



Biometric Screenings and Health Initiatives: A Preliminary Study

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Abstract (Abstract Heading Style)

Wellness programs are becoming pervasive in the workplace. The following study captures employees' perceptions regarding wellness programs, health initiatives, and biometric screenings in a Hungarian company. As a result, nearly 95% of the respondents stated that biometric screenings are important; more than 88% expressed interest in participating in a screening event. More than 70% of the employees believe that it is the company's responsibility to safeguard the workforce's health. Approximately 90 % prefer an employer with health initiatives, and 61% trust an organization concerned about the worker's health.

Keywords: Biometric, Screenings, Occupational, Safety, Health

1 Introduction

Economy development can be achieved thanks to working activities. Employees should be considered the most valuable asset in a company. Hence, accidents, injuries, work-related illnesses, and fatalities directly influence the economy and impose a heavy burden on the family and society[1].

Occupational safety and health (OSH) management systems provide various benefits to the company and the workforce. Some of the advantages are enumerated below[2]–[4]:

Company

- As hazards, risks, and accidents are monitored and minimized. The company saves money in unplanned costs, health, insurance, fines, and compensations.
- The company's image, reputation, and value are created and enhanced. OSH initiatives show social responsibility
- The return on investment is high. For one euro spent in OSH practices, at least two euros return as profit for the business.
- OSH procedures maximize productivity and competitiveness and enhance sustainable development.

Employees

- Employees are healthy and motivated, which stimulates a multiplier effect in the workplace and their personal life to overcome poverty.
- Turnover and absenteeism are reduced while retaining trained staff, and job satisfaction is enhanced.

1.1 Wellness programs at the workplace

Wellness programs have become very popular among medium and large enterprises. They consist of a series of activities developed at the workplace, aiming to improve the employees' well-being [5]. These programs can be categorized based on the type of prevention efforts carried out. Table 1 shows the prevention efforts classification, the targeted population, and several examples.

Table 2: Classification of wellness programs based on the type of prevention efforts [6]

Type of Prevention	Target Population	Examples
Primary	Employees that are healthy or susceptible to preventable diseases	• Exercise
		• On-site fitness centers
		• Healthy eating
		• Adult vaccination campaigns
		• Weight and stress management programs
Secondary	Employees that are at risk due to certain lifestyle habits	• Smoking cessation programs
		• Weight loss programs
Tertiary	Employees that already have a health condition	• Disease management programs
		• Medication compliance programs

Biometric screenings constitute an essential component of wellness and health-promoting initiatives. These screenings are defined as measuring physical characteristics such as height, weight, body mass index, blood pressure, blood cholesterol, blood glucose, and physical exams taken at the workplace. These tests provide insight into the worker's health condition to arrange and put in practice prevention efforts[7].

The following work presents a preliminary study executed in a Hungarian company. Its main goal was to acquire information concerning employees' opinions and perceptions about health initiatives and the importance of workplace biometric screenings.

1.2 Antecedents

The research was done in a multinational company located in Budapest- Hungary. This company has a well-structured wellness program. The program consisted of several health-based activities such as tobacco cessation programs, disease screening, fruit availability in the workplace, on-site fitness activities, and discounts in gyms and physical activity centers. Additionally, this program has a web-based component, where the employees can register and be part of a virtual health network. In this community, health advice, interaction with other members, access to a mobile wellness application, and the possibility to pair fitness devices is provided. The company does not regularly offer biometric screenings. However, some biometric characteristics are collected and analyzed during health-oriented activities.

1.3 Objective and Rationale

This work aimed to explore the employees' perceptions regarding wellness programs, especially biometric screenings. It also captures their opinions and needs concerning wellness programs and ways to improve them.

Workers' involvement at every stage of wellness programs implementation promotes safety and health outcomes[8], [9]. Suggestion programs and surveys are beneficial because they collect data from the most reliable source. Workers are the people that know the most about their health, safety

necessities, and workplace hazards. Moreover, these programs empower employees and get them actively involved in safety and health initiatives[10], [11].

2 Methodology

The study comprised a thirty-one question survey, addressing the company's needs regarding data about the opinion, suggestions, and employees' requirements concerning wellness programs and health. The questions included demographic data, Likert scale questions, close and open-ended questions. The survey had four components:

1. Personal Information
2. Health Habits
3. Biometric screening questions
4. Workplace Health Initiatives

The survey was sent to the employees via a social networking service exclusively used at the corporation. It was available for two months, from December 2017 until January 2018.

3 Results

After retrieving and cleaning the data, eighty-nine respondents were used to presenting the data below. Descriptive statistics were applied to summarizing the data obtained in the survey. Microsoft Excel and SPSS were used for calculating means, standard deviations, percentages, and frequencies.

3.1 Demographic Data

The demographic data presented in Table 3 shows a slightly higher percentage of women compared with men. The average age is 37 years. Marital status is higher for married/ in a relationship while having children was reported by 36% of the sample surveyed.

Table 3. Demographic Data Preliminary Research

Characteristic	Value
Gender (%)	
Male	46,1
Female	53,9
Mean Age (Standard Deviation)	36, 69 (9,168)
Marital status (%)	
Married/ In a relationship	76,4
Single	23,6
Children (%)	
Yes	36
No	64

3.2 Health Information

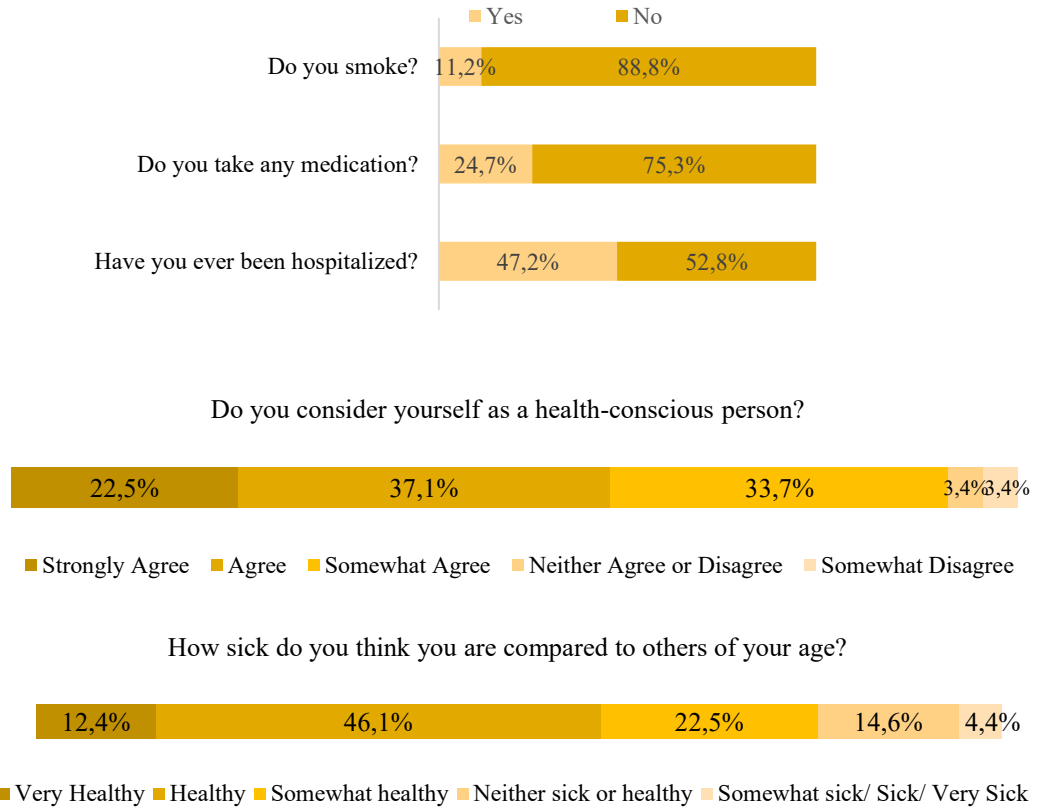
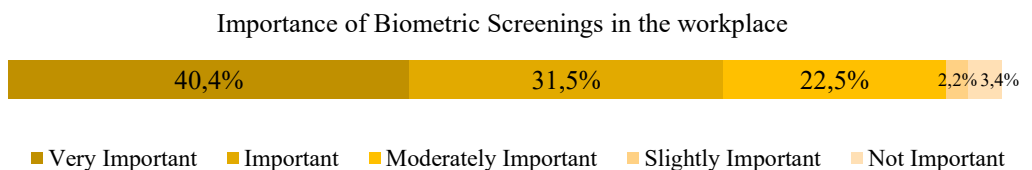


Figure 1. Health data preliminary research

Regarding health data, Figure 1 shows several health habits and perceptions among respondents. Health habits such as smoking and medicine intake present low percentages, while hospitalization is 47%. Concerning health perception, 81% of the respondents think that they are healthy, and nearly 94% agreed that they are conscious about their health.

3.3 Biometric Screenings



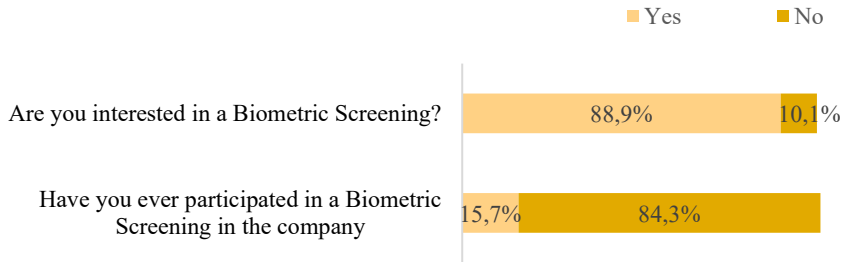


Figure 2. Biometric Screening Information Preliminary Research

Figure 2 presents data regarding the respondents' opinions about biometric screenings. More than 90% believe biometric screenings are important in the workplace. Concerning willingness to participate, nearly 89% are interested in being part of a biometric screening event while only 15.7% participated in screenings inside the company.

3.4 Wellness Initiatives

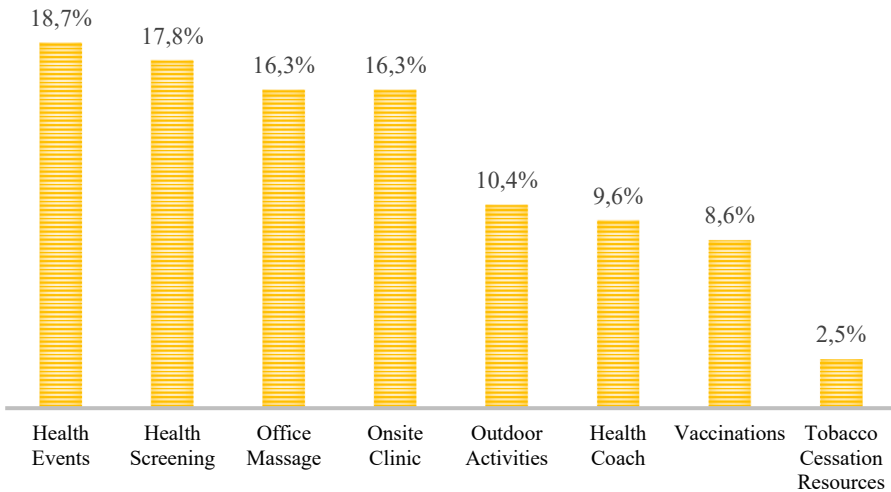


Figure 3. Wellness programs importance

Figure 3 ranks the importance of different wellness programs, according to the respondents. Health-related events, screenings, and health coaches are ranked higher than other activities such as tobacco cessation resources and vaccinations.

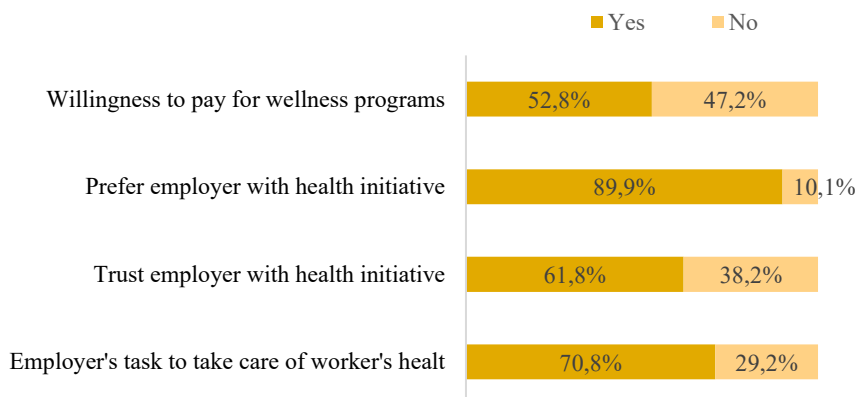


Figure 4. Wellness program opinion

Figure 4 shows several impressions regarding wellness programs. Concerning the employer's opinion about wellness programs, the respondents' preference was for a company that pays attention to their health. Additionally, more than half of the respondents are willing to pay for this type of program.

3.5 Other data

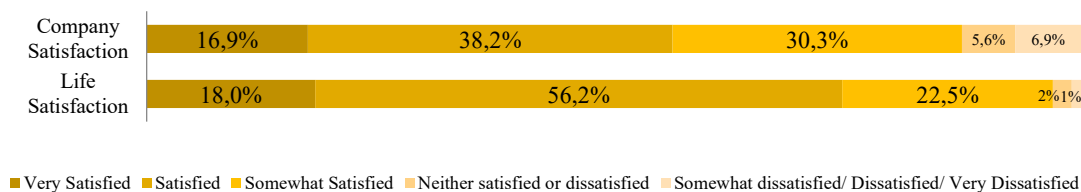


Figure 5. Company and life satisfaction

Figure 5 displays information concerning the respondents' level of satisfaction in life and the company. More than 85% answered that they are satisfied with the company with a minor percentage dissatisfied while nearly 97% are satisfied with their lives, and just 1% is dissatisfied.

4 Discussion

The importance of this preliminary research was to acquire a baseline regarding different aspects of wellness programs, especially biometric screenings. The survey administered to the employees gathered their perceptions, opinions, and suggestions to make the wellness initiatives, including biometric screenings, as valuable for the company as they are for the employee.

The survey's participation rate was low; 89 of the respondents were used to present the results. Even though wellness programs' availability and initiatives are continuously increasing in corporations[12], workers' participation is low[13], [14]. For this particular survey, more advertisements and an extended period to collect data could have given better results. Also, targeting

groups such as young[15], [16], or health-conscious employees[17] can increase participation rates.

This survey helped the company know about the employees' perceptions of health programs and their primary needs regarding its health initiatives. For example, a high percentage of the respondents trust and prefer an employer concerned about the workforce's health. Moreover, employees mainly suggested health-based wellness programs such as screenings and health coaches.

One of the survey's critical findings was the importance of these screenings for the employees regarding Biometric Screenings. More than 90% of the respondents think biometric screenings are very important, important, or moderately important. Furthermore, a significant percentage of the respondents expressed their interest in participating in this type of event while just nearly 16% participated in a biometric screening in the company. Therefore, it opened an opportunity to plan and execute a biometric screening event.

5 Conclusions

The study presented below summarized the employees' opinions concerning work wellness initiatives and created awareness about the importance of biometric screenings in an organization. The effectiveness of OSH initiatives in place or the introduction of new ones at an organization can be easily assessed by revising the biometric screening results. The results can indicate which OSH interventions benefit the workforce health over time, which ones need to be changed or updated by evaluating biometric markers such as blood pressure, weight, cholesterol, and more.

Biometric screenings are just one step to attain workers' health and safety. They do not replace an appointment with a physician but motivate a better lifestyle by making informed decisions about their health and change into healthy and safer behaviors. Its results need to be integrated with other components such as work processes and hazard assessments to providing motivating, satisfying, and quality jobs.

As for the upcoming trends in wellness programs nowadays. Tracking devices such as smartwatches or mobile fitness applications that collect the number of steps, heartbeat, calories burned, distance, and hours of sleep are gaining popularity among big enterprise companies. These devices can also accommodate each employee's different health necessities, such as pregnancy, diabetes, high cholesterol, blood pressure, or fitness, to create a program that motivates them and shows health improvement. Moreover, the usage of wearable tracking devices as part of a wellness program suggests a statistically significant reduction in body mass index values in employees [18].

The impact of sedentary jobs on workers' health is catching the public's attention. Health policies are trying to shape the work environment, but they do not provide enough incentives to the corporations. Biometric screenings can be the initial point for improving health and giving the employer motivation by offering data that can impact safety that, in the long term, reduces costs and improves the workforce's morale and the company's image.

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