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Both, Jorge; Ferreti Borgatto, Adriano; Fogliarini Lemos, Carlos Augusto; Ciampolini,
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Physical education teachers' wellbeing and its relation with gender

Jorge Both^{1*}, Adriano Ferreti Borgatto², Carlos Augusto Fogliarini Lemos³, Vitor Ciampolini², Juarez Vieira do Nascimento²

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ABSTRACT

The objective of this study was to evaluate the relation between gender and physical education teachers' wellbeing in southern Brazil, considering the socio-environmental (job satisfaction) and individual (lifestyle) parameters. A total of 1653 teachers (741 men and 912 women) in the states of Paraná, Santa Catarina, and Rio Grande do Sul were surveyed. The instruments used for data collection were QVT-PEF and PEVI, as well as a socio-demographic and professional questionnaire. The results confirm findings concerning dissatisfaction of physical education teachers regarding remuneration, work conditions, job autonomy, work and total life space as well as an overload in women's daily lives. In relation to lifestyle, women showed better eating habits; however, they also showed lower levels of positive behaviour in the components of relationships, and stress control. Therefore, the authors point out to implementation of public policies to ensure more equitable treatment regarding gender issues in the work environment, as well as regarding physical education teachers' personal aspects.

Keywords: Lifestyle, job satisfaction, faculty, teaching.

INTRODUCTION

In recent years several factors have hindered the educational process, and among them teachers' wellbeing has been one of the main affected (Hwang, Bartlett, Greben, & Hand, 2017; Silveira et al., 2017). This fact also takes place in the physical education (PE) field, especially when considering that several health problems take part during PE teachers' professional career such as lower back pain, voice disorders, common cold, and auditory problems (Kovač, Leskošek, Hadžić, & Jurak, 2013). Moreover, low salaries, job type, job promotion, bad relationship with colleagues, and poor management have interfered in perceived job satisfaction (Tajnia, Honari, Ranjoust, & Ebadi, 2014; Yarmohammadi & Taghibigloo, 2013).

In addition to job-related socio-environmental issues, PE teachers' lifestyle is associated with individual behaviours such as eating habits, physical activity, preventive health actions, relationships, and stress control, all of which have

a direct impact on their wellbeing. When socio-environmental and individual aspects reflect negatively on lifestyle and work environment, physical and/or mental illnesses may arise, affecting the professional's life. Therefore, investigating PE teachers' wellbeing perception and its relation to job satisfaction and lifestyle has been a major topic in this field (Both, Nascimento, Sonoo, Lemos, & Borgatto, 2014).

In order to understand the factors that contribute to higher job satisfaction perceptions, recent research on PE teachers has examined the differences between genders (Kroupis et al., 2017; Tajnia et al., 2014). In fact, the literature regarding to this topic has no general agreement yet. If on the one hand, gender differences seems not to interfere in job satisfaction (Ahmadian, Farshbaf, & Vafaeian, 2015; Kroupis et al., 2017); on the other hand, other studies have pointed that women present a higher job satisfaction in comparison to men (Jyothish Kumar & Manoj, 2015; Tajnia et al., 2014). With regards to PE

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¹ Londrina State University.

² Federal University of Santa Catarina.

³ Regional Integrated University of the Upper Uruguai and Missions at Santo Angelo.

* Corresponding author: Address: Departamento de Educação Física, Universidade Estadual de Londrina, Rodovia Celso Garcia Cid, PR 445 Km 380, Campus Universitário, P.O. Box 6001, CEP 86051-990, Londrina, Paraná (PR), Brasil. E-mail: jorgeboth@yahoo.com.br

teachers' lifestyle, women have indicated more stress perception (Kelley & Gill, 1993) and work overload (Al-Mohannadi & Capel, 2007); while men are physically more active (Madureira, Maia, & Fonseca, 2003) and usually present a higher number of injuries than women (Kovač et al., 2013).

In the literature consulted, many factors have influenced PE teachers' work, whether through socio-environmental (job satisfaction) or individual (lifestyle) aspects. However, the results have been presented in a scattered manner and little is known about which factor has the strongest influence on PE teachers' wellbeing. Having a better understanding of those factors can help support national governmental bodies to promote health-related initiatives to enhance the quality of teaching and a better work environment. Therefore, the objective of this study was to evaluate the relation between gender and PE teachers' wellbeing in southern Brazil, considering the socio-environmental and individual parameters.

METHODS

Study design, participants, and ethics

This is as descriptive, cross-sectional research (Armour & Macdonald, 2012). The population consisted of PE teachers actively working at the public state educational system in southern Brazil. In total, the surveyed population consisted of 13.892 teachers, with whom 4.770 teachers were from Parana state, 1.857 were from Santa Catarina state, and 7.265 were from Rio Grande do Sul state.

Sample selection was performed in three phases, consisting of two strata and one stage. The first stratum considered the geopolitical division of the federative units (states) that make up Brazil's south region. The second stratum considered the mesoregions of each state. The single stage considered the Regional Educational Centres (RECs) as conglomerates of the mesoregions of the respective states.

In order to conduct the research, authorizations from the Education Department of each state were obtained, as well as the approval of the Ethics Committee for Human Research at the Federal University of Santa Catarina.

Data collection

Contacts by phone were made to the RECs to establish partnerships to gather information. When the collaboration for the investigation was accepted, 5.734 survey instruments were sent by mail to the RECs. After receiving the instruments, the RECs forwarded them to the schools. At the schools, the administration of the educational units delivered the questionnaires to the PE teachers, who completed and handed them back to the schools' administration, which returned them to the RECs, and afterwards to the researchers. During all stages the questionnaires were sealed and were opened only by the respondents and researchers. Explanatory letters describing the procedures for data collection were sent to the RECs, school directors and the PE teachers.

In total, 653 teachers from Parana, 580 from Santa Catarina and 411 from Rio Grande do Sul completed the questionnaires, totalling a sample of 1.653 PE teachers. Considering the final sample, the authors calculated a sampling error of 2.27 percentage points through a confidence interval of 95%.

Instruments

The instruments for data collection consisted of the "*Escala de Avaliação da Qualidade de Vida no Trabalho Percebida por Professores de Educação Física do Ensino Fundamental e Médio*" (QVT-PEF) ("Rating Scale of Quality of Working Life as Perceived by Physical Education Teachers of the Elementary and Intermediate School") (Both et al., 2006), to evaluate the teachers' job satisfaction; the "*Perfil do Estilo de Vida Individual*" (PEVI) ("Profile of Individual Lifestyle") (Nahas, Barros, & Francalacci, 2000), to evaluate the teachers' lifestyle; and a short questionnaire that aimed to characterize the educators' socio-demographic and professional aspects.

The QVT-PEF instrument comprises 34 questions responded through a 7-point Likert scale, which ranges from (1) totally disagree to (7) totally agree. This instrument is based on the theoretical matrix of quality of work life by Walton (1973), who indicates that a job is linked to eight dimensions, namely: remuneration, work

conditions, job autonomy, opportunities for career advancement, social integration in the workplace, labour laws and regulations, work and the total space of life, and social relevance of the work. Both et al. (2006) conducted an empirical study for the validation of the QVT-PEF, finding acceptable levels of content validity (i.e. 70%), strong correlations of reproducibility (i.e. r_s between 0.82 and 0.69), and high score of reliability (i.e. 0.9482).

The PEVI instrument was created by Nahas et al. (2000), which consists of 15 questions distributed in the following components: dietary habits, physical activity, preventive behaviour, relationships, and stress control. The questions are related to the individual's lifestyle characteristics in relation to their wellbeing; there are four frequency options for each healthy behaviour question, in which the score ranges from 0 to 4: (0) "Absolutely not part of my lifestyle", (1) "sometimes corresponds to my behaviour", (2) "almost always true in my behaviour", and (4) "the statement is always true in my daily life and it is a part of my lifestyle". Regarding the validation of the PEVI, Both et al. (2008) conducted a study that revealed acceptable levels of internal consistency (i.e. Conbrach's Alpha = 0.78) and the percentage of explained variance of the questionnaire was 58.65%.

The socio-demographic and professional questionnaire aimed to measure variables to characterize the sample, such as gender, state, life cycles, marital status, professional development cycles, length of time at the institution, academic education, total weekly work hours, and multiple jobs.

Data analysis

In order to analyse data, we first categorized the components/dimensions and the 'overall assessment of lifestyle and job satisfaction' score using Lemos' (2007) weighting equations. Considering that the sample extrapolated the minimum number of subjects estimated for conducting this study, we also assigned weights to the respondents based on the reverse

procedure of probability of selecting the teacher. Afterwards, in order to evaluate the associations between the socio-demographic and professional aspects with gender, the chi-square test was used. To determine the distribution trend of the gender, the chi-square test was employed for a single group, having 50 percent as reference.

To evaluate job satisfaction and lifestyle constructs considering teachers' gender, the likelihood ratio test in the multinomial logistic regression model was employed either in crude or adjusted analyses. It is worth noting that the multinomial logistic regression aimed to perform a detailed analysis of the significant associations found, showing a confidence interval (CI95%) for odds ratio (OR) of 95%. The adjusted analysis for the multinomial logistic regression added in the model the variables that presented $p \leq 0.10$ in the previous analysis. It should be noted that the independent variables remuneration, work conditions, job autonomy, work and total life space, dietary habits, relationships, and stress control were suppressed from the adjusted analysis models as they were assessed as dependent variables. In the multinomial logistic regression analysis, the category "unsure" in job satisfaction and the category "intermediate profile" in lifestyle were employed to determine the odds ratio of dissatisfied and satisfied teachers regarding job satisfaction and teachers with negative profile and positive profile in lifestyle. The statistical tests were performed through the software SPSS, version 15.0, having 95% as significance level ($p \leq 0.05$).

RESULTS

The results revealed that the majority of the PE teachers were female (55.2%) ($p < 0.01$). By analysing the socio-demographic and professional characteristics of the professionals according to the gender of the participants, there was a significant association in the variables corresponding to the state where the teachers work ($p < 0.01$), multi-jobs ($p < 0.01$), marital status ($p < 0.01$), life cycles ($p < 0.01$), and length of work time at the institution ($p = 0.03$) (See Table 1).

Table 1.

Socio-demographic and professional aspects considering PE teachers' gender

Gender	Male (%)	Female (%)	<i>p</i>
State			
Paraná	37.8	31.6	<0.01 ^a
Santa Catarina	15.4	12.8	
Rio Grande do Sul	46.9	55.6	
Multi-jobs			
Do not have	36.4	50.8	<0.01 ^a
Have	63.6	49.2	
Marital status			
Married	68.6	60.1	<0.01 ^a
Others	31.4	39.9	
Life cycles			
Up to 29 years old	17.4	15.2	<0.01 ^a
30-39 years old	30.3	37.5	
40-49 years old	35.6	39.0	
50 years or older	16.7	8.4	
Education			
College graduation	37.8	36.7	0.66 ^a
Post-graduation	62.2	63.3	
Professional development cycles			
Admission (up to 4 teaching years)	17.9	17.4	0.08 ^a
Consolidation (5 to 9 teaching years)	20.9	29.7	
Diversification (10 to 19 teaching years)	28.4	33.9	
Stabilization (20 or more teaching years)	32.8	28.9	
Length of work time			
Up to 3 years	30.1	31.1	0.03 ^a
4-11 years	32.6	32.2	
12-19 years	20.3	24.4	
20 years or over	16.9	12.3	
Total working hours			
Up to 40 weekly hours	44.7	48.3	0.15 ^a
41 weekly hours or over	55.3	51.7	
Total	44.8	55.2	<0.01 ^b

^a *p*-value estimated by the chi-square test^b *p*-value estimated by the chi-square test for single group

The results of the other socio-demographic and professional variables showing significant association allowed identifying the teachers' profiles considering the teachers' gender, which were:

- **Male:** Teachers were from the state of Santa Catarina (15.4%) and Paraná (37.8%), they had multiple jobs (68.6%), were in a wider age ranges (i.e. up to 29 years old (17.4%) and 50 years or older (16.7%)); and most of them had 20 years or more of work time (16.9%).
- **Female:** Teachers were from the state of do Rio Grande do Sul (55.6%), they did not have multiple jobs (50.8%), were in the intermediate age ranges, (i.e. 30 to 39 years old (37.5%) and 40 to 49 years (39.0%)); and most of them had 12 to 19 years of work time (24.4%).

About the job satisfaction construct this study found that 65.6% of the PE teachers in the public state schools in southern Brazil were satisfied with their jobs. Most of the teachers surveyed reported that they were satisfied for the following variables: Social

relevance of the work (79.6%), labour laws and regulations (77.8%), job autonomy (75.8%), and opportunities for career advancement (71.5%). On the other hand, the dimensions in which the teachers showed the lowest satisfaction rates were: Remuneration (14.5%), work conditions (39.9%), work and total life space (46.2%), and social integration in the workplace (53.3%).

In the evaluation of job satisfaction according to the gender of the participants, significant associations were identified in the dimension of work and total life space for both crude ($p < 0.01$) and adjusted ($p = 0.03$) analysis. Work conditions ($p < 0.01$) and job autonomy ($p = 0.02$) showed significant association only in the crude analysis (See Table 2).

In the detailed evaluation of the points that comprise the job satisfaction construct and which presented significant association with gender, this study found that either in the crude or adjusted analysis of the dimension work and total life space, men [52.3% (Crude: OR=1.44, CI95%:1.15-1.81)

(Adjusted: OR=1.37, CI95%:1.06-1.79)] showed a higher rate of satisfaction than women (41.8%). In the crude analysis of the dimensions work conditions and job autonomy, men [25.4% (Crude: OR=0.75, CI95%:0.58-0.96)] had a lower rate of dissatisfaction

with work conditions than women (32.5%), whereas men reported a higher rate of satisfaction [79.2% (Crude: OR=1.45, CI95%:1.12-1.86)] with job autonomy when compared to women (73.4%) (See Table 2).

Table 2.

Evaluation of job satisfaction considering PE teachers' gender

Gender	Job satisfaction			Crude p^a	Adjusted p^b
	Not satisfied (%)	Unsure (%)	Satisfied (%)		
Remuneration					
Male	51.0	32.8	16.3	0.08	0.67
Female	56.2	30.6	13.3		
Total	54.0	31.5	14.5		
Work conditions					
Male	25.4	31.4	43.3	<0.01	0.14
Female	32.5	30.0	37.5		
Total	29.6	30.6	39.9		
Job autonomy					
Male	4.1	16.7	79.2	0.02	0.09
Female	4.1	22.5	73.4		
Total	4.1	20.1	75.8		
Opportunity for career advancement					
Male	6.2	20.2	73.6	0.26	0.84
Female	7.5	22.5	70.0		
Total	7.0	21.5	71.5		
Social integration in the workplace					
Male	9.4	35.6	55.0	0.29	0.78
Female	11.5	36.5	52.0		
Total	10.6	36.1	53.2		
Labour laws and regulations					
Male	5.1	16.3	78.6	0.78	0.41
Female	5.8	17.0	77.3		
Total	5.5	16.7	77.8		
Work and total life space					
Male	19.4	28.3	52.3	<0.01	0.03
Female	25.5	32.6	41.8		
Total	23.0	30.9	46.2		
Social relevance of work					
Male	3.1	16.3	80.6	0.22	0.10
Female	4.7	16.5	78.8		
Total	4.1	16.4	79.6		
Overall assessment of job satisfaction					
Male	7.0	24.4	68.6	0.07	0.06
Female	9.1	27.5	63.4		
Total	8.2	26.2	65.6		

^a p -value estimated by the likelihood ratio test.

^b p -value estimated by the likelihood ratio test adjusted for the following variables: state, multi-jobs, marital status, life cycles, length of time at the institution, professional development cycles, remuneration, work conditions, job autonomy, work and total life space, overall assessment of job satisfaction, dietary habits, relationships and stress control.

With respect to the lifestyle of PE teachers in southern Brazil, the overall assessment of lifestyle showed that 66.9% of the teachers had positive behaviours. Considering the specific components, the highest rates of positive behaviour were observed in preventive behaviour (80.4%) and relationships (79.5%). In contrast, the lowest scores were presented

in dietary habits (38.4%), stress control (51.7%), and physical activity (58.2%).

In the evaluation of the lifestyle construct considering the gender of the educators, this study found that the components of dietary habits, relationships, and stress control presented a significant association in the crude ($p<0.01$) and adjusted ($p<0.01$) analysis (See Table 3).

Table 3.

Evaluation of lifestyle according to gender

Gender	Lifestyle			Crude p^a	Adjusted p^b
	Negative(%)	Intermediate(%)	Positive(%)		
Dietary habits					
Male	35.5	32.6	32.0	<0.01	<0.01
Female	25.3	31.8	42.8		
Total	29.5	32.1	38.4		
Physical activity					
Male	20.1	20.2	59.7	0.13	0.06
Female	18.5	24.4	57.1		
Total	19.2	22.7	58.2		
Preventive behaviour					
Male	7.6	12.3	80.1	0.96	0.93
Female	7.3	12.0	80.6		
Total	7.4	12.2	80.4		
Relationships					
Male	4.3	11.1	84.6	<0.01	<0.01
Female	6.5	17.6	75.9		
Total	5.6	14.9	79.5		
Stress control					
Male	18.7	22.8	58.4	<0.01	<0.01
Female	22.8	30.3	47.0		
Total	21.1	27.2	51.7		
Overall assessment of lifestyle					
Male	5.6	28.7	65.7	0.42	0.86
Female	6.3	26.0	67.8		
Total	6.0	27.1	66.9		

^a p -value estimated by the likelihood ratio test.^b p -value estimated by the likelihood ratio test adjusted for the following variables: state, multi-jobs, marital status, life cycles, length of time at the institution, professional development cycles, remuneration, work conditions, job autonomy, work and total life space, overall assessment of job satisfaction, dietary habits, relationships and stress control.

Regarding the component dietary habits, this study found that men [35.5% (Crude: OR=1.37, CI95%:1.07-1.76) (Adjusted: OR=1.65, CI95%:1.25-2.17)] had a higher negative behaviour than women (25.3%), and men [32.0% (Crude: OR=0.73, CI95%:0.58-0.93) (Adjusted: OR=0.65, CI95%:0.50-0.85)] also had a lower rate of positive behaviour than women (42.8%). Concerning relationships, men [84.6% (Crude: OR=1.77, CI95%:1.32-2.37) (Adjusted: OR=1.68, CI95%:1.21-2.33)] had a higher rate of positive behaviour than women (75.9%). Similar result was found in the stress control dimension, in which men [58.4% (Crude: OR=1.66, CI95%:1.31-2.10) (Adjusted: OR=1.71, CI95%:1.31-2.24)] had a higher positive behaviour rate than women (47.0%) (See Table 3).

DISCUSSION

Data revealed that the majority of the PE teachers in southern Brazil are women. This fact

confirms a trend generally indicated for the teaching profession (Tardif & Lessard, 2014). Thus, considering that this finding was also reported by other research in different countries (Karimi, Hadavi, Zahedmanesh, & Ghamarpour, 2015; Yarmohammadi & Taghibigloo, 2013), it seems that the PE field it is also being influenced by this feminization process. However, one should notice that Parana and Santa Catarina state still indicate a higher number of male PE teachers, which suggests a paradigm still in shift in the southern Brazilian context.

The high incidence of multiple jobs among teachers has been connected with the fact that teachers have other jobs outside the school environment (e.g. team coach, personal trainer, sports manager, etc.) (Silva & Nunez, 2009). Thus, it appears that the job market for the professionals with bachelor's degree in PE and full teaching degree is conducive to multiple jobs. Another important aspect is that the job offered in public schools means employment and income

security to the teacher, while the functions performed outside public schools is largely seen as an additional activity to supplement income (Both et al., 2016). For men, the need for extra jobs is probably more evident because they usually are responsible for the largest portion of the household income.

The fact of existing differences between the variables 'life cycles' and 'length of work time' and the teachers' gender may be associated with the legal aspects relating to the national eligibility to retirement. In Brazil, male teachers must work five years more than women to be entitled to retirement (Paraná, 2004; Rio Grande do Sul, 1974; Santa Catarina, 1986). Therefore, considering this characteristic, one can expect the number of men to be greater in the age groups and have longer work time.

Regarding the PE teachers' dissatisfaction, the results indicated higher scores relating to salary and work conditions. However, it was also observed that there was no consistent agreement on the perceived satisfaction relating to the existing ratio between the amount of time devoted to work and leisure, and the social integration that teachers have with the school community. These results were similar to those found in other international studies (Al-Mohannadi & Capel, 2007; Koustelios, 2005), which suggest that the issues related to educators are widespread; a clear indication that the public policies in primary education are poor and inadequate. In contrast, the dimensions relating to career advance, autonomy in the educational work, laws that regulate the educational work, and teachers' perception about the relevance of their role in education are aspects that received high satisfaction rates. The results shown in the dimensions affected the results of the overall assessment, where six out of ten teachers reported being satisfied regarding job satisfaction. The influence of the results of dimensions on the overall assessment of job satisfaction can be justified by the similarity of the themes that constitute the work evaluation construct (Both, Nascimento, Sonoo, Lemos, & Borgatto, 2010).

About the dimensions of the job satisfaction construct, this study showed that work

conditions and job autonomy had a significant association only in the crude analysis. That is to say, firstly the higher rate of women's dissatisfaction with work conditions may be associated with the feeling of reduced time to perform work tasks (Ramzaninezha, Hemmatinezhad, Nejadajadi, & Keshtan, 2009). On the other hand, women's dissatisfaction with job autonomy may be associated with the fact that men perceived more personal power in the workplace than women (Lindholm, 1997). However, when using the moderating variables in the analyses, the autonomy of the administrative/pedagogical job and the perception of work conditions did not show significant associations with the teachers' gender, indicating similar perceptions on these matters.

Regarding work and total life space, the adjusted analysis confirmed the result of the crude analysis. In fact, men's higher level of satisfaction regarding the ratio between leisure time and work time may be connected with the extra time that women need to spend in family chores when they are out of work, such as child care. Connected with this factor, this study found that men have better relationships interaction, which can also contribute to the relation found in this survey.

With respect to lifestyle, positive ratings were present in these two components: Preventive behaviour and relationships. In contrast, the negative aspects relating to lifestyle were dietary habits, and stress control. The component physical activity had an intermediate result, because only six out of 10 PE teachers reported positive behaviour. This result is of concern because physical educators should put more emphasis on the knowledge and understanding of the importance of physical activity during primary education, which shows that the theory is not consistent with the practice for a significant group of teachers. Furthermore, it should be noted that the result of the frequencies of the lifestyle components had influence on the overall assessment of this construct. A larger number of the teachers studied showed positive behaviours in relation to the overall assessment of lifestyle.

In the analysis of the lifestyle construct considering the gender, three components

showed significant association. But the number of components that presented relation with gender was not sufficient to affect the overall assessment analysis, which indicates a strong singularity of each component (Both et al., 2008). On the other hand, the associations found in the crude analysis that presented significant relation between the variable gender and the components dietary habits, relationships and stress control were confirmed in the adjusted analysis.

The results showed that women had healthier behaviours with respect to eating habits, and men reported better attitudes regarding relationships and stress. Such results are similar to those found among employees in the Brazilian industry (National Industry Confederation, 2009). In addition, women's dietary habits may be associated with a higher level of concern with body image, which is connected with a cultural aspect, for example, that women tend to have a more critical view of their own body (Veggi, Lopes, Faerstein, & Sichieri, 2004). On the other hand, the findings on the component relationships may be connected with the fact that men have more group leisure activities (Del Duca, Oliveira, Sousa, Silva, & Nahas, 2011).

The information provided on stress control may be connected with the fact that men are less prone to burnout as a result of work problems when compared to women (Brudnik, 2010). Furthermore, it should be emphasized that the pre-menstrual syndrome, a highly prevalent disorder among women in fertility age, may alter negatively women's mood for a significant period of time every month (Vieira & Gaion, 2009).

Limitations of the Study

Some limitations of this study should be mentioned. The self-administered application method allows a risk of inaccuracy of data considering the less interaction between researcher and subject. Added to this risk is the non-observation of the respondents' behaviour by the researcher, which is limited to the information contained in the instruments. In addition, although the sampling error presented an excellent score, this calculation was performed with the assumption that the sample was chosen randomly, which was not the case in this study

considering that people self-selected to participate.

Another limitation is that even though this research presents a good representation of teachers in each state and REC, which allowed an acceptable sampling error for this study, the authors did not control the number of subjects with each socio-demographic characteristic investigated, which would ensure the analysis of heterogeneous individuals presenting different profiles.

CONCLUSION

The findings of this study allow us to conclude that most of the PE teachers in southern Brazil are satisfied with their job and present positive lifestyle behaviours. However, the most negative aspects regarding to their job satisfaction and lifestyle are remuneration and dietary habits, respectively. When considering gender comparisons, men reported being more satisfied with work and total life space with regards to job satisfaction, as well as showing better relationship and stress control behaviours. On the other hand, women presented significantly better dietary habits. Finally, as a suggestion, there is a need for the implementation of public policies to ensure more equitable treatment regarding gender issues in the work environment, as well as regarding PE teachers' personal aspects.

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