Pedagogical techniques in food and nutrition groups: the backstage of choice process

Abstract study aimed to understand the health professionals’ social representations about the choice on pedagogical techniques to develop educational groups about food and nutrition, as health promotion strategies, in Primary Health Care (PHC). It is a qualitative research performed through the systematic observation of each accessed group (23) and semi-structured interviews with the respective coordinators (28). The analysis was made using the Discourse of the Collective Subject (DCS) technique, based on the Social Representation Theory. Six DCS were produced, highlighting that the health professionals’ choice on pedagogical techniques consider: the appreciation of the collective participation; the access to audio-visual resources; the practicality to the professional; the availability of workforce; the population profile; and the use of body experience. We concluded that the decisions about the use of pedagogical techniques are influenced by the context, labor relationships and the institution, besides health professionals’ beliefs and knowledge. The food and nutrition approach in educational groups as health promoters strategies is comprehend in a complex PHC, which involves structural elements, beyond public policies.

Key words Health professional, Primary Health Care, Food and nutrition education, Health education

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Introduction

With the increase in chronic diseases in the country, the health necessities of the Brazilian population have changed and the consumption of food has become an element for strategic intervention in this area. Since 2006 the National Policy for the Promotion of Health (PNPS) has placed healthy food as a top priority. This is based around strengthening food security and nutrition. Food has been deemed as a human right and can thus contribute to the reduction in social inequalities.

Dietetics in the context of health is a concept that has been applicable since the Hippocratic Oath. Historically, the term diet refers to a group of corporal and mental habits that have been applied in the areas of science, literature and philosophy. Through the course of time the definition of diet has limited itself to the medical field and is connected to knowledge on food and its connection with diseases. Currently dietetics forms part of the practices in public health which includes tackling food and nutrition in an educational way and this is also opens up an opportunity to promote health. These actions are for the benefit of the wider public and particularly for those with multiprofessional and transdisciplinary attributes as they contribute to an understanding of reality.

In this vein food and nutritional education (EN) in spite of being traditionally dealt with by dietitians, can and ought to be carried out by other health professionals. This recommendation is mentioned by the EN Reference Mark for Public Policies. In a recent study 75% of educational groups in the health sector covering health services users who had chronic diseases, mentioned issues in relation to food while dietitians were only involved in a tenth of cases. Other health care professionals have been working with the population on these themes.

The scientific literature, however, has placed more emphasis on the developed work done by dietitians whilst at the same time providing few details on the work of other professionals that work in the area of food and nutrition. Concomitantly a revision of specialist journals showed that the production of scientific information on nutrition in Primary Health Care (PHC) is a priority area for the implementation of actions for the promotion of health but the production is small. This is particularly for comprehensive studies that are qualitative in nature.

The current PNPS expresses the necessity and the importance of health care promotion-
2013 and April 2014 through systematic observations of the groups that were studied and with those that were interviewed (semi-structured interviews) with the respective coordinators of the groups. Our study and research was given the approval by the Department of Health in Ethics Committee and the Faculty for Public Health at the University of São Paulo. The study followed the ethical principles under Resolution CNC number 466/2012.

**Participants**

The municipality of São Paulo divides its management with the Department of Health and Societal Organizations (OS). These entities have been recognized by the federal authorities in the administration of public institutions. Health care professionals find themselves working in the context of public-private partnerships. In spite of the emergency movement of the OS to have São Paulo as the epicenter, other states and municipalities work towards the implementation of this initiative.

In order to find health care professionals contact was made with the Regional Health Coordinators and the Municipal Health Technical Supervisors. The study included groups coordinated by the health care professionals, except dietitians, in order to understand the perception of the others that deal with food and nutrition on a routine basis. It was considered that the approach to this theme, which implied that there would be trained dietitians, transcends one type of qualification covering transdisciplinary and multi-professional interests in public health which is essential for all health care professionals.

In the construction of the research, as a starting point of reference, we had a group present information on the details of the problems being investigated and acceptance was given of the personnel involved that would carry out the study. Aside from this, we looked for regional diversity in the municipalities of São Paulo with a view to finding different realities and perspectives which would go beyond just one locality or OS in order to obtain an adequate saturation of data.

We had access to 23 groups that belonged to different programs and strategies: i) The Green and Healthy Environment Program (PAVS), associated with the environment and territory sustainability, helping to empower and increase community participation, ii) The Self-monitoring of Glycemic Levels Program (AMG) which is aimed at controlling Diabetes Mellitus in those that are insulin dependent, iii) The Registering and Accompanying of those with Hypertension and Diabetes Program (SisHiperDia), which aims for those with these diseases to be closely monitored, iv) The Paulistana Mothers Program, which for those who are pregnant or receiving neo-natal care to be accompanied/monitored throughout their treatment and v) The Traditional Medicine and Integrated Practices Municipal Program (MTHPIS), which deals with corporal practices, meditation, homeopathy and healthy eating. We also observed groups that were not connected to the programs that were acting at a local level in the Family Health Strategy team (ESF).

The groups that were observed had either one or two coordinators and 28 health care professionals were interviewed as per Table 1.

**Production of the data**

Field research was conducted by researchers that went out in twos. They had received prior training and they went to the areas where the educational programs were taking place. When the educational groups were being observed the researchers used a form that had a list of elements covering information on: the current professional coordinators, the number of users that participated, duration, frequency, pedagogical

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**Table 1. Professionals that made up the Primary Health Care Team, group coordinators with the theme of food and nutrition. São Paulo, 2013 and 2014.**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Professionals (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionals, graduates in the</td>
<td>Nurses (14)</td>
</tr>
<tr>
<td>area of health</td>
<td>Doctors (2)</td>
</tr>
<tr>
<td></td>
<td>Social Assistant (1)</td>
</tr>
<tr>
<td></td>
<td>Physiotherapist (1)</td>
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<tr>
<td></td>
<td>Phonoaudiologist (1)</td>
</tr>
<tr>
<td></td>
<td>Physical Education Teacher (1)</td>
</tr>
<tr>
<td></td>
<td>Occupational Therapist (1)</td>
</tr>
<tr>
<td></td>
<td>Public Health Trainer (1)</td>
</tr>
<tr>
<td>Specialists</td>
<td>Specialist in Oral Hygiene (1)</td>
</tr>
<tr>
<td>Support Staff and Agents</td>
<td>Promotors of a healthy environment (2)</td>
</tr>
<tr>
<td></td>
<td>Community Health Workers (1)</td>
</tr>
<tr>
<td></td>
<td>Support Nurses (1)</td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>Accountant (1)</td>
</tr>
</tbody>
</table>
techniques used, the content, the physical space, materials/educational resources and how the professionals acted.

The interviews that were carried out with the coordinators were aided by the aforementioned form in a semi-structured way after the meeting of the educational groups. There were questions on the elements that recommended the choosing of specialists and pedagogical resources for the work in the groups on the theme of food and nutrition.

Analysis of the data

The data produced in observation of the groups was organized and its content was put into groups based on themes and sub-themes to make a group of thematic areas in the field of food and nutrition.

The interviews were recorded in audio. They were then transcribed and later organized. The analysis had at its base the Discourse of the Collective Subject (DSC) based on the Social Representation Theory. The analysis was done according to the following steps: a detailed reading of the statements given, an identification of the key expressions (part that described the content better), an identification of the central ideas (categories that synthesize and describe present meaning) and the construction of the DSC. These are synthesized discourses having key expressions with similar content and aimed at expressing the thoughts of the collective through the discourse of one individual.

The social representations for Moscovici, as forms of know-how, are cognitive-affective structures and they need to be understood based on the reality that is produced and its functionality in the social interactions of daily life marked by conflicts and turmoil. In this way we looked to understand the social representations of the health care professionals based on their collective construction giving consideration to the context and relations that interfere in the pedagogical strategy used for the educational groups on theme of food and nutrition.

Results

Amongst the total of 23 groups observed, 18 had a coordinator and out of 5 from this group, two were professionals coordinating the activities. It is worth noting that 20, aside for the coordinators, had other professionals that were present. The nurses were present in 17 groups and they acted as coordinators in 14. Also even though the community health worker (ACS) was present at 10 of the groups, he took over the coordination just once. In a general way, the presence of higher education educated professionals assisted their being coordinators. This was particularly the case for the following: Social Assistant, Phonoaudiologist, Physical Education Teacher, Public Health Trainer, Physiotherapist, Doctor and Accountant.

The number of users that participated in the groups varied from between three and 40. The groups that were observed held activities from between 10 to 140 minutes. The frequency of the group meetings tended to be monthly (n = 13) or weekly (n = 8) and occasionally fortnightly (n = 2).

Every educational group presented one or more pedagogical technique during the course of their activities. Round table discussions were more usual (n = 12), followed by lectures (n = 5) and consultations (n = 5). The consultations were identified by the professionals as group spaces where individuals could participate together in a waiting room before being formally attended to. The following activities in lesser numbers were observed: workshops (n = 3), physical activities (n = 2) and the dynamics or games played (n = 1). The ad measurement of anthropometric variables was not seen on a frequent basis (n = 1).

The content on food and nutrition was varied making it possible to identify tendencies of approaches according to the program (Figure 1). Six themes were subsequently developed: three related to specific diets (dietary guidance, food and nutrients) and three about the process of health-disease (health, disease and risk factors). The SisHiperDia program covered all of the thematic groups while the PAVS program took a more focused approach on food and nutrients.

We observed interruptions and interference from other professionals and users during the group activities as well as the use of sound stimulus and external visuals. Concomitantly, in many of the spaces no identification was made of any moment for reflection and understanding of the problems in reality. In general there was not any putting together of or interaction with educational material or the participants which meant that there were not many activities. Materials and educational resources were used in only eight groups and when used the content, the language and the form of use of the material was marked by: a distancing in understanding for the tar-
get-audience, the excessive use of technical terms and the distribution of materials where discussions had taken place.

There was a tendency on the part of the coordination to limit the opportunities for participation and questioning by the users. There was little stimulus for speech and for asking questions. Aside from this, the clear strategies for the evaluation of understanding of the messages given consisted in certain moments at the end of the meeting being used as a way to verify the transmission of the content.

The synthesis and meanings from the statements given that laid the ground for the choices on the pedagogical strategies to be used in the educational groups on food and nutrition obtained from the semi-structured interviews, resulted in six DSCs. The “Central Idea A, The Promotion of Collective Participation” concerns social representation in that decisions involve relations with populations and the DSC showed the intent of the professionals in making sure the user took part in the educational process at the level of communication:

*I believe in working together and not just being a spectator. There has to be an exchange, we also need to listen. So with the resources that we have, it would be more to do with the question of participation. I think it is better to work with workshops because they allow for there to be interaction, because it is not just you speaking and imposing your learning. All the time there is any exchange, as they bring the knowledge. Also the round table discussions are really good because when everyone is seated together I think people feel more open to asking questions or to tell people about something that happened. Thus at this time we are able to offer some technical support. It has to be something that is more dynamic for the participants so that they can understand the why which is important when taking care in relation to what you eat. This exchange of know-how works extremely well. I think we cannot, therefore, be very explicit and direct because it will become like a formal class. I think we have to be very interactive with them because if we talk a lot and they don’t say much, they will get tired. I think all forms of communication are very important such as looking, touching, a hug and speaking for those that have the opportunity and the gift.* (DSC-A)

The “Central Idea B - Population Profile” shows that the choice of the pedagogical strategy is associated with the characteristics of the users that are a part of the educational group, belong-
The "Central Idea E - Availability of human resources" notes the difficulties placed on working in teams in the face of work demands making dietitians the main source of knowledge in this area:

Ah, more professionals in the area means more monitoring. I could have had a dietitian here explaining the real value of every food item and thus I would not lose time giving diets. With some partnerships to create a group of people interested in healthy eating we can be dynamic, play around and after this we can talk about what people have brought in as content. But here, I'm the only one that is available for these groups. The other people don't get involved due to the demand. (DSC-E)

Lastly, the "Central Idea F - Centrality - of the body and senses" shows the social representation of the corporal experience as a crucial element for the success of the educational activities on food and nutrition:

You have to work with the body having synergy and effective participation. I think about all of the resources that they can transfer and how understanding can be shaped where people in groups are captured and want to participate. Based on my own experiences I've noted that they like group work when movement is involved, movement of the body accompanied by a lot of music... Another thing that I find interesting is, for example: once we were talking about chocolate and we brought various types of chocolate in order to talk about the benefits and problems with them and so that we could taste them. When we also talked about tea we brought in tea for all to taste. We bring in many things which ends up enriching our time together. Because if you use all of the body's elements, the five senses, the group will have all that it needs to be successful! (DSC-F)

Discussion

This article intends to get to grips with social representations made by health care professionals, not dietitians, on the choices of pedagogical strategies for educational groups covering the theme of food and nutrition in the PHC. The results provide the possibility for the production of knowledge on the heterogeneity of approaches that was carried out and the different perceptions in relation to the pedagogical strategies that correspond to the care in health through educational groups. The DSC shows that this choice is subject to three social representations: relations with the population involved, the logic of the service which determines the availability of the different
types of resources and the centrality in the corporal experience.

The social representation of relations with the population include the DSC A, which brings the importance of collective participation. This involves round table discussions and workshops as the best facilitating strategies. However, there is no indication that time for reflections and understanding problems were used as justifications for these choices. The professionals recognize each other as listeners and apprentices, however the participation described in the DSC is apparently limited, being restricted to communicational aspects of the concession for the right to speak to the users. What is presented is an educational process that maintains learning at a cognitive level. The objective of the group is “to make them understand why it is important to take care in relation to the food they eat”. In other words there is a lack of progress to the level of construction and comprehension amongst the subjects.

Pinafo et al.\textsuperscript{11} notes that education in health, from the point of view of the professional, is about convincing people based on technical and scientific knowledge without considering the transforming dimension of the educational process. Therefore, in spite of the advances in the recognition of collective participation, there is still a need to explore and understand how to construct relations that have dialogue between professionals and users culminating in the protagonism of the population\textsuperscript{12} and thus an extrapolation of social representations based historically on educational and traditional processes. In spite of these processes being anchored in reality and context, they were socially constructed.

At the same time, it is worth reflecting on what the health care professionals understand by workshops and round table discussions as there were no references for reflection, understanding the problems and transformation as elements in the educational process. In Oliveira e Wendhausen\textsuperscript{13}, research which aimed to redefine educational practices in health with professionals, they noted discordance between the practices and the concepts constructed during the study. The initial idea of the round table discussions was for the professional to convey content to others and later generate discussions with users.

In turn the DSC B presented another determinant for pedagogical strategies to be used: the users’ profiles. For the choices of the pedagogical strategies, it is necessary to consider the socioeconomic characteristics of the population and its physical limitations amongst other things. However it is necessary to highlight the use of methods that promote collective participation, allowing for accounts of reality getting closer to professionals and users\textsuperscript{22}. In spite of the idea that with a specific demographic a particular pedagogical strategy works better it should be noted that collective participation ought to be prioritized in all groups.

The social representation of the centrality in the relations between people constitute, in the idea of Merhy\textsuperscript{23}, “light technology”. In turn, social representation of relations between the choice of pedagogical strategies and the service structure shown by DSC C, that deals with the use of audiovisual resources (in other words “light-heavy technology”) is knowledge that is well structured and this also goes for the forms in which it is applied\textsuperscript{23}. A study carried out with health care professionals that put together groups of people that suffered from hypertension and diabetes also showed the use of light-heavy technology, highlighting the importance of it being in accordance with the physical, psychological and social characteristics of the users\textsuperscript{24}.

This DSC brings the perception of the power of the image as necessary support for the educational process which constitutes an element in a symbolic plan, advances verbal communication to meet the interests of the public and consequently, obtains involvement in activities. The computer, the projector, the photos and the posters allows for the projection of images as a strategy that follow the standards of a typical show in the media that we are all familiar with. In an analogy, a presentation by Kehl\textsuperscript{25} about the television, the use of audiovisual resources by health care professionals looks to quickly grab the public’s attention in a fluid manner. It is done in such a way as to stop them changing channels which in this case would be vehicles of information on food and nutrition.

Aside from this, the health care professionals as social groups expressed their difficulties in accessing these resources. They felt frustrated in not being able to do what they imagined they could do. The lack of physical structure has already been noted in journals as an obstacle for educational actions\textsuperscript{23}. Fernandes et al.\textsuperscript{24}, however, note that sophisticated material resources, such as the projector, do not necessarily constitute a prerequisite for educational activities in groups. Thus, basic materials such as posters made by professionals can also go towards meeting the objective of the activities if used in the correct way.

The DSC D shows the influence of the work in schools based on pedagogical strategies. Talks
are seen as a source of something that is practical for professionals. This technique is associated with: the model of traditional education, the conveyance of knowledge and the vertical nature in the relations between the educator and those being educated. However, under the eye of the social representation as a built up collective structure that expresses a way of thinking and acting, lectures/talks seem to correspond to the requirements of service being one option (not necessarily ideal) in the face of material and structural possibilities that an institution provides.

The planning of educational groups requires time and it is necessary that the professional develops these activities without identifying how onerous his/her routine may be, which would result frustrating working. To this end the challenge of materializing the EN remains firm for the educational groups as a priority activity for the promotion of health in the PHC. This is due to the public policies in health and food that sit on the horizon.

The (un)availability of the human resources appears to be another identified element that influences choices regarding pedagogical strategies (DSC E). The social representation of a specialist, in the case of the dietitians, that provides solutions in relation to food and nutrition is in contraposition to transdisciplinary factors which are essential elements for activities in this area. Aside from this, the National Policy for Food and Nutrition which aims to improve the food, nutrition and health of the Brazilian population is a guidance document for Unique Health System and not a group of guidelines just for dietitians.

The insertion of the dietitians in the PHC through the support of registering reference teams seeks to find a balance of knowledge where value is placed on interdisciplinary care and integrity in health care. We recognized the importance of the dietitians at this level of care, however, his/her presence as a coordinator of the educational groups is not a condition for the support of actions in relation to food and nutrition.

It is important to reflect on the training of health care professionals for the development of EN groups as this DSC exposes the lack of identification and accountability concerning the theme. The process of training in the collective perspective needs to be understood as an instrument of engagement by Unique Health System with alterations in the work conditions and support to face the challenges in obtaining health.

Social representation of learning through the body is shown in DSC F, where there is a corporal experience noted as a tools for the acquisition of new knowledge on food and nutrition. Users involved in educational groups can learn based on the material given in a rational and symbolic way. Consideration should, therefore, be given to the presence of individuals in the world that learn in this way through corporal strategies using the body’s senses. This is good for groups that work in the area of food and nutrition. Therefore the use of the senses can be an effective instrument for changing food habits and an incentive for eating different foods.

The exception for Category F can be seen in the social representation of health care professionals on the process of choosing the pedagogical strategies which brought structured elements for the educational process. The actions that have educational approaches involve components from three different spheres: the method including pedagogical technique as well as the content and the technology used; the individuals involved (in other words educators and those being educated); and the space in which the actions take place. We noted that amongst these, the content was not mentioned as an element that influences the choice and use of pedagogical strategies, but it seems to be related to programs, which is surprising in the face of the diversity of content related to food and nutrition that is discussed in the groups.

Over the past 10 years with the publication of the PNPS, there was at the same time the application of the new policy which meant that adequate and healthy food was maintained as a priority theme when working with the population. The information presented shows the challenges placed on professionals in leading educational groups that touch on themes linked to the promoting of healthy eating.

**Final considerations**

This study has brought to light elements that help in the understanding of the social representations that lead to the choice of pedagogical strategies for activities in educational groups. For groups having the theme of food and nutrition, the discourse finds the professionals having to choose according to the participation process, based on the characteristics of: the population, the audiovisual resources, the human resources, what works in practice and corporal experience. This last point widens the opportunities for educational promotion strategies for health related
to corporal habits which brings back the Hippocratic concept in the theme of diets.

The results were processes involving the PHC being complex and having covered food and nutrition. Focus was placed on food and the process of health-disease as part of the different health programs to be dealt with at local and national levels. The professionals present their imaginary components that go beyond current policies and acts as individual translators. There are other elements such as the context and the service that are interpreted as barriers that need to be overcome structurally speaking for the materialization of actions that promote health in its guiding principles.

Also it is necessary to consider what is understood by the health care professionals on the components of the educational process and on the importance and accountability in relation to the theme of food and nutrition. The carrying out of continuous education constitutes one of the ways to generate new understanding and new ways to develop these activities based daily services and the reality of users, aside from strengthening pedagogical themes. We highlighted the importance of taking a deeper look from the perspective of health care professionals, institutions and users to fully understand educational groups on food and nutrition.

Collaborations

FC Botelho and LDS Guerra conducted field research, data analysis and writing of the text. A Paiva-Cárdenas conducted data analysis and writing of the text. AM Cervato-Mancuso worked in the design of research and final draft text.

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