Health promotion for a multiethnic population: the case of weight-gain prevention among a multiethnic population of mothers living in Amsterdam South-East
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CHAPTER 8

Testing the applicability of a general exercise program to a multiethnic group of mothers in practice

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Abstract

Ethnic minority women are frequently more physically inactive than ethnic majority women. Exercise programs relevant to multiethnic groups are needed. Formative studies (for example, among mothers) have revealed common ground for exercise promotion among different ethnic groups. Our primarily qualitative process evaluation tested in practice the applicability of a general group-based exercise program to a multiethnic group. The program addresses mother-specific barriers to participation; behavioral strategies and execution are not adapted to specific ethnic groups. We explored how this general approach stimulated or hindered satisfaction with and attendance of the program among Ghanaian, Antillean, and Surinamese mothers in Amsterdam, the Netherlands. We conducted interviews with 21 participants, and kept attendance records. Attendance patterns and reasons for non-attendance were similar between ethnic groups, with a mean attendance of 70% the first three months. Regardless of ethnicity, participants were enthusiastic about the program. Women appreciated the classes for the activity (water exercises), adaptation to their needs, and group bonding. They were positive about the ethnic Dutch coaches. Women commented on within-exercise-group differences (for example, exercise skills) rather than on the multiethnic group composition. Therefore, a general exercise program that addresses mother-specific barriers can be applicable to a multiethnic group of mothers.
Introduction

In high-income countries, which are increasingly ethnically diverse [1], ethnic minorities have been found to be more physically inactive than ethnic majorities, especially during leisure time [2-4]. Therefore, exercise programs that are relevant to multiethnic populations are needed. It has been suggested that culturally targeting health promotion programs to ethnic groups might increase their relevance and thereby the effectiveness of these programs [5, 6]. Examples of cultural targeting are facilitating culturally specific opportunities for exercise like dancing [7], making use of ethnically homogeneous intervention groups [8], and incorporating faith into a weight-loss intervention [9]. However, current evidence limits the ability to draw definite conclusions about the effectiveness of cultural targeting [5, 10]. Hence, it is important to carefully consider whether such targeting is needed, or whether it is possible to use general approaches.

Several intervention aspects should be examined individually when considering whether a targeted or general approach is needed – not only behavioral aims, but also the determinants addressed and how they are executed [5, 11]. Without evidence from experimental studies, project-specific formative studies are a useful first source of evidence for making informed decisions [5]. Cultural targeting is advisable if formative studies find large, transparent differences between ethnic groups regarding needs related to these aspects, while similarities may imply the applicability of general programs to a multiethnic target population [5, 12].

We conducted formative research among mothers from various ethnic groups living in Amsterdam, and embedded outcomes in the international literature. Mothers are at increased risk of physical inactivity [4, 13]. It appeared that mothers from different ethnic groups share many constraints to exercise and a need for exercise facilities, including a lack of time due to work, household and childcare responsibilities, and not wanting to be surrounded by those who are young, fit, thin, and trendy while exercising [13-15]. Moreover, more general determinants and needs were shared, like the importance of enjoyment, the reinforcing effect of exercising together, and the desire for neighborhood locations and professional supervision [15, 16]. Although these similarities legitimize the use of general exercise program approaches, their applicability needs to be verified in practice.

Big Move mama is a general exercise program that addresses the aforementioned common determinants and needs without being culturally targeted to specific ethnic groups. The exercise program is characterized by weekly classes in a group with other overweight and/or inactive mothers. The classes are held in a safe environment and in a neighborhood location, the time is adapted to working mothers, childcare is provided, and it is meant to be fun. Neither the behavioral strategies nor the execution are adapted to ethnic groups: the exercise activity, group composition, coaches, and language used are general.

As a result, Big Move mama provided the opportunity to test in practice the applicability of a general exercise program (i.e., with general behavioral change strategies and execution)
to a multiethnic group of mothers, which was the aim of this study. We explored how this general approach affected satisfaction with and attendance of the exercise program among women from three ethnic minority groups. These indicators were chosen because satisfaction and attendance are associated with cultural relevancy and prerequisites for program effectiveness [17, 18]. Shared satisfaction as well as high attendance among the different ethnic minority groups would indicate how relevant a general exercise program might be for a multiethnic target group. Conversely, dissatisfaction, low attendance, and/or differences in satisfaction and attendance would provide substance to the need for cultural targeting to specific ethnic groups.

**Methods**

A primarily qualitative process evaluation exploring satisfaction with and attendance of Big Move *mama* was conducted in Amsterdam South-East, an ethnically diverse district. This study was aimed at mothers from the three largest ethnic minority groups living in this district: Ghanaians (from sub-Saharan Africa), Antilleans, and Surinamese (from former Dutch colonies in the Caribbean).

**The exercise program Big Move mama**

This evaluation concerns Big Move *mama* as it was executed in 2011 (see Appendix 1 for additional program information). The program consisted of an intake, three months of weekly group-based exercise classes and an initial evaluation class (Phase 1), followed by another three months of exercise classes and a final evaluation class (Phase 2). The program was aimed at overweight mothers and/or mothers who did not exercise during leisure. Childcare was provided, but this was only used once for one child, and after two months it was discontinued. Participants paid a reduced price for the exercise classes, in installments. The classes took place in a nearby neighborhood location that could be reached on foot or by bicycle, public transportation, or car (free parking).

In the beginning, a dance group was organized in the morning and a water exercise group in the evening to account for exercise preferences and childcare/work responsibilities. Because working mothers had a greater need for evening groups, both groups became water exercise groups in the evening. No swimming skills were necessary. Behavioral strategies used in the intake, classes, or evaluations were not adapted to specific ethnic groups. In Phase 1, two ethnic Dutch coaches supervised the classes; in Phase 2, a Surinamese coach took the place of one of these coaches. The primary language of all coaches was Dutch. Exercise groups were multiethnic.
Recruitment for the intervention and study

Recruitment for the intervention was done through community organizations like churches, immigrant organizations, schools, community projects, and local radio stations [19]. A total of 60 mothers – 38 Ghanaians, 13 Surinamese, 7 Antilleans, and 2 from other ethnic backgrounds – were approached personally with information about Big Move mama. Of these women, 22 Ghanaians, 4 Surinamese, 3 Antilleans, and 1 ethnic Dutch woman entered the Phase 1 exercise classes. Hereafter we will refer to the Surinamese and ethnic Dutch as one group (Surinamese/Dutch), because the Dutch woman was reached via the same channel as the Surinamese women, and also to ensure anonymity. Reasons mentioned for non-participation were not culturally specific, but rather related to such things as childcare responsibilities, conflicting work or study schedules, radical life events, and physical discomfort.

Purposive sampling methods were used to recruit intervention participants for an in-depth interview about Big Move mama. We sought to achieve a maximum balance with respect to recruitment channel, ethnic background, and Big Move mama group. The researcher (LdS), who was familiar to the women because she participated in some of the exercise classes for observational purposes, informed the women about the interviews during a class, and they were subsequently invited by telephone. One Ghanaian woman could not be reached; all of the other 21 women approached (13 Ghanaians, 5 Surinamese/Dutch, and 3 Antilleans) were willing to be interviewed. On average, the participants interviewed attended 15 out of 24 classes, which is comparable to attendance in the total group of (mean attendance: 14 out of 24 classes).

Data collection

Data triangulation was used: four exercise classes were observed per group, coaches were interviewed in Phases 1 and 2, an attendance record was kept, intake and evaluation results were collected, and program participants were interviewed during Phase 2 of Big Move mama. Information from the attendance records and interviews with the participants formed the major sources of information.

All three interviewers (LdS, AS, and MB) were trained in qualitative research. Interviews with participants took place in a setting and language of the participant’s choice (Dutch or English). Anonymity was assured in the transcripts and reporting. Participants gave written consent for the taping of the discussion and also for the retrieval of intake and evaluation data. In compliance with Dutch legislation, the study did not require review by a medical ethics board.

The interviews were guided by a topic list containing questions about the intervention recruitment (Hartman, unpublished) and satisfaction with and attendance of Big Move mama (Box 8.1). After a general question concerning a participant’s opinion about Big Move mama, more specific questions were asked about their satisfaction with the non-culturally adapted
program components (the intake, classes, and evaluations; the coaches and language used; the group) as well as reasons for attendance and non-attendance.

Interviews lasted 30 to 35 minutes on average. At the end of the interview, we used a short structured questionnaire to collect information about the study participant’s characteristics (e.g., age, socioeconomic status, and ethnic identity). Interviewees received a small gift (a €10 gift voucher).

**Box 8.1 Interview topic list for Big Move *mama* participants on satisfaction and attendance**

**Satisfaction:**

1. If you wanted to participate in Big Move *mama*, you were phoned to schedule an intake with the Big Move coach. How did that go? How did you feel about it?
2. What do you think about Big Move *mama*?
   a. What do you like about the classes?
   b. What don’t you like that much
3. How do you like the group?
   a. What do you like about exercising in a group? What don’t you like?
   b. There are Ghanaian, Surinamese, Antillean, and Dutch women in the group. What do you think about this? How is this working out?
4. What do you think of the coaches?
   a. Do you understand everything? Can you participate fully? Why do you think this is?
   b. What could the coaches do differently?
   c. Would you prefer someone else to give the class?
5. A few weeks ago there was an evaluation. Can you tell me how that went? What did you think about it?

**Reasons for attendance and non-attendance:**

6. How often do you make it to class?
   a. You didn’t make it to class . . . times. Why was that?
7. Do you go to class with someone else? (friend/acquaintance)
   a. You come to class with people you already know. Why? Would you still go if they didn’t?
8. Why do you go to class/what motivates you? What doesn’t?
9. How do you feel when you can’t make it to class?

**Overall final questions**

10. Is there something about the program you would like to change?
11. Does it meet the expectations you had at the start?
12. Do you think you will finish the program? What is the most important reason for continuing?

**Data analyses**

The audiotaped interviews were transcribed verbatim and subjected to content analysis. This analysis consisted of the three main stages in qualitative analysis: data management (sorting), description (summarizing), and explanation (associating) [20].

Maxqda (2010) software was used for data management. The observations of exercise classes, intake and evaluation data, and interviews with the Big Move *mama* coaches created the context for interpreting and coding the data. Moreover, to increase validity, two coders (LdS and MH) coded the first interviews independently and compared outcomes. In cases of incongruity, a third coder (VN) was consulted. Relevant excerpts regarding satisfaction
and attendance were extracted from the data, and assigned to sub-codes that corresponded with reasons for satisfaction and attendance. After inter-coder consensus was reached (i.e., the same excerpts were extracted, assigned the same key codes, and similar sub-codes), LdS coded the final interviews. After coding, MH summarized the outcomes by charting the interview, intake, and evaluation outcomes according to participant characteristics such as ethnic group. This enabled analysis of potential differences in reasons for satisfaction and attendance between ethnic groups or other participant characteristics.

When findings are applicable to all three ethnic groups in the study, we will report quotations from participants from a specific ethnic group that best illustrate the findings described. Quotations from the interviews are annotated as I=interviewer, G=Ghanaian, A=Antillean, and SD=Surinamese/Dutch participant, followed by respondent number.

**Results**

*Characteristics of the study population*

Table 8.1 shows the characteristics of the study participants as derived from the short questionnaire. The mean ages of the women and their youngest child were highest among Antillean and lowest among Surinamese/Dutch participants. Ghanaian women had on average the most children. The majority of participants were single mothers and had paid jobs. On average, the Ghanaians had the least education and relatively poor Dutch language proficiency. All participants were first-generation migrants, with the exception of two Surinamese who were second generation. Antillean and Ghanaian women migrated on average later in life and more recently than their Surinamese counterparts. The self-perceived identity of most participants was Dutch as well as Ghanaian/Antillean/Surinamese. Furthermore, the majority of the participants indicated they were Christian (n=11); other reported religions were Pentecostal (n=3), Roman Catholic (n=1), and Protestant (n=1). It appeared from the intakes and interviews that 1 Antillean, 1 Surinamese, and 11 Ghanaians were either afraid of water or not used to water at the start of the program. Nine Ghanaians mentioned they had no previous experience with sports, while four Ghanaians and all Surinamese and Antilleans did have such experience.

*Attendance*

During Phase 1, attendance was generally high; participants participated in an average of 70% of the exercise classes. Then, in Phase 2, attendance dropped to an average of 51% of the exercise classes. This decrease in attendance was observed in all ethnic groups. There were small differences in attendance between the ethnic groups: Surinamese/Dutch had on average the lowest attendance (65% during Phase 1, 40% during Phase 2) and Antilleans the highest (75% during Phase 1, 56% during Phase 2). Although the same pattern in attendance
was observed regardless of ethnic group, there were low attenders (attended fewer than half of the exercise classes) and high attenders (attended 75% of the classes or more) in all the participating ethnic groups.

**Reasons for non-attendance**

Participants’ reasons for non-attendance had a general nature, and were not directly linked to ethnicity or culture. Moreover, participants from the different ethnic groups gave similar reasons for non-attendance. These reasons were related to physical complaints (sickness, menstruation, pain), work or study obligations, traveling, or later active enrollment (e.g., because they needed to gather courage first). Children were also a reason for non-attendance due to problems at home or children’s birthdays. Moreover, a few mentioned a lack of childcare as

<table>
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<th>Table 8.1 Characteristics of the study participants</th>
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<tbody>
<tr>
<td><strong>Ghanaian</strong></td>
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<tr>
<td>(n=13)</td>
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<tr>
<td><strong>Antillean</strong></td>
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<tr>
<td>(n=3)</td>
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<tr>
<td><strong>Surinamese/ Dutch</strong></td>
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<td>(n=5)</td>
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<td><strong>Total</strong></td>
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<td>(n=21)</td>
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<tr>
<td>Mean age (range)</td>
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<tr>
<td>Age of youngest child</td>
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<td>Number of children</td>
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<tr>
<td>Partner</td>
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<td>- Yes</td>
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<td>- No</td>
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<tr>
<td>Employment</td>
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<tr>
<td>- Yes, part-time &lt;36 h</td>
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<td>- Yes, full-time or more ≥36 h</td>
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<td>- No</td>
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<tr>
<td>Education</td>
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<td>- Primary school</td>
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<td>- Junior secondary school</td>
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<td>- Senior secondary school</td>
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<td>- Senior secondary vocational education</td>
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<td>- Higher professional education/ university</td>
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<td>Dutch language proficiency</td>
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<td>- Native/good</td>
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<td>- Average/poor</td>
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<tr>
<td>Generation</td>
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<td>- First</td>
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<td>- Second</td>
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<td>Ethnic identity</td>
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<tr>
<td>- Completely or primarily Dutch</td>
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<td>- 50/50 (both)</td>
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<tr>
<td>- Completely or primarily Antillean/ Ghanaian/ Surinamese</td>
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a reason for non-attendance; childcare in the evening was not convenient for them due to their children's bedtimes.

G18: 'Yeah, [I go] every week. But sometimes my friend isn't there, and I don't have anyone to take care of my son. [I: Why don't you use the childcare provided?] Because sometimes, when I start it's winter, dark early, after that he goes to bed.'

**Overall satisfaction and motivation to attend**

The prevailing view of the program by the multiethnic group of participants was positive. The women mentioned that they enjoyed the exercise classes, and that this was a major motivation for them to continue to participate. Feelings associated with non-attendance were generally 'a pity' or 'you have the feeling that you've missed something.' Since satisfaction was closely associated with motivation for attendance and feelings about non-attendance, they are described together below.

The mothers liked Big Move *mama* because it was nice to have time for themselves, without the children (or partner). Several of the mothers indicated this was a major motivation for them to attend, and it gave them an opportunity to relax:

- G9: ‘Well, no one has any time – I don't have any time, either – I have to work, I have to take care of my child, I have to do that that that. But you also have to have time for yourself, and... with this, Big Move mama, this is time for me. A whole hour with no child, no problems, what I mean is, something for myself.

**Satisfaction with the intake, classes, and evaluations**

Regardless of ethnic background, the women were positive about the intakes and evaluation classes. They mentioned the anthropometric measurements as a good aspect, as well as the positive attitude of and feedback from the coaches. Some mentioned that their awareness of the need for exercise had increased, and that this had motivated them to start or continue. However, what they were really enthusiastic about was the exercise classes themselves.

Almost all participants expressed themselves positively about the water exercise activity. Women mentioned it as relaxing, and some mentioned the advantage of being able to move easily:

- [I: What motivates you to come to the classes?] S6: 'The water. It's just nice to be in the water (…) because all week I have to do all kinds of other things... and that's it, really... the minute you get in the water, you relax... and the water is nice and warm, too.'

- G13: Water exercise is different from other exercise. Believe me. It's totally... when you're in it, you feel like paper. You feel like a sheet of paper. So you can move your body easily.'
Another very positive outcome for women who were not used to water or were afraid of it was that they had overcome their fears and experienced what it is like to move in the water.

Moreover, the women from all three ethnic groups were enthusiastic about the aspect ‘exercising in a group’ because it created enjoyment and motivated them. The group motivated women to actively participate in the exercises during the classes and also to attend the classes. Generally, the women liked the atmosphere, where having fun was an important aspect, and they described their group as close. Several program characteristics contributed to this group bonding, such as the fixed groups and the strategies used by the coaches. The coaches invested in getting acquainted by learning names and exchanging information, introduced team activities, and encouraged participants to help each other out during the exercises. The participants noticed this, and experienced it as pleasant. In addition to this social outcome of group bonding in the exercise group, the women were enthusiastic about the outcome of meeting group members in their neighborhood and greeting each other:

G1: ‘We throw balls to each other using our names, it’s really... you could say it’s one big family – it’s fun. Yes. So it’s really important, also that you know each other, I think that’s really important.’

- [I: How do you like the group?] SD7: ‘Yes, it’s nice, fun. Of course, at first it always takes a while to get used to things when you find yourself in a group of strangers. But you get to know each other the more you do it. Because now, if I’m at the market or somewhere else and I see one of the ladies, it’s, ‘Hey, how are you?’”

Furthermore, participants from all ethnic groups appreciated that the classes were adapted to their needs. They liked being able to influence the classes as time went on: the content and structure were adapted to their wishes, their questions (especially with regard to healthy diet) were answered, and they were asked for input on what kind of exercises they enjoyed. Moreover, it was generally appreciated that the coaches were not that serious and pushy, and that you could set your own limits regarding participation:

SD7: ‘I like it that they’re also responsive to your own [wishes] and to ideas we have. So at first we did all kinds of different exercises ... and now ... well, although we have a standard set of exercises that we do, they also ask ‘Which exercises do you enjoy? What do you like to do?’”

Despite these expressions of satisfaction, some critical comments about the classes were made as well. Most importantly, not everyone appreciated the fact that the level of the classes had been adapted to the participants with the fewest exercise skills. Because this dissatisfac-
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Satisfaction with the coaches and the language used
Independent of their ethnic backgrounds, participants liked the coaches because of their efforts, involvement with the group, and personalities. The coaches were described as ‘nice,’ ‘open,’ and ‘funny.’ All women indicated that they understood the coaches’ instructions. The coaches gave all instructions in the water together with the participants, so that by watching them and the other participants, everyone could participate. The Ghanaian women with the least Dutch language proficiency explained that if something was unclear they could ask, and the coaches would then translate it into English. Since most participants’ second language was English, this was generally all right with them.

Satisfaction with the exercise group composition
Participants appreciated the group’s homogeneity in that it was composed of adults only, and more specifically, women or mothers only. Moreover, most women for the three ethnic groups were neutral (‘no problem,’ ‘normal’) or positive about the ethnic heterogeneity within the exercise group. It was mentioned as an important advantage that Big Move mama brings people of different cultures together, and that it gives everyone a feeling of belonging:

- [I: What’s it like to have Ghanaian, Antillean, and Surinamese women in the same group?] A10: ‘It’s not a problem at all (…) Um… well… it maybe brings us a bit closer, and you also learn things about each other that [you] might not otherwise learn about each other.’

- G9: ‘I just really enjoy it. Because [names of SD8 and SD11] are there. I mean, they’re not Ghanaian – that’s what I want, I like that. In order to exercise together, they join in with us; I think that’s wonderful. (…) It’s something completely new.’

Participants had rather different opinions about within-exercise-group heterogeneity regarding competitiveness, motivation, language use, and exercise skills. Although two of them referred to a specific ethnic group (i.e., ‘Ghanaian,’ ‘African’) when commenting on these within-group differences, most mentioned these differences independent of ethnic background. For example, some women did not like what they saw as the extreme competitiveness of some group members, such as getting too physical during games. In addition, participants who perceived themselves as more serious did not like the drop in class attendance among group members and less motivated participants. Some Surinamese/Dutch and Antillean participants who were native Dutch speakers or spoke good Dutch did not perceive it as optimal if others spoke in the language of their home countries. To them, this hindered bond-
ing, whereas if bonding occurred, participants made more of an effort to make themselves understood. Finally, women with recent exercise experience and good water exercise skills were less satisfied because of the presence of women with poor water exercise skills.

However, regardless of ethnicity, women with fewer water exercise skills appreciated the within-group differences in exercise skills and exercise level. They appreciated the help they received from the skilled group members and the role these members played during competitive games:

G1: ‘Yes, you notice the difference, because [SD8 and SD11] are really able to do a lot of things in the water. Because they’re used to it... swimming classes and... (...) they help us if we’re afraid to get in the water. You see... they want to help us, and that’s good. They like to help us: ‘You don’t have to be scared, I’ll help you.”

Moreover, they liked the gradual increase in exercise level during the classes, and the patience of the coaches and the good instructions they gave. In the beginning, coaches went into the water hand-in-hand with the women if necessary, and they increased the level of the classes slowly. This was exactly what the skilled participants disliked. They found the exercise level too low, and would have preferred being assigned to a group according to exercise skills:

SD6: ‘They should already make categories during the intake. Because if it were up to me – and it’s really not just about the language – but if I had to choose a group, I’d pick a group that [is] a little more advanced, for the simple reason that, well, a group that’s never been in the water before, well, then I’ll have to wait till they’re ready... till they’re at the level I want to reach. (...) There should be more groups. And then background or culture or whatever else doesn’t matter, but groups should just be formed according to, this person can do this, or this person wants more of a challenge.’

Discussion

The participating ethnic groups had similar patterns of attendance and reasons for non-attendance. During the first three months, attendance was high (mean: 70%). The multiethnic group of mothers was very satisfied with the general program approach, which meant they enjoyed it and were subsequently motivated to attend. Women appreciated the exercise classes, especially for the water exercise activity, the group and bonding, and that the classes were adapted to their needs. They were particularly positive about the coaches because of their friendliness and involvement. The language used seemed to be of minor importance to understanding and active participation. Women commented on within-exercise-group
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The high attendance during the first three months and the general reasons for non-attendance can be interpreted as meaning that the ethnic minority women experienced no hindrances to attending this general exercise program because of ethnically or culturally specific norms and values or barriers [21]. Nonetheless, the shared attendance pattern also involved a drop in participation after three months. Because this decrease in attendance was apparent in all three ethnic groups, this would seem to be a general issue within the program rather than a lack of cultural adaptations for certain ethnic groups. This explanation is supported by literature reviews on general audience-oriented and ethnic minority audience-oriented physical activity interventions, which also found attrition, attendance, and adherence to be problematic [22-24].

In addition, we found no mismatches with cultural determinants (e.g., norms and values) in the exercise program; instead, we found a high degree of satisfaction with the applied general strategies. Appreciation for exercising in a group corresponds with formative research conducted among various ethnic minority groups living in the United States, Sweden, and the Netherlands, which revealed a shared need for social support and group activities [15, 25, 26]. Our study adds the importance of group bonding and some approaches that may enhance bonding (e.g., fixed groups, playing on teams). Adapting to an exercise group’s needs may be a good example of individualization and participation at the group level. These behavioral change strategies can be defined as providing participants with the opportunity to have questions answered and specific needs fulfilled, as well as giving the target group a degree of control over the intervention content. Indeed, both participation and individualization are considered to be effective basic methods in health promotion [11].

Finally, the general execution – expressed in the organized exercise activity, Dutch coaches and language used, and multiethnic exercise groups – did not hinder satisfaction. This might be explained by the water exercises. Water exercises minimize the joint pain and pain in the lower extremities from which obese exercisers often suffer [27]. Therefore, participants might have experienced the feeling of being able to move easily. Furthermore, combined with their friendly personalities, the aforementioned strategies used by the coaches seemed sufficiently relevant. Language adaptation appeared to be of minor importance for making physical exercises accessible, in contrast to the suggested need for linguistic adaptations for traditional health education [6]. Moreover, with regard to the multiethnic composition of the exercise groups, previous studies suggest also the value of group exercise for sociocultural integration of ethnic minority groups through social group cohesion and bringing cultures together [28, 29].

Nevertheless, heterogeneity in the exercise group can still result in dissatisfaction. Within-group differences in exercise skills in particular resulted in mixed satisfaction, because the level of the classes was adapted to the least enabled (i.e., those with no exercise experience)
participants. On the one hand, this level of adaptation might have been a general strategy for overcoming barriers to the non-culturally targeted exercise activity. Ethnic minority women who were not used to water or who were afraid were happy with the gradual increase in the exercise level of the classes. On the other hand, the most skilled participants did not benefit from the relatively low exercise level, which made them rather dissatisfied. Therefore, the idea of targeting the program to the less enabled by addressing the most salient barriers so that everyone’s needs will be met [15] does not necessarily apply. Consequently, exercise skills might be an alternative targeting criteria [5].

In contrast, one of the main similarities shared by the participants – that of being a mother – might have contributed to the shared satisfaction but may have also contributed to barriers to attendance. Participants liked the homogeneous group composition in this respect, and perceived shared benefits, such as time for yourself and a moment without the children. At the same time, childcare responsibilities were a shared barrier to enrolling and participating in the program. This supports formative research which concluded that motherhood might be a common denominator that results in similar motivations and barriers across ethnic groups [15].

Before drawing final conclusions, we have to delimit the study results to the 3 ethnic minority groups under study (out of the 176 different nationalities in Amsterdam [30]) and their related characteristics. The participants from the ethnic groups we studied differed with regard to religion, socioeconomic status, birth country, time since migration, generation, and language, but less so with regard to such things as ethnic identity. We can only draw conclusions within this context. Moreover, this context was unique in that three different ethnic minority groups had one common second language (i.e., English). Although the language use of the coaches did not seem to be very important to intelligibility, the lack of a common language among group members may hinder group bonding, while this bonding seemed to contribute significantly to program satisfaction and attendance. Therefore, it would be useful to verify the results among other ethnic minority women who speak different languages and have different characteristics (such as for ethnic identity) to increase further generalizability for multiethnic populations.

Furthermore, a limitation of this study was that mainly Ghanaians enrolled in the program. Because the majority of participants were Ghanaian, individualization might have largely been directed towards them, resulting in a kind of ethnocultural targeting that led to satisfaction. However, Surinamese and Antillean participants (the minority) were similarly positive about how the coaches individualized their wishes, needs, and input, which reinforces the importance of this method for ethnically mixed groups.

In conclusion, to our knowledge, this study is one of the first to explore whether and how a general group-based exercise program can be applied to a multiethnic population. This general program can be perceived as a common denominator approach: the choice was based on the shared determinants and needs of mothers in a multiethnic target group. In practice,
this test revealed no cultural norms, values, or barriers that seemed to hinder attendance or satisfaction. Instead, participants were positive about the general program strategies (group bonding and individualization) and the way it was executed (such as the exercise activity provided, the Dutch coaches and the language used, and the multiethnic group). Therefore, no indications were found to recommend cultural targeting for ethnic groups. A group-based exercise program like Big Move *mama* that addresses mother-specific barriers can be applied to a multiethnic group of mothers.
References

Can a general exercise program fit a multiethnic group?


Appendix 1: Additional information about the program Big Move *mama*

Originally, the Big Move program was an ‘exercise by prescription’ program offered through primary care providers. The program is constantly being developed. This evaluation concerns Big Move *mama* as it was executed in 2011. Big Move *mama* regards the regular Big Move program although open for mothers recruited via community organizations. The program consists of an intake, three months of weekly group-based water exercise classes (Phase 1), and an initial evaluation class, followed by another three months of exercise classes (Phase 2) and a final evaluation class. With the participant’s permission, general practitioners were asked to confirm their ability to participate.

The classes focused on knowledge, skills, and motivation for becoming physically active. They consisted of an exchange of information, exercises and games in the water, and encouragement to exercise outside of and following Big Move *mama*. Phase 1 concentrated on becoming familiar with each other, the coaches, and the exercise activity to increase a sense of belonging. Then, the program focused on encouraging physical activity outside of the classes to discover ‘what suits me’ (Phase 2). The responsibility shifted from the coaches to the participants, who were given more autonomy both during and outside of the classes. To promote active participation, coaches phoned non-attenders (Phase 1) or sent them a text message (Phase 2).

The intake and evaluations consisted of anthropometric measurements of waist circumference, body weight and height, blood pressure, and heart rate. In addition, during the intake – a face-to-face conversation between a Big Move coach and the participant – the participant’s quality of life was assessed (subjectively and objectively, using the International Classification of Functioning, Disability, and Health) and personal motivations and goals for participation in Big Move *mama* were discussed. During the evaluations at the end of Phases 1 and 2, questions were asked about the participant’s experiences with the program, personal goal attainment was assessed, and new future goals were set.