International Journal of Marketing, Communication and New Media
ISSN: 2182-9306. Special Issue on Sustainable Marketing, JUNE 2021

Research Paper

The Participation of Manufacturing Employees in Workplace Health Promotion Programmes: Determinants and barriers

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ABSTRACT

Workplace health promotion programmes (WHPPs) are of growing interest to employers. They are treated as practices combining corporate social responsibility (CSR) and human resources (HR) objectives. However, when it comes to employees, the interest in these programmes is unsatisfactory. This raises the need to study the determining factors in employee participation in such company schemes. The aim of this article is (1) to examine the socio-demographic determinants for participation in workplace health promotion programmes by workers in manufacturing companies and (2) to identify barriers to participation in these programmes. A two-stage procedure was used. First, the data provided by one manufacturing company in Poland concerning the participation of employees in the workplace health promotion programmes were analysed. Next, a survey among 228 employees of this company was conducted. As a result, the socio-demographic determinants of employee participation in workplace health promotion programmes were established. Five groups of barriers to the participation of employees in workplace health promotion programmes were also identified. Eventually, recommendations for building these programmes as well as for further research into employee participation were proposed.

Keywords: Employee participation in WHPPs; workplace health promotion programmes; WHPPs; barriers to WHPPs; manufacturing company

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Received on: 2021/03/29

Approved on: 2021/05/28

Evaluated by a double blind review system

1. INTRODUCTION

Workplace health promotion (WHP) has been gaining a lot of interest recently, as it can benefit both employees and organisations (Van De Ven, Robroek & Burdorf, 2020). Companies increasingly offer their employees the opportunity to participate in workplace health promotion programmes (WHPPs). Such programmes are considered to be a manifestation of corporate social responsibility (CSR), socially responsible human resource management (SRHRM), and social marketing strategies. Researchers analyse WHPPs primarily at the organizational level without paying proper attention to employees' perception of this kind of support (Christensen, Larsen, & Kolind, 2020; Nöhammer, Schusterschitz & Stummer, 2010). Interest in WHPPs is also related to the COVID-19 pandemic, which has made it necessary to strengthen pro-health behaviours recommended by the World Health Organization (WHO) and to prevent behaviours that are no longer considered socially responsible (Bavel et al., 2020). However, many studies have reported low levels of employee participation in WHPPs (e.g. Ilvig et al., 2018; Kaveh, Layeghiasl, Nazari, Ghahremani & Karimi, 2021). Furthermore, it was noted that the employees who would benefit the most from participating in WHPPs are not necessarily involved (Nöhammer et al., 2010). This requires examining the determinants of participation in WHPPs since there are no clear indications regarding the effectiveness of WHPPs across socio-economic groups (Van De Ven et al., 2020). In addition, the barriers for participation in WHPPs faced by employees should be analysed (Ilvig et al., 2018).

The purpose of this article is twofold. Firstly, it aims to examine employee participation in WHPPs and its socio-demographic determinants. Secondly, it attempts to identify barriers that limit participation in these programmes. The investigation was limited to the employees of one manufacturing company in Poland. Both the company's and employees' perspectives were taken into consideration. In the first step, an analysis of WHPPs implemented during the COVID-19 pandemic was carried out. Next, the employee-perceived barriers to participation in WHPPs were examined.

2. LITERATURE REVIEW

2.1. Workplace health promotion programmes as CSR and SRHRM practices

Corporate social responsibility (CSR) is a concept which encompasses social, environmental and ethical issues in the activities and strategies of a given organisation (Monachino & Moreira, 2014). It involves introducing socially responsible practices intended for various groups of external and internal stakeholders. A specific area of CSR practices is health promotion in the workplace (WHP), which aims to increase the health and well-being of the employees. WHP is based on the involvement of employers, employees, and social partners towards creating a healthier workplace. WHP focuses, among others, on work safety to reduce the risk of occupational injuries and illnesses. It is also geared towards increasing the potential for health promotion and continuous development of employees (Tanner, Bamberg, Baur & Schümann, 2019).

CSR and WHP are widely discussed in the literature of the subject. Monachino & Moreira (2014) see significant differences in how these concepts are understood and defined. They believe that CSR activities can be consistent with health promotion undertaken by companies if they comply with WHO guidelines for these programmes. A different approach to the mutual relationships between these concepts is provided by Tanner et al. (2019). In their opinion, WHP quality affects CSR quality and vice versa.

Employee health and wellness is one of the key issues in human resource management (HRM) (Macassa & Tomaselli, 2020). The successful implementation of CSR policies and activities within the area of WHP requires a socially responsible human resources management (SRHRM) (Shen & Benson, 2016; Shen & Zhu, 2011). This concept was developed by Shen and Zhu (2011). SRHRM includes recruiting and retaining socially responsible employees, providing corporate social responsibility training, and taking into account employees' social performance when considering promotions, performance appraisals, and rewards (Abdelmotaleb & Saha, 2020; Shen & Benson, 2016). SRHRM is not only an integral part of CSR initiatives, but also an important tool for its successful implementation as it is through employees that objectives of CSR are achieved (Shen & Benson, 2016). Combining CSR practices with SRHM affects the competitiveness of the organisation as well as employee well-being (Dezmar-Krainz, 2015). On the one hand, Macassa and Tomaselli (2020) argue that SRHRM policies coupled with public health literacy and integrative responsible leadership can play a significant role in shaping health

behaviour change of internal stakeholders, which in turn can spread to external stakeholders (family and proximate communities). Implementing these policies requires analysing the impact of CSR strategies on the health and well-being of external stakeholders, which can help address health inequities (Hiswåls, Hamrin, Vidman & Macassa, 2020). On the other hand, Jarkovská and Jarkovská (2020) stress that combining CSR with HRM practices may improve employees' attitude to their work. SRHM contributes to keep work-life balance by monitoring different aspects of employee health and productivity (Dezmar-Krainz, 2015). Moreover, SRHRM can be seen as a means of educating employees about the value of CSR and public health promotion programmes as well as employee support practices.

Workplace health promotion programmes (WHPPs) are defined as the collaborative efforts of employers, employees, communities and society to improve the health and well-being of people at work (Jessiman-Perreault, Alberga, Jorge, Makwarimba & Scott, 2020). WHPPs address physical and psychological aspects of health and, together with the existing safety programmes and policies, aim to create an environment that promotes health within the organisation. WHPPs cover a diverse range of practices. These include, among others, actions geared towards healthy lifestyles, nutrition quality, sleep quality, stress management, physical activity, health check-ups or screening of people at risk of various diseases (Magnavita, 2018; Syed, 2020).

Employers are increasingly aware of the benefits that workplace health and well-being initiatives bring to their employees and organisations, including improving physical, mental and emotional health as well as productivity, and reducing the cost of health care and absenteeism (Imboden et al., 2020; Jessiman-Perreault et al., 2020). WHPPs are particularly important during the period of the COVID-19 pandemic. The pandemic poses a challenge to the promotion of mental health and to the reduction of the stress associated with the healthcare crisis (Raihan, 2020). However, research in this area covers mostly promotion of physical activity (Kaveh et al., 2021). It should be stressed that, despite the benefits of employee health and wellness, the implementation of WHPPs by organisations involves some risks. Holmqvist (2009) claims that such activities can potentially be seen as a form of organisational control. This means that they can be interpreted as CSR actions undertaken to reach goals which would benefit the organisation (Hull & Pasquale, 2018). The next group of risks is related to the inadequacy of ethical frameworks for the implementation of WHPPs (Kuhn, Müller, Heidbrink, & Buyx, 2020). They are the result

of asymmetric relationships between employers and employees. The implementation of WHPPs raises concerns about autonomy and voluntariness, discrimination and distributive justice as well as privacy and responsibility.

2.2. Determinants of employee participation in workplace health promotion programmes

Despite the growing interest of organisations in WHPPs, not all of them can be considered effective. The proper implementation of these programmes depends on many aspects (Grossmeier et al., 2020). Although research in this area has been carried out since the 1980s, Nöhammer et al. (2010) claim that determinants of employee acceptance of, and participation in WHPPs are a neglected field of research. Studies on the determinants of participation in WHPPs indicate that they are a complex combination of different factors. For example, the research involving small, medium and large companies in Australia has identified 43 interrelated factors that influence the implementation of WHPPs (Waterworth et al., 2018). These factors are categorised in different ways, in combination with organisational, interpersonal, and intrapersonal characteristics (Dauner, McIntosh & Xiu, 2019; Krick, Felfe & Klug, 2019; Tsai, Alterman, Grosch & Luckhaupt, 2019). As regards organisational factors the studies investigated company characteristics (Grossmeier et al., 2020; Jessiman-Perreault et al., 2020), organisational culture (Waterworth et al., 2018), incentives, organisational support and commitment from managers (Grossmeier et al., 2020; Justesen, Eskerod, Christensen & Sjøgaard, 2017). The interest in programmes depends on the design of WHPPs (e.g. criteria for entry, costs to employees) and the compatibility with job requirements (e.g. work load) (Nöhammer et al., 2010). Nöhammer et al. (2010) found that the determinants of employee acceptance and participation in WHPPs involve both information and the structure of the offer. In the case of information, its flow, reception, and design are crucial. Interpersonal factors that are predictors of employee participation in WHPPs include, but are not limited to, health-oriented leadership (Krick et al., 2019). In contrast, among the determinants at the intra-personal level researchers highlight the importance of health practices and socio-demographic factors (Krick et al., 2019; Nöhammer et al., 2010; Tsai et al., 2019). These can also be associated with expectations, risk, strain and self-care (Krick et al., 2019). Differences in terms of gender, socio-economic status or job status are highlighted in the literature of the subject as well. White collar employees participate in the programmes more frequently (Nöhammer et al., 2010). Moreover, studies show differences in women

and men participation in WHPPs. Men show less interest in these programmes, which makes it necessary to prepare programmes tailored specifically for this sub-group of employees (Seaton, Bottorff, Caperchione, Johnson & Oliffe, 2020).

2.3 Barriers to employee participation in workplace health promotion programmes

Potential barriers to participation in WHPPs have received little attention in research (Nöhammer, Stummer & Schusterschitz, 2014). Research in this area often focuses on a specific type of WHPPs (e.g. programmes that increase physical activity) (Garne-Dalgaard, Mann, & Stochkendahl, 2019) or on a specific context, such as the employees of care homes (Zhang et al., 2016). There is also little variation in the geographic markets where the studies are based. Such research was carried out in the USA (Zhang et al., 2016), Australia (Sargent, Banwell, Strazdins, & Dixon, 2018) and Germany (Nöhammer et al., 2010). This insufficient diversity contributes to the fragmentation of the findings, although there are several common themes.

Garne-Dagaard et al. (2019) categorised barriers to participation in programmes which increase physical activity in the three main groups: *environmental context* and *resources, social influences* and *social/professional role* and *identity.* The most important among them was the unwillingness to participate in WHPPs which were believed to infringe on private matters through exercising in front of colleagues. The work task organisation and lack of managerial support also significantly limited employee participation (Garne-Dalgaard et al., 2019). In addition, a strong commitment to work and working long hours are important barriers to participation in WHPPs (Blackford, Jancey, Howat, Ledger & Lee, 2013). Both employees and managers consider time constraints as a major obstacle to participation in the WHPPs (Sargent et al., 2018; Zhang et al., 2016). Other key barriers include lack of managerial support and financial constraints (Zhang et al., 2016). Ilvig et al. (2018) described barriers restricting participation in WHPPs by referring to organisational factors (e.g. lack of support from team leaders), intervention factors (e.g. training sessions organised outside normal work hours) and individual factors (personal factors). They claimed that organisational and intervention factors are the two most important attendance barriers in future WHPPs.

One of the more comprehensive categorisations of barriers to participation in WHPPs was developed by Nöhammer et al. (2014). It includes six groups of barriers, i.e. integration, information, imbalance, interpersonal, involvement and incredibility. Integration barriers concern the lack of integration of WHPPs with the employee's day schedule, which would

allow to combine participation in WHPPs and private life, high costs of these programmes and their perceived difficulty. Information barriers refer to insufficient or unavailable information on WHPPs. Imbalance barriers are associated with the imbalance between the benefits and costs of WHPPs, such as the possibility of privacy being violated. Involvement barriers have to do with the employees' lack of engagement. Interpersonal barriers concern the attitudes of co-workers and managers toward WHPPs. The last group, incredibility barriers, refers to the lack of conviction among employees about the company's fair commitment to such programmes (the belief that these are cost-saving marketing efforts).

2.4 Research questions

A critical review of literature shows that the implementation of WHPPs requires an analysis of factors which influence employee participation in these programmes. Companies of different sizes face the problem associated with a low interest in these programmes on the part of employees. The problem also affects large organisations with extensive experience in implementing such programmes. Researchers attempt to elucidate this issue by focusing on different groups of determinants. They look for differences in employee interest in WHPPs among organisational, interpersonal, and intrapersonal factors. The analysis of the results of the research carried out in 2013-2015 by Van de Ven et al. (2020) indicates an ambiguous character of the impact of the socio-demographic status of employees on their participation in the WHPPs. When analysing manufacturing companies, these factors appear to be important. In addition, despite the amount of research on employee participation barriers in WHPPs being limited, evidence of its pertinence can be found. Therefore, it seems important to identify barriers perceived by employees of manufacturing companies, both those involved and those who opt out of participating in WHPPs. Moreover, reviewing literature on WHPPs confirms that their functioning in low and middle income countries is rarely examined (Pham, Phung, Nguyen & Chu, 2020). Thus, noting the research gap, this study was intended to examine the socio-demographic conditions for employee participation in the WHPPs in one of large manufacturing companies in Poland, and to identify barriers which limit the participation of employees in WHPPs. With regard to the current state of research, the following research questions were formulated:

RQ1. What socio-demographic characteristics differentiate the extent of employee participation in WHPPs?

RQ2. What barriers limit employee participation in WHPPs?

RQ3. What features differentiate the intensity of perceived barriers to employee participation in WHPPs?

3. MATERIALS AND METHODS

3.1 Participants

The participants of the survey were employees of one of the biggest manufacturing companies in Poland. A convenience sampling technique was used to recruit them. Questionnaires were made available to employees, irrespective of their socio-demographic characteristics. Participation in the study was voluntary and respondents were guaranteed anonymity. In the sample size calculation, the total number of employees (N = 1537) was limited to the population of employees present at work on the day of the survey (without ½ shift workers), additionally excluding, among others, those on various leaves of absence (above 20%). The relatively high absence rate was connected with the epidemiological restrictions. 228 completed questionnaires were received, which ensured the required minimum sample size (for 95% confidence level; 5% error assumed). Finally, 206 correctly completed questionnaires were qualified for the analysis, giving a response rate of 38%.

Participants in the study represented different groups of employees: managers, specialists and manual workers. The majority of the respondents worked at lower-level positions (51%; 106 participants), reflecting the structure of this characteristic in manufacturing companies. The participants had varying years of service for the manufacturing company. The average was 19 years, although most of them had only been working for one year in the organisation (d size = 11; min. 1 year; max. 44). The average age of the employees participating in the survey was 45 years old (d = 54; min. 21; max. 68). Overrepresentation of women (65%) and single-shift workers (56%) was noticed in the sample. In the manufacturing company employing the participants only 30% are women. In addition, most people work in shifts (58%), although in the sample they were a minority (39%).

3.2 Materials and procedure

The study adopted a quantitative approach and a two-stage procedure. First, the secondary data provided by the company was used. Next, a survey was conducted among its employees.

The extent of employee participation in WHPPs was established based on the data provided by the company. This not only allowed measurement of the actual behaviour of employees, but also led to limiting the testing of the socio-demographic determinants to those controlled by the organisation. The participation in WHPPs was determined by an analysis of employee participation data in WHPPs in 2020 and the participation in the programme in the first quarter of 2021. The time frame adopted was the result of the availability of data and restrictions caused by the COVID-19 pandemic. It was recognised that these circumstances could represent a specific context for participation in such programmes, both as a barrier or as a facilitator of interest. It was assumed that participation in at least one of the WHPPs in 2020 was sufficient to categorise the employee as actively using such programmes. In addition, questions concerning interest in participation in WHPPs were repeated in the questionnaire.

Measuring the attractiveness of WHPPs and the perception of barriers to employee participation in these programmes required data collection from respondents based on the prepared questionnaire. The questionnaire had three main parts measuring the scope of participation in WHPPs in the period from 2020 to 2021; an assessment of the attractiveness of WHPPs, the perception of participation barriers in WHPPs and socio-demographic characteristics.

The attractiveness assessment required the respondent to select a response using a 4-point Likert scale from 1 (*not effective*) to 4 (*very effective*), without a neutral category.

The measurement of the perceived barriers to participation from the employees' point of view required a scale adapted to the research context of a large manufacturing company. The framework for its development was provided by the approach of Nöhammer et al. (2014). In preparing the scale, the first step consisted of translating the items borrowed from the original scale. This scale, based on a six-component typology of barriers, consists of 22 items. The respondents had to rate how strongly they personally perceived these in a 4-point Likert-type format ranging from 1 (*disagree*) to 4 (*agree completely*), without a neutral category. Translations were prepared by researchers independently of each other and compared to eliminate potential inaccuracies. Next, the items were assessed by competent judges who were experts with experience in implementing WHPPs in large manufacturing companies. As a result of the procedure, new items were removed, modified, and added. The added items included a reference to the current COVID-19 pandemic (e.g. *I am afraid I will catch SARS-Cov-19*). The modification resulted in a total

of 22 items. Thus prepared, the scale required verification of the psychometric characteristics. Exploratory factor analysis (EFA) (with Varimax rotation) was used to determine the internal structure of the factors. As a result, three items whose values were unsatisfactory were removed. Based on the remaining 19, five groups of barriers to participation in WHPPs were identified. Construct reliability of measures reached an acceptable level (Cronbach's alpha between 0.70 and 0.90) (Table 1).

Table 1. Scale reliabilities and item descriptive statistics for barriers to participation in WHPPs

Abbreviation	Sub-scale/items	Factor loading	Cronbach's alpha	Mean (M)	Standard deviation (SD)
INTEGR	**Factor 1 – Integration with employee needs**		**0. 7991**	**1.9257**	**0.7398**
INTEGR1	WHPPs do not meet my health needs	**0.6838**		2.0195	0.9998
INTEGR2	Information about WHPPs is not convincing	**0.7831**		1.7415	0.9427
INTEGR3	I do not see the benefits of participating in WHPPs	**0.7332**		1.7255	0.9691
INTEGR4	WHPPs in the form of check-ups, without further treatment or consultation, do not meet my needs	**0.5715**		2.2990	1.0845
INTEGR5	Participating in earlier WHPPs was disappointing	**0.6611**		1.8495	0.9786
INFO	**Factor 2 – Access to information**	–	**0.8951**	**1.3580**	**0.7042**
INFO1	Superiors advise me not to participate in WHPPs	**0.5998**		1.2282	0.6487
INFO2	I receive information about WHPPs too late	**0.8633**		1.4293	0.8524
INFO3	I receive no information about WHPPs	**0.8896**		1.3805	0.8584
INFO4	Finding information about WHPPs is hard for me	**0.8975**		1.3981	0.8536
CONC	**Factor 3 – Concerns**	–	**0.7811**	**1.5793**	**0.7197**
CONC1	Colleagues advise me not to participate in WHPPs	**0.5356**		1.2718	0.6506
CONC2	I am afraid of catching SARS-Cov-19 during WHPPs	**0.6224**		1.9317	1.0825
CONC3	I am afraid that my employer will learn about my health	**0.7901**		1.6165	0.9993
CONC4	I am afraid that my colleagues will learn about my health	**0.8639**		1.5024	0.9216
INVOL	**Factor 4 – Involvement**	–	**0.7477**	**1.8026**	**0.8439**
INVOL1	WHPPs take place on inconvenient dates	**0.5327**		1.8301	0.9903
INVOL2	I have no time to participate in WHPPs outside working hours	**0.8119**		1.9219	1.9219
INVOL3	I feel pressure associated with participation in WHPPs outside working hours	**0.6924**		1.6537	1.0010
INCR	**Factor 5 – Incredibility**	–	**0.7313**	**1.7710**	**0.8041**
INCR1	I do not want to pay the tax for WHPPs	**0.6065**		2.0246	1.1749
INCR2	WHPPs are just marketing efforts	**0.7069**		1.6942	0.9099
INCR3	WHPPs have to do with trying to reduce costs	**0.7900**		1.5971	0.8767
	Barriers together	–	**0.9016**	**1.6897**	**0.5327**

Parameters	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Eigenvalues after rotation	2.9779	3.1602	2.6378	2.0566	2.2312
Explained variance after rotation	15.6736%	16.6327%	13.8829%	10.8241%	11.7431%

Notes: scale ranging from 1 to 4 without a neutral category; 1 – *disagree*

The data were collected at the beginning of March 2021. The analyses were performed using the STATISTICA software. One-factor ANOVA and Cramer's V and Chi-squared test were used to find relationships between variables.

4. RESULTS

4.1 Employee participation in workplace health promotion programmes

The company which employs the respondents has been offering WHPPs to its employees and their families for more than 25 years. Participation is voluntary and open for every employee, regardless of length of service or form of employment. Information on available health programmes is made available through the company intranet. The range of WHPPs is wide, but it is limited to two categories: check-up programmes and vaccinations. On average, around 9 programmes are offered per year which include the prevention of cardiovascular diseases and diabetes as well as vaccination for employees and their children. Their scope is modified each year. Some of them are repeated (e.g. cancer diagnostic programmes), others are proposed based on monitoring employee problems or occupational health reports (e.g. cardiovascular disease prevention and lung disease prevention). During the COVID-19 pandemic, the recommendations of WHO and the staff needs resulting from potential problems related to infection with the coronavirus (e.g. diagnosis of complications after a SARS-CoV2 infection) were additional sources of inspiration.

The interest in WHPPs offered by the company is relatively low. In 2020, only 19% of employees took part in them (Table 2). This result is not surprising according to literature findings (Ilvig et al., 2018). It may also be related with the co-financing by the employer of a comprehensive medical package (unlimited visits to many specialists and a large number of different diagnostic tests). Moreover, it is important to keep in mind the constraints arising from the spread of the pandemic in 2020, which resulted in some programmes beginning late.

Table 2. Employee participation in WHPPs offered by the company in 2020-2021

Employee participation in WHPPs	2020	2021*
Participate	286 (19%)	117 (8%)
Does not participate	1251 (81%)	1420 (92%)
Together	1537 (100%)	1537 (100%)

*data refers to the first quarter of 2021

The participants of WHPPs use this offer with a varying intensity. The average number of programmes in which an employee participated oscillates around three. In 2020, on

average, it was 2.6608 of a programme (max. 9; SD = 1.7791), while in 2021 the average was 3.3333 (max. 8; SD = 1.9839). However, in both analysed periods, the majority of employees participated in a programme only once (101 employees in 2020; 29 in 2021).

The study verified which socio-demographic factors differentiate the extent of employee participation in WHPPs. Based on Cramer's V and Chi-squared test, it was found that the employee's gender ($chi^2 = 62.88$; df = 1; p = 0.00), work system ($chi^2 = 111.69$; df = 1; p = 0.00), position ($chi^2 = 120.33$; df = 2; p = 0.00) and education ($chi^2 = 77.22$; df = 3; p = 0.00) differentiate interest in programmes. Those more likely to take advantage of such an offer are women, single-shift workers, people with higher education and those working in specialised positions. In the cases analysed, Cramer's V value was between 0.2 and 0.3, which is a sign of a weak relationship. On the other hand, there was no statistically significant relationship between the age of employees and their interest in participation in WHPPs.

The level of participation in WHPPs was also checked among respondents. Both in 2020 and 2021 most of them did not participate in WHPPs, respectively 59% and 60%. Although most respondents did not use the programme offer, the overrepresentation of the number of participants using WHPPs in the study allowed the verification of whether participation in the study differentiated the assessment of the attractiveness of the programmes and the perception of barriers to participation in WHPPs.

Among the programmes offered in 2020, respondents were mainly interested in those concerning the prevention of cardiovascular diseases and diabetes, gastrointestinal cancer and prostate diseases. These programmes are not associated with SARS-CoV-19 prevention. Only 7% of the respondents were interested in such programme. The least popular was the prevention of meningococcal infections for children (1%), which can be explained by the age of the subjects and the fact of not having children under 18 years of age. Similarly, in 2021 employees declared participation in programmes that were not directly related to SARS-CoV-19 prevention. Programmes raising the most interest concern the prevention of kidney diseases, cardiovascular diseases and diabetes as well as venous and arterial insufficiency in lower extremities.

Employees highly rate the attractiveness of WHPPs (m = 3.2277; SD = 0.8391; max. 4). Attractiveness does not depend on the gender of the respondent, his/her education or position. It is evaluated higher by those in a relationship (p = 0.0205) (Figure 1) and those working on a single-shift basis (p = 0.0400). The evaluation of the attractiveness of

WHPPs also depends on participation in programmes (Figure 2) (p = 0.0110 for participants in WHPPs in 2020; p = 0.000 for participants in WHPPs in 2021). The respondents who participated in them rate them higher.

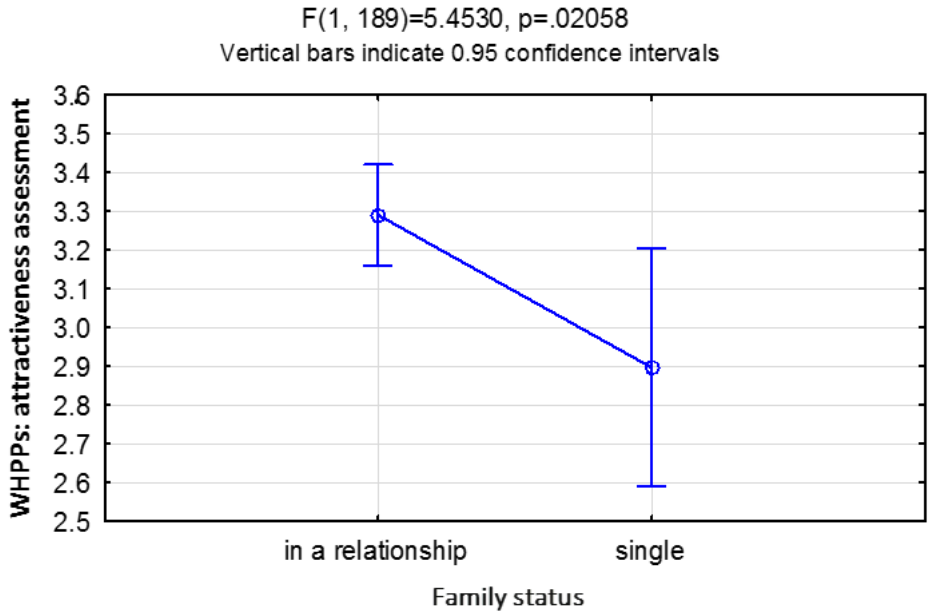

Figure 1. Attractiveness of WHPPs depending on the family status of the employee

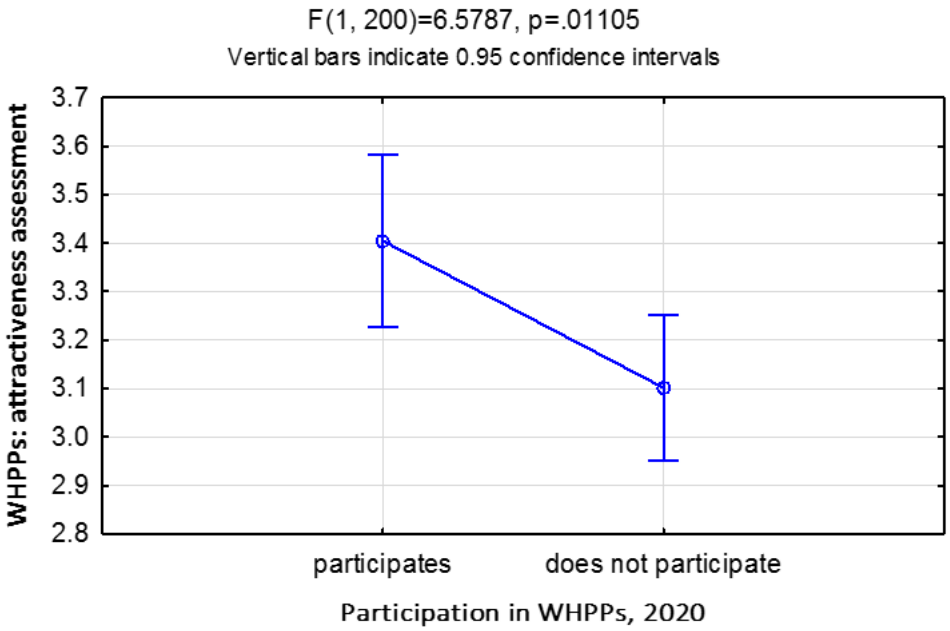

Figure 2. Attractiveness of WHPPs depending on participation in programmes

4.2 Barriers to employee participation in workplace health promotion programmes

The EFA conducted allowed the identification of five groups of barriers restricting the participation of employees in WHPPs (Figure 3). The data indicates that most of these barriers do not constitute a significant obstacle to the use of these programmes for the respondents (Table 1). Among the diagnosed barriers, the biggest obstacle is the lack of integration with employee needs (m = 1.9257; SD = 0.7398) and the involvement required to participate in WHPPs (m =1.8026; SD = 0.8439). The proposed WHPPs do not meet the needs of employees primarily due to the range of tests being incongruous (m = 2.0195; SD = 0.9998) and the fact that they are limited to performing tests without further diagnosis if a condition is found (m = 2.2990; SD = 1.0845). The least significant barrier to participation in WHPPs is access to information (m = 1.3580; SD = 0.7042).

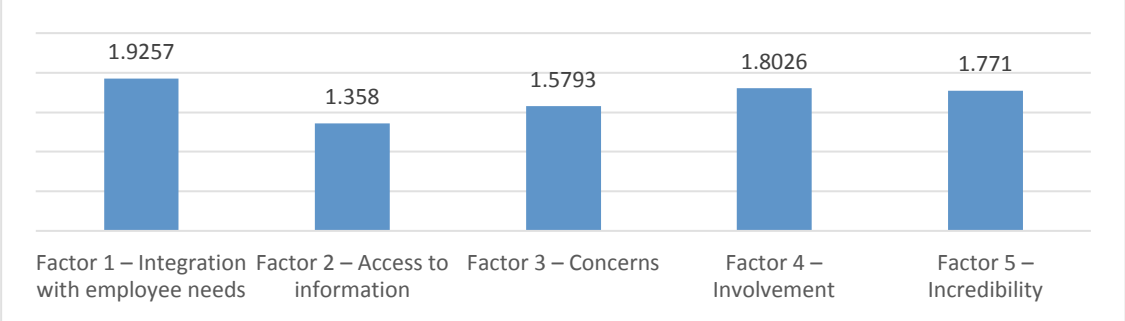

Figure 3. Intensity of perceived barriers to participation in WHPPs

The results confirm that the perception of barriers restricting participation in WHPPs by the subjects depends on their socio-demographic characteristics. They vary by gender (p = 0.0001), family status (p = 0.0388); education (p = 0.0053); position (p = 0.0299) and the work system (p = 0.0000).

In the case of the position at work, the greatest differences in the perception of barriers are linked to a limited access to information (Factor 2). While access to information does not constitute a restriction of participation in WHPPs for most of the respondents, it is a barrier for lower-level employees. It is also a significant limitation for employees with basic education. It should be stressed that respondents with basic education perceive each group of barriers most strongly. However, the number of people with basic education in the sample was too small to draw unequivocal conclusions.

The results showed that men are more concerned about barriers restricting their participation in WHPPs (Figure 4). Above all, compared to women, the greater barriers for

them are: the lack of integration with needs (Factor 1); insufficient access to information (Factor 2) and concerns (Factor 3).

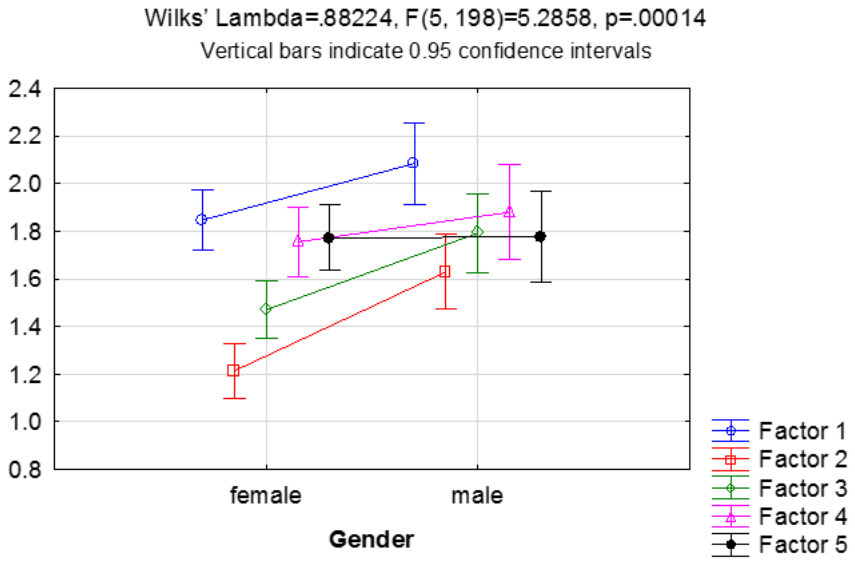

Figure 4. Perception of barriers to participation in WHPPs depending on gender

There are significant differences in the perception of these barriers in the case of people working in a different work systems. They are perceived more acutely by shift workers (Figure 5). In their case, the stronger limitations are: insufficient access to information (Factor 2); concerns (Factor 3) and the lack of credibility of the activities offered by the organisation (Factor 5).

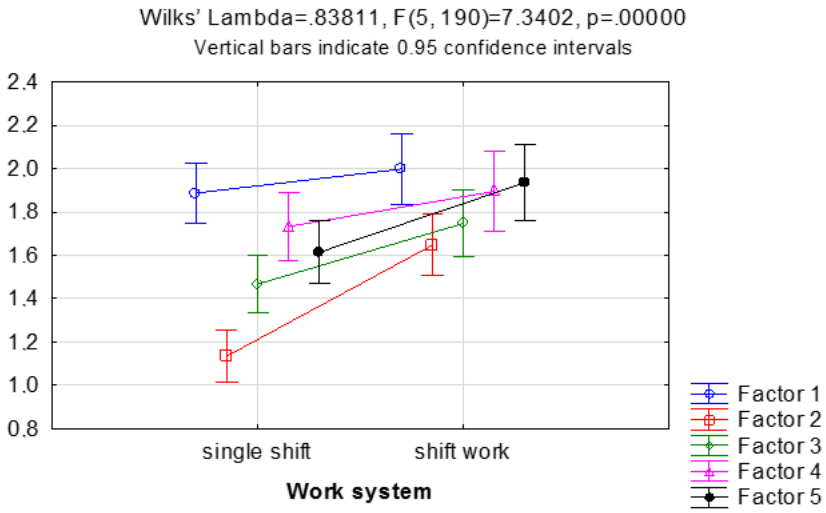

Figure 5. Perception of barriers to participation in WHPPs depending on work system

The perception of barriers to participation in WHPPs also depends on the prior experience of respondents in participating in these programmes (p = 0.0111) (Figure 6). People who have previously not participated in WHPPs perceive barriers more intensively. Especially when it comes to integrating programmes to their needs (Factor 1), insufficient access to information (Factor 2), the commitment required to participate in WHPPs (Factor 4) and credibility (Factor 5).

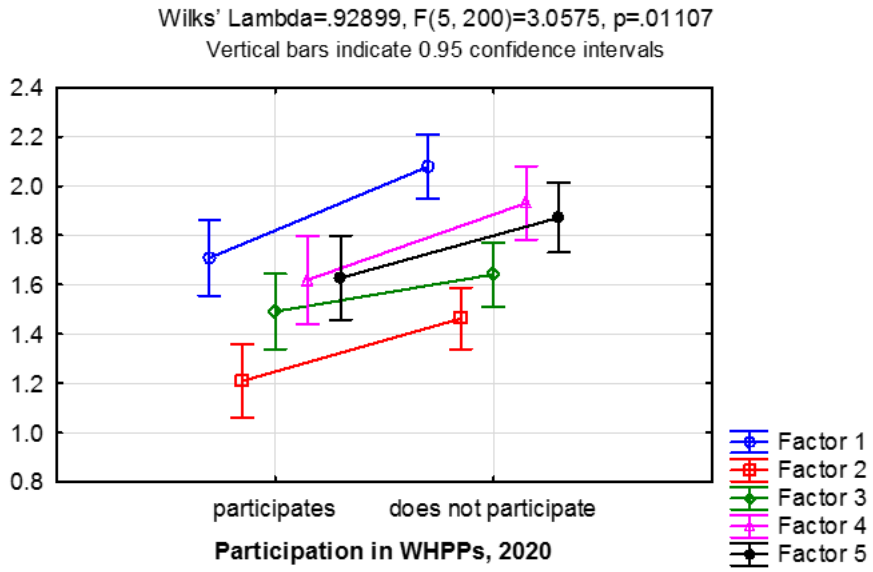

Figure 6. Perception of barriers to participation in WHPPs depending on participation in programmes

5. CONCLUSIONS

5.1. Theoretical implications

The research carried out allows to supplement the existing knowledge on determinants for the participation in WHPPs of employees of manufacturing companies. As a result, five groups of barriers to employee participation in WHPPs were identified by expanding the scale proposed by Nöhammer et al. (2014). The results show that, despite the high evaluation of the attractiveness of WHPPs by the employees of a particular manufacturing company, their participation in them remains low. Both the evaluation of attractiveness and the participation of employees in WHPPs depend on socio-economic factors. The gender, working system, position and education have been shown to explain the employees' interest in WHPPs. The fact that women are more likely to take advantage of WHPPs is in line with previous findings (e.g. Jonsdottir, Börjesson & Ahlborg, 2011),

although it is surprising for a manufacturing company in which men predominate. This draws attention to the integration of WHPPs to the needs of the employees. The results of earlier research indicate that the involvement of men and women in WHPPs can be similar (Van De Ven et al., 2020), especially when relevant programmes are targeted at these respective groups (Robroek, van Lenthe, van Empelen, & Burdorf, 2009). In addition, among the identified barriers limiting participation in WHPPs, the workers of the manufacturing company stressed the lack of connection between the programmes and their needs. The time constraints were important among the identified barriers to participation in WHPPs. This barrier is emphasised in previously conducted research (Sargent et al., 2018). Interestingly, the analysis of the data did not allow to identify a separate barrier group related to interpersonal relations, which is found in the original typology by Nöhammer et al. (2014). This may be linked to the specific nature of work in a manufacturing company, or may result from the specific time of the COVID-19 pandemic restricting interpersonal relationships between employees. This requires further investigation.

What is interesting, is the employees' perception of WHPPs as a low-credibility activity. This is a challenge for those responsible for CSR and SRHRM tasks. It also requires in-depth research to identify the reasons for treating WHPPs as marketing efforts, aimed at reducing costs or building the image of the company rather than promoting the health of the staff.

5.2. Managerial implications

The obtained results allow to formulate recommendations on the implementation of WHPPs by manufacturing companies in terms of communication and scope. Firstly, attention should be paid to the possibility of overcoming barriers by trying to plan WHPPs in such a way as to enable all employees to participate. Although access to information was the least significant barrier for most of the respondents, it is an important factor for lower-level staff with less education working in shifts. The solution in use whereby information is made available to these employees via the intranet is not effective. Such solutions are recommended in the literature on the subject. For example, Rozman and Širok (2020) suggest that e-platforms are a solution to the challenge of low employee participation in WHPPs. However, manufacturing companies which employ people with varying digital competence and a limited access to digital platforms require other solutions. In addition, Nöhammer et al. (2010) found that employees avoid searching for information

on WHPPs by themselves. Using smartphone-based applications might be a solution (Dunkl & Jiménez, 2017). M-health approaches and unique applications are also gaining popularity (Steigner, Doarn, Schütte, Matusiewicz, & Thielscher, 2017). Secondly, there is growing evidence that COVID-19 may be an objective risk factor for mental distress among the general adult population. More psychological and social support should be provided to protect adult people's mental health (Raihan, 2020). Therefore, when expanding WHPPs offer of manufacturing companies, proposals from this area should also be taken into account. In the future, due to the ageing of the workforce, WHPPs should focus not only on disease prevention, but also take into account a participative approach to these issues (Magnavita, 2018).

5.3 Limitations

The research was limited to an analysis of WHPPs and their perception by employees of one manufacturing company in Poland. This provided an opportunity to tap into diverse data sources, but it limits the possibilities for generalising the results. It was the authors' intention to select a large manufacturing company with experience in implementing WHPPs for the analysis. However, the type of programmes offered to employees is a specific feature of a given company. Thus, it is necessary to broaden the scope of research in the future, both by increasing the number of cases from Poland and by confronting them with manufacturing companies from other countries.

The study focused only on the socio-demographic determinants of employee participation in WHPPs. Other groups of determinants should be considered in future research. In addition to barriers to participation in WHPPs, facilitating factors ought to be considered as well.

REFERENCES

Abdelmotaleb, M., & Saha, S.K. (2020). Socially responsible human resources management, oerceived organizational morality, and employee eell-being. *Public Organization Review*, *20*(2), 385–399.

Bavel, J.J.V., Baicker, K., Boggio, P.S., Capraro, V., Cichocka, A., Cikara, M., … Willer, R. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, *4*(5), 460–471.

Blackford, K., Jancey, J., Howat, P., Ledger, M., & Lee, A.H. (2013). Office-based physical activity and nutrition intervention: Barriers, enablers, and preferred strategies for workplace obesity prevention, Perth, Western Australia, 2012. *Preventing Chronic Disease*, *10*(9), 130029.

Christensen, J.R., Larsen, C.M., & Kolind, M.I. (2020). Managers attitude towards implementing workplace health promotion programmes to employees in eldercare: A cross-

sectional study. *Public Health in Practice*, *1*(100049), 1–5.
Dauner, K.N., McIntosh, C.R., & Xiu, L. (2019). Determinants of workplace health program participation among non, low, and incentive-achieving participants. *Journal of Workplace Behavioral Health*, *34*(2), 111–128.
Dezmar-Krainz, K. (2015). Enhancing wellbeing of employees through corporate social responsibility context. *Megatrend Revija*, *12*(2), 137–153.
Dunkl, A., & Jiménez, P. (2017). Using smartphone-based applications (apps) in workplace health promotion: The opinion of German and Austrian leaders. *Health Informatics Journal*, *23*(1), 44–55.
Garne-Dalgaard, A., Mann, S., & Stochkendahl, M.J. (2019). Barriers and facilitators affecting implementation of physical activity at workplaces: A mixed-methods scoping review. In *Work Disability Prevention and Integration Conference 2019*. Odense, Denmark.
Grossmeier, J., Castle, P.H., Pitts, J.S., Saringer, C., Jenkins, K.R., Imboden, M.T., … Mason, S.T. (2020). Workplace well-being factors that predict employee participation, health and medical cost impact, and perceived support. *American Journal of Health Promotion*, *34*(4), 349–358.
Hiswåls, A.S., Hamrin, C.W., Vidman, Å., & Macassa, G. (2020). Corporate social responsibility and external stakeholders' health and wellbeing: A viewpoint. *Journal of Public Health Research*, *9*(1), 27–30.
Holmqvist, M. (2009). Corporate social responsibility as corporate social control: The case of work-site health promotion. *Scandinavian Journal of Management*, *25*(1), 68–72.
Hull, G., & Pasquale, F. (2018). Toward a critical theory of corporate wellness. *BioSocieties*, *13*(1), 190–212.
Ilvig, P.M., Bredahl, T.V.G., Justesen, J.B., Jones, D., Lundgaard, J.B., Søgaard, K., & Christensen, J.R. (2018). Attendance barriers experienced by female health care workers voluntarily participating in a multi-component health promotion programme at the workplace. *BMC Public Health*, *18*(1), 1–9.
Imboden, M.T., Castle, P.H., Johnson, S.S., Jenkins, K.R., Pitts, J.S., Grossmeier, J., … Noeldner, S. P. (2020). Development and validity of a workplace health promotion best practices assessment. *Journal of Occupational and Environmental Medicine*, *62*(1), 18–24.
Jarkovská, P., & Jarkovská, M. (2020). A contemporary approach to managing social responsibility in relation to employees as perceived in academic papers. *Journal on Efficiency and Responsibility in Education and Science*, *13*(3), 101–112.
Jessiman-Perreault, G., Alberga, A., Jorge, F., Makwarimba, E., & Scott, L.A. (2020). Size matters: A latent class analysis of workplace health promotion knowledge, attitudes, practices and likelihood of action in small workplaces. *International Journal of Environmental Research and Public Health*, *17*(4), 2–23.
Jonsdottir, I.H., Börjesson, M., & Ahlborg, G. (2011). Healthcare workers' participation in a healthy-lifestyle-promotion project in western Sweden. *BMC Public Health*, *11*(448), 1–9.
Justesen, J.B., Eskerod, P., Christensen, J.R., & Sjøgaard, G. (2017). Implementing workplace health promotion – role of middle managers. *International Journal of Workplace Health Management*, *10*(2), 164–178.
Kaveh, M.H., Layeghiasl, M., Nazari, M., Ghahremani, L., & Karimi, M. (2021). What are the determinants of a workplace health promotion? Application of a social marketing model in identifying determinants of physical activity in the workplace (a qualitative study). *Frontiers in Public Health*, *8*(January), 1–8.
Krick, A., Felfe, J., & Klug, K. (2019). Turning intention into participation in occupational health promotion courses? The moderating role of organizational, intrapersonal, and interpersonal factors. *Journal of Occupational and Environmental Medicine*, *61*(10), 779–799.
Kuhn, E., Müller, S., Heidbrink, L., & Buyx, A. (2020). The ethics of workplace health promotion. *Public Health Ethics*, *13*(3), 234–246.
Macassa, G., & Tomaselli, G. (2020). Socially responsible human resources management and stakeholders' health promotion: A conceptual paper. *South Eastern European Journal of Public Health*.

Magnavita, N. (2018). Obstacles and future prospects: Considerations on health promotion activities for older workers in Europe. *International Journal of Environmental Research and Public Health*, *15*(6), 1–14.
Monachino, M.S., & Moreira, P. (2014). Corporate Social Responsibility and the health promotion debate: An international review on the potential role of corporations. *International Journal of Healthcare Management*, *7*(1), 53–59.
Nöhammer, E., Schusterschitz, C., & Stummer, H. (2010). Determinants of employee participation in workplace health promotion. *International Journal of Workplace Health Management*, *3*(2), 97–110.
Nöhammer, E., Stummer, H., & Schusterschitz, C. (2014). Employee perceived barriers to participation in worksite health promotion. *Journal of Public Health (Germany)*, *22*(1), 23–31.
Pham, C.T., Phung, D., Nguyen, T.V., & Chu, C. (2020). The effectiveness of workplace health promotion in low-and middle-income countries. *Health Promotion International*, *35*(5), 1220–1229.
Raihan, M.M.H. (2020). Mental health consequences of COVID-19 pandemic on adult population: A systematic review. *Mental Health Review Journal*, (October).
Robroek, S.J.W., van Lenthe, F.J., van Empelen, P., & Burdorf, A. (2009). Determinants of participation in worksite health promotion programmes: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, *6*, 1–12.
Rozman, N., & Širok, K. (2020). E-platform as an innovative approach to workplace health promotion for ageing workforce. *European Journal of Public Health*, *30*(Supplement_5).
Sargent, G.M., Banwell, C., Strazdins, L., & Dixon, J. (2018). Time and participation in workplace health promotion: Australian qualitative study. *Health Promotion International*, *33*(3), 436–447.
Seaton, C.L., Bottorff, J.L., Caperchione, C.M., Johnson, S.T., & Oliffe, J.L. (2020). The association between men's heath behaviors and interest in workplace health promotion. *Workplace Health & Safety*, *68*(5), 226–235.
Shen, J., & Benson, J. (2016). When CSR is a social norm: How socially responsible human resource management affects employee work behavior. *Journal of Management*, *42*(6), 1723–1746.
Shen, J., & Zhu, C.J. (2011). Effects of socially responsible human resource management on employee organizational commitment. *International Journal of Human Resource Management*, *22*(15), 3020–3035.
Steigner, G., Doarn, C.R., Schütte, M., Matusiewicz, D., & Thielscher, C. (2017). Health applications for corporate health management. *Telemedicine and E-Health*, *23*(5), 448–452.
Syed, I. (2020). Diet, physical activity, and emotional health: What works, what doesn't, and why we need integrated solutions for total worker health. *BMC Public Health*, *20*(1), 1–9.
Tanner, G., Bamberg, E., Baur, C., & Schümann, M. (2019). Workplace health promotion inspired by Corporate Social Responsibility – Interactions within supply chains and networks. *Management Revue*, *30*(2–3), 213–231.
Tsai, R., Alterman, T., Grosch, J. W., & Luckhaupt, S.E. (2019). Availability of and participation in workplace health promotion programs by sociodemographic, occupation, and work organization characteristics in US workers. *American Journal of Health Promotion*, *33*(7), 1028–1038.
Van De Ven, D., Robroek, S.J.W., & Burdorf, A. (2020). Are workplace health promotion programmes effective for all socioeconomic groups? A systematic review. *Occupational and Environmental Medicine*, *77*(9), 589–596.
Waterworth, P., Pescud, M., Chappell, S., Davies, C., Roche, D., Shilton, T., … Rosenberg, M. (2018). Culture, management and finances as key aspects for healthy workplace initiatives. *Health Promotion International*, *33*(1), 162–172.
Zhang, Y., Flum, M., Kotejoshyer, R., Fleishman, J., Henning, R., & Punnett, L. (2016). Workplace participatory occupational health/health promotion program: Facilitators and barriers observed in three nursing homes. *Journal of Gerontological Nursing*, *42*(6), 34–42.

How to cite this article:

Budzanowska-Drzewiecka, M.; Ptaszyńska, M. & Bugaj, J. M. (2021). The Participation of Manufacturing Employees in Workplace Health Promotion Programmes: Determinants and barriers, *International Journal of Marketing, Communication and New Media*. *Special Issue on Sustainable Marketing*, June 2021, 30-50.