

INFLUENCE OF HEALTH INFORMATION IN STRETCH BREAK PARTICIPANTS' LIFESTYLE

Influência de informações de saúde no estilo de vida de participantes de ginástica laboral

Influencia de las informaciones de salud en el estilo de vida de participantes de gimnasia laboral

Article Original

ABSTRACT

Objective: To verify the influence of health information on the lifestyle of stretch break (SB) participants. **Methods:** The study comprised 14 subjects of both sexes, members of the SB program of the Federal University of Paraíba (FUPB), who underwent, between March and May 2010, anthropometric evaluation and semi-structured interview. The quantitative analysis used mean, standard deviation, and absolute frequencies. The qualitative data was based on content analysis, emerging three categories: behavioural changes in the practice of physical exercise and eating, memories of information passed on the anthropometric measurements, and preferred exercise. **Results:** The subjects were pre-obese (26.03 kg/m²), with increased risk of developing chronic noncommunicable diseases and pre-hypertension. Five of them increased the practice of physical exercise (PhE), five intended to start exercising, three continued the PhE practice, one began practicing PhE with his partner and, from those two who started to eat better, one did not intend to exercise. Walking was practiced by six individuals. **Conclusion:** Transmission of concise health information proceeding from a SB program may have positive reflexes in the worker's lifestyle, and walking was the preferred modality of physical exercise among the investigated participants. **Clinical trials register:** [NCT01943734](#)

Descriptors: Access to Information; Life Style; Occupational Health.

RESUMO

Objetivo: Verificar a influência de informações de saúde no estilo de vida de participantes de ginástica laboral (GL). **Métodos:** Participaram 14 sujeitos de ambos os sexos, integrantes do programa de GL da Universidade Federal da Paraíba (UFPB), nos quais se aplicaram, entre março e maio de 2010, avaliação antropométrica e entrevista semiestruturada. A análise quantitativa utilizou média, desvio padrão e frequências absolutas. Os dados qualitativos foram baseados na análise de conteúdo, emergindo três categorias: mudanças comportamentais na prática de exercícios físicos e alimentação, lembranças de informações repassadas na avaliação antropométrica e exercícios físicos preferidos. **Resultados:** Os sujeitos estavam pré-obesos (26,03 kg/m²), com risco aumentado de desenvolvimento de doenças crônicas não transmissíveis e pré-hipertensão. Cinco aumentaram a prática de exercícios físicos (EF), cinco pretendiam passar a se exercitar, três mantiveram a prática de EF, um passou a realizar EF com seu cônjuge e, dos dois que começaram a se alimentar melhor, um não pretendia se exercitar. A caminhada foi praticada por seis indivíduos. **Conclusão:** A transmissão de dados salutaros concisos provenientes de um programa de GL pode ter reflexos positivos no estilo de vida do colaborador, sendo a caminhada o exercício físico preferido pelos participantes investigados.

Descritores: Acesso à Informação; Estilo de Vida; Saúde do Trabalhador.

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RESUMEN

Objetivo: Verificar la influencia de las informaciones de salud en el estilo de vida de participantes de gimnasia laboral (GL).

Métodos: Participaron 14 sujetos de ambos sexos integrantes del programa de GL de la Universidad Federal de Paraíba (UFPB) en los cuales se aplicaron la evaluación antropométrica y entrevista semi-estructurada entre marzo y mayo de 2010. El análisis cuantitativo utilizó la media, desviación típica y frecuencias absolutas. Los datos cualitativos se basaron en el análisis de contenido emergiendo tres categorías: cambios de conducta en la práctica de ejercicios físicos y alimentares, recuerdos de informaciones repasadas en la evaluación antropométrica y ejercicios físicos preferidos. **Resultados:** Los sujetos eran pre-obesos (26,03 kg/m²), con riesgo aumentado en desarrollar enfermedades crónicas no transmisibles y pre-hipertensión. Cinco aumentaron la práctica de ejercicios físicos (EF), cinco intentaron empezar un EF, tres mantuvieron la práctica de EF, uno empezó a realizar EF con su compañero y de los dos que empezaron a alimentarse mejor, uno no tenía la intención de practicar EF. La caminata fue practicada por seis individuos.

Conclusión: La transmisión de los datos saludables concisos de un programa de GL puede reflejar positivamente en el estilo de vida del colaborador, siendo la caminata el EF elegido por los participantes investigados.

Descriptores: Acceso a la Información; Estilo de Vida; Salud Laboral.

INTRODUCTION

A Worker Health Promotion Program (WHPP) is comprised among demands for policy and activities that have been used in the occupational environment aiming at promoting workers' quality of life (WQoL) in the workplace, respecting the characteristics of the company, the employee and the community in which it is located⁽¹⁾.

The demand may render a WHPP composed of, for instance, health-related quality of life (HRQoL) and related-to-work QoL lectures, return-to-work program, drug addict support program, ergonomics program, weekly information on WQoL, and stretch break program (SB). That demand is mainly defined through questionnaires, checklists and biometric evaluations. These and/or other instruments should be employed to evaluate whether the program or activities implemented are fulfilling their purpose⁽²⁾.

A questionnaire can thus be applied to identify which shall be the focus of SB in a given department, guiding the application of stretching exercises, recreational activities, massages and any other activity that may be employed to reduce the negative psychophysiological stress, prevent injuries, provide moments of relaxation, reduce body aches, among various other benefits⁽³⁻⁵⁾.

The anthropometric data collection is essential to design and maintain the WHPP, but should be held for specific purposes – just taking measures, without any specific purpose, makes everyone waste time. The anthropometric assessment results should be passed on to the employees, especially to make them more responsible for improvements in their lifestyle, defined⁽⁶⁾ as the set of habitual actions that reflect the attitudes, values and opportunities in the individuals' life. Such evaluation can thus promote self-directed learning and the adoption and/or retaining of habits that compose a life with more quality^(3,7).

Although anthropometric assessments are performed in SB/WHP programs, the influence that the information obtained through those evaluations may have on the evaluated's lifestyle is not evident so far. In order to fill this gap, this study aimed to verify the influence of health information on the lifestyle of SB participants.

METHODS

This is a cross-sectional, descriptive study with quantitative and qualitative approach, conducted at the Federal University of Paraíba (UFPB - *Universidade Federal da Paraíba*).

The target population was composed of 653 servers who performed their labour activities in 2010 in the rectory of UFPB. In the first two weeks of the study, 43 servers decided to have their anthropometric data collected, thus being included in this study; however, those who did not complete the anthropometric and/or did not answer the semi-structured interview were excluded, remaining a total sample of 14 subjects.

The UFPB SB program had a pilot study started in October 2009 in three units of the rectory (Rector's office, Directory of Community Affairs and Directory of Undergraduate), by applying a checklist⁽²⁾ in order to identify usual and predictable movements or postures related to work that could harm the employees' health. This program is aimed at the health promotion within and outside the work environment and is structured to provide 15-minute long SB classes (based on stretching exercises), individualized weekly service provided by the teacher and weekly dissemination of information on the virtual environment regarding WQoL and HRQoL. In the identification stage of the program, virtual questionnaires drew the workers' health and occupational profile, and their preferences (e.g., the best time to participate in the SB program activities), in addition to anthropometric measurements, in order to reach the maximum individuality of the SB program components, enabling the structuring stage.

Data collection occurred in 2010, prior to the start of the SB classes, in a meeting room in the subjects' own work

environment, and was performed in two stages: from March to April, the anthropometric assessments were carried out, and in May occurred the semi-structured interviews. The measurement devices were settled 'in circuit' in that room, being followed the collection protocols required for each measure⁽⁸⁾.

In the anthropometric evaluation, the following variables were assessed: body weight (kg, collected by digital scale TechLine[®]), height (cm, checked by stadiometer Sanny[®]), waist circumference (assessed by the shortest perimeter between the last rib and the iliac crest, in cm, measured by flexible anthropometric tape Sanny[®]) and blood pressure (in mmHg, measured by sphygmomanometer and stethoscope Premium[®]).

From height and weight measurements, the body mass index (BMI) was calculated in kg/m² using the cut-off points established by WHO⁽⁹⁾, classifying individuals as pre-obese with a BMI between 25 and 29.99. For the waist-to-height ratio (WHtR), it was considered the result ≥ 0.50 ⁽¹⁰⁾. For blood pressure - BP (mmHg), the cut-off points of the Brazilian Society of Cardiology⁽¹¹⁾ were used, indicating that the systolic blood pressure between 130 and 139 or diastolic from 85 to 89 is classified as prehypertension.

An especially designed electronic spreadsheet performed the calculation and the automatic classification of data, as well as the registration of the subjects' report⁽¹²⁾ on specific information (e.g., consumed medicine). The anthropometric data collection for each subject took about 30 minutes, 15 minutes for the individual to rest prior to BP measurement, and the remaining 15 minutes for the other procedures.

When workers volunteered for anthropometric assessment, they would firstly responded to questions that would not promptly qualify them for such measurements (having previously practiced physical exercise - PhE; having drunk coffee or eaten food recently; being with full bladder). After this screening, they signed the Free and Informed Consent Form and subsequently identified individual characteristics and contact (e.g., work department, age, e-mail). Following, they received information on the procedures of anthropometric assessment and were asked to rest for 15 minutes to get the blood pressure measured. The results on the health profile were passed on to each subject individually, so that all received incentives to maintain or adopt a lifestyle grounded in physical activities (including the regular practice of PhE), and have received basic information about appropriate feeding (e.g., lower intake of fatty foods), and referral to see a nutritionist, when needed.

In a second stage, semi-structured interviews were carried out in the workplace (in a private room), lasting ten minutes on average, focusing on the adoption or maintenance

of habits related to PhE and eating. The subjects chose an alias (name of city, neighbourhood, beach or flower), in order not to be identified by their speech.

For the quantitative analysis, we used the SPSS[®] (Statistical Package for Social Sciences) version 17.0, using descriptive statistics with mean and standard deviation, as well as absolute frequencies.

As for the analysis of qualitative data, it was based on the content analysis technique⁽¹³⁾, which revealed three themes: behavioural changes in the practice of PhE and eating, memory of information passed on during the anthropometric measurements, and preferred PhE.

This study was approved by the Research with Human Beings Ethics Committee of Lauro Wanderley University Hospital, of the Federal University of Paraíba (HULW/UFPB) under opinion n° 298/09 in accordance to the National Health Council Resolution 466/12.

RESULTS AND DISCUSSION

Initially, quantitative data will be presented, and then the qualitative data. The fourteen employees evaluated {female (fem) = 11; 51.07 $\pm$ 8.17 years; male (male) = 3; 51.3anos} had technical-administrative functions in the rectory of UFPB campus I.

Table I - Anthropometric characteristics of workers in the Rectory of the Federal University of Paraíba (UFPB) expressed in mean and standard deviation. João Pessoa, PB, 2010.

Variables	Mean (standard deviation)
	n=14
BMI (kg/m ²)	26.03 ($\pm$ 4.60)
WHtR (cm)	0.54 ($\pm$ 0.07)
SBP (mmHg)	120 ($\pm$ 13.01)
DBP (mmHg)	79.30 ($\pm$ 10)

BMI=Body mass index, WHtR= Waist-to-height ratio, SBP=Systolic blood pressure, DBP=Diastolic blood pressure.

Table I presents the anthropometric characteristics of the sample, indicating average pre-obesity, increased risk for noncommunicable diseases (NCD) and prehypertension. It is noteworthy that individuals presenting prehypertension should adopt a physically active and healthy lifestyle, without intake of antihypertensive drugs, with treatment indicated by the highest category of BP⁽¹⁴⁾.

The speeches analysis indicated that five workers have adopted (fem=2; male=1) or increased (fem=1; male=1) PhE practice; five intended to initiate it (fem=5); three remained the PhE practice (fem=2; male=1); one even began to practice PhE with his spouse (male=1); and two

began to eat better (fem=2). Of these two, however, one did not intend to exercise (fem=1).

The most practiced PhE were: walking (fem=5; male=1), gymnastics (fem=1; male=1), swimming (fem=1), and water aerobics (male=1). Two individuals (fem=1; male=1) practiced two types of PhE (walking and gymnastics).

The information provided during the anthropometric measurements that was considered most important by the respondents involved body mass (fem=4; male=1), BP (fem=2; male=2), and waist circumference (fem=3; male=1), as well as the indication that they should practice more physical activities (fem=3); that they had high risk for heart disease (fem=1), and had good health (male=1).

The significant increase in the prevalence of NCDs in Brazil has arisen from the nutritional and epidemiological transition process, besides being considered the main causes of deaths⁽¹⁵⁾. Among the risk factors for NCDs, in the last 30 years, excess weight has been in evidence, so that, for the same age group, death rates are higher among obese people, with a strong association between excess body fat and respiratory, cardiovascular and joint diseases, for instance⁽¹⁶⁾.

Studies performed with Brazilian workers presented different results, pointing out normal levels of BMI and BP⁽¹⁷⁾, normal levels only for BP⁽¹⁸⁾, and high prevalence of increased BP and obesity levels^(19,20), mainly among men. In the present study, the average of the results indicated not only prehypertension, but also inadequate body composition, suggesting that actions to obtain a favourable health profile should be considered. Those data point to the need of diverse measures in the anthropometric assessment, so that a more comprehensive health profile of the worker is obtained, even if brief procedures are employed.

The waist circumference and height measurement demands a short time and provides data for the calculation of WHtR, which has shown strong correlation with cardiovascular risk factors in Brazilians⁽²¹⁾, in addition to being considered more sensitive for prediction of health risks than waist circumference⁽²²⁻²⁴⁾. The findings of this research as regards to increased risk of developing NCDs were also observed in other studies with workers⁽²⁵⁻²⁷⁾. The verification of high WHtR values can emphasize the urgency of activities and programs aimed at the prevention of NCDs, especially considering that prevention involves lower cost in comparison with interventions targeting assistance and cure⁽¹⁵⁾.

Behavioural changes in physical exercise practice and eating

The 'behavioural changes in physical exercise practice and eating' category suggests that workers were able

to move forward linearly through the stages, reporting situations in which they had little information about their health (pre-contemplation), were more aware of themselves (contemplation) and were able to have autonomy to change their lives (action), becoming who they wanted to be (maintenance). The following statements illustrate some situations:

'[...] I started walking again and I am trying to eat at the right times. I'm trying to eat a more healthy food like salad, that didn't exist before (in the diet).' (Jacumã)

'[...] I intensified it (the practice of physical exercise), because I only did it three times a week and I started to do it every day.' (Tambaú)

'[...] also due to some exams I did, where the results were altered, I already underwent a dietary re-education and this first contact (anthropometric measurements) with the team was very helpful.' (Flor do Campo)

The next speech, Guarabira's, indicates that the transfer of information after anthropometric measurements may have been characterized as an incentive for changes to occur in habits related to a physically active and healthy lifestyle for workers, even able to influence spouses, as evidenced:

'[...] my wife and I now schedule walking, gymnastics and so on.' (Guarabira)

Only one subject did not intend to practice PhE (despite being aware of the importance of this practice), but started to eat better, as demonstrated Margarida's speech:

'Specially, I mean... as for my diabetes, due to that (anthropometric assessment), I am improving my diet a little bit, giving myself more careful consideration (...). But I try, I try, and never start this physical activity that I know is essential for my treatment.' (Margarida)

Margarida's speech shows that, even if the employee does not participate in any physical activity offered in the SB program, they can still benefit from other activities like the anthropometric assessment. This evaluation can lead to improvements in their WQoL/HRQoL, from the moment they experiment, on a step-by-step basis, a power of decision grounded on the acquired knowledge about their health⁽²⁸⁾.

Females eventually find it easier to embrace changes in lifestyle when compared to men⁽²⁹⁾, thus directing managers of SB/WHP programs to create differentiated strategies to promote behaviour change.

Even when the health profile is unfavourable (e.g., waist circumference larger than half of the subject's height), information on the workers' health condition is able to generate positive aspects⁽³⁰⁾, demonstrating the importance

of employee's awareness about their actual health status. In Flor do Campo's talk, it is observed that other procedures were employed after the anthropometric assessment, for an in-depth analysis of their health, leading to the adoption of healthier eating habits.

This means that health education is one of the solutions to drive people to change aiming the prevention and/or control of NCD risk factors through healthy habits⁽³⁰⁾. Given that, one of the ways that can positively influence WQoL is participating in a SB/WHP program, which allows the adoption of favourable behaviours, like joining in fitness programs within and/or outside the workplace, from the results emerged by a mere anthropometric assessment. Promoting behavioural change is a difficult phenomenon to be achieved, but it is essential for SB/WHP programs to obtain success. The Transtheoretical Model (TM) is considered a useful archetype of behaviour change promotion, having basically five linear behaviour stages, which include the beginning of change and the habit maintenance^(31,32).

Memories of information passed on during the anthropometric evaluation

The 'memories of information passed on during the anthropometric assessment' category indicates that all subjects remembered something passed on during the anthropometric measurements, including specific information, with BM (weight) being the most remembered information. Jacumã's and Guarabira's statements (following) illustrate these facts.

Meaningful information can help intrinsic motivation, generating a phenomenon that is characterized as an involvement in a certain activity for their own benefit, because it is considered interesting and generator of satisfaction⁽³³⁾. Thus, it is suggested that verbal information, provided by the anthropometric assessment in SB/WHP programs, shall be accurate, clear and readily assimilated by the worker⁽²⁾, enabling the consolidation of a physically active and healthy lifestyle.

'In general, the weight, because it was above and prone to obesity.' (Jacumã)

'[...] my blood pressure was good. I believe the weight, circumference, all that was in conformity.' (Guarabira)

It is noteworthy that such strategies should be 'concrete', combining the information with means for the goal to be solidified⁽²⁾. And the more frequent is the stimulus applied to the SB/WHP programs, deeper and consistent changes can effectively occur in the workers' lives⁽³³⁾.

Researches^(3,34,35) have verified how different activities offered for a certain period have influenced the workers'

lifestyle, either by increasing the physical activity levels, by increasing the motivation, or because of the experience of living what has been learned, and the information passed on to the social environment. The results of these researches contribute to understand how necessary it is to encourage the workers' effective participation in SB/WHP programs, so that the benefits of the program are significant and lasting. One way to maximize this participation is to encourage adherence, which is characterized as maintenance of worker participation in the proposed activities, considering the way they persist in a certain goal^(2,36).

Thus, the teacher is considered a key part of a SB program, given that their performance can be crucial to maximize the adherence of workers to the program⁽³³⁾. The teacher should offer frequent stimuli along the SB program, also having the ability to positively influence the employee who is not in the TM action stage. That requires conceptual and attitudinal knowledge on the part of such professional⁽³⁷⁾, so that it is not demanded large investment of physical, mental and emotional energy to generate possible changes in the workers' lifestyle, making them aware, first of all, so that they take wise decisions concerning their own destiny⁽³⁸⁾.

Preferred physical exercise

The 'preferred physical exercise' category demonstrates that walking was the preferred activity by the subjects of the sample, allowing them to adopt or maintain a physically active lifestyle, as the speech below:

'I go for a walk from Monday to Friday, on average one hour and 40 minutes, on my neighborhood square.' (Hortência)

Walking is considered one of the most common activities among individuals practicing PhE⁽⁶⁾, besides comprising the items low financial investment, flexible practice scheduling, and convenience, which favour the PhE practice.

FINAL CONSIDERATIONS

Verbal information provided in the anthropometric assessment regarding the workers' health profile have shown effective, particularly because more than half of the subjects adopted, increased or maintained the practice of physical exercises, showing that transmission of concise health data from a SB program can have a positive impact on the employee's lifestyle. Walking was pointed by the participants in this study as the preferred PhE.

A longitudinal study would be essential to indicate the long-term effectiveness of the information transfer

over different behaviours and outcomes related to the workers' health. It is suggested that the strategy used with the sample of this study becomes emphasized through more comprehensive policies, solidifying the promotion of HRQoL in the overall society.

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