

REVIEW PAPER

Barriers to Physical Activity (PA) in the Working Population: A Review

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Abstract

Regular physical activity (PA) plays a crucial role in promoting overall health and preventing non-communicable diseases, with exercise both during and outside working hours reducing accumulated fatigue and stress caused by various job tasks. However, despite this, many people do not engage in sufficient levels of PA for various reasons. In line with this, this comprehensive research aimed to identify the barriers to physical exercise among the working population (WP). A search of literature was conducted using the following databases: Google Scholar, PubMed, Medline, and Mendeley, covering the period from 2002 to 2022. To potentially include in the study, all titles and abstracts were reviewed. A search of the databases based on keywords yielded 420 studies, then, through analysis and in accordance with the study's objectives, 50 studies were included for analysis. Through a detailed analysis of selected studies, various barriers to PA in the WP have been identified. All barriers can be divided into three main groups: i) Work schedule and workplace as barriers; ii) Marital and extramarital relationships, parenthood, family, and household obligations as barriers; iii) Time, behavioral, socio-economic, demographic, and ecological factors as barriers. The detected barriers suggest that interventions to overcome them should not be directed toward a single solution, given their diversity. In the context of the contemporary lifestyle where economic activities almost dominantly prevail, maintaining the health and adequate work level of employees is of utmost importance, further emphasizing the significance of PA and the identification of barriers of various kinds. Therefore, this research is of great value, as by determining the state and identifying different barriers to PA, it can serve as an initial step in devising various measures and solutions to eliminate these barriers and enable the WP to engage in physical activities for the improvement of their health and work potential.

Keywords: *barriers to physical exercise, perceived barriers and physical activity, employees, workplace, leisure-time physical activity*

Introduction

Regular physical activity (PA) plays a crucial role in promoting overall health and preventing non-communicable diseases (Cerdá et al., 2016), with exercise both during and outside working hours reducing accumulated fatigue and stress caused by various job tasks. Socioeconomic changes in most countries have influenced the lifestyle of the working population (WP), as well as the way of practicing PA (Kaleta & Jegier, 2005). The sustainability of the working

age and the health of the WP in all age groups pose a global challenge and an important issue for economic prosperity, public health, and social protection. The complex interplay between the level of development of the social community and the level of individuals points to initiatives and measures that need to be taken to make the working age population healthy and sustainable, considering the multilayered interactions of physical, mental, cognitive, organizational, socio-economic, cultural, and other relevant factors (UNFPA &



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HelpAge International, 2012; World Economic Forum, 2016; Pensions at a Glance, 2018; Nilsson, 2020).

Lack of exercise, reduction, or cessation of PA can lead to a decline in health status (Mujika & Padilla, 2000a; Mujika & Padilla, 2000b) and is a health indicator of the “risk factor” for premature mortality and morbidity (Osuji, Lovegreen, Elliott & Brownson, 2006). Lost workdays, reduced work capacity, early disability pension, doctor visits, all depicted through indirect costs of illness due to insufficient PA, are high among the working-age population (Kaleta, Makowiec-Dabrowska & Jegier, 2006). Besides the benefits of regular physical exercise (PE), it is emphasized that the majority of the world’s working-age population does not engage in sufficient physical activity (Drygas, Skiba, Bielecki & Puska, 2001), highlighting positive health effects in the domains of physical, mental, and social status in properly adapted and dosed physical activities (Puciato et al., 2018).

Currently available scientific indicators suggest that numerous factors can negatively impact the involvement in physical activities among the WP (Kaleta & Jegier, 2005). It is emphasized that regular PA outside working hours effectively reduces fatigue, while on-the-job fatigue can also inhibit PA outside working hours (Puetz, 2006). In this regard, some researchers indicate that a high level of physical fatigue as a barrier in manual jobs reduces physical activities, and a high level of PA is associated with reduced fatigue in sedentary jobs (de Vries et al., 2016; de Vries, van Hooff, Geurts & Kompier, 2017). Bernard and colleagues suggest that workers with sedentary jobs benefit more from strenuous PA during leisure time compared to those with non-sedentary jobs (Bernaards et al., 2006). Professional jobs that require a significant time and energy expenditure reduce the opportunity for PA during leisure time, where fatigue and lack of time are recognized as barriers to PA (Kaleta & Jegier, 2005; Angrave, Charlwood & Wooden, 2015; Bláfoss et al., 2019). Other authors point out that shift work is recognized as a barrier to engaging in PA among the WP (Fletcher, Behrens & Domina, 2008). Inadequate space and PE environment, as well as the feeling of discomfort exercising with colleagues, can be barriers to physical activity (Schwetschenau, O’Brien, Cunningham & Jex, 2008). Sara Edmunds and colleagues, in addition to the mentioned factors, indicate that attitudes toward PA, the culture of PA, low levels of physical fitness, and a sense of self-efficacy during exercise can be barriers to engaging in PA (Edmunds, Hurst, & Harvey, 2013), while other researchers recognize a lack of incentives and the distance to exercise locations as barriers to engaging in PA (Bredahl, Christensen, Justesen, & Christensen, 2019).

Socio-demographic factors and behavioral determinants such as education, household income, economic solvency, family type, age, education, unhealthy weight, smoking habits, and non-compliance with PE recommendations are perceived as barriers to engaging in PE (Kaleta & Jegier 2007; Borodulin et al., 2016). Family circumstances, the transition to parenthood, and the gender of parents are cited as barriers to PA among working parents due to a lack of time, energy, and feelings of guilt (Popham & Mitchell, 2006; Dombrowski, 2011; Mailey, Huberty, Dinkel & McAuley, 2014). Poor social climate regarding PA is highlighted as a barrier to engaging in PA (Tavares & Plotnikoff 2008). Health problems that hinder exercise are cited as barriers to engaging in PA (Lawton, Ahmad, Hanna, Douglas & Hallowell, 2006). Barriers are in-

dicated as a reliable predictor of preventing or reducing the likelihood of engaging in physical activities, and they have the character of a previously unwanted event in relation to PA (Haynes & O’Brien, 2000). The lack of standardized measures developed to assess perceived barriers to PE makes it challenging to ensure the reliability and accuracy of measuring their impact on preventing PA (Brown, 2005).

Based on the existing information, it is noticeable that there are various barriers to physical activity among the working population. However, there is a need for a comprehensive overview research that will thoroughly examine this area and identify potential barriers to PA. Therefore, the aim of this a review was to determine the barriers to physical activity among the working population.

Methods

The first step in writing the paper was collecting relevant research in line with the topic of the review. The search for papers was conducted using the following databases: Google Scholar, PubMed, Medline, Mendeley, in the period from 2002 to 2022. The search was performed using the following keywords and their combinations: physical activity, barriers to physical activity, working age population. In order to potentially include them in the study, all titles and abstracts were reviewed. The found research titles, abstracts, and full texts were then read and analyzed. Relevant studies were obtained after a thorough review, provided they met the inclusion criteria. A search of the database based on keywords resulted in 420 studies. Through analysis and in accordance with the set criteria, in line with the aim of this study, 50 studies were included for analysis.

Discussion

Data collection from the 50 acceptable studies published between 2002 and 2022, including three review papers analyzing 138 articles (Kirk & Rhodes, 2011; Abbasi, 2014; Joseph, Ainsworth, Keller & Dodgson, 2015), and 47 studies with a total sample size of 346,037 participants ranging from 13 (Mayne, Hart, Tully, Wilson & Heron, 2022) to 135,340 participants (Alonso-Blanco et al., 2012), allowed for the identification of barriers to engaging in PA among the WP.

In 25 studies, a survey was used to collect data for identifying barriers to PA. Seven studies obtained the necessary data through interviews, while the International Physical Activity Questionnaire (IPAQ) was applied in four studies. Telephone interviews were used in three studies, postal surveys in one study, and an online survey in five studies. A mixed data collection method provided data for one study, while three studies conducted a systematic integrative literature review.

Occupational schedule and workplace as barriers

Work hours, schedule of work duties, and fatigue as barriers to engaging in PA have been observed in a significant number of studies (Bowles, Morrow Jr, Leonard, Hawkins & Couzelis, 2002; Gidlow, Johnston, Crone, Ellis & James, 2006; Cerin, Leslie, Sugiyama & Owen, 2010; Brinthaup, Kang & Anshel, 2010; Withall, Jago & Fox, 2011; Fransson, et al., 2012; Leicht, Sealey & Devine, 2013; Abbasi, 2014; Bardus, Blake, Lloyd & Suggs, 2014; Bredahl, Særvoll, Kirkelund, Sjøgaard, & Andersen, 2015; de Vries et al., 2016; Borodulin et al., 2016; Stankevitz et al., 2017).

A number of authors emphasize that work-related factors such as workload (Schneider & Becker, 2005; Dombrowski, 2011; Fransson, et al., 2012; Mayne, Hart, Tully, Wilson, & Heron, 2022), the structure, nature, and length of work duties (Fletcher et al., 2008), and psychosocial work demands (Kouvonen et al., 2005; Kirk & Rhodes, 2011; Ryde, Atkinson, Stead, Gorely & Evans, 2020) are barriers that negatively correlate with PA. Long working hours, especially in combination with lower-skilled jobs, can be a hindrance to exercise (Popham & Mitchell, 2006), considering that this work model reflects higher physical strain among lower-class occupations (Takao, Kawakami, & Ohtsu, 2003).

Takao (2003) states that male workers with higher physical strain had a lower threshold for engaging in PA than clerks and managers, while for female workers, the difference is not clearly pronounced (Takao et al., 2003). Cook and Gazmararian (2018) suggests that the WP with lower levels of work activity met the guidelines for engaging in PA compared to workers with higher levels of work activity. Some authors estimate that shift work, irregular working hours, night shift work, inflexible working hours, urgent unscheduled tasks, and unplanned work duties outside the workplace influence the prevalence of physical inactivity, indicating that the characteristics of work engagement can determine the attitude toward PA (da Silva Garcez, et al., 2015; Bredahl et al., 2015; Neil-Sztramko, Gotay, Demers, Muñoz & Campbell, 2017). Night shift work may initiate gender differences in PA, which can be explained by the cultural and family roles of different genders in society (da Silva Garcez, et al., 2015). The WP spends a significant portion of their time at work, resulting in psychophysical fatigue, lack of energy, will, and time, which can lead to a loss of interest in engaging in PA (Cerin, Leslie, Sugiyama & Owen, 2010; Edmunds, Hurst, & Harvey, 2013; Abbasi, 2014; Bardus et al., 2014; Hunter, Gordon, Bird, & Benson, 2018; Paudel, Owen, & Smith, 2021).

Lack of time and feelings of fatigue as perceptual barriers due to the characteristics and schedule of work engagement and assumed social obligations can result in a lack of self-motivation, which can be a determinant of physical inactivity behavior (Bowles, et al., 2002). A high level of stress caused by a high job role and significant responsibility could reduce the prevalence of exercise, indicating an assumption that there is a connection between job-related stress and the desire for physical activities (Takao et al., 2003; Mayne et al., 2022).

In her paper, Dombrowski (2011) presents, “most women stated that most of the time they do not feel confident in their ability to continue PA when faced with barriers” (Dombrowski, 2011). Results obtained in the study by Heesch & Mâsse (2004) indicate that, for African American and Hispanic American participants, PA is not a priority, and the lack of time seems to be used as an excuse for physical inactivity. Understanding the importance of PA and its beneficial psychophysical effects can be achieved through educational programs (Heesch & Mâsse, 2004).

Bredahl (2015) and colleagues in their study highlight the importance of organizing the workplace for the implementation of PA at the workplace (Bredahl, et al., 2015). Several authors note that urgent tasks outside the workplace, tight deadlines, overloaded work tasks, inaccessibility and inappropriate facilities, unhygienic conditions, lack of

teamwork, poor self-assessment, physical discomfort, age, education, attitude toward exercise and motivation, lack of instructor competence, and an uninteresting program can be barriers to physical activity in the workplace (Edmunds, Hurst & Harvey, 2013; Bredahl, et al., 2015; Torquati, Kolbe-Alexander, Pavey, Persson & Leveritt, 2016; Stankevitz, et al., 2017; Hunter et al., 2018). In the study by Mariam and Mazin (2019), employed women, regardless of the length of their work experience, identified a lack of time and energy as the main barriers to physical activity at the workplace. Better organization of working hours may reduce barriers expressed in attitudes that it is uneconomical to spend working time and resources on PA during work procedures (Ryde et al., 2020). Awareness of barriers to the prevalence of PA during work schedules and necessary interventions to reduce them assumes that the workplace can be crucial for achieving PA (Al-Mohannadi, Albuflasa, Sayegh, Salman, & Farooq, 2020). Improving exercise at the workplace could be enhanced by individually tailored program adjustments (Bardus et al., 2014), as well as interventions in the structure of daily work duties, improvement of organizational challenges, and cultural-normative parameters of the workplace, directed at both employees and employers (Ryde, et al., 2020). Effective workplace programs, as a result of shared awareness among all employees, can reduce barriers to exercise, inaugurating the workplace as crucial for engaging in PA (Stankevitz, et al., 2017; Al-Mohannadi, et al., 2020).

It is important to emphasize that one-time measures to increase exercise engagement are likely to be ineffective, pointing to the need for continuous and tailored programs for specific categories and interests, considering the presence of different needs, motives, and interests of the WP (Fletcher, et al., 2008). Interventions should ideally focus on raising awareness of specific aspects of PA, which can help individuals as well as the entire population overcome identified barriers to PA (Schneider & Becker, 2005). Initiatives in the domain of social support, understanding gender differences, and improving exercise environments and facilities can create conditions for higher prevalence of physical exercise among the WP (Paudel, et al., 2021).

Angrave (2015) and colleagues, in their paper, present that, with the control of certain exogenous factors, they did not discover a significant link between long working hours and the prevalence of PA but confirm the findings of other authors that shift work can be a barrier (Angrave, Charlwood & Wooden, 2015).

It can be argued that psychophysically demanding occupations and their related psychosocial effects on lifestyle can reduce the prevalence of PA. This suggests that professional work activity and the workplace are areas where interventions should be directed to increase levels of PA (Schneider & Becker, 2005; Vandelanotte et al., 2015), which can lead to an improvement in the overall quality of life of the WP (Puciato et al., 2018). Study findings suggest that PA is crucial for the WP (de Vries et al., 2016).

Marriage and extramarital relationships, parenthood, family, and household duties as barriers

Entering marital and extramarital unions, transitioning to parenthood, and the associated shift in priorities can influence changes in the physical activity levels of partners and parents. This prioritization often favors childcare and fami-

ly obligations over physical activity (Kouvonen et al., 2005; Popham & Mitchell, 2006; Roessler & Bredahl, 2006; Bellows-Riecken & Rhodes, 2008; Withall et al., 2011; Alonso-Blanco et al., 2012; Leicht et al., 2013; Mailey et al., 2014; Torquati et al., 2016). Barriers identified include a lack of time and energy, family and household obligations, feelings of guilt, and a lack of family and spousal support (Dixon, 2009; Hull et al., 2010; Abbasi, 2014; Mathews et al., 2016; Keohane, Mulligan & Daly, 2018; Al-Mohannadi et al., 2020; Paudel et al., 2021). Similar findings were reported by Joseph et al. (2015), identifying these as “interpersonal barriers” involving family care responsibilities, lack of social support, and a lack of a partner for physical activity.

Mailey et al. (2014) highlighted that within family obligations, children took precedence, and barriers to physical activity were more pronounced in fathers than mothers. Feelings of guilt were cited as a barrier for fathers in relation to family and self-care, and for mothers in relation to family, self-care, and work. Both fathers and mothers recognized a lack of support as a barrier to physical activity prevalence. Difficulty prioritizing due to schedule constraints and the need for balance, particularly due to limited daily time, was more frequently emphasized as a barrier by mothers than fathers (Mailey et al., 2014). Overload of daily routine, family, and household obligations were identified as barriers more commonly experienced by women than men (Leicht et al., 2013; Paudel et al., 2021). Despite the physical activity requirements of childcare and household chores, women are socio-culturally disadvantaged, with Abbasi (2014) underscoring that women, due to their gender roles in family and society, struggle to achieve desirable levels of physical activity. Results suggest that childcare, particularly in families with more children, is a central part of maternal household work, positively correlating with the number of children and the number of identified barriers. Identified barriers include household work, cultural beliefs, social isolation, and an insecure environment (Abbasi, 2014).

Despite maternal and spousal responsibilities at home, Heesch et al. (2004) suggest in their study that the lack of time due to work obligations is not decisive for physical inactivity. Participants in the study used a significant portion of their free time for reading, watching television, and relaxation. Predominant sedentary leisure was identified as a barrier to engaging in physical activity (Heesch & Mâsse, 2004). Joint physical activity by parents and children, along with a tandem focus on parental goals and interventions, can provide supportive conditions within the family (Mailey et al., 2014).

Time, behavioral, socio-economic, demographic, ecological factors as barriers

A significant number of studies highlight a lack of time, fatigue, lack of self-initiative and will, lack of exercise companionship, costs, lack of social support, non-aesthetic or insecure living environment, poor health, alcohol and tobacco consumption, physical incapacity, education, and poor weather conditions as possible barriers to PA (Bowles et al., 2002; Kouvonen et al., 2005; Schneider & Becker, 2005; Popham & Mitchell, 2006; Osuji et al., 2006; Gidlow et al., 2006; Roessler et al., 2006; Azevedo et al., 2007; Kaleta & Jegier, 2007; Godin, Bélanger-Gravel, & Nolin, 2008; Schwetschenau et al., 2008; Brinthaup et al., 2010; Cerin, et al., 2010; Arango, Patiño, Quintero, & Arenas, 2011; Withall

et al., 2011; Holtermann, Hansen, Burr, Sogaard & Sjøgaard, 2012; Thomas, Halbert, Mackintosh, Quinn & Crotty, 2012; Alonso-Blanco et al., 2012; Edmunds et al., 2013; Abbasi 2014; Bardus et al., 2014; Bredahl et al., 2015; Vandelanotte et al., 2015; Joseph et al., 2015; Borodulin et al., 2016; Mathews et al., 2016; Torquati et al., 2016; Stankevitz et al., 2017; Puciato et al., 2018; Keohane et al., 2018; Hunter et al., 2018; Bláfoss et al., 2019; Mariam & Mazin, 2019; Al-Mohannadi et al., 2020; Paudel et al., 2021; Mayne et al., 2022).

Professional, social, and family obligations can lead to a lack of time for exercise, with time scarcity being the most commonly cited barrier. Those who reported time pressure as an obstacle to exercise had a lower prevalence of PA (Bowles et al., 2002; Osuji et al., 2006; Roessler & Bredahl, 2006; Fletcher et al., 2008; Borodulin et al., 2016; Ryde et al., 2020; Paudel et al., 2021; Mayne et al., 2022). Gidlow and colleagues (2006) in their study emphasize that the lack of time for exercise is more present among those with lower socio-economic status. Work schedules and conflicts within schedules and busyness can contribute to a lack of time for PA (Leininger, Adams & DeBeliso, 2015; Neil-Sztramko et al., 2017; Mayne et al., 2022), which could be addressed by allocating time resources for PA, taking into account specific job needs (Leininger et al., 2015). Overtime hours, simultaneous tasks, weekend work, and a high level of responsibility can shape a lack of time recognized as a barrier to exercise (Kirk & Rhodes, 2011), while unemployed individuals are less likely to perceive time as a barrier to PA (Borodulin et al., 2016). High managerial positions and greater social engagement, despite better economic status, may result in less time as a barrier to PA (Takao et al., 2003). Interventions aimed at establishing flexible working hours and adjusted breaks can help reduce daily time pressure for higher exercise prevalence (Ryde et al., 2020). Lack of time as a barrier, due to childcare, family, and household responsibilities, may be a reason for not exercising (Withall et al., 2011; Leicht et al., 2013; Keohane et al., 2018; Paudel et al., 2021). The results of the study by Leicht et al. (2013) indicate that the lack of time and energy due to family and household responsibilities is more pronounced in women than in men, which aligns with the findings of Abbasi (2014), who indicates that women, due to family busyness, lack of spousal and family support, more than men, identify a lack of time as a barrier to PA. The results of the study by Al-Mohannadi (2020) and colleagues highlight that women recognize time as a barrier due to daily family responsibilities and difficulties in maintaining a routine. Efforts and interventions aimed at reducing social responsibility expectations and burdens, improving social, family, and partner support, can influence the reduction of time barriers in women and initiate their greater participation in exercise (Abbasi, 2014). Borodulin et al. (2016) identify that men and women in non-partner relationships and without children perceive time as a barrier less than those in partner relationships and with children.

Lack of interest (Stankevitz et al., 2017), reduced motivation and insufficient skills (Hunter et al., 2018; Paudel et al., 2021), the belief that exercise could lead to physical injury (Al-Mohannadi et al., 2020), discomfort caused by external factors (Mathews et al., 2016), the perception that exercise is boring, and a sense of body shame among colleagues during exercise (Edmunds et al., 2013), assessed low self-efficacy levels (Withall et al., 2011), lack of energy and knowledge

(Mariam & Mazin, 2019) are recognized barriers to engaging in PA. Leicht (2013) emphasizes that women more often cited lack of energy as a barrier than men, explaining this gender difference with traditional daily schedules and participation in household and family physical activities. Dombrowski (2011) presents that participants stated that facing barriers discourages them from engaging or continuing exercise and negatively impacts their self-confidence, while Al-Mohannadi et al. (2020) state that women expressed the view that PA is uninteresting. Arango (2011) and colleagues note that women reported higher barrier values when it comes to lack of will. Lack of motivation, in combination with a lack of skill and fear of injury, as barriers, has been increasing with age and in obese individuals, which could be alleviated by interventions aimed at increasing motivation and

Azevedo et al. (2007) present findings that men engaged in higher levels of PA compared to women, which can be explained by the busy schedules of women with household and family responsibilities, which are perceived as a barrier promoting a healthy lifestyle (Arango, et al., 2011). Older workers engage in lower levels of PA than younger workers, with age negatively correlating with exercise levels, making chronological age a barrier (Stankevitz et al., 2017; Bláfoss et al., 2019). Fear of injury and pain (Osuji, et al., 2006), age considered in the same-sex group, unhealthy weight associated with a sedentary lifestyle, smoking habits, alcohol consumption, and spending time in front of the TV as observed barriers to PA are variables significantly correlated with physical inactivity (Kaleta & Jegier, 2007). Schneider & Becker (2005) note that smoking and excessive alcohol consumption represent barriers to PA. Awareness that excess weight as such directly or indirectly affects reduced involvement in exercise underscores the importance of promoting a healthy lifestyle, health, and physically active living (Godin et al., 2008). Inactivity in the WP can pose a public burden, assuming interventions to raise awareness of the importance of PA and healthy behavior change (Kaleta & Jegier, 2007). Combined effects of lack of knowledge and instructions, fear, and low self-awareness regarding PA can emerge as barriers to exercise, which can be mitigated by involving appropriate educators and planning PA interventions (Fletcher et al., 2008).

Kaleta and Jegier (2007) report differences in the level of PA concerning the level of education and economic status. The level of education positively correlates with PE, while the risk of not exercising is several times higher in individuals with basic education than in college-educated men and women. Low monthly incomes can appear as a barrier, aligning with the findings of Kaleta and Jegier (2007), who present results that men and women with the lowest monthly incomes have a higher risk of physical inactivity than those with a higher monthly budget. Economic insecurity through a lack of savings and financial indebtedness can project life problems, reducing quality of life and personal financial solvency, with a consequent questionable active involvement in PE (Puciato et al., 2018). The positive interaction of low socio-economic status with exercise is confirmed by Azevedo et al. (2007) and Stankevitz et al. (2017), whose results indicate that a low level of socio-economic status can appear as a barrier to engaging in PA. It is assumed that individuals with lower levels of education possess less knowledge about the positive effects of exercise compared to those with higher

levels of education, which somewhat explains the presence of barriers in the lower-educated population. Involvement in fitness centers requires financial resources, which are not always accessible to the population with lower economic status, leading to barriers in the lower socio-economic population (Azevedo, et al., 2007).

Lack of and distance to indoor and outdoor facilities and spaces for PA, lack of safety, and meteorological conditions can emerge as barriers to PA (Brinthead et al., 2010; Keohane et al., 2018; Paudel et al., 2021; Mayne et al., 2022). Edmunds (2013) and colleagues state that the distance between workplaces and exercise locations can be a barrier to exercise. Barriers in the form of inadequate hygiene conditions during and after exercise can influence the degree of involvement in physically active populations, which is essential for employees who would like to exercise during working hours. The inability to have proper hygiene treatment after exercising due to inadequate and insufficient numbers of bathrooms and showers can be a barrier to PA in the workplace, which can be overcome by identifying and intervening to improve space and facility standards (Torquati et al., 2016). An unsafe environment, such as narrow streets, wandering dogs, and poorly visible entrances, can be barriers, and addressing them requires a strategic approach to activities aimed at improving social and cultural norms in the community (Mathews et al., 2016). Risky social communities (Cerin et al., 2010) as barriers in the form of verbal and physical harassment may be challenging to resolve, considering the need for comprehensive engagement at political, security, economic, cultural, and social levels. Devastated pedestrian paths can hinder or discourage participants from exercising, emphasizing the importance of involving local government unit leaders and a creative architectural approach to overcoming this barrier. Involvement in joint action by security agencies, law enforcement, and community members can reduce security-related barriers, aiming to provide a better environment for involvement in exercise activities (Joseph et al., 2015). External weather conditions such as rain, snow, wind, hail, and temperature can pose a barrier to PA, although the strength of this barrier in this case is perceived to be of less significance.

The variability of exercise leaders and non-pedagogical work, misunderstanding exercises by exercisers, and rigid exercise content can act as barriers with the potential to project monotony, low perceived capability, and demotivation, lack of progress, and loss of attention in exercisers (Bredahl et al., 2015). Distrust towards the instructor (Withall et al., 2011), strict adherence to schedules, and the belief that they shouldn't exercise when the instructor is not present were detected as inconsistencies by exercisers. Lack of motivation can be explained by the fact that exercise content is monotonous and lacks creativity. By applying multidisciplinary knowledge regarding PA, more flexible, content-diverse programs, and simplified procedures for membership and participation in PA programs, it is possible to reduce barriers to PA (Schwetschenau et al., 2008; Bardus et al., 2014; Bredahl et al., 2015).

Conclusion

Psychophysical subjective benefits and mental well-being, supported by experience and skill gained during PA, positively influence social interactions within the WP. A

wide spectrum of presented barriers, aside from revealing the challenging circumstances faced by the WP in their efforts to engage in PE, demonstrates their interconnected and intricate impact that should not be overlooked. All barriers can be divided into three main groups: i) Work schedule and workplace as barriers; ii) Marital and extramarital relationships, parenthood, family, and household obligations as barriers; iii) Time, behavioral, socio-economic, demographic, and ecological factors as barriers. In the context of the contemporary lifestyle, where economic activities almost dominantly prevail, maintaining health and a adequately functional state among employees is of utmost importance, further emphasizing the significance of PA and the detection of barriers of various kinds. Findings underscore the need for synchronized and continuous interventions by various entities within the social community, both on an individual and societal level, in the domains of behavioral, socioeconomic, demographic, and ecological aspects. Interactive communication regarding PA between managers and employees should unveil its meaning to the WP, without discarding understanding of what it means in a comprehensive life context. Values highlighted in the working active population might be valued if they reflect the desired outcome of what people appreciate in terms of how PA can be designed to reflect the desired result. Study findings indicate the importance of

promoting more frequent involvement in clubs and easier access to PA. The results of this study could potentially guide various interventions aimed at eliminating barriers associated with PE, and in that sense, future studies should adopt consistent procedures and approaches, rigorous analytical techniques, and deeper exploration of the context. The fact that awareness of barriers presupposes higher-quality implementation of PE programs, among other things, may suggest the need to establish related relationships and influences between encouraging factors of PA. Understanding and activating the obtained findings and their implementation in future research should provide a better understanding and design of interventions that reduce barriers and enhance factors that encourage participation in PA. Detected barriers suggest that interventions to eliminate them should not be directed at a single solution, given their diversity. Therefore, this research is of great value, as by determining the state and identifying different barriers to PA, it can serve as an initial step in devising various measures and solutions to eliminate these barriers and enable the WP to engage in physical activities for the improvement of their health and work potential. As PA is important for the WP, the design of exercise programs should be structurally and socially desirable, designed with a comprehensive perspective to be attractive and accessible to the widest WP.

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Conflict of Interest

The author declares that there is no conflict of interest.

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