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Financial Barriers and Pricing Strategies Related to Participation in Sports Activities: The Perceptions of People of Low Income

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Background: Physical activity levels in most affluent countries are low and many people do not meet the current recommendations. Particularly for people with a low income, economic strategies seem promising to stimulate taking part in sports activities. This study investigated the importance of economic restraints for taking part in sports activities as well as perceptions of low-income people toward different pricing interventions. **Methods:** A qualitative study was conducted, using semistructured, individual interviews with 27 low-income men and women. The framework approach was used to analyze the transcripts of the interviews. **Results:** The respondents considered finances to be an important barrier for participating in sports activities, together with some individual barriers. Promising pricing strategies are a discount on the subscription to the fitness or sports club, a 1 month free trial, and free entrance to the swimming pool once a week. **Conclusions:** Pricing strategies may be a promising intervention to increase physical activity levels of low-income people. However, this study indicates that this should be coupled with an intervention directed at individual barriers. Some pricing strategies will be used and appreciated more by low-income people than other pricing strategies. In addition, pricing strategies should be tailored to individual needs and preferences.

Keywords: economic environment, costs, physical activity, socio-economic status

Lack of physical activity is an important risk factor for coronary heart diseases, for several types of cancer,

and also for overweight and obesity.¹ At present, only half of the Dutch population is active according to the recommendations, as in many other western societies.² This percentage is even lower for low-income populations.²

There is still a lack of effective interventions targeted at low-income groups.³ Environmental strategies may play an important role in improving physical activity levels, next to educational approaches.⁴ The ANGELO-framework (Analysis Grid for Environments Linked to Obesity) has been used to identify possible environmental determinants and interventions regarding physical activity in addition to dietary interventions, since both are important energy-balance related behaviors.⁴ According to the ANGELO-framework, 4 types of environment can be distinguished: the physical environment (eg, existing sport facilities in the neighborhood), the sociocultural-environment (eg, influence from family or friends), the political environment (eg, rules and laws on physical education), and the economic environment (eg, costs of sports activities).⁵

Economic interventions seem particularly promising for people with low income, since pricing strategies might reduce economic barriers to take part in sports activities. Economic forces are hypothesized to have an especially strong, but often neglected, influence on physical activity, including taking part in sports activities.^{6,7} Although pricing strategies have proven to be effective in other domains (such as smoking and diet),^{3,8,9} economic interventions to increase participation in sports activities have received little consideration to date and it is still unknown how such interventions should be implemented successfully.^{4,6,7} Nor is there research investigating the importance of economic restraints for participation in sports activities among low income groups.

To assess the potential value of economic interventions targeted at participation in sports activities (for example playing basketball, going to a fitness club or do swimming as an exercise) among low-income people, the first aim of this preliminary qualitative study was to investigate economic barriers to participate in sports activities through the perceptions of low-income people. The second aim of the study was to identify promising pricing strategies from the perspective of low-income people.

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Methods

As yet very little is known about the subject, we used a qualitative design to explore possible relevant issues regarding pricing and pricing strategies of sports activities among the target group. The data were collected by means of semistructured individual interviews. With this qualitative method, we could gain understanding of potential economic barriers and the underlying issues. Further, a qualitative design allowed us to explore attitudes and feelings toward different pricing strategies. Because of the sensitivity of the subject (ie, talking about one's personal finances is considered a delicate matter in the Netherlands), we chose for individual interviews in a familiar environment.

Respondents

Inclusion criteria were 21 years or older and having a low educational level (only primary education or general secondary education and junior secondary voca-

tional education at a lower level). Educational level is the most frequently used indicator for socioeconomic status in the Netherlands.¹⁰ In addition, information about the respondents' occupation was asked, and this was classified according to the Dutch Standard Classification of Occupations which is based on the International Standard Classification of Occupations (ISCO).¹¹

In total, 27 respondents were interviewed, 19 females and 8 males. Age ranged from 23 to 50, with a mean age of 39.1 (SD 6.8). Most respondents lived together with someone else ($n = 25$) and were of Dutch ethnicity ($n = 25$). Almost half of the respondents were unemployed ($n = 13$), 9 had an occupation classified as low level (eg, cashier in a supermarket), and 5 respondents had an occupation classified as middle level (eg, crane driver). The majority of the respondents were currently not involved in sports activities ($n = 24$).

Procedure

Respondents were recruited through key-persons (ie, primary school teachers, employees of municipal services, general practitioners, physiotherapists) in 2 medium sized towns in the Netherlands. The key-persons were instructed to recruit adults with a lower socioeconomic status. In addition, the general practitioners and physiotherapists were asked to not only recruit patients who were currently under treatment for health problems. Obviously, people with an acute illness were excluded from the study. Next in the recruitment procedure, socioeconomic status was checked among the respondents themselves, using educational level as an indicator for socioeconomic status. After that, an appointment was made for an interview. The interviews were conducted at the respondents' home. Respondents received a small reward for their participation (ie, free tickets for the swimming pool).

Interview Topics

The ANGELO-framework was used as theoretical framework for this study. Barriers in the economic, physical, and sociocultural environment were investigated, as well as possible interventions in the economic environment. Although the main focus of this study were the economic barriers and interventions, barriers in the physical (eg, available facilities) and sociocultural environment (eg, influence from family and friends) were included as well to gain insight in the relative importance of financial barriers. For the same reason, respondents were asked about some possible individual barriers (eg, time constraints and health issues) to take part in sports activities, as opposed to environmental barriers. An additional advantage of including more topics than financial issues alone was that respondents were not prompted that financial issues were the central issue of interest.

Table 1 presents the main interview topics. First, barriers to participate in sports activities were asked with an open-ended question, without mentioning the question categories or sub topics mentioned in Table 1.

Table 1 Interview Topics

Question categories based on ANGELO framework	Sub topics within category
Economic environment	<ul style="list-style-type: none"> • subscription costs • costs for clothing & equipment
Physical environment	<ul style="list-style-type: none"> • perceived availability of sports facilities
Sociocultural environment	<ul style="list-style-type: none"> • norms and support of family and friends
Individual barriers	<ul style="list-style-type: none"> • time constraints • exhaustion • health issues
Economic environment: interventions	<ul style="list-style-type: none"> • 50% discount on membership of fitness or sports club • discount during off peak hours for the fitness club • free 1 month trial for the fitness club • discount on membership of fitness or sports club for 1 year, under condition of average weekly participation • free entrance to swimming pool during specific hour • discount on sports clothing and equipment • free sporting facilities at work.

After that, respondents were asked to comment on several possible barriers mentioned by the interviewer, including the financial barriers (both money for subscription to a fitness club or sports club as well as money for sports clothing or other equipment), and the other barriers (see before). Again, first an open-ended question was asked about the question category in general. If certain sub topics were not discussed spontaneously by the respondent, the topics were introduced by the interviewer. Next, the respondent's opinion was asked about a number of different pricing strategies, including a 50% discount on a membership of the fitness or sports club, a discount during off-peak hours for the fitness club, a free 1 month trial for the fitness club, a discount on a membership of the fitness or sports club for a year under the condition of an average weekly participation, free entrance to the swimming pool during a specific time per week, discount on sports clothing and equipment, and free sporting facilities at work. These predetermined strategies were formulated by the research team and were based on considerations regarding feasibility in the future, alignment with current marketing practices of fitness clubs (for example discount during off peak hours) or alignment with new trends in the Netherlands (for example offering sporting facilities at work). Finally, respondents were asked their most preferred pricing strategy and to describe other ideas for pricing strategies.

Analysis

The interviews were audio taped and full transcripts were made. The framework approach was used to analyze the data.¹² The framework approach is especially suitable for policy-relevant qualitative research. It starts deductively from a preset theoretical background and objectives, but also uses inductive analysis to reflect the original discussions.¹² The analysis consisted of several phases and started with familiarization with the data through reading the transcripts. After that, a thematic framework was identified in 2 steps: a) deductively (by using the different types of barriers and the different types of pricing strategies determined on beforehand as themes); and b) inductively (by identifying additional themes deriving from the data). Next, the data were indexed using this thematic framework. The last phase in analysis consisted of rearranging the data per theme and interpreting and summarizing it. For indexing and rearranging the data per theme we made use of ATLAS.ti software (version 5.2).

Results

Financial Barriers

The results are summarized in Tables 2 and 3. The majority of the respondents experienced financial barriers to participate in sports. This accounts for unem-

Table 2 Barriers to Participate in Sports, Main Results

Barriers	Sub topics within category
Economic environment	<ul style="list-style-type: none"> • subscription costs • financial prioritization of sports activities for children • additional costs besides membership and clothing & equipment not able to choose favorite sport
Physical environment	<ul style="list-style-type: none"> • no perceived barriers
Sociocultural environment	<ul style="list-style-type: none"> • no perceived barriers
Individual barriers	<ul style="list-style-type: none"> • time constraints • baby-sit during sports • perceptions of physical appearance

Table 3 Pricing Strategies, Main Results

Pricing strategy	++	-
50% discount on membership of fitness or sports club	<ul style="list-style-type: none"> • motivating 	<ul style="list-style-type: none"> • for some people still too expensive
Discount during off peak hours for the fitness club	<ul style="list-style-type: none"> • suitable for some people 	<ul style="list-style-type: none"> • less freedom to choose schedule • fore some people still too expensive
Free 1 month trial for the fitness club	<ul style="list-style-type: none"> • motivating 	<ul style="list-style-type: none"> • quitting after 1 month
Discount on membership of fitness or sports club for 1 year, under condition of average weekly participation	<ul style="list-style-type: none"> • motivating • reasonable conditions 	<ul style="list-style-type: none"> • too pushy • time span too long
Free entrance to swimming pool during specific hour	<ul style="list-style-type: none"> • attractive 	
Discount on sports clothing and equipment	<ul style="list-style-type: none"> • attractive 	<ul style="list-style-type: none"> • increase of sports activities doubtful
Free sporting facilities at work	<ul style="list-style-type: none"> • convenient • motivation by coworkers 	<ul style="list-style-type: none"> • spending too much time at work • privacy toward coworkers

ployed respondents as well as for employed respondents (regardless level of occupation). Most respondents already brought up the high costs of sports while answering the open-ended question about barriers:

“It’s way too expensive. That’s the number one cause.”

The costs for membership of the fitness or sports club were a greater problem than the costs for clothing and equipment. Although costs for clothing and equipment were perceived as rather high, respondents indicated that this was not an important barrier to participate in sports activities since these costs were incidental and solvable in a rather cheap way (for example by buying sports clothing in second hand shops). Roughly, 3 groups of respondents could be distinguished: a group who could not afford any money to spend on sports activities; a group who could spend a little money on sports activities, but not enough to actual pay a membership for a fitness or sports club on a regular basis; and a group who could afford a membership of a cheap facility. Among the group unable to afford any money were no respondents with an occupation classified as medium level. Further, unemployed respondents were more or less equally represented in all 3 groups. In addition, respondents with children prioritized spending money for their children instead of sports activities for themselves.

“However, it’s pricey. If you spend money for yourself, you cannot spend it for your children.”

In addition, parents indicated that they were willing to spend money on sports activities for their children.

“Sport is important. If my child practices a sport, I want to help her. I mean: if she puts in a lot of energy, I would be willing to spend money on it.”

Besides subscription costs and costs for clothing and equipment, some respondents mentioned additional costs resulting from participating in sports activities as a problem, such as the costs for having a drink afterward. Furthermore, respondents reported that they did not feel able to choose their favorite sports activity due to financial barriers. Some people did not find a cheap alternative and therefore did not perform any sports; others chose a cheaper activity such as running.

Other Barriers

Time constraint was also considered to be an important barrier to participate in sports, both for employed and unemployed respondents. Taking care of the family and children was reported to be very time-consuming. Respondents with children experienced difficulties organizing a baby sitter while they were doing sports. Again, they could not afford to pay someone for baby sitting. In addition, being exhausted after a day of work was for some respondents a barrier to participate in

sports activities. Another barrier to go to a fitness club mentioned by some respondents was their physical appearance. Being overweight, they would feel uneasy in a fitness club with mostly slim and trained people:

“I would go to the gym to loose weight, because I am too fat. . . . If I would only be confronted with string beans over there, I’ll be gone. I’ll feel uneasy.”

Although some respondents did experience certain chronic health problems, only few respondents mentioned health problems as an important barrier to participate in any kind of sports activities. Almost all respondents perceived that there were enough sports facilities available within a reasonable distance and they experienced no barriers regarding sport facilities. In addition, most respondents did not experience barriers related to their sociocultural environment to participate in sports activities. Sometimes, a positive influence of the sociocultural environment was reported (motivating each other by doing a sports activity together), and in other cases the sociocultural environment was neither stimulating, nor a barrier. Another aspect appeared to be financial barriers of people in the sociocultural environments of respondents:

“One of my friends, she doesn’t have enough money right now. Before, I always went together with her. I hope she’ll go again to the gym in the future. I now go with another friend; of course going together motivates me.”

Pricing Strategies

Respondents welcomed the idea of pricing strategies to stimulate participation in sports activities. Most respondents actually would like to do more sports and the pricing strategies could help them. Respondents were positive about a pricing strategy that would consist of a 50% pricing discount on the subscription to the fitness or sports club.

“Then it’s affordable, that’s very welcome. In that case, I would have gone already. “

However, some respondents could not spend any money on sports and it still remained too expensive for them after a 50% discount. This was especially true for some of the unemployed respondents. On the whole, respondents agreed that such a discount would motivate them to participate more in sports activities. Different opinions were observed about a discount for a year under the condition of an average weekly participation. Around half of the respondents had a negative opinion on this pricing strategy, mainly because they perceived this strategy as too pushy and the time span of a year too long.

“I would perceive that as negative pressure, so I would not participate.”

The other half of the respondents had a positive opinion since they perceived this pricing strategy as motivating and a weekly average participation as reasonable.

The respondents' opinion on a discount during off-peak hours was less positive. Again, some respondents could not afford to spend any money on sports, but also work during off-peak hours and the freedom to choose your own schedule were mentioned as reasons to be less positive about this pricing strategy. However, for some, mostly unemployed respondents, this was a suitable and attractive strategy.

Respondents were rather positive about the option of a 1 month free trial for a fitness club. Most respondents indicated it would motivate them to try the fitness club 1 month and probably continue afterward.

"I would love that. Then I'll know if I like it or not. . . . If I feel comfortable and relaxed, I'll stay there after the free trial month."

However, a few others indicated on beforehand to quit after the free 1 month trial.

Mixed opinions were expressed by the respondents about a discount on sports clothing and equipment. Although such a discount was perceived attractive (if at least 25% according to the respondents), it is questionable if respondents would increase their sports activities because of it.

Mixed opinions were also found regarding free sport facilities at work. Some of the employed respondents had a positive opinion on this because sport at work was perceived convenient and respondents felt motivated by doing sports activities together with their coworkers. Others were negative because they already spent a lot of time in their work environment and wanted to go home straight away after work. Some respondents also did prefer not to practice sports with their coworkers, because of privacy reasons.

One hour free entrance at the swimming pool every week would be appreciated by the majority of respondents, and most respondents indicated they actually would go to the swimming pool.

Other possible strategies brought up by the respondents were free trials of different sports clubs in their neighborhood, a discount on sports facilities provided by health insurance companies, free sporting facilities provided by municipal services for unemployed people, and 'group discounts.' Doing sports activities with friends was motivating according to respondents, and this could be rewarded by some sort of 'group discount.' Another aspect mentioned by a couple of respondents was that sports activities for example organized in community centers, specific for people with a lower socioeconomic status, were perceived as inferior and of less quality compared with regular fitness and sports clubs.

Discussion

Goal of the study was to explore the importance of costs with respect to participation in sports activities and to gain insight in preferences for pricing strategies defined by low-income people.

Finances indeed appeared to be an important barrier for participating in sports activities, as Hill and colleagues⁷ and Pratt and colleagues⁶ already proposed in their theoretical frameworks. The respondents want free or low cost opportunities to be physically active. However, since other, individual barriers are also present, changing the economic environment alone will not lead to the necessary behavioral change. Time perceptions and prioritization of sports activities should also be changed among the target group, as well as some practical barriers such as child care during sports activities. Opposite to the economic environment, the physical and sociocultural environments were not considered as a serious barrier to participate in sports activities. Therefore, it seems that interventions should mainly be targeted at the economic barriers and the individual barriers mentioned before. However, this finding should be interpreted with caution, as other studies did find a relation between physical activity and the physical environment.⁴ Our study did not examine associations with actual participation in sports activities. With respect to pricing strategies, respondents had a positive attitude toward pricing strategies in general. However, the most favorable and suitable pricing strategy differed among respondents. When implementing pricing strategies, it is advisable to tailor the strategies to individual needs and preferences, and to offer various alternatives to choose from. Overall, a discount on the subscription to the fitness or sports club, a 1 month free trial and free entrance to the swimming pool once a week seemed to be most favorable according to the respondents, while other strategies received mixed judgments. Although a lot of respondents said they would try several pricing strategies if offered, it is still unknown how they actual would react on such an offer. The results reflect the opinions of respondents about the different pricing strategies. However, it must be noted that the strategies were formulated on beforehand by the research team, and were not selected by the respondents themselves, which can be seen as a limitation of this study.

This was a first, explorative, qualitative study into perceptions of low-income people about financial barriers and pricing strategies related to physical activity.

Educational level was used as an indicator for socioeconomic status. However, we did not ask level of income. It could be that respondents, despite their low educational level, did have a middle income level. Information about the occupational level of respondents indicated that this might have been the case for 5 respondents. Because of the small number of people included in

the study and the non representative sample, results must be interpreted with caution and should be further investigated. For example, men were underrepresented in our study. They might be interested in different kinds of sports activities than women, and therefore prefer other pricing strategies. A next step could be to conduct a quantitative survey among a large representative sample of the target group with the results of the underlying study as input for the survey questionnaire. Not only will it be possible to include underrepresented groups such as men, but it also will gain further insight in the number of people experiencing comparable problems to finance sports activities and the most popular pricing strategies among a representative sample of the target group. Another step could be to experiment on a small scale with some promising pricing strategies, to assess their effectiveness. Based on the results of the underlying study, it is recommended to target subscription costs together with perceived individual barriers in such a small scale experiment. A joined effort of fitness and sport clubs or swimming pools together with governmental organizations could result in for example a free month trial, followed by a subsidized membership. Perceived individual barriers could possibly first be targeted in an educational program (for example about fitting in sports activities in daily life, despite exhaustion or time restraints) followed by offering more facilities in the future (for example for child care during sports activities).

Another limitation of the study that has to be taken into account is the fact that participating in sports activities only account for a small part in ones total level of physical activity. Transportation and physical activity during occupation or daily activities are also important factors. However, participation in sports activities might be especially suitable to influence with pricing strategies, and therefore we focused on this aspect in current study.

Conclusions

Pricing strategies may be a promising strategy to increase physical activity levels of low-income people. However, this study indicates that this strategy should be coupled with a strategy directed at individual barriers. The choice of pricing strategy needs some further exploration.

References

1. WHO. Global Strategy on diet, physical activity and health. <http://www.who.int/dietphysicalactivity/strategy> 2004.
2. Hildebrandt VH, Ooijendijk WTM, Stiggelbout M, Hopman-Rock M. *Tendrapport bewegen en gezondheid 2000/2003 (Trends in physical activity and health 2000/2003)*. TNO. Hoofddorp/Leiden: Netherlands; 2004.
3. de Hollander AEM, Hoeymans N, Melse JM, van Oers JAM. *Zorg voor gezondheid. Volksgezondheid toekomst verkenning 2006 (Public Health Forecast 2006)*. RIVM. Bilthoven: Netherlands; 2006.
4. Brug J, van Lenthe F. *Environmental determinants and interventions for physical activity, nutrition and smoking: a review*. Speed-Print b.v. Zoetermeer; 2005.
5. Swinburn B, Egger G, Raza F. Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity. *Prev Med*. 1999;29:563–570.
6. Pratt M, Macera CA, Sallis JF, O'Donnel M, Frank LD. Economic interventions to promote physical activity: application of the SLOTH model. *Am J Prev Med*. 2004;27:136–145.
7. Hill JO, Sallis JF, Peters JC. Economic analysis of eating and physical activity: a next step for research and policy change. *Am J Prev Med*. 2004;27:111–116.
8. Boer J, Bogers RP, Mangen MJJ, van den berg SW, Bemelmans WJE. *Het mogelijke effect van prijsbeleid op de voedselconsumptie; Een oriënterend onderzoek (The possible impact of pricing policy on food consumption; An explorative investigation)*. RIVM. Bilthoven: Netherlands; 2006.
9. French SA, Story M, Jeffery RW. Environmental influences on eating and physical activity. *Annu Rev Public Health*. 2001;22:309–335.
10. Droomers M, Limburg LCM, Westert GP. *Het terugdringen van social-economische verschillen in gezondheid tussen 2000 en 2020 (Reducing socio-economic differences in health between 2000 and 2020)*. RIVM. Bilthoven: Netherlands; 2003.
11. CBS. Standaard Beroepen Classificatie 1992, Editie 2001 (Standard Classification of Occupations 1992, Edition 2001). CBS. Voorburg/Heerlen: 2001.12. Pope C, Ziebland S, Mays, N: Qualitative research in health care: Analysing qualitative data. *BMJ*. 2000;320:114–116.
12. Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. *BMJ*. 2000;320:114–116.