



let's make
scotland
more active

**Entrance Charges and Sports Participation:
A review of Evidence**

April 2002

Fred Coalter



Centre for Leisure Research
Department of Physical Education, Sport and Leisure Studies
The University of Edinburgh
St Leonard's Land
Holyrood Road
Edinburgh
EH8 8AQ

Telephone: 0131 651 6524



CONTENTS

	Page
1. Introduction.....	1
1.1 Data collection.....	1
2. Why subsidise entrance charges?	1
2.1 Constrained demand and social equity.....	2
2.2 High benefits and low valuation.....	2
3. Entrance charges and the total cost of participation	3
4. Constrained demand: evidence	4
4.1 Introduction.....	4
4.2 The nature and extent of constrained demand	4
4.2.1 Adults	4
4.2.2 Single parents.....	5
4.2.3 Social class.....	5
4.2.4 Young people	6
4.2.5 Price and participants.....	7
5. The impact of concessionary charges	8
5.1 A general lack of monitoring and evaluation	8
5.2 Scottish data on concessionary use	9
5.2.1 Survey of concessionary schemes	9
5.2.2 Highland Council: High Life	10
5.2.3 The impacts and benefits of concessionary schemes	10
5.2.4 Concessionary schemes: not proven.....	11
6. Free entrance.....	11
6.1 Glasgow City Council.....	11
6.2 Port Glasgow Baths	13
6.3 Free access: conclusions	13
7. Conclusions.....	13
8. References and sources	15

TABLES

	Page
4.1 Factors most likely to put people off taking part in sport or active recreation more often.....	7

FIGURES

4.1 Reasons for not participating in sport and recreation	4
4.2 Single parents and constraints in participation	5
4.3 Obstacles to taking part in sport more often: young people	6
4.4 Constraints on participation in new sport: young people.....	7
4.5 Effects of price increases on participation.....	8
5.1 Previous constraints on participation: concessionaires.....	9
5.2 Benefits of concessionary schemes	10
6.1 Glasgow free swimming: volume of visits.....	12

1. Introduction

The purpose of this short report is to provide a review of the evidence about the relationship between the pricing and use of local authority sport and recreation services. The specific objectives are to comment on:

- (i) The nature of the general evidence that the pricing of such services has a positive or negative effect on participation levels.
- (ii) The nature of evidence of practice where specific pricing interventions have been used positively to increase participation levels.
- (iii) The nature of any evidence as to how pricing affects participation and for whom.

1.1 Data collection

In addition to the work undertaken by the author (and colleagues), the following organisations and individuals were contacted to obtain any relevant research information:

Audit Commission
Prof. John Crompton (Texas A and M University)
Glasgow City Council
Highland Council
Leisure Industries Research Unit (Sheffield Hallam University)
Local Government Association
Scottish Association of Directors of Leisure Services
Sport England
Prof. Peter Taylor, Sheffield University

The general conclusion was that there is a lack of relevant information. Further, where research has been undertaken, concerns were expressed about its general lack of methodological rigour. There are limitations to the comparability of current evidence which place severe constraints on the development of general conclusions about the impact of entrance charges on participation (especially for specific social groups).

2. Why subsidise entrance charges?

It is worth setting out the basic assumptions underpinning the provision of subsidised access to public sports facilities, as they have different implications for policy and the presumed significance of entrance charges as a constraint to participation.

2.1 Constrained demand and social equity

This presumes that a certain proportion of the population *are already predisposed to participation*, but are prevented from doing so by entrance charges. Related to this is the fact that, for those with low incomes, the entrance charge accounts for a higher proportion of their disposable income than for higher income groups - participation is relatively more expensive.

Consequently, the *relative cost of participation* is equalised via targeting the highest subsidies to those with the lowest income. This serves to increase opportunity and permit the exercise of *choice* - no one should be excluded simply on the basis of an ability to pay entrance charges.

Evidence

The extent of such 'constrained demand' can be explored via surveys of non-participants (usually via household surveys) (see Section 4). However, there are a number of limitations to current evidence:

- (i) Most relevant surveys have used random sampling which produces sub-samples of various 'target groups' which are often too small for meaningful analysis.
- (ii) More generically, there is often a weak relationship between expressed intent ("I would take part if it was cheaper/free") and subsequent behaviour.

Another approach is to address these issues retrospectively, via surveys of participants using free or concessionary schemes, exploring the extent to which cost had been a constraint prior to the introduction of concessionary charges. Some indicative material is presented in Section 5.2.

2.2 High benefits and low valuation

The presumed externalities associated with participation in sport and physical recreation (fitness and health, improved self-esteem, reduced anti-social behaviour, increased community cohesion) underpin policies aimed at *encouraging* wider and more frequent participation.

However, many non-participants place a low value on sport and physical recreation (although, paradoxically, they often acknowledge the positive benefits of exercise). In terms of expenditure of money and time, sport and physical recreation are allocated a low priority - this can be the case even where the entrance cost can be afforded.

From this perspective, the entrance charge needs to be at a level which reflects this low valuation. It needs to be differentially priced in relation to higher priority goods, services and, most importantly, social and professional commitments. Such an approach aims to promote the perception of sport as 'good value', in terms of money and time.

Evidence

Survey evidence indicates that, even when acknowledging the fitness and health benefits of sport and physical activity, respondents also produce a range of reasons

for not participating (in which cost tends to be only one of a range of factors). In other words, sport and physical recreation is viewed in positive terms, but allocated a lower priority than other 'lifestyle factors' (Coalter, 1993).

Evidence suggests that, for this group, the entrance charge will only be one of a number of factors influencing (non) participation. A series of factors (possibly in association with cheap entrance charges) may need to be addressed to increase the perceived value/relative priority of sport and physical activity. For example, local facilities, innovative promotion, social and information networks and initiatives aimed at increasing the perceived value of physical recreation (GP referral schemes; cardiac rehabilitation schemes; school promotions; health visitors promoting physical activity) are also significant factors in widening participation.

In other words, evidence suggests that a policy based solely on low entrance charges may not be an effective approach.

3. Entrance charges and the total cost of participation

Discussion of cost as a constraint to participation is based mostly on consideration of *entrance charges* - the element of cost which providers can control most easily. However, in most cases this is only one element and consideration of cost as a constraint needs to address the total, *composite price* - consisting of fixed and variable costs.

(i) Fixed costs

Most sports and physical activities require, at a minimum, the ownership of 'sports' *clothing/footwear*. Others (eg tennis, badminton, golf) also require either the ownership (or renting) of *equipment*. Perhaps part of the popularity of swimming - for both participants and health promoters - is the minimal requirement in terms of fixed costs and sporting capital (skills and expertise).

(ii) Variable costs

These contain a range of expenditures:

- Entrance charge
- Travel costs and travel time (especially important in rural areas and for those allocating a low priority to participation)
- Child care
- Food/drink (especially for those participating with children)

In a survey of six sports centres in Scotland (Coalter and McGregor, 1999), entrance charges accounted for only 54 per cent of the total variable costs of participation. The costs of travel by private car accounted for a third (34%) of variable costs, with the purchase of food/drink accounting for a further 8 per cent (higher for adults with children).

Although the variable costs differ between activities, it is worth noting that for the most popular activity - swimming - the cost of entrance accounted for about half (52%) of total expenditure.

Consequently, any consideration of the total cost of participation must take into account both the, calculable, composite price and the broader 'opportunity cost' involved in committing time to the activity (much more difficult to estimate).

4. Constrained demand: evidence

4.1 Introduction

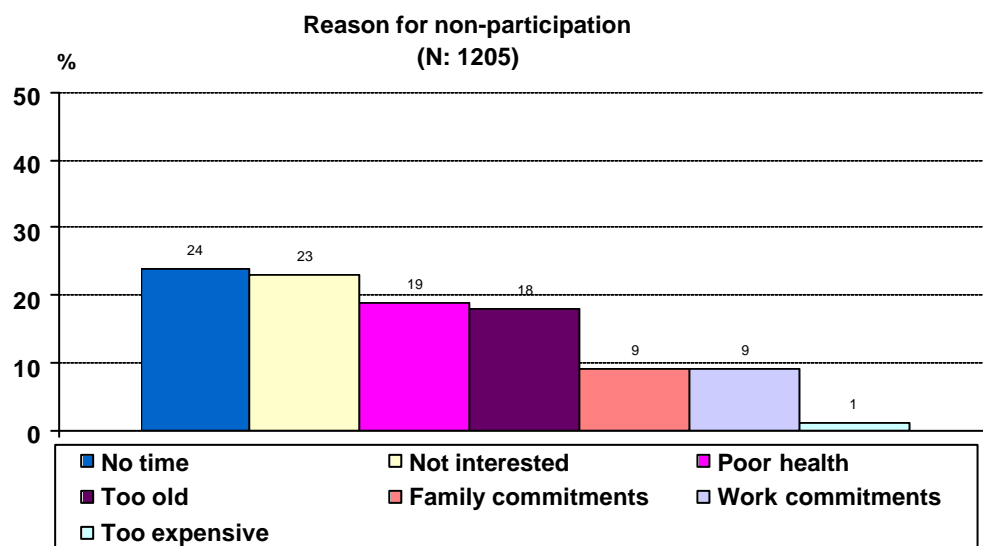
A central policy assumption is that a proportion of the population who *are already predisposed to participation* are prevented from doing so by entrance charges. However, although this may be the case, there is a lack of systematic research evidence on local populations as to the extent and distribution of this 'constrained demand'. In this section we draw on a number of surveys which indicate that, in unprompted questioning, respondents indicate that the cost of participation is not perceived as an important constraint.

4.2 The nature and extent of constrained demand

4.2.1 Adults

In a household survey in three areas of Scotland (Coalter et al, 1993) respondents were asked "Why do you not take part in sporting or recreational activity these days". Figure 4.1 indicates that only 1 per cent of non-participants referred to the cost of participation ('Too expensive').

Figure 4.1 Reasons for not participating in sport and recreation (16 plus)



As with most surveys of this type, the main reasons (42%) for non-participation were *time-related* (24% no time; 9% each for family and work commitments). One way of understanding this response is that sport is allocated a lower priority than other

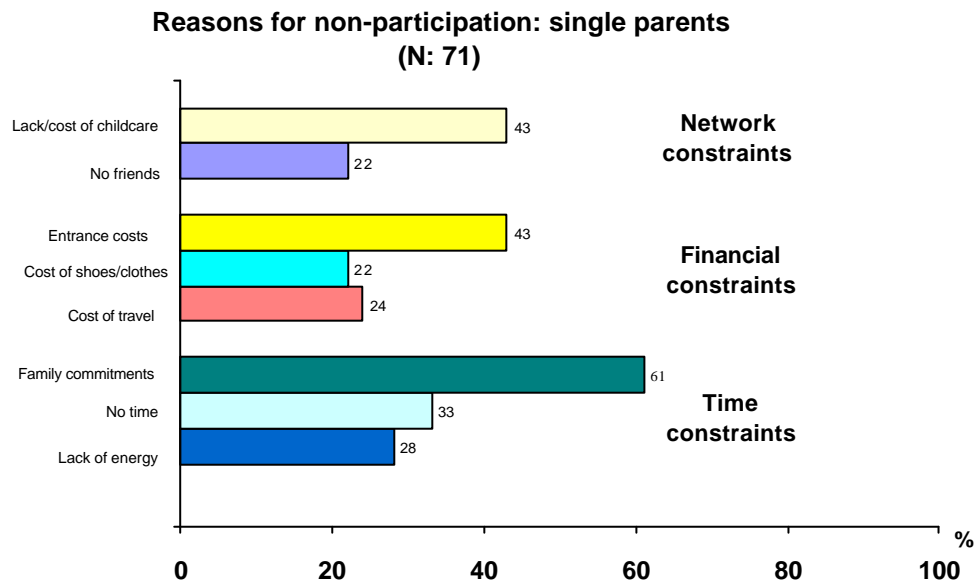
commitments (reinforced by the fact that it is likely that much available free time is allocated to watching TV (Roberts and Brodie, 1992)).

It is also worth noting that one quarter (23%) of respondents were simply *'not interested'*, with a further one in five (19%) stating that 'ill-health' prevented them from participating (although the extent to which this is an objective assessment cannot be estimated).

4.2.2 Single Parents

Figure 4.2 presents data from a small scale unpublished study of female single parents. This (and other surveys) indicate that single parents are perhaps the most price sensitive group of non-participants - 43 per cent referred to the *entrance charge* as a constraint (although in subsequent questioning they could not accurately name a price for their desired activity), with one fifth referring either to the *cost of shoes/clothes* or *travel*.

Figure 4. 2 Single parents and constraints on participation



However, the entrance costs were only one of a number of perceived constraints, with *time constraints* and *lack of people to participate with* also viewed as major constraints. As with similar surveys it is clearly unwise to identify the cost of participation as the sole or major constraint.

4.2.3 Social Class

Although participation is strongly related to social class, one piece of evidence suggests that the relationship between social class and the cost of participation might be less simple than supposed. Data from the General Household Survey (GHS) (Gratton and Taylor, 2001; Coalter et al, 1995) indicate that when those from manual occupations take part in sport and physical recreation, they often participate more often than participants from the higher socio-economic groups. For example, in the 1996 GHS, the *frequency* of participation over a four-week period was higher for manual groups than for non-manual groups - a level of frequency inverse to the participation *rates* in these groups.

A tentative conclusion from such data might be that, if barriers to sports participation within the lower socio-economic groups can be overcome, the frequency of participation may be sufficiently high to generate health benefits (Gratton and Taylor, 2001).

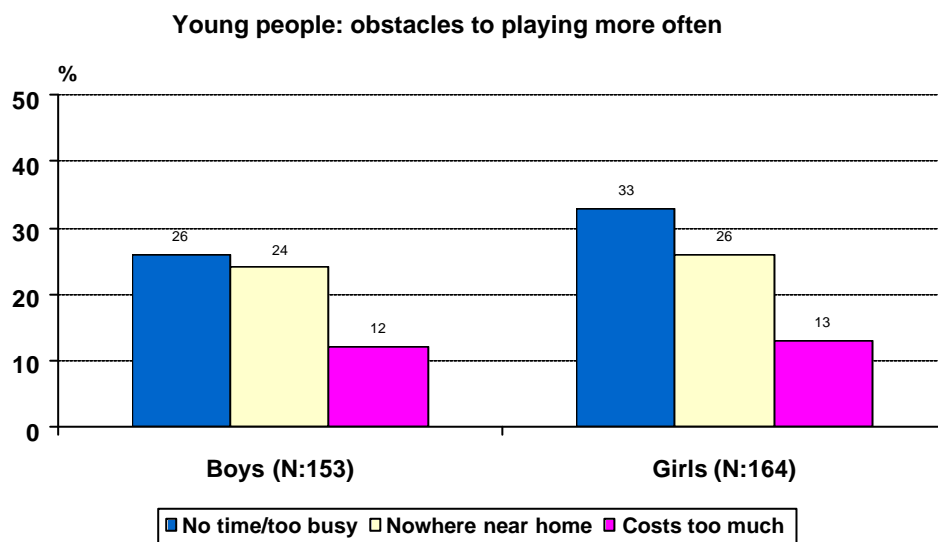
4.2.4 Young people

In this section we draw on a Scottish household survey of young people and sport (Allison et al, 1999). Because of the very high rates of participation among young people of school age (eg in a 1997 Scottish survey, 97% of those aged 8-18 claimed to participate in at least one sport in the previous four weeks), the data relate to constraints to more frequent participation.

Taking part more often

Perhaps not surprisingly young people expressed a broadly similar pattern of responses to those of adults, with *lack of time* being the major constraint on participation.

Figure 4.3 Obstacles to taking part in sport more often: young people



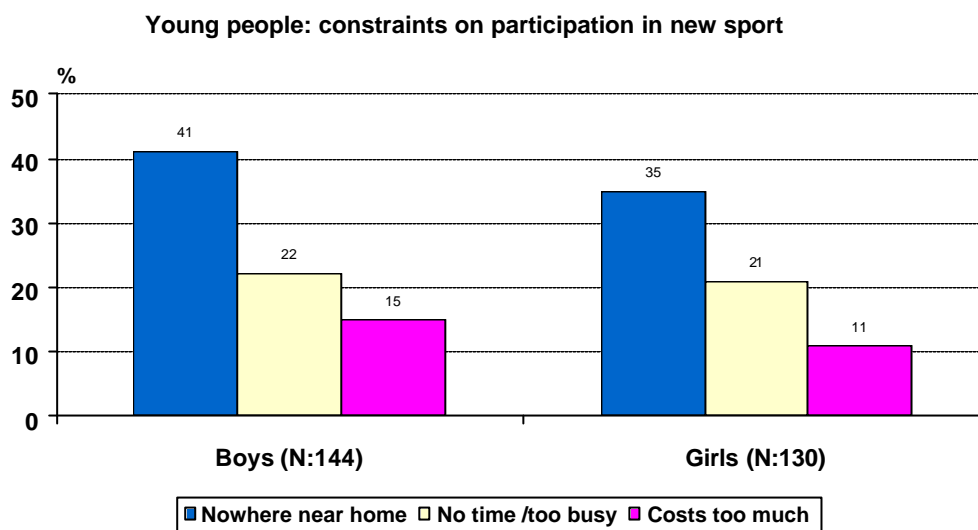
It is also significant that that, accessibility, *lack of local provision*, was perceived to be a major constraint on more frequent participation (an issue to which we will return).

Once again cost is only one element of perceived constraints, with approximately one in eight viewing the *cost of participation* as a constraint on more frequent participation (although we do not know how this relates to SEG).

Taking up a new sport

In terms of constraints on taking up a new sport, *cost* was again a minority factor (although this clearly depends on their choice of sport). The accessibility issue of *lack of local provision* was easily the main constraint, with *time* being a constraint for one fifth of those wanting to take up a new sport.

Figure 4.4 Constraints on participation in new sport: young people



The above does not indicate that the *cost of participation* is unimportant. However it is clear that, for the majority, the main constraints are *time* and *location* (accessibility).

4.2.5 Price and participants

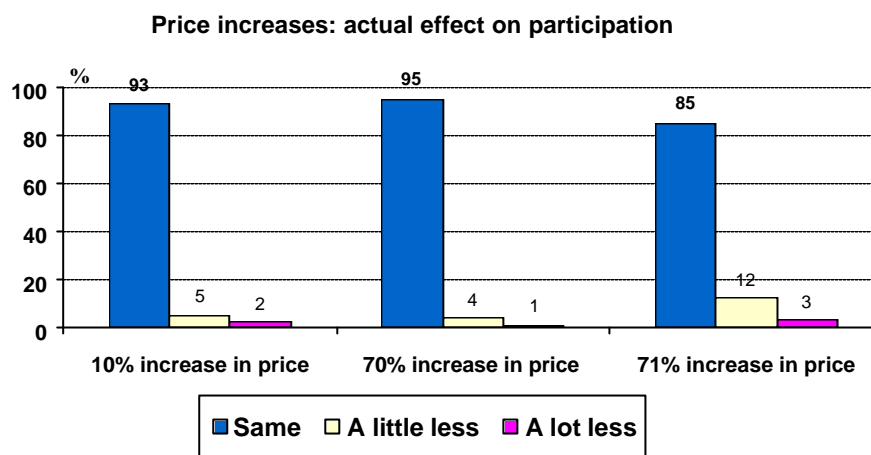
Unlike most non-participants, participants are more aware of the precise costs of participation, making them potentially more 'price sensitive'. However, as Table 1 indicates, in a survey of participants at six leisure centres (Coalter et al, 1993) only 4 per cent stated that increased entry/booking fees would result in a reduction in their frequency of participation.

Table 4.1 Factors most likely to put people off taking part in sport or active recreation more often (multiple response)	
	Percentage of respondents (n=1794)
Nothing	22
Weather	18
Work commitments	18
No time	17
Family commitments	10
Health problems	10
Access problems	9
Availability of transport	4
Entry/booking fees	4
Cost of travel	2
Too old	2
Other	14

As with non-participants, time and the associated family and work commitments are more significant potential constraints.

The assessment of the low significance of entrance charges as a potential constraint is partially confirmed by the data in Figure 4.5, from the same sample of participants.

Figure 4.5 Effect of price increases on participation



In centres experiencing price increases between 10 per cent and 71 per cent, the impact on frequency of participation was limited (although we have no evidence about participants who may have stopped attending).

In addition to a commitment to the activity (and fellow participants), the minimal impact of increased charges on the frequency of participation also reflects the perception that the increased entrance charges continued to represent ‘value for money’ - a crucially important factor.

In relation to the ‘psychology of charges’, recent work on ‘reference pricing’ in sport and recreation (Coalter and MacGregor, 2000) indicates that attitudes to pricing (and resistance to increases) can be positively affected by the provision of a range of relevant information about the basis of such charges - again indicating that traditional approaches to charging are often too one-dimensional.

5. The impact of concessionary schemes

5.1 A general lack of monitoring and evaluation

Threequarters of Scottish local authorities offer concessionary charges (91% of these target people on income support and all include the unemployed (**sportscotland, 2001**)).

However, there is a general absence of robust monitoring information on the effectiveness of such schemes (Coalter and MacGregor, 2000, Gratton and Taylor, 2001). Further, there is a widespread tendency to quote increases in *usage* (ie aggregate throughput), with little detailed information about participants (ie the scheme’s *social effectiveness*). Most importantly, there is a general lack of information on:

- (i) The extent to which such schemes attract new, or current, participants to take part more often (which, of course, may also be a policy goal).
- (ii) The socio-economic characteristics of participants.
- (iii) The medium term retention rate of new participants and/or increased frequency.

Where evidence does exist, researchers have expressed concerns about its methodological rigour. For example, political imperatives may influence design and interpretation of data, the quality of questionnaire design is highly variable and sampling procedures are often less than rigorous, raising questions about representativeness.

Within the context of these qualifications, this section summarises a range of relevant information.

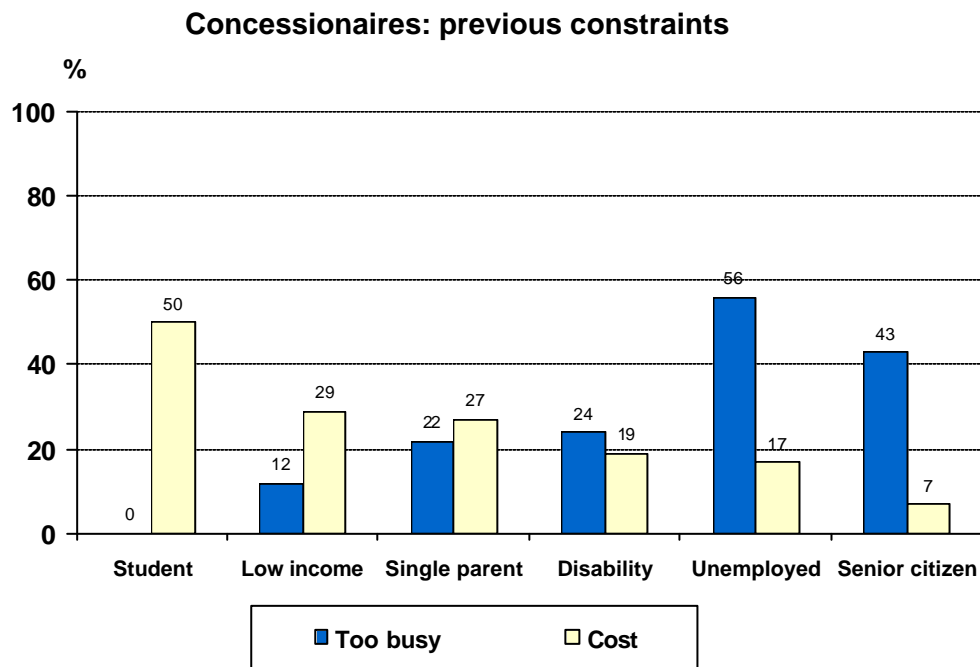
5.2 Scottish data on concessionary use

5.2.1 Survey of concessionary schemes

A survey of concessionary access schemes at 10 Scottish leisure centres was undertaken in 1993 (Coalter et al, 1993). However, despite targeting members of such schemes, the resulting sub-sample sizes were too small to permit detailed analysis of the target groups - reflecting the relatively low number of certain groups at such centres (low income, single parents). Consequently the data should only be regarded as indicative.

The data indicate that more than one fifth of 'concessionaires' were 'new participants'. However, when questioned about why they had not participated previously, the importance of reduced entrance charges varied between social groups.

Figure 5.1 Previous constraints on participation: concessionaires



These data tend to suggest that such schemes may be partly effective in encouraging new participants (mainly for swimming). For example, for some groups the cost of participation previously had been a constraint - students, low income and single parents (although, except for students, a minority identified this factor).

In addition, among previous participants, more than half *had increased their frequency of participation* because of the concessionary charges.

5.2.2 Highland Council: High Life

This monthly direct debit scheme, based on 'smart card' technology, provides individual access to six facilities for £9.99 and families for £14.99. It also provides a 'budget' access of 50p per visit for those on state benefits.

In the first six months, visits at the six centres increased by 36 per cent compared to the equivalent period in the previous year, with a 47.5 per cent increase in income. There was also a 51 per cent increase in 'budget' admissions. This was in the context of stable usage at non-participating facilities. However, the effect was not uniform across all facilities - varying between 8 per cent and 41 per cent. Further, the available data indicate that, in some centres, the initial large increases have not been maintained, with some participation settling close to the previous year's levels.

Anecdotal 'evidence' suggests that the scheme has led to a large increase in family visits. Survey data (which, for a number of technical reasons, can only be regarded as indicative) indicates the following:

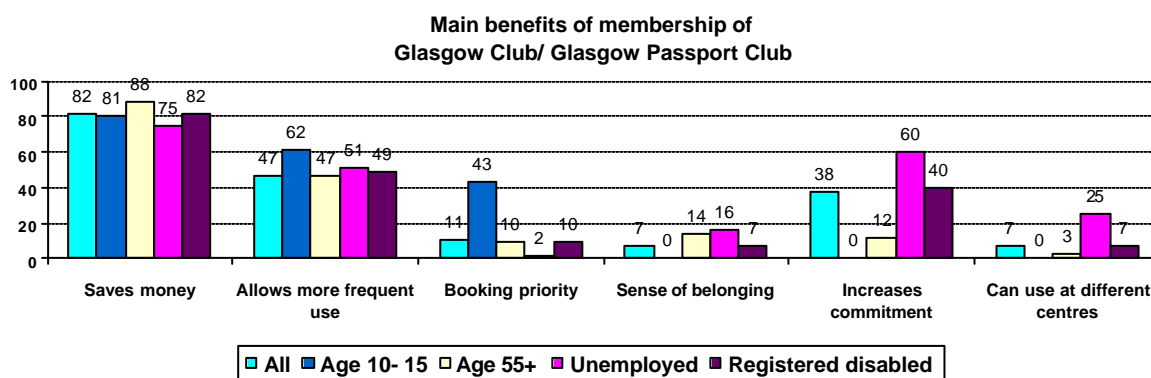
- 74% agreed that it had encouraged their family to participate more frequently
- 51 % had tried new activities since the introduction of the scheme.

However, there are no data to assess the social effectiveness of the schemes - eg the SEG of participants or the proportion of new, rather than more frequent, users.

5.2.3 The impact and benefits of concessionary schemes

Although there is a lack of systematic (and comparable) monitoring and evaluation data relating to concessionary schemes, there is some indication that they have the ability to increase *general levels of use*. Further, among participants there seems to be a general perception that they are 'good value for money' and that they encourage more frequent participation. For example, Figure 7 presents data from a recent survey of users of Glasgow sports centres. Among members of the Glasgow Club/Passport scheme the main perceived benefit was that it 'saves money'.

Figure 5.2 Benefits of concessionary schemes



It is worth noting that the related fitness benefit of *allowing more frequent use* was also rated highly, with the associated *increases commitment* also being rated highly by some groups.

5.2.4 Concessionary schemes: not proven

Concessionary schemes appear to have some potential to increase the volume of use of facilities. However, there is an absence of robust data on their social effectiveness - the extent to which they increase frequency or attract new participants (and the nature of these participants).

Further, there is evidence that their full potential may not be being achieved because of poor promotion and under-resourcing resulting in a failure to reach target populations - Collins and Kennett (1999) indicate that about one quarter (23%) of concession schemes reached a tenth or less of the "deprived population".

A recent study in Glasgow (Coalter, 2001) found a generally low level of (unprompted) awareness of the various membership/concessionary schemes - only about one in five were aware of the Glasgow Leisure Card (19%) and the Passport Leisure Card (20%).

Collins and Kennett's (1999) conclusion seems appropriate:

"..leisure cards have been tried and found difficult and mostly ... insensitive, under-resourced and tokenistic attempts at anti-poverty and inclusion policies. The few good examples show the potential but also the policy resolve and management skill neededreducing price alone is not enough, even when price is a constraint: one has to have other supportive policies in marketing and outreach, in improving transport etc ".

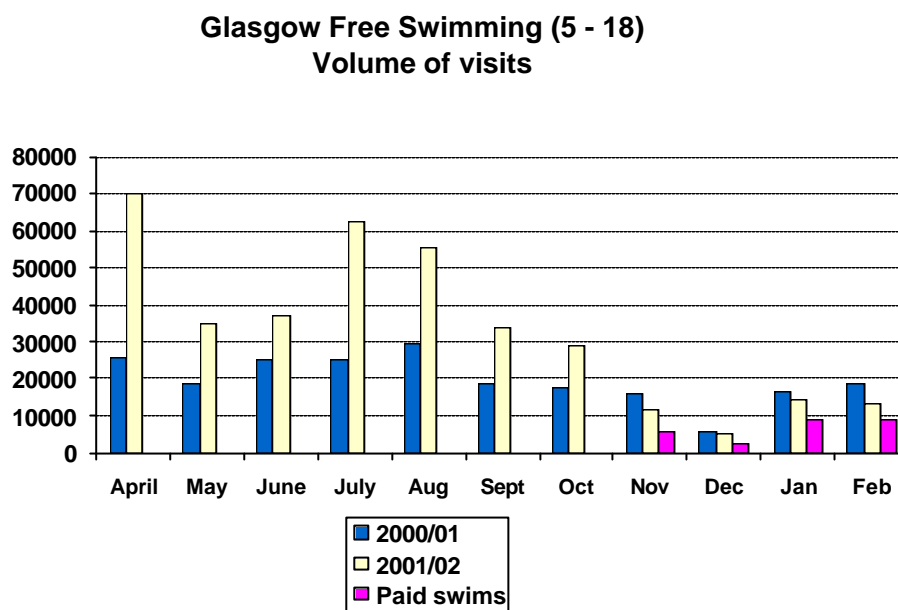
6. Free entrance

A more radical approach to addressing the presumed constraint posed by entrance charges is to provide free use. Here we have data from two Scottish experiments, although it is highly significant that both relate to swimming (low fixed costs and little need for skill/expertise).

6.1 Glasgow City Council

In April 2001 Glasgow City Council introduced free swimming for 5-18 year olds. As Figure 6.1 illustrates, the initial impact of this was to generate substantial increases in levels of use. Compared to the previous year, there was a 160 per cent increase in usage in the first month and 125 per cent in the second month and by the end of July (4 months into the scheme) attendances had slightly more than doubled compared to the same period in the previous year.

Figure 6.1 Glasgow Free Swimming: volume of visits



As Figure 6.1 indicates, in line with similar initiatives, the dramatic initial increase in attendances was not maintained - although this may be partly accounted for by the decline in the novelty value, other factors are also important. Firstly, on 1st November the scheme became more formalised via the introduction of a card system - to obtain free swimming young people had to obtain a concession card (issued free of charge). Secondly, the cards were available only to Glasgow residents, or those attending Glasgow schools. This served to reduce the proportion of free swims accounted for by those living outwith Glasgow who had used the pools on the city's boundaries. A further factor might have been that, as 72 per cent of the participants were under 12, parents might have been reluctant to permit children to attend on winter evenings.

For whatever reason, there was a significant reduction in the percentage increase over the previous year's attendances, with a 41 per cent decrease in total usage between October and November. Between November and February the total of free swims was less than the total (paid) usage in the previous year (accounting for between 71% and 86%). However, it is worth noting that the overall level of usage was up on the previous years - accounted for by paid swims by those who, presumably, had previously been able to swim for free. This raises the issue of the extent to which those who continued to swim for free would have been willing to pay.

The largely descriptive aggregate data available for this initiative make it difficult to arrive at definitive conclusions about the long term effectiveness of free swim programmes. For example, there are no data on the social effectiveness of the approach. Although the managers' evaluation is that the initiative attracted new participants, there is no robust information about the volume and nature of the new participants. Other than the fact that approximately 70 per cent of free swim usage (to January 2002) was by children of primary school age, there is no information as

to the extent of new users, the nature of users or the relationship between increased usage and increased frequency by previous participants. It is clear that the programme has increased usage levels, but why and for whom remains an issue for investigation and one which needs to be clarified before more general policy conclusions can be made.

6.2 Port Glasgow Baths

This was a before and after study (Coalter et al, 1993) in which free admission to a Victorian swimming pool was provided for six months. The overall picture mirrors that of Glasgow.

- Visits increased by 72 per cent (greatest increases during school holidays)
- Attendances by under 17s increased by 77 per cent and by adults by 62 per cent.

However, the survey evidence from Port Glasgow also indicated the following:

- Only 2 per cent of participants had not participated prior to the introduction of free use
- Approximately one third (35%) had increased their frequency of participation
- Free access had little effect on the social class composition of men, although there was an increase in the proportion of C2DE women

6.3 Free access: conclusions

- The evidence suggests that although free access can lead to substantially increased usage, the initial high volume increases are not sustained.
- The available evidence relates only to swimming (with low fixed costs and sporting capital).
- There is no evidence as to whether increased levels of use are a result of increased frequency of use by current participants or the attraction of new users. Given the very high initial increases it is unlikely that these will be a result of new users. It is possible that those who increase their frequency find this level impossible to sustain over time and that, once the novelty wears off, the new users find adherence difficult.
- There is very limited evidence about the socio-economic status of those attracted by such schemes.

7. Conclusions

- It must be emphasised that nothing in the above discussion implies that entrance charges are **not** an important component of the decision to participate.
- However, the question remains open as to the precise significance of such charges. This will vary according to such factors as the level of the charges, the value placed on the activity (a significant factor), the nature of the activity, the associated fixed and variable costs and the ability to pay. The available data seem to indicate that entrance charges alone may act as a constraint for a minority of people. Those on low income will have several other constraints, similar to the rest of the population. Time is consistently the most important constraint for most participants and non-participants and many on low incomes may have more than one job, or work unsociable hours.

- It seems that *well-promoted and supported* concessionary schemes have the ability to attract new participants and increase the frequency of participation (although there is little evidence about the nature of the participants which they attract).
- Free access schemes remain unproven in terms of the nature of the participants which they attract and their ability to retain participants over time.
- Most information on concessionary schemes and free access relates only to swimming and cannot be generalised to other sports and activities (with higher fixed costs and a need for sporting capital).
- Entrance charges are only one component of a varying set of factors which either constrain or facilitate participation in sport. It seems clear that the decision to participate is not a simple economic one. A wide range of priorities and 'life-style' factors (usually expressed via constraints on time) and personal preferences ('not interested') appear to be more significant 'obstacles' to participation (Coalter, 1993). This is supported by a later study (Collins and Kennet, 1999) which concluded that, even when price is a constraint, reducing entrance charges alone is not enough.

Based on a review of various sources it would appear that sensitive pricing needs to be combined with other elements to encourage participation among low income groups.

(i) Location

Collins and Kennet (1999) and data from the Sport England Performance Measurement and National Benchmarking Service (Gratton and Taylor, 2001) provide strong indicative evidence that location is an important factor. Centres located in areas of deprivation appear to be the most successful in attracting participants from lower income groups - the geographical clustering of deprived groups/local facilities enables much more effective sports promotion.

(ii) Targeting

Various sources indicate that, in addition to concessionary schemes, systematic and sustained targeting is essential in order to attract low income groups who are likely to lack a history of participation and the associated 'sporting capital'. Some examples include:

- Schools targeted in order that children took the message back to parents
- Staff recruited from the same backgrounds as the target population
- Discount card promoted via an extensive, existing GP referral scheme and cardiac rehabilitation scheme
- Health visitors promoted the idea of physical activity.

In the absence of wholly definitive evidence one can only conclude that the decision to take part in sport and physical activity is not a wholly economic one. Attempts to increase participation among low income groups will need to view entrance charges as only one component of a complex set of factors. Entrance charges relate not only to the ability to pay, but the willingness to do so.

8. References and sources

- Allison M et al (1999) *Youth Sport in Scotland: Young People and Sport*. Research Report No 70, Scottish Sports Council, Edinburgh.
- Coalter F et al (1993) *The Impact of Variations in Charges on Usage Levels at Local Authority Sports Facilities*. Research Report No 35, Scottish Sports Council, Edinburgh.
- Coalter F (1993) Sports Participation: Price or Priorities? *Leisure Studies*, Vol 12 No. 3.
- Coalter F (1995) 'The impact of social class and education on sports participation: some evidence from the General Household Survey', in K Roberts (ed) *Leisure and Social Stratification*. Leisure Studies Association.
- Coalter F and MacGregor C (1999) *Reference Pricing in Sport and Recreation*. Scottish Association of Directors of Leisure Services/Centre for Leisure Research, Edinburgh.
- Coalter F (2001) *A survey of user of seven Glasgow sports centres*. Glasgow City Council, unpublished.
- Collins M and Kennet C (1999) *Combating social exclusion in leisure: the introduction and operation of Leisure Cards by British local authorities*. Glasgow City Council
- (2002) Free Swimming Initiative: Internal monitoring Report.
- Gratton C and Taylor P (1999) *Feasibility assessment of a 'Leisure Credit' initiative to promote social inclusion in sport*. Unpublished report to Sport England
- Highland Council (2002) High Life: Internal Monitoring Report
- Roberts K and Brodie D (1992) Inner City Sport: Who Plays and Who Benefits? Stichting Uitgeverij Giordano Bruno.
- sportscotland** (2001) *Charges for Sports Facilities: Scotland 2000/2001*. **Sportscotland**. Edinburgh