

Original Article

Interventions by Physical Education professionals in Family Health Support Units in São Paulo

Intervenção do Profissional de Educação Física nos Núcleos de Apoio à Saúde da Família em São Paulo

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Abstract

The aim of this study was to describe interventions developed by Physical Education professionals (PEP) inserted in the Family Health Support Units (NASF) in the State of São Paulo. A cross-sectional survey was conducted with 91 PEP working in NASF of São Paulo, who answered by telephone. Data was analyzed descriptively (frequencies). Most participants were men with an average of 44 years of age. A greater part (96.7%) reported group sessions and shared sessions, independently of users health conditions. Gymnastics (76%) and walking (67%) were the most frequent activities. Most professionals did not intervene in school environments and did not participate in educational groups. The PEP mentioned the need for more spaces for the practice of physical activity, higher investment in interventions developed by the PEP prioritize the organization of physical activity groups in a shared environment, but are still missing the interventions in schools and broader educational activities.

Keywords

Unified Health System; Physical education and Training; Motor activity; Primary Health Care.

Resumo

O objetivo deste estudo foi descrever as intervenções desenvolvidas por Profissionais de Educação Física (PEF) inseridos nos Núcleos de Apoio à Saúde da Família (NASF) do estado de São Paulo. Realizou-se inquérito transversal descritivo com 91 PEF vinculados ao NASF que responderam questionário aplicado por telefone. Os dados foram analisados de forma descritiva (frequências). A maioria eram homens com idade até 44 anos. A maioria (96,7%) relatou o atendimento em grupos e de forma compartilhada, independente da condição de saúde dos usuários. A ginástica (76%) e a caminhada (67%) foram as atividades mais frequentes. A maioria dos profissionais não intervinha em ambiente escolar e não desenvolvia grupos educativos. Os PEF apontaram a necessidade de mais espaços para a prática da atividade física, maiores investimentos em recursos materiais e redução do número de equipes de Estratégia Saúde da Família apoiadas. As intervenções desenvolvidas pelos PEF priorizam a organização de grupos de atividade física de forma compartilhada, mas carecem de intervenções em escolas e atividades educativas mais amplas.

Palavras-chave

Sistema Único de Saúde; Educação Física; Atividade motora; Atenção primária à saúde

Introduction

Since the implementation of the Brazilian Unified Health System (in Portuguese “Sistema Único de Saúde”, also known as “SUS”), in 1990, it is noticeable the efforts from the Ministry of Health in structuring actions related to health promotion and disease prevention, particularly focused on non-communicable chronic diseases¹. The Strategy for Family Health is one of the main ideas in this new line of

work, focused on the strengthening of the primary health care by interdisciplinary work, and the Centers of Support for Family Health (in Portuguese: Núcleo de Apoio à Saúde da Família – NASF) are the base for scaling health offers throughout the country^{2,3}.

In recognition to the benefits to health and low operational costs, physical activity promotion has become, since then, one of the main pillars of this process⁴, allowing the insertion of Physical Education professionals in the multidisciplinary teams at the NASF, in order to organize and qualify the actions in physical activity promotion in the context of the SUS.

However, at the same time physical activity pro-

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motion is an important aspect of health promotion in the context of the SUS and that Physical Education professionals are inserted in the NASF teams since 2008, being the fifth most hired professional category according to a survey in 2011⁵, there is little knowledge on the physical activity promotion interventions such professionals lead in the context of the NASF. Therefore, the aim of this study was to describe the main characteristics of interventions in physical activity promotion led by Physical Education professionals working within the NASF in State of São Paulo.

Methods

Type of study

This is characterized as a descriptive, cross-sectional study.

Instruments used in the research

The development of the questionnaire followed three steps: 1) group discussion on which questions would have theoretical base according to other studies in intervention by Physical Education professionals within SUS, National Policy in Health Promotion and NASF guidelines^{2,5,6,7,8}. The discussions were led by researchers of the Physical Activity Epidemiology Group - University of São Paulo (GEPAF-USP) and the Research Group in Lifestyles and Health of the University of Pernambuco (GPES-UPE); 2) consolidation of the questions as a products of the previous reunions within the groups; 3) pre-test with Physical Education professionals working in the NASF.

Two pre-tests were conducted with the aim to verify the need for adjustments in the questionnaire. Therefore, a phone survey was performed with Physical Education professionals working within the NASF in the cities of São Paulo and São Bernardo do Campo. To avoid bias, both professionals were excluded from the final analysis of this study.

The final version of the questionnaire was composed by 57 questions divided into 5 domains: i) identification of the participant; ii) professional status; iii) professional relation with the NASF (current job specifications and experience at the NASF); iv) coverage of service; v) professional intervention at NASF. The final version of the instrument delivered by phone is available at gepaf.usp@gmail.com.

Data collection procedures

All Physical Education professionals working at least three months in the NASF in the State of São Paulo until February 2014 were eligible to participate in this study.

Before the survey, a detailed procedure was done for all NASF until August 2013. This process began by acquiring from the State Health Secretary, a list of all municipalities authorized to implement the NASF teams since 2008. In order to avoid loss of important information, a second match of municipalities was made through a list available in the National Registry of Health Facilities from the Ministry of Health (CNES)⁹. Once all the data was available, all coordination offices from every municipality were contacted by phone to confirm the existence of NASF, as well as the presence of Physical Education professionals working in the nucleus.

When telephone number and email addresses were updated, the responsible researcher contacted each one of them and scheduled a date and time for the phone interview, and forwarded electronically the informed consent term, which should be signed and returned, also electronically.

The interviews were conducted between September 2013 and February 2014 by four interviewers who were previously trained for six hours in the following topics: i) the aims of the study; ii) the type of questionnaire and the procedures for conduction; and iii) primary application of the tool (simulation of an interview).

Variables in the study

Based on the construct of the questionnaire, information used related to social, demographic and work characteristics of the Physical Education professionals, such as: sex, age group, marital status, professional qualification, amount of time qualified in Physical Education, type of employment, amount of time working at NASF, other employments, type of individual services (specific or shared), type of group service (specific or shared), physical or educational activities performed individually or in groups, and opinion on the actions that could be performed to improve the promotion of physical activity in the SUS.

Data analysis

All data collected was doubled entry in EpiData v3.1 and validated using the tool “*Validate*” for correction of inconsistencies. Descriptive analyses were performed by means, standard deviations (SD) and frequency analysis (%). All analyses were conducted in the software SPSS v15.0.

Ethical aspects

This research was approved by the Ethics in Research Committee of the School of Arts, Sciences and Humanities of the University of São Paulo (protocol no. 294.876) and by the Ethics in Research Committee of the Municipal Secretary of Health in São Paulo (protocol no. 34/13).

Results

By August 2013, 57 of the 645 municipalities in the State of São Paulo had NASF (8.8% of total). A total of 29 municipalities (50.9% from the total of 57) had hired a Physical Education professional for the NASF. These municipalities are: Amparo, Andradina, Aracatuba, Arthur Nogueira, Botucatu, Braganca Paulista, Campos do Jordao, Catanduva, Cubatao, Garca, Guarulhos, Itapetininga, Itatiba, Jacarei, Junqueiropolis, Juquitiba, Marília, Maua, Peruibe, Piraju, Presidente Prudente, Registro, Santa Fe do Sul, São Bernardo do Campo, São Caetano do Sul, São Jose do Rio Preto, São Paulo, Sud Mennucci and Tupa. For the number of teams in the NASF for each municipality, according to data from the CNES⁹, twenty three municipalities were found (79.3%) with three teams or less, two municipalities (6.9%) with four teams, three municipalities (10.3%) with 6 to 10 teams, and one municipality (3.5%) with 65 teams.

From the 114 Physical Education professionals linked to the NASF that were contacted to participate on this study, 91 were included in the final analysis (response rate was 79.8%) From the 23 that didn't respond, nine refused to participate (7.9%), seven were on vacation (6.1%), four were working at the NASF for less than three months (3.5%), one was part of the team elaborating the questions in the instrument and two were part of the pre-test (2.6%).

Table 1 shows that most part of the professionals were male (54.9%), age group between 24 and 34 years (mean of 34.3 years) and hired under the Work Consolidation Laws (CLT). Almost half of the professionals referred to having other jobs besides working at the NASF.

About academic qualification, most professionals reported being qualified from six to 10 years (42.8%), with a degree in Physical Education (53.8%), and almost half (49.4%) had *lato sensu* education.

TABLE 1 – Distribution of number and proportion of Physical Education professionals working in Centers of Support for Family Health in the State of São Paulo until February 2014 according to social, demographic and employment characteristics (n= 91).

Variables	n	%
Sex		
Male	50	54.9
Female	41	45.1
Age group (years)		
24–34	50	54.9
35–44	32	35.2
45 and above	9	9.9
Qualification in Physical Educations (years)		
≤ 5	26	28.6
06–10	39	42.8
11–15	14	15.4
> 15	12	13.2
Schooling		
Bachelor degree	38	41.8
Specialization	45	49.4
Residency	4	4.4
Master degree	4	4.4
Type of qualification in Physical Education		
Complete License (School Education + Fitness and Health)	49	53.8
Bachelor (Fitness and Health)	11	12.1
Both License and Bachelor degrees	31	34.1
Type of employment		
Federal employee	7	7.7
CLT	79	86.8
Other*	5	5.5
Other professional activity besides NASF		
Yes	43	47.3

Labels: *: Hired as a federal employee (non-effective), outsourced; CLT, federal employee with consolidated work rules; n: number; NASF: Centers of Support for Family Health.

Related to the actions developed in the NASF (Table 2), most part of professionals reported performing service in groups (n=88; 96.7%), being the most common activities gymnastics (76.1%), walking groups (67.1%) and mixed sessions (60.2%), which included different types of actions. About 38.6% of professionals performed educational activities.

A great part of the Physical Education professionals who informed individualized services (n=68; 72.7%), worked with orientation on the importance of physical activity practice as well as orientation to physical activity practice groups within the NASF. Only 35.2% of the Physical Education professionals worked with promotion of physical activity in the school environment, involving children and adolescent groups, and 53.8% assessed results of the actions.

TABLE 2 – Work actions from Physical Education professionals in Centers of Support for Family Health in the State of São Paulo until February 2014.

Variables*	%
Individual sessions	
Professionals conducting individual sessions (n=69)	75.8
Types of individual sessions	
Orientations and forwarding	98.6
Prescription of physical exercise	18.8
Physical assessment	13.0
Group sessions	
Professionals conducting group sessions (n=88)	96.7
Types of group sessions	
Gymnastics lessons ¹	76.1
Walking groups	67.1
Mixed sessions ²	60.2
Educational activities ³	38.6
Activities for children and adolescents ⁴	29.5
Lian Gong	20.5
Sports	13.6
Dance	11.4
Professionals conducting activities in school	
Yes	35.2
Professionals conducting evaluations to assess results	
Yes	53.8

Labels: *: Professionals could cite more than one option; 1: s;gymnastics lessons aimed muscular strengthening and aerobic activities (except walking), stretching, Pilates, hydro gymnastics, exercises for coordination and balance; 2: mixed sessions or lessons combined different actions in one session (example: walk and dance, gymnastics and sports; 3: educational activities were composed by specific orientation activities on physical activity (lectures and educational dynamics); 4: activities for children and adolescents were play, games and combat;

On table 3 we can see that, among individual services, most were shared (62.3%). Among activities performed in groups, 47.7% of Physical Education professionals shared services, 10.2% offered specific service and shared in the same proportion and 42.1% only conducted specific service.

For the populations reached at individual service, most professionals reported working with all ages independently from personal characteristics (98.6%). For groups service, results were similar 75.0% of professionals reported service to all ages in spite of characteristics. However, 47.7% of professionals reported also servicing patients with non-communicable diseases and 35.2% reported working with the elderly.

In the perception of 27.5% of participants in this study, the improvement and/or extension of spaces for physical activity practice, the support of each Physical Education professional to a smaller number of teams of Family Health Strategy (19.8%) and the improvement of investments in materials used for classes (18.7%) would be the main strategies to help promotion of physical activity in the actions coordinated by them inside the NASF (Table 4).

TABLE 3 – Sessions and assisted populations by Physical Education professionals working in Centers of Support for Family Health in the State of São Paulo until February 2014.

Variables*	%
Individual sessions (n=69)	
Specific ^a	29.0
Shared ^b	62.3
Same proportion (specific and shared)	8.7
Group sessions (n=88)	
Specific ^a	42.1
Shared ^b	47.7
Same proportion (specific and shared)	10.2
*Population assisted in individual sessions	
Free	98.6
Elderly	17.4
NCD	4.4
Women	2.3
Insomnia	1.5
Spinal problems	1.5
Stroke	1.5
Interest in physical activity	1.5
*Population assisted in group sessions	
Free	75.0
NCD	47.7
Elderly	35.2
Children and adolescents	26.1
Women	12.5
Pain group	6.8
Pregnant	5.7
Mental health	5.7
Disabilities	5.7
Health professionals	5.7
Postural problems	3.4
Spinal pain	2.3
Vulnerable	1.1

Labels: a: specific sessions – it is a session only conducted by Physical Education professionals; b: shared session – it is a session conducted by the Physical Education professional and other health professional; *: For assisted population, professionals could cite more than one option; Free: activity without restrictions on the population type (independent from age and health conditions); NCD: non-communicable diseases.

TABLE 4 – Opinion of Physical Activity professionals working at Centers of Support for Family Health in the State of São Paulo about the strategies that could be performed to increase the promotion of physical activity in the SUS.

Most cited strategies	%
Improve and expand space for PA practice	27.5
The PEP should have to support fewer Family Health teams	19.8
Increase investment in materials	18.7
Improve the dissemination on PA promoted by the SUS to the community	14.3
Improve investment in the qualification of health professionals	12.1
Expand participation of health professionals in promotion of PA	11.0
Improve or create strategies to motive PA practice	3.3
Assess results from the actions of PA promotion	3.3
Offer a greater number of options for PA practice	3.3

Labels: PA physical activity; PEP Physical Education professional.

Discussion

In this study, it is possible to observe that there is a small amount of NASF implemented in the State of São Paulo. This data agrees with a study from Santos and Benedetti⁵ in which they found it is still low the acceptance from the municipalities to the idea and proposal of the NASF in the entire country. Looking at the low capillarity of the NASF, the present study shows that in half of the nuclei there is a Physical Education professional present and active. Similar results were found in Santos and Benedetti⁵ where they observed Physical Education professionals are the fifth most hired category and present in 49.2% of the teams. It is necessary to highlight the fact that Physical Education professionals are important agents in the qualification of physical activity promotion in the SUS and the family health teams, supported by the NASF¹⁰.

Among the main results in this study, a great part of Physical Education professionals working in NASF, until February 2014, performed individual sessions based mainly in orientation and forwarding to physical activity practice in shared sessions, as well as group sessions, also shared, in gymnastics orientation, walking groups and mixed sessions. On the other hand, few reported interventions in the school environment, as well as educational activities. The improvement in environmental aspects for physical activity practice, expansion of materials and support from Physical Education professionals to a smaller number of teams in family health were the strategies mostly reported for an increase in promotion of physical activity in the SUS.

In the present study, 96.7% of Physical Education professionals who were interviewed reported offering group activities in NASF. This type of activity is an important strategy to potentialize the work of the team and provide enough care for the demand presented. The group dynamics facilitate activities among subjects who live in similar conditions, strengthening alternatives in organization and group coping, also allowing for dynamics involving aspects such as mutual help, shared suffering, overcoming fears, cooperation, solidarity and exchange of information^{2,11}. In such perspective, it is possible to identify group work as a potential for the expansion of the service to a greater number of people. These results agree with those presented by Souza and Loch⁶ in a study where most Physical Education professional linked to NASF in the northern region of Parana perform their work through activities using strategies like walking and muscular strengthening exercise groups.

This research also reports the most frequent activities, according to Physical Education professionals, as gymnastics and group walks. A systematic review with the aim to verify the insertion and practice of Physical Education professional in primary health care in Brazil presented that walk groups, muscular strengthening exercises and play as the most performed activities by such professionals¹². Authors suggest the prevalence of these activities due to a series of factors, including low cost, interest (popular knowledge), the fact that it does not demand specific spaces for its practice, effects in improved health conditions of its participants (short, medium and long-term) and low complexity. In the same way, a recent study conducted with a representative sample in primary care units in Brazil confirms that groups walks is the most frequent practice in the promotion of physical activity¹³.

A great parcel of professionals interviewed reported performing individualized sessions. The federal guidelines¹¹ say individual sessions must take into consideration the needs of the territory, needs of the user, the type of NASF and the municipality network. The guidelines also clarify that, the smaller the number of teams,

the highest the possibility to perform these sessions when necessary. Therefore, it is important for the professional to have conditions to identify real needs and decide which type of session is better according to the conditions offered by the system. In the municipality of São Paulo, according to the Guidelines for NASF Actions¹⁴, Physical Education professionals can perform up to 10% of their work hours in shared individual sessions and only 5% of the same activities in a specific field. The focus on these sessions was the actions such as orientation on how to practice physical exercise and forwarding to physical activity practice groups.

A study by Ribeiro¹⁵, which involved participants who were users of the SUS assisted by the Family Health Strategy in the district of Ermelino Matarazzo, showed that interventions involving educational processes developed independently, with orientation and forwarding to already existing groups, were effective to increase and maintain physical activity practice in adults.

It is important to notice in the present study that only 38.6% of professionals report specific sessions for educational activities. Systematic reviews have shown that interventions to promote physical activity based in behavioral changes involving educational as well as practice activities are effective for the promotion of physical activity^{16,17}. Therefore, these strategies are suggested for Physical Education professionals working in NASF.

Scabar et al.¹⁸ reports that educational processes should go beyond the transmission of knowledge, aiming at the empowering of the community to improve quality of life, not only from needs felt by them, but valuing the cultural context. When it comes to education in health, it is primary to work on empowerment, development of independency, participation and co-responsibility of users. However, to reach such goal it is necessary to take on a receptive attitude towards the subject and consider some aspects as, for example, personal issues, subjective issues, family dramas and other difficulties¹¹. Facing this context, educational actions are promising for promotion and adherence to physical activity as a permanent behavior, extrapolating spaces offered by the SUS.

The results from this study point that 58% of Physical Education professionals perform shared sessions, as recommended by the Ministry of Health in the NASF Guidelines^{2,11}. Shared sessions consist in having the intervention run by a health professional and a matrix supporter². The shared action can also occur between health professionals if both belong to the NASF. This type of sessions are highly important, once it allows exchange of knowledge and practice, generating experience for both professionals involved. Besides, it facilitates the qualification in service and the discussion of the singular therapeutic project, contributing to a whole and resolute approach². Ribeiro¹⁵ showed that interdisciplinary intervention based on involvement and empowering of people was effective to increase physical activity in users of the SUS who were assisted by the Family Health Strategy. Since this is an important type of assistance related to facilitation of processes and interdisciplinary interventions, it is believed that this strategy should be priority in the area of primary care in the SUS. Therefore, it is considered important that professionals are encouraged to use this type of action.

This study shows that 35.2% of Physical Education professionals promote physical activity in school. Another study with representative sample in primary health units in Brazil showed 81.8% of such units did not develop strategies to promote physical activity in partnerships with schools or in the school environment¹³. Those strategies are important for public health, given the low prevalence of physical activity practice in recommended doses among school children in Bra-

zil¹⁹, as well as the body of evidence demonstrating many biological, psychological and social benefits for children and adolescents^{20,21,22,23}.

The Health in School Program from the Ministry of Health aims to change this picture, bringing primary health units closer to the school environment, through integration and permanent articulation on education and health²⁴. That is, Physical Education professionals must actively take part on this process.

It is important to point out that activities to promote physical activity have been offered to different populations, such as: those with chronic disease, children, adolescents, adults, older adults and pregnant women. However, 70.5% of the professionals reported offering activities without any restriction, including the entire community as potential public, and not only those who were vulnerable, what allows the promotion of health through physical activity for a higher number of people, besides being in agreement with the National Policy on Health Promotion⁸.

When asked about what could be done to improve physical activity promotion through NASF, Physical Education professionals suggested many strategies. The main three were: 1) more options of physical spaces for the development of physical activity practices; 2) supporting fewer family health teams; 3) increasing and improvement of materials for the development of physical activity practices. In agreement with these findings, Physical Education professionals working in NASF of the northern region of Parana reported the main difficulty to develop physical activity practice is lack of physical space⁶. Related to the problem of material resources, professionals in Parana reported using alternative materials for being low cost options (for example, weights made of plastic bottles filled with sand or rocks and brooms as sticks).

The Programa Academia da Saude (Health Gym Program), which is one of the main strategies of promotion from the Brazilian Ministry of Health, can contribute to lessen these problems noted by the Physical Education professionals. The implementation of poles with infrastructure, equipment and qualified professionals may facilitate the processes of physical activity promotion, specially for being part of the organizational structure of primary health care and allowing Physical Education professionals to act in NASF in a joint work²⁵.

A systematic review conducted by Rodrigues et al.¹² showed that work overload for Physical Education professionals was a problem for physical activity promotion, once the professionals need to assist multiple family health teams and, as a consequence, many primary health units in different regions. This data reinforces the idea that the number of Physical Education professionals admitted in NASF must be upgraded in order to improve the processes in promoting physical activity.

Another important aspect that may interfere on the actions of Physical Education professionals is the type of employment. In the present study, most professionals were hired under the CLT employment rules. A systematic review conducted by Rodrigues et al.¹² involving original studies on the insertion and act of the Physical Education professional in the primary health care in Brazil, agrees with the findings that show such professionals are under an employment plan that does not offer a career plan and professional stability.

It is believed that contracts following CLT rules, in municipalities and regions offering low wages, may contribute to great change of professionals and causes a high percentage of participants to have extra (47%). For Rodrigues et al.¹², it is important for Physical Education professionals to be admitted in contracts that offer a certain amount of professionals stability, in order to maintain the planned work and allow the professional to evaluate the progress of those receiving treat-

ment as well as the effect of the actions in primary health care. However, it is important to highlight that this subject is complex once major studies are needed to identify the influences on employment contracts and extra activities on Physical Education professionals work in NASF.

The evaluation of effectiveness of strategies related to physical activity is a recommendation from the National Policy for Health Promotion⁸. However, only half of Physical Education professionals conducted some sort of evaluation. Moreover, there was no standardization on equipment and types of variables analyzed. Most evaluated variables observed were anthropometric, physiological, physical capacities and perception of health. It is important to notice that these variables, found in this study, are centered in biological aspects and that it would be interesting to use different variables for evaluation aiming at a better qualification to the Public Health area. Variables such as perception of quality of life, self-efficacy for physical activity practice, other behaviors related to lifestyle, social support and barriers could be important in this process.

Evaluations are important to verify the effectiveness in interventions and may contribute to the development of guidelines⁸ and even reorganization on health services. However, for the elaboration of an adequate evaluation process, is it important to have users reflecting and participating, as well as managers and health professionals, and the expansion of variables analyzed and more adequate approaches to health promotion, for example the ones aiming to evaluate the levels of physical activity of the populations participating in this service.

This study presents as limitations the impossibility to deepen the discussion in some aspects, given its quantitative survey methodology. For example, to discuss the work of the Physical Activity professional in school, it would be interesting to reflect on some issues such as: what are the expectations concerning the professional in this action; how are the strategies to promote physical activity chosen and elaborated in the school context; what are the difficulties for this type of action and how can they be overcome. In order to reach aspects such as these, it is necessary to use qualitative approaches.

A positive point of this study was the high response rate. From the total of Physical Education professionals hired to work in NASF in the State of São Paulo until November 2013, 79.8% completed the survey. Therefore, a good representation on the reports for actions to promote physical activity implemented by those professionals in the SUS through NASF was achieved.

Thus, we can conclude that most Physical Education professionals reported offering individual shared sessions, based mainly in orientation to physical activity practice and forwarding to physical activity groups. It was also observed that great frequencies of sessions in walk groups and gymnastics. As of coverage, the activities are offered to various groups of people, independent on health conditions.

For the improvement of physical activity promotion, professionals suggest expansion of spaces for practice, investment in materials and reduction in the number of family health teams supported by those professionals.

It is acknowledgeable the need for processes to evaluate the effectiveness of strategies related to physical education, a larger number of activities prioritizing educational intervention and a better understanding between the Physical Education professional and the school.

The results of this study may contribute to a discussion concerning the guidelines to Physical Education professionals working in NASF and contribute to the improvement of processes for physical activity promotion in the SUS.

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