Physical activity promotion in general practices of Barcelona: a case study

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Abstract

This case study aimed to generate explanations for the lack of integration of physical activity (PA) promotion in general practices of Barcelona, the capital of Catalonia. This explanatory study adopted a qualitative approach, based on three techniques; focus groups (n = 3), semi-structured (n = 25) and short individual interviews (n = 5). These approaches explored the wider environment surrounding primary care from a range of distinctive professional and personal perspectives. Participants were recruited as patients (n = 20), policy makers (n = 6), academics (n = 5), PA professionals (n = 3), medical doctors (n = 3), researchers (n = 2), media employees (n = 2) and one social worker. Phenomenological techniques were used for data coding and interpretation. Contributors confirmed the final interpretation. Three main factors underpinned the lack of integration of PA promotion approaches. PA promotion delivery rarely accounted for either patients’ individual needs or the circumstances that influenced their interest in PA promotion. This was a missed opportunity in promotional consultations. There was also a lack of official support for general practitioner-based PA promotion. Finally, primary care staff intentionally isolated their practice from other professionals and/or services in the community. Community-based PA promotion could be better integrated by (i) introducing stage-based strategies, (ii) creating top–down approaches and (iii) connecting primary care with other professionals and institutions in the community.

Introduction

Sedentary behaviour is one of the strongest risk factors for many chronic diseases, including coronary heart disease, hypertension, Type 2 diabetes mellitus, osteoporosis, colon cancer, depression and anxiety [1]. Despite the benefits of physical activity (PA), 65% of adult Catalans are inactive [2]. Inactivity is also more prevalent in Spain than the rest of Europe [3], showing the lowest rates of perceived opportunities for PA within the residential environment [4]. Furthermore, obesity and diabetes mellitus are increasing in the Spanish and Catalan populations [2, 5, 6] consistent with most westernized and urbanized societies such as United States [7] and United Kingdom [8]. In this context, reducing sedentary lifestyles should be a priority area within the Catalan and Spanish public systems [9–11].

There is an indication that increasing PA can be a cost-effective undertaking [12–15]. Canadian estimates, based on a smaller [12] but more active population than Spain [3, 16], showed that, annually, inactivity cost health services Can$2.1 billion. Based on 1999 data, a 10% reduction in the prevalence of inactivity would have generated Can$150 million of annual savings [13]. In Australia, general practitioner’s (GP’s) advice cost...
Aus$3647 for every saved disability adjusted life year [14]. US figures show that annualized health care costs were reduced by US$2202 in people aged >50 years who increased their walking from 0–1 to >3 days/week [15].

While official Catalan documentation encourages primary care health professionals to promote PA as a key feature for reducing sedentary behaviours [17–22], physicians and nurses do not have a sense that PA promotion is integrated into the daily routine of practice consultations [23]. The purpose of this case study was to generate explanations for the lack of micro-level integration of promoting PA in general practices of Barcelona, the capital of Catalonia. Given that environmental approaches are now at the forefront of efforts to promote more active lifestyles [24], focus was placed on studying how the wider environment surrounding primary care was integrated into existing promotional approaches. Data were gathered from different stakeholder perspectives regarding experiences, values and beliefs for PA promotion practice consultations.

**Methods**

Primary care interventions have been moderately effective in increasing PA in the short term but not in sustaining long-term increases [25–31]. Recent papers emphasize that there is no firm or conclusive rationale for directing resources towards PA interventions in primary care [32]. In an absence of conclusive results from quantitative studies, qualitative research is needed to generate a deeper understanding of quantitatively derived results. Carrying out studies on individuals will increase the opportunity to inform health promotion policies that reflect personal perspectives and experiences [33].

Quantitative studies point to two main causes for the inconclusive results regarding PA promotion within primary care: interventions failed to account for (i) specific population barriers and (ii) the surrounding environment for promoting PA [26, 27]. Further, to date most studies of PA promotion in general practices have not only generated evidence-based data but also presented the perspective and experiences of doctors [32, 34–37]. The experiences of patients and other ‘key players’, within the wider environment affecting primary care, have not been represented. With this in mind, carrying out qualitative research to explore the views of those involved in PA promotion in primary care addresses a significant gap in current research.

Using a qualitative approach allowed the researcher to explore experience-based information [38] and generate explanations for the lack of micro-level integration of promoting PA in general practices of Barcelona (Fig. 1).

**Qualitative study**

A case study constitutes an approach to the study of singular entities. This may involve the use of a wide range of diverse methods of data collection and analysis, based on the understanding that specific examples illustrate general issues [39]. In this study, conducted in 2001, the case was a city, Barcelona. Our methods were chosen to generate an in-depth and intensive exploration of how the wider environment influenced PA promotion in practice consultations.

Focus groups, semi-standardized individual interviews and short individual interviews were conducted with patients to understand the framework for PA promotion in primary care and generate important and relevant insights. Semi-structured interviews corroborated focus group data and provided more in-depth personalized information. These interviews were conducted with key players to explore PA promotion from different perspectives.

Using the theoretical sampling strategy [38], key informants were identified as being information rich. Informal approaches made to official authorities helped to identify key players (Table I) within a range of settings. This process identified policymakers, researchers, academics, representatives of family medicine associations and PA professionals [40]. Extra participants were added when their importance was emphasized by other contributors.

Potential participants were contacted by phone and provided with information about the project.
Directors of primary care teams supported conducting focus groups with patients. General practices were selected according to factors that potentially influence patients' views and experiences on PA promotion: (i) geographical area (urban versus city outskirts), (ii) publicly versus privately managed, (iii) delivery within a reformed model of primary care versus non-reformed model and (iv) supported a wide range versus a narrow range of preventive activities. GPs and nurses recruited patient volunteers to participate in focus groups. All individuals provided verbal consent for participation and understood conditions for withdrawing. Where signed permission was acceptable, this was undertaken.

The interviewer was experienced through other qualitative research studies and refined the skills needed for this study within the piloting of the interview guide. Developing the focus group guide also helped to train the focus group moderator. Interviews and focus groups were tape-recorded, fully transcribed and coded using phenomenological techniques borrowed from van Manen [41] and Moustakas [42]. These techniques offer two distinct and relatively neutral ways to analyse experiences. In combination, they provide a detailed exploration of the contributions and also help researchers to suspend personal preferences and biases in the analysis and interpretation.

After transcribing the interviews, we first coded categories and identified themes and trends in the data. Second, coded categories and themes were cross-checked with the notes made immediately following each focus group and interview. Third, coded categories and themes were related first to the existential constructs of Time, Body, Space and...
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Table I. Theoretical sampling: initial sample structure

<table>
<thead>
<tr>
<th>Groups of cases</th>
<th>Settings</th>
<th>Factors/dimensions</th>
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<tbody>
<tr>
<td>Politicians</td>
<td>Department of Sanity and Social Security</td>
<td>—</td>
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<tr>
<td></td>
<td>Advisory council on PA and health promotion</td>
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<td></td>
<td>City council Sports section</td>
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<tr>
<td>Researchers</td>
<td>Own workplace</td>
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<tr>
<td>Academics</td>
<td>Faculty of medicine</td>
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<td></td>
<td>Catalan Official Medical Association</td>
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<td></td>
<td>Faculty of exercise</td>
<td>Urban Rural</td>
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<td></td>
<td>Catalan Official Association of PA and Sports Professionals (COPLEF)</td>
<td>—</td>
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<tr>
<td>Representatives of family medicine associations</td>
<td>Catalan Society for Family and Community Medicine (SCMFic)</td>
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<td></td>
<td>Spanish Society for Family and Community Medicine (SEMFyC)</td>
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<td></td>
<td>The Preventive Activities and Health Promotion Programme (PAPPS)</td>
<td>—</td>
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<tr>
<td>PA professionals</td>
<td>Fitness centres</td>
<td>Private management</td>
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<td></td>
<td>Exercise companies</td>
<td>Private management of public spaces</td>
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<tr>
<td>Patients</td>
<td>General practices</td>
<td>Urban Rural</td>
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<tr>
<td>Reporters</td>
<td>Mass media</td>
<td>Outskirts of Barcelona</td>
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<tr>
<td>PA professional</td>
<td>Socio-sanitary hospital</td>
<td>—</td>
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<tr>
<td>Politicians</td>
<td>The Catalan Institute of Health (ICS)</td>
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<td></td>
<td>The Catalan Health Service (SCS)</td>
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<td></td>
<td>The City Council of Barcelona</td>
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<tr>
<td>Academic</td>
<td>The University of Social Work</td>
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Human Relations [41] and second, according to constructs of Being-in, Being-for and Being-with [42]. Findings were displayed in tables according to both coding frameworks and then subject to interpretation. In this process, we identified labels that effectively grouped individual themes. Finally, interpretations were returned to selected participants for verification (Fig. 1).

Several further strategies were used to ensure rigour. These variously addressed the credibility, confirmability, dependability and transferability of both analysis and interpretation [38] and included

(i) Piloting focus groups and interviews.
(ii) Data gathering based on different participants, at different times and at different places to ensure diverse experiences and levels of conformity.
(iii) Using a comparative method established interactions, which were assessed in successive focus groups and interviews.
(iv) Searching for deviant cases helped to test ‘discoveries’.
(v) Member checking.
(vi) Integrating different cases and contexts to analyse the relations under study and improve generalizability.

Findings

Forty-two people participated in the study; 20 were recruited as patients and 22 as key players. Twenty patients participated in three focus groups, three
semi-standardized individual interviews and five short individual interviews (when focus groups were not feasible). Patients represented a wide range of experiences regarding different stages of change in PA, health conditions and age (17 females, seven retired, with others aged 28–48 years). Eleven participants reported health problems that included fibromyalgia, obesity, diabetes, anxiety, sport-related injuries or having suffered a heart attack and 15 reported being physically active at the time of their interview. Only one participant reported never having been physically active in the past. Focus groups ranged 5–12 participants, lasted 30–120 min and, consistent with recommendations [43], were conducted until the moderator could predict how the participants were going to respond.

Six politicians, three members of primary care-related organizations, two medical academics, three exercise academics, three PA professionals, two researchers, two mass media professionals and a social worker participated in semi-standardized individual interviews. Participants expressed views on PA promotion. Many contributors represented both individual patient and organizational perspectives. In this context, they triangulated their own accounts.

Consensus items provided the three main findings reported here as potential explanations for the lack of integration of PA promotion in general practices of Barcelona. These were (i) PA promotion delivery did not account for patients’ individual needs and circumstances that influenced their interest in PA promotion, (ii) a lack of official support for PA promotion and (iii) that primary care delivery was isolated from local communities, activities and services.

Patients identified several factors from their interaction with physicians/nurses that stopped them integrating PA advice into their lives. ‘Not knowing’ was a strong theme and this was linked to issues of ‘professional competence’ to promote the ‘right sort’ of PA and how to progress for optimum effects. These are the four not knowing factors:

(i) Not knowing where to go and or which properly trained professionals to consult:

‘I would like to go to places where I think they do things [exercise] adequately according to my health problems. But I don’t know where these places are. Staff there should know exactly what type of exercise I can do. The Social Security should be involved in organising all this.’

(ii) Not being convinced about why they should start doing PA:

‘I have always been a healthy person and I have never done exercise, so, do you understand me? I don’t like gymnastics ... I don’t see the point.’

(iii) Not knowing how PA would benefit personal health and problems:

‘I would need the doctor to tell me:- if you don’t do this [exercise], you’ll be diabetic, and if you do it [exercise] I assure you won’t be a diabetic. He should give me the reasons why, do you understand me? It would be because I have an illness.’

(iv) Not enough guidance and support for what to do next:

‘I told them [the doctors]: Listen, for my job I have to be in good condition and run [man recovering from a hip fracture].—No, no they say to me: walk slowly and that’s it. They didn’t take me to any place to evaluate: now run on the machine or do this to see where it hurts. I had to chase after them—can I run? Yes. Can I ride a bicycle? Yes.’

PA promotion delivery did not help patients to overcome these powerful not knowing barriers. Showing the value of ‘knowing’ about local amenities and services, ‘paying for private medicine’ was seen as offering a chance to ‘do the right sort of PA’, especially among individuals from higher socio-economic groups. Further, patients with adult experiences of involvement in PA often held strong positive attitudes and saw the personal need for being more active once medical staff provided reminders.

The second main finding was linked to a perception that most institutions (political, research,
health and university-related medical/exercise courses) did not officially support PA promotion. Several local factors were seen as contributing to the lack of integration of PA promotion practices in Barcelona. For example:

(i) PA promotion was a ‘secondary-task’ when compared with other health issues:

[Politician] ‘Nowadays these things [doing PA promotion campaigns] have been cut down because some problems like AIDS and long waiting lists have appeared.’

(ii) PA promotion was not seen as a strong concern:

[Researcher] ‘Inactivity is not seen as a problem yet. For instance, the administration doesn’t consider removing a dangerous bend in the road until 5 people have died of an accident there. This is the same, they won’t do anything about physical inactivity until people of 25 years of age start dying because they are diabetic and fat ...!’

(iii) Lack of regulated, common training in PA promotion in universities delivering course in medical and in exercise-related subjects:

[Medical academic] ‘Medical and nursing degrees hardly talk about physical activity. Training in exercise issues is very limited in these degrees.’

(iv) A lack of funding for PA-specific research meant that no research institutions considered this as a priority issue:

[Researcher] ‘There are calls for research in primary care, but ... there aren’t many specific projects especially financed for physical exercise. There are several projects financed privately, but they are only interested in their drugs.’

(v) PA promotion was not solely the domain of public health, but was undertaken by many groups:

[Politician] ‘This Health service can’t solve everything. It is a public company that provides health services and that’s all. We are not the Mother Theresa of Calcutta.’

The third main finding identified that an ‘integrated’ approach was prevented by reliance on isolated PA promotion within practice consultations. Physicians and nurses’ barriers for promoting PA were thought to be overcome by establishing working networks between fitness/sports or other community centres so people could be referred from medical centres. Four main reasons were offered: (i) this would preserve practice time for other activities, (ii) general practice staff would need less specific knowledge and training, (iii) referring beyond the practice to other community spaces would free practice space for other activities and (iv) patients’ concerns about where to go to do the right types of exercise would be resolved by providing expert supervision.

Although there were good reasons for integrating with community services, there were also important barriers that prevented a shift from the existing approaches within primary care.

(i) General practice staff wanted defined roles within PA promotion, especially for PA professionals. This extended to recommending how services should be coordinated:

[Medical academic] ‘The first thing to do is classifying each professional’s role. There are people that can’t see which their roles are or what other people’s functions are on PA promotion.’

(ii) Different professionals and institutions (medical versus non-medical) rarely communicated meaningfully about PA and exercise-related services:

[Politicians] ‘Dialogue doesn’t exist in most cases. An institution should group together the medical and the physical activity professionals, or managers of sports facilities. I’m sure that most doctors would be happy to know there are PA professionals they can recommend patients with specific problems to go to.’

(iii) The professions and institutions found it difficult to establish trusting relationships
(medical versus non-medical) and sensed a lack of credibility by not being ‘medical’:

[PA professional] ‘You may know a lot but if you are not wearing a white coat and behind a desk in a hospital you have half the credibility ... that’s the way it is.’

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**Discussion**

Currently, the evidence-base regarding the effectiveness of counselling adults in primary care to increase PA has been inconclusive [44]. The US Preventive Task Force [45] concluded there is insufficient evidence to recommend for or against behavioural counselling in primary care settings to promote PA. Assuming that incorporating the views of target participants and influential people will improve the likelihood of developing successful preventative health strategies [46], our study provides innovative experience-based data from a relatively large group of patients and stakeholders. Little of the published research [47, 48] has canvassed individual views and concerns in this way. Even less research has addressed PA promotion from as wide range of influential perspectives. This integrated approach is not commonly addressed in contemporary literature, yet seems to be fundamental in explaining why PA interventions are often poorly adopted or delivered by GPs and nurses.

This case study generated explanations for the lack of micro-level integration of promoting PA in general practices of Barcelona, the capital of Catalonia. It provided a database for a deeper understanding of previously reported quantitative research from Barcelona’s physicians/nurses [23]. Just as important, this study showed that addressing the perspectives of both patients and the principal stakeholders offers a novel and valuable use for conventional qualitative methods. The findings highlighted similar barriers to the promotion of PA through general practices to those reported in other countries, albeit only from the provider and not patient’s perspective [49]. For this reason, potential solutions being explored elsewhere may equally apply in Barcelona. The findings may also have a wider application by reflecting experience within individual practices who are finding it difficult to deliver effective PA promotion, even where their regional and national systems appear well organized. The study yielded three main consensual findings and these will be addressed in turn.

The first main issue was that, within practice consultations, PA promotion rarely considered patients’ daily circumstances and needs. This limited responsiveness to any PA advice and suggests that local planning—to reflect daily routines, geography and access to services—is needed to address the range of patient concerns about how to live more actively. Our evidence suggests that this matters to patients and makes promotion more meaningful, especially if the benefits of exercising can be linked to improvements in immediate medical concerns and recommendations can be made about which experts can be consulted in their localities. This would help to refine contemporary approaches which focus on personality, motivation and individual decision making regarding exercise [34, 36]. Clearly, medical staff have reservations about how they would determine who was expert; they may have justified concerns about recommending services and individuals who they do not know, whose skills they cannot vouch for and whose effectiveness they cannot estimate.

Previous research suggested that generalized PA strategies have only limited effectiveness in practice consultations [25, 40, 50–52]. However, most previous qualitative researches have explored the integration of promoting PA into practice consultations from a physician’s/nurse’s perspective [53–58] at the expense of careful consideration of patient needs [40, 48]. Given our findings, future research may profitably include patient views and experiences not only just about PA but also how to be active within immediate living environments. Local knowledge and understanding is likely to be personalized and this justifies continued person-centred PA promotion. Adding discussion about local circumstances is likely to make PA promotion more relevant to individuals.
A second issue was the perception that authorities and institutes did not obviously support doctors or nurses PA promotion. This also prevented integration within general practices. In this context, creating ‘top–down’ approaches may encourage the integration of PA within practice consultations where these approaches (i) offer specific guidance to physicians/nurses on how to promote PA to meet different patient needs, (ii) emphasizes how liaison between physicians/nurses and other professionals (e.g. exercise specialists) may be best achieved, (iii) creates multi-disciplinary teams and (iv) funds local research projects on PA promotion. A number of these issues have already been endorsed by doctors and nurses [23].

In comparison with other studies highly concerned with developing feasible and successful PA promotion protocols to overcome major barriers [28, 29, 59, 60], this study revealed that this stage of development had not been reached. Most PA professionals were still thinking about how to integrate their work into practice consultations, and were still looking for ways to action. However, community services remain isolated from practice consultations and were rarely used to encourage and support either patients or staff. Developing national guidelines for PA promotion may help to develop top–down approaches. International examples, such as England’s National Quality Assurances Framework [61] for exercise referral systems, may be a good model to build upon [62].

The third main finding highlighted the isolation of national medical, exercise and social institutions. This added a further explanation for the lack of integration of PA promotion in practice consultations. Our participants agreed that connecting doctors with well-established local clubs, facilities and events and with professional groups and institutions were all wise ways for enhancing integration.

Existing literature shows a range of different ways of integrating PA promotions in general practices. ‘Primary-care-only’ strategies offer a traditional model of PA promotion [30, 63–65]. For example, individual doctors can adopt different approaches during consultations [66, 67]. Adolescents recently showed encouraging responses to focused PA promotion in general practice; of the 392 adolescents provided with counselling, 41.5% were more active than controls at 6 months [68].

However, traditional approaches may have poor long-term outcomes because they are trying to persuade individuals to participate in activities in environments that are hostile to those activities [27]. Thus, a ‘new-future model’ for promoting PA may be proposed based on linking primary care–based PA interventions with PA resources available outside the health care system [25–29]. This model corresponds with many of the preferences expressed by our participants. Some studies have already begun testing the effectiveness of this new-future model [40, 69, 70] but so far results are limited. This limited database not only reflects the newness of the integrated approach but also underlines the challenge of integrating services given current frameworks and practice.

This new-future model suggests a number of further options for linking primary care with the community to stop the isolation regarding the promotion of PA. These ways include (i) recruiting local exercise specialists outside the practice setting in community centres to subsequently support GP advice [71, 72], (ii) changing the content of promotions to recommend involvement in local initiatives based on walking [73–75], (iii) identifying especially appropriate venues, noting aesthetic and safety issues, to help make PA recommendations more realistic and relevant to patients [75] and (iv) recommending reduced use of cars to make daily tasks more physically demanding [76].

This study has several limitations. First, we cannot ensure that all themes were identified, even though, for a qualitative study, a large number of contributors were recruited from a range of individual perspectives. Reliance on volunteers amplifies this concern and may mean that some themes are overemphasized.

Second, although data reduction techniques were used to at least acknowledge the researchers’ views, there are no criteria for establishing how well this has been achieved. However, these tools were useful for listening to the accounts while resisting our preferences for ‘naming’ and reflecting personal preferences [41, 42]. The analytical constructs of
both van Manen (Time, Body, Space, Human Relations) and Moustakas (Being-in, Being-with, Being-for) were particularly useful as they are rarely the subject of any account of experience; rather, they provide the framework within which stories are related.

Third, not every stakeholder group that influences PA promotion may have contributed equally to this study. Equally, the range of views expressed here may not offer an exhaustive expression from any one stakeholder perspective. For example, it was difficult to recruit low motivated participants regarding PA promotion. Finally, data were collected in Catalan and in Spanish. Thus, meanings may have been lost with translation. However, the original and the translated quotes are available for secondary analysis.

Understanding of patients and of the wider cultural context are key issues for better integrating PA promotion in the primary health care systems from different countries and cultures. This is a fundamental issue, especially since the current evidence of intervention effectiveness for promoting PA in primary care is not yet strong. In this regard, future research should supplement quantitative data with experiential evidence to generate more robust evidence-based data. Further, effectiveness trials need to focus on the integrated approaches suggested by our findings. As this new model is extended to the community, there is the need to investigate effectiveness on the wider social and psychological effects of promoting PA, with evidence drawn from those people for whom GPs are known to be influential. This would provide important evidence of their potential effect.

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Received on August 10, 2005; accepted on February 27, 2006