workplace Health Promotion (WHP) programs. In WHP, companies are increasingly adopting financial incentives to motivate employees toward healthier behaviors. These incentives often include premium discounts, rebates, or rewards for participating in wellness programs such as exercise initiatives or smoking cessation (Schmidt, 2011). While financial incentives have been shown to effectively promote short-term behavioral changes, particularly in areas like weight loss and smoking cessation, there remains ongoing debate about their long-term impact (Kullgren et al., 2016).

The ethical concern arises when considering whether employees are truly participating in these programs voluntarily. Although financial incentives provide immediate, tangible benefits, altering the perceived cost-benefit equation of health behaviors, some researchers argue that these incentives may unduly influence employees' decisions, potentially compromising their autonomy (Madison et al., 2011). Incentive programs, by design, shift the relative attractiveness of certain choices, prompting individuals to make decisions they might not have made autonomously. This raises concerns about whether individuals are genuinely exercising free will or if they are being subtly coerced by the financial rewards.

Such concerns highlight the need to carefully consider the ethical implications of financial incentives in WHPPs, ensuring that they encourage voluntary participation rather than manipulate decision-making in a way that undermines personal autonomy.

Diversity of personal circumstances

The diverse personal circumstances of employees are a critical factor in understanding the ethical risks associated with autonomy in Workplace Health Promotion Programs (WHPPs) and Financial Incentive (FI) interventions. Employees face a variety of barriers that can prevent them from fully participating in these programs, including logistical challenges, lack of information, financial constraints, and pre-existing health conditions (Madison et al., 2011). For some employees, these barriers are particularly high, making it difficult to meet the uniform health targets set by employers.

An employee's health status, level of health literacy, and capacity to engage in healthy behaviors influence not only their ability to participate but also their overall motivation (Madison et al., 2011). Studies have categorized participants into distinct groups based on their motivational characteristics when faced with incentives (Schmidt, 2011). For example, some employees may be naturally motivated by health initiatives, while others may feel compelled to participate due to external pressures, raising concerns about the voluntary nature of their engagement. Moreover, different occupational environments and job demands can shape employees' health goals and behaviors (Kuhn et al., 2020).

Therefore, while some employees may feel encouraged to participate in health programs, others might feel that the programs impose undue pressure, limiting their sense of autonomy. This highlights the ethical challenge of ensuring that interventions respect personal autonomy while accounting for the diversity of personal circumstances that can affect employees' ability to engage in WHPPs.

Motivation crowding effect

According to Self-Determination Theory (SDT), autonomy is defined as the sense of volition and willingness when engaging in an activity (Ryan & Deci, 2000). Autonomy, along with competence and relatedness, constitutes the three basic psychological needs identified by SDT. These three elements interact to shape an individual's motivation.

Behavioral psychology categorizes motivation into three types: intrinsic motivation, extrinsic motivation, and amotivation. These categories illustrate varying levels of autonomy. Intrinsic motivation, characterized by engaging in activities for inherent satisfaction, represents the highest level of autonomy, while extrinsic motivation involves performing tasks to earn rewards or avoid punishment. Amotivation, on the other end of the spectrum, signifies a complete lack of motivation and autonomy. Financial incentives, commonly used in Workplace Health Promotion Financial Incentive (WHPFI) programs, are a form of extrinsic motivation.

External interventions with monetary incentives are concerned might undermine

motivation, which is known as the motivation crowding theory. Research suggests that when external financial incentives are perceived as controlling, a "crowding out" effect on intrinsic motivation can occur. Conversely, when incentives are perceived as supportive, they can result in "crowding in," strengthening intrinsic motivation (Promberger & Marteau, 2013). A comparative study found that, in the context of complex health-related behaviors, there is insufficient evidence to conclude that financial incentives significantly diminish intrinsic motivation. In fact, for self-control-related behaviors, financial incentives may be beneficial. However, the effectiveness of financial incentives depends on their specific characteristics and contexts, warranting further research.

However, financial incentives might be perceived as coercive if they are substantial enough to pressure employees into participating in programs they would otherwise avoid. This creates a situation where employees may feel compelled to act in alignment with the incentives, rather than based on their personal preferences and intrinsic motivation. Such coercion risks undermining the autonomy of employees, raising concerns about the ethical implications of WHPFI programs.

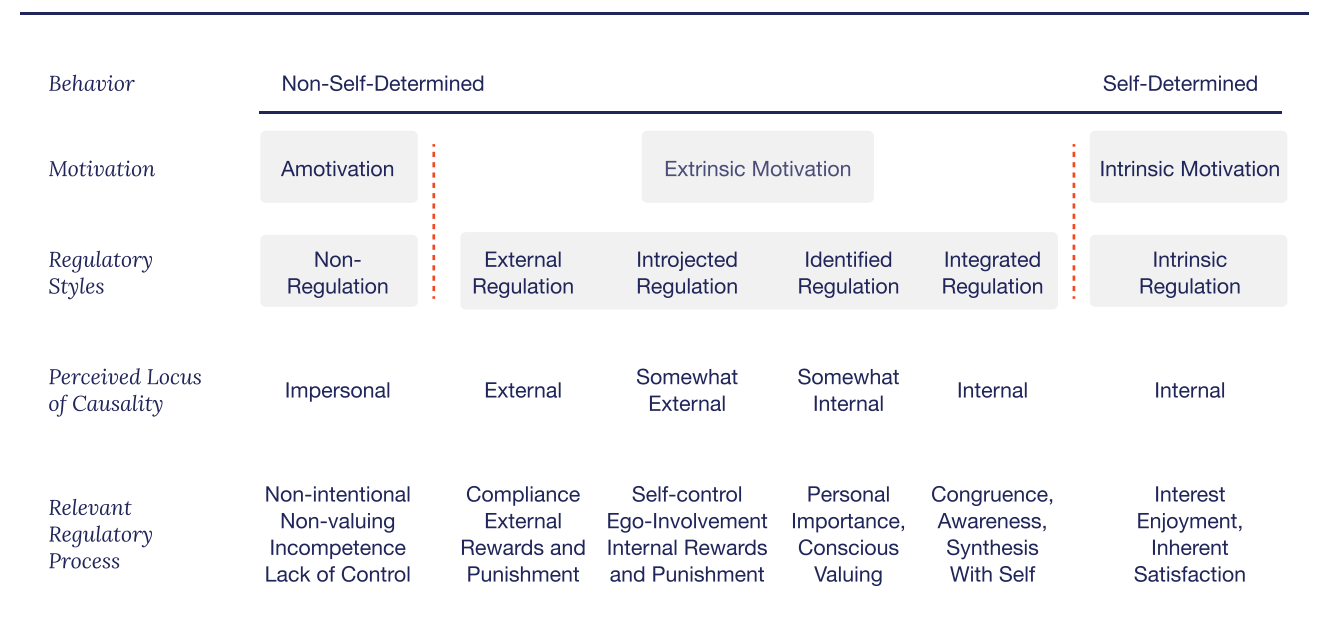


Figure 2.1 The Self-Determination Continuum Showing Types of Motivation With Their Regulatory Styles

2. 2. 2 Fairness

Potential exclusion for specific groups

Fairness is a critical ethical consideration in Workplace Health Promotion (WHP) programs. Employees possess varying capacities to participate in such programs, and standardized health targets or uniform financial incentives may unintentionally disadvantage certain groups. For example, employees with pre-existing health conditions, lower levels of health literacy, or financial constraints may struggle to meet program goals compared to their healthier or more financially stable counterparts (Schmidt et al., 2011).

This raises concerns about whether financial incentives could exacerbate inequalities within the workplace by benefiting some employees more than others. Those who are already in better health or who have fewer barriers to participation may disproportionately benefit from these programs, leaving vulnerable groups further behind. As a result, WHP programs, despite their intentions to promote overall employee well-being, may inadvertently reinforce existing disparities and lead to the exclusion of certain groups from the benefits of these initiatives.

Unequal distribution

Another significant risk factor for unfairness in financial incentives (FI) is unequal distribution (Kuhn et al., 2020). When limited resources—such as adjustable desks or spots in health classes—are available, decisions must be made regarding who receives these benefits. Without clear and fair criteria, such decisions can result in unequal distribution, where certain employees are prioritized over others. For instance, an Italian WHP study by Rossi et al. (2022) initially targeted employees with cardiovascular disease or a high risk of type 2 diabetes. However, out of more than 500 employees, only about 30 qualified for the program, leaving healthier employees or those with less visible health concerns excluded. While prioritizing employees with greater health needs aligns with fairness principles, it also raises the

concern about the exclusion of broader, more accessible interventions that could benefit a larger portion of the workforce.

Jill R. Horwitz et al. (2013) questioned whether workplace wellness programs offering health insurance rewards genuinely save costs by improving employee health, or if they shift healthcare costs onto employees with health risks. This "cost shifting" can lead to a situation where unhealthy employees, who need the most support, bear a disproportionate share of the costs, effectively subsidizing healthier employees. While this may create apparent savings for employers, it raises ethical concerns about the fairness and efficiency of wellness programs, which may rely on redistributing costs rather than achieving genuine health improvements to reduce healthcare expenses.

2. 2. 3 Discrimination

Participation and character Judgments

Health-based discrimination is a significant ethical risk in Workplace Health Promotion (WHP) programs. Even well-intentioned programs can lead to discriminatory behavior depending on how specific interventions are designed and how interpersonal dynamics play out.

WHP programs often aim to improve employee health through organizational-level changes, such as installing walkways or implementing smoking bans, as well as individual-level changes like incentivizing exercise (Harris et al., 2014; Mattke et al., 2013). These programs emphasize individual responsibility for health, using financial incentives to reward or penalize employees based on their ability to meet health outcomes. This reinforces the idea that health is primarily an individual responsibility (Powroznik, 2016).

As a result, employees who choose not to participate in WHP programs may face negative judgments from colleagues or management (Kuhn et al., 2020). Such individuals may be perceived as unwilling to change, lacking self-discipline, or possessing weak character, especially when others are actively engaging in the programs. This can lead to stigmatization and subtle forms of exclusion in the workplace.

Stereotype and Stigmatization

Discrimination in WHP programs can also manifest through stereotyping and stigmatization. Weight management programs are a common example. Nearly 50% of employers implementing WHPPs offer some form of weight loss intervention, and more than 50% provide physical fitness programs (Mattke et al., 2013). By focusing heavily on weight reduction, these programs risk stigmatizing employees with higher body weights, portraying them as lazy, unattractive, or lacking intelligence. This can lead to harmful stereotypes in professional settings, where individuals with excess weight are blamed for their condition, while broader environmental factors contributing to obesity are ignored.

Such programs also risk reinforcing health inequalities, particularly among populations with the highest rates of obesity, where weight loss interventions may prove ineffective (Have et al., 2013). Beyond individuals with obesity, other groups, such as the elderly and smokers, are also at risk of being subjected to harmful stereotypes and stigmatization in the workplace, further exacerbating discriminatory attitudes.

2. 2. 4 Privacy

Privacy and Confidentiality

In the pursuit of improving employee health, Workplace Health Promotion Programs (WHPPs) often incorporate data collection technologies to monitor personal health behaviors such as diet, exercise, and physical activity. The use of digital health tools, like fitness trackers and health self-management applications (HSMAs), raises significant privacy concerns as these technologies collect sensitive health data from employees (Kuhn et al., 2020). HSMAs are widely utilized in WHPPs to provide employees with insights into their health metrics and offer "developmental feedback" aimed at fostering healthier behaviors. However, despite their benefits, the integration of HSMAs can lead to negative experiences, with employees—particularly those in vulnerable groups—feeling that their privacy is being compromised (Bonvanie et al., 2020). This raises critical ethical concerns regarding how health data is collected, stored, and used, especially in programs where participation is incentivized or encouraged by employers.

Blurred Boundaries

Another privacy-related concern in WHPPs is the blurring of boundaries between employees' professional and personal lives. Health interventions often influence not only workplace behaviors but also activities outside of work that are crucial to overall health. This creates ambiguity around the extent of employers' responsibilities regarding employee health and how far companies can go in accessing and using health data collected through workplace programs (Kuhn et al., 2020).

While the General Data Protection Regulation (GDPR) in the EU provides a legal framework to protect employees' privacy by ensuring data minimization and requiring informed consent, its application in WHPPs is complex. Questions remain about whether employers have the right to access employee health information beyond what is explicitly authorized by the regulation (Roossien et al., 2021). The lack of clear guidelines defining

the boundaries between employer oversight and employee privacy leaves room for potential misuse of health data, raising concerns about the ethical implications of data collection in workplace health initiatives.



Image 2.1 The big brother

2. 3 Ethical Guidelines

Ethical challenges such as autonomy, fairness, discrimination, and privacy are central to the implementation of Workplace Health Promotion Financial Incentives (WHPFIs). Given these complexities, an important question arises: Are there existing guidelines capable of addressing these issues?

The limitations

Lynagh et al. (2022) affirmed the positive impact of financial incentives (FIs) in workplace health promotion and offered practical guidelines for introducing FIs into such programs. Their guidelines are particularly useful for program and intervention developers, providing a clear framework for effective interventions design. However, they do not specifically address the ethical considerations that are critical to ensuring the acceptability of such programs.

Have et al. (2013) categorized the ethical impacts of health programs into areas such as physical health, psychosocial well-being, informed choice, cultural values, equality, privacy, responsibility, and liberty. They designed a checklist based on eight ethical questions, to assess the ethical strengths and risks of a program and is intended to be used in group discussions with expert panels, target groups, and the general public. Although this approach provides valuable feedback for program developers and promotes transparency in decision-making, it was designed for public health professionals rather than for workplace settings. As a result, it may not be fully applicable to a workplace setting. Another limitation of this guideline is its only focus on weight loss programs. The emphasis on weight loss can lead to ethical challenges related to discrimination, stigmatization, and autonomy.

The promising direction

Involving employees in the development of WHP programs could meaningfully address these issues by shaping and guiding the program in a way that reflects their needs and concerns. A case study by Rossi et al. (2022) introduced a "co-production" approach during the development phase of a WHP, involving employees, program providers, and public institutions in the decision-making process. Through focus groups, employees contributed to discussions about lifestyle health activities, providing evaluations and feedback on the potential benefits and limitations of the program. This participatory approach helped resolve ethical challenges in an open and collaborative environment, transforming the project from a targeted program into a broader health risk prevention initiative.

Conclusion: The gap in Ethical Guidelines

In summary, while various guidelines and frameworks exist for implementing financial incentives and addressing ethical concerns in health programs, they often fall short in directly addressing the unique needs of workplace settings. There is a need for guidelines that not only focus on effective program implementation but also prioritize ethical considerations, involve employees in the decision-making process, and are adaptable to various workplace environments, including smaller organizations. Such guidelines would help ensure that WHPFIs are not only effective but also ethically sound, fostering trust and engagement among employees.

Takeaways

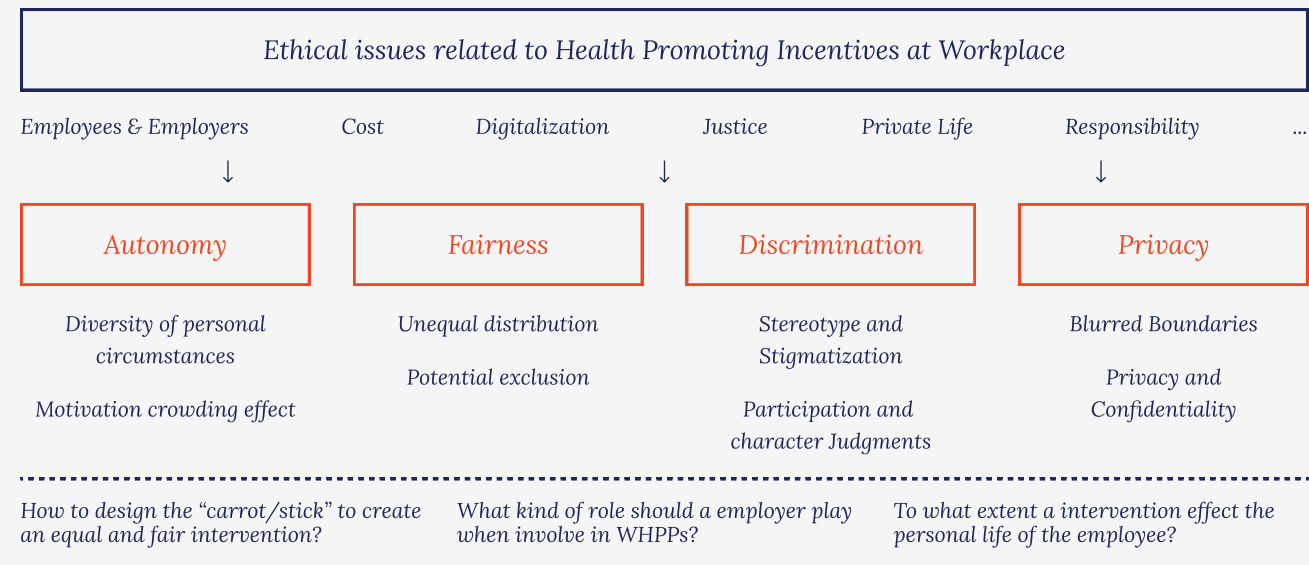


Figure 2. 2 The Mind-map and Sub-questions

The literature review has mapped the ethical considerations specific to the context of Workplace Health Promotion Financial Incentives (WHPFIs).

Elements

First, the key elements of WHPFIs have been identified, highlighting the complex interplay between financial incentives, employee engagement, and organizational goals. These elements shape the design and implementation of health promotion programs, and their ethical implications must be carefully considered to ensure fairness, autonomy, and inclusivity.

Ethical themes

Second, the review has identified four primary ethical themes that emerge in this context: autonomy, fairness, discrimination, and privacy. These themes are central to understanding the ethical challenges that arise in WHPFIs. Programs that fail to address these concerns risk exacerbating inequalities, infringing on employee privacy, or undermining individual autonomy through coercive incentive structures.

An Ethical Guidelines Tailored for WHPFI

Third, the design of WHPFIs plays a crucial role in shaping their ethical impact. Poorly designed programs can inadvertently lead to exclusion, stigmatization, or health-based discrimination. This emphasizes the need for thoughtful and inclusive design strategies that align with ethical principles. The necessity of conducting further research into these design-related ethical issues is clear, as it will provide the foundation for creating more ethically sound health promotion programs.

Further Research

Building on the literature review, the research direction will now focus on developing a guideline to help shape ethically sound WHPPs and FIs. To accomplish this, it is essential to not only understand the theoretical and conceptual frameworks but also to gain insights into the practical realities and unique challenges that arise in real-world applications.

By mapping out ethical issues and factors of WHPPs and FIs, this chapter lays the groundwork for further research phases. In the next chapter, the expert interviews will provide crucial input, bridging the gap between theory and practice. >>

3. Expert Interview

This chapter presents findings from interviews with experts in the fields of workplace health promotion. Drawing from their practical experiences and research backgrounds, the experts offer valuable insights and recommendations regarding ethical issues in WHPPs.

- 3.1 Method
- 3.2 Analysis
- Takeaways
- 3.3 Synthesis

3. Expert Interview

Goal of interview

The literature review has provided a comprehensive understanding of different WHPFI designs and the potential ethical issues that may arise during their implementation. Expert interviews will be conducted to explore how an ethically sound Health Promoting Financial Incentives Program can be designed in the workplace, considering perspectives from both employees and employers. Key topics to be addressed include:

- Unintended ethical issues/effects
- Ethical considerations from the perspectives of both employees and employers
- Recommendations for design and implementation

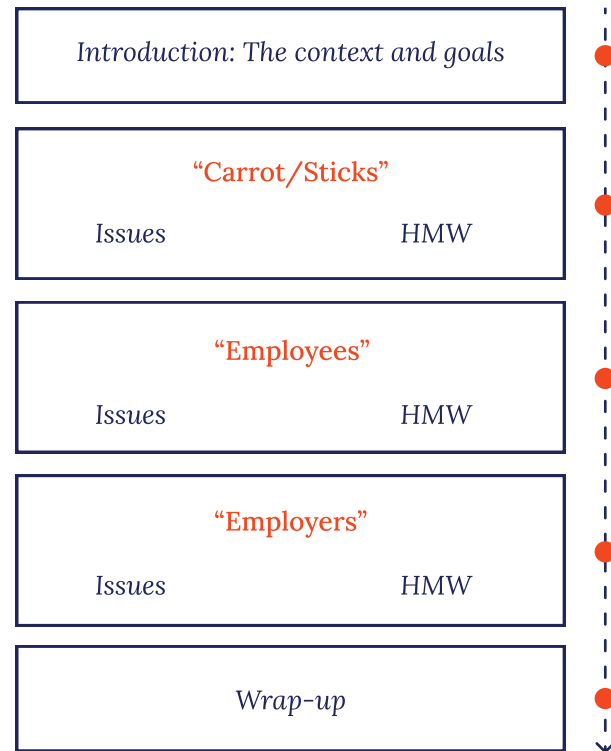


Figure 3.1: Protocol of Expert Interviews

The interview structure was composed of three blocks:

1. Financial Incentive Design: Carrots/Sticks
 2. From the Employees' Perspective
 3. From the Employers' Perspective
- Each block explored potential unintended ethical risks associated with financial incentives from these different perspectives, how these risks might be prevented, and how both employers and employees could be involved in a participatory design process.

The researchers primarily focused on their academic insights into WHPFI, while the product providers shared their experiences from the field. The detailed design of the specific questions can be found in the appendix.

3.1 Method

3.1.1 Thematically Structured Interview

Participants

5 experts participated in the interviews, as detailed in Table 3.1. Among them, three are researchers (R1-R3) from the field of behavioral psychology with relevant research experience, while two are product providers (P1, P2) specializing in the WHPFI domain.

Protocol

These interviews are part of the preliminary research phase and were conducted in parallel with the literature review. The process followed a semi-structured interview format, with the structure design outlined in Figure 3.1.

Participants	Description	Field	Gender	Schedule
1. R1	Assistant Professor	Economics and Behavior	Male	04/06/24
2. R2	Associate Professor	Economics and Behavior	Male	07/06/24
3. P1	Founder & Product Owner	Healthcare	Male	10/06/24
4. P2	Product Owner	Healthcare	Male	10/06/24
5. R3	Researcher	Public Health	Female	21/06/24

Table 3.1: Participants of Expert Interviews

3.1.2 Results

Form & Data collections

Due to the experts' schedules and their dispersed geographical locations, the interviews were conducted online, with each session lasting approximately 30 minutes.

Data collection during the interviews involved audio recordings and the author's notes. The audio recordings were transcribed for further analysis. As a qualitative study, the interview results will be

analyzed using thematic analysis to derive final insights.

In the data collection phase, all findings were organized into three categories: pre-insights, opportunities (advice), and problems (concerns). This approach provided a clearer understanding of the results, facilitating a more focused analysis. Detailed information from the collection phase is included in the appendix.

3.2 Analysis

3.2.1 Clusters

The results have been summarized into six clusters (see Figure X). The following sections will provide a detailed explanation of each cluster:

During the analysis, some insights have been categorized into the first 4 clusters, confirming the summary of ethical themes outlined in the literature review.

Threats to Autonomy <i>Undermine intrinsic motivation</i> <i>The risk of coercion</i> <i>The right of making choices</i> <i>Provide guidance</i>	Fairness <i>Concern about exclusion</i> <i>Wider choice might help</i>	Early Involvement <i>Employer's goal</i> <i>Employee's interests</i> <i>Overcome the bias</i>
	Anti-Discrimination <i>Achievable target</i>	Privacy <i>Data confidentiality</i> <i>The work-life Boundary</i>

Figure 3.2: Clusters of Expert Insights

Threats to Autonomy

Intrinsic motivation
 Research indicates that while the majority of employees express a willingness to change their health behaviors (R2), many researchers (R1, R2, R3) suggest that using financial incentives (FI) in WHPPs may unintentionally undermine employee autonomy. Some researchers (R2) argue that the greatest ethical risk posed by FI is its potential threat to autonomy, especially when large incentives are involved. From the employees' perspective, many express sentiments such as, "I want to be able to quit on my own, and I don't need incentives," highlighting their desire for self-determined health behavior changes.

Threats to Autonomy <i>Harm Intrinsic motivation</i> <i>Prevent coercion</i> <i>Right of making choices</i> <i>Provide guidance</i>
--

Figure 3.3: Threats to Autonomy

"The most threatening part of incentives is the threat to autonomy."

R2

"I(they) want to be able to quit on my own and I don't need incentives."

R3

The risk of coercion

The workplace is an effective setting for organizing health behaviors, but it also carries the risk of coercion. It was emphasized that employers should avoid directly offering incentives to employees, as this adds another layer of control over employees' lifestyle choices, in addition to their working hours and contractual rights (R2). Another related concern is that employer encouragement of health behaviors can sometimes create implicit, or even strong recommendations, which may result in a sense of coercion (R1).

The right of making choices

Providing employees with autonomy in their health decisions starts with respecting their right to choose whether or not to pursue a healthy lifestyle (P1). Additionally, since health is just one of many life goals (R3), efforts to improve health often compete with other personal priorities. Given the diversity of employees' health goals, offering multiple options within a program is essential to preserve individual autonomy.

Provide guidance

Intrinsic motivation is crucial for maintaining prolonged health behavior changes (R1). While individuals need guidance on how to sustain such behaviors, it is essential that they ultimately develop their own motivation. Therefore, the core purpose of WHPPs should be to help individuals cultivate intrinsic motivation. As R3 illustrated with a metaphor, financial incentives in these programs are like the "handrail" in a "journey of ice skating" or the "carrot" in front of a rabbit—serving as guidance but not the primary force driving their efforts.

"No one is obligated to take part into a program...It should be optional and designed to help employees help themselves"

R1

"...they (employees) still have the choice to choose for a healthy meal or a less healthy meal. And I think also there's a balance."

P1

"A lot of people have different desires in incentives, so involving them, but also having a lot of different options in your design. Yeah, I think is important."

R3

"I once heard a very nice metaphor, if people learn to ice skate and they can hold on the rail, but then they can learn how to move without following. So you should see the incentives as direct(rail). You can still learn how to ice skate without it. Yeah, but your way towards ice skating becomes smoother."

R3

"So if you would see their need as a carrot, so that many following the carrot guides you in the good direction, but it's still the bunny itself that's moving towards that direction."

R3

Fairness

In a WHPFI program, the concern of fairness can influence the employer's willingness to invest and the employee's willingness to participate in the program.

Concern about exclusion

From the employee's perspective, concerns about fairness are closely tied to the issue of exclusion. In a study by R3, a smoking cessation program was offered to smoking employees at a hospital. Some non-smoking employees felt excluded from the opportunity to receive rewards and, as a result, chose not to participate. They perceived the program as "unfair."

Providing wider choice might help

From the employer's perspective, fairness is also a significant concern (R2). Employers must not only consider what can be offered to those who are already healthy but also face the challenge of investing in and organizing a program with uncertain outcomes. Most participants believe that providing wider options could help address fairness concerns. Since individuals have different health needs and require varying levels of support, offering simpler and more diverse designs can provide equal opportunities for everyone to participate.

Anti-Discrimination

Achievable target

Another related finding from the interviews is the connection between health targets and the issue of discrimination. When health targets are not applicable to certain groups, even rewards-based incentives can feel like a punishment for those who do not qualify, ultimately leading to feelings of discrimination.

Fairness

Concern about exclusion
Wider choice might help

Figure 3.4: Fairness

"People would have would discuss like, hey, but is that fair? How about the non smoking employees? They don't get like to get an incentive."

R3

"If you look at fairness from the employer perspective, that's the difficulty because they have to make an investment where they're not certain that they also can yield the benefits in the long term."

R2

"If you think it's ethical that everybody can participate and everybody can achieve something, that's a good thing because it's more important that you start doing things and start liking it and then keep improving yourself. Yeah, I think then that's more important than setting a really high standards."

P1

a lot of people have different desires in incentives, so involving them, but also having a lot of different options in your design. Yeah, I think is important."

R2

With reward type incentives, people that are not eligible might feel discriminated against."

R1

Anti-Discrimination

Achievable target

Figure 3.5: Anti-Discrimination

"With reward type incentives, people that are not eligible might feel discriminated against."

R1

"It's ethical that everybody can participate and achieve something. Starting doing things and liking it, then keep improving yourself, is more important than setting a really high standards."

P1

Privacy

Data confidentiality

Product owners highlighted that employers often express concerns about employee privacy in workplace health promotive interventions. In the "Fitcoin" product, an anonymous account was introduced as a solution to address these concerns, allowing health behaviors to be tracked without intruding into the private lives of employees.

The work-life boundary

In the design of WHPPs, defining the boundaries between work and personal life is both necessary and complex. Although employees relinquish some autonomy when entering the workplace, participating in health interventions is not essential for their work. From the employer's perspective, they must consider what space can be provided for employees to engage in health behaviors within the workplace. Outside of work, the extent to which employers can intervene in employees' health decisions is also a challenging issue, even though these decisions are closely linked to health behaviors within the workplace.

Incentive Design

Additional and indirect

The Financial Incentive (FI) cannot be the sole reason for driving health behavior change. It should be promoted and supplemented as part of the core intervention but not relied upon as the primary driver. FI can be funded by employers, but the incentive should not be directly transferred from employer to employee, as this could create additional pressure on employees.

Privacy

Data confidentiality

The work-life Boundary

Figure 3.6: Privacy

"Employers of larger organization always have concerns about privacy...and we should not do not share the data with employers."

P1

"Do you really need to know everything about your employee? That's the question."

P2

"Consider in the design of the incentives is what room are you offering for employees to engage in the behavior as part of their work."

R1

"We involved managers in recruiting people, a lot of people were a bit against and they were like, okay, but I don't want my manager to be involved in my personal life."

R3

Incentive Design

Additional and indirect

Different forms

Figure 3.7: Incentive Design

"...incentive is really a nice addition to help them over some, yeah, intention behavior gaps to deal with some withdrawal symptoms...but it's not the key reason."

R3

"The incentive shouldn't be directly be transferred from the employer to the employee, which will definitely harm autonomy."

R2

Different forms

Multiple forms of incentives were mentioned by both researchers and product providers. These were categorized into reward-based incentives (cash, vouchers, lotteries) and penalty-based incentives. A product mentioned by the providers involved converting recorded health behaviors into vouchers in the form of virtual currency.

Most interviewees believed that reward-based incentives were acceptable, as employees do not lose anything for their behavior. However, concerns regarding fair distribution and privacy need to be considered. For lottery-based incentives, two researchers (R1, R2) held opposing views. Additionally, deposit and donation-based incentives were suggested as potentially effective forms, as they reduce the direct link between health and money (R3).

Unintended effects

While financial incentives can provide external motivation, another issue mentioned is that their effectiveness cannot always be guaranteed. One reason for this is that health and well-being are inherently difficult goals to achieve (P1), and their outcomes cannot be easily quantified or measured by incentives. Another unintended issue is that employees may falsify data in order to receive rewards, which directly contradicts the original objectives of the program (P2).

Early Involvement

Employer's goal

In the early stages of designing WHPPs, it is essential to understand what employers truly need. First, it is necessary to determine the costs that employers are willing to accept, as they need to control the aspects they manage and fund (P2). Secondly, from an ethical perspective, certain approaches may be sensitive for employers, requiring careful consideration (R1).

"Deposit based programs can also overcome this issue, also took away the feeling of external motivation because it's your own money and that makes, you know, already more intrinsic."

R3

"And well-being is something difficult and there is a lot of research that it pays off, but you cannot really say when it comes. And I think that's the hardest part."

P1

"...So can I get my reward without doing anything? And then like, this is user's platform, for example, just to make some noise or to test it out or to find something"

P2

Early Involvement

Employer's goal

Employee's interests

Figure 3.8: Early Involvement

"Lots of employers say, whatever we give, we want to keep control. Yeah, but this control means that the employer must organize and pay for everything."

P2

"They should be involved in definitely the early phases of the design in terms of making sure that whichever options are acceptable to the employer."

R1

Employee's interest

The effectiveness of incentives is based on their attractiveness to employees. If the offered incentives are not appealing to the target audience, the entire process becomes meaningless. Therefore, designing incentives that cater to more diverse needs will allow a greater number of employees to participate. Additionally, understanding the different needs of employees helps overcome preconceived biases and reveals employees' true perspectives on the program, which is essential for addressing potential ethical issues.

“Attractive for employee is important”

R1

“...to hopefully then overcome some barriers or mis-mentions between our own beliefs and how potential participants view the program.”

R3

Takeaways

Validation of Ethical Themes

The expert interviews confirmed the key ethical themes from the literature: Autonomy, fairness, privacy, and discrimination. Researchers emphasized autonomy and fairness, while product providers focused more on privacy. Experts also noted that discrimination and fairness are interconnected. These findings reinforce the need to address these four ethical issues in the project.

Ethical Effects

Experts highlighted three main effects of ethical issues in WHPFIs:

1. Acceptability: Whether employers and employees are willing to engage with the program.
2. Effectiveness: How well the program improves employee health.
3. Employer-Employee Relationship: The impact on the relationship between employers and employees.

These effects are crucial in shaping program success.

Blurred Ethical Boundaries

Experts pointed out that the line between ethical and unethical program design is often blurred and context-dependent. Certain design elements may be considered ethical in one scenario but problematic in another, highlighting the need for context-specific considerations.

Involving Employers and Employees

Experts stressed the importance of including both employers and employees early in the design phase. Understanding their needs and ethical concerns is key to creating WHPFI programs that are both effective and ethically sound.

The insights from expert interviews bridge the gap between theory and practice, highlighting real-world challenges and opportunities. The next chapter will expand upon these findings through user research, capturing the perspectives of employees and employers to offer a more rounded view of ethical issues in WHPPs. >>

3.3 Synthesis

Both the literature review and expert interviews have provided critical insights into the ethical concerns and practical challenges of implementing Workplace Health Promotion Financial Incentives (WHPFIs). Together, they highlight the key ethical themes, design elements, and the potential ethical impacts of these elements in the WHPFI context (Figure 3.3).

4 Ethical Themes

The literature review identified four primary ethical themes: autonomy, fairness, discrimination, and privacy in the design of WHPFIs. The expert interviews further validated the relevance of these themes in practical applications. These themes provide a clear framework for addressing ethical challenges and contribute to the design of guidelines that ensure ethical soundness in WHPFI programs.

6 Design Elements

From both the literature and expert interviews, six key design elements have been outlined to describe a comprehensive WHPFI program:

1. Participants: Target employee groups; whether participation is voluntary or mandatory.
2. Goal: The health goals of the program.
3. Context: The time, place, and boundaries between personal and professional life in the intervention.
4. Features: Information provided and functionality offered by the program.
5. Evaluation: Methods for collecting and using data to assess the health outcomes of the program.
6. Incentives: The form and magnitude of the incentives offered.

3 Effects

Following the expert interviews, three critical questions were identified to evaluate the effectiveness of a WHPFI program:

1. Is the program accepted by both employers and employees?
2. Does the program promote employee health?
3. Does the program positively impact the relationship between employers and employees?

2 perspectives

The expert interviews emphasized the importance of involving both employers and employees early in the program design process. Understanding their needs and ethical concerns ensures that WHPFI programs are both effective and ethically sound. This aligns with the literature's call for co-creation approaches to accommodate the diverse perspectives of both.

Based on the synthesis of Elements, Ethics, and Effects (EEE), the following research directions are proposed:

D1 Tension among Elements, Ethics, and Effects

Further research is needed to explore how specific design elements impact ethical issues and program outcomes.

D2 Defining Ethical Boundaries

Experts highlighted the blurred line between ethical and unethical program design. Future research will aim to define clear boundaries between ethically risky, safe, and gray zones.

D3 Ethics from 2 perspective

The upcoming co-creation interviews with employers and employees will explore their views on typical ethical and unethical WHPFI programs, helping to identify the ethical boundaries from both perspectives.

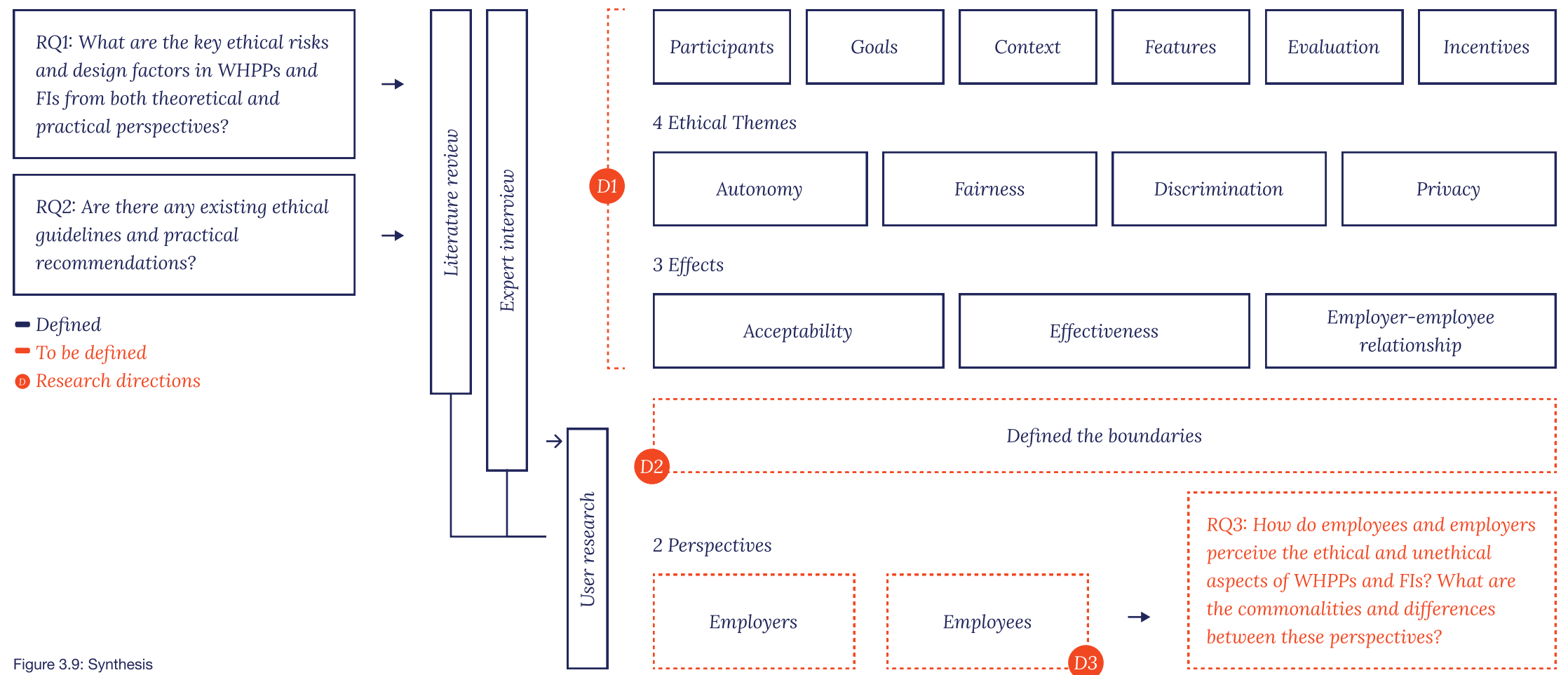


Figure 3.9: Synthesis

4. User Research

How do ethical factors influence the stakeholders involved in WHPPs? This chapter details the co-creation interviews conducted with 8 employees and 5 employers, focusing on their perspectives regarding the ethical and unethical aspects of WHPPs and FIs. It follows the progression from refined research questions and pilot sessions to the final discussion based on the co-creation exercises.

- 4.1 Interview Design
 - 4.2 Co-creation Interview
 - 4.3 Analysis
- Takeaways

4. User Research

Goal of interview

After the finalization of the literature review and expert interviews, this chapter aims to validate and discuss the findings from the perspectives of the primary project stakeholders—employers and employees. The user research serves as a credible supplement to explore whether employers and employees acknowledge the ethical issues identified in the literature and how they perceive the acceptability of rewards and penalties in Financial Incentive (FI) interventions. This, in turn, provides practical insights for the subsequent development of the ethical guideline and answers the following research question:

- *RQ3: How do employees and employers perceive the ethical and unethical aspects of WHPPs and FIs? What are the commonalities and differences between these perspectives?*

Further more the questions was split into 6 sub-questions:

- **T1: Typical positive/negative programs**

RQ3. 1. 1: *What are the typical ethical/unethical programs in general?*

RQ3. 1. 1: *What are the typical ethical/unethical programs for employees and employers?*

- **T2: Similarities and Differences between Employees and Employers**

RQ3. 2. 1: *What are the differences between the answers of the employees and employers?*

RQ3. 2. 2: *What are the similarities between employers and employees?*

- **T3: Ethics, Elements, and Effects**

RQ3. 3. 1: *Which design elements are related to the ethical considerations??*

RQ3. 3. 2: *How would the ethical considerations affect on the effectiveness?*

4. 1 Interview design

4. 1. 1 The Design of Materials

Introduce Generative Toolkits

Expert interviews have emphasized the importance of understanding the preferences and ethical acceptability of employers and employees before introducing WHPPs and FIs. This highlights the necessity of conducting user research with both employers and employees to collect real-world insights that cannot be fully addressed by literature alone.

Ethics, being a sensitive and complex subject, is often difficult to articulate using words alone. In this human-centered research process, it is crucial to respect and capture participants' ideas and desires. Therefore, generative tools and methods were introduced into the user research phase, designed as a language that allows participants to express their thoughts, feelings, and ideas through creative exercises (Sanders, 2000).

After defining the research goals and methods, the first challenge was designing the co-creation interviews with generative toolkits. These toolkits were designed in alignment with the context of WHPPs and FIs, enabling participants to create their own intervention programs and express their views on ethical issues throughout the process. Hence, based on the ethical concerns identified in the literature and expert interviews, the generative toolkits were divided into three sections:

Rapid prototyping of the toolkits

Two sets of rapid prototypes of the generative toolkits for the co-creation interview were created. Design students with work experience from the Faculty of Industrial Design Engineering were recruited for testing, resulting in the first version of the toolkit design:

Scenario Canvas

The scenario canvas was provided as a background for the creation exercise, enabling participants to build their own WHPFI programs. Six elements defined during the literature review were placed on the canvas, with arrows illustrating the journey of employees participating in the program and eventually receiving the incentive. The central circle was used to define the goals, context, features, and evaluation of the health promotion incentive program.

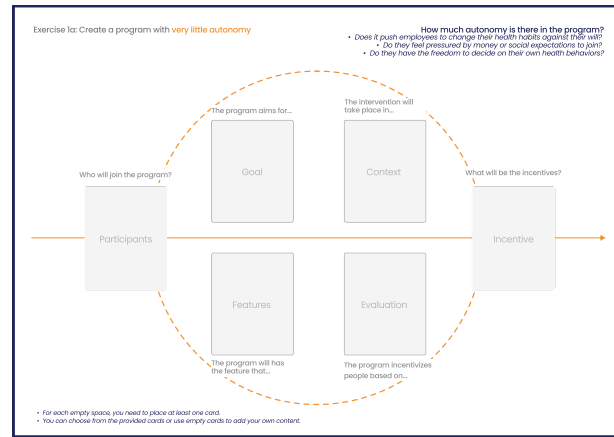


Image 4.1 Scenario Canvas

Initially, the canvas was designed to guide participants in creating five different programs:

1. A program with very much autonomy.
2. A program with very little autonomy.
3. A program with very much fairness.
4. A program with very little fairness.
5. The ideal program.

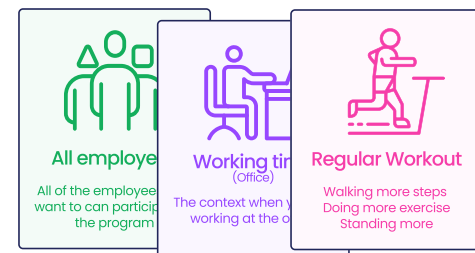


Image 4.2 Incentive Design Elements

In addition to brief instructions, prompts were provided in the top-right corner to help participants understand concepts such as autonomy and fairness when designing the first four programs.

Incentive Design Elements

The incentive design elements were created in the form of cards, which participants could select and place on the canvas to complete their program descriptions. These element cards were derived from a deconstruction of common existing programs. Each card included a title and a description, and icons were used instead of specific images to give participants more flexibility in their designs.

Scales

For the first four programs, the Likert scale was used to assess participants' (employees and employers) perceptions of the program's acceptability, effectiveness, and sustainability. For the ideal program, two additional questions were included to assess participants' views on whether the program provided sufficient autonomy and fairness.

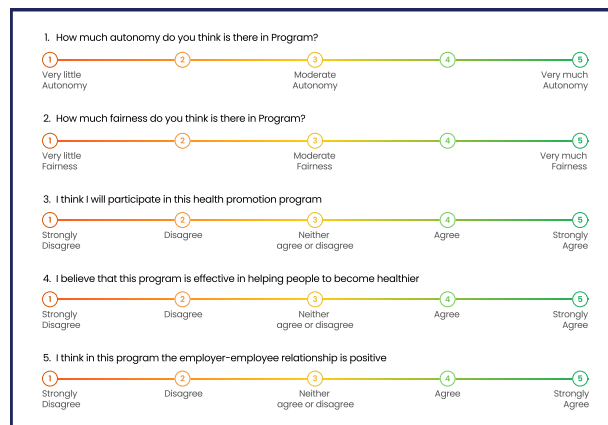
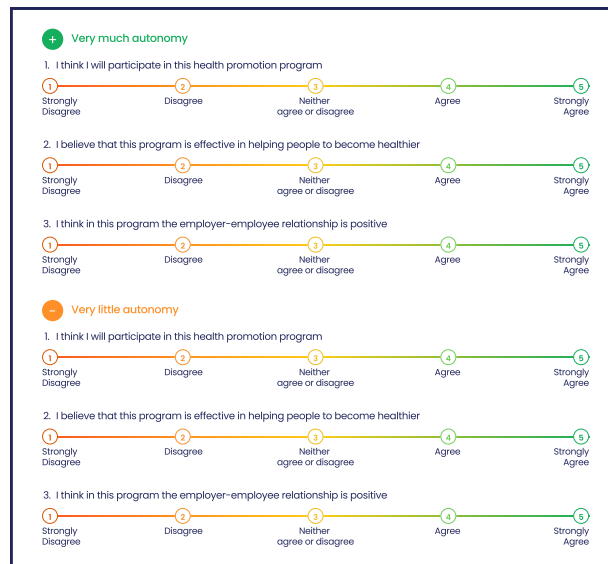


Image 4.3 Scales

4. 1. 2 Pilot session

A pilot session was conducted to evaluate the feasibility of the overall protocol and materials. The objective was to collect feedback and observe the practical effectiveness of the session in order to make final adjustments before conducting interviews with actual participants.

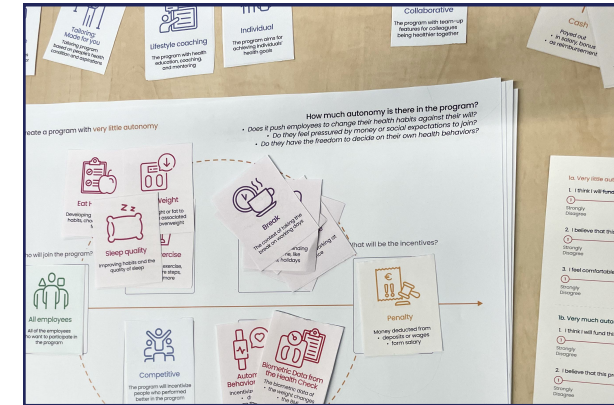


Image 4.4 Pilot Session

Participants

Researchers in the Design for Health Motivation research group were participated in this pilot session. A role-play method was utilized during the pilot session. (Table 4.1)

Participants	Role	Gender
1. P1	Employee	Male
2. P2	Employee	Female
3. P3	Employer	Female
4. P4	Employee	Male
5. P5	Employee	Male

Table 4.1

Process

During the pilot session, an introduction to the research background was provided. The process followed a present-past-future structure, beginning with a brief sensitizing phase where participants were asked about the WHPFs and FIs currently implemented in their companies and their experiences with these interventions. Following this, participants were asked to create five scenarios using the provided materials.

Present & Past(Ice-break & Expereince)

- Insights about the health-work relationship
- Needs and problems of WHP program

Extreme scenarios

Exercise 1: Very Much/Little Autonomy

- Create Program with given materials
- Grade the impressions

Exercise 2: Very Much/Little Fairness

- Create Program with given materials
- Grade the impressions

Exercise 3: Ideal Scenario

- Create Program with given materials
- Grade the ethics and impressions

Wrap-up

- Questions & Feedbacks

Figure 4.1 Pilot Session Process

Results

The results showed that the information provided was clear and easy to understand, and participants were able to use the generative toolkits to create their own WHPFI programs.

However, a key issue identified was that the generative toolkits offered too many options, making the tasks difficult to complete within a 40-minute session. Due to the number of rounds and the time-consuming actions of reading and selecting from the elements cards, only three rounds were fully completed: "with very much autonomy," "with very little fairness," and the "ideal" program.

As a result, the final interview design will undergo further simplification to improve the flow and ensure the tasks can be completed within the given time.

4.1.3 Iteration

Based on the results and feedback from the pilot session, several adjustments were made to the co-creation interview protocol and generative toolkit in four key areas:

Transition Between Sections

The transition from the introduction to the exercise was re-evaluated. Sensitizing questions and the transition between phases were redesigned to help interviewees quickly engage with the main topic. This included revising how the background and context were introduced to ensure a smoother flow from the initial introduction to the creative exercise.

In general, do you think a health financial incentive ethical?
Do people have the freedoms on their own health decision?
Are people under money/social pressure?
Is the program fair for everyone?
Does the program intervene too much into their private lives?
 ...
 Let's discuss it by creating!

Image 4.5 Transition Between Sections

Explanation of the Cards

To reduce cognitive load, a clear explanation of how to use the cards was added. The cards could either be explained in detail before the first exercise begins or briefly introduced during the first scenario creation, depending on the interviewees' understanding. This adjustment aims to provide interviewees with the necessary guidance while avoiding overwhelming them with information all at once.

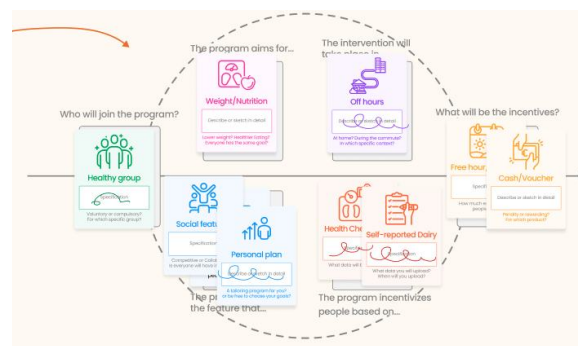


Image 4.6 Explanation of the Cards

Focus on Sepecification

The focus was shifted toward encouraging participants to provide their own explanations rather than simply placing the cards. The goal is to gather more in-depth insights into participants' interpretations of their choices. The "describe a typical day for the participant" and the impressions of the created programs would be asked.

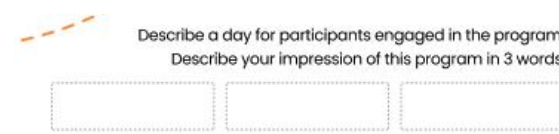


Image 4.7 Focus on Sepecification

Reducing Rounds

Participants were required to create only two programs: one ethical program and one unethical program. After creating each program, participants answered eight questions related to four ethical themes and the program's effectiveness using a Likert scale.

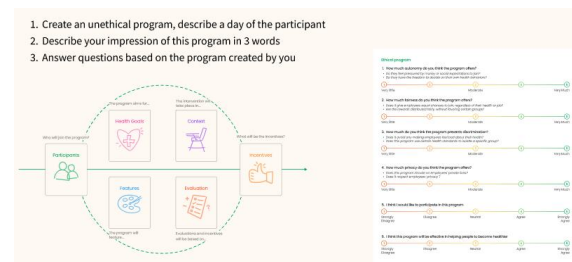


Image 4.8 Reducing Rounds

Reducing Cards

For the 6 groups of element cards, the number of cards in each group was reduced to three. Additionally, the design of each element was made more open-ended, with a blank space provided for participants to add their own specifications. This approach encourages participants to engage in deeper reflection on the ethical aspects of each program.

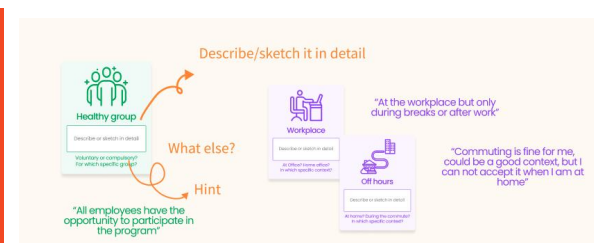


Image 4.9 Reducing Cards

4.2 Co-creation Interview

4.2.1 Participants

A total of 13 participants were involved in the interviews, including 8 interviewees as employees and 5 as employers (Table 4.2). The criteria for defining the roles of participants were as follows:

- Employees: Potential participants of Workplace Health Promotion Programs (WHPPs) and Financial Incentives (FIs).
- Employers: Employers, HR managers, or health officers.

Participants were recruited from two organizations, Vital10 and the TU Delft. Recruitment was primarily conducted through internal channels and supplemented by snowball sampling (Parker et al., 2019).

At Vital10, internal recruitment was facilitated through an introduction by the company's Implementation Consultant. At TU Delft, initial participants were contacted through email.

4.2.2 Research Protocol & Settings

Protocol

The goal of the generative interview was to gather insights and proposals from both employers and employees regarding WHPPs and FIs. Participants were asked to design and propose their own incentive programs and discuss which practices they considered ethical or unethical (Figure 4.2).

Details of the Interview:

- Duration & Schedule: Each session lasted 30 minutes.
- Format: The interviews were conducted in person, at the participants' workplaces.
- Participation: 5-8 employees and 3-5 employers were scheduled for the interviews.
- Data Management: Consent forms were required at the beginning of each interview, all input was kept anonymous, and data was securely deleted after the project was completed.

Participants	Role	Institutions	Gender	Schedule
1. E1	Employee	Hearts4People/Vital10	Female	20/08/24
2. E2	Employee	Hearts4People/Vital10	Female	20/08/24
3. R1	Employer	Hearts4People/Vital10	Female	21/08/24
4. E3	Employee	Hearts4People/Vital10	Male	23/08/24
5. E4	Employee	Hearts4People/Vital10	Male	23/08/24
6. R2	Employer	Hearts4People/Vital10	Female	26/08/24
7. E5	Employee	Hearts4People/Vital10	Female	26/08/24
8. E6	Employee	TU Delft	Male	27/08/24
9. E7	Employee	Hearts4People/Vital10	Female	28/08/24
10. E8	Employee	TU Delft	Male	28/08/24
11. R3	Employer	Hearts4People/Vital10	Male	29/08/24
12. R4	Employer	Hearts4People/Vital10	Female	29/08/24
13. R5	Employer	TU Delft	Male	03/09/24

Table 4.2 The Participants of Co-creation Interview

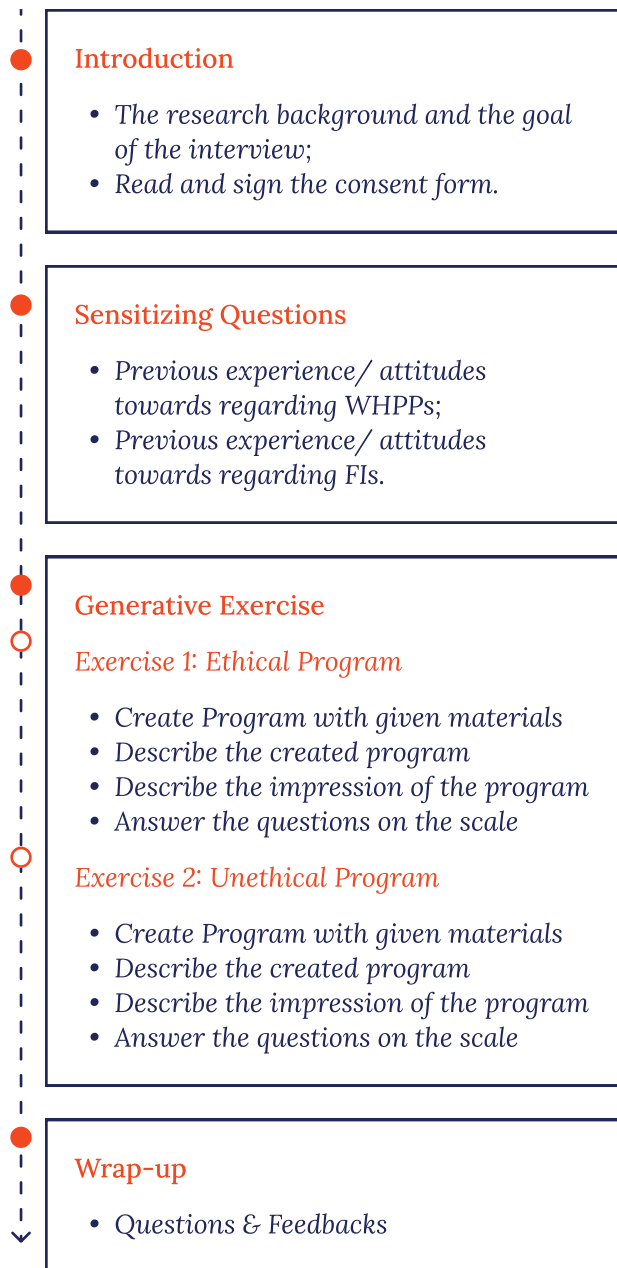


Figure 4.2 The Protocol

Settings

As shown in the interview settings (Figure 4.3), each interview was conducted between a facilitator and one participant. To ensure that the instructions were easy to understand, slides were created to provide additional visual explanations. This also facilitated smoother management of the process and timing, especially in situations where only one facilitator was present.

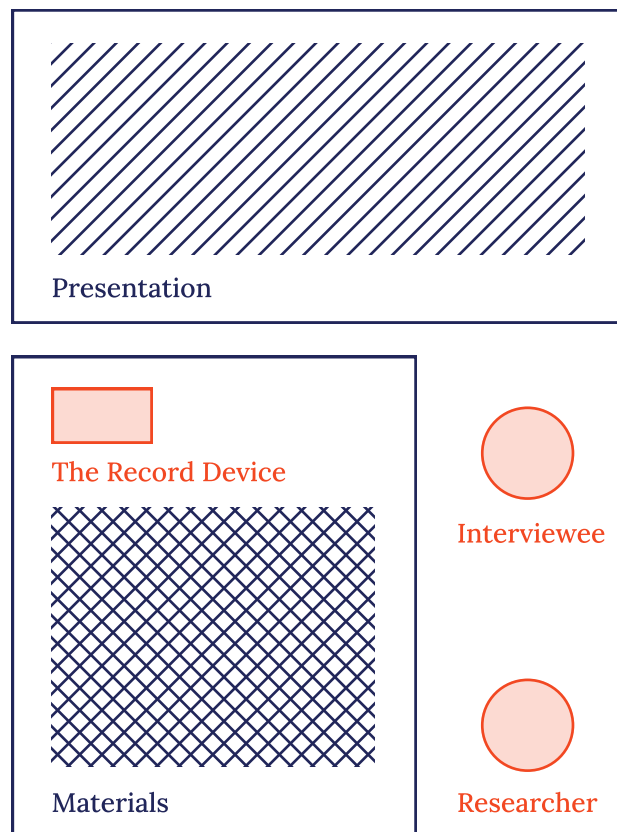


Figure 4.3 The Generative interview setting

4. 2. 3 Co-creation Materials

As a co-creation interview, participants were provided with the following materials (Image 4.10) to create their ethical and unethical workplace health promotion programs:

- Consent Form: Participants reviewed and signed consent forms prior to the interview.
- Element Cards and Empty Element Cards: Six categories of cards were provided, corresponding to the sections of the scenario canvas: participants, health goals, context, features, evaluation, and incentives. Participants could select and personalize the pre-defined
- Cards with explanations. Empty element cards were also available for participants to add custom content.

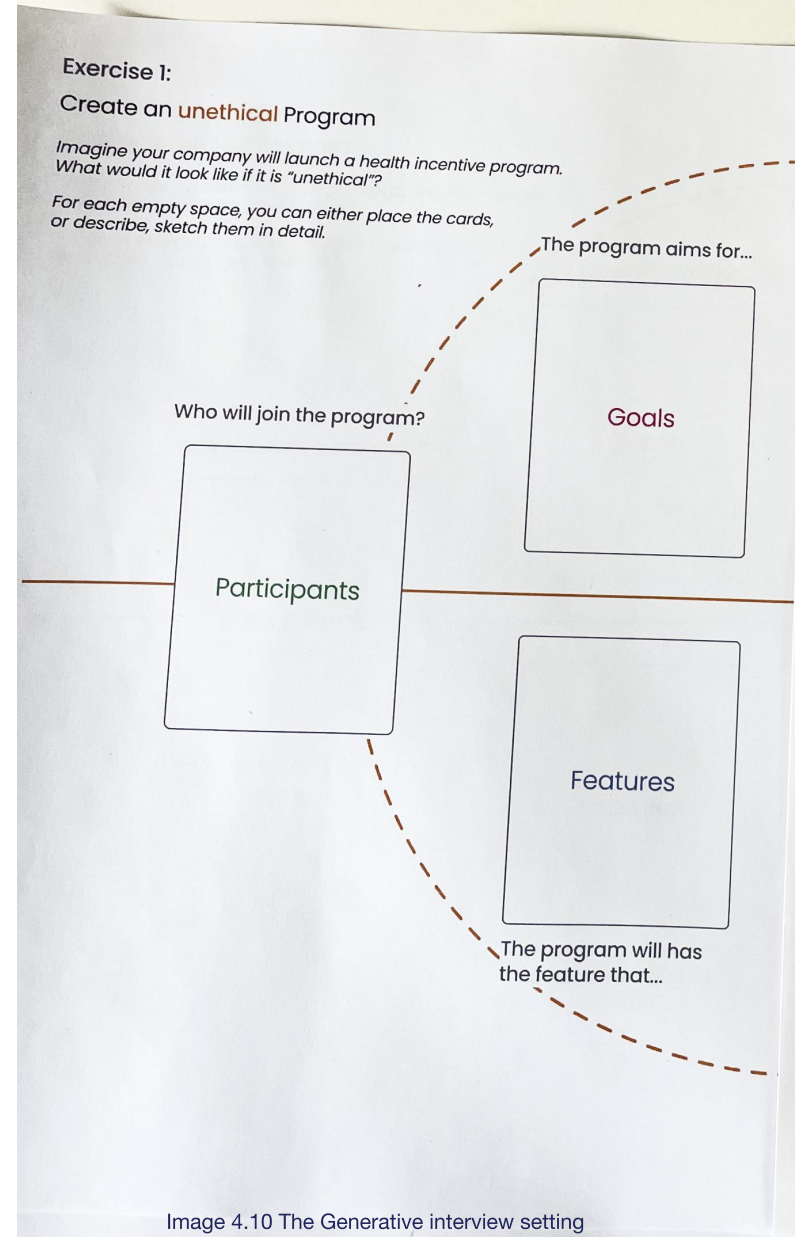


Image 4.10 The Generative interview setting

HUMAN RESEARCH ETHICS INFORMED CONSENT

PLEASE TICK THE APPROPRIATE BOXES

	Yes	No
A: GENERAL AGREEMENT – RESEARCH GOALS, PARTICIPANT TASKS AND VOLUNTARY PARTICIPATION		
1. I have read and understood the study information dated [DD/MM/2024], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>
2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	<input type="checkbox"/>	<input type="checkbox"/>
3. I understand that taking part in the study involves:	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> An audio-recorded interview, a set of co-creation materials to be completed. The participant will complete the co-creation exercise with provided materials. The audio recordings will be transcribed as text and the recording will be destroyed. 		
4. I understand that the study will end in 30 minutes.		
B: POTENTIAL RISKS OF PARTICIPATING (INCLUDING DATA PROTECTION)		
5. I understand that taking part in the study involves the following risks [a]. I understand that these will be mitigated by [b].	<input type="checkbox"/>	<input type="checkbox"/>
<p>[a] No potential risk of physical or mental harm.</p> <p>[b] The participants own the ability to ask for the session to stop at any point.</p>		
6. I understand that the following steps will be taken to minimise the threat of a data breach, and protect my identity in the event of such a breach:	<input type="checkbox"/>	<input type="checkbox"/>
<p>The audio record will be processed into quotes and transcriptions with anonymization, no voice will be used.</p> <p>All the image with participants will be blurred.</p>		
7. I understand that personal information collected about me that can identify me, such as [my name, my position], will not be shared beyond the study team.	<input type="checkbox"/>	<input type="checkbox"/>
8. I understand that the (identifiable) personal data I provide will be destroyed after the research.	<input type="checkbox"/>	<input type="checkbox"/>
C: RESEARCH PUBLICATION, DISSEMINATION AND APPLICATION		
9. I understand that after the research study the de-identified information I provide will be used for	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The images of the user research materials in the thesis report/website. The quotes with de-identified information as the evidence of the research questions. All data will be used anonymously and cannot be traced back to any participant. 		
10. I agree that my responses, views or other input can be quoted anonymously in research outputs.	<input type="checkbox"/>	<input type="checkbox"/>
11. I agree that the written information and the draft created in the co-creation session will be used in the thesis and report after anonymisation process.	<input type="checkbox"/>	<input type="checkbox"/>

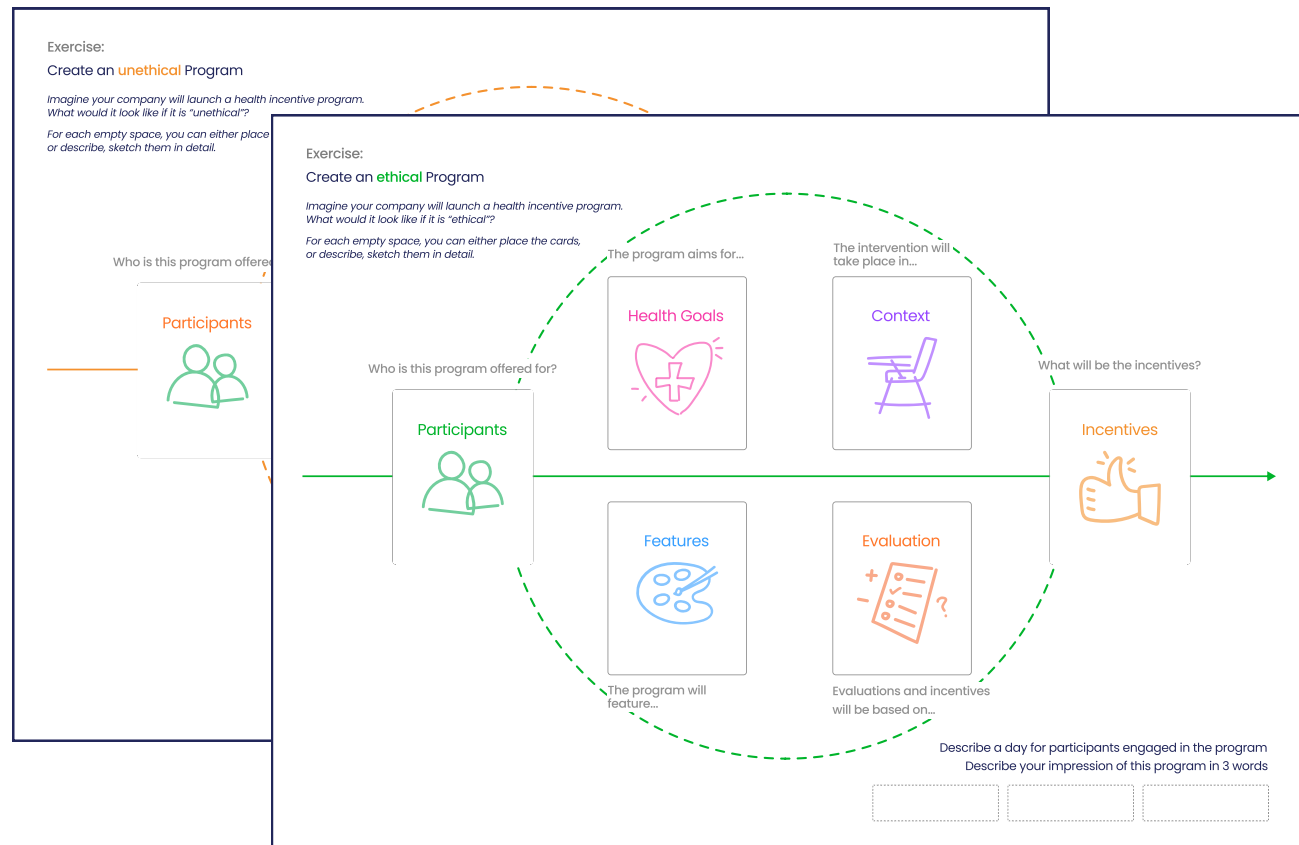


Image 4.11 The Scenario Canvas

- Scenario Canvas: A structured canvas with six empty spaces, where participants could place multiple cards. After completing each program, participants were asked to describe and share their impressions, allowing the interviewer to understand the specific factors influencing their ethical judgments (Image 4.11).
- Scale with 8 Questions: After each program was created, participants were presented with a Likert scale to evaluate the program based on four ethical themes and four questions related to effectiveness (Image 4.12).

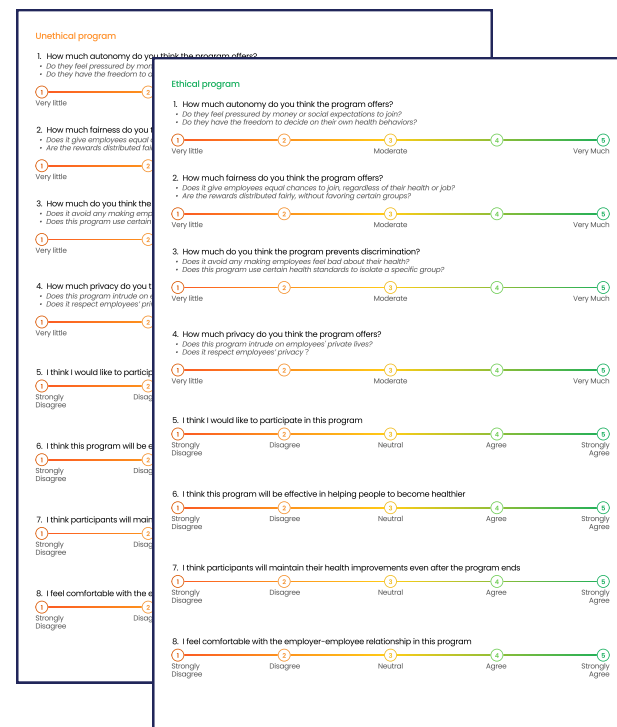


Image 4.12 The Question with Likert scale

4.3 Analysis

The analysis of user interviews was based on multiple materials. The audio recordings of the co-creation interviews were transcribed (see appendix) and used for analysis. Additionally, the completed materials from the sessions showcased the ethical and unethical programs created by participants, while the scores on the scales recorded their reactions to various program design variations. These materials were digitized (see appendix) and analyzed alongside the corresponding audio recordings.

The analysis results are presented in three sections, corresponding to the refined research sub-questions: 1) typical ethical and unethical cases, 2) differences in ethical perspectives between employees and employers, and 3) how specific design elements influence the ethical considerations and effectiveness of the programs. As these questions all target qualitative insights, thematic analysis was adopted for the analysis process.

4.3.1 Overview

More Overlaps than divergences in ethics

In discussions with 8 employees and 5 employers, no significant divergences were observed regarding ethical concerns. For both employers and employees, autonomy, fairness, anti-discrimination, and privacy were seen as sensitive and noteworthy considerations. While employers emphasized the desire to present themselves as sincere and responsible managers, employees focused more on their own preferences, as well as those of their colleagues, and on the need for workplace benefits and a positive social environment. Despite these differences, both groups shared a common view: that health should be promoted in an ethical manner.

Typical (Un)ethical Programs

The co-creation exercise results revealed typical ethical and unethical cases. It was observed that the views of employers and employees on whether a program was ethical were largely aligned. Employers tended to design ethical programs with a focus on covering a broader range of employees and addressing multiple health risk factors. On the other hand, some employees emphasized that ethical programs should not only be effective but also engaging and appealing.

Ethics have big effects

The interviews revealed that different design elements resulted in various program variations, leading to distinct ethical outcomes. The scale results indicated a clear positive correlation between the level of ethical considerations and the program's participation rate, utilization rate, and the relationship between employees and employers. Although ethical considerations showed a relatively weaker positive correlation with program effectiveness, the connection between ethics and the long-term sustainability of effectiveness was even less pronounced.

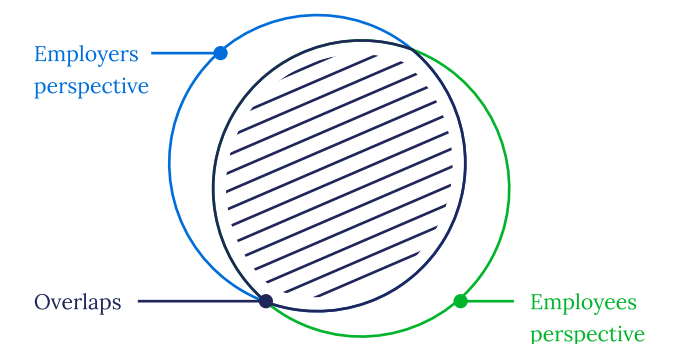


Figure 4.4 Ethical Aspects from 2 Perspectives

4.3.2 Typical (Un)Ethical Programs

This section focuses on analyzing the explanations and impressions provided by employers and employees regarding the ethical and unethical programs they created. The goal is to answer the following sub-questions:

RQ3.1.1: What are the typical ethical/unethical scenarios in general?

RQ3.1.1: What are the typical ethical/unethical scenarios for employees and employers?

Typical Ethical Programs

What characteristics make WHPFI programs ethical for both employees and employers? As shown in Figure 4.5, there are five overlapping impression clusters between employees' and employers' perspectives on ethical programs, along with one additional characteristic unique to employees.

The typical ethical programs in general

Based on the overlapping impressions and explanations from both employers and employees, the following characteristics define ethical WHPFI programs:

- *Path to Well-Being*: Programs that provide positive feedback on physical health improvements and offer health education.
- *Freedom of Choice*: Ethical programs respect employees' health motivations, encourage voluntary participation, and provide ample choices.
- *Accessible & Welcoming*: These programs genuinely care for employees' health, accommodating special circumstances and ensuring broad participation.
- *Tailored to You*: Programs respect employees' health habits and preferences, addressing their individual health needs.
- *Fair and Equal*: Equal opportunities for all employees to participate are essential.

The typical ethical programs for employees

Compared to employers, employees place a higher emphasis on their experience and enjoyment within the program. They value programs that incorporate gamification elements or interventions that align with their interests, making the programs more engaging and appealing:

- *Engaging Journey*: For employees, ethical programs are also engaging and enjoyable.

<p><i>Path to Well-Being</i></p> <ul style="list-style-type: none"> • Self-improvement • Intrinsic-Motivation • Gain more in the long run • Clearer with your health(consciously) • Healthy • Healthier • Beneficial • Helpful 	<p><i>Freedom of Choice</i></p> <ul style="list-style-type: none"> • Personal decision • Activate yourself • Vitality • Voluntary • Free-willing • Freedom
<p><i>Accessible & Welcoming</i></p> <ul style="list-style-type: none"> • Subscription • Nice • (Maybe not really reachable) but nice • environment-driven • easy • Honest 	<p><i>Tailored to You</i></p> <ul style="list-style-type: none"> • Personal • Personal • Personalized <p><i>Fair and Equal</i></p> <ul style="list-style-type: none"> • Equality • Ethical • Non-selective
<p><i>Engaging Journey</i></p> <ul style="list-style-type: none"> • Engaging • fun • Enjoy • Motivating*2 • Together • Interesting(collaborative) 	<ul style="list-style-type: none"> • Employers • Employees

Figure 4.5: Impressions of Ethical Programs

Typical Unethical impressions

What makes WHPFI programs unethical? Figure 4.6 presents three overlapping impression clusters from both employees and employers, along with one additional characteristic unique to employees.

The typical unethical programs in general

From the participants' feedback on the created unethical programs, the analysis reveals several common characteristics identified by both employers and employees:

- *Prison of Control*: Programs that are coercive or paternalistic, described using metaphors like "Big Brother" or "Black Mill."
- *Unfairness & Exclusion*: Programs that unfairly target specific groups for health improvement, excluding others.
- *Superficial in Vain*: Programs designed to boost corporate image, without genuine concern for employee well-being.
- *Cross the Line*: From employees' perspective, programs that delve into overly personal health topics unrelated to work are unethical.

<p><i>Prison of Control</i></p> <ul style="list-style-type: none"> • Paternalism • Prison • Stressful • Black mill • Pushing*2 • No personal choice • Limited 	<p><i>Unfairness & Exclusion</i></p> <ul style="list-style-type: none"> • Unfair*2 • Unequal • Exclusive • Stigmatizing • Discriminate for health • Selective • Discriminating
<p><i>Superficial In Vain</i></p> <ul style="list-style-type: none"> • Useless • Prestigious-driven, in vain • Unhelpful in the long run • Demotivating • Company based • Dishonest 	<p><i>Cross the line</i></p> <ul style="list-style-type: none"> • Too personal • No work-related • Big-brother*2

- Employers
- Employees

Figure 4.6 Impressions unethical programs

4. 3. 3 Similarities & Differences

What are the similarities and differences in how employers and employees perceive the ethics of specific program designs? By analyzing the different elements chosen in the created programs and the specific details of each program, the following sub-questions can be addressed:

RQ3. 2. 1: What are the differences between the answers of the employees and employers?

RQ3. 2. 2: What are the similarities between employers and employees?



Figure 4.7 Similarities & Differences on Participants

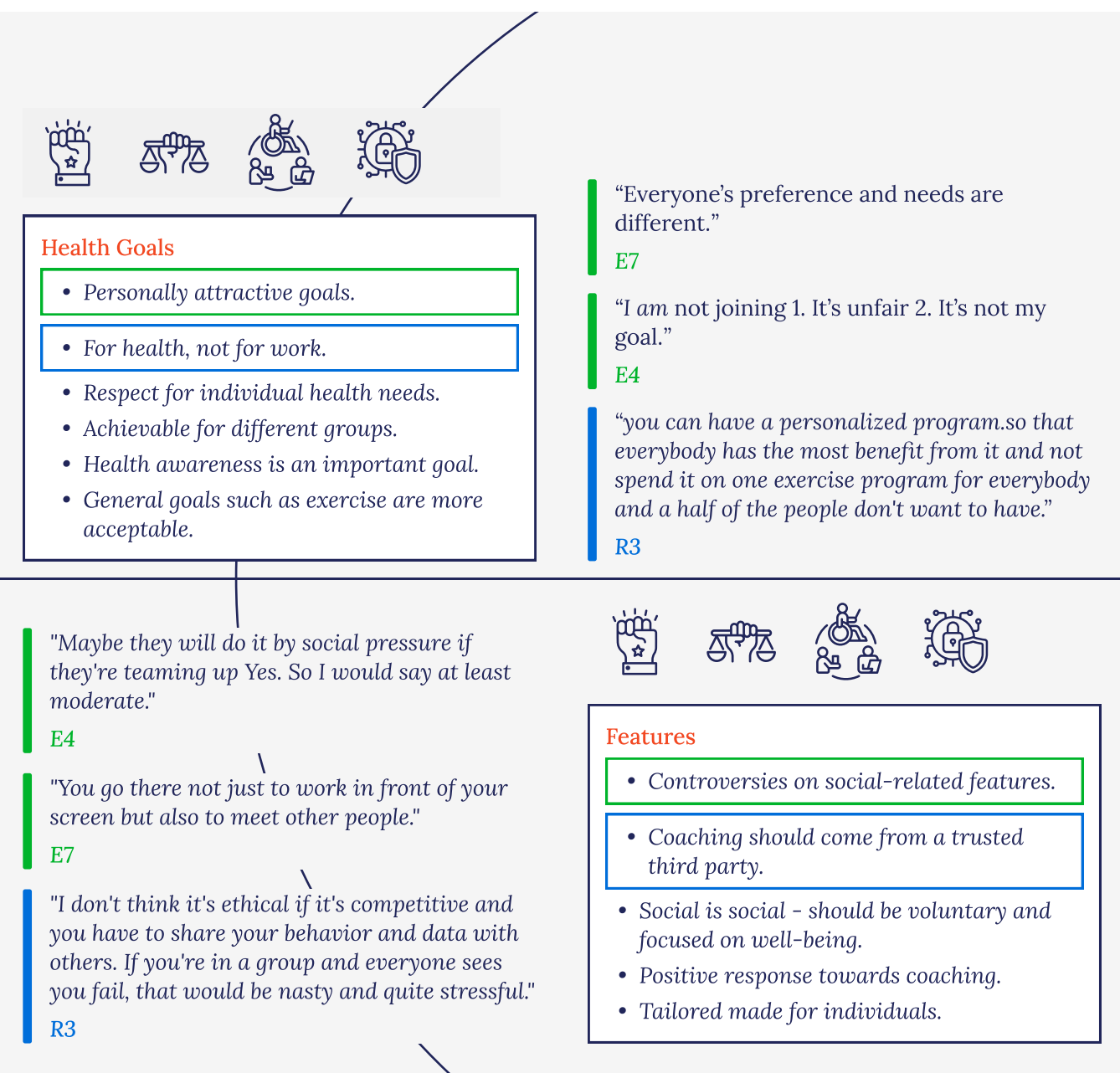


Figure 4.8 Similarities & Differences on Health Goals & Features



Context

- Privacy concerns about off-work contexts.
- Extra burden outside work is undesirable.

- Health activities should be counted in working hours.
- Shouldn't leave the health responsibility in the private time.
- Concern about the effects on productivity.
- Workplace > Commute > Break > Home.
- Provide the freedom to choose the context.

"It's unethical if you want something to attend something in your work for your boss. Okay, it's a boss at your work time and it's not outside."

E7

"I trust everyone, but if you institutionalize this, there's always a group of people, try to do as less work as possible."

R5

"You don't show that you care about the person and you ask the person just to do it outside your building. I think that's really dishonest."

R4

"Body weight, for example, that I can imagine that is for some people already a little bit too risky and too personal to share with colleagues and share with your boss."

E4

"You can see that you're progressing in the way you feel, that's much more important than money. So I think it's (financial) sounds easy, but in the end, it's the wrong reason why you would do it."

R4



Evaluation

- Collection of personal data is not necessary
- Evaluation could be used for program improvement.
- For personal use only, with the right of OPT IN/OUT.
- Privacy risks on sensitive data .

Employees
 Employers
 Similarities



Incentive

- Intrinsic motivation > incentives.
- Concerns about indirect penalties.
- The less direct, the more honest: Free time > Vouchers > Cash.
- Rewards > Lottery/Penalty.
- Health shouldn't be measured by money.
- To enhance the sense of achievement.
- Should be separate from job performance.

"I don't think it's fair to punish the employees who don't have a health lifestyle, I only think that it's fair to get rewarding on salary."

E4

"Especially in the lottery, cash, voucher. they are all met mean money for your health."

E5

"Thousand euros for a step count competition. And then people were cheating. because they wanted to have the thousand euros not for their health."

R3

"I would prefer to give them more insight of what vitality or health with you every day, because I think that's the good present you get when you have a good lifestyle, you feel better every day. I think that's more of value than money."

R4

Figure 4.9 Similarities & Differences on Context & Evaluation

Figure 4.9 Similarities & Differences on Incentive

4. 3. 3 Elements, Ethics, and Effects

How do ethical factors and program design impact the effectiveness of Workplace Health Promotion Financial Incentives (WHPFIs)? The analysis of the Likert scale responses addresses the following questions:

RQ3. 3. 1: Which design elements are related to the ethical considerations?

RQ3. 3. 2: How would the ethical considerations affect on the effectiveness?

Acceptability

The responses to the questions “I think I would like to participate in this program” and “I would like to introduce this program into my company” indicate that employees' participation rates and employers' adoption rates are significantly influenced by ethical factors, showing a positive correlation between ethics and acceptability.

In the relevant descriptions from the transcripts, it is clear that ethical issues play a crucial role in influencing employees' willingness to participate.

“I don't want to join because I think that I'm forced to do something first. Then that the available only during break and the off hours, then it's like the only choice.”

E8

Ethical factors that primarily influence employee participation include:

- Respecting and protecting privacy.
- Having control over personal health decisions.
- Aligning with participants' health goals.
- Providing an engaging experience.
- Ensuring equal opportunities to participate.

For employers, ethical soundness is a key consideration, as they seek to build a positive employer image.

“A WHP can make a better employer-ship, and help us being a good employer.”

R3

Ethical factors influencing employers' willingness to introduce WHPFI programs include:

- Building a positive image by demonstrating responsibility and honesty.
- Prioritizing health as the primary goal, rather than focusing solely on productivity.
- Avoiding any sense of obligation or pressure for employees.

Effectiveness

Responses to the question, “I think this program will be effective in helping people to become healthier,” suggest that ethically sound programs tend to be perceived as more effective than unethical ones. Notably, there was no significant difference in viewpoints between employees and employers on this matter.

However, regardless of whether a program was deemed ethical, participants' responses to the question, “I think participants will maintain their health improvements even after the program ends,” generally remained neutral. Participants felt that sustaining long-term health behavior changes is challenging and depends heavily on specific circumstances and individuals' intrinsic motivation.

“That's always, always difficult. It's always difficult because it's always intrinsic motivation.”

R5

Finding a balance between autonomy and structure is crucial. Programs with excessive autonomy rely entirely on employees' intrinsic motivation, which may result in wasted resources if many employees lack the motivation to engage, limiting the program's reach and impact.

“If you let it really free like that, you can manually put it in or just say, I was there.”

E1

Conversely, overly mandatory programs, which are highly controlled and supported by substantial incentives, may be effective in encouraging participation among vulnerable groups.

However, these programs are not perceived as having long-term benefits and may even negatively impact employees' enthusiasm for their work.

“It will make people healthy, but it would be, yeah, it would probably be also to the detriment of a lot of mental health because of that..”

E6

Both employees and employers recognize that programs that emphasize the importance of health and provide sufficient support can have a positive impact. Such support helps participants become more aware of their health, fostering a beneficial process that enhances their understanding and motivation to maintain healthier behaviors.

“The process of the traveling is much more important than the destination”

R4

“Just advocating it might be difficult for people. So that might be to, just to create awareness and that make people a conscious choice.”

E6

Employer-Employee Relationship

Responses to the question, “I feel comfortable with the employer-employee relationship in this program,” indicate that ethically sound programs foster a more positive employer-employee relationship.

“I don't think I'm being fair to my employees then, and you can feel it and it's very uncomfortable.”

R2

A strong relationship should be based on Collaboration Over Coercion. Employers can offer support, incentives, or inspiration, but ultimately, healthy behaviors should be driven by employees' own motivation. Therefore, the program should be presented as a gift, not a prison, implying that employees have the autonomy to decide whether or not to participate.

“(It's not good for them) Controlling every factor of your life that the employer is no longer concerned with only work.”

E6

“I think your employer will you're trying to do something to improve your health, but it's comfortable, because you are with own autonomy.”

E2

Additionally, there should be a sense of Equal Contribution between employees and employers. Health behavior change requires effort from employees, but as beneficiaries of improved employee health, employers must contribute more than just financial resources—active effort is equally important. This includes creating a healthier work environment and aligning policies and management strategies to support health improvements.

“It's totally up to the employee. Provide something they like and they and they have a lot of choices. It's a present for me to them.”

R3

Takeaways

The co-creation interviews have revealed both shared and differing perceptions of ethical and unethical practices between employers and employees.

In the next chapter, these insights will be translated into practical guidelines, providing concrete recommendations for addressing the ethical challenges identified through both theoretical research and user feedback.

Based on the co-creation interview results, the guidelines will serve the following functions:

Building Understanding of Ethical Issues

The co-creation interviews highlighted the interconnectedness of various ethical themes (Figure 4.10), further illustrating the complexity of these issues. As a result, the guidelines will include an introduction to ethical concerns in WHPFI contexts, helping audiences develop a deeper understanding of these challenges.

Evaluation

The interviews confirmed that the identified ethical themes and design elements can form the foundation for WHPFI programs, encouraging reflection on ethical concerns. The toolkit will be further refined to integrate the research results into a framework for evaluating ethical issues in WHPFI programs.

“Everything an employer brings forward as an option for their employees, it has always has a tiny bit of mandatory character.”

R5

Optimizing Communication and Actions

The way programs are communicated and implemented can result in varied ethical impacts. Some employees felt uncomfortable with receiving incentives for health improvements, while employers worried that direct financial rewards could feel coercive. Additionally, social features might foster a positive health culture, but if mandatory, they could create pressure or even stigmatization. Therefore, the guidelines will offer recommendations on wording and practical steps for ethical implementation.

“I think purpose and wording make difference. so you need to be on the right side of the wording that you use to motivate anyone have a more healthy lifestyle. In the end, it's the responsibility of the individual.”

R5

Shifting Mindsets

The guidelines should promote perspective shifts to reconcile differing ethical views. In the interviews, employers showed a desire to build a positive company image and uphold moral standards, while employees focused more on their relationships with colleagues and the overall work atmosphere. These subtle differences suggest the need for the guidelines to help audiences develop empathy and consider the perspectives of both parties.

The user research provided key insights into employees' and employers' perspectives on ethical considerations in WHPPs and FIs. These findings provide a user-centric foundation for developing an ethical guideline. In the next chapter, these insights will be translated into convincing recommendations for program design >>

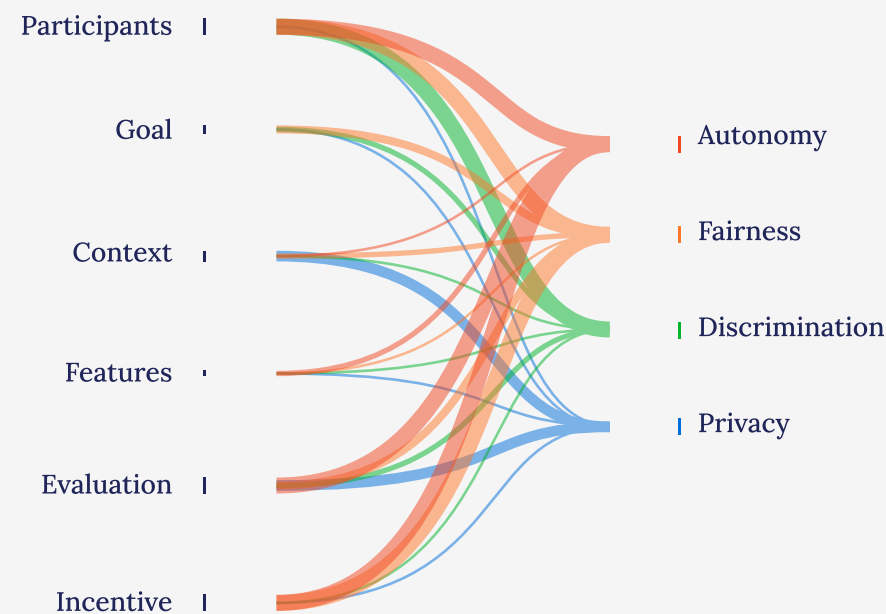


Figure 4.10 Sankey Diagram of Design Elements & Ethical Themes

5. Conceptualization

Building upon insights from the previous research phases, this chapter outlines the process of conceptualizing the ethical guideline for employers and presents the final guideline. To ensure the guideline is practical and effective, the design phase also includes a survey addressing employers' needs, a card-sorting exercise, and heuristic evaluations.

- 5.1 *The Design Goal*
- 5.2 *Ideation*
- 5.3 *The Guideline*

5. Conceptualization

5.1 The design goal

5.1.1 Target Audiences

Who need the ethical guideline?

The audience for this ethical guideline are employers who are responsible for selecting and investing in workplace health promotion programs (WHP) and financial incentives (FI). They could be (Centers for Disease Control and Prevention [CDC], 2024):

- Employers.
- HR managers.
- Health benefit managers.
- Health education staff.
- Occupational nurses.
- Medical directors.
- Wellness directors.

Why employers

1. *The key of practical implementation.* As the central figures in the implementation process, employers have the resources and authority to create and maintain an ethical mindset. This enables them to effectively choose, modify, and implement WHP programs that are both ethical and beneficial for employees.
2. *Have a broader impact.* For large companies, employers can directly access guidelines and resources, helping them align with providers to establish ethical standards. Smaller companies, which may lack the resources to develop complex WHP programs, can benefit from a simple guideline to guide them in selecting ethically sound interventions. This ensures that more employees can engage in ethical WHP programs.

5.1.2 Needs & Context

The Survey

What are the specific needs and contexts for employers regarding an ethical guideline? Understanding this question is crucial for defining a clear design goal. Therefore, a survey was designed to further explore employers' needs for an ethical guideline (see Appendix.7).

A total of 5 employers participated in the survey, as shown in Table 5.1. The participants included three General Managers, one HR Manager, and one Company Founder.

Participants	Role
1. U1	HR Manager
2. U2	Founder
3. U3	Manager (General)
4. U4	Manager (General)
5. U5	Manager (General)

Results

Awareness of ethics	■■■■■
Knowledge of ethics	■■■□□
Confidence of identifying ethical risks	■■■□□
Confidence of addressing ethical risks	■■■□□
Needs of having ethical guidelines	■■■■■

How would employers use the guideline:

- Searching for programs (4)
- Evaluating the chosen program (2)
- Implementing the program (2)
- After the program has ended (1)
- Any potential status (1)

The functions important to employers:

- Practical recommendations (4)
- Evaluation toolkits (3)
- Tools for co-production (2)
- Tools for discussion (1)
- Overview of ethical issues (1)

Table 5.1 Survey

Needs & Problems

Based on the survey results, the employers' needs for using the ethical guideline and the potential problems they may encounter were identified.

Employers demonstrated a strong ethical awareness and a desire to ensure that their actions align with ethical standards. However, they lack a clear basis for making ethical judgments and have limited experience in implementing specific ethical actions.

Context

Additionally, the potential use scenarios for the guideline include:

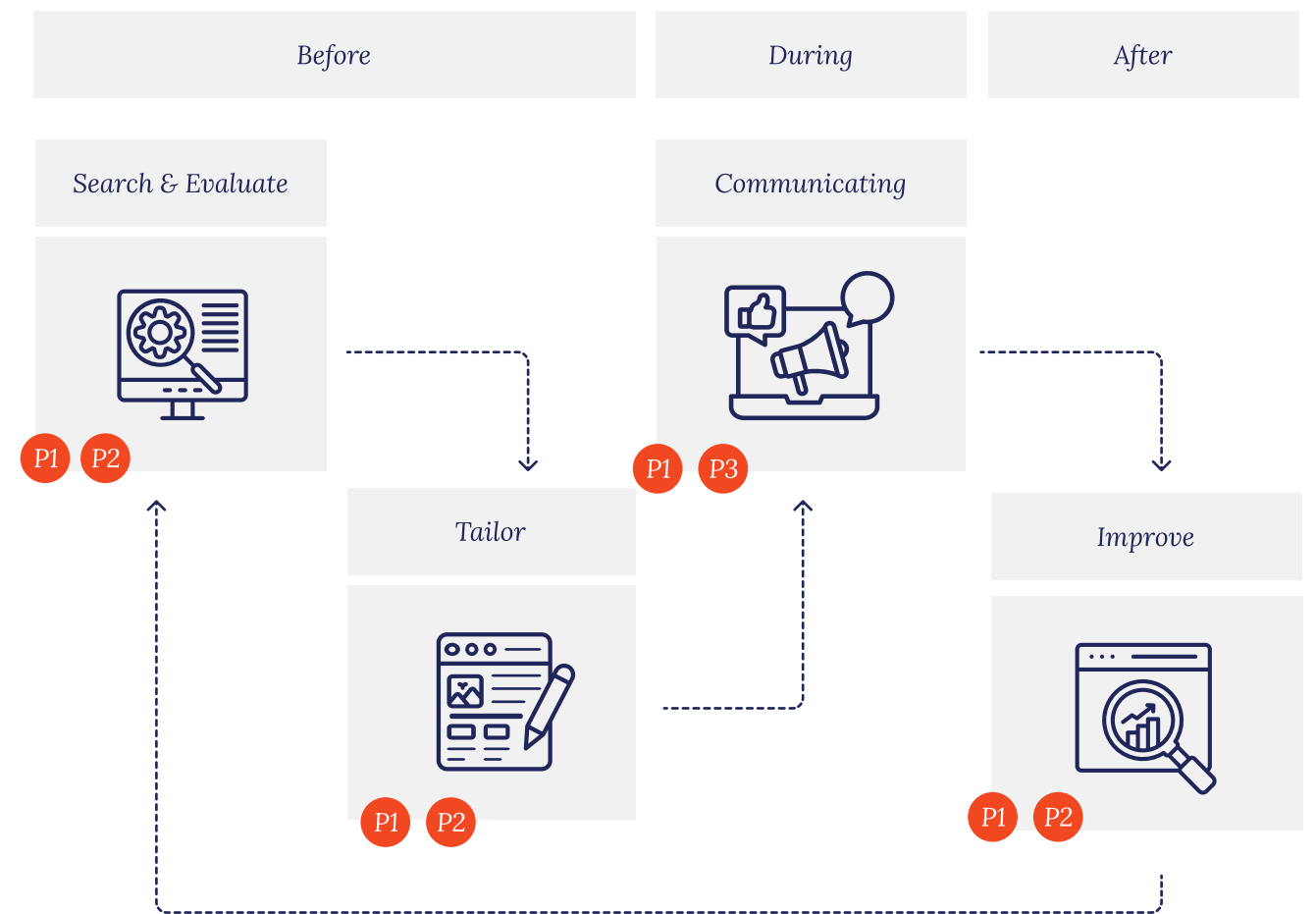


Figure 5.1 The User Journey with User Scenarios

Needs



1. Promoting employees' health and well-being
2. Building a positive employer image
3. Mitigating the risks associated with ethical dilemmas

Problems



1. Unclear with ethical risks
2. Uncertain in their ability to design and implement these programs ethically
3. Unconfident with addressing ethical dilemmas

Based on the research on the needs and potential problems, and the potential use scenarios, the design goal has been defined to guide the direction of the design and address their challenges.

(See next page)

Design Goal

“To help employers address ethical challenges in selecting, evaluating and implementing Workplace Health-Promotion Programs and Financial Incentives to enhance employees' health and well-being

5. 2 Ideation

5. 2. 1 Supplementary User Research

Card-Sorting

To further define the specific ethical functionalities of the guideline, a card-sorting exercise was conducted with the Design for Health Research group at IDE. During this process, role-playing was used, with researchers imagining themselves as employers who are introducing ethically sound WHPPs and FIs into their companies.

The card-sorting exercise followed a hybrid approach, consisting of two parts:

1. Prioritizing Functionalities: Identifying which functions are most important for employers.
2. Exploring Information Architecture: Assessing the logical structure and organization of information in the guideline.

The results of the card sorting (see Appendix) indicate that employers tend to prioritize practical tools over thought-provoking ones. Specifically, having case references to clarify abstract ethical issues offers more direct support, making it easier to provide effective ethical guidance.

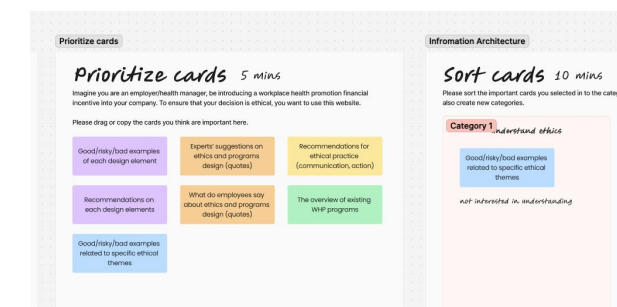


Image 5.1 Card-Sorting

Interview with Employers

Subsequently, two open-ended interviews were conducted with employers. Using a prototype of the guideline, they were asked for feedback to better understand their needs.

One of interviewees was the coordinator of vitality programs at TU Delft. The other interviewee was the management and policy expert from the IDE Faculty.

Key findings include:

- Ethical dilemmas are a concern for them, and they seek practical advice for resolution.
- They prefer specific guidance on implementation and evaluation methods.
- The ethical guideline is most valuable during the selection and evaluation stages. Additionally, assessing ethical aspects of less successful parts after the program's conclusion is also important.

5. 2. 2 Qualities & Functions

Qualities

Based on the design goals and supplementary user research into employers' needs, the interaction qualities were defined:

- Clear
- Practical
- Trustworthy
- Reflective

Functionalities

The 3 core functions of the ethical guideline were conceptualized as follows

1. Ethical Evaluation Framework: A structured approach to evaluate and assess ethical considerations in WHPPs and FIs.
2. Overview of Ethical Issues: A summary of key ethical considerations to help employers quickly grasp important topics.
3. Channels for In-Depth Understanding and Discussion: Resources and tools that facilitate a deeper understanding and enable conversations around ethical issues.

5.3 The Guideline

5.3.1 Structure

The final concept for the ethical guideline is a website, chosen for its ability to effectively reach a broader audience and enhance accessibility to the content.

Why a Website?

A website allows for wider dissemination, making the content more accessible to a larger number of employers. Additionally, it enables easier feedback collection, allowing for timely updates and revisions to the content. This ensures that the information remains accurate and relevant to users' needs.

Information Architecture

Figure 5.2 illustrates the information distribution and interactive flow of the website, demonstrating how users navigate through various sections to access the ethical guidance provided.

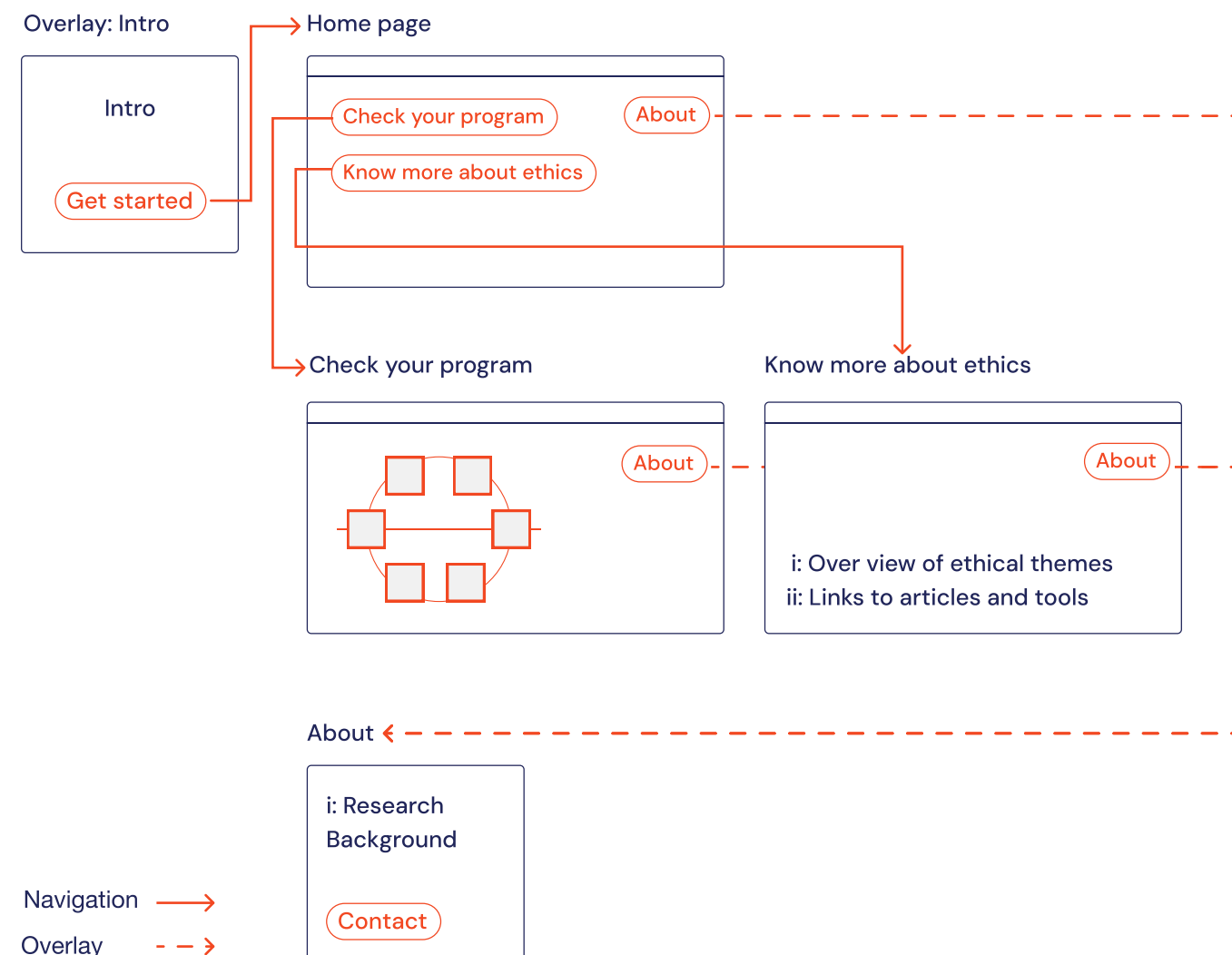
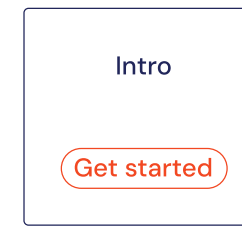


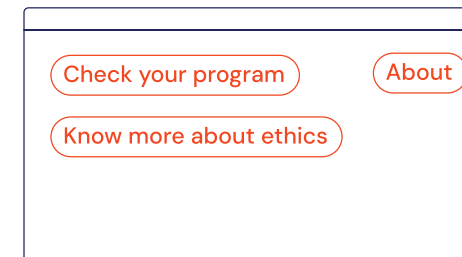
Figure 5.2 User Flow



Intro

Content:

- Story-telling on ethical issues.
- Intro of the potential usage of the guideline.



Home

Actions:

- Navigate to different pages.
- Start the evaluation process.

Content:

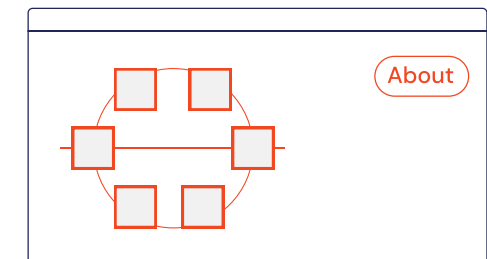
- A brief introduction to the guideline.
- Navigation options for exploring the different sections.
- Access to the Ethical Evaluation Framework.



Know more about ethics

Content:

- Definitions of the four key ethical topics involved in WHPPs.
- Links to toolkits and articles for further reading and practical guidance.
- Open links of toolkits



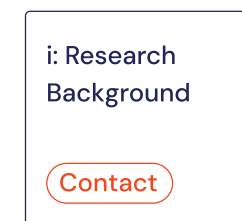
Check your program

Actions:

- Click to explore each design element.
- Switch among the 6 design elements.

Content:

- An introduction to each design element.
- "What do employees say": Quotes from research that reflect employees' perspectives.
- "What do experts say": Expert opinions gathered from research.
- Thought-provoking questions for users to consider.
- Ethical and unethical case examples for reflection.



About

Actions:

- View background information about the research project.
- Send emails to the researchers for further inquiries.

Content:

- Background information on the research project and its purpose.

On the next page, the showcase shows the detailed guideline design.

5.3.2 Showcase

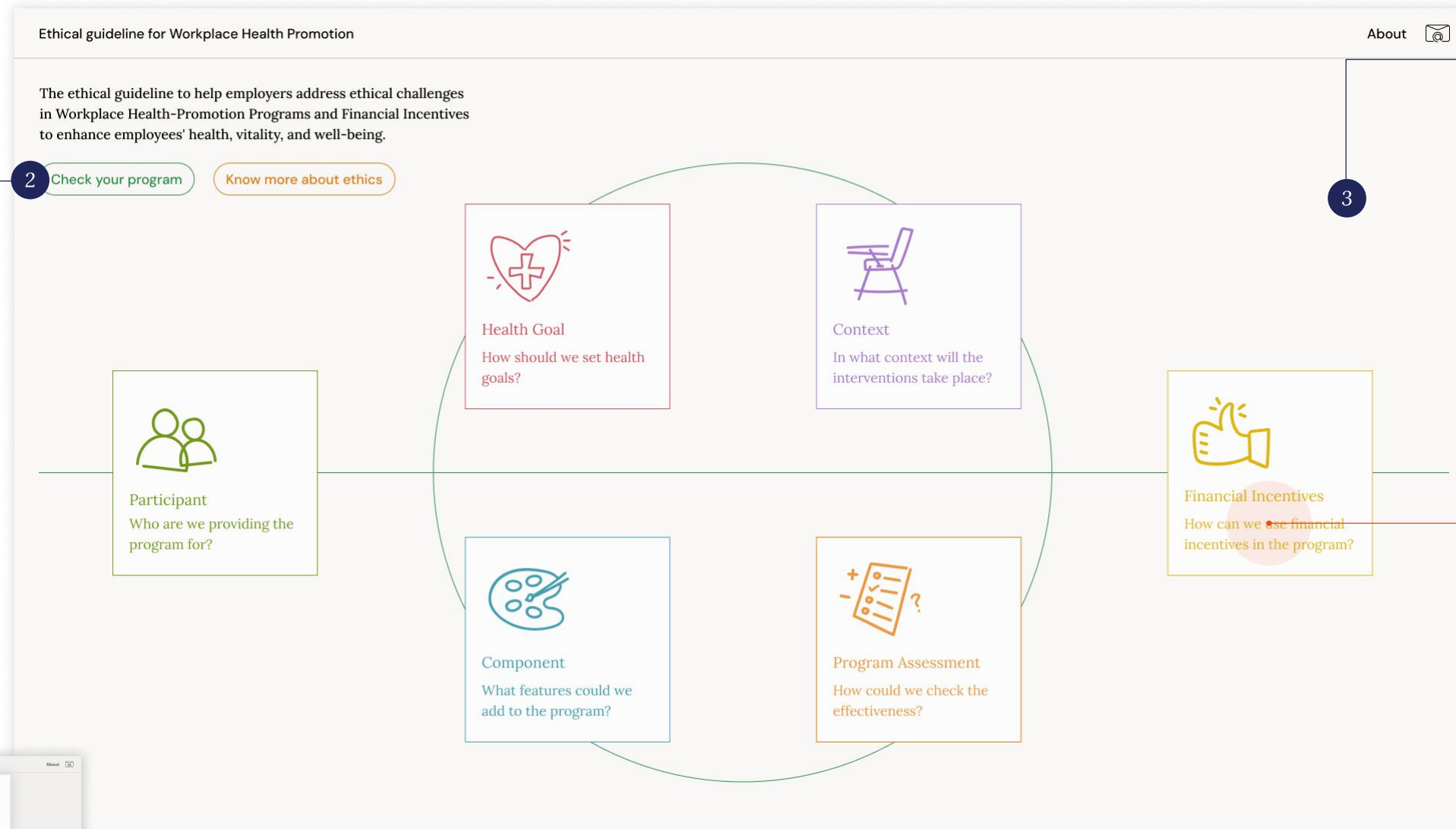
Intro & Home page

Introduction

When users open the website, an overlay presents them with provocative questions that highlight typical ethical dilemmas in WHPPs and FIs. This storytelling approach emphasizes the importance of considering ethical issues and informs users about the support they can find on the website.

Navigation Buttons

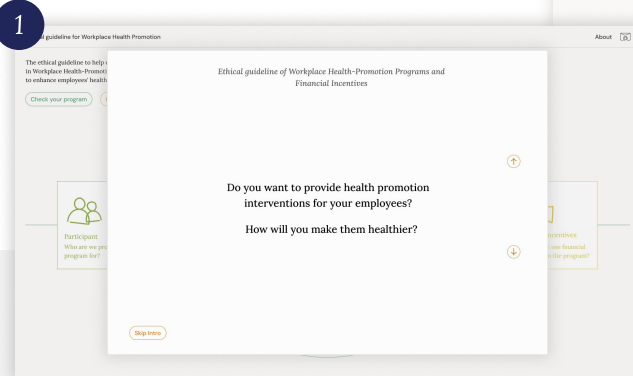
On the homepage, users can directly navigate to two main sections: "Check Your Program" and "Know More About Ethics."



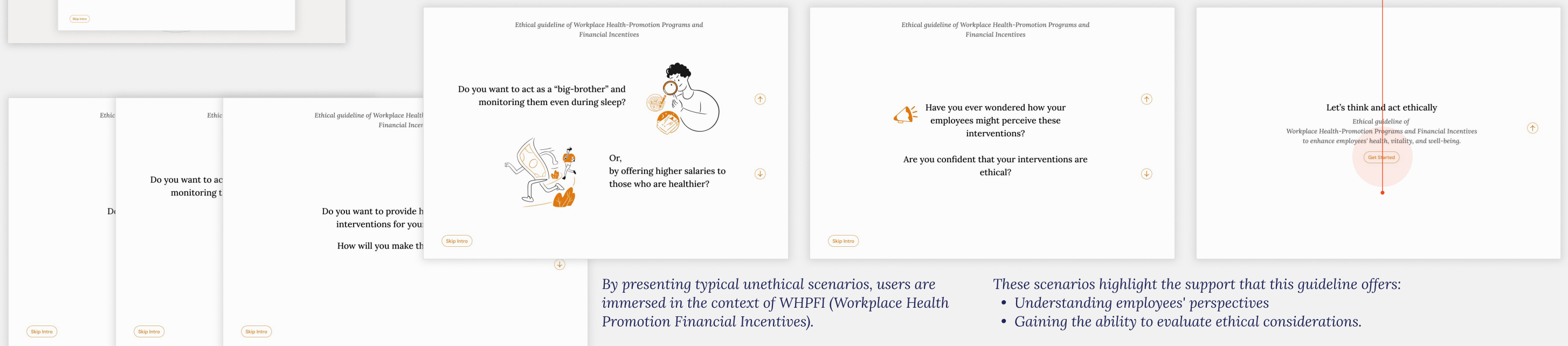
Link to the Prototype

Evaluation framework
On the homepage, users can directly access the primary feature, "Check Your Program." This framework is an improved version of the co-creation materials used in the user research phase. It was proven effective in helping users think systematically about WHPPs and FIs, exploring the complex ethical issues involved.

When users click on the card for any design dimension, they are navigated to the corresponding evaluation page (see next page).



After clicking "Get Started," users can explore the website with the thought-provoking questions in mind.



By presenting typical unethical scenarios, users are immersed in the context of WHPFI (Workplace Health Promotion Financial Incentives).

These scenarios highlight the support that this guideline offers:

- Understanding employees' perspectives
- Gaining the ability to evaluate ethical considerations.

Image 5.2 Intro & Home page

Check your program

[Link to the Prototype](#)

The navigation bar

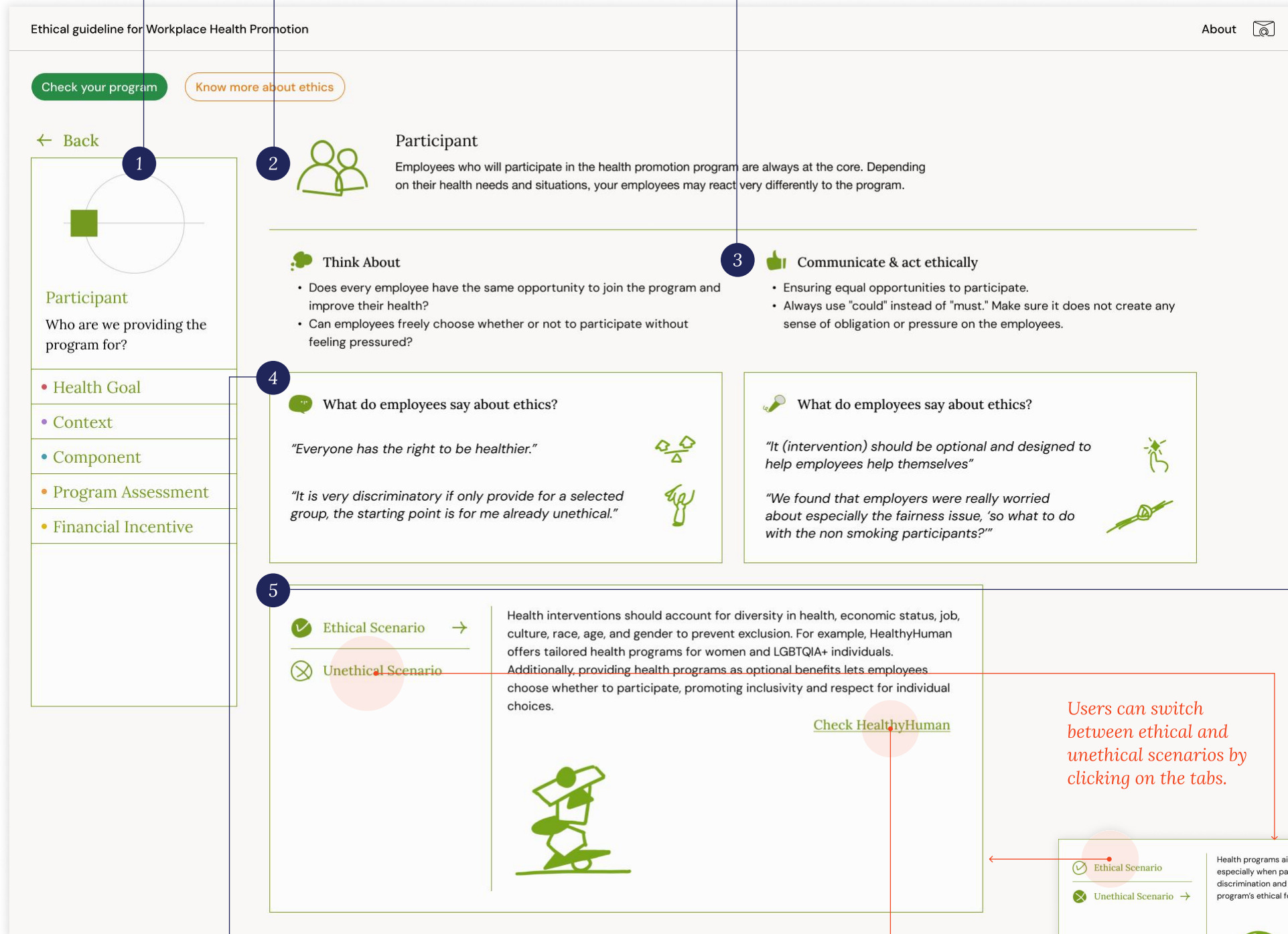
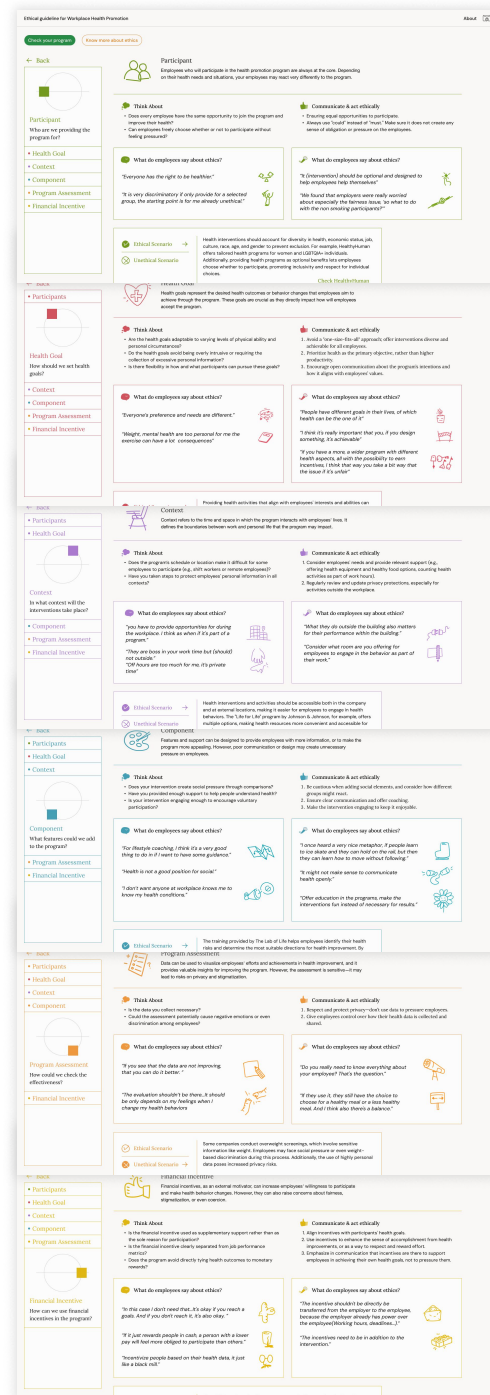
On the left side of the page is the navigation bar for "Check Your Program," allowing users to see which dimension they are currently evaluating and to switch between different design dimensions.

Introduction of the dimension

At the top of the content, there is a brief description of the design dimension.

Thinking, Communicating & Acting ethically

This section provides employers with evaluation questions and practical tips on how to communicate and act ethically. It offers direct and actionable advice.



Cases

Providing examples of both ethical and unethical scenarios offers context-specific references, helping employers reflect on their own company's interventions.

Users can switch between ethical and unethical scenarios by clicking on the tabs.

By clicking the link, users can access the webpage of the respective program.

What do employees & experts say about ethics?

This part aims to help employers consider ethical issues from the perspectives of employees and experts. Quotes serve as powerful evidence, fostering empathy and helping employers think from their employees' viewpoints.

Image 5.3 Check your program


Ethical guideline for Workplace Health Promotion
About

Check your program
Know more about ethics

1 4 Ethical Themes


Autonomy

Autonomy refers to respecting employees' right to make their own choices about participation. Health programs should always be voluntary, allowing employees to decide without pressure or coercion.




Fairness

Fairness ensures that all employees have equal opportunities to benefit from health programs. This means designing interventions that are accessible to everyone, regardless of their background or circumstances.




Discrimination

Discrimination occurs when a program unfairly favors or disadvantages certain groups of employees. Ethical health programs must avoid practices that could lead to unequal treatment based on factors like age, gender, race, or health status.




Privacy

Privacy involves protecting employees' personal health data. Programs must ensure that any collected data is secure and only used with the employees' consent, respecting their right to control their own information.



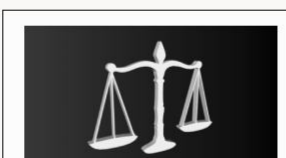
2 Toolkits

In the early stages of a project, involving employers and other stakeholders is essential. Below are some toolkits you can use:



Ethical compass

This toolkit is designed to help companies make ethical decisions when developing digital products. It also includes workshop materials for conducting ethical discussions with stakeholders.



Maslow Mirrored

Apply Maslow's Hierarchy of Needs to forecast the positive and negative ways your program might affect employees.

About

This website is based on my thesis project titled "Ethics in Workplace Health Promotion Programs."

The research explores the ethical challenges that arise in workplace health promotion programs (WHPs) and financial incentives designed to improve employees' health and well-being.

Through co-creation interviews with both employees and employers, the study identified common ethical concerns and gathered insights from various perspectives.

The findings have shaped the tools, guidelines, and evaluation framework provided here, helping employers navigate the ethical complexities of WHPs while respecting employee autonomy, fairness, privacy, and preventing discrimination.

Contact Us!

Thank you for your interest in the ethical issues surrounding Workplace Health Promotion Programs (WHPPs) and Financial Incentives (FIs).

Please enter your contact information and any questions you may have below.

Name

Email

Occupation

Content

4 Ethical Themes

Users who wish to "Know More About Ethics" can find an overview of ethical issues organized under the relevant ethical themes in WHPPs and FIs.

Toolkits

Additionally, users can access other ethical toolkits to further support their ethical practices.

Clicking "About" opens an overlay where users can find background information and opportunities for further engagement.

Image 5.3 Know more about ethics

6. Summary

This chapter reviews the entire research process, summarizing the key outcomes of each phase and their contributions to the final guideline. It also addresses the limitations encountered during the study, such as challenges in data collection and analysis. Lastly, the recommendations section explores potential directions for further research and design efforts to advance this field.

- 6.1 *Main Outcomes*
- 6.2 *Limitations*
- 6.3 *Recommendations*

6. Summary

6.1 Key Outcomes

Explore Ethics, Elements, and Effectiveness

The research provided a systematic overview of ethical issues related to Workplace Health Promotion Financial Incentives (WHPFIs). By identifying and categorizing key ethical considerations such as autonomy, fairness, discrimination, and privacy, the study highlighted how these factors influence the design and implementation of WHPFI programs. This overview serves as a foundation for understanding the complex ethical landscape that employers must navigate when introducing health promotion programs in the workplace.

The study explored the intricate relationship between ethics, elements, and effectiveness (EEE) within WHPFI programs. It demonstrated that ethical considerations play a crucial role in shaping both the effectiveness of health programs and the level of engagement among employees. Ethical programs were shown to positively impact participation rates, trust between employees and employers, and overall program acceptability. Conversely, programs perceived as unethical, such as those that feel coercive or invasive, tended to have lower engagement and diminished long-term effectiveness. This relationship underscores the importance of integrating ethical considerations into program design to achieve sustainable outcomes.

A Dual-perspective User Research

By examining the perspectives of both employers and employees, the research revealed significant insights into how these groups perceive ethics in WHPFI programs. While both employers and employees value ethical principles like fairness and respect for autonomy, their priorities differ. Employers often focus on maintaining a positive company image and ensuring that programs align with organizational goals. In contrast, employees are more concerned with having their individual needs and preferences respected, as well as maintaining a sense of choice and control over their participation. Understanding these differing perspectives is crucial for designing programs that are both effective and ethically sound.

Develop an Ethical Guideline for Employers

Based on the research findings, a practical and user-friendly ethical guideline was developed to support employers in the design and implementation of WHPFI programs. This guideline is structured as an interactive website, allowing employers to easily access information, evaluate the ethical dimensions of their programs, and adjust their strategies accordingly. It offers practical tools such as an ethical evaluation framework, cases, and reflective questions, making it suitable for use in real-world scenarios. The guideline aims to bridge the gap between ethical considerations and practical application, providing employers with the resources they need to create programs that respect employees' rights while achieving health goals.

[Link to the Prototype](#)

6. 2 Limitations

Scope of this study

The scope of this research was limited to the context of the Netherlands, focusing specifically on companies operating within this geographical and cultural environment. This limitation means that the findings may not fully capture the diverse experiences of companies in other countries, particularly those with different stages of workplace health policy development and varying ethical norms and cultural attitudes. The lack of comparative data from other countries limits the generalizability of the study's conclusions across different international contexts.

Time Constraints

Due to time constraints, the user research component of the study was limited, lacking the ability to conduct long-term observations and surveys on behavior change. As a result, it was not possible to collect data on the sustained impact of ethical considerations on long-term health behavior changes. This limitation makes it difficult to draw conclusions about how ethical aspects of WHPFI programs influence the persistence of healthy behaviors over time.

Limited Sample of User Research

The sample size of the study was relatively small and homogeneous, encompassing employees and employers from only two organizations: TU Delft, representing the education and research sector, and Vital10, representing the healthcare sector. This limited sample means that the study lacks data from companies of varying sizes, industries, and organizational cultures. The absence of diverse perspectives from different sectors, such as manufacturing, retail, or technology, limits the breadth of the findings and may affect the applicability of the results to a wider range of organizational contexts.

6. 3 Recommendations

This study examined WHPPs from four ethical perspectives, but ethics, being a concept that evolves with individual viewpoints and varying contexts, presents opportunities for further, more in-depth research.

Expand Ethical Guidance to Include More Stakeholders

While this study focused on the perspectives of employers and employees, it is valuable to involve other stakeholders, such as policymakers, healthcare professionals, and coaches, in discussions on how to address ethical issues. Future research could focus on studying these groups individually, while also exploring the value of involving them collectively in the design, implementation, and evaluation processes of WHPPs.

Leverage Design Thinking in Ethical Research

This project applied a design perspective to define and solve ethical issues, using design thinking to structure the research process. Through methods like "co-creation interviews," the study demonstrated the role of design thinking in academic research. The author encourages more designers to extend their influence beyond end-user-focused products, integrating design approaches into areas such as system management and service innovation, thereby generating broader societal impact.

Ethics in Tailoring Financial Incentives

Based on previous research on WHPPs and FIs, as well as insights gathered from experts and employees in this project, it is evident that tailoring financial incentives to align with individuals' personal aspirations can effectively promote health behavior change. Therefore, future research and application should focus on the ethical considerations involved in tailoring financial incentives, ensuring that such personalization respects individual autonomy and fairness while achieving the desired health outcomes.

7. Reflection

Reflecting on this journey, I am truly glad to have completed the exploration of design for ethics. I delved deeply into understanding the ethical risks that may arise in the field of healthcare and gained insights into the psychological principles of behavior change and motivation. This experience has been an extension of my work in experience design.

I am particularly pleased that this project allowed me to practice and develop my skills in facilitation and co-creation design methods. There were certainly imperfections in my approach, but I could clearly see my growth in this area and the direction for further improvement.



In this project, taking on the role of a "designer" to create a guideline for employers was a promising direction for me. During discussions with friends, I was once asked, "Is this project being done for the benefit of employers?" This question weighed heavily on my mind but also sparked a great deal of reflection. In my conversations with both employers and employees, I was delighted to find overlapping values regarding ethical standards, which reaffirmed my belief in humanity's commitment to ethics. At the same time, the differing perspectives made me more convinced of the necessity of studying ethical viewpoints from both sides. This dual perspective helps to highlight potential issues and guide the way for improvements. I believe I can now answer that initial question, as I see my exploration as being directed toward shared interests and finding ethically sound ways to achieve common values.

Looking ahead, I feel more confident in addressing ethical challenges and acting as a designer who takes responsibility for the consequences of their work. I am also determined to be more open, engaging in discussions with my future colleagues, clients, and even users about their views on ethics.

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A1. Project Brief


7206


IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

In this document the agreements made between student and supervisory team about the student's IDE Master Graduation Project are set out. This document may also include involvement of an external client, however does not cover any legal matters student and client (might) agree upon. Next to that, this document facilitates the required procedural checks:

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project's setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student's registration and study progress
- IDE's Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME

Complete all fields and indicate which master(s) you are in

<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">Family name</td> <td style="border: 1px solid #ccc; padding: 2px;">Chen</td> </tr> <tr> <td>Initials</td> <td style="border: 1px solid #ccc; padding: 2px;">S.CHEN</td> </tr> <tr> <td>Given name</td> <td style="border: 1px solid #ccc; padding: 2px;">Siqi</td> </tr> <tr> <td>Student number</td> <td style="border: 1px solid #ccc; padding: 2px;">5784530</td> </tr> </table>	Family name	Chen	Initials	S.CHEN	Given name	Siqi	Student number	5784530	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">IDE master(s)</td> <td style="width: 15%;">IPD <input type="checkbox"/></td> <td style="width: 15%;">Dfl <input checked="" type="checkbox"/></td> <td style="width: 15%;">SPD <input type="checkbox"/></td> </tr> <tr> <td>2nd non-IDE master</td> <td colspan="3" style="border: 1px solid #ccc; height: 20px;"></td> </tr> <tr> <td>Individual programme <i>(date of approval)</i></td> <td colspan="3" style="border: 1px solid #ccc; height: 20px;"></td> </tr> <tr> <td>Medisign</td> <td colspan="3"><input type="checkbox"/></td> </tr> <tr> <td>HPM</td> <td colspan="3"><input type="checkbox"/></td> </tr> </table>	IDE master(s)	IPD <input type="checkbox"/>	Dfl <input checked="" type="checkbox"/>	SPD <input type="checkbox"/>	2 nd non-IDE master				Individual programme <i>(date of approval)</i>				Medisign	<input type="checkbox"/>			HPM	<input type="checkbox"/>		
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HPM	<input type="checkbox"/>																												

SUPERVISORY TEAM

Fill in the required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Chair	Visch, V.T.	dept./section	HCD/CDF	<p>! Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why.</p> <p>! Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter.</p> <p>! 2nd mentor only applies when a client is involved.</p>
mentor	Buisonjé, D.R. de	dept./section	HCD/CDF	
2 nd mentor				
client:				
city:		country:		
optional comments	<p>This project runs parallel to a research project of David de Buisonjé in the context of the Enduring Rewards project led by Valentijn Visch. To ensure this alignment contentwise as well as the collaboration with project stakeholders, both 'same section' supervisors are needed.</p>			

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in by the Chair of the supervisory team

Sign for approval (Chair)

Name <u>V.T.Visch</u>	Date <u>18 Jun 2024</u>	Signature 
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CHECK ON STUDY PROGRESS

To be filled in by SSC E&SA (Shared Service Centre, Education & Student Affairs), after approval of the project brief by the chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total _____ EC	★	YES	all 1 st year master courses passed
Of which, taking conditional requirements into account, can be part of the exam programme _____ EC		NO	missing 1 st year courses

Comments: _____

Sign for approval (SSC E&SA)

Name Rik Ledoux Date 19-6-2024 Signature 

APPROVAL OF BOARD OF EXAMINERS IDE on SUPERVISORY TEAM -> to be checked and filled in by IDE's Board of Examiners

Does the composition of the Supervisory Team comply with regulations?

YES	V	Supervisory Team approved
NO		Supervisory Team not approved

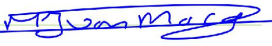
Comments: _____

Based on study progress, students is ...

V	ALLOWED to start the graduation project
	NOT allowed to start the graduation project

Comments: _____

Sign for approval (BoEx)

Name Monique von Morgen Date 18/7/2024 Signature 

Name student Siqi Chen Student number 5,784,530

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT
Complete all fields, keep information clear, specific and concise

Project title Ethics in the Workplace Health Promoting Financial Incentive Design

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

Encouraging healthy lifestyle choices in the workplace is vital for promoting individual employees' health and well-being because of the environmental diversity and the lot of time they spend at work [1]. "Workplace Health Promotion (WHP) is the combined efforts of employers, employees, and society... improving the work organization and the working environment, promoting active participation, and encouraging personal development," declared the European Network for Workplace Health Promotion [2]. Previous cases of WHP practice demonstrate that Health Promoting Financial Incentives (HPFI) had a significant effect on increasing the participation of employees in making health behavioral changes and increasing the effectiveness of the program [3]. By aiming to enhance productivity and reduce healthcare costs, more employers are willing to invest in promoting these incentive programs.

However, the ethical concerns of such programs remain unresolved. First, using financial incentives may affect employees' intrinsic motivation to health behavioral change, which could also cause disputes over the fairness of resource distribution [4][5]. In addition, although it has been confirmed that employer participation is essential, their involvement might carries the risk of discrimination and stigmatization in the workplace [5]. Moreover, ethical concerns about personal privacy arise particularly when employer incentives intrude into the personal lives of employees. These concerns can reduce the volunraries of employee participation in the program, impede the promotion of healthy lifestyle changes, and ultimately decrease the effectiveness of the program, failing to achieve the outcomes as the expectation of employers.

Although ethical regulations in medical and other fields can provide guidance, an ethical principle tailored to HPFI programs is still missing [6]. Therefore, this project aims to create a guideline to design ethically sound incentives from the perspectives of employees and employers engaged in the Health Promoting Financial Incentives program. The project is dedicated to filling the ethical gap in this field to support further design activities.

[1] Díaz-Benito, V. J., Vanderhaegen, F., & Barriopedro Moro, M. I. (2020). Physical activity and health promotion programs in the workplace: A meta-analysis of effectiveness in European organizations. *Journal of Workplace Behavioral Health*, 35(4), 232-255. <https://doi.org/10.1080/15555240.2020.1720515>

[2] ENWHP. ENWHP: Leuven: 2007. Luxembourg declaration on workplace health promotion in the European Union. http://www.enwhp.org/fileadmin/rs-dokumente/dateien/Luxembourg_Declaration.pdf

[3] Hill-Mey, P. E., Merrill, R. M., Kumpfer, K. L., Reel, J., & Hyatt-Neville, B. (2013). A focus group assessment to determine motivations, barriers and effectiveness of a university-based worksite wellness program. *Health promotion perspectives*, 3(2), 154-164. <https://doi.org/10.5681/hpp.2013.019>

[4] Roossien, C. C., De Jong, M., Bonvanie, A. M., & Maeckelberghe, E. L. M. (2021). Ethics in Design and Implementation of Technologies for Workplace Health Promotion: A call for discussion. *Frontiers in Digital Health*, 3. <https://doi.org/10.3389/fdgh.2021.644539>

[5] Madison, K.M., Volpp, K.G. and Halpern, S.D. (2011). The Law, Policy, and Ethics of Employers' Use of Financial Incentives to Improve Health. *The Journal of Law, Medicine & Ethics*, 39: 450-468. <https://doi.org/10.1111/j.1748-720X.2011.00614.x>

[6] Eva Kuhn, Sebastian Müller, Ludger Heidbrink, Alena Buyx, The Ethics of Workplace Health Promotion, *Public Health Ethics*, Volume 13, Issue 3, November 2020, Pages 234-246. <https://doi.org/10.1093/phe/pha007>

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Personal Project Brief – IDE Master Graduation Project

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice. (max 200 words)

How might we create an ethical guideline to design ethically sound Workplace Health Promoting Financial Incentives to enhance the justice of employer involvement, the autonomy of employee participation, and the effectiveness of incentives?

To reach the design goal of the project, three sub-questions will be answered:

1. How and to what extent could the employer intervene in the lifestyle of employees?
2. What ethical concerns might arise from different types of incentives from the perspectives of employers and employees?
3. How might we design and evaluate to create fair and achievable “carrots” to realize the health lifestyle change?

Employers have both the responsibility and capability to engage in health-promoting incentives for their employees, but ethical dilemmas might cause unintended effects, which will bring barriers to participation. By conducting research through human-centered design and co-design, a guideline will be created based on defined ethical themes. For each theme, the guideline will follow the structure of 5 parts: Definition, Literature Research, Expert and User research, Conclusion and Insights, and Recommendations”. By providing the guideline, there would be the chance to understand the ethical concerns and needs from the perspectives of employers and employees, and design the ethically sound financial incentives.

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Create a guideline for designing ethical Workplace Health Promoting Financial Incentives from the perspectives of employees and employers.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

The project will be carried out through the double-diamond model, with four phases:

1. Explore: Conduct preliminary research to understand the context and analyze ethical issues and their impacts. This initial research will consist of two parts: (i) Desk research to analyze theories and cases related to Health Promoting Incentives and ethics. (ii) Expert Interviews within the frame of “carrots, employers, employees”. The research questions will be: What could be the unintended effects ethical-related that financial incentives cause? Which ethical concerns might employees and employers have when the intervention intervenes in their personal lives? What could be the main ethical concerns to focus on?
2. Define: Integrate information from the research to derive ethical insights, define design directions: Which ethical issues to address, Which types and dimensions of the incentive to research on, and Which design practice to do. Develop and refine a 'research-through-design' process.
3. Develop: Recruit and conduct research-through-design practice with participants in the client company with human-centered and co-design methods. The goal of this phase is to understand the vision and desire of employers and employees, and to explore, discuss, and reflect on ethical issues in different incentive scenarios. The scenarios will focus on two incentive targets: (i) Daily behavior: food intake log, and physical activity based on daily step count, (ii) Outcomes of behavior (e.g. weight, blood pressure, cholesterol).
4. Deliver: Finish the final guideline with the 5-part structure, and refine the final guideline through 'prototype-evaluation' iterations.

introduction (continued): space for images

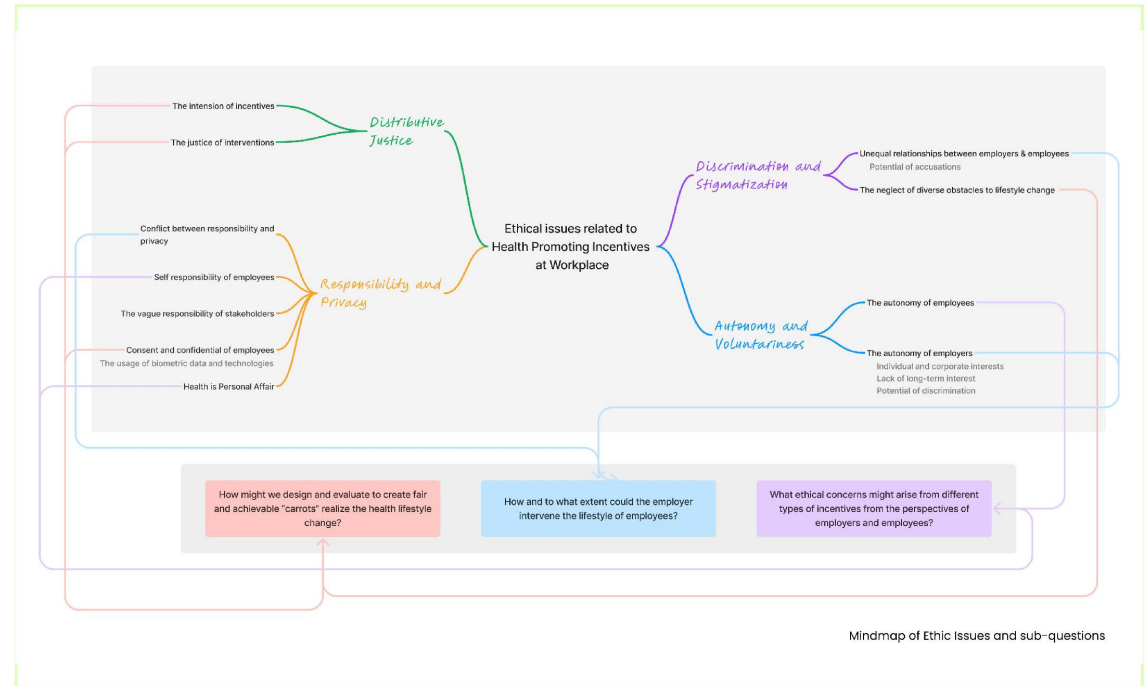


image / figure 1 Mindmap of Ethic Issues and sub-questions

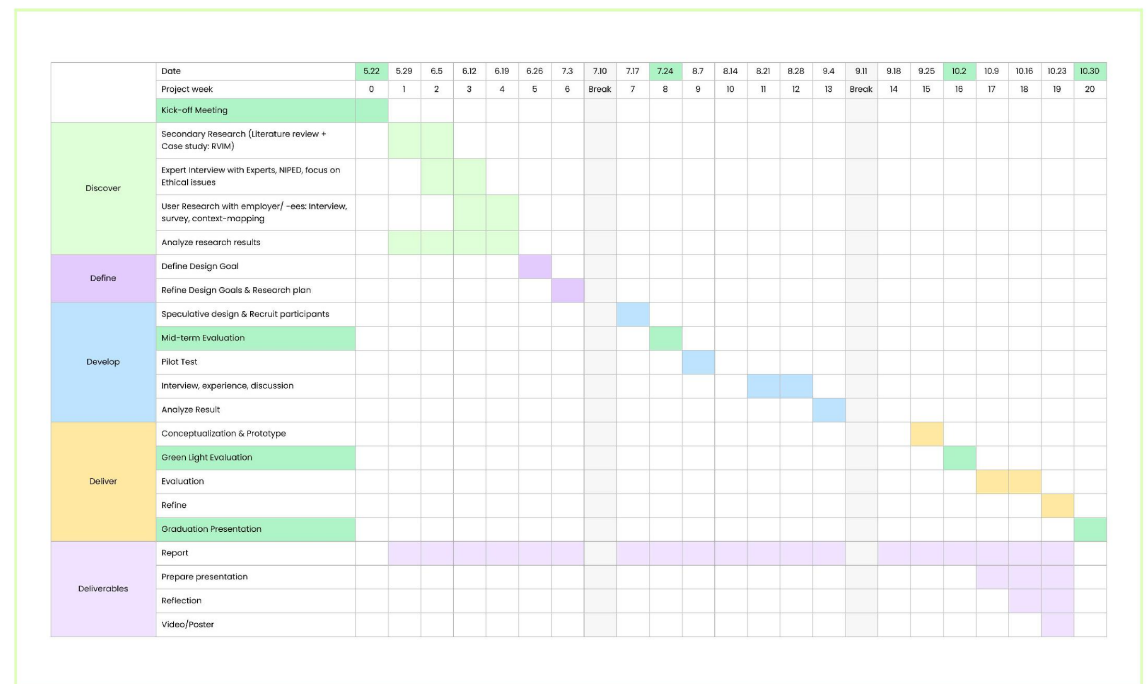


image / figure 2 Timeline

Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting, mid-term evaluation meeting, green light meeting and graduation ceremony**. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting	<u>22 May 2024</u>
Mid-term evaluation	<u>24 Jul 2024</u>
Green light meeting	<u>2 Oct 2024</u>
Graduation ceremony	<u>30 Oct 2024</u>

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	<input type="checkbox"/>
For how many project weeks	<input type="text"/>
Number of project days per week	<input type="text"/>

Comments:

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.

(200 words max)

I am dedicated to designing experiences for everyday life. Health is a topic of universal concern, and while products and services related to workplace health primarily aim to help employees achieve their health goals, their experience and effectiveness are challenged by ethical factors in the complex workplace environment. My project, as a practice of "design for design," will provide ethical insights for future design activities, presenting both a challenge and significant meaning for me.

Additionally, this project will enhance my design capabilities, shaping me into a creator who can tackle complex issues and design for a better future:

Develop the ability to facilitate communication between companies and designers, collaborating on complex problems and applying human-centered design within a business context. Gain experience in navigating the intricate balance between ethics and financial considerations.

Evolve into a responsible designer who considers the ethical, economic, and cultural impacts of designs.

Engage with the "research-through-design" methodology, explore the openness of design, and deepen my skills in co-creation, context-mapping, and storytelling.

I am excited about using this project as a validation of my learning outcomes and as a starting point for my future career.

A2. Consent Form

HUMAN RESEARCH ETHICS INFORMED CONSENT

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
A: GENERAL AGREEMENT – RESEARCH GOALS, PARTICIPANT TASKS AND VOLUNTARY PARTICIPATION		
1. I have read and understood the study information dated [DD/MM/2024], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>
2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	<input type="checkbox"/>	<input type="checkbox"/>
3. I understand that taking part in the study involves:	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> An audio-recorded interview, a set of co-creation materials to be completed. The participant will complete the co-creation exercise with provided materials. The audio recordings will be transcribed as text, and the recording will be destroyed. 		
4. I understand that the study will end in 30 minutes.		
B: POTENTIAL RISKS OF PARTICIPATING (INCLUDING DATA PROTECTION)		
5. I understand that taking part in the study involves the following risks [a]. I understand that these will be mitigated by [b].	<input type="checkbox"/>	<input type="checkbox"/>
<p>[a] No potential risk of physical or mental harm.</p> <p>[b] The participants own the ability to ask for the session to stop at any point.</p>		
6. I understand that the following steps will be taken to minimise the threat of a data breach, and protect my identity in the event of such a breach:	<input type="checkbox"/>	<input type="checkbox"/>
<p>The audio record will be processed into quotes and transcriptions with anonymization, no voice will be used.</p> <p>All the image with participants will be blurred.</p>		
7. I understand that personal information collected about me that can identify me, such as [my name, my position], will not be shared beyond the study team.	<input type="checkbox"/>	<input type="checkbox"/>
8. I understand that the (identifiable) personal data I provide will be destroyed after the research.	<input type="checkbox"/>	<input type="checkbox"/>
C: RESEARCH PUBLICATION, DISSEMINATION AND APPLICATION		
9. I understand that after the research study the de-identified information I provide will be used for	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The images of the user research materials in the thesis report/website. The quotes with de-identified information as the evidence of the research questions. All data will be used anonymously and cannot be traced back to any participant. 		
10. I agree that my responses, views or other input can be quoted anonymously in research outputs.	<input type="checkbox"/>	<input type="checkbox"/>
11. I agree that the written information and the draft created in the co-creation session will be used in the thesis and report after anonymisation process.	<input type="checkbox"/>	<input type="checkbox"/>

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
D: (LONGTERM) DATA STORAGE, ACCESS AND REUSE		
12. I give permission for the de-identified results that I provide to be archived in <i>the One Drive with limited access to the corresponding and responsible researcher</i> so it can be used for the research and learning, and being deleted after finalising this research.	<input type="checkbox"/>	<input type="checkbox"/>

Signatures

Name of participant [printed] Signature Date

[Add legal representative, and/or amend text for assent where participants cannot give consent as applicable]

I, as legal representative, have witnessed the accurate reading of the consent form with the potential participant and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

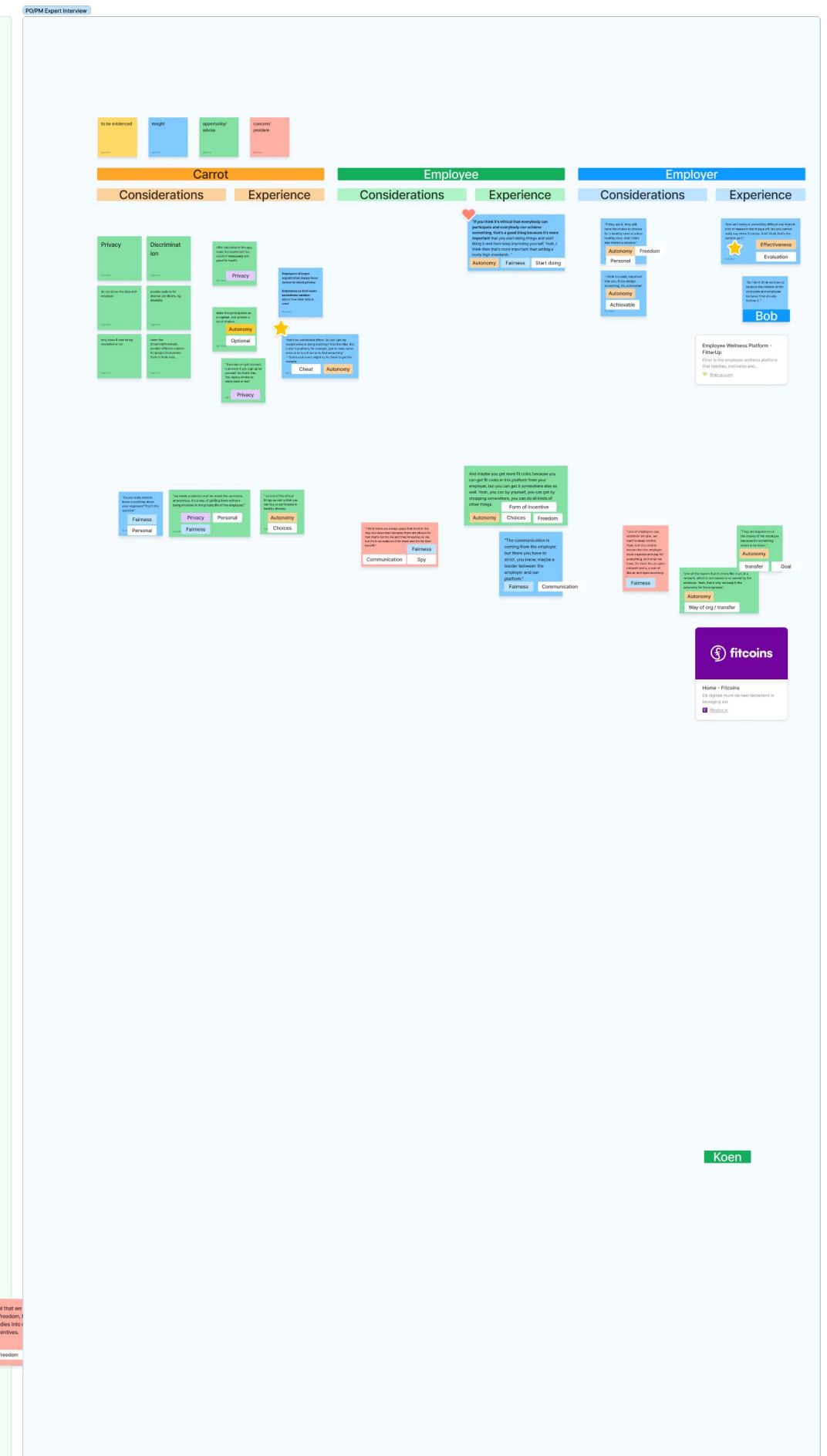
Name of witness [printed] Signature Date

I, as researcher, have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

Siqi Chen *Siqi Chen* 11.07.2024
 Researcher name [printed] Signature Date

Study contact details for further information:

A3. Expert Interview



A4. Expert Interview Cluster

Expert interview cluster

Autonomy

Autonomy (the biggest risk)

The biggest threat to autonomy, the most threatening part of incentives, is the amount of autonomy (the biggest risk)

most employees have their own interests in becoming healthier, but less people want to be healthier with incentives

If you look at the nationwide surveys, a lot of people actually want to engage in these behaviors. I want to be able to quit on my own and I don't need incentives. The other part is the people's related incentives are external motivation. And that was also a topic of concern among some people.

Metaphor-direction and guide of the WHP is important

They shouldn't be left to their own devices... I once heard a very nice metaphor: if people learn to go back and they get this very nice week where they can hold on to and then they can learn how to move without following. So you should use the incentives as direct. You can still learn how to hold on without it. Yeah, but your way towards holding becomes smoother.

to much freedom will have lead to limited effects

But also experienced in my trial that we give them a little bit of freedom for example, with changing our studies into not promoting openly about the incentives.

Fairness (general concern)

"No, I don't want to join this incentives thing because I think it's unfair." People would have would discuss like, hey, but is that fair? How about the non smoking employees? They don't get like to get an incentive. That's unfair. All employees can participate in all kinds of behavior changes and we give them and discount on their health insurance if they successfully participate.

And so you definitely see that employees were really worried about especially the fairness issue, so what to do with the non smoking participants? isn't it unfair? But I do think it's an ethical consideration that we did not think of enough is how to do with incentives for people with a low income wage. They might feel that it's some form of wage that others would get because they are already living a healthy life.

Concern form both ee&r Exclusive some group and diverse obstacle

Not really research. But from my own experience, what we noticed is that there were very interested in participating.

Fairness have potential negative impact on uptake and participation

But do think that's really the case that incentives are not the main reason why people change their behavior. We need to broadcast a lot more to people who would like to join a program that they know it's that incentive is really a nice addition to help them overcome, yeah, intention behavior gaps to deal with some without any programs, for example that, but it's not the key reason.

The incentive should be in addition to a program or some other form of aid that people can go to when they want to change their behavior, or whether they want to sustain their good lifestyle. I think that's very important

Autonomy
Incentive should be an additional part of the intervention
incentive is a kinds of external motivation

This incentive shouldn't be directly be transferred from the employer to the employee, which will definitely harm autonomy.

Autonomy
-prevent the sense of being controlled by employers

I see them mostly as an addition to strengthen the adherence to existing interventions. And I think that's, if you look at the, like the ethical discussion that we had before in this talk, that people might feel that you might coerce people to do something that they don't want.

Paternalism is the sense that the employer has the feeling that they know better than you. I do think that the employer can raise a lot of attention for things about healthy lifestyle, after courses and, feedback as much as possible, advice and also talk to people directly. But I think they're very good. But the employer cannot force people to go on because that's definitely to my loss. There should be one, at least one other form of guidance guide for people. Offer multiple different programs let employees to choose. Voluntary no one is obligated to take part into a program. This is optional and it is designed to help employees help themselves. Autonomy is not a goal in itself, it's a means to an end. Autonomy is not a goal in itself, it's a means to an end.

relieves a lot of the ethical difficulties. **Autonomy--**
Optional and provide choices / the right to choose not being health

Achievable Target (discrimination)

Achievable is more important than high standards. If you think that it's not achievable, then it's not achievable. It's not about the goal, it's about the process. It's not about the goal, it's about the process.

acceptability

Privacy

It might not make sense to communicate this openly. People have different goals in their lives, of which health can be the one of it. If this incentive is pushing people so hard to achieve this particular goal, it might result in other important goals.

Employer&employees relationship

Bob: "I don't think we have to balance the interest of the corporate and employees because they already believe it." Stefan: "The financial reasons for wanting to invest in health are not necessarily aligned with what employees want." Stefan: "The reason of caring about employee health conditions are not the same." Stefan: "If having health employees is the common goal, then that interest is aligned." Stefan: "Don't directly pay your employees, but you need to have an intervention and the incentives need to be in addition to the intervention and the intervention needs to be freely available, et cetera, et cetera."

Stefan: "People have different goals in their lives, of which health can be the one of it. If this incentive is pushing people so hard to achieve this particular goal, it might result in other important goals."

The boundary between work and the private life Relationships
Health is just one of the life goals

Context

What does the intervention ask if it's of a asks for behavior change that makes people engage in the behavior on part of their work. Consider in the design of the incentives is what room are you offering for employees to engage in the behavior on part of their work. A good lifestyle is not very obviously not necessary for work. It's important one could be to what degree can intervene in people's lifestyles in the decisions that also place without outside of the outside of this building, the workplace. On the other hand, what they do during the building also matters for their performance within the building.

The boundary between work and the private life

Evaluation & Effectiveness

It's, and not directly necessary for people to do their job well, so also participate in an intervention. It could maintain employees because they like that you offer a lot of stuff for them, but it's not that's no guarantee. So that could be a feedback. The communication is coming from the employer, but there's a need to think, you have to make a trade-off between the employer and the employee.

Employer's considerations & how to monitor, invest & adding another power

Incentive Form

The way and the form of incentives

The incentive shouldn't be directly be transferred from the employer to the employee, because the employer already has power over the employees (working hours, deadlines...).

that's why I think we have to really think about how can we make incentives attractive.

It needs a party which is independent and they can offer an intervention. And part of that intervention could be a financial incentive and of course, it could be funded by the employer.

more think about what type of incentives can you give to people and other types of monetary incentives that you, for example, would not have to report as income.

Effectiveness

Make sure the incentives they offer fits the budget. They should be involved in defining the early phases of the design in terms of making sure that whatever options are acceptable to the employer.

deposit

deposit based programs can also overcome this issue, also look away the feeling of external motivation because it's your own money and that makes, you know, already more interesting.

Autonomy different form of incentives might be better than direct monetary incentive

social fetures

A social component has been best incentives they have, they generally stick quite well.

I think that's also really a part where we could involve the potential participants in not only what level of program should I be that changes behavior, but also how should the money be structured? what kind of incentives do they want to receive?

I think that's also really a part where we could involve the potential participants in not only what level of program should I be that changes behavior, but also how should the money be structured? what kind of incentives do they want to receive?




And to hopefully then overcome some barriers or misconceptions between our own beliefs and how potential participants view the program.

I think that's also really a part where we could involve the potential participants in not only what level of program should I be that changes behavior, but also how should the money be structured? what kind of incentives do they want to receive?




bias of how people view

A5. Element Card




Participants

 <p>All employees</p> <p>Describe or sketch in detail</p> <p>Voluntary or compulsory? For which specific group?</p>	 <p>Healthy group</p> <p>Describe or sketch in detail</p> <p>Voluntary or compulsory? For which specific group?</p>	 <p>Unhealthy group</p> <p>Describe or sketch in detail</p> <p>Voluntary or compulsory? For which specific group?</p>
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Features

 <p>Personal plan</p> <p>Describe or sketch in detail</p> <p>A tailoring program for you? or be free to choose your goals?</p>	 <p>Social features</p> <p>Describe or sketch in detail</p> <p>Competitive or Collaborative? Will everyone be rewarded?</p>	 <p>Lifestyle coaching</p> <p>Describe or sketch in detail</p> <p>What kinds of health education will be provided?</p>
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Context

 <p>Workplace</p> <p>Describe or sketch in detail</p> <p>At Office? Home office? In which specific context?</p>	 <p>Break</p> <p>Describe or sketch in detail</p> <p>Lunch/Coffee break? Weekends? In which specific context?</p>	 <p>Off hours</p> <p>Describe or sketch in detail</p> <p>At home? During the commute? In which specific context?</p>
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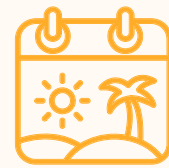
Evaluation

 <p>Attendance</p> <p>Describe or sketch in detail</p> <p>What counts as the attendance?</p>	 <p>Behavioral records</p> <p>Describe or sketch in detail</p> <p>How are behaviors collected? How are data used?</p>	 <p>Health check data</p> <p>Describe or sketch in detail</p> <p>What kinds of data will be checked?</p>
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Goal

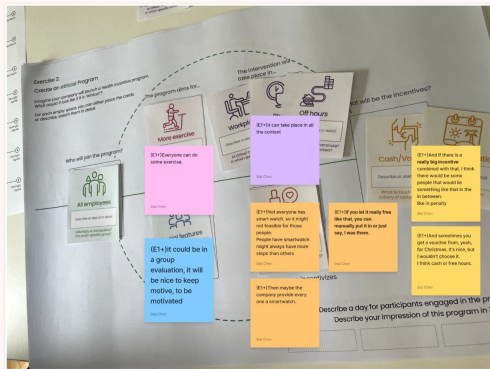
 <p>More Exercise</p> <p>Describe or sketch in detail</p> <p>What kinds of exercise? Everyone has the same goal?</p>	 <p>Mental & Sleep</p> <p>Describe or sketch in detail</p> <p>Control stress? Sleep better? Everyone has the same goal?</p>	 <p>Weight/Nutrition</p> <p>Describe or sketch in detail</p> <p>Lower weight? Healthier Eating? Everyone has the same goal?</p>
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Incentive

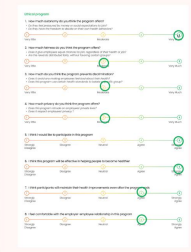
 <p>Cash/Voucher</p> <p>Describe or sketch in detail</p> <p>Penalty or rewarding? For which product?</p>	 <p>Lottery</p> <p>Describe or sketch in detail</p> <p>What as penalty? Salary? In which situation?</p>	 <p>Free hour/Vacation</p> <p>Describe or sketch in detail</p> <p>How much extra time can people gain?</p>
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A6. User Research Created Programs

Like you connected either a step device like your mobile or a smartwatch and as a group you had to make the most steps and then you walk. So everyone was going to involve more in their free time just to get to the first place with the most steps.

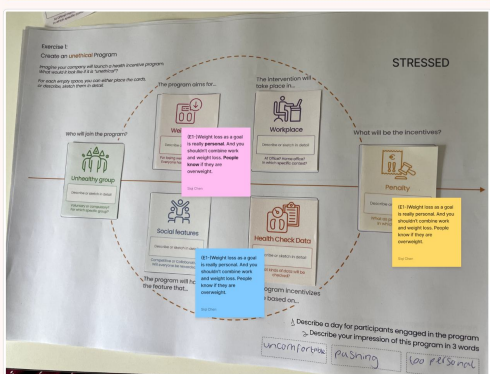


Motivating
Interesting(collaborative)
Healthy

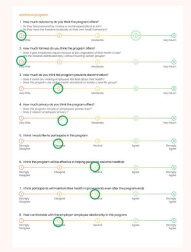


So everyone was going to involve more in their free time just to get to the first place with the most steps.

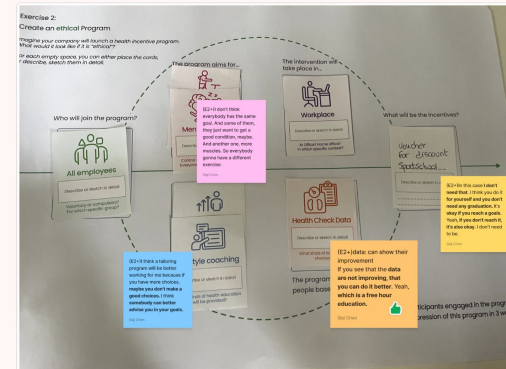
A program offered for overhead people in the company. They are grouped together and walk the steps every month after the weight checking at workplace. The one who walks the least steps lose all the money from their salary.



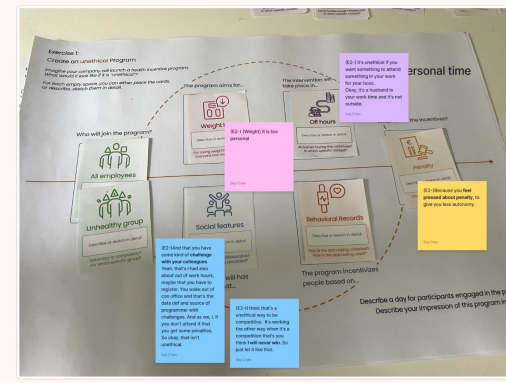
Uncomfortable
Pushing
Too personal



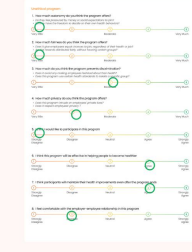
A day that everybody get email, an email to attend them, that it's possible to follow a program about your to improve your . And like we can speak about it during your day at work.



Motivating
Clear with your
health(consciously)

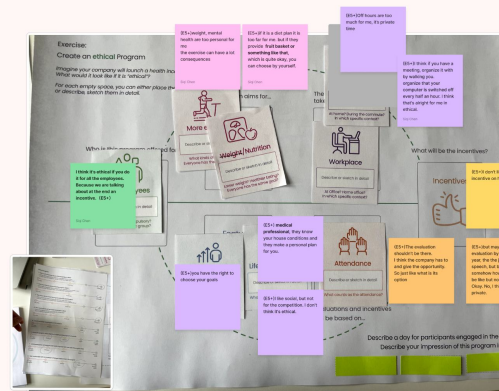


Dislike
Useless
Stressful

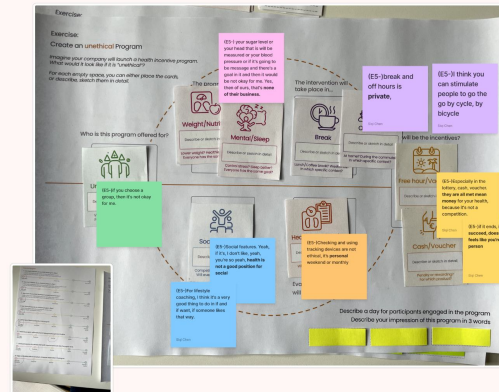
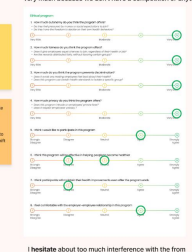


WHP: N, would like to have interventions

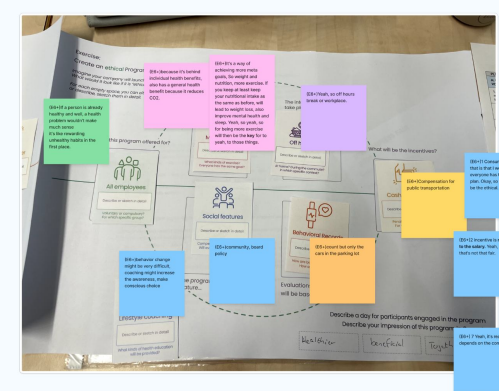
Incentive: N, don't want to have financial incentive because she has her intrinsic motivation



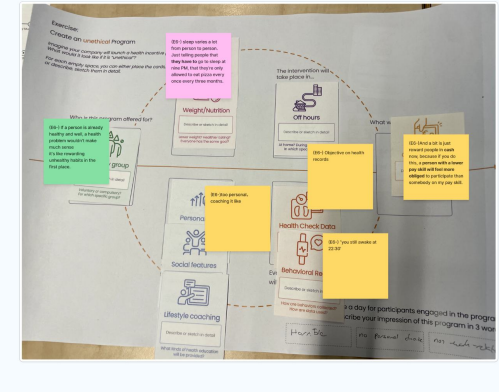
environment-driven
Health awareness



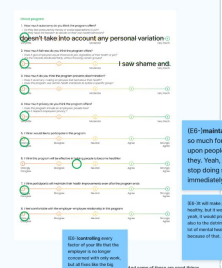
evil
unacceptable
I will quit the job in the reverse.



Healthier(sustainability health point of view)
Together

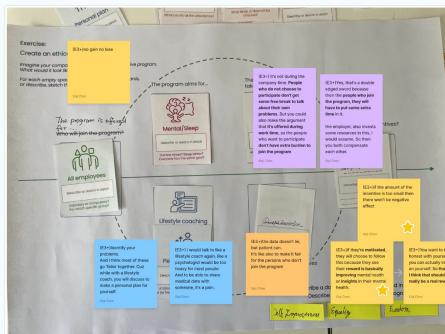


Horrible
No-personal-choice
Non-work-related



So a gym plan would also be quite convenient to have.

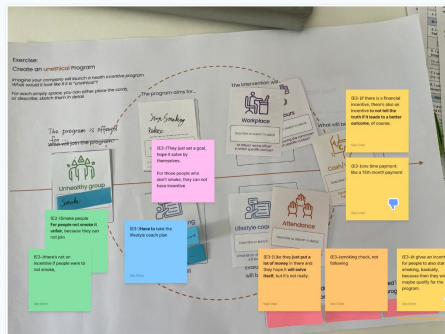
cost reduction on our fitness plan or like you will be allowed to go to the gym hired from the hospital. you still get paid per kilometer for travel time. And all my colleague sometimes stays here to work out in the area provided down there. it's also something you could use if you would want to.



Self-improvement
Freedom



Quit smoking with the aides of a lifestyle coach and the incentive to get extra money at the end of the program. if they quit during the process and they will get nothing

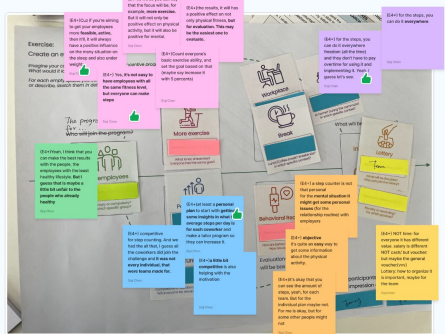


Unethical
Exclusive
Prestigious-driven, in vain

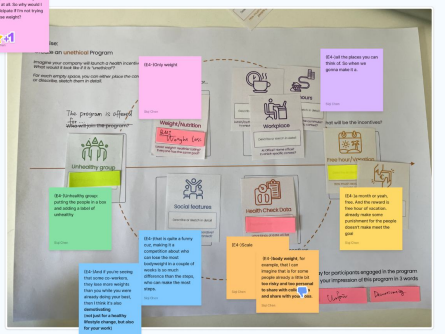
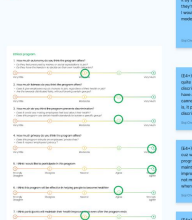


It's important to have a healthy lifestyle. And also it works throughout the week, if you're life style is healthy at work, that is already a big part of the whole week

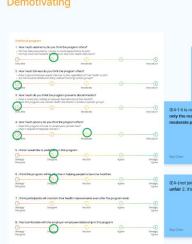
positive stimulates the employees to get a healthy life I don't think it's fair to punish the employees who don't have a healthy lifestyle, I only think that it's fair to get rewarding on salary.



motivating
easy fun

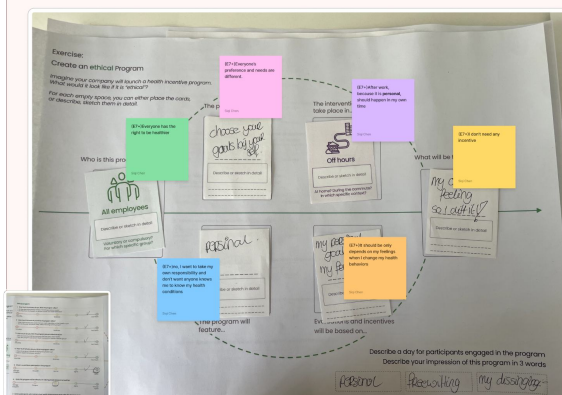


Stressful
Unfair
Demotivating

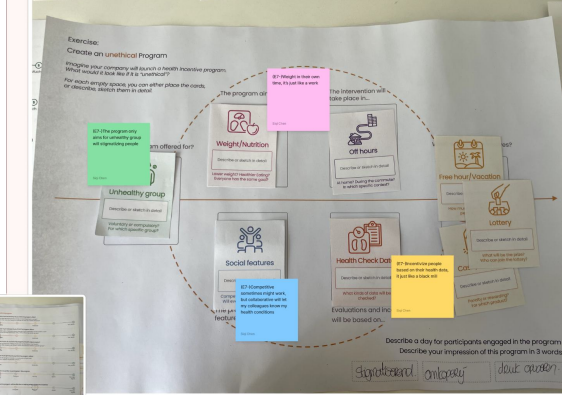
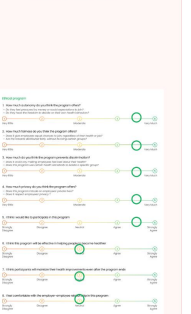


You cannot see what the locations are and where they went. So I think the privacy is, this is okay. So very much.

No, and don't need
No, work and life should be separated



Personal
Free-willing
Personal decision



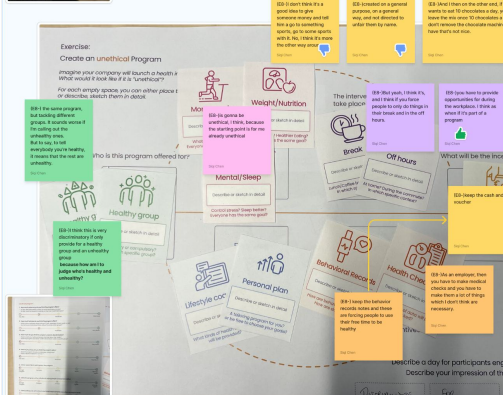
Stigmatized
Pushing
Black mill



Yes, it's a good thing could be provided by company
Yes,



Engage
Activate yourself
Enjoy



Discriminate



Voluntary Non-selective Personal

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? All employees, Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Voluntary, Non-selective, Personal.

Selective Discriminating Unequal

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Selective, Discriminating, Unequal.

Nice High expectations not really reachable but nice

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? All employees, Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Nice, High expectations, not really reachable, but nice.

Limited Company based Unfair

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Limited, Company based, Unfair.

Intrinsic-Motivation Ethical

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? All employees, Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Intrinsic-Motivation, Ethical.

Discriminating Control Shaming

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Discriminating, Control, Shaming.

Personalized Vitality Subscription

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Personalized, Vitality, Subscription.

Honesty Helpful Gain more in the long run

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Honesty, Helpful, Gain more in the long run.

Prison Big-brother Paternalism

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Prison, Big-brother, Paternalism.

dishonesty Big brother Unhelpful in the long run

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: dishonesty, Big brother, Unhelpful in the long run.

Discriminating Control Shaming

Exercise: Create an ethical program. Imagine your company will launch a new program. For each activity, you can choose to include or exclude it. Describe your impressions of the program in 2-3 words.

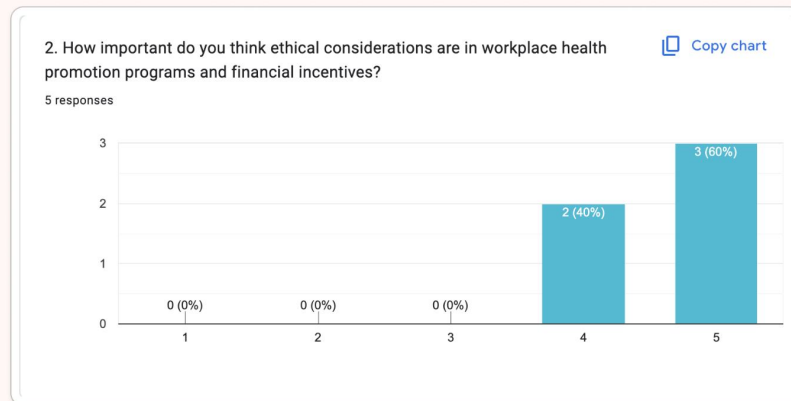
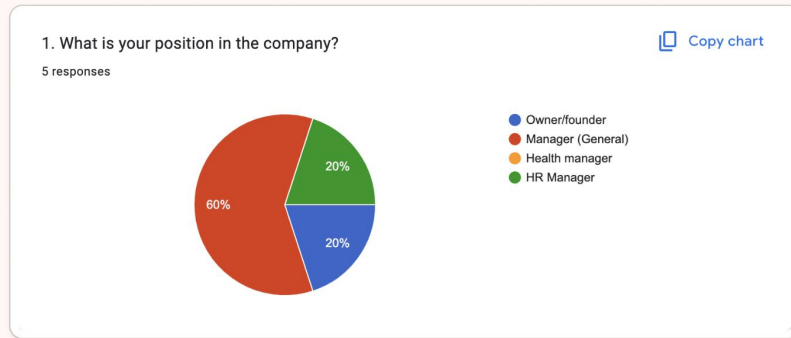
Who is this program offered to? Selected employees, Unhealthy group, Personal group.

What is the program offered for? Health check, Mental sleep, Weight, Off hours, Social features, Incentives, Health check, Mental sleep, Weight, Off hours, Social features, Incentives.

Describe your impressions: Discriminating, Control, Shaming.

A7. Survey

Survey



average: 4.6



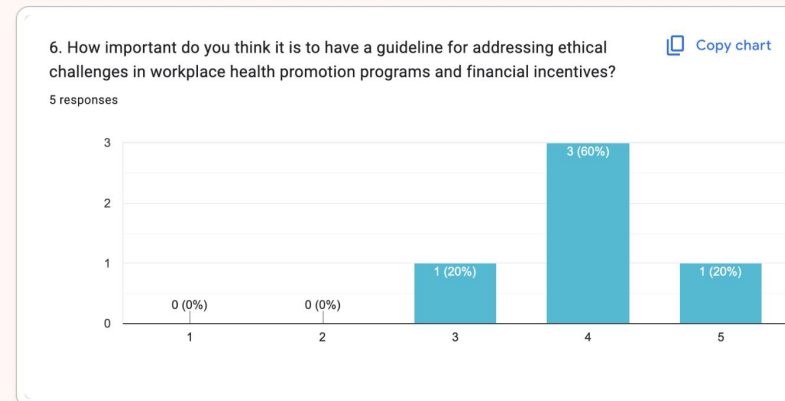
average: 3



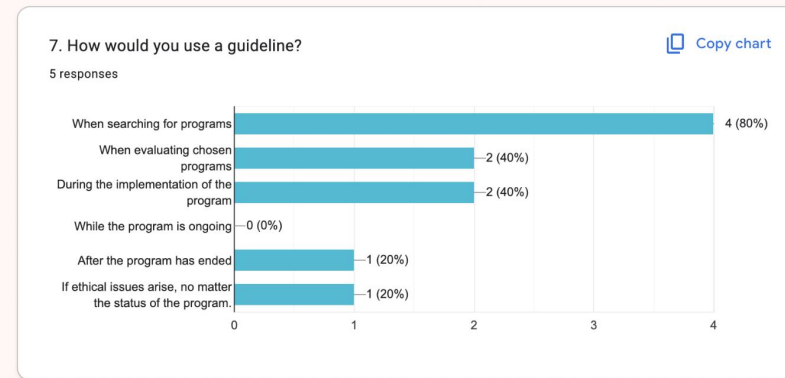
average: 3.6



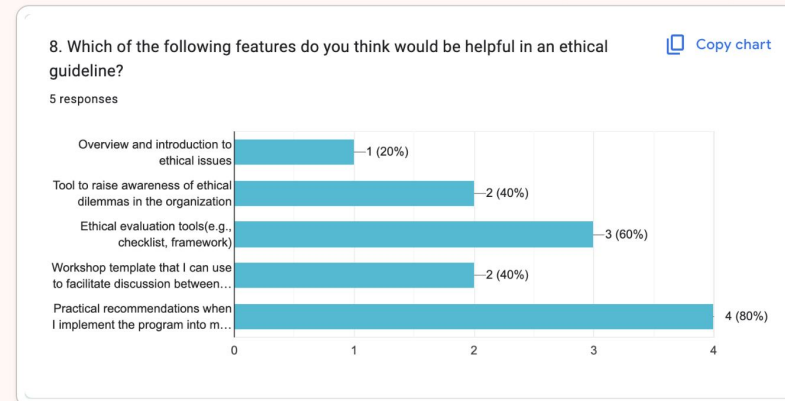
average: 3.6



average: 4



Searching, evaluating, During



Practical, Evaluation tool, workshop & awareness

A8. Card-Sorting

