

AN EVALUATION OF THE NATURE AND EXTENT OF OPPORTUNITY
FOR ADULTS ON THE NORTH SHORE TO PARTICIPATE
IN PHYSICAL ACTIVITIES

by

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ABSTRACT

The purpose of this study was to design a survey tool which could be used to evaluate the nature and extent of opportunity for adults to participate in organized physical activities. This tool was then used as a means to examine this opportunity in an urban community. The survey tool included five parts: (i) supply of facilities, (ii) availability of facilities, (iii) content of programs, (iv) quality of instruction and (v) participant opinion questionnaires. Further purposes of the study were to make some of the information available to the community, to offer a set of recommendations specific to the community studied designed to improve the opportunity for participation and to develop a model for general recreation administration.

The supply of public, private and commercial recreational facilities were evaluated relative to selected standards. All public facilities which could be leased or reserved were examined with respect to how heavily they were used for a variety of activities. The organized physical activities were evaluated against selected fitness, educational and safety criteria. The educational background and related work experience of the instructors was documented and they were evaluated with respect to their teaching methods.

In general, the supply of parkland acreage including community and neighbourhood parks, large park areas and hiking trails met the standards suggested by the National Recreation Association. The supply of community centres, senior citizen recreation centres and swimming pools did not meet the standard; whereas, there appeared to be an adequate provision of tennis courts and gymnasiums. School gymnasiums were 83.8% unoccupied during out-of-school hours. Only 7.3% of the available time was taken up by organized physical activities for adults. The fields showed a similar minimal usage for organized activities (i.e. they were 75.8% unoccupied during the daylight hours). Swimming pools were occupied close to 100% of the time.

Tennis, yoga and fitness classes were the most commonly occurring. In general, the classes were non-competitive, they emphasized participation and they were offered at the beginner and intermediate skill or fitness levels. With respect to the fitness aspects of these classes, 51.3% met only once a week and 43.4% were offered only two seasons out of four each year. In fact, only 8.7% were offered on a regular basis (i.e. three times a week, year round). However, 58.9% emphasized stamina development, 40.2% suppleness improvement and only 0.9% strength increases. An examination of the educational content of classes revealed that instructors rarely emphasized the importance of fitness. However, it appeared as though they

were successful in creating an atmosphere in which participation was enjoyable and recreative. A consideration of the safety aspects showed that no medical clearance was required, minimal pretesting was done, no resuscitation equipment was readily available and only 60% of the classes had immediate access to general first aid equipment.

The educational background of instructors varied a great deal. Nine of thirty-nine held university degrees; four of these were in related fields. Three instructors held two year diplomas in physical education or recreation and fourteen had certificates in the specific activities they were teaching. The thirty-two part time instructors had an average of 4.97 years (part-time) experience. Only 25.9% of the instructors had any formal first-aid training.

Information about the facilities and programs was summarized in a catalogue and made available to the members of the community. All of this information was included in articles printed in the two local newspapers early in September.

Specific recommendations included the suggestion that consideration be given to (i) more multi-use facilities in future recreation planning, (ii) changing the rent structure applied to non-profit community groups for the use of school

(vi)

facilities, (iii) increasing the number of community schools, (iv) increasing the number of fitness-oriented physical activity classes in the community, (v) improving the safety aspects of classes and (vi) developing an instructor certification program. Finally, the general model for recreation administration was designed to be applicable to all communities comparable in size to the area studied.

This thesis is dedicated to and in
memory of Dr. Steven Casey, whose
genuine concern for the health and
happiness of the members of his
community made this report possible.

Whatever you can do, or dream you can, begin it.

Boldness has genius, power, and magic in it.

- W. H. Murray

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CHAPTER I

INTRODUCTION

Present day technology has created a situation in our urban centers where leisure time constitutes a large portion of one's waking hours. The length of the work week has dropped steadily throughout this century to such an extent that modern society is quickly moving away from a work-centered life towards a leisure-centered one. (67,222) "For the first time in history leisure may become more important than work in giving meaning to life." (55,4) One of man's major uses of leisure time is his recreation and to some this means regular participation in various forms of physical activity. This participation in physical activities is becoming more important because the demands of everyday living are insufficient to keep muscles strong and flexible and the cardiovascular system efficient. (45,1182) The increasing number of sedentary jobs fosters a lifestyle which does not include enough activity to maintain minimum levels of fitness.

It is apparent that organizations providing leisure time activities for adults have a crucial role to play now and in the future. They must "plan for an extended program of recreation activities and facilities if leisure time is to be used for individual enrichment." (74,3) Jay Shivers, in

Principles and Practices of Recreational Service, summarized

this task in the following terms:

The limitations placed upon most individuals by the scope of satisfaction in his gainful occupation enhance the importance of recreational activity and provide an objective toward which recreational service may move. (86, 126)

This task is twofold. First, due to the routine and at times monotonous nature of some jobs, agencies must provide opportunities for people to exercise artistic talents, to pursue cultural interests and to express themselves creatively. Secondly, because of the sedentary nature of many jobs, these agencies must provide opportunities for people to use their leisure time to maintain adequate levels of fitness. The amount of leisure time now available affords people enough time to participate in some form of physical activity and this participation can achieve two desirable goals for the individual. It can ensure the maintenance of an adequate level of fitness and it can provide one with the opportunity for creativity and self-expression. An important function for recreation agencies, therefore, is to provide opportunities for adults to participate regularly in physical activities.

Purpose

The purpose of this study was to develop a survey tool which could be used to effectively examine the opportunity for

adults to participate in organized physical activities. Using the survey tool developed, the nature and extent of such opportunity in an urban community was evaluated.

A number of different factors which could affect participation were considered. These included not only data on organized classes but also information on location and type of various facilities available for adult use. The five-part survey questionnaire, administered personally or by mail, examined the following aspects:

- (i) the supply of facilities,
- (ii) the availability of facilities,
- (iii) the fitness, educational and safety aspects of programs offered by public, private and commercial organizations,
- (iv) the quality of human resources, (i.e. instructors and exercise leaders), and
- (v) the opinions of participants in various programs.

A general goal of the project was to document the opportunities available for adults of all ages and all fitness levels. In addition, an attempt was made to determine which classes presently existing in the community were suitable for cardiac rehabilitation purposes. The incentive to gather this specific information was due to a very active cardiac

rehabilitation program in the community hospital. The doctors supervising this program wished to be aware of classes elsewhere in the community which were appropriate for the condition and fitness level of their patients.

A further purpose of the study was to make the information collected readily available to the people in the community. It was hoped that knowledge of this information would have a positive effect on the degree of participation by adults in physical activities. The final purpose of the project was to develop a set of recommendations designed to change and improve the opportunity for participation in the specific community studied and to outline a general model of an administrative structure designed to effectively operate a wide range of organized physical activity programs in any community.

Study Area and Methodology

The area examined for the purposes of this study was the "North Shore", an urban community in the Greater Vancouver Regional District, British Columbia. Although the North Shore consisted of three separate municipalities it was considered a single entity or a community for study purposes. Burrard Inlet, separating the North Shore from Vancouver City and

other local municipalities, made it very much a community unto itself. Two bridges, Lions Gate and Second Narrows, provided access to other parts of the Regional District. The geographical area known as the North Shore was made up of the City of North Vancouver, the District of North Vancouver and the Municipality of West Vancouver. The most recent population information available to the writer was that of December 1973. At that time the population of the entire North Shore was estimated at 136,059, the City of North Vancouver at 35,037, North Vancouver District at 62,965 and West Vancouver at 38,057.

The first task necessary in order to carry out a study of this nature was the development of a tool which would be sufficient to collect the desired information. A search of the current literature revealed no appropriate survey questionnaires. This necessitated drawing criteria from a number of sources. Some of the criteria employed were objective while others required a subjective evaluation on the part of the author. Facility supply was evaluated against accepted National Recreation Association standards. Criteria for evaluation of facility availability was based on information gained from literature sources modified somewhat to make them appropriate for the community under consideration. Similarly, criteria used to evaluate the fitness and educational aspects of the classes were drawn from

pertinent literature in the field. Criteria used in examining the safety aspects of the classes were suggested by three doctors from Lions Gate Hospital who acted as advisers in the early stages of planning the survey format. Very little information was available to provide strict guidelines in the development of a survey tool designed to evaluate the quality of instruction. A few authors, dealing with recreation administration and programing, suggested general criteria to consider when hiring instructors. Based on these general suggestions, an appropriate survey tool was designed. Appendix 1 includes all the survey forms that were used in this study. A full explanation of the methodological approach taken in each of the four parts of the study is provided in the chapter dealing with that aspect.

The data were collected in the following manner: first, people in charge of various recreational organizations were contacted. The purpose of the study was explained to them and permission to observe their classes was obtained. The content of programs, quality of instruction and participant opinion information was collected by personal visits to the adult physical activity classes in the community. This information was first gathered from the large public organizations including the North Vancouver Recreation Centre, the West Vancouver Community Centre, the School Board Adult Education classes and the North Shore Family Y.M.C.A. Having completed

this, the same information was then collected from the smaller organizations, (i.e. the private clubs, commercial establishments, apartments and churches). In addition, supply and availability information for these organizations was obtained from them at this time.

The supply and availability of facilities controlled by the larger organizations was then assessed. Much of the information on supply of facilities was obtained from the Recreation Canada National Study of the Supply and Demand for Sports and Recreation Facilities which was also carried out in the summer of 1974. The remainder of the supply data and information on availability of facilities was obtained directly from the municipalities concerned. This involved working with the school board, the Parks Board, the Recreation Commission, private clubs and commercial organizations. Supply and availability information for the churches and apartments was gained by a mailed survey. (Appendix 2)

Significance of the Study

All of the aspects of community recreation that this study considered have been examined by others who have appraised and evaluated community physical activity programs. Of the seven areas that the National Recreation Association

considered in assessing community programs, four of these were included in the present study. These were buildings and indoor facilities, leadership personnel, program service and participation.(61,4) Spindler and Dambach, in developing criteria for evaluating recreation programs, included as important components personnel, program content, facilities, teaching methods, program time and attendance.(90,124) All of these aspects were included in this study.

As pointed out earlier, the leisure time habits of people should include some physical activity designed to maintain and enhance their levels of fitness.

It seems to be essential for persons of middle and elderly ages to have appropriate exercise habits for the sake of their health and active living.(43,193)

Hein and Ryan pointed out a number of advantages to be gained from regular participation in physical activities. Regular exercise can 1) play a significant role in the prevention of obesity, 2) inhibit vascular degeneration characteristic of coronary heart disease, 3) assist in preserving the physical characteristics of youth and 4) exert a favourable influence on longevity.(37,279)

It is often at that point in life when people accept full-time jobs that they can develop habits which contribute to a lifestyle dominated by inactivity. Harold Sagar, dealing with school and community cooperation, noted that: "A

disappointingly small proportion of school leavers and people in their late teens continue with any form of physical activity." (81,38) A study examining the opportunities available to adults can thus be a step in attempting to determine what factors affect the degree of participation in physical activities by this group.

The Honourable Marc Lalonde, Minister of Health and Welfare, discussed some aspects of the health care field relevant to the present study in A New Perspective on the Health of Canadians: a working document. His 1972 report indicated that 76% of Canadians over thirteen years of age spent less than one hour per week participating in some form of physical activity. (48,25) Lack of exercise was a major contributor to deaths caused by diseases of the cardiovascular system. Forty-four percent of the deaths in Canada in 1971 in the thirty-five to seventy age range were related to cardiovascular disease. (48,15) From a health standpoint, a change in the lifestyles of Canadians to one which includes more regular physical activity appeared essential. A more rational use of leisure time could do much to aid this change.

From an economic point of view, this change also appeared crucial.

The annual rate of health care costs escalation has been between 12% and 16%, greater by far than the economic growth of the country. If unchecked, health care costs will soon be beyond the capacity of society to finance them.(48,28)

Lalonde continued saying, "vast sums are being spent to treat diseases that could have been prevented in the first place."

(48,32) Regular physical exercise has proven to be an excellent preventative measure against many diseases.

A number of different factors have been discussed to indicate the significance of a study of this nature. The specific aspects chosen for examination in this study were supported by the literature. The importance of fitness and the role that leisure time activities play in enhancing one's level of fitness have also been pointed out. A change in the lifestyle of Canadians to one which more often includes regular physical activity could slow the alarming increase in health care costs. An examination of the opportunities available for adult participation in physical activities and recommendations for their improvement could play a part in changing people's lifestyles in the desired direction.

Limitations of the Study

The following limitations attended the study:

1. The facilities examined were those controlled by schools, parks and recreation, private clubs, public agencies,

commercial enterprises, apartment complexes and churches. This necessitated using a number of different sources to gain information on their supply. This may have resulted in the omission of a few facilities that do in fact exist. Small semi-independent community halls are an example of this sort.

2. Due to the large number of churches and apartment complexes that had to be surveyed, a mailed questionnaire was employed. This resulted in less than full data being available for analysis.

3. Some subjective evaluation of the content of programs and the capabilities of instructors was required. The large number of classes (309) that had to be examined made it necessary for two people to collect these data. Criteria for evaluating these aspects of the programs were discussed. However, the subjective nature of the material meant more of a variation in results with two people engaged in survey work than would have resulted if only one person had been involved.

4. The time period during which the data was collected meant the inclusion of only spring and summer activities. The existence of activities which were offered in the fall and winter were documented but could not be examined for their content or quality of instruction.

5. A search of the literature revealed little previous information on some aspects of this study. Therefore, critical discussion in these areas was limited.

Definitions

The following definitions applied for the purposes of this study:

Fitness implies the ability to withstand and respond to the physical, emotional and social stresses of daily life. (68,353)

Leisure time is that time free from the more formal and obligatory demands of work. (84,259)

Organized physical activities are those physical activities which are participated in, in a group, with leadership or supervision present. This excludes any formal leagues in team or individual sports.

Adult refers to those who have completed their secondary school education or are above the age of eighteen.

A community is a geographic unit of land and people (urban, suburban, and adjacent areas) generally sharing the same education, recreation and local government services. (77,7)

Recreation is the field of activities, freely chosen, possessing potentialities for the enrichment of life through satisfaction of certain basic individual needs. (29,120)

Housing starts is a term drawn from the field of urban and regional planning. It implies the number of housing units (including homes, condominiums and apartments) started in a given period of time. It is an accepted method used to determine the population of an area in the intervening period between federal census'.

A neighbourhood park is a major neighbourhood recreation unit, including a park or a school or the two combined providing play space.(82,368)

A community park is a recreation unit providing play space serving four or five neighbourhoods.(82,368)

A regional park is a large park in or adjacent to an urban area, often used for conservation purposes and serving one or more urban areas.

Developed parkland is land set aside for recreation and prepared specifically for public use.(76,22)

Undeveloped parkland is land set aside for recreation but not specifically prepared for public use.(76,22)

A large recreation area includes regional parks and any community parks larger than one hundred acres.

Total parkland acreage includes neighbourhood, community and regional parks. Provincial parks are excluded.

A multi-use (or multi-purpose) facility is a recreation unit in which five or more specialized recreation facilities are available at one location.

A leased facility is an area controlled by a recreation organization requiring the payment of a fee as a prerequisite to use by groups or individuals.

A reserved facility requires no fee payment for usage but necessitates booking the space with the controlling organization ahead of time.

Stamina (or cardiovascular endurance) is the quality that enables an individual to mobilize enough energy to maintain movement over an extended period of time. Stamina is largely a matter of an adequately developed oxygen transport system. (68,354)

Suppleness (or flexibility) is the quality of muscles, bones, tendons and ligaments that permits full range of movement in a joint. (68,353)

Strength is the maximum amount of force from a single volitional muscle contraction. (78,R43)

CHAPTER II

SUPPLY OF FACILITIES

Four aspects essential to a complete community recreation program have been examined in this study. Both the supply and availability of facilities were documented as was the content of all organized physical activity programs for adults. The final consideration was the quality of instruction in the classes observed. All of these aspects were crucial in providing adequate opportunity for adults to participate in activities of their choice. An attempt was also made to integrate these aspects and indicate ways in which they complemented one another. It seemed logical that any successful community recreation program should have a sound base of facilities upon which to build. For this reason, the supply of facilities has been dealt with first. An inventory of facilities on the North Shore included only those which were suitable for organized physical activities for adults. The emphasis, then, was not on competitive athletic facilities but on those appropriate for the leisure time recreational pursuits of adults.

Facility Supply Relative to International Standards

Total Parkland Acreage

During the 1920's two different organizations, one in Britain and one in the United States, developed standards for

the provision of parkland acreage in urban areas. In 1925 the National Playing Fields Association of Britain indicated that six acres of permanently preserved playing field space per thousand population was essential. (35,9) This six acre standard excluded school playing fields unavailable outside of school hours, woodlands and commons and open areas where playing of games was not permitted. In 1951 the Association reexamined this standard to determine if any changes should be made due to the demands of agriculture and housing on the limited land resources of the country. The reexamination indicated that no reduction could be justified and the standard was once again endorsed by urban and town councils.

The National Recreation Congress of the United States convened in 1920 to determine standards for recreation land space in their country. The Congress settled on one acre of space for outdoor recreational activities per hundred population. (38,372) This standard was defined to include neighborhood, community and regional parks. A 1943 meeting of the Committee on Park and Recreation Standards of the American Society of Planning Officials said one acre per hundred population was no longer practical in large cities and densely populated areas. They suggested a standard of one acre per two hundred population. (38,372) The most recent generally accepted standard was the 1965 guideline set down by the National Recreation Association (N.R.A.). It stated that one acre of

park (neighbourhood and community) per two hundred and fifty population should be adequate. (62,20) This differed from their 1920 standard by excluding regional parks in the acreage and increasing the ratio of population per acre.

The N.R.A. standards included more categories of parkland acreage of interest to this study than did those of the National Playing Fields Association. In addition, the N.R.A. has developed a comprehensive set of standards for many other types of facilities included in this study. This fact, along with the lack of standards specifically developed for Canada, made it logical to adopt the N.R.A. standards in their entirety. This provided a standard against which the adequacy of recreational facilities on the North Shore could be evaluated.

Three N.R.A. standards were used to evaluate parkland acreage on the North Shore. The first was that of total parkland acreage, with the standard set at one acre per one hundred population. This figure included neighbourhood, community and regional parks. The second standard of 1965 excluded regional parks and increased the population to acreage ratio to 250:1. A third standard dealt with the provision of large recreation areas. Included were regional parks and any community park larger than one hundred acres. The standard for large recreation areas was set at one park per 40,000 population.

North Vancouver City and the District of North Vancouver were considered as one entity for the examination of facility adequacy. This seemed logical since they were under the jurisdiction of the same school board and shared the same social, cultural and recreational amenities. Population estimates (Appendix 3) were used for comparison with standards. These figures were based on "housing starts" to December 1973 to extrapolate from the 1971 Federal Census. In this way, the adequacy of facilities for the entire North Shore, for North Vancouver and for West Vancouver was examined.

Provision of total parkland acreage for the entire North Shore was one acre per 72.1 population. The provision in North Vancouver was slightly less (1/116.1) and in West Vancouver slightly more (1/36.4) than that for the entire North Shore. (Table 1 and Appendix 4(ii)) The second standard provided by the N.R.A. was that dealing with neighbourhood and community parks. Lighthouse Park and Hollyburn Ridge in West Vancouver and Lynn Canyon in North Vancouver were excluded from this group since by definition they did not qualify as neighbourhood and community parks. This N.R.A. standard suggested 250 population per acre. The North Shore provided a ratio of 90:1, with North Vancouver and West Vancouver 150:1 and 44:1 respectively. (Table 1)

TABLE 1

ADEQUACY OF NORTH SHORE PARK AREAS

(NATIONAL RECREATION ASSOCIATION STANDARDS)

Type of Park Area	NRA Standards	NORTH SHORE Existing Provision	NORTH SHORE Percent Adequacy	NORTH VANCOUVER Existing Provision	NORTH VANCOUVER Percent Adequacy	WEST VANCOUVER Existing Provision	WEST VANCOUVER Percent Adequacy
Total Recreation Acreage	1 acre/100 population	1/72.1	>100	1/116.1	86.1	1/36.4	>100
Neighbourhood and Community Parks	1 acre/250 population	1/90.1	>100	1/150.3	>100	1/44.3	>100
Large Recreation Areas	1 park/40,000 population	1/34,015	>100	1/49,001	81.6	1/19,028	>100

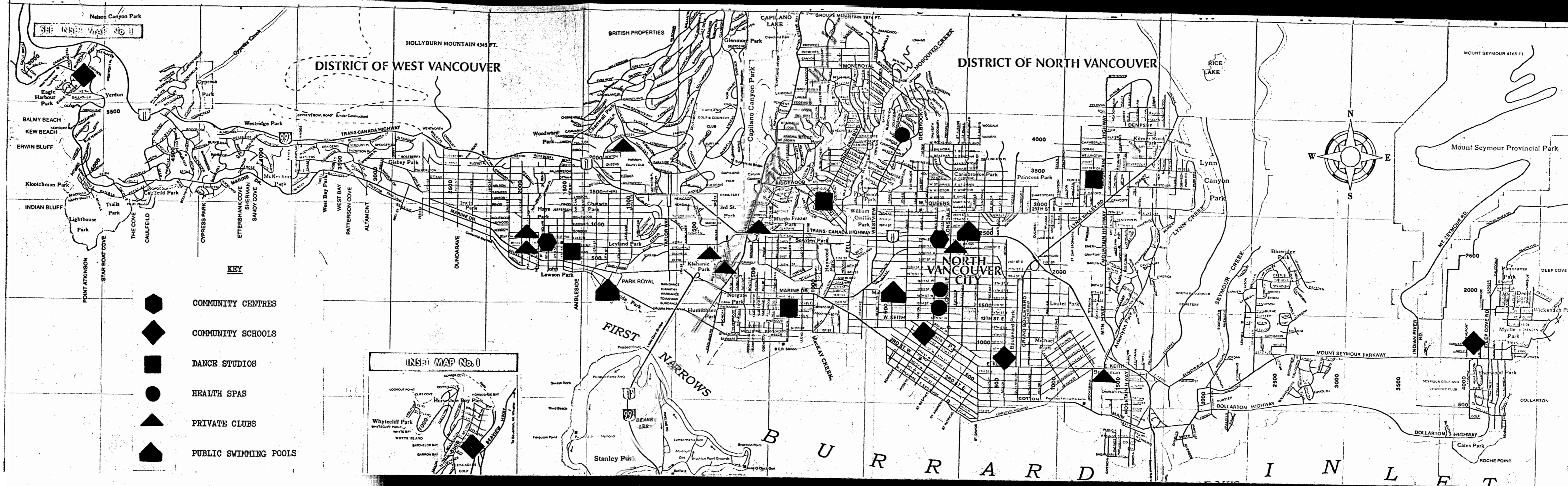
The third and final N.R.A. standard was that dealing with large recreation areas. One park for each 40,000 population was a suggested criteria, although this was not specific as to whether these areas were to be totally within municipal boundaries. For this reason, inspite of the fact that Mount Seymour was a provincial park and not included in the total parkland acreage for the North Shore municipalities, it was considered as a large recreation area for comparison purposes. It was included because of its easy accessibility from anywhere on the North Shore. Thus four large recreation areas were considered to be available. Two were in North Vancouver (Mount Seymour and Lynn Canyon) and two in West Vancouver (Lighthouse Park and Hollyburn Ridge). This meant a provision of one area for every 34,015 population for the entire area, 1/49,001 population for North Vancouver and 1/19,028 for West Vancouver. (Table 1) Maps 1 and 2 show the locations of parks in North and West Vancouver.

Hiking Trails, Running Trails and Bicycle Paths.

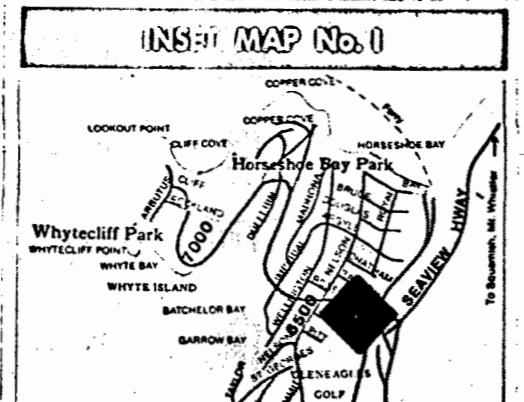
Provision of hiking, running and cycling areas was another concern of this study. One obstacle to developing urban trails was the finding of suitable land. However, M.E. Brooks, in Planning for Urban Trails, suggested that almost any reasonably level stretch of land covering a half mile or more should be viewed as a potential trail site. Possible sites for locating trails include railroad right-of-ways,

LOCATIONS OF COMMUNITY CENTRES, COMMUNITY SCHOOLS, PUBLIC SWIMMING POOLS, HEALTH SPAS,
PRIVATE CLUBS AND DANCE STUDIOS ON THE NORTH SHORE

MAP 1

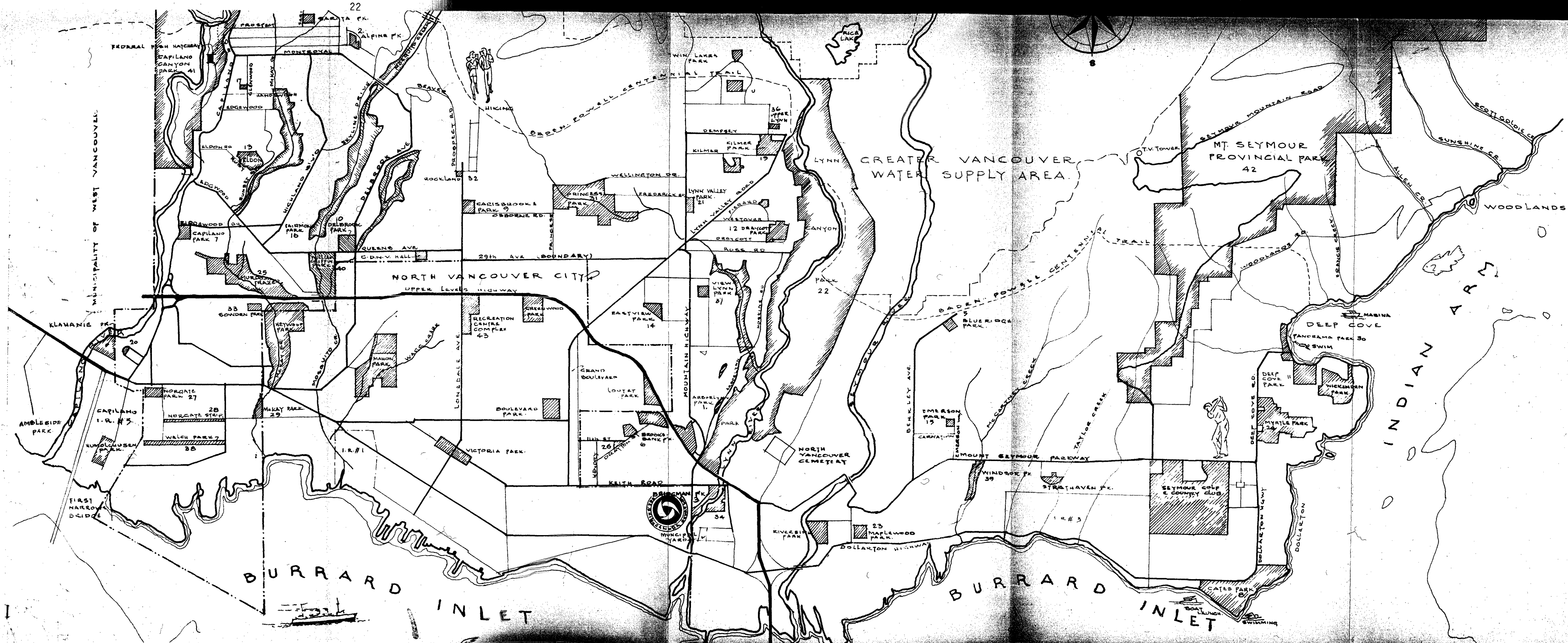


- KEY**
- ◻ COMMUNITY CENTRES
 - ◊ COMMUNITY SCHOOLS
 - DANCE STUDIOS
 - HEALTH SPAS
 - ▲ PRIVATE CLUBS
 - ⬠ PUBLIC SWIMMING POOLS



LOCATIONS OF NORTH VANCOUVER CITY AND DISTRICT PARKS

MAP 2



utility company easements, canal and river banks, city streets and parks.(11,1)

A number of different standards were also available as guides for the provision of urban trails; however, some variation was evident in the recommended supply of trail-miles. Maricopa County in Arizona developed a highly complex and comprehensive plan for hiking and riding trails. This involved measuring the demand for trail use in "activity-days" and determining yearly participation rates. (11,17) Their system was much like that used by transportation engineers in determining adequate urban transportation systems. R.J. Rutledge, in Anatomy of a Park, used a similar method by considering provision in terms of the number of people per mile of trail per day.(80,147)

The Bureau of Outdoor Recreation, Department of the Interior, Washington D.C., developed what appeared to be a simple but suitable guide. They recommended one mile of hiking trail for each two thousand population. The same ratio was suggested for bicycle paths. If multi-use of trails was expected then one mile per two thousand people was suggested as a criterion. However, if intensive use was expected and separate trails seemed necessary then each type of trail (hiking and bicycling) had to satisfy the 1:2000 standard. It was of interest to note that the Bureau suggested separate

areas for motorcyclists and recommended fifteen acres for motorcycling for each 50,000 population in an area.(14,42)

An inventory of the North Shore neighbourhood and community parks revealed that twenty locations had trails suitable for hiking. Nineteen of these had between one and ten miles of trail and one had between eleven and twenty. Information on the accurate mileage of trails could not be obtained from the parks boards concerned. For this reason, it was only possible to list the distance of trails in broad range categories. If the trail mileage at each location was estimated at the mid-point of that mileage range, this figure could be used to comment on their adequacy relative to the standards mentioned above. For example, a park having between one and ten trail-miles would have five miles designated for comparison purposes. This method of evaluation gave a trail provision for the North Shore of one hundred and ten miles, or one mile per 1237 population. North and West Vancouver were 1:2800 and 1:507 respectively.(Table 2) In addition to trail mileage, the trail terrain was also categorized, with three categories included (i.e. flat, variable and hilly) A subjective judgment was made by the author in order to include all park trails in one of the three categories. Six locations had trails with terrain termed flat, seven had variable terrain and seven hilly.

TABLE 2

PROVISION OF HIKING TRAILS AND BICYCLE PATHS ON THE NORTH SHORE
(NATIONAL RECREATION ASSOCIATION STANDARDS)

Type of Facility	Bureau of Outdoor Recreation Standard	NORTH SHORE		NORTH VANCOUVER		WEST VANCOUVER	
		Existing Provision	Percent Adequacy	Existing Provision	Percent Adequacy	Existing Provision	Percent Adequacy
Hiking Trail	1 mile/2000 popul.	1/1236.9	> 100	1/2800	71.4	1/507.4	> 100
Bicycle Path	1 mile/2000 popul.	1/27,211.8	7.3	0/98,002	0	1/7071.4	28.3

The number of trails immediately accessible to the North Shore population was actually more than that mentioned above. The trails documented included only those in neighbourhood and community parks. In addition, there were a large number of trails in the regional parks, in Mount Seymour Provincial Park and in undesignated forested areas. Appendix 4(iv) outlines detailed information on trail provision in these areas. Many of the trails of flat or variable terrain were also found to be suitable for running. In addition, five parks had sawdust-based running trails designed and built specifically for running purposes.

One marked bicycle route existed on the North Shore. This path was in West Vancouver, was five miles in length and stretched through Ambleside Park and along quiet residential streets. A September 26, 1973 Vancouver Sun article reported a study carried out by North Vancouver District examining the feasibility of creating a bikeway through the area. The bikeway would consist of a white-line, eight feet from the curb on selected streets. Lynn Valley Road was chosen as the trial site. At the time of this report plans for the route in North Vancouver still remained tentative. (101,39)

Specialized Recreation Facilities.

There were a number of specialized indoor and outdoor facilities which were generally accepted as an integral part of a community recreation plant. These include recreation

centres, gymnasiums, swimming pools and tennis courts. The National Recreation Association has also set guidelines for the adequate provision of these types of facilities. The criteria for recreation (community) centres and senior citizen centres was one for each 20,000 population. The swimming pool standard was one for every 15,000, with the indoor pool requirement set at 1 per 50,000 population. One gymnasium for each 10,000 was recommended as well as one tennis court per 2000. (63,7)

The North Vancouver Recreation Centre and the West Vancouver Community Centre were the two full community complexes existing at the time of this study. This resulted in a provision of one centre per 68,029 population for the entire area and 1 per 98,002 for North Vancouver. A better situation existed in West Vancouver where the one centre catered to a municipal population of 38,057. (Table 3) One senior citizen recreation centre, Silver Harbour Manor, catered to the needs of the elderly population. No recreation centre designed specifically for senior citizens existed in West Vancouver.

There was an abundance of gymnasiums in the community when those at the high schools and elementary schools were counted. Only gymnasiums generally available for community use were included for comparison with the N.R.A. standard. This meant excluding some private facilities such as specialized

TABLE 3

PROVISION OF SPECIALIZED RECREATION FACILITIES ON THE NORTH SHORE

(NATIONAL RECREATION ASSOCIATION STANDARDS)

Type of Facility	NRA Standard	NORTH SHORE		NORTH VANCOUVER		WEST VANCOUVER	
		Existing Provision	Percent Adequacy	Existing Provision	Percent Adequacy	Existing Provision	Percent Adequacy
Community Recreation Center	1/20,000 popul.	1/68,029	29.3	1/98,002	20.4	1/38,057	52.5
Senior Citizen Recreation Centers	1/20,000 popul.	1/136,059	14.7	1/98,002	20.4	0/38,057	0
Gymnasiums	1/10,000 popul.	1/1374	>100	1/1420	>100	1/1268	>100
all Swimming Pools (indoor&outdoor)	1/15,000 popul.	1/45,353	33.1	1/49,000	30.6	1/38,057	39.4
Indoor Swimming Pools	1/50,000 popul.	1/136,059	36.7	1/98,002	51.0	0/38,057	0
all Tennis Courts	1/2000 popul.	1/1226	>100	1/1485	>100	1/856	>100
Public Tennis Courts	1/2000 popul.	1/1495	>100	1/1782	>100	1/1057	>100

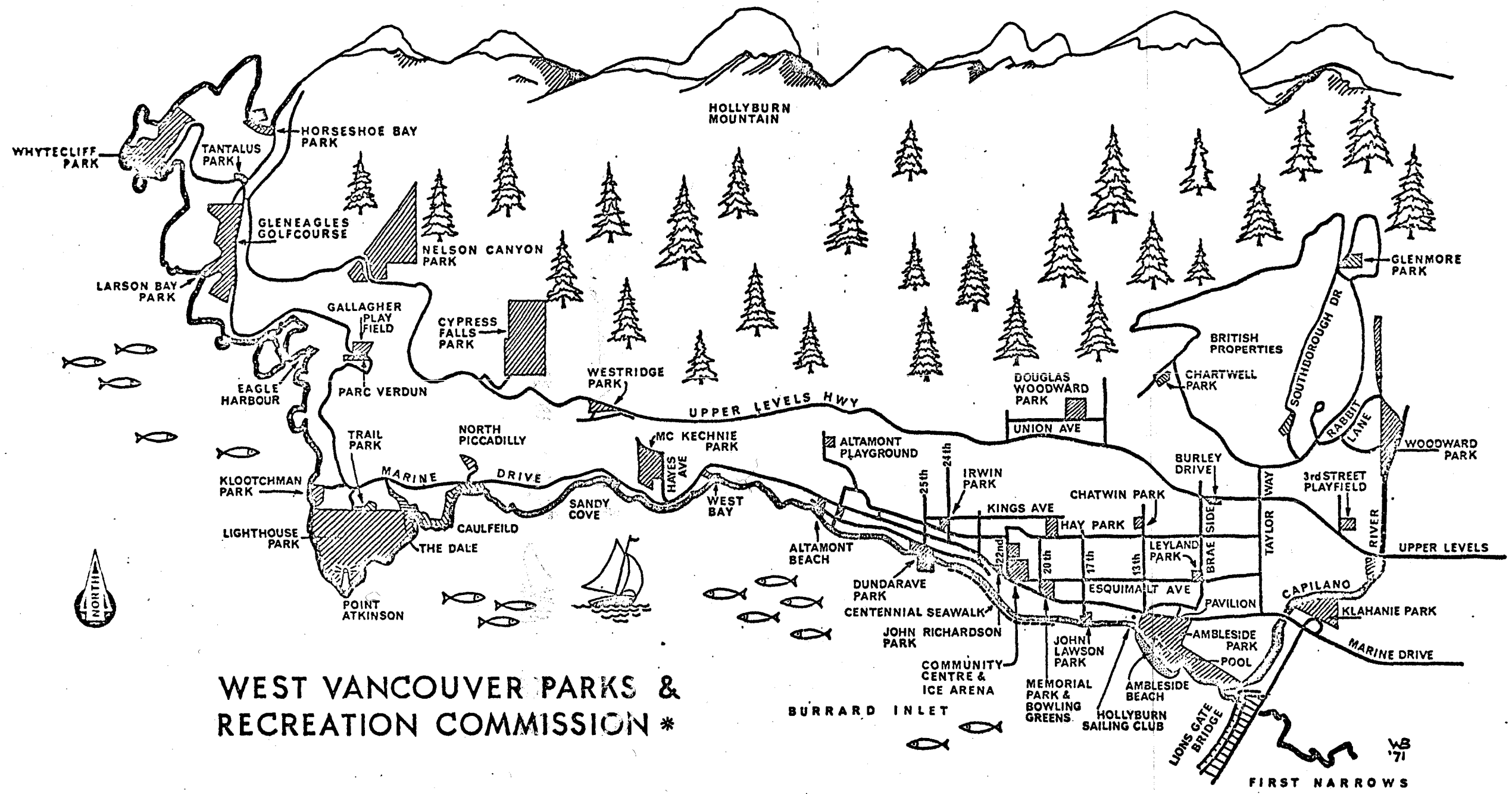
weight training gymnasiums in Health Spas and exercise rooms in the dance studios. Even with these exclusions, the provision of gymnasiums was one for every 1374 population. (Table 3)

At first glance the North Shore appeared to be well provided with swimming pools. Eighty-eight such facilities existed. However, when those not publicly accessible (seventy-seven in apartments, three in private clubs, three in schools and two in spas) were eliminated from consideration, only three pools were left which could be considered publicly controlled and generally available to the community. Thus, outdoor pools at Mahon and Ambleside parks and an indoor pool at the North Vancouver Recreation Centre catered to the entire demand for aquatic activities. The indoor pool at the North Vancouver Recreation Centre was the only pool serving the entire North Shore for eight months of the year. Map 3 indicates the locations of a variety of specialized facilities on the North Shore.

Other Facilities.

A number of other facilities appropriate for adult use were available in the community. These included handball, badminton and squash courts, running tracks, fitness circuits, ice arenas and canoeing areas. A search of the literature uncovered no international standards which could be used to

MAP 3
LOCATIONS OF WEST VANCOUVER PARKS



WEST VANCOUVER PARKS & RECREATION COMMISSION *

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evaluate the adequacy of these facilities. The North Shore had eight cinder running tracks, five located in North Vancouver and three in West Vancouver. Three fitness circuits combined with sawdust running trails also existed. These circuits were in Ambleside Park and Parc Verdun in West Vancouver and in Bridgman Park in North Vancouver. The Parks Superintendent for the District of North Vancouver indicated that two more would be constructed very soon. One was to be located in Eldon Park and the other in William Griffin Park.

Only two of the five ice arenas in the community were generally available for community use. These were situated at the North Vancouver Recreation Centre and the West Vancouver Community Centre. Three other ice rinks were in private clubs. Hollyburn Country Club, Capilano Winter Club and the North Shore Winter Club each had one ice arena as a part of their facility complexes.

There was a wide variation in the provision of courts for racquet games. Most elementary schools and all high schools had gymnasiums suitable for badminton. The provision of handball and squash courts was not as adequate. No official three-wall handball courts existed but some schools indicated they had suitable one-wall courts. Only the Evergreen Squash Club in North Vancouver provided regulation squash courts, with two courts for one hundred and forty members. The club

manager indicated that they would soon begin construction on a third court at which time they would accept seventy new members.

Other public and private facilities available for adult use included one roller skating rink and fourteen waterfront areas designated suitable for canoeing and boating. In addition, the North Shore had three locations (and forty-four pitches) for lawn bowling. Appendix 4(i) gives a full outline of all types of facilities available on the North Shore.

Multi-use Facilities.

The concept of multi-use or multi-purpose facilities could, if implemented, play an important role in providing adequate recreational opportunities on the North Shore. This idea appeared to be gaining support from a growing number of people in the recreation field. (74,35) The multi-use facility is a recreation unit having five or more specialized facilities at one location. This could be a complex consisting completely of indoor facilities, one combining indoor and outdoor facilities or a large park offering only a range of outdoor facilities. Multi-purpose indoor facilities appeared essential to provide adequate opportunity for a number of activities in the winter months.

John F. Goghlan, in his article "Physical Recreation in New Towns", offered the following advice:

Piecemeal development of recreational facilities constructed as single units will certainly have value where no more can be accomplished, but it is towards the multi-sports complex we should increasingly look when we consider community provision on a higher scale. (34,153)

A central recreation complex, or a multi-use facility, appears very logical for financial reasons. A significant saving in capital and operating costs is possible by combining a number of facilities in one location. This savings could result from a sharing of parking areas, ancillary facilities, mechanical services and various operating costs such as management staff. (74,35) In addition, family participation is becoming more common and is facilitated by these complexes. (34,153)

Ten recreation locations having multi-use facilities existed on the North Shore at the time of the study. There were seven locations with five specialized facilities available and one each with six, seven and eight facilities. The most noteworthy public facility of this nature was the North Vancouver Recreation Centre. It possessed indoor facilities which included an ice arena, curling rink, swimming pool and gymnasium. The private club offering the greatest variety in facilities was Hollyburn Country Club. It possessed a wide range of indoor and outdoor facilities suitable for racquet games, weight training, swimming, hockey, figure skating and curling.

A majority of multi-use facilities in the community combined both indoor and outdoor activity areas. Many secondary schools had facilities which could be classified as multi-use. A commonly occurring group of school facilities included a gymnasium, playing field(s), running track and tennis courts. Ambleside Park was a notable municipal multi-use facility providing an opportunity for outdoor activities. Facilities in the park included a swimming pool, a beach, tennis courts, playing fields, a fitness circuit and a bicycle path. A typical combination of facilities at multi-use parks were tennis courts, hiking and running trails and beach areas suitable for swimming, canoeing and boating. Appendix 4(v) provides a full outline of the specialized recreation facilities available at the various multi-use locations.

DISCUSSION

The National Recreation Association standards and those offered by the Bureau of Outdoor Recreation provided an opportunity to comment on the adequacy of a wide range of recreation facilities in the community. The fact that the North Shore was to be considered a community for geographical reasons made it essential to examine the adequacy of facilities for this entire area. In addition, the two subsections of the North Shore, North Vancouver (City and District) and West Vancouver were also evaluated with respect

to their provision of facilities. Both North Vancouver and West Vancouver were of sufficient size and possessed the necessary services and amenities to make them self-supporting communities. Both areas had some semblance of a central business district with surrounding residential areas. That is, each had followed urban growth patterns common to most North American cities in the twentieth century. Therefore, the use of recent American recreation standards to evaluate these areas appeared quite appropriate. The fact that these standards were determined by two organizations well known in the field of recreation enhanced the validity of the standards and confirmed their use in this study. They proved to be excellent guideposts to test the adequacy of recreation facilities on the North Shore and in its two subsections.

The N.R.A. standard for parkland acreage, broken down into three categories, provided a comprehensive look at this aspect of the problem. The total parkland acreage standard of one acre for each one hundred population was more than fulfilled for the entire area (1 acre/72.1) and for the West Vancouver municipal area (1/36.4). North Vancouver was deemed 86.1% adequate having one acre per 116.1 population. (Table 1) The community and neighbourhood parks standard provided a more exacting tool for evaluation, specifically considering open spaces within walking distance of peoples homes. This standard also dealt with acreage per population (1/250). All three

areas under consideration provided space far greater than that suggested by the standard. In fact, the North Shore provided one acre for every 90.1 population, almost three times more land than was recommended. (Table 1) The third standard dealt with large recreation areas including regional parks and community parks greater than one hundred acres. Once again, the North Shore and West Vancouver proved more than adequate in this respect. Two large recreation areas in North Vancouver made that area 81.6% sufficient. (Table 1) However, a number of forested areas outside municipal boundaries but in close proximity to residential areas may have made up for this slight insufficiency in North Vancouver.

The wealth of parkland space on the North Shore provided ample room for a wide range of hiking and running trails. Again, if any inadequacy did exist, it was in North Vancouver which had only 71.4% of the trail mileage suggested by the N.R.A. (Table 2) The entire North Shore provided almost twice the recommended trail mileage and West Vancouver four times the suggested amount. The inadequate provision evident in North Vancouver was more than compensated for by excellent hiking areas at the edge of municipal boundaries on Grouse, Dog and Goat mountains.

The present situation for bicycle paths was not so encouraging. Only one recognized bike path existed and part of it was on residential streets. The entire length of this path

was in West Vancouver. This still left bicycle path provision only 28.3% adequate for that municipality. North Vancouver provided no areas specifically designated for bicyclists. Five miles of bicycle paths in West Vancouver resulted in a provision deemed only 7.3% adequate for the entire region. (Table 2) Other than this acute shortage of bicycle paths, the provision of parkland acreage and trails was generally adequate.

Supply of some specialized indoor facilities was not as impressive as parkland acreage and trails. There appeared to be an urgent need for more community centres, senior citizen recreation centres and indoor swimming pools. One full recreation centre complex in each municipality meant a provision which was only 20.4% adequate for North Vancouver and 52.5% adequate for West Vancouver. To bring facility provision up to the recommended standard, four centres in North Vancouver and one in West Vancouver would have to be constructed. The North Vancouver Recreation Commission indicated that facilities soon to be utilized in Capilano Hall, Sey-Lynn Hall and Lynn Valley Hall would partially solve the urgent need for community centres. (71) In addition, the Director of Recreation for the municipality of West Vancouver revealed that the feasibility of using a community hall near Gleneagles Golf Course was being examined. (47) None of these would be multi-use facilities but would at least provide some

additional space and temporarily help alleviate facility shortages.

The number of senior citizen recreation centres was also unsuitable according to the N.R.A. standard. Their standard recommended a provision of one centre for every 20,000 population. This was the same as the number suggested for community centres. However, it was not clear what types of facilities were to be included in the centre or if, in fact, they were even to be separate from the general community centre. Another shortcoming evident in the use of this standard was that it did not take into consideration the age-mix of the population. Obviously, a community with a large percentage of retired people would require more senior citizen recreation centres than one which had a predominantly young population. Only one recreation centre built specifically for senior citizens was available in the community at the time of the study. Silver Harbour Manor, at Twenty-second and Lonsdale in North Vancouver, was completed in the Fall of 1973. It was the result of a federal, provincial and municipal cost sharing arrangement. (100,31) The importance of these centres for senior citizens cannot be overlooked. Jo Dean, North Vancouver City alderman, said, "The prevalent disease of old age is loneliness and the only antidote is such a centre (as Silver Harbour Manor) where the older people can keep active and happy." (97,41) The question remained whether elderly people

needed separate facilities or whether the provision of space in a general community centre was adequate. A February 28, 1966 article in the Vancouver Province recommended sharing of facilities, saying, "Every community centre should have a place where elderly people can enjoy activities together." (96,2) If separate facilities were desired on the North Shore, this would necessitate the construction of four more in North Vancouver and two in West Vancouver. If sharing facilities with general community centres were deemed sufficient then the requirement for added facilities would be less.

The supply of both indoor and outdoor pools on the North Shore was far below the number suggested by N.R.A. standards. It was indicated earlier that a large number of pools existed in the community but only three were publicly controlled and available to everyone. In addition, outdoor pools at Ambleside and Mahon parks were only accessible four months of the year. This left the indoor pool at the North Vancouver Recreation Centre to serve all the aquatic needs of the community during the fall, winter and spring months. To meet the standard suggested by the N.R.A. six more pools would have to be built. Two of these should be indoor, one each in North Vancouver and West Vancouver. The North Vancouver Recreation Commission was making a concerted effort to rectify this situation. At the time of the study two indoor pools were under construction in the District, one at William Griffin

Park and one at Seymour Park. These two pools were due for completion in the spring of 1975.

Of all indoor facilities under consideration, the provision of gymnasiums was the only one that was overwhelmingly adequate. The N.R.J. standard suggested a gymnasium for every 10,000 people in the community. If consideration was given to gymnasiums in community centres and high schools and activity rooms in elementary schools and churches a total provision of one gymnasium for every 1374 population resulted. The role that school and church gymnasiums can play in providing recreation opportunities is substantial. They offer two advantages. First, gymnasiums are usually suitable for a wide range of activities appropriate for adults including badminton, volleyball, basketball, conditioning, yoga, dance and martial arts. Secondly, a school or church is usually within walking distance of every home in any given community.

A final specialized facility that was discussed in relation to available standards was tennis courts. When all tennis courts were considered, the community was served to a degree far above that suggested by the standard. When only public courts were included the provision was still adequate. As was the case for gymnasiums, the proximity of courts to residential areas was excellent. Clusters of two, three or

four courts at many schools and in a large number of parks served the community well in terms of both number and location. It should be noted that there were many times when tennis courts were not being fully used. For this reason, the possibility of their multi-use should be investigated.(74,28) Proper lines and extra equipment could make them suitable areas for volleyball, basketball and shuffleboard.

A previously mentioned limitation of the study was the complete lack of literature on certain aspects of the topic under consideration. No information could be located which would allow discussion on some facilities considered as important for adult use. Among these were handball, badminton and squash courts, running tracks, fitness circuits and ice arenas. It can only be stated that these facilities did exist in the community, but the adequacy of their provision could not be objectively evaluated against any standard.

This discussion has dealt with the number of various recreation facilities in the community. In many ways, the proper location of such facilities is as important as the number provided. With respect to swimming pools, the participants of a national facilities conference said, "Experience has shown that several moderate sized pools, properly constructed ..., if strategically located may be better than a single but very large swimming pool."(58,84)

The same idea may be logical in providing facilities for senior citizens. A large number of small and inexpensive facilities may serve the older population better than a few large elaborate centres. Lack of mobility which often accompanies old age may mean that only those close to programs could participate. Creating many small facilities and situating them throughout the community might help to alleviate this problem.

The importance of the location of multi-use facilities (specifically community centres) must also be emphasized. The location of the multi-use facility must have a sound basis from a regional and urban planning point of view. The former Lower Mainland Regional Planning Board suggested a number of basic considerations necessary in determining the correct site for a community centre. These included accessibility relative to traffic arteries, proximity to residential and commercial areas and location of other facilities such as theatres and schools.(50,2) In light of the above considerations, it would appear that the two community centres now available are strategically located. The North Vancouver Recreation Centre is situated two blocks from the Upper Levels Highway, is across the street from a theatre and half a block from a high school which has a field and running track. Ample parking is available and shared with the theatre. A safety pedestrian overpass was constructed above Twenty-third Street to join the

parking lot to the centre. The centre is adjacent to Lonsdale Avenue and near the dividing point between the commercial district and the residential areas. West Vancouver Community Centre is on Marine Drive, the main thoroughfare in the municipality. It is a few blocks from the major commercial district and is very convenient to large apartment complexes and private homes.

In summary, evidence would indicate that the supply of recreation facilities in the community was excellent in some aspects and inadequate in others. Generally, the provision of parkland acreage was far above that required by the standards cited. This included an adequate supply of hiking and running trails but insufficient bicycle paths. The supply of specialized facilities appeared to be the only shortcoming. Community centres, senior citizen recreation centres and both indoor and outdoor swimming pools were in much smaller supply than was suggested as being adequate. A positive note regarding specialized facilities was the favourable number of gymnasiums and tennis courts.

In the final analysis, it should be stated that strict adherence to standards is not the only guiding principle to be followed. More flexibility in planning is necessary. The age-mix of the population must be taken into consideration as well as the needs and wants of citizens, the types of housing

in the community and the recreational opportunities available to them at home. For example, a community of high socio-economic status, possessing a large number of backyard pools, may require far less than the recommended number of publicly controlled indoor and outdoor pools. The 1956 California Committee of Recreation, Park Areas and Facilities held a position which is as relevant today as it was then. It stated, "Each recreational agency or school district should establish its own standards in accordance with what the people consider adequate and are willing to pay for." (19,50)

A community effort is necessary in facility planning and design to ensure proper location as well as number of all types of recreation facilities. To this end, greater cooperation now and in the future between school board officials, recreation specialists and urban planners could result in a more efficient provision of recreation opportunities for all adults.

CHAPTER III

AVAILABILITY OF FACILITIES

The supply of facilities is only one aspect important to the adequate provision of opportunity for participation in physical activities. A crucial issue that should be examined along with the facility supply is their availability to the adult members of the community. Obviously, the number of facilities existing in the community is of little consequence unless they are readily available for use by adults at times that are most convenient to them.

This chapter deals with the availability of a variety of facilities suitable for adult use. In order to evaluate their availability, a number of procedures were employed. A form was devised (appendix I(ii)) on which the different types of activities occurring at each facility could be noted. Record was made of whether a facility was 1) unoccupied, 2) occupied by individuals or groups less than eighteen years of age or by adults for none physical activities, or 3) occupied by adults for physical activities. In addition, if the facility was being used by adults for physical activities, the age range of the people involved was also noted. In this way, each facility was examined with regard to its degree of usage, the age range of the users and the activities engaged in. The day was broken

down into one hour time intervals beginning at seven in the morning and running through to twelve midnight. In addition, any activity occurring between twelve midnight and seven a.m. was noted.

The availability of facilities was determined by documenting all regularly occurring activities. The last week in May was chosen as a suitable "typical week" for the fields and a number of specialized facilities in the community centres, health spas and private clubs. Information obtained from the community centres, spas and clubs indicated that this week was very much like most weeks September through June. Generally, they offered activities on a semester system (i.e. September to December, January to March and April to June) with a common core of activities available each time. In this way the availability of facilities throughout the entire year could be fairly accurately estimated. The summer appeared to be very different as many of the adult programs were discontinued and the facilities were made available for children's activities. Availability information for the specialized facilities at the community centres, health spas and private clubs was obtained directly from those organizations. Data on the availability of fields was gained from the West Vancouver Parks Board and the North Vancouver Recreation Commission. These two organizations controlled all leasing and reserving arrangements for school and park

playfields on the North Shore. Information on the availability of school gymnasiums was received from the two school boards concerned. An estimation of a "typical week" in school gymnasiums was determined by examining the lease forms of the outside groups who used these facilities. A record was made of all groups who used the gymnasiums on a regular basis. The facility timetable shown in (Appendix 1(ii)) was used to record availability information.

The percentage of time facilities were in use for various activities was another means used to evaluate the adequacy of existing facilities. For example, there would be no justification for construction of new facilities to meet a standard if the existing facilities were only occupied fifty percent of the time. Hence, an examination of the availability of facilities could aid not only in ensuring adequate opportunity for participation now but could also be instrumental in ensuring proper planning for the future.

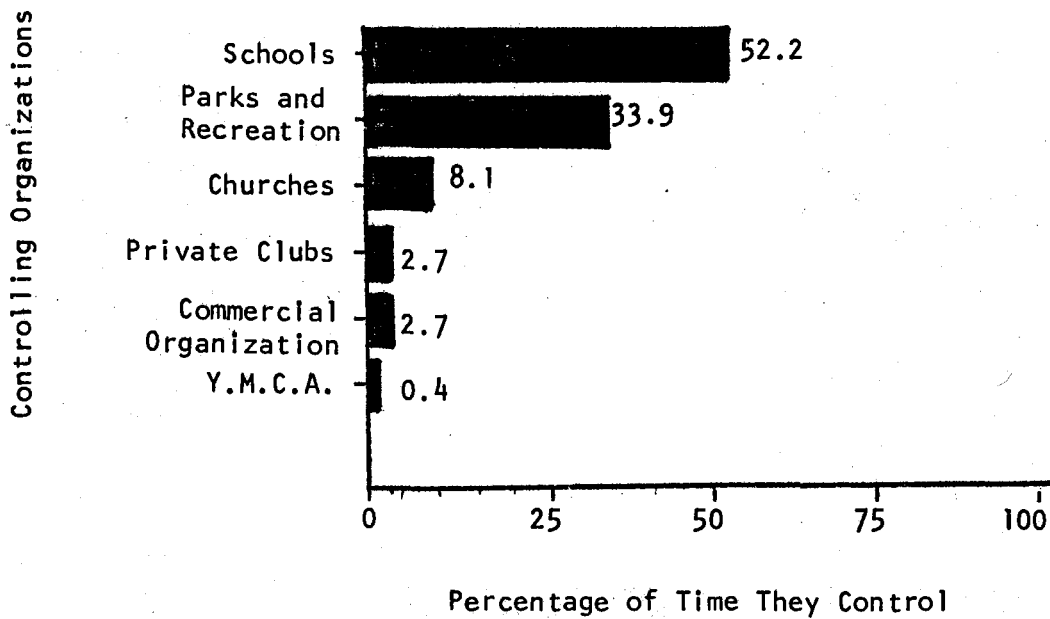
General Availability

It was neither feasible nor crucial to examine the availability of all types of facilities in the community. The fact that some facilities could not be leased or reserved resulted in them being considered as available to everyone at any time. These facilities included trails, running tracks,

fitness circuits, and beach areas suitable for swimming and boating. Other facilities controlled by a number of different organizations had to be leased or reserved for use by adult groups. In other words, the use of some facilities required payment of a fee (leased facilities) while others could be used at no charge (reserved facilities) as long as the group reserved it by contacting the controlling organization ahead of time.

Of all the facilities (indoor and outdoor) on the North Shore that could be leased or reserved for group use, 64% were in North Vancouver, 36% in West Vancouver. Schools controlled over half (52.2%) of the facilities which could be leased or reserved and the parks and recreation departments controlled another 33.9%. (Figure 1) Inquiry into the general availability of all types of facilities on the entire North Shore that could be leased or reserved indicated that they were 82.7% unoccupied. (Figure 2) This figure was based on a seventeen hour day (7 a.m. to 12 midnight) and a seven day week. Only 3.4% of this time was used by adults for organized physical activities. An additional 13.9% of facility time was used by groups of people less than eighteen years of age or by adults for non-physical activities.

FIGURE 1
PERCENTAGE OF TOTAL TIME AVAILABLE CONTROLLED BY
VARIOUS ORGANIZATIONS ON THE NORTH SHORE



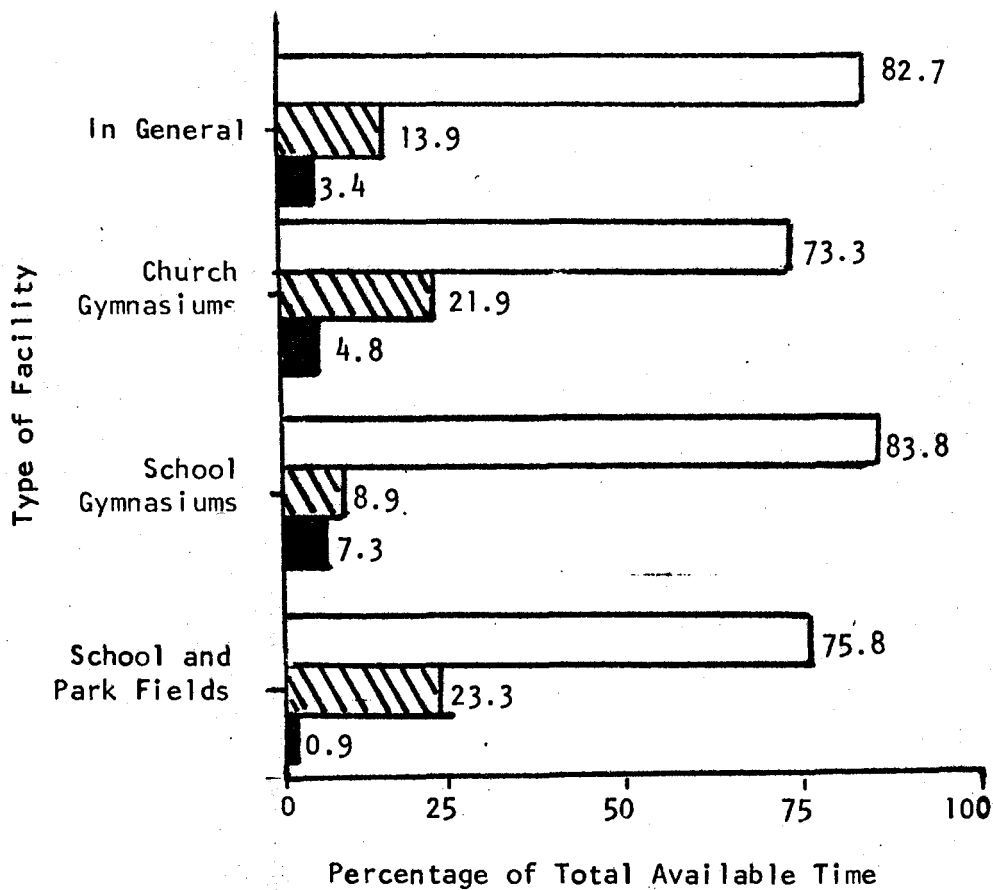
includes time 'available' in gymnasiums, swimming pools, tennis courts, and fields.

Availability of Facilities which could be Leased or Reserved
Fields and School Gymnasiums.

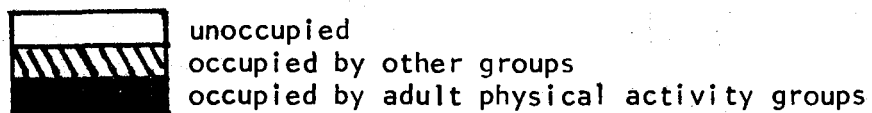
Two types of facilities which had to be leased or reserved for use by groups were school gymnasiums and the playing fields in the parks and school yards. The accessibility of parks and school gymnasiums, usually within walking distance from any home, made them ideal locations to offer organized activity classes for adults on a regular basis.

The availability of fields was estimated using a fourteen hour day (7 a.m. to 9 p.m.). This fourteen hour day appeared appropriate taking into consideration the number of daylight hours during the time period of the study (May to August). (However, the use of a shorter day would be necessary to get a more accurate indication of field availability in the months September to April.) Tabulation of results showed the fields to be unoccupied 75.8% of the time, occupied 0.9% of the time by adults for organized physical activities and occupied 23.3% of the time by other groups. (Figure 2) This time used by 'other' groups was generally for organized leagues in baseball, football and cricket for adults and children alike. It appeared that the heaviest use of fields was made by school age children in a variety of sports leagues. This generally occurred in the late afternoons, early evenings and on weekends. The most popular Saturday and Sunday bookings were

FIGURE 2
 AVAILABILITY OF NORTH SHORE FACILITIES
 THAT COULD BE LEASED OR RESERVED



KEY



in the late morning and early afternoon. In fact, 34% of the time fields were reserved in a "typical week" was between nine in the morning and six in the evening on Sunday.

The availability and use of school gymnasiums appeared even more crucial than the use of fields in the provision of recreational opportunity. Gymnasiums were suitable for twelve of fourteen organized activities available in the community at the time of the study. Some improvisations were necessary for golf, soccer and tennis but gymnasiums were suitable at least for practice purposes in these activities.

The minimal use of school facilities outside of school hours is cited regularly in the literature dealing with facility supply and availability. The 1969 Report of the Task Force on Sports for Canadians indicated:

Both the educational system and the armed forces structure control excellent sports facilities but the availability of these facilities to the public is very limited or non-existent. In the case of many schools, facilities appear to become the personal property of the principal or a teacher who locks them up and takes the key home for the weekend. (75,55)

The community use of schools for recreation purposes after school hours is advocated for a number of reasons. First, as pointed out by Howard Danford, "they are admirably situated to meet the recreation needs of their constituents". (29,246) Eleanor Glueck, in The Community Use of Schools, indicated

that "the very number of schools makes them a significant factor as potential neighbourhood centers".(33,4) In fact, there appeared to be no other way to provide a centre in every neighbourhood.(38,370)

Schools appeared excellent as community recreation centres for reasons of economy as well as location. Considering construction, operation and maintenance costs, separate provision for school and community recreation needs was far more costly than a joint venture.(32,10) If schools are only to be used for educational purposes then billions of dollars are being invested in buildings that are used six hours a day, five days a week, nine months of the year. (30,411) It would appear that a logical reason for school centered recreation would be to cut down on the wasteful and costly duplication of facilities.(30,409) The number of schools on the North Shore was more than adequate to fulfill a large portion of the recreation needs of the community. However, it was necessary to ensure their availability to adults outside of school hours if they were to function successfully in this capacity.

The West Vancouver School Board had an equitable policy governing the use of their facilities by outside groups. Their brochure, outlining arrangements for renting and using school facilities, stated: "It is the policy of the West Vancouver

School Board to encourage the use of school facilities". (8,1) The policy allotted gymnasium space during the week to all non-profit community groups at no cost. The only stipulation was that they had to vacate the building by 10:30 p.m. in order to avoid extra custodial charges. A large number of self-organized community groups took advantage of the no charge policy to non-profit groups, using the school gymnasiums in the evenings for a wide range of activities including badminton, basketball, volleyball and floor hockey.

The North Vancouver School Board had a similar policy to that in West Vancouver but one not quite as conducive to extensive community use. The former charged a fee to any group for seasonal use (September to June). Non-profit community groups wishing to use the facilities for physical activities were not exempt from this charge. Renting a high school gymnasium three hours a night, one night a week from September to March would cost \$288. A similar arrangement from January to June amounted to a \$216 charge. The rate charged to commercial groups for the use of North Vancouver schools was twice that charged to non-profit groups.(83,3) In both North Vancouver and West Vancouver, an organization such as the Y.M.C.A. which used school facilities for its physical activity programs was subject to the commercial rate.

The cost for use of North and West Vancouver school gymnasiums on weekends would generally be prohibitive to non-profit community groups. For example, the North Vancouver School Board assessed an extra ten dollar per hour per custodian and any other expenses incurred by the Board above and beyond the normal amount specified in the Rental Schedule.(83,3)

Times considered available for the community use of high school gymnasiums were 7 p.m. to midnight weekdays and all day Saturday and Sunday. This seven o'clock opening time resulted from the facility being reserved for school team practices up to that time. Activity rooms in elementary schools were generally available from earlier in the afternoon (usually 3:30 p.m.). Considering only the 7 p.m. to 12 midnight weekday period and all day on weekends, the school gymnasiums remained unoccupied 83.8% of the time. They were occupied 8.9% of the time by other groups and 7.3% of the time by adults for organized physical activities.(Figure 2) The most common 'other' groups to use the facilities were P.T.A. organizations, cubs, scouts, brownies and guides and minor league soccer teams. Adult physical activity groups using the school gymnasiums included the non-profit self-organized community groups, Y.M.C.A classes and adult education classes organized by the school board.

Other Gymnasiums

In addition to the large number of school gymnasiums available, there were similar facilities in the churches, apartments and health spas. Availability information was gathered from commercial operations by personal visit; whereas, data from churches and apartments were obtained by means of a mailed survey. (Appendix 2)

Commercial organizations had a variety of gymnasiums under their jurisdiction. Generally, they were too small for games such as badminton, volleyball and basketball and were often specifically prepared for certain activities. Activity rooms at the five dance studios were equipped with ballet bars and other apparatus appropriate to dance conditioning and rehearsing. Exercise rooms at the European Health Spa, Figure Magic and Riveria Swimming and Fitness Centre were equipped with strength training equipment and stationary bicycles. All these facilities had long operating hours each day and were available to anyone who paid the required membership fee.

The apartment complexes often housed a variety of gymnasiums and exercise facilities. A mailed survey to apartments resulted in a 50.8% response rate, with 28.1% indicating they had some type of gymnasium facility available. Usually this facility included a combination of exercise room, exercise bicycles and weight lifting equipment adjacent to the pool.

A mailed survey to gain supply and availability information on the recreational facilities in the thirty-seven churches elicited a 89.2% response rate. Of these, 56.6% indicated they had some type of church hall, activity room or gymnasium suitable for physical activities. Of twenty-one churches with recreational facilities, thirteen returned facility availability timetables. (Appendix 1(ii)) Tabulation of these indicated that church facilities were 73.3% unoccupied, 4.8% occupied by adults for physical activities and occupied 21.9% of the time by other groups. (Figure 2) Lease reserve policy of these facilities varied from church to church. Facilities were provided to church groups at no cost, some churches charged a minimal fee for use by outside groups and a few, like North Lonsdale United, had some semblance of a rental schedule. In the latter cases, rent charges varied according to the group renting and the use to which the space would be put.

Swimming Pools

The apartment complexes housed an extremely large number of pools and exercise facilities. However, in most cases these facilities were only available to apartment residents and their guests. There were sixty-six apartment pools in the community, sixteen of which were indoor. Information on the number of pools was obtained from the North Shore Health Department. A mailed survey to the apartments with pools to

gain further information elicited a 50.8% response. Of those answering, only one apartment offered any type of organized swim lessons or swim conditioning classes leaving the pools generally available for use by residents at any time during operating hours.

The three pools at private clubs, available for the exclusive use of members, received heavy usage throughout the summer months. The outdoor pools at the North Shore Winter Club and Capilano Winter Club were only open mid-May through mid-September. A wide range of activities were offered at these pools including swim instruction for children and adults, swim conditioning for adults and free swimming hours. Efficient scheduling resulted in very little time during the day in which the pools were not occupied. A similar situation existed at Hollyburn Country Club with respect to efficient scheduling and variety of programs available. However, this latter club had the advantage of an indoor pool, making their aquatic activities available year round.

The three public pools on the North Shore were also heavily used throughout the summer months. The outdoor pool at Mahon Park in North Vancouver and the one in Ambleside Park in West Vancouver opened the first week of June and closed on Labour Day. The pool at Mahon Park had no lighting system resulting in a closing time of 8:30 p.m. It operated from 9

a.m. to 8:30 p.m. Tuesday through Sunday and was closed Mondays for maintenance. Eighty percent of the time the pool was open was set aside for general swimming, swim lessons for children occupied 14.3% of the time and adult conditioning classes 5.7%.

A similar situation existed at the Ambleside Park pool. Four hours each week were set aside for adult classes (swimming instruction) and another twenty-three hours for children's lessons. This amounted to 32.9% of the total available time. The remainder of the 9 a.m. to 9 p.m. operating hours Monday to Saturday were reserved for general swimming. No formal swim classes were scheduled for Sundays making the pool available for general swimming from 11 a.m. to 9 p.m.

The indoor pool at the North Vancouver Recreation Centre was in full operation from 7 a.m. every morning. Generally, the pool closed at ten in the evening with an 8 p.m. closing on Sundays. Of the one hundred and eight hours the pool was in operation each week, 11.1% were set aside for adult classes. These classes included swim lessons, swim conditioning, fun swimming for senior citizens and family activities. Children's lessons and general swimming occupied 82.4% of the time, leaving the pool unoccupied only 7.5% of the time. This left a minimum number of hours for cleaning and maintenance.

Tennis Courts

The availability of tennis courts at the time of the study appeared very adequate. As indicated earlier, both the number and location of courts was conducive to participation by adults in all neighbourhoods. In both North and West Vancouver, individuals were prohibited from using public courts to teach private lessons. In West Vancouver, only two organizations (the community centre and the Y.M.C.A.) had permission to use public courts for group lessons. They used courts at four locations (Parc Verdun, Glenmore Park, Ambleside Park and the Community Centre) in the morning and in the early evening. All other courts in the municipality were available for public play at all times. The courts used for group lessons were available to the public whenever lessons were not in progress and during lesson times if all the courts were not taken up for instructor purposes.

A similar situation existed in North Vancouver. Only the Recreation Commission and the Recreation Centre offered group lessons to the public. The Recreation Centre used its two indoor and two outdoor courts for an extensive teaching program. The Recreation Commission used only courts at the Secondary schools. In addition, the Recreation Commission did not have sole access to these courts during their scheduled lesson hours, taking them over only as they were vacated by other players. None of the courts in the parks were used for

lessons and hence were available for general play at all times.

Public courts in both North and West Vancouver were booked periodically for tournaments such as the North Shore Public Tennis Tournament and the B.C. Junior Tournament. This usually meant the use of a few courts on occasional evenings or weekends, having a minimal effect on the general availability of courts over the entire season.

As in the case of swimming pools at the private clubs, their tennis courts also received heavy usage throughout the summer months. The three winter clubs, along with the Capilano Tennis Club and the West Vancouver Tennis Club, offered a wide range of lessons and opportunity for individual play. In this way, there was very little time in which their courts were unoccupied.

Discussion

The availability of all recreation facilities is undoubtedly an important component of the provision of recreation opportunity in the community. The adequate supply of facilities relative to standards is irrelevant unless they are generally available at times suitable to both sexes, all

ages and all occupational groups. Cooperation between all organizations providing recreation opportunity may again be the key to achieve this end.

Discussion of the availability of various specialized facilities which could be leased or booted should serve to point out where changes and improvements are necessary. First, there was very little use made of the playfields in the parks and school yards. They were unoccupied 75.8% of the time. (Figure 2) Less than one percent of the time they were in use was for adult organized physical activity classes. This lack of use is of interest considering how suitable these areas were for a wide range of adult fitness classes involving cardiovascular work. The soft grass of the playfields, along with some of the trails, provided the best surfaces for running.

Availability of school gymnasiums for adults was only considered during out-of-school hours. These included weekday evenings and all day Saturday and Sunday. This time interval was very much the same as the leisure time of adults who held full-time jobs during normal workday hours. As mentioned earlier, the availability of fields was evaluated on a fourteen hour day (7 a.m. to 9 p.m.). Since much of this time was during normal working hours, the results may have been unduly biased with respect to the amount of time fields were

unoccupied. However, fields could have been used by many women, all non-working men and some shift workers during these hours. A greater use of all recreational facilities by adults throughout the entire day should be expected in the future if the present trend towards three and four day work weeks continues.

Heavy demands on the three public swimming pools indicated the need for more facilities of this type. As a temporary measure, full lighting systems at the two outdoor pools could result in a longer operating day for each. In addition, effective heating systems could lengthen the season for these uncovered pools. The indoor pool at the North Vancouver Recreation Centre operated at full capacity for the entire year. As the only indoor pool on the North Shore, it had the difficult task of providing adequate aquatic opportunity for the community in the winter months.

The schedule at the two outdoor pools included a very large percentage of time for general swimming. The small number of people in the pools during some of the general swimming hours resulted in a less than optimum use of these facilities. Restructuring the schedule to include more organized activities at times when the pools were not heavily used might result in a better provision of aquatic opportunity.

The immediate future looked favourable with respect to the availability of swimming pools in the community. Two indoor pools under construction in North Vancouver (at Griffin and Seymour parks) were scheduled for completion in the early spring of 1975. Negotiations were under way to provide West Vancouver with its first public indoor swimming pool. Hopefully the operating hours of these new pools will be appropriate for adult use and scheduling will provide suitable organized classes to meet the needs of adults in the community.

Two public arenas, one at the West Vancouver Community Centre and one at the North Vancouver Recreation Centre, received only minimal use during the summer months. Neither arena had an ice surface at this time and the only activity occurring was lacrosse, leaving these facilities entirely unused during the day Monday through Friday. If these arenas were considered as multi-use facilities, a greatly increased opportunity for some activities in the late spring and summer months would result. Minor equipment changes would mean four indoor tennis courts in each arena. These would receive heavy use in the late spring when the weather remained unpredictable. In addition, they would also be suitable for volleyball, basketball, floor hockey and roller skating.

Probably the most controversial and important aspect of the availability question is that of the community use of schools. There is no doubt that the schools could play an important role in providing recreational opportunity for everyone in the community. Schools would make ideal community centres because they are an integral part of each neighbourhood, their facilities are adaptable to a broader community use and they are already owned by the public. (64,53) Participants in a national facilities conference pointed out that educational and recreational programs are complementary and supplementary to each other, each requiring similar facilities. The functional design of a school should then be based on its use as an education and recreation centre. (58,6) E.L. Vernier pointed out that schools should not only make facilities available to the community but should be instrumental in providing programs.

The school should join hands with the local government, the home, the churches, the recreation department and other community agencies and organizations in a united, interrelated approach, in which the total resources are brought to bear on the constructive development of a program designed to enrich the lives of all people. (103,142)

A May 12, 1973 Victoria Daily Times article pointed out the virtue of the joint use of facilities but said this was only acceptable as long as it did not interfere with the primary purpose of the facility. (95,4) This seemed to be the

crux of the issue. Perhaps the "primary purpose" of the school should now be looked upon as a dual purpose. Not until the school is viewed as a place where education and recreation have equal footing will proper provision of all types of community programs be achieved. If recreation agencies are merely tenants in school facilities, innumerable conflicts could develop which become intolerable to both tenant and landlord. Operational freedom to each agency is then handicapped. (38,127) Hjelte and Shivers pointed out that much of this difficulty passes away when the schools themselves assumed responsibility for the recreational programs on their own properties. (38,127)

The community school concept is a logical and realistic answer to the provision of education and recreation opportunities in the community. The Burrard View Community School, in one of its bulletins, defined the community school in the following way:

A community school is a school with a difference - a regular school with an open door policy, a concern for all aspects of community life and an extended programme of educational, social, recreational and service opportunities for all age groups in the community. (16,1)

The community school concept was first developed in Flint, Michigan in the 1930's. It began as a response to a general belief that the "educational establishment" was not

properly serving the educational needs of the community. (99,6) By 1972, a United States National Community Schools Education Association had a membership of over six hundred school districts. (99,1)

At the time of this study, the North Shore had five community schools. Mr. Jack Stevens, community school director for the North Vancouver School Board had three schools under his jurisdiction. Community schools existed at Queen Mary, Ridgeway and Burrard View elementary schools. West Vancouver had community schools at Gleneagles and Eagle Harbour with plans for a third in the Hollyburn area in the near future. These schools hoped to provide a focus for all community social, educational and recreational activities.

The community school utilizes its facilities to maximize the learning and leisure-time opportunities of all groups and to make education truly a continuous life-long process. (64,53)

The schools intended to carry out this service through community school coordinators who were to provide leadership in developing, promoting and coordinating community programs and activities which were desired and needed by members of the community.

These objectives could perhaps best be achieved by a system similar to that instituted in Newark, New Jersey. The board of education employed recreation workers (community

school coordinators) who had professional preparation comparable to that of the teachers and they were granted professional status, salary and tenure accordingly. They began work at 3:15 p.m. and transformed the school into a community centre. In the summer each school was designated as a neighbourhood recreational centre and utilized as such.

(38,123) In this way the school could break out of its traditional role as a formal learning centre solely for the young operating six hours each day, five days per week for thirty-nine weeks of the year. Using the community school idea it became a centre for all ages, operating twelve to thirteen hours per day, seven days per week, fifty-two weeks a year.

A wider use of the community school concept in North Vancouver and West Vancouver could do much to facilitate the use of schools by adults outside of school hours. Programs operating at the schools during these times could include a wide range of physical activity classes for adults. The school that is designed to serve the needs of the community could keep gymnasiums open after 10:30 p.m. on weekdays and all day Saturday and Sunday as well as eliminating the extra custodial fee now levied for use of the facilities at these times. In addition, the whole rent structure applied to non-profit community groups using North Vancouver schools could be eliminated. This policy was one which appeared detrimental to mass participation in physical activities. The fact that

school facilities in West Vancouver were used infrequently in the evenings by adults inspite of the no charge policy may have indicated that few people were aware of this policy. Each school working within its own neighbourhood, with advertising promoting the full use of facilities, could be more successful in drawing adults to programs or facilities provided for them.

In addition to an extension of the community school concept, a more equitable policy regarding leasing of school facilities to recreation organizations appeared beneficial. The North Vancouver School Board applied the same rental fee to the Recreation Centre and the Y.M.C.A. as it did to any commercial organization. Greater cooperation between recreation and education agencies, by making their facilities readily available to each other and the community at large, could have a very positive effect on the opportunities for participation.

A number of suggestions have been proposed to improve the availability of facilities and programs for adults in the community. A more extensive use of play fields and trails would be facilitated by a larger number of fitness programs available in the community. Some scheduling changes and three new pools on the North Shore should alleviate any shortage in the availability of aquatic opportunities. A more extensive

use of ice arenas for a variety of activities in the off season could reduce crowding at some facilities. An easing of the policy regarding the use of apartment recreation facilities by non-residents was also suggested. Allowing non-residents to use apartment facilities at certain hours would provide many more people the access to excellent swimming pools and exercise equipment. The final concept explored was the community use of schools. The variety of facilities included and the excellent location of schools made them the logical centre for community physical activity programs as well as social and cultural activities. A number of problems that could be overcome by a wider use of the community school idea have been highlighted. The community school concept could result in a greater availability of publicly supported buildings and could be instrumental in revitalizing a feeling of community closeness.

Conclusions to be drawn regarding the availability of facilities are much the same as those for their supply. Cooperation remained the key for the proper provision of recreation opportunity for all adults. Optimum availability of facilities did not appear possible if all groups controlling facilities and offering programs work independently. School boards and recreation departments should favour reciprocal free use of facilities. Apartments and churches could help by making their facilities available at various times to

non-residents and non-members. Finally, commercial organizations could assist by providing facilities and programs at a cost that would allow a large number of people to participate.

CHAPTER IV

CONTENT OF PROGRAMS

The previous two chapters have dealt with the supply of recreational facilities on the North Shore and their availability to the adult members of the community. These components comprise only half the elements necessary for the overall provision of opportunity for adults to participate in physical activities. Readily available and sufficiently numerous facilities could remain largely unused unless a wide variety of programs and professional instruction are present. This chapter deals with the variety and content of organized physical activity programs for adults in the community. Chapter V will examine the competence of the instructors and exercise leaders who were teaching classes at the time of the study.

The importance of quality in organized programs cannot be overemphasized. The aim of the recreation program is the enrichment of living by enabling individuals to find outlets for self-expression, to develop inherent potentials and to achieve desired satisfactions. (59,2) Organized activities should be set up in such a way as to afford individuals the opportunity to engage in a variety of activities with the help of trained leaders and under conditions which assure maximum

enjoyment and benefit.(59,2) Jay S. Shivers summarized concisely the part that organized activities could play in the leisure time of all people: "Free time, constructively used advances society, enriches individual life and produces massive cultural development."(86,12)

The nature of this study was such that only organized physical activity programs were examined. The introduction served to point out that the lifestyle of Canadians could benefit from a change to one that includes some form of physical activity on a regular basis. It was also suggested that due to the sedentary nature of many occupations the physical activities engaged in during leisure time should be sufficiently vigorous to maintain adequate levels of fitness. Hans Kraus, in "Preventative Aspects of Physical Fitness", also proposed this concept, saying, "We have now scientific evidence, based on many years of research ... that the idea of 'toughening up' and exercising regularly may be old but is still valid." (45,1184) It could also be added that "the kind of exercise is not important except that it should suit the strength, aptitude and liking of the particular person." (104,70)

Because this study was set up to deal with leisure time pursuits positively affecting physical fitness, the tool (appendix 1(iii)) developed to evaluate program content

considered primarily fitness aspects of the activities examined. The survey form was divided into four parts: scope and format, fitness, educational and safety aspects of programs. The scope and format section noted the age group as well as the number of people served in each class. Record was made of the skill or fitness level at which the activity was conducted (beginner, intermediate, etc.), whether it was competitive or non-competitive and whether it emphasized participation or instruction. Because the study hoped to determine how effective classes were in improving levels of fitness, record was also made of the number of sessions per week, the duration of each session and the number of seasons the activity was offered. The latter idea was based on literature sources in the field which suggested that regular participation (i.e. three or four vigorous sessions per week) is recommended to achieve a good improvement in cardiovascular endurance. (68,360; 42,48)

Fitness aspects of classes were examined with respect to the three components - strength, suppleness and stamina. These three components were proposed as logical subsections of total fitness. (68,353) It has been suggested that the type, intensity and frequency of physical activity an individual engages in should be sufficient to keep him fit for the world he faces now and in the future. (68,353) First, an observation of the activities pursued in each class provided the

opportunity to rank the importance placed on strength, suppleness and stamina development. Secondly, considering the types of activities pursued a subjective judgment was made of the percentage of class time spent on the improvement of each of these components of fitness. Finally, the author was required to determine whether the intensity and duration of activities were sufficient to improve the fitness levels of participants.

The third factor examined in this part of the study was the educational content of the classes. Classes were evaluated with respect to how well they educated participants regarding the importance of fitness and whether the class atmosphere was such that people would leave with positive feelings about exercise. A search of the literature indicated that present habits and education could affect one's lifestyle in later years. J.A. Baley, in "Recreation and the Aging Process", indicated that leisure time is determined by habit, so that how one spends his leisure at age thirty will affect how he spends it at forty.(4,2) Mark Zborowski pointed out that aging has a rather insignificant influence upon people's recreational patterns and preferences. The end result is usually that people retain the patterns of living which have been developed in the past.(105,308) For example:

If the pattern of living has been oriented toward activity and social participation, older people will tend to maintain it despite chronological age and the attitudes of society. (105,309)

This development of active leisure time habits is especially important considering that as people age they spend more and more time in leisure roles. (3,13)

It would appear that two concepts stood out as being very important with respect to the educational aspects of classes. First, people should be made aware of the importance of good fitness and its relevance to all age groups. Secondly, at the youngest possible age people should be introduced to a wide range of activities which will be appropriate leisure time pursuits for them in their middle and later years. Adequate opportunity to participate under proper guidance could result in more people including regular physical activity as a part of their everyday living.

This apparent role that educational processes could play in attuning people to a physically active lifestyle made it important to include some questions which examined this aspect of the classes. A record was made of the number of instructors who explained the relationship of the present activity to overall fitness and the number who outlined the rationale for particular exercises. In addition, the atmosphere of the class and the way in which an activity was pursued could affect the

person's outlook on exercise in general. An atmosphere which created positive attitudes towards exercise might result in long term involvement on the part of the participants. For this reason an attempt was made to subjectively evaluate the degree of relaxation, enjoyment, formality and pressure in the class. A five category scale was used to note these educational aspects observed. This was done by completing the statement on the survey form with the appropriate word. For example, the statements 'the rationale for doing specific exercises is outlined...' or 'the atmosphere of the class is one of...' were completed with the word always, frequently, occasionally, rarely or never.

The final aspect of the content of classes examined was the existence and adequacy of various safety procedures. This was done for two reasons. First, if the classes were of a sufficiently vigorous nature to enhance the fitness level of the participants then some safety precautions appeared appropriate. Secondly, a specific purpose of the study was to determine which of the programs presently existing in the community were appropriate for cardiac rehabilitation purposes. Obviously, the unique condition and general fitness level of the cardiac patients would require that any program in which they were involved have proper safety features. The safety aspects considered were those suggested by three doctors from Lions Gate Hospital who advised the author in the

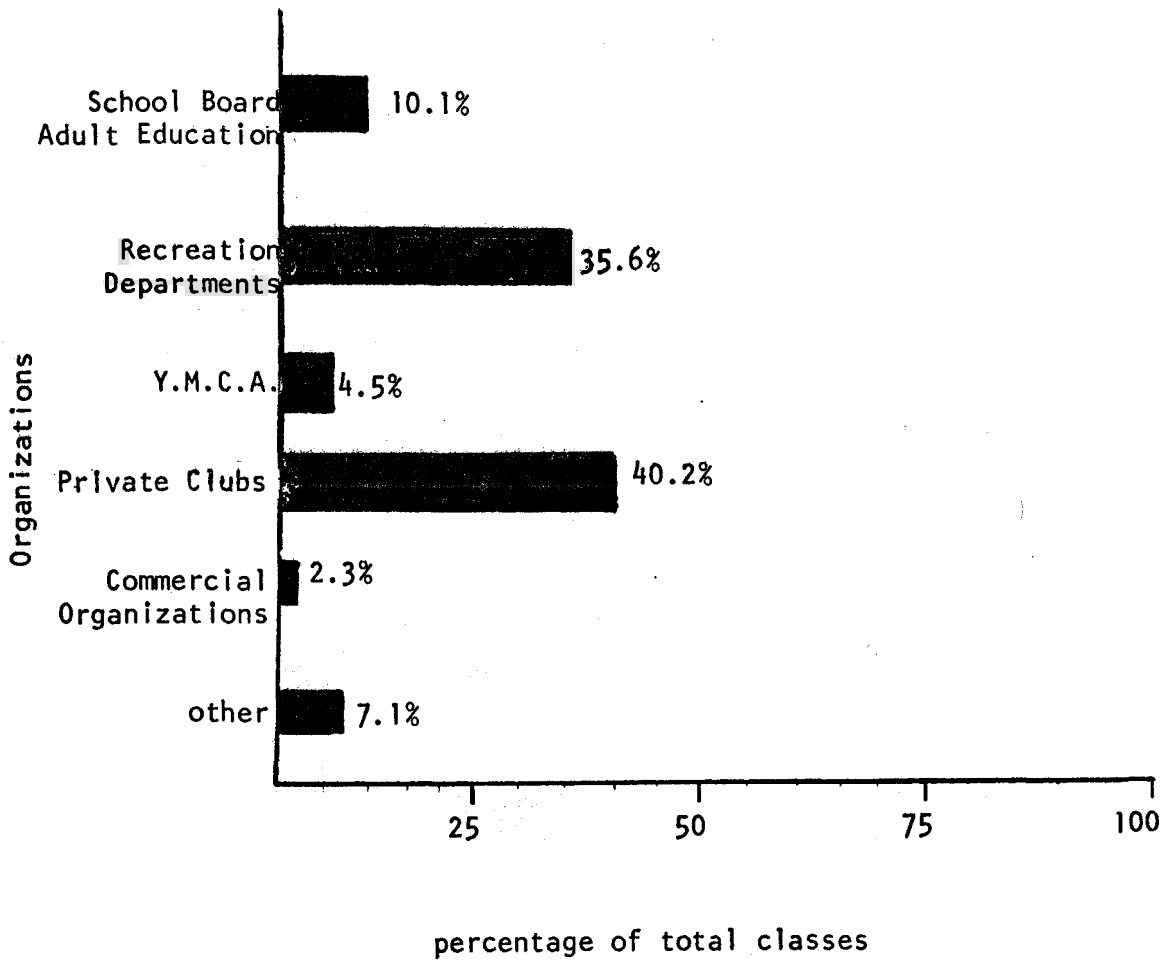
early planning stages of this study. The instructors were questioned whether medical clearance was a prerequisite to participation, whether any (fitness) pretesting was carried out or whether medical assistance was readily available. In addition, the availability of resuscitation equipment was noted, as was the existence of suitable first-aid equipment. (Chapter V examines the number of instructors who were proficient in first-aid and capable of using resuscitation equipment). Finally, the appropriateness of the level of activity to the fitness of the participants was observed.

GENERAL CONSIDERATIONS

Three hundred and nine (309) classes were surveyed and evaluated. Private clubs provided the largest number (40.2%) of organized classes for adults. However, these clubs were not as active in providing recreational opportunity as it first appeared since the bulk of their programs were one or two week courses in tennis instruction. Other than private clubs, recreation departments (35.6% of all classes) and school boards (10.1%) were most active in providing opportunities for adults. (Figure 3 and Appendix 6(i)) Appendix 6(iii) outlines the type of physical activity classes offered by the various sponsoring organizations.

FIGURE 3

PERCENTAGE OF TOTAL PROGRAMS OFFERED BY VARIOUS COMMUNITY ORGANIZATIONS ON THE NORTH SHORE

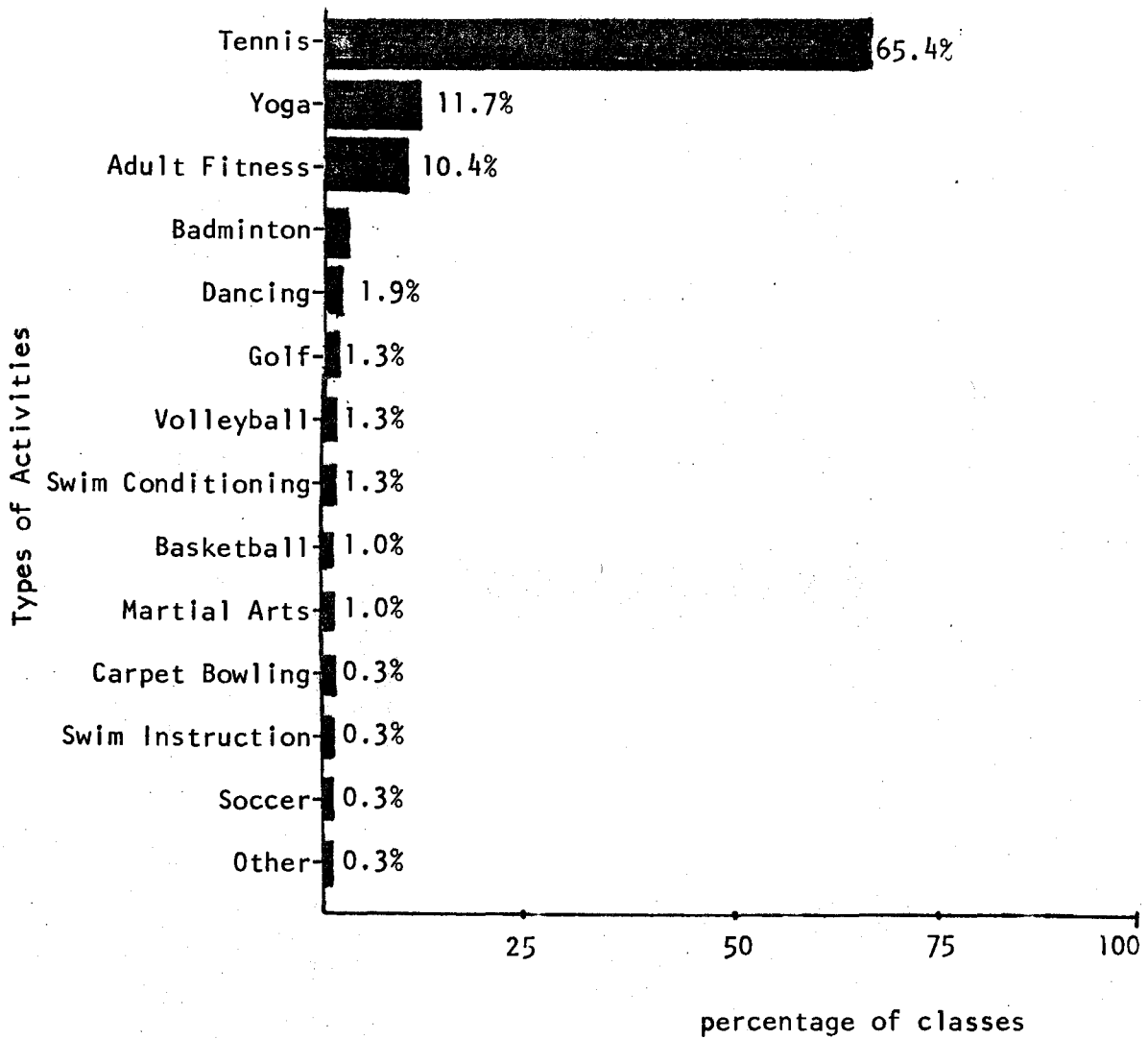


Scope and Format

Of the three hundred and nine classes available at the time of the study, thirteen different activities were included. The most common activity found was tennis (65.4% of all classes). Fifty-six percent of all the tennis classes available were offered by five private clubs. The next most commonly occurring classes were yoga (11.7% of all classes) and fitness training (10.4%). (Figure 4 and Appendix 6(ii)) Of the six different types of organizations offering classes, five included yoga and four fitness training as a part of their curriculum. The activities available ran the full range from very active to almost passive in terms of the physical demands on the participants. Some of the fitness and martial arts classes included very vigorous activities while the lawn bowling, carpet bowling and ballroom dancing appeared much less demanding.

The age range of the people served by these classes varied a great deal. In general, all classes except one were open to adults of any age. The participant opinion survey (appendix 1(v)) provided the opportunity to examine the age of participants. Of the total of five hundred and forty-four (544) respondents, 34.8% were in the thirty to thirty-nine age range. The forty to forty-nine age group comprised 23.8% of those completing the survey and only 5.1% of the respondents were over sixty years of age. (Appendix 8(i)) All of the people

FIGURE 4
TYPES OF ACTIVITIES IN RECREATIONAL PROGRAMS SURVEYED
AS A PERCENTAGE OF TOTAL CLASSES AVAILABLE

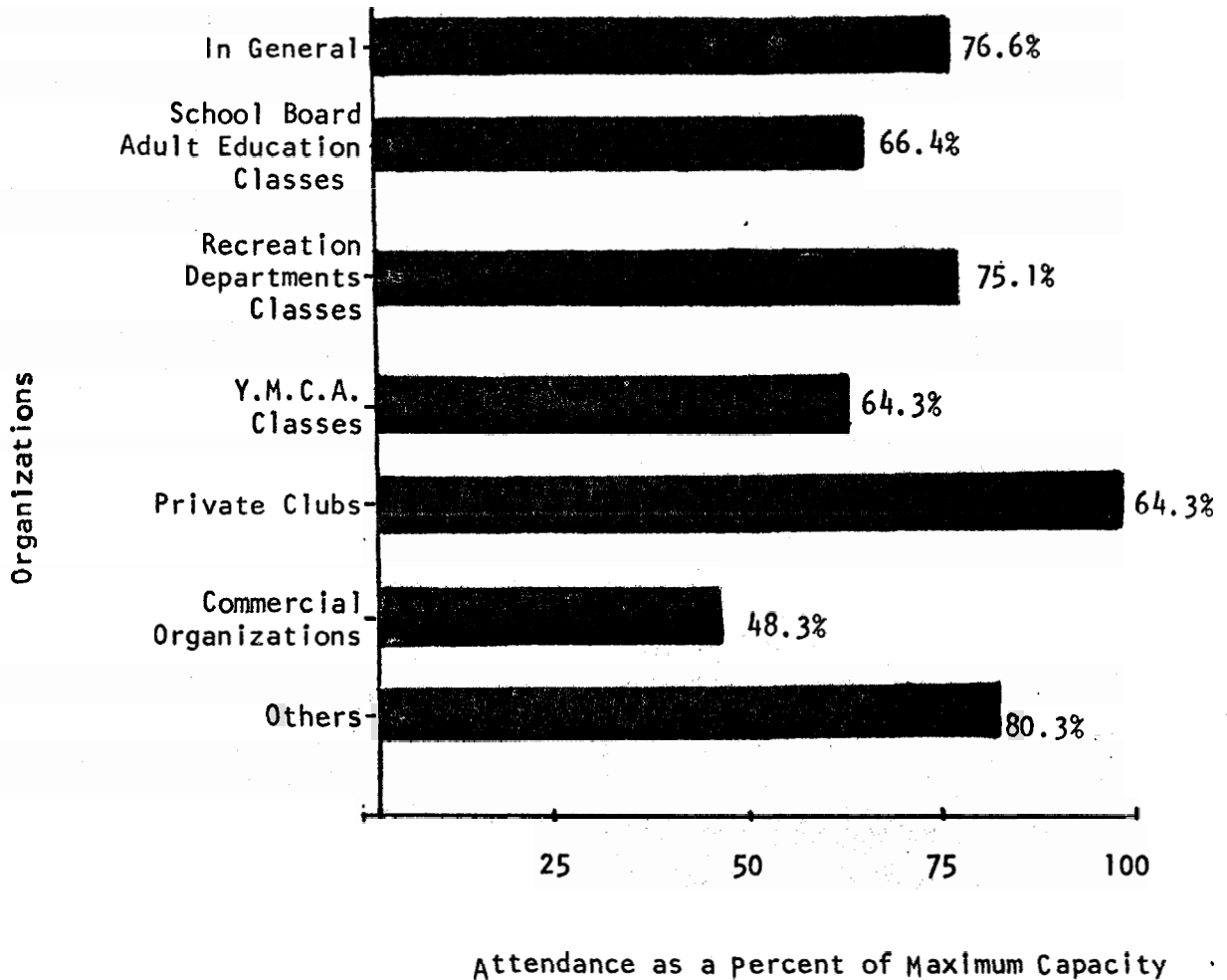


over sixty years of age completing the participant opinion survey were members of a class at Silver Harbour Manor. This was the only exercise program found in the community designed and run specifically to meet the needs of senior citizens.

In almost all of the classes surveyed there was room for more participants than the number regularly attending. In fact, the mean number of people served per class was 13.42; whereas, the classes were capable of serving 17.53 participants. (Appendix 6(iv)) The number of people a class was capable of serving was defined as the maximum capacity of the class. Maximum capacity was determined by the size of the facility used and the number of participants the instructor believed he could safely and adequately supervise. The Y.M.C.A. consistently served more people per class (26.38) than any other organization. The private clubs generally served far fewer people in each class (6.54) than any other agency. In addition, they indicated that the maximum number of people they were capable of serving per class was 6.64. In general, regular attendance was 76.6% of the maximum capacity of classes. Private clubs operated at the closest to capacity (98.5%) and the commercial organizations at the lowest capacity relative to maximum (48.3%). (Figure 5)

FIGURE 5

ATTENDANCE AS A PERCENTAGE OF MAXIMUM CAPACITY* OF CLASSES



* maximum capacity was determined by (a) the size of the facility, and (b) the number of participants the instructor felt he could safely supervise.

Two thirds of the classes involved activities which were of a non-competitive nature in that they neither matched or tested participants against one another, against time nor relative to some predetermined standards.(Appendix 6(v)) In addition, the great majority (70.6%) emphasized participation over instruction. Golf lessons and some tennis classes emphasized skill instruction, but this appeared appropriate considering the nature of these sports and the skill levels of the participants involved. Most of the classes were offered at the beginner skill or fitness level, some at an intermediate level, but very few at an advanced level. Full details on the type, nature and level of activities offered by all organizations are provided in appendix 6(v).

Examining the duration and number of sessions per week and the number of seasons per year each activity was offered provided an insight into the appropriateness of the classes for fitness development. It was found that 74.7% were forty to sixty minutes in duration, the majority (51.3%) met only once a week and 43.4% were offered only two out of four seasons each year.(Appendix 6(vi)) A hundred percent of the School Board adult education classes met only once a week, but 58.1% were available three seasons per year. Classes offered by recreation departments provided a good opportunity for regular participation as 50.5% were conducted three times per week. The opportunity for year round participation was best provided

by the Y.M.C.A. and the commercial organizations. The Y.M.C.A. scheduled 69.2% of their classes year round and 85.7% of those provided by commercial agencies were offered on a yearly basis. This stood in striking contrast to the classes conducted by school boards and recreation departments. Only 2.0% of the adult education classes and 2.4% of those run by the recreation departments were available four seasons of the year. Details on the duration and regularity of classes offered by all organizations is outlined in appendix 6(vi).

Fitness Aspects

The President's Council on Physical Fitness and Sports determined the major motivation for participation in organized physical activity classes was good health in 23% to 37% of the men interviewed and 15% to 27% of the women.(69,7) The next most common reasons for participation were weight control (by women) and enjoyment, relaxation and pleasure (by men and women).The participant opinion survey (appendix 1(v)) carried out as a part of the present study indicated similar results. In general, 57.9% stated their single major reason for attending the class was because of the awareness of the need for good physical fitness.(Appendix 8(ii)) This was the most common reason given by all age groups.

If the major reason people attended class was because they were aware of the need for good physical fitness, then the programs available should be evaluated with regard to how

well they served this purpose. For this reason, it was decided to evaluate classes within the strict framework of the strength, suppleness and stamina components of fitness. The majority of classes available placed the major emphasis on the development of stamina (cardiovascular endurance). Generally, in 59% of the classes, stamina training ranked as the most important aspect. In 40.2% of the classes suppleness improvement was given first priority and in only 0.8% did strength training receive the major emphasis. (Appendix 6(vii)) Adult fitness classes at the Y.M.C.A. were an example of the type that placed an overwhelming emphasis on stamina. In all of the yoga classes, the improvement of suppleness was looked upon as the major concern. The classes at European Health Spa and the Riveria Swimming and Fitness Centre that used weight lifting equipment were the only ones that stressed strength improvement at the expense of suppleness and stamina. Appendix 6(viii) gives a full breakdown of the rank and mean in-class time spent on each of the three components of fitness.

Educational Aspects

The literature suggested that habits developed at certain stages of life could have a great effect on habits in later years. In this regard, two educational factors, regularly incorporated into organized classes, could have a positive effect on continued participation. A continual reference to the importance of fitness and the creation of an environment

where physical activity is of a relaxing and recreative nature could leave people with positive feelings about exercise. In the short run, these feelings may result in people including exercise as a normal part of their daily lives. If this desire for exercise became habitual then long term involvement might result. (105,308) Sections one through five of the educational aspects part of the survey noted whether the importance of fitness was stressed by the instructor and whether the rationale for doing specific exercises was outlined. Part six was used to note observations regarding the atmosphere of the class. This section dealt with the degree of relaxation, enjoyment, formality and pressure evident in the class atmosphere.

It appeared that instructors did not play a leading role in educating class members on the importance of fitness. Some of the questions in this part of the survey may have been difficult to evaluate based on one visit. However, one visit was sufficient to give some indication of the emphasis the instructor placed on fitness. In 28.9% of the classes the rationale for doing specific exercises was always emphasized. In a large percentage of classes the role of fitness in everyday life was rarely or never indicated nor was the relationship of the present activity to overall fitness explained. (Appendix 6(ix)) However, it appeared although the instructors were more successful in creating a favourable

atmosphere for exercise. In 46.4% of the classes the atmosphere was always one of enjoyment, with another 47.4% having an enjoyable atmosphere frequently. Thirty-five percent of the classes examined frequently had an atmosphere of relaxation and 44.8% occasionally had a relaxed atmosphere. Over half (52.1%) of the classes never appeared to apply pressure on individuals to improve faster than others. In 53.1% of the classes there was frequently pressure placed upon individuals encouraging them to improve. In some cases, this type of pressure appeared to act as a positive motivator. Full details on the educational aspects of classes are presented in appendix 6(ix).

Safety Aspects

Safety aspects appeared necessary for two reasons: (i) where classes were of a sufficiently vigorous nature that some safety restrictions seemed appropriate and (ii) where classes suitable for cardiac rehabilitation were to be implemented.

The first safety aspect examined was whether medical clearance was a prerequisite to participating in the class. The importance of medical clearance was pointed out in a newspaper article reporting proceedings from the British Columbia Medical Association annual meeting. One doctor indicated he felt that these checkups were an important safety procedure. He went on to say that the older the person the

more recent the last checkup should have been and added that for anyone over sixty a checkup immediately prior to commencing exercise was essential.(98,18)

The second safety aspect dealt with the idea of pretesting. One source indicated that pretesting was essential in order to set up an appropriate program for the individual. It was also suggested that testing could act as an excellent tool to motivate individuals to exercise.(94,42) Medical supervision and the availability of resuscitation equipment were factors examined to determine the feasibility of using existing fitness classes for cardiac rehabilitation. The final safety aspects studied were the availability of first-aid equipment and an evaluation of the appropriateness of the activity for the fitness level of the participants.

No classes required any type of medical clearance as a prerequisite to participation. The Y.M.C.A. and the European Health Spa inquired into the medical history of potential participants, but neither required a recent medical checkup. In only 4.0% of the classes was any type of pretesting carried out by the instructor to determine the fitness level of class members. In fact, the only organization which regularly conducted any kind of pretesting was the Y.M.C.A.. Pretesting was conducted in 69.2% of the classes they offered (i.e. in all of their fitness classes). The three part evaluation

included a three minute step-test to determine cardiovascular fitness, repetitive muscular contractions, (pushups, situps, etc.), to evaluate muscular endurance and a measurement of shoulder flexion and trunk flexion and extension to evaluate suppleness. (65,1)

None of the programs generally available to the community had any medical personnel in regular attendance during class time. Additionally, there was a complete absence of resuscitation equipment at the site of the classes. Only 60.7% of the classes had general first-aid equipment immediately available. This ranged from 100% for classes conducted by commercial organizations to 5.3% for recreation department classes. Almost every (97.2%) class appeared to offer an activity level appropriate to the fitness level of the participants. A complete summary of the safety aspects of the classes is presented in appendix 6(x).

Discussion

The results outlined above indicate an attempt to document the content of a wide variety of physical activity programs. Information was gathered on all programs in operation at the time of the study. Thirteen distinct types of activities were available for adults during the late spring and early summer months. The content of the fall and winter

programs could not be evaluated due to the time period over which the study was conducted. However, a full list of all physical activity programs available (appendix 9) throughout the entire year was evidence of the great opportunity for those who wished to participate.

At the time of the study, recreation centres in the municipalities of North and West Vancouver offered the widest variety of programs. School Board adult education courses also offered a large number of different activities. The Y.M.C.A. presented the most comprehensive range of adult fitness classes. Health spas were organized in such a way that formal structured classes were rarely conducted. A notable exception was the yoga classes run at the Riveria Swimming and Fitness Centre. The general activity format at spas was one where people worked individually on a program set up for them during their first visit. Supervision was available to give advice and change programs when revision was felt necessary by either the instructor or the participant. Activity programs run in the church facilities were usually conducted on a private basis. Space was reserved in a church gymnasium and the participants paid their fees directly to the instructor. Finally, a number of adult physical activity classes were run by five community schools in existence on the North Shore at the time of the study.

The number of organizations providing recreation opportunities and the wide variety of activities available indicated that members of the community had ample recreational opportunity. In fact, the mean attendance was 13.42 per class which on the the average was four people less than the recommended maximum capacity. Since there were three hundred and nine classes available this would indicate that another 1236 people could participate without any increase in class offerings. However, there was some discrepancy in these figures. The Y.M.C.A. indicated that their women's fitness classes were regularly booked and had waiting lists long before the first day of classes. This was in direct contrast to the figures which indicated their classes ran at 64.3% capacity. Officials of the two recreation centres also indicated that a great number of their programs were sold out ahead of time. Results of the study suggested that classes at these centres operated at 75.1% capacity. In both cases the discrepancy could have occurred for the same reason. Classes may have been closed once they had registered the number of people they felt they could safely and adequately supervise. No consideration seems to have been given to the fact that, for various reasons, on any given day a certain percentage of people would not attend. For example, if the normal attendance of the class was 80% of maximum capacity, on the average, sixteen people out of twenty would come to each class. Based on this premise, organizations should consistently overbook

their programs by 20%. This would result in the average attendance being very close to maximum capacity. Not only would this policy result in a more efficient use of facilities and instructors' time but it would increase revenue to the sponsoring organization. Increased revenue would result in more funds for upgrading the overall recreation service. This would be possible through investment in new facilities, instituting new programs or decreasing the participant instructor ratio.

An examination of the fitness aspects of the classes indicated that a great deal of improvement could take place. A number of important changes would have to be made in the majority of classes if they were to act successfully in their function of improving the fitness levels of the participants. Apart from their specific content, very few were scheduled regularly enough to have any impact on the stamina of the participants. As suggested earlier, three vigorous sessions per week are recommended to achieve a good improvement in cardiovascular endurance. (68,360; 42,48) More than half of the classes (51.3%) met only once a week. Moreover, only 32% of the people responding to the opinion survey indicated that their instructors had stressed they do some activity outside of class time. This once-a-week concept and the fact that almost half of the classes (43.4%) were offered only two out of four seasons made most of the classes insufficient to

achieve any cardiovascular training effect. The Y.M.C.A. classes were a notable exception, meeting three times a week, year round for forty-five minutes each session.

The regularity of exercise was usually stressed because of the beneficial effect it has in developing stamina. Of the three components of fitness discussed earlier, stamina appeared to have received the major emphasis. Most sources did, in fact, outline the need for some improvement in strength and suppleness, but the overwhelming emphasis has been placed on the development of stamina.(42,45; 9,7). Studies have indicated that greater physical reserves, achieved through regular endurance training, could be beneficial, allowing people to get through the normal daily activities with less fatigue.(62,355; 79,26) The intensity and duration of the exercise should be sixty-five percent of one's maximum for an extended time of at least twenty minutes. (98,18)

Most programs were adequate with respect to the stress placed on stamina. In 59% of the classes stamina received the major emphasis. A further 40.2% of the classes placed the major emphasis on suppleness and 0.8% of the classes on strength. The fact that 59% of the classes stressed the development of stamina does not necessarily mean that the nature and extent of the activity was vigorous enough to have

any positive cardiovascular training effect. For example, the total demands of a volleyball class may be assessed at 60% stamina, 30% strength and 10% suppleness. However the intensity of activity in this class may not be at a sufficient level for a long enough period of time to enhance one's level of endurance. Many of the activities available, conducted as they were, did not appear conducive to this development of stamina. Fitness, badminton, basketball, volleyball, swim conditioning and martial arts classes, if vigorous enough, could maintain the heart rate at a sufficiently high level long enough to achieve positive training effects. However, it appeared that dancing, golf instruction, lawn bowling and yoga were completely unsuccessful in this respect. The only classes which did appear sufficiently demanding were the fitness classes at the Y.M.C.A., fitness and volleyball classes at the North Vancouver Recreation Centre and swim conditioning classes at Hollyburn Country Club and the North Shore Winter Club. Some classes studied appeared to be totally inadequate with respect to suggested guidelines of intensity, duration and frequency. A notable example of this sort was the programs offered to members of the health spas. In most cases, a great deal of use was made of passive exercise equipment and little or no emphasis was placed on cardiovascular development. Participants were usually involved in exercises to increase strength and rarely was anyone seen doing exercises to improve stamina or suppleness.

With respect to the educational aspects of classes, instructors rarely pointed out the role of fitness in everyday life nor did they present a rationale for specific exercises. However, this may have resulted from the nature of the activities under consideration and not from some omission on the part of the instructor. For example, a number of instructional classes did not lend themselves easily to explaining the role the particular activity played in the fitness of the participants. In fact, in a large number of cases, fitness was irrelevant to the content and function of the class.

It was apparent that the safety precautions were also less than optimal. No medical clearance was required and negligible fitness pretesting was done, thus little was known of the medical history or present fitness level of the participants. It could be said that this was unnecessary since the activities available were generally not very vigorous. However, if improved fitness levels of all participants was a desired goal and the intensity, duration and frequency of the classes were to be enhanced, medical clearance prior to starting would be an advisable precaution. In addition, pretesting would be advantageous and regular testing thereafter may be helpful in motivating the participants and monitoring the adequacy of the training program. General first-aid supplies were usually available but no classes had

immediate access to resuscitation equipment. When questioned, all officials of the recreation organizations indicated that the Fire Department was close enough with any necessary equipment.

An examination of the content of all organized physical activity programs provided a standpoint from which to suggest suitable programs for cardiac rehabilitation. It appeared that there were no classes for men, and only one for women which were suitable for cardiac rehabilitation in the community at the time of the study. The reason for the lack of this type of class was that the activity level of those presently available would be too stressful, the safety equipment not adequate or the knowledge of the instructors not suitable to conduct classes of this nature. The fitness class offered on Monday, Wednesday and Friday mornings at the North Vancouver Recreation Centre appeared appropriate for cardiac rehabilitation use. Mild cardiovascular work was done, the atmosphere was pleasant, the instructor enthusiastic and the women progressed at their own speed. The only drawback at this stage was one indicated by the instructor herself. She said she was unsure of her capabilities with respect to the first-aid and safety aspects. However, with a medically trained assistant, it appeared as though she would be quite capable running an excellent cardiac rehabilitation program.

The popular fitness classes offered for men and women at the Y.M.C.A. would be too strenuous for cardiac patients in their present format. However, the Y.M.C.A. appeared to have all the essentials necessary to run special cardiac fitness classes given the opportunity and proper medical assistance. They inquired into the medical history of potential participants and they had adequate pretesting procedures. In addition, they had an excellent staff, a suitable gymnasium and very good running facilities nearby in Ambleside Park.

Additional to the general need for more fitness oriented activity classes and classes appropriate for cardiac rehabilitation, another specific need in the community appeared evident. At the time of the study the only fitness oriented physical activity class specifically for senior citizens was conducted at Silver Harbour Manor. The instructor negotiated with Silver Harbour Manor for six months before they finally permitted her to conduct a class for members of the centre. The end result was that she taught the class on a volunteer basis. The class was well attended and appeared to be thoroughly enjoyed by everyone. It appeared that all the participants had no difficulty handling the moderate level of physical activity required. The success of this program indicated that many more retired citizens might welcome participation in a fitness class if the opportunity was readily available to them.

The only activities available primarily for senior citizens were lawn bowling and carpet bowling. There seemed to be no reason to relegate older people to passive activities since a study carried out by Adams and DeVries commented positively on the beneficial effects of a training regimen for older women. (1,54) Seventeen women between the ages of fifty-two and seventy-nine (mean=65.9 years) participated in a vigorous three month exercise program including calisthenics, jogging and stretching exercises. The trainability of the cardiovascular system was established in that the physical working capacity (PWC) and resting heart rate showed significant differences in the changes between experimental and control subjects. In fact, their study indicated that the improvements were of the same order of magnitude as those commonly reported for young people. (1,54)

Another source gave support to the idea that elderly people should continue involvement in moderately vigorous physical activities:

The (disabled) and aged, over the years, have been somewhat apprehensive concerning their own abilities to participate, or they have been made to believe they could not do many things that we now know they can do. (59,153)

These positive statements regarding the participation by elderly people in demanding leisure time activities stand in contrast to the ideas normally held by senior citizens themselves. The results of a survey conducted by the

President's Council on Physical Fitness and Sport indicated that people over sixty commonly cited as their reason for not exercising: "I'm too old."(69,7)

Once again the educational process could play a large part in changing these views. Besides convincing senior citizens that exercise is essential, more enjoyable classes could be made readily available to them. It is suggested that more classes such as the one at Silver Harbour Manor be instituted throughout the community on a regular basis. In addition, another specific activity called aquabics (or swimnastics) appeared very appropriate to the exercise needs of this age group. Aquabics is defined as repetitive resistance exercises done in the water.(85,C) The most important thing about exercising in the water is its cushioning effect, minimizing jerky movements which could occur in land exercise.(92,8) This made exercises especially suitable for older people and for those with arthritic conditions. Aquabics is suggested as one specific type of a wide variety of moderately demanding physical activities that should be available to senior citizens.

A broad range of ideas suggested to change and improve the content of organized physical activity classes on the North Shore have been discussed. If these classes were to play a part in improving the fitness of members of the community,

the changes suggested appeared essential. Obviously, since tastes and desires vary, the availability of a wide range of activities was necessary to serve the community properly. The variety of programs in existence at the time of the study appeared appropriate. However, there was an apparent need for more of these classes to be offered on a regular basis (i.e. three times a week, year round). Very few classes met this criteria. In addition, there appeared to be a need for classes applicable to cardiac rehabilitation and ones suitable for senior citizens. The educating of people about the importance of fitness could be a step in reversing the growing trend towards a sedentary way of life. A successful educational program could have a two fold positive effect. It could result in all recreation organizations providing more fitness oriented classes and it could result in the trend of participation away from passive recreation activities towards more active ones. If more people begin to participate in vigorous activities, then adequate safety precautions will become more important. This would include regular medical clearance before participating, suitable pretesting procedures and adequate monitoring techniques to ensure levels of activity that are individually appropriate.

The emphasis of this chapter has been on the need for more vigorous, demanding organized physical activity programs. However, these should not occur at the expense of social

recreation activities or other less active physical recreation endeavours. Each has its place and each plays an important role in the comprehensive provision of leisure time opportunities for adults. It is merely suggested that some classes could include more prolonged vigorous activities and a number of new classes could be added to the present curriculum available in the community.

The importance of the variety and content of organized physical activity programs has now been added to the discussion on the supply and availability of facilities. It begins to appear that a number of interdependent factors, working together, are essential to the adequate provision of recreational opportunity in the community. Closely related to these factors is the quality of instructors and exercise leaders. This aspect will be considered next.

CHAPTER V

QUALITY OF INSTRUCTION

A number of authorities in the field of recreation have indicated that a high calibre of instruction is one important component of a comprehensive and successful community recreation program. Howard Danford, in Recreation in the American Community, said:

Leadership is the most important single factor in the operation of a community centre. Without good leadership the best equipped centre will fail; with good leadership a centre lacking many desirable material features will still be a success.(29,237)

He added, "Leadership must be of high quality because of the voluntary nature of the participation."(29,237) A Province of Manitoba recreation study indicated that "the success of recreation services depends more on the quality of leadership than on any other single factor."(70,44) Another general comment on the role of instructors was provided by J.M. Anderson. He suggested that "the importance of good leadership to the success of the community recreation program should not be underestimated."(2,25)

Of a more specific nature, Sapora and Mitchell felt that one role of the recreation leader was to have 'control'. By this they meant that the instructor should be able to move people in the direction of their interests and keep them

happily occupied in the activities of their choice. (82, 533) Anderson, in "Evaluating Community Recreation", suggested a number of characteristics to look for when selecting recreation personnel. Among those included were considerateness, courage, health, intelligence, professional knowledge, efficiency, sociability, judgment and dependability. (2, 26) Along the same lines, it was suggested that instructors be cheerful and good-humoured, helping people over their initial fears, giving suitable advice and encouraging them to participate. (2, 22)

It was decided to evaluate the instructors in a number of ways relevant to these precepts. The two part Survey of Human Resources (Appendix 1(iv)) included a resume, completed by the instructor, and a form completed by the investigator after observing the instructor in action. The resume dealt with the instructors' educational background (including degrees, diplomas, clinics, conferences etc.), first-aid and safety training and related work experience. The evaluation form completed by the investigator (Part B of Appendix 1(iv)) evaluated the characteristics exhibited and teaching methods used by the instructors. The first part of this survey (the resume) was factual information and easy to collect; whereas, the second part was more difficult to complete because of its subjective nature. This latter part of the survey was carried out by completing eight statements dealing with the

instructor's characteristics and teaching methods with one of the following words: always, frequently, occasionally, rarely or never. A similar procedure was employed in evaluating the educational aspects of the classes.

Study Findings

Information was gathered from thirty-nine instructors, covering ten different activities. Thirty-eight percent of the instructors completing resumes taught fitness classes, another 18.9% taught yoga and 16.2% taught tennis. Sixty percent of the instructors who indicated their age on the survey form were less than thirty. Two of the instructors were in the fifty to fifty-nine age range and none were sixty or older. (Appendix 7(i)) Thirty-two of the thirty-nine were part time instructors, that is, they taught only a few hours each week. Of seven full-time instructors, four were employed by commercial health spas, while three worked for the Y.M.C.A.

Educational Background

Nine of the instructors surveyed had completed some university degree. Four had obtained bachelors degrees in related areas (i.e. two in Physical Education and two in Education). The remainder of the instructors completing degrees had done so in fields unrelated to physical education or recreation.

With respect to diplomas, two of the instructors had completed two-year diploma courses in physical education and a third had achieved a diploma in recreation. The instructors who were involved in swim lessons or swim conditioning had passed either their Canadian Red Cross Water Safety Instructor (W.S.I.) course or the Royal Life Saving Society (R.L.S.S.) Instructor certificate. A number of other instructors had earned diplomas or certificates related to the field. The certificates held included Yoga teachers certificate (3), British Columbia Lawn Tennis Association diploma (2), Martial Arts teachers awards (2), Dance Teaching diplomas (3) and an Outdoor Recreation diploma (1). Only thirteen of the instructors indicated they had recently attended clinics specific to the activity they taught. Clinics attended by instructors included fitness, swimming, tennis, volleyball and yoga.

Less than a third (25.9%) of the instructors indicated they had any formal training in first-aid. One instructor had completed the St. John's Ambulance course as well as a course in the care and prevention of athletic injuries. Four others had completed the St. John's Ambulance course and one the Industrial First Aid course. Five other people had some other formal first-aid training including courses in physiology and anatomy, a civil defence course and training as a orderly. Only two of the thirty nine instructors indicated they were

capable of operating resuscitation equipment. Full details on the educational background of instructors is provided in Appendix 7(ii).

Related Work Experience

The amount of work experience in the field varied from one instructor to the next. Of seven full-time instructors, three had been working full-time in the field for more than one year. The manager of one of the health spas had been in that position for seven years. The head instructor at the Y.M.C.A. had fourteen years experience with his organization, and one of his assistants had been with him for two years. The third instructor at the Y.M.C.A had only recently started working full-time but she indicated she had six years part-time experience in aquatics, gymnastics and fitness. One instructor at the health spa indicated eight months full-time experience, one ten months part-time in fitness and dance and a third no experience in the field whatsoever.

The group working as part-time instructors indicated a large range in the amount of related work experience. All had experience of a part-time nature, with the mean being 4.97 years. (Appendix 7(iii)) Along with part-time experience in the activity they were presently teaching, six of these instructors indicated teaching experience in other recreational activities. This left twenty-eight with work

experience only in the activity in which they were currently involved.

Characteristics and Teaching Methods

A number of characteristics of the instructors were noted as were some aspects of their teaching methods. It was suggested in Chapter III that the atmosphere of the classes might have some effect on the feelings participants were left with regarding exercise. It was further suggested that positive feelings might cause exercise to become a habit which in turn might result in long-term involvement in the activity. For this reason, the instructors were evaluated with respect to their effectiveness in relaying information, eliciting good responses from participants and creating an atmosphere suitable for the enjoyment of physical activities. The nature of the information desired necessitated a subjective evaluation on the part of the author. It was noted whether the instructors stressed relaxation and enjoyment and whether they emphasized that participants progress at their own rate. In addition, the author noted whether instructors showed empathy for, and were well received by, participants.

Thirty percent of the instructors always showed empathy for the participants and another 53.3% frequently exhibited this characteristic. Fifty-seven percent of the instructors frequently stressed enjoyment; whereas, 40.0% frequently

emphasized relaxation. In addition, 73.3% of the instructors appeared to be well received by the participants. Full details of the characteristics exhibited and teaching methods used are presented in Appendix 7(iv).

DISCUSSION

Danford, Anderson, and Sapora and Mitchell have all indicated the important role that the class instructor has to play in the provision of organized recreational opportunities. Their knowledge and enthusiasm could have a positive effect on class attendance. As indicated earlier, regardless of the efficiency of administration or the availability of facilities, poor programs can result if instructors are ineffective. (29,237)

It may well be that the characteristics exhibited and teaching methods used by the instructor were more important to the success of the class than was the amount of formal training he or she had received. Specifically, it appeared as though the lack of people with degrees or diplomas in the field did not adversely affect the quality of instruction. One example of this was the women's fitness class conducted Monday, Wednesday and Friday mornings at the North Vancouver Recreation Centre. The class appeared suitable to achieve good

training effects in the participants and it seemed to be thoroughly enjoyed by everyone. The class was taught by a woman who had no formal training and had developed the routine on her own. Her presentation of the material and her charm and personality appeared to be the important components. Generally, the considerable amount of work experience indicated by most instructors seemed to favourably affect the quality of instruction.

Perhaps the area requiring the most change was that of the first-aid training and safety knowledge of the instructors. Since less than a third of the instructors had any formal first-aid training and only two were able to operate resuscitation equipment, it appeared that injury and emergency situations might not be adequately taken care of. The need for instructors to be more competent in first-aid will be more important in the future if more vigorous, physically demanding classes are instituted and if some of these classes are to be used for cardiac rehabilitation purposes. Along with better first-aid procedures, pretesting may be more important if classes become more demanding. In the event that testing is carried out, the instructors should be familiar with the tests and be able to use the results to develop safe and beneficial programs for participants. In addition, more vigorous classes may make injuries more imminent again necessitating added first-aid knowledge on the part of the instructors.

The rapport developed by instructors with their classes appeared favourable. This was evident in that most were able to create an atmosphere in their classes where relaxation, enjoyment and lack of pressure prevailed.

It could be said, generally, that the educational background and work experience of the instructors as well as the characteristics they exhibited and the teaching methods they employed had positive effects on their ability to instruct. The general lack of safety and first-aid knowledge appeared to be the only inadequacy. However, it should be pointed out that the quality of instruction varied from one organization to the next. The most outstanding instructors appeared to be those who conducted the fitness classes at the Y.M.C.A. These three instructors had considerable formal training in physical education and recreation. The head instructor had earned a diploma in physical education in Hungary. One of his assistants completed a B.Sc. in Physical Education in Italy and the other her Recreation Diploma at Vancouver Community College. In addition, their full-time work experience was considerable and their enthusiasm created what appeared to be a very enjoyable class atmosphere.

The quality of instruction in the School Board Adult Education courses, the classes at the West Vancouver Community Centre and those at the North Vancouver Recreation Centre

varied considerably. Some of the instructors employed by these organizations on a part-time basis appeared excellent while others seemed less effective in their role as exercise leaders.

The group of instructors who appeared least competent were those employed by the health spas. None of the health spa instructors surveyed had any formal training in physical education, fitness or recreation, none indicated they were trained in first-aid and only one had any extensive work experience in the field. It appeared that these instructors had been selected more for their sales ability than for their knowledge as physical educators.

It was apparent that formal training, work experience, teaching methods used and personality of the instructors all played a part in determining how effective they were in a class situation. A wide range in education, experience, methods and characteristics was evident. On the one hand, very beneficial and enjoyable classes at the Y.M.C.A. were conducted by instructors who appeared very competent; whereas, programs at the health spas were supervised by people who appeared unprepared and incapable of being effective physical activity instructors.

Having now presented information on the capabilities of instructors, it would appear that the content of programs and the quality of instruction are inseparable, with the latter greatly affecting the former. Similarly, the supply and availability of facilities are closely interrelated. A generous supply of facilities is apparently ineffectual unless they are readily available to the community at convenient times and at costs to the user which are not prohibitive.

Two tasks remain. First, a number of recommendations for change will be suggested aimed specifically at the community studied. If implemented, these changes could result in an improved opportunity for adults on the North Shore to participate in organized physical activities. Secondly, of wider consequence and applicability, the four aspects discussed above will be integrated into a cohesive unit by developing a model system designed to help provide better opportunity for adults in any community to be physically active.

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to develop a survey tool designed to evaluate the nature and extent of opportunity for adults to participate in organized physical activities. The survey tool was then used to evaluate this opportunity in one urban community. The "North Shore" community was examined with respect to its supply and availability of recreational facilities, the fitness, educational and safety aspects of organized physical activity classes and the quality of instruction. Based on the fitness and safety aspects of these classes, another purpose was to assess their suitability for cardiac rehabilitation. A further purpose of the study was to make much of the information collected available to the members of the community. The final purpose was to present a set of recommendations, which, if instituted, might improve the opportunity for participation. These recommendations take two forms. First, recommendations for change specific to the area under consideration are offered. Secondly, a model for recreation administration has been designed. The goal of this model structure was to effectively administer a wide range of organized physical activities in a community.

The supply of facilities survey was used to document the existence of a wide range of facilities. Facility supply was evaluated relative to National Recreation Association standards. The percentage of time public facilities (that could be leased or reserved) were in use was recorded using the facility timetable. Criteria used to evaluate the fitness and educational aspects of the classes as well as the quality of instructor were based on ideas suggested in literature related to the field. Criteria used to evaluate the safety procedures in the classes were suggested by three medical practitioners in the community.

The supply of total parkland acreage, community and neighbourhood parks and large recreation areas on the North Shore was more than adequate relative to National Recreation Association standards. Standards from the Bureau of Outdoor Recreation suggested that the supply of hiking and running trails in these parks was suitable but the total mileage of bicycle paths was insufficient.

The number of recreation centres in North Vancouver was deemed 20.4% adequate relative to N.R.A. standards; whereas, West Vancouver was 52.5% adequate in this respect. In addition, the number of senior citizen recreation centres was less than that recommended. Standards indicated that six more swimming pools (two indoor and four outdoor) should be

constructed to fulfill the community needs. The number of gymnasiums and tennis courts were overwhelmingly adequate according to N.R.A. Standards.

Based on a fourteen hour day (7 a.m. to 9 p.m.), the playfields in the parks and school yards were unoccupied 75.8% of the time. Of the time they were in use, less than one percent was for organized adult physical activity programs. Taking into consideration only the seven p.m. to twelve a.m. weekday hours and all day Saturday and Sunday, the school gymnasiums were unoccupied 83.8% of the time. Of the time they were available, 7.3% was used by adults for organized physical activities.

The two public arenas were only used in the evenings and on weekends during the summer for lacrosse. Unlike the arenas, the three public pools on the North Shore were heavily used throughout the summer months. They operated seven days a week offering swim lessons for children and adults, swim conditioning classes and general swimming hours.

The private clubs, the two recreation centres and the school board provided a great majority of the adult classes in the community. Tennis, yoga and fitness classes were the most commonly occurring activities. In general, the classes were non-competitive, they emphasized participation and they were

offered at the beginner and intermediate skill or fitness levels. In looking at the effectiveness of classes in improving the fitness of the participants, it was found that 51.3% met only once a week and 43.4% were offered only two seasons out of four. However, 59% of the classes concentrated on activities which emphasized the development of stamina (relative to suppleness and strength).

The instructors appeared to be minimally effective in their role of educating the participants about the importance of fitness. Rarely in the instructors directions were there indications of the importance of fitness or a rationale for doing specific exercises. However, the atmosphere of the classes seemed appropriate to induce positive feelings about exercise in the participants. Generally, the atmosphere was one of relaxation and enjoyment where there was rarely unfavourable pressure applied to class members.

An examination of the safety aspects of the classes revealed that none required medical clearance as a prerequisite to participation and in only 4% was any fitness pretesting carried out. In addition, only 60.7% of the classes had general first-aid equipment readily available and none had immediate access to resuscitation equipment.

Considering the fitness and safety aspects of the classes, their applicability for cardiac rehabilitation was assessed. Only one class for women and none for men were found suitable for this purpose. The classes appeared unsuitable because the level or type of activity was inappropriate, the knowledge of the instructors insufficient or the safety and first-aid equipment inadequate.

The background training of instructors varied considerably. Nine of thirty-nine instructors surveyed had degrees, but only four of these were in areas related to the field. Three instructors had diplomas in physical education or recreation and a number had diplomas or certificates specific to the activity they taught. Only 25.9% of the instructors had formal training in first-aid and only two indicated they were capable of operating a resuscitator. Generally, the work experience of the instructors was considerable in the activities they were presently teaching. A wide range of results also occurred in evaluating instructors abilities to give clear and meaningful explanations and in the rapport they developed with their classes. Instructors at the Y.M.C.A. seemed most effective in their role as exercise leaders; whereas, those at the health spas appeared inadequate.

In order to make some of this information available to the community a Catalogue (Appendix 9) outlining the

facilities and programs was developed and distributed through the Health Department, the recreation centres and Lions Gate Hospital. In addition, in early September, both the Citizen and The Times (each having a circulation of about 10,000) carried an article on fitness accompanied by all the information in the catalogue. (Appendix 10) By making the community aware of the opportunities available to them, it was hoped that more people would become involved in some vigorous, satisfying physical activity.

Recommendations for Change on the North Shore

Supply and Availability of Facilities

It is recommended:

1. That some attempt be made to increase the number of community centres, senior citizen recreation centres and public swimming pools. Consideration should be given not only to an increased provision of facilities but also suitable locations relative to future expected population growth.
2. That in recreation planning in the future, more consideration be given to the multi-use concept.
3. That arenas and tennis courts be considered for multi-use purposes at times when they are not being used for activities for which they were specifically designed.

4. That, if fitness activities receive a greater emphasis, the municipalities give thought to increasing the number of fitness circuits, sawdust-based running trails and bicycle paths.

5. That School Boards attempt to increase the number of community schools and that the community school coordinators consider including more adult physical activity classes.

6. That the School Board examine the possibility of changing the rent structure for the use of school facilities, making them readily available to working adults and at costs which are more reasonable to non-profit groups.

7. That School Board and Municipal recreation officials investigate ways to cooperate which may make facilities more readily available to each other and to the community at large.

Content of Programs and Quality of Instruction

It is recommended:

1. That various recreation organizations consider offering more fitness oriented classes on a regular basis (i.e. three times a week, year round).

2. That the appropriate recreation organizations examine the possibility of instituting classes suitable for cardiac rehabilitation and classes specific to the needs of senior citizens.

3. That, if more vigorous, physically demanding classes are instituted, consideration be given to (i) medical clearance as a prerequisite to participation, (ii) the use of fitness pretesting, and (iii) adequate safety precautions (i.e. both equipment and personnel).

4. That recreation officials consider the possibility of some instructor certification procedure which would ensure that instructors are qualified initially and that they stay abreast of pertinent changes in the field.

A Model to Administer Organized Physical Activity Programs in a Community

It has been suggested that 'public, commercial and private facilities all play a part and have a place, but what is needed in the first instance is a comprehensive plan for recreation.'"(34,150) The following model, representing an administrative structure, is offered as one possible comprehensive plan. The goal of this model is an optimum

provision of opportunity for adults to use community facilities and participate in activity programs of high calibre. This model is suggested as a general plan for administering recreation in a community. However, because of the unique characteristics of each community, the general format of this model could be modified to serve specific purposes. For example, a recreation administrative organization may wish to augment its present structure by creating departments similar to some included in this model. Others may wish to alter the structure of some of their departments to include responsibilities suggested by the model. Finally, a newly developing community could incorporate some of the proposed ideas when designing a structure specific to their needs.

An outline of how this organization operates is, of necessity, brief. A full exposition on this topic would require a length comparable to this entire work. Therefore, the following discussion only dwells on the duties of each committee (or segment) of the organization, the members who could comprise the committee and the ways in which each group could interact with other groups.

The Board of Directors might consist of one or two members from each committee including people from the public agencies, commercial organizations, private clubs and

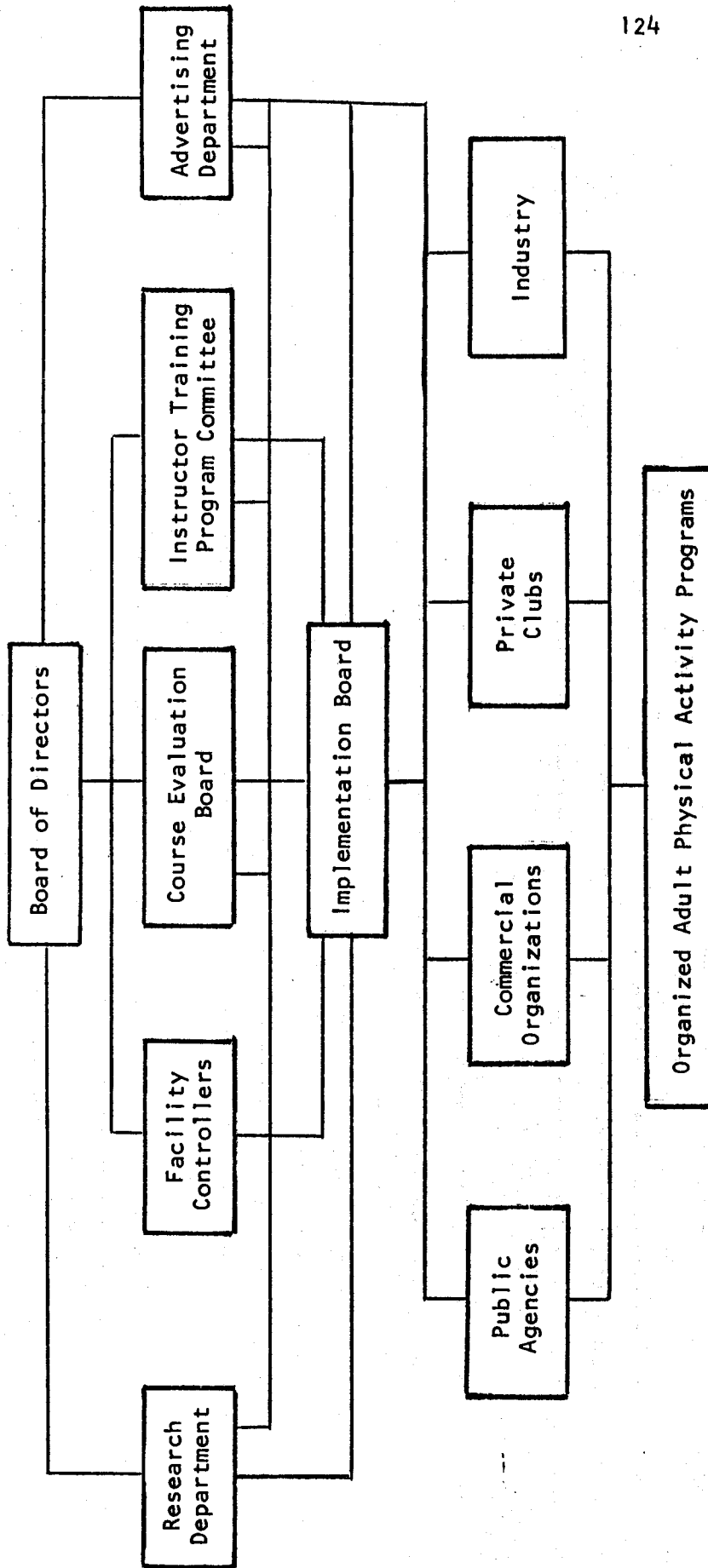
industry. In this way, direct communication is ensured among the organizers, implementers and deliverers of recreation services.

The research department would be specifically concerned with developing innovative ideas for change and improvement. They would deal with all aspects of the problem including facility planning and design, course curriculum improvements, safety and fitness testing, calibre of instruction and participant motivation. For this reason, the committee would include city planners and engineers, medical practitioners and exercise physiologists, physical educators and recreation personnel as well as advertising experts. Depending on the ideas formulated, the research department could report to the Board of Directors, the Implementation Board or the specific committee for which the ideas were developed. (See Figure 6)

The task of the advertising department would be to notify the entire community about the availability of facilities and classes. This could be accomplished by working closely with the Facility Controllers and the directors of public agencies, commercial organizations, private clubs and industrial groups. Recreation specialists, advertising experts, television, radio and newspaper personnel could best make up this department. They would have to transform information gained from the the four groups mentioned above into advertising which would be effective in motivating people to participate.

FIGURE 6

A MODEL FOR RECREATION ADMINISTRATION



The research and advertising departments could be considered peripheral committees; whereas, the Facility Controllers, the Course Evaluation Board and the Instructors Training Program represent the central focus of the structure. The Facility Controllers could formulate all policy regarding facilities and would oversee the operations of all public facilities including parks, playfields, trails, swimming pools, tennis courts, recreation centres, arenas and schools. Their major objective would be that of serving the community in general, not catering to the specific needs of educational or recreational groups. They would train and coordinate the facility supervisors who individually would oversee the operation of the specific public facilities. This board would report directly to the Implementation Board.

The Course Evaluation Board would have a two-fold task. First, it would recommend suitable programs and evaluate all activities proposed by the four agencies offering classes. Before a class could be offered to the general public its format and content could be evaluated and certified as appropriate by the Course Evaluation Board. Secondly, this committee could work closely with the Instructor Training Program to ensure that instructor education is appropriate for the classes they might teach upon completion of their course. This board should consist of medical and para-medical people as well as physical educators and recreation specialists.

The Instructor Training Program could be part of a Junior college curriculum and may include the completion of a degree or diploma in the field of recreation and exercise leadership. The educational institute would be required to develop and administer a comprehensive program designed to train people in exercise leadership. In addition, they could offer mini-courses or regular refresher courses in order to update instructors' qualifications and ensure a high standard of leadership. The graduates of these programs would be suitably trained to instruct in courses offered by the four agencies serving the public. (See Figure 6)

The Implementation Board would serve as the core of the administrative structure. The four different types of agencies offering activities could contact the Implementation Board with any problems, comments, criticisms or suggestions. The work of the three main committees (the Facility Controllers, Course Evaluation Board and Instructor Training Program) could be synthesized and tailored by the Implementation Board before being passed on to the four groups at the next stage of the hierarchy. This committee should have a composition much like that of the Board of Directors, having personnel with expertise in all areas.

The public agencies, commercial organizations, private clubs and industrial groups would be the ones who directly

cater to the public and provide the organized physical activity classes. They could employ instructors graduated from the training program, obtain assistance in designing programs from the Course Evaluation Board and receive suggestions from the Facility Controllers.

Generally, it is hoped that an administrative structure such as this would ensure an optimum use of facilities, many beneficial and enjoyable classes as well as a high calibre of instruction. The model is designed merely to indicate how various people with valuable input in the field can work together towards a common goal. The degree of authority given to any committee should be determined by the community who wishes to adopt some aspects of this overall structure. In other words, the various committees could work in authoritative or advisory capacities depending on the specific needs and desires of that community.

In conclusion, it is suggested that a number of changes, if effected, could help alter the lifestyle of Canadians to one which more often includes regular physical activity as a part of daily living. The crux of the issue is aptly stated in the following:

The tragedy is that many North Americans have simply accepted early aging as their inevitable personal cost of technological progress. There are better alternatives. Understanding and action based on that understanding are essential in communities where there is more reinforcement for sedentary living than for physically active living. (68,353)

If this 'action' is to occur, a start must be made somewhere. Providing excellent opportunity for adults to participate in physical activities may be a logical beginning. This means providing the right mix of facilities in terms of number and location, given the community needs and available funds. It means making facilities available to adults at times that are most convenient to them. It means the provision of a large number of organized classes that are both physically demanding and enjoyable. This in turn will require more well trained and capable instructors.

Making opportunities readily accessible to everyone may enhance the chances of mass participation. Taking the programs to the people may be one answer. For example, the concept of industrial recreation is growing and appears to be an excellent way to involve more people in regular exercise. Exercising at the work site eliminates the need for the individual to travel to a special recreation location to participate, thus saving both time and money. The same concept could be applied by taking classes to peoples' homes. The large number of apartment and housing complexes with various

exercise equipment and swimming pools would be excellent places for public recreation departments to teach courses and supervise activities. This idea could be taken one step farther, using mobile units, taking recreational opportunities to the public instead of having the people come to them. The latter system would be most helpful to senior citizens whose mobility may be severely limited due to the many infirmities which often accompany old age.

Another possibility is to suggest that people more often combine exercise with the necessary activities of everyday living. For example, added bicycle paths, properly situated may encourage more people to take up cycling not only as a leisure time activity but as a logical means of transportation to work, to shop, or to school. If this occurs, physical activities will have been successfully incorporated into daily living and fitness will be a mere by-product of activity, with an efficient and enjoyable means of transportation being the major purpose. Perhaps then, businessmen in suits carrying briefcases, riding bicycles to the local commuter train or bus stop will be as common a sight in Vancouver, Toronto and Montreal as it is in Stockholm and Copenhagen. This new style of life would not only have positive effects on the human system but could help to alleviate some of the problems confronting urban North America in the 1970's.

In summary, it could be said that, once sufficient opportunity to participate is provided, the crusade to change our lifestyles must focus more on the way we think than on any other single factor. Our priorities must be changed to the point where regular physical activity is an integral and important part of everyday living. This crusade can not be led by recreation specialists alone. It must be a community effort, involving the medical profession, urban planners, politicians and all other groups that can dramatically effect the way we live. Ultimately, it should be a national effort, where we look beyond our boundaries with the hope of adopting ideas that have proved successful in other social systems.

BIBLIOGRAPHY

1. Adams, Gene, M., and Herbert A. deVries. "Physiological Effects of an Exercise Training Regimen Upon Women Aged 52 to 79," Journal of Gerontology 28:50-55, January, 1973.
2. Anderson, Jackson M. "Evaluating Community Recreation," JOPHER, 24:25-26, May, 1953.
3. Atchley, Robert C. "Retirement and Leisure Participation: Continuity or Crisis?" Gerontologist, II:13-17, Spring, 1971.
4. Baley, James A. "Recreation and the Aging Process," Research Quarterly, 26:1-7, March, 1955.
5. Baley, James A. "Recreational Activity: The Modern Fountain of Youth," Physical Educator, 23:167-170, December, 1966.
6. Benestad, A.M. "Trainability of Old Men," Acta Medica Scandinavica, 178:321-327, 1965.
7. Benestad, A.M., J. Halvorsurd, and K.L. Andersen. "The Physical Fitness of Old Norwegian Men and Women," Acta Medica Scandinavica, 183:73-78, 1968.
8. Board of School Trustees, School District No.45. "Arrangements for Renting and Using School Facilities." West Vancouver: School Board, 1973. (Mimeographed.)
9. Bowerman, W.J., and W.E. Harris. Jogging. New York: Grosset and Dunlap, 1967.
10. British Columbia Mountaineering Club, and the Mountainers. 103 Hikes in Southwestern British Columbia. Vancouver: Mitchell Press Ltd, 1973.
11. Brooks, Mary, E. Planning for Urban Trails. U.S., Report of the American Society of Planning Officials, Planning Advisory Service, Report No. 259, December, 1969.
12. Broom, Eric, F. Leisure Services in British Columbia. Victoria, B.C.: Queen's Printer, 1974.
13. Bultena, G, and V. Wood. "Leisure Orientation and Recreational Activities of Retired Community Residents," Journal of Leisure Research, II:3-15, Winter, 1970.

14. Bureau of Outdoor Recreation. Trails for America. Washington, D.C.: Department of the Interior, 1966.
15. Bureau of Outdoor Recreation. Outdoor Recreation Space Standards. Washington, D.C.: Department of the Interior, 1970
16. Burrard View Community School. "School Opens Doors To Community." North Vancouver, Burrard View School, 1973, (Mimeographed.)
17. Burton, Thomas L. ed. Recreational Research and Planning. London: George Allen and Unwin Ltd., 1970.
18. Butler, George D. Recreation Areas: Their Design and Equipment. New York: The Ronald Press Co., 1958
19. California Committee on Planning for Recreation, Park Areas and Facilities. Guide for Planning Recreation Parks in California. Sacramento, California: Documents Division, 1956.
20. Campbell, D.E. "Analysis of Leisure Time Profiles of Four Age Groups of Adult Males," Research Quarterly, 40:266-273, May, 1969.
21. Coates, E. "The Role of the Physical Educator in Facility Planning," Physical Educator, 28:88-91, May, 1971.
22. Conrad, C.C. "Regular Exercise Program is Beneficial Psychologically as well as Physically," Geriatrics, 29:40-44, January, 1974.
23. Cooper, K.H. "The Role of Exercise in our Contemporary Society," JOPHER, 40:22-25, 1970.
24. Corbin, H.D. and W.J. Tait. Education for Leisure. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
25. Council for Cultural Cooperation. Sport For All: Low Cost Swimming Pools. Strasbourg: Council of Europe, 1970.
26. Council for Cultural Cooperation. Sport For All: Low Cost Sports Halls. Strasbourg: Council of Europe, 1972.
27. Cunningham, D.A. and others, "Active Leisure Time Activities as Related to Age among Males in a Total Population," Journal of Gerontology, 23:551-555, October, 1968.

28. Cureton, Thomas, K. "What Research Says About Physical Fitness," Journal of Physical Education, 63:89-93, 1965.
29. Danford, Howard, G. Recreation in the American Community. New York: Harper and Row Publ., 1953.
30. Daughtrey, G., and J.B. Woods. Physical Education Programs: Organization and Administration. Toronto: W.B. Saunders Co., 1971.
31. Department of Health and Welfare, Recommendations of the National Conference on Fitness and Health. Ottawa: Queen's Printer, 1972.
32. Division of School Buildings and Grounds. Designing the Central School Plant as a Community Centre, The University of the State of New York: State Education Department, 1945.
33. Glueck, E.T. The Community Use of Schools. Baltimore: The Williams and Wilkins Co., 1927.
34. Goghlan, John F. "Physical Recreation in New Towns," Royal Society of Health Journal, 88:149-154, June, 1968.
35. Gooch, R.B. Selection and Layout for Playing Fields and Playgrounds. London: National Playing Fields Assoc., 1963.
36. Gray, A.V., W.T. Wegawa, and A.P. Mew. Burnaby Parks and Recreation Study. Vancouver: AVG Management Science Ltd., 1970.
37. Hein, Fred V., and Allan J. Ryan. "The Contribution of Physical Activity to Physical Health," Research Quarterly, 31:263-285, May, 1961.
38. Hjelte, George and J.S. Shivers. Public Administration of Recreational Services. Philadelphia: Lea and Febiger, 1972.
39. Joseph, J.J. "Personal and Physical Reactions of Women to Rhythmical Endurance Calisthenics and Jogging," Journal of Physical Education, 68:177-178, October, 1970.
40. Joseph, J.J. "The Effects of the 21 Day Shape-Up Program on Middle Aged Women," Journal of Physical Education, 69:216-217, August, 1972.

41. Kaiman, B.D., and H.F. Desroches. "Stability of Activity Participation in an Age Population," Journal of Gerontology, 19:211-214, April, 1964.
42. Kasch, F.W., and J.L. Boyer. Adult Fitness: Principles and Practices. Palo Alto, California: National Press Books, 1968.
43. Katsuki, Masuda M. "Physical Exercise for Persons of Middle and Elder Age in Relation to their Physical Ability," Journal of Sports Medicine and Physical Fitness, 9:193-199, September, 1969.
44. Kisby, Russ. "Participation," CAPHER, 38:10-14, August, 1972.
45. Kraus, Hans. "Preventative Aspects of Physical Fitness," New York State Journal of Medicine, 64:1182-1184, May, 1964.
46. Kraus, Richard. Recreation Today: Program Planning and Leadership. New York: Appleton-Century-Crofts, 1966.
47. Kurucz, Frank. Personal Interview. West Vancouver, British Columbia, October 10, 1974.
48. LaLonde, Marc. A New Perspective on the Health of Canadians: a working document. Ottawa: Queen's Printer, 1974.
49. Lower Mainland Regional Planning Board. Park Lands in West Vancouver. New Westminister, November, 1955.
50. Lower Mainland Regional Planning Board. An Appreciation of the Location of the Proposed North Vancouver City-District Sports Centre Complex. New Westminister, 1964.
51. Lundberg, G.A., M. Komarovskiy, and M.A. McInerney. Leisure: A Suburban Study. New York: Agathon Press Inc., 1969.
52. McDonald, A. Sport, Health and Leisure. CAPHER, 33:21-24, 1967.
53. McGlynn, G.H. "Reconditioning for the Cardiac Patient," Physical Educator, 27:175, October, 1970.
54. Meyer, Harold, C.A. Brightbill, and D.A. Sessoms. Community Recreation. Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1969.

55. Miller, N.P., and D.M. Robinson, The Leisure Age: Its Challenge to Recreation. Belmont, California: Wadsworth Publ.Co.Inc., 1963.
56. Munro, J.M. Sport Canada, Recreation Canada. Ottawa: Queen's Printer, 1971.
57. Nash, Bernard E. "Retirement as Leisure," JOPHER, 43:50, March, 1972.
58. National Facilities Conference. A Guide for Planning Facilities for Athletics, Recreation, Physical and Health Education. Chicago: The Athletic Institute, 1947.
59. National Facilities Conference. College and University Facilities Guide for Health, Physical Education and Recreation. Chicago: The Athletic Institute, 1968.
60. National Recreation Association. Standards for Neighbourhood Recreation Areas and Facilities. New York: National Recreation Assoc., 1943.
61. National Recreation Association. Schedule for the Appraisal of Community Recreation. New York: National Recreation Assoc, 1951.
62. National Recreation Association. Outdoor Recreation Space Standards. New York: National Recreation Assoc., 1965.
63. National Recreation Association. Standards: Playgrounds, Recreation Buildings, Indoor Facilities. New York: National Recreation Assoc., 1965.
64. Nierman, Wayne H. "The Community School and Recreation," JOPHER, 43:53-55, March, 1972.
65. North Shore Family Y.M.C.A. "Men's Fitness Assessment." West Vancouver: Y.M.C.A., 1972. (Mimeographed.)
66. Olson, L.H. "A Comparison of Participant Recruitment Techniques in Senior Citizen Community Centres," Unpublished PhD dissertation, University of Oregon, 1971.
67. Outdoor Recreation Resources Review Commission. Outdoor Recreation for America. Washington, D.C.: Government Printing Office, 1962.
68. Painter, H John. publ. Life and Health. Del Mar, Calif.: Ziff Davis Publ.Co., 1972.

69. President's Council on Physical Fitness and Sports. Physical Fitness Research Digest. Washington, D.C.: Government Printing Office, 1974.
70. Province of Manitoba Study Committee. Physical Education and Recreation in Manitoba. Winnipeg: Province of Manitoba, 1958.
71. Pryde, John. Personal Interview. North Vancouver, British Columbia, May 16, 1974.
72. Punke, Harold H. Community Uses of Public School Facilities. New York: Kings Crown Press, 1951.
73. Raab, Arthur W. "Prevention of Degenerative Heart Disease by Neurovegetative Reconditioning," New York State Journal of Medicine, 64:317-327, May, 1964.
74. Rawson, M., and F.A. Wiles. A Study of Recreation Needs and Facilities: Castlegar Area. Vancouver, 1966.
75. Rea, W.H., P.W. Desruisseaux, and Nancy Greene. Report of the Task Force on Sports for Canadians. Ottawa: Queen's Printer, 1969.
76. Recreation Canada. National Study of the Supply and Demand for Sports and Recreation Facilities: Phase 3 - Study Manual and Field Manual. Ottawa: Queen's Printer, 1974.
77. Reich, Charles M. "Socioeconomic Factors Related to Household Participation in Community Recreation," Unpublished PhD dissertation, Pennsylvania State University, 1965.
78. Ross, William D. "Glossary." Simon Fraser University: Department of Kinesiology, 1974. (Mimeographed.)
79. Runner's World Magazine. First Steps to Fitness. Mountain View, Calif.: World Publications, 1974.
80. Rutledge, R.J. Anatomy of a Park. New York: McGraw Hill, 1971.
81. Sagar, Harold. "School and Community Cooperation in Planning Programs of Physical Education and Recreation," International Council of Health, Physical Education and Recreation. Washington: ICHPER, 1967.
82. Sabora, A.V., and E.D. Mitchell The Theory of Play and Recreation. New York: The Ronald Press Co., 1961.

83. School District No. 44 (North Vancouver). "Rental Procedures and Rates for School Facilities." North Vancouver: School Board, 1973. (Mimeographed.)
84. Senters, J.M. "A Function of Uncertainty and Stakes in Recreation," Pacific Sociological Review, 14:259-268, July, 1971.
85. Shapiro, Sidney M. Swim-Nastics: Water Exercises for Better Health. Hollywood, California: Creative Editorial Service, 1969.
86. Shivers, Jay S. Principles and Practices of Recreational Service. New York: The MacMillan Co, 1967.
87. Shivers, Jay S., and George Hjelte. Planning Recreational Places. Cranbury, New Jersey: Assoc.Univ.Presses Inc., 1971
88. Shivers, Jay S. "Recreational Service: Overview and Expectations," Physical Educator, 30:211-214, December, 1973.
89. Sofranko, A.J., and M.F. Nolan. "Early Life Experiences and Adult Sports Participation," Journal of Leisure Research, 4:6-18, Winter, 1968.
90. Spindler, E.B., and J. Dambach. "Criteria for Studying and Evaluating Physical Education Programs with Relation to their Leisure Time Contributions," Research Quarterly, 7:119-130, 1936.
91. Stiles, M.H. "Motivation for Sports Participation in the Community," Canadian Medical Association Journal, 96:889-894, March, 1967.
92. Stinson, David, and Richard Lough. Aquabics: Recreation and Fitness in the Water. Toronto: Fitzhenry and Whiteside Ltd., 1973.
93. Strobbe, John E. "The Year Round School and Recreation," JOPHER, 43:51-52, March, 1972.
94. Timm, Donald R. "A Survey of Physical Fitness in the Young Men's Christian Association of the United States," Journal of Physical Education, 69:41-43, 1971.
95. The Daily Times (Victoria), May 12, 1973.
96. The Province (Vancouver), February 28, 1966.

97. The Province (Vancouver), October 4, 1969.
98. The Province (Vancouver), October 8, 1970.
99. The Sun (Vancouver), May 12, 1972.
100. The Sun (Vancouver), September 24, 1973.
101. The Sun (Vancouver), September 26, 1973.
102. Whitaker, Ben, and Kenneth Browne, Parks for People.
London: Seeley Service and Co., 1971.
103. Vernier, E.L. Current Administrative Problems:
Athletics, Health Education, Physical Education and
Recreation. Washington: AAPHER, 1960.
104. White, P.D. "The Role of Exercise in the Aging," Journal
of the American Medical Association, 165:70-77, 1957.
105. Zborowski, Mark. "Aging and Recreation," Journal of
Gerontology, 17:302-309, 1962.

APPENDIX I

SURVEY FORMS

SUPPLY OF FACILITIES SURVEY FOR NORTH SHORE COMMUNITIES

STUDY OF PARTICIPATION IN PHYSICAL ACTIVITIES

PART I : SUPPLY OF FACILITIES

Facility Number 6

Name _____

Address _____

Controller:

1. school (public), 2. school (independent)
3. parks and recreation, 4. private club,
5. public agency, 6. commercial enterprise
7. apartment complex, 8. church, 9. other-

specify _____

Specialized Facilities: (code: yes= 1 , no= 2) 140

1. Gymnasium size ___ x ___ (feet) 9
2. Playing Field(s) size ___ (acres) 11
3. Running Track length ___ (yards) 13
4. Ice Arena 15
5. Swimming Pool size ___ x ___
depth: shallowest ___
deepest ___ 17

6. Fitness Circuit Number of stations ___ 18
7. Weight training equipment 19
8. Tennis 24
9. Badminton 29
10. Handball 34
11. Squash 39
12. Archery 40
13. Lawn Bowling Number of greens ___ 43
14. Bowling Number of lanes ___ 46
15. Golf Number of holes ___ yardage ___ par ___ 47
16. Canoeing 48
17. Putting Greens 51
18. Table tennis 54
19. Roller Skating 55
20. Boating 56
21. Hiking Trails 60
22. Running Trails 64
23. Bike Paths 68
24. Climbing Facilities 69
25. Other specify _____ 70

AVAILABILITY OF FACILITY SURVEY FOR NORTH SHORE COMMUNITIES

FACILITY TIMETABLE

Name of Facility _____

Address _____

Type of Facility(eg. gymnasium, games room etc) _____

10

16

FOR OFFICE USE ONLY

FOR OFFICE USE ONLY

TIME	MON	TUES	WED	THUR	FRI	SAT	SUN
7 am							
8							
9							
10							
11							
12 pm							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
2 am-7 pm							

22

25

28

31

34

37

40

43

46

49

52

55

58

61

64

67

70

73

CONTENT OF PROGRAM SURVEY FOR NORTH SHORE COMMUNITIES

STUDY OF PARTICIPATION IN PHYSICAL ACTIVITIES
PART III: CONTENT OF PROGRAMS

Identification

1. Facility Number

--	--	--	--	--	--	--	--	--	--	--	--

 6
2. Name of Class _____
3. Nature of Activity _____
4. Sponsoring Organization

--	--	--	--	--	--	--	--	--	--	--	--

 7
5. Cost of Activity (in dollars)

--	--	--	--	--	--	--	--	--	--	--	--

 10

Scope and Format

1. Age Group served

--	--	--	--	--	--	--	--	--	--	--	--

 11
2. Number of people served per class.

--	--	--	--	--	--	--	--	--	--	--	--

 14
3. Number of people capable of serving per class

--	--	--	--	--	--	--	--	--	--	--	--

 17
4. Activity is: 1 = competitive, 2 = non-competitive

--	--	--	--	--	--	--	--	--	--	--	--

 18
5. Activity stresses: 1 = instruction, 2 = participation

--	--	--	--	--	--	--	--	--	--	--	--

 19
6. Level of activity: 1 = beginner, 2 = Intermediate 3 = advanced, 4 = other specify _____ 20
7. Number of sessions per week

--	--	--	--	--	--	--	--	--	--	--	--

 22
8. Duration of each session (in min)

--	--	--	--	--	--	--	--	--	--	--	--

 25
9. When offered: spring, summer, fall, winter

--	--	--	--	--	--	--	--	--	--	--	--

 29

Fitness Aspects Rank which aspects of fitness are stressed and note percentage of time spent on each

1. Strength

--	--	--	--	--	--	--	--	--	--	--	--

 32
2. Suppleness

--	--	--	--	--	--	--	--	--	--	--	--

 35
3. Stamina

--	--	--	--	--	--	--	--	--	--	--	--

 38

Educational Aspects Complete the following statements

using one of the following five words: 1 = always,

2 = frequently, 3 = occasionally, 4 = rarely,

5 = never

1. The role of fitness in everyday life is stressed. _____

--	--	--	--	--	--	--	--	--	--	--	--

 39
2. The relationship of this activity to everyday life is outlined

--	--	--	--	--	--	--	--	--	--	--	--

 40
3. The relationship of this activity to overall fitness is explained

--	--	--	--	--	--	--	--	--	--	--	--

 41
4. The rationale for doing specific exercises is outlined

--	--	--	--	--	--	--	--	--	--	--	--

 42
5. The use of fitness testing is included

--	--	--	--	--	--	--	--	--	--	--	--

 43
6. The atmosphere of the class is one of:

--	--	--	--	--	--	--	--	--	--	--	--

 48

Safety Aspects Answer the following questions using the

code yes = 1, no = 2

1. Is medical clearance a prerequisite to this class?

--	--	--	--	--	--	--	--	--	--	--	--

 49
2. Is pretesting carried out by instructor? If yes, specify _____

--	--	--	--	--	--	--	--	--	--	--	--

 50
3. Is there medical supervision (that is, doctor or nurse available)?

--	--	--	--	--	--	--	--	--	--	--	--

 51
4. Is there first aid equipment available? If yes, specify _____

--	--	--	--	--	--	--	--	--	--	--	--

 52
5. Is the first aid equipment in good working order?

--	--	--	--	--	--	--	--	--	--	--	--

 53
6. Is a resuscitator/inhalator available?

--	--	--	--	--	--	--	--	--	--	--	--

 54
7. Is level of activity appropriate for fitness level of participants?

--	--	--	--	--	--	--	--	--	--	--	--

 55

APPENDIX 1 (v)

PARTICIPANT OPINION SURVEY FOR NORTH SHORE RECREATIONAL PROGRAMS

STUDY OF PARTICIPATION IN PHYSICAL ACTIVITIES

PART V: PARTICIPANT OPINION SURVEY

1. Type of activity - _____
2. Your age: (circle the appropriate category) - (1) less than 30, (2) 30-39, (3) 40-49, (4) 50-59, (5) over 60 years.
3. Length of time in some organized physical activity program? _____ years, _____ months.

Questions 4 through 8: Please circle the appropriate answer to the following questions.

4. How did you find out about this program? (1) from my doctor, (2) from a friend, (3) from a newspaper, (4) from an advertising circular sent to my home, (5) from the recreation department, (6) from the school, (7) other, specify _____
5. What was your major reason for attending this class? (1) to help rehabilitate from some form of injury or sickness (2) am aware of need for good physical fitness, (3) a friend attends, (4) enjoy social aspect, (5) enjoy this type of physical activity, (6) doctor suggested it, (7) spent money to enroll so want to finish, (8) other - specify _____
6. How often do you attend? (1) always, (2) usually, (3) rarely.
7. How do you most enjoy physical activity? (1) in an organized or supervised group, (2) in an informal group, (3) alone, (4) other, specify _____
8. How do you find the level of activity in this class? (1) too strenuous, (2) just right, (3) not strenuous enough, (4) don't know.

Questions 9 through 17: Please indicate your answer to the following questions by checking (✓) Yes or No.

9. Are you involved in any other form of physical activity at the present time? Yes _____ No _____
If yes, specify _____
10. Will you continue with this same type of program when organized classes end? Yes _____ No _____
11. Will you continue with some other type of physical activity when organized classes end? Yes _____ No _____
If yes, specify _____
12. Does this class cost money? Yes _____ No _____
If yes, how much? _____
If no, would you still take the class if it did cost money? Yes _____ No _____
13. Is periodic testing done in this class? Yes _____ No _____
If yes, does this help motivate you to keep coming? Yes _____ No _____
14. Does your doctor emphasize the need for you to partake in some form of physical activity? Yes _____ No _____
15. Has he ever helped you locate a suitable physical activity program? Yes _____ No _____
16. Have you ever asked him to help you find a suitable program? Yes _____ No _____
17. Are you requested to do some activity outside of class? Yes _____ No _____
If yes, I do the required outside activity - (circle the appropriate choice)
(1) always, (2) usually, (3) rarely, (4) never.
If no, and if I were asked to do the same activity on non-class days I would do it - (circle the appropriate choice)
(1) always, (2) usually, (3) rarely, (4) never.
18. How far do you travel from home to reach this class? _____ miles, _____ don't know.

APPENDIX 2

LETTERS FOR MAILED SURVEY

APPENDIX 2(i)

LETTER SENT TO CHURCHES FOR SUPPLY AND AVAILABILITY INFORMATION

Dear Sir:

This summer the North Shore Union Board of Health is undertaking a study to document all types of organized adult physical activity programs in operation on the North Shore. The types of activities we are interested in could range from mountaineering to ballroom dancing.

The study is a direct outgrowth of the cardiac rehabilitation program at Lions Gate Hospital. There is an urgent need to catalogue all adult physical activity programs in the community for the doctors to use as a guide to refer rehabilitated patients to suitable programs.

To ensure that a comprehensive study is carried out we have contacted you hoping that you will assist us by filling out the enclosed questionnaire. We have sent a few 'Timetable' forms in case you have more than one facility used for adult physical activity programs.

Thank you very much for your assistance and we look forward to receiving the questionnaire at your earliest convenience.

Sincerely,

Gord Stewart

APPENDIX 2(ii)

LETTERS SENT TO APARTMENT MANAGERS FOR SUPPLY AND AVAILABILITY INFORMATION

Dear Sir:

This summer the North Shore Health Department is undertaking a study to document all types of organized adult physical activity programs in operation on the North Shore.

To ensure that a comprehensive study is carried out we have contacted you hoping that you will assist us by filling out the enclosed card and returning it to us as soon as possible. We are interested in learning if any adult swim programs are conducted in your apartment swimming pools. Could you also indicate if any exercise equipment is available at the apartment for residents use.

Thank you very much for your assistance and we look forward to receiving your card at your earliest convenience.

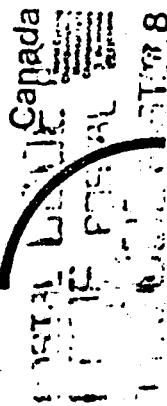
Sincerely,

Gord Stewart

APPENDIX 2 (111)

SAMPLE OF STAMPED, SELF-ADDRESSED CARDS ACCOMPANYING LETTER SENT TO APARTMENT MANAGERS

56



To. Mr. Gord Stewart
c/o Recreation Study
North Shore Health Department
253 East 14th St.
North Vancouver, V7L 2N5
B.C.

148

Please check (✓) the appropriate box.

- | | YES | NO |
|--|--------------------------|-------------------------------------|
| 1. We have adult swim lessons or conditioning classes in our apartment pool. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. We have the following facilities for exercise in our apartment. | | |
| (a) Exercise Room | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (b) Exercise Bicycles | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (c) Weight Lifting Equipment. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

3. Owner of Apartment

Name

Address

Gord Stewart
110 E. 14th St.
North Vancouver

APPENDIX 3

POPULATION INFORMATION

APPENDIX 3
POPULATIONS* USED TO EVALUATE MUNICIPALITIES
RELATIVE TO NATIONAL RECREATION ASSOCIATION STANDARDS

North Shore	136,059
North Vancouver City	35,037
North Vancouver District	62,965
North Vancouver (City & District)	98,002
Municipality of West Vancouver	38,057

* based on December 1973 projections by each municipality using "housing starts" to extrapolate from the 1971 Federal Census.

APPENDIX 4

SUPPLY OF FACILITIES

APPENDIX 4(i)

SUPPLY OF RECREATIONAL FACILITIES ON THE NORTH SHORE

FACILITY										
	NORTH SHORE	NORTH VAN	WEST VAN	SCHOOLS	PARKS & REC	PRIVATE CLUBS	PUBLIC AGENCIES	COMMERCIAL	APARTMENTS	CHURCHES
gymnasiums	108	77	31	67	10	2	1	7		21
playing fields	107	73	34	64	43	0	0	0	0	0
running tracks	8	5	3	7	1	0	0	0	0	0
ice arena	5	3	2	0	2	3	0	0	0	0
swimming pools	77	46	31	3	3	3	0	2	66	0
fitness circuits	3	1	2	0	3	0	0	0	0	0
indoor tennis	5	2	3	0	5	0	0	0	0	0
outdoor tennis	106	64	42	34	52	20	0	0	0	0
indoor badminton	116	67	49	91	13	4	2	0	0	6
indoor handball	8	0	8	8	0	0	0	0	0	0
indoor squash	2	2	0	0	0	2	0	0	0	0
archery	1	0	1	0	1	0	0	0	0	0
lawn bowling (pitches)	44	16	28	0	12	32	0	0	0	0
lawn bowling (locations)	3	1	2	0	1	2	0	0	0	0
canoeing	14	4	10	0	14	0	0	0	0	0
putting greens	4	0	4	0	3	0	0	1	0	0
roller skating	1	1	0	0	0	0	0	1	0	0
boating	14	4	10	0	14	0	0	0	0	0
hiking trails (locations)	20	27	13	0	20	0	0	0	0	0
running trails	3	8	15	0	23	0	0	0	0	0
bike paths	1	0	1	0	1	0	0	0	0	0
other	30	9	21	10	14	2	0	3	0	0
bowling (lanes)	92	56	36	0	0	92	0	0	0	0
golf (locations)	6	3	6	0	3	2	0	1	0	0

APPENDIX 4(11)

TOTAL PARKLAND ACREAGE* ON THE NORTH SHORE

North Shore	1887 acres
North Vancouver	844 acres
West Vancouver	1043 acres

West Vancouver

undeveloped parkland (includes 185 acres in Lighthouse Park)	624 acres
developed parkland (includes 61 acres in Ambleside Park)	366 acres
Schools (considered half of 106 acres for recreational use, other half for building, parking lots etc.)	53 acres

North Vancouver

city parks "dedicated" to 1971	172 acres	
reserved for parkland to 1971	71 acres	253 acres
additional since 1971	10 acres	
district parks		465 acres
schools (half of 252 site acres)		126 acres

* total parkland acreage includes neighbourhood, community and regional parks. Provincial parks are not included. The North Shore has one provincial park- Mount Seymour, which encompasses 8669 acres.

APPENDIX 4(iii)

SUPPLY OF HIKING TRAILS, RUNNING TRAILS AND BICYCLE PATHS ON THE NORTH SHORE

	Length of Course (in miles)							Composition of surface				Terrain of Course	
	10 or less	11-20	21-30	31-40	more than 40	pavement	sawdust	dirt	gravel	other	Flat	Variable	hilly
hiking trail	19	1	0	0	0	0	19	1	0	6	7	7	
running trail	22	1	0	0	0	3	19	1	0	9	7	7	
bike route	1	0	0	0	1	0	0	0	0	0	1	0	

APPENDIX 4(iv)

HIKING TRAILS IN LARGE RECREATION AREAS ON THE NORTH SHORE

Location	Acreage of Park	Trail Mileage	Terrain of Trails
Hollyburn Ridge	305	11-20	hilly
Lighthouse Park	185	11-20	variable
Lynn Canyon	192	11-20	variable
Mount Seymour	8669	21-30	hilly

OTHER NORTH SHORE HIKING AREAS

Baden Powell Centennial Trail (Deep Cove to Horseshoe Bay)

Black Mountain (near Horseshoe Bay)

Grouse Mountain (top of Capilano Road)

Goat Mountain (near Grouse Mountain)

APPENDIX 4 (Y)
 NORTH SHORE MULTI-USE FACILITIES
 TYPES OF SPECIALIZED FACILITIES AVAILABLE

Name of Facility	Gymnasium	Field	Track	Ice arena	Swimming pool	Fitness circuit	Tennis	Badminton	Handball	Canoeing	Boating	Hiking trail	Running trail	Bike path
North Vancouver Secondary School	*	*	*			*	*	*						
Sutherland Junior Secondary School	*	*	*			*	*	*						
North Vancouver Recreation Centre	*		*	*		*	*	*						
West Vancouver Community Centre	*		*	*	*	*	*	*						
Handsworth Secondary School	*		*			*	*	*						
Cates Park														
Whytecliff Park													*	*
West Vancouver Secondary School	*	*	*			*	*	*		*	*			
Hollyburn Country Club	*		*	*		*	*	*						
Ambleside Park	*	*	*	*	*	*	*	*		*	*			*

APPENDIX 5

AVAILABILITY OF FACILITIES

APPENDIX 5(1)

AVAILABILITY OF NORTH SHORE FACILITIES BY AREA, TYPE OF FACILITY AND CONTROLLING ORGANIZATION

percent	NORTH SHORE		WEST VANCOUVER		PARKS & RECREATION		PRIVATE CLUBS		Y.M.C.A.		COMMERCIAL ENTERPRISES		CHURCHES		SCHOOL GYMS		FIELDS	
	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical	unoccupied	occupied by organized adult physical
	82.7	3.4	80.8	2.5	86.1	5.1	79.5	2.9	79.2	15.0	21.0	2.7	4.8	73.4	7.3	83.8	0.9	75.8
	13.9	16.7	8.8	17.6	5.9	5.9	N/A	N/A	N/A	N/A	21.8	8.9	23.3					

APPENDIX 6
CONTENT OF PROGRAMS

APPENDIX 6(1)

NUMBER OF ORGANIZED PHYSICAL ACITIVITY PROGRAMS OFFERED BY
NORTH SHORE SPONSORING ORGANIZATIONS

Sponsoring Organization	Number of Classes Offered	Percentage of Total Number of Classes Offered
School Board Adult Education	31	10.0
Recreation Departments	110	35.6
Y.M.C.A.	14	4.5
Private Clubs	124	40.2
Commercial Organizations	8	2.5
Other (includes classes at churches and some self- organized groups using school facilities)	22	7.1
Total	309	100.0

APPENDIX 6(ii)

TYPES OF ORGANIZED PHYSICAL ACTIVITY CLASSES AVAILABLE
ON THE NORTH SHORE

Type of Activity	Number of Classes Available	Percentage of Total Number of Classes Available
Tennis	202	65.4
Yoga	36	11.7
Adult Fitness	32	10.4
Badminton	11	3.5
Dancing	6	1.9
Golf	4	1.3
Volleyball	4	1.3
Swim Conditioning	4	1.3
Basketball	3	1.0
Martial Arts	3	1.0
Carpet Bowling	1	0.3
Swim Instruction	1	0.3
Soccer	1	0.3
Floor Hockey	1	0.3
Total	309	100.0

APPENDIX 6(iii)

TYPES OF ORGANIZED CLASSES OFFERED BY NORTH SHORE

SPONSORING ORGANIZATIONS

Type of Activity	Sponsoring Organization					
	School Board	Recreation Department	Y.M.C.A.	Private Clubs	Commercial Organizations	Others
Tennis	*	*	*	*		
Yoga	*	*	*		*	*
Adult Fitness	*	*	*		*	*
Badminton	*	*		*		
Dancing	*	*			*	
Golf	*					
Volleyball	*	*				*
Swim Conditioning		*			*	
Basketball		*				*
Martial Arts	*	*			*	
Carpet Bowling		*				
Swim Instruction	*	*				
Soccer	*					

APPENDIX 6(iv)
ATTENDANCE AND CAPACITY OF CLASSES IN NORTH SHORE
PHYSICAL ACTIVITY PROGRAMS

	Number of People Served per Class	Number of People Capable of Serving per Class	Resulting Attendance as a Percentage of Maximum Capacity*
All Classes	13.42	17.53	76.6%
Adult Fitness Classes	25.21	38.79	65.0%
<u>Organizations</u>			
School Board Adult Education Classes	21.38	32.20	66.4%
Recreation Department Classes	18.04	24.03	75.1%
Y.M.C.A. Classes	26.38	41.00	64.3%
Private Clubs	6.54	6.64	98.5%
Commercial Organizations	11.67	24.17	48.3%
Others	17.40	21.67	80.3%

*maximum capacity was determined by (a) the size of the facility, and (b) the number of participants the instructor felt he could safely and adequately supervise.

APPENDIX 6 (v)

CHARACTERISTICS OF ACTIVITIES IN NORTH SHORE PHYSICAL ACTIVITY PROGRAMS

	TYPE OF ACTIVITY (percent)					NATURE OF ACTIVITY (percent)			LEVEL OF ACTIVITY (percent)		
	COMPETITIVE		NON-COMPETITIVE		INSTRUCTION	PARTICIPATION		BEGINNER	INTERMEDIATE		ADVANCED
In General	33.6	66.3	29.4	70.6	61.4	31.3	7.1				
Adult Fitness	6.2	93.8	0	100.0	56.2	43.8	0				
<u>Organizations</u>											
Adult Education	32.3	67.7	12.9	87.1	80.6	19.4	0				
Parks & Recreation	15.5	84.5	71.8	28.2	80.6	19.4	0				
Private Clubs	54.0	46.0	2.4	97.6	59.6	40.4	0				
Y.M.C.A.	0	100.0	15.4	84.6	23.1	76.9	0				
Commercial	0	100.0	14.3	85.7	71.4	28.6	0				
Other	36.4	63.6	9.1	90.9	81.8	18.2	0				

APPENDIX 6(vi)

SCOPE AND FORMAT OF CLASSES IN NORTH SHORE PHYSICAL ACTIVITY PROGRAMS
 NUMBER OF SESSIONS PER WEEK, DURATION OF SESSIONS, NUMBER OF SEASONS PER YEAR

percentage of classes	number of sessions per week					duration of each session (min)					number of seasons offered						
	1	2	3	4	5	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	1	2	3	4
	In General	51.3	10.3	37.8	0.3	0.3	1.6	74.7	14.8	8.9	26.5	43.4	21.4	8.7			
Adult Fitness	46.6	26.7	26.7	0	0	13.3	56.7	20.0	10.0	3.2	0	53.1	43.7				
Adult Education	100.0	0	0	0	0	25.8	45.2	29.0	0	38.7	0	58.1	3.2				
Parks & Recreation	27.5	21.1	50.5	0.9	0	0	80.0	12.7	7.3	57.3	12.7	28.0	2.0				
Private Clubs	54.9	0.8	43.5	0	0.8	0.8	95.0	0	4.2	0.8	96.8	0	2.4				
Y.M.C.A.	30.8	38.4	30.8	0	0	0	69.2	15.4	15.4	15.4	0	15.4	69.2				
Commercial	60.0	0	40.0	0	0	80.0	0	20.0	0	14.3	0	0	85.7				
Other	86.4	9.1	4.5	0	0	0	27.3	27.3	45.4	0	0	68.2	31.8				

APPENDIX 6 (vii)

FITNESS ASPECTS OF NORTH SHORE PHYSICAL ACTIVITY PROGRAMS

A RANKING OF THE EMPHASIS PLACED ON STRENGTH, SUPPLENESS, AND STAMINA

percentage of classes	STRENGTH Rank in Importance			SUPPLENESS Rank in Importance			STAMINA Rank in Importance					
	1st	2nd	3rd	1	2	3	1	2	3			
	mean class time			mean class time			mean class time					
In General	0.8	18.2	80.8	12.9	40.2	57.8	1.9	33.8	58.9	23.9	17.2	53.3
Adult Fitness	0	34.6	65.5	17.9	62.1	37.9	0	48.4	37.9	27.5	34.5	33.7
Adult Education	0	71.4	28.6	20.6	67.9	25.0	7.1	56.2	32.1	3.6	64.3	23.2
Parks & Recreation	2.0	16.4	81.6	20.1	24.5	73.4	2.1	36.5	73.5	10.1	16.3	43.4
Private Clubs	0	2.3	96.7	4.4	45.0	54.5	1.5	32.0	54.9	43.2	1.8	63.6
Y.M.C.A.	0	15.4	84.6	16.5	15.4	84.6	0	39.6	84.6	0	15.4	43.9
Commercial	100.0	0	0	31.0	0	100.0	0	66.0	0	0	100.0	3.0
Other	0	66.7	33.3	10.0	100.0	0	0	85.0	0	33.3	66.7	5.0

APPENDIX 6(viii)

NORTH SHORE PHYSICAL ACTIVITY PROGRAMS SUMMARY OF PARTICIPANT OPINION SURVEY

Question	Percent answering "yes"										
	In-General	Under 30	30-39	40-49	50-59	60 and over	Adult Education Parks and Recreation Private Clubs Y.M.C.A. Commercial				
14. Does your doctor emphasize the need for you to partake in some form of physical activity?	38.3	20.4	36.5	50.0	63.6	52.2	27.1	32.4	33.3	58.4	56.5
15. Has he ever helped you locate a suitable physical activity program?	4.7	2.2	3.9	9.2	6.4	0.0	5.1	3.3	7.1	7.0	4.3
16. Have you ever asked him to help you find a suitable program?	2.0	2.2	1.7	0.9	2.1	0.0	3.0	1.5	0.0	0.9	8.7

APPENDIX 6 (ix)

EDUCATIONAL ASPECTS OF PHYSICAL ACTIVITY CLASSES ON THE NORTH SHORE

Statements	Percentage of Responses				
	always	frequently	occasionally	rarely	never
1. The role of fitness in everyday life is stressed	0	12.3	9.8	35.1	42.8
2. The relationship of this activity to everyday life is outlined.	0	6.2	16.5	33.0	44.3
3. The relationship of this activity to overall fitness is explained.	0	10.4	8.2	44.8	36.6
4. The rationale for doing specific exercises is outlined.	28.9	21.6	46.4	2.6	0.5
5. The use of fitness testing is included.	1.0	6.3	1.0	0.5	91.2
6. The atmosphere of the class is one of:					
(a) relaxation	13.4	35.6	44.8	6.2	0
(b) enjoyment	46.4	47.4	5.2	1.0	0
(c) formality	0	80.9	17.0	2.1	0
(d) pressure to improve individually	2.1	53.1	38.6	1.0	5.2
(e) pressure to improve faster than others	0	0.5	33.5	13.9	52.1

APPENDIX 6 (x)

SAFETY ASPECTS OF NORTH SHORE PHYSICAL ACTIVITY CLASSES
 PERCENTAGE OF CLASSES PROVIDING THE FOLLOWING SERVICES

percentage of classes where:	percentage of classes providing the following services						
	General	School Board	Recreation Department	Y.M.C.A.	Private Clubs	Commercial	Other
1. Medical clearance is a prerequisite to the class.	0	0	0	0	0	0	0
2. Pretesting is carried out by the instructor.	4.0	0	1.2	69.2	0	0	0
3. There is medical supervision (doctor or nurse) available	0	0	0	0	0	0	0
4. There is general first aid equipment available.	60.7	70.0	5.3	84.6	55.7	100.0	0
5. There is a resuscitator available.	0	0	0	0	0	0	0
6. Activity level is appropriate for fitness level of participants.	97.2	78.9	98.8	100.0	98.4	100.0	100.0

APPENDIX 7

QUALITY OF INSTRUCTION

APPENDIX 7(i)

AGE RANGE OF INSTRUCTORS
IN NORTH SHORE PHYSICAL ACTIVITY PROGRAMS

<u>Age (years)</u>	<u>Number of Instructors (n=39)</u>
less than 30	20
30-39	4
40-49	7
50-59	2
60 and older	0
not recorded	6

Appendix 7(11)

EDUCATIONAL BACKGROUND OF INSTRUCTORS
IN NORTH SHORE PHYSICAL ACTIVITY PROGRAMS

<u>Degrees</u>	<u>Number of Instructors holding degrees indicated</u>
B.A.	3
B.Sc.	3
B.Ed.	2
B.P.E.	1
M.Sc.	1
Ph.D.	1
<u>Diplomas</u>	<u>Number of Instructors holding diploma indicated</u>
Recreation	1
Physical Education	2
Water Safety Instructor	2
Royal Life Saving Society Instructor	3
Others	11
(including yoga, tennis, martial arts, dance, and outdoor recreation)	
<u>First Aid Training</u>	<u>Number of Instructors</u>
St. John's First Aid	4
Industrial First Aid	1
Athletic Injuries	1
Others	5
(including civil defense, anatomy and physiology)	

APPENDIX 7(iii)
WORK EXPERIENCE OF INSTRUCTORS
IN NORTH SHORE PHYSICAL ACTIVITY PROGRAMS

Type of Work Experience	Mean (years)	Standard Deviation	Range (years)
Full-time (n= 7)	3.23	4.55	1 to 14
Part-time (n=32)	4.97	8.79	.67 to 42

APPENDIX 7 (iv)

EVALUATION OF INSTRUCTORS IN NORTH SHORE PHYSICAL ACTIVITY PROGRAMS

<u>Characteristics shown or Teaching Methods used</u>	<u>Percentage of Instructors that exhibit that Characteristic or use that Teaching Method</u>				
	always	frequently	occasionally	rarely	never
shows empathy for participants	30.1	53.3	13.3	3.3	0
stresses enjoyment	33.3	56.7	8.0	2.0	0
stresses relaxation	16.7	40.0	26.6	16.7	0
stresses each person work at own level	30.0	26.7	26.7	16.6	0
explains rational for specific exercises	13.3	36.7	20.0	26.7	3.3
is well received by participants	73.3	20.0	6.7	0	0

APPENDIX 8

PARTICIPANT OPINION INFORMATION

NORTH SHORE PHYSICAL ACTIVITY PROGRAMS PARTICIPANT OPINION SURVEY

Population of Respondents

<u>Organization</u>	<u>Percentage of Participants surveyed</u>
Adult Education	19.5
Recreation Centres	52.2
North Shore Y.M.C.A.	21.1
Commercial Orgnaizations	4.4
Private Clubs	2.8

<u>Type of Class</u>	<u>Percentage of Total surveyed</u>
Women's Classes	46.3
Co-educational Classes	42.1
Men's Classes	11.6

<u>Type of Activity</u>	
Fitness	47.7
Tennis	20.3
Yoga	20.1
Dancing	4.6
Swim Conditioning	2.4
Golf	1.8
Martial Arts	1.8
Volleyball	1.3

Age Range of Participants
(in years)

less than 30	27.2
30-39	34.8
40-49	23.8
50-59	8.9
over 60	5.1

APPENDIX 8 (ii)

NORTH SHORE PHYSICAL ACTIVITY PROGRAMS PARTICIPANT OPINION SURVEY

QUESTION	BY AGE					BY ORGANIZATION					
	In General		30-39	40-49	50-59	60	Adult Education	Parks & Recreation	Private Clubs	Y.M.C.A.	Commercial
	30	30-39	40-49	50-59	60	Adult Education	Parks & Recreation	Private Clubs	Y.M.C.A.	Commercial	
5. What was your major reason for attending this class? (in percent)											
rehabilitation	5.4	3.6	3.3	5.6	12.8	15.5	6.8	4.3	0	5.2	16.6
aware of need	57.9	47.3	61.0	58.9	66.0	76.9	53.8	53.2	40.0	76.3	54.2
friend attends	1.1	1.4	1.1	1.6	0	0	1.9	0.7	6.7	0	4.2
enjoy social aspect	2.2	4.3	1.1	1.6	0	3.8	2.9	2.9	0	0.9	0
enjoy this activity	26.8	36.7	27.5	24.3	14.9	0	26.0	32.5	53.3	12.3	16.6
doctor suggested	1.7	0	0.5	4.8	2.1	3.8	0	1.4	0	3.5	4.2
spent money	0.9	0.9	0	1.6	4.2	0	1.9	0.4	0	0.9	4.2
other	4.0	5.8	5.5	1.6	0	0	6.7	4.6	0	0.9	0

APPENDIX 9

**CATALOGUE OF FACILITIES AND PHYSICAL ACTIVITY PROGRAMS
AVAILABLE FOR ADULTS ON THE NORTH SHORE**

A CATALOGUE
OF
FACILITIES & PHYSICAL ACTIVITY PROGRAMS
AVAILABLE FOR
ADULTS
ON THE NORTH SHORE

prepared by
THE NORTH SHORE HEALTH DEPARTMENT



INTRODUCTION

The following catalogue is an outgrowth of a study carried out by the North Shore Health Department in the summer of 1974. The study consisted of three parts:

- (1) a lengthy document outlining the supply and availability of facilities, the content of programs and the quality of instruction in adult physical activity programs on the North Shore. In addition, an opinion survey of the participants in these programs was carried out.
- (2) a manual explaining how to carry out the same study in other communities. This included survey forms and instructions as to their use, computer programs used and an outline of problems encountered.
- (3) this easy-to-use catalogue outlining all pertinent organizations, programs and facilities involving adult physical activities on the North Shore.

It is felt that this third part, the catalogue, should have the greatest impact. By making the community aware of opportunities available to them, it is hoped that more people will become involved in some vigorous, satisfying physical activity.

MAJOR GROUPS PROVIDING FACILITIES OR ORGANIZED PHYSICAL ACTIVITY PROGRAMSPUBLIC ORGANIZATIONS

1	Adult Education, School Board	721 Chesterfield, N.Van.	985-8741
2	North Shore Y.M.C.A.	1705 Marine Dr., W.Van.	926-5541
3	North Van District Parks	Hunter & Mountain Hwy.	987-2622
4	North Van Rec Centre	123 East 23rd., N.Van.	988-6166
5	N.Van Recreation Commission	146 West 16th, N.Van.	985-8261
6	Silver Harbour Manor Centre	144 East 22nd, N.Van.	980-2474
7	West Van Parks Office	750 17th, W.Van.	922-9136
8	West Van Community Centre	2158 Fulton, W.Van.	926-3266
9	West Van Ice Arena	2185 Fulton, W.Van.	926-1818

COMMUNITY SCHOOLS

10	Burrard View Community School	1475 Deep Cove Road, N.Van.	929-2922
11	Queen Mary Community School	230 West Keith Rd, N.Van.	980-5114
12	Ridgeway Community School	420 East 8th, N.Van.	980-5222
13	Eagle Harbour Community School	5575 Marine Dr., W.Van.	921-7425
14	Glen: Eagles Community School	6350 Marine Dr., W.Van.	921-7421

HEALTH SPAS

15	European Health Spa	3751 Delbrook, N.Van.	985-3148
16	Figure Magic	138 West 16th, N.Van.	980-4881
17	Riveria Swimming and Fitness Cen.	148 West 14th, N.Van.	980-9358

DANCE STUDIOS

18	Ann Gordon Ballet School	286 Pemberton, N.Van	988-5811
19	Anna Wyman Studio of Dance Arts	656 16th, W.Van.	926-6535
20	Dorothy Hunter Ballet School	Mountain Highway	
21	George Walker Ballet School	3018 Edgemont Blvd., N.Van	985-4071
22	North Shore Dancing School	130 Lonsdale, N.Van.	987-5733

PRIVATE CLUBS

23	Capilano Tennis Club	Capilano and Upper Levels	
24	Capilano Winter Club	2035 Fullerton, N.Van.	980-2661
25	Evergreen Squash Club	1802 Glenaire Dr., N.Van.	985-8636
26	Hollyburn Country Club	950 Crosscreek, W.Van	922-0161
27	Lawn Bowling Club of West Van.	Marine Dr. & 20th, W.Van.	922-0411
28	North Shore Winter Club	1325 E. Keith Rd., N.Van.	985-4135
29	North Van. Lawn Bowling Club	Lonsdale & 22nd, N.Van.	985-2321
30	West Van Tennis Club	21st & Fulton, W.Van.	922-0901

OTHER GROUPS

31	Greenwood Archers		926-1229
32	North Shore Hikers		228-9140
33	Outdoor Recreation Club	c/o West Van Rec Centre	926-3266
34	Stardust Roller Skating Rink	710 West 14th, N.Van.	988-0222
35	West Van Cricket		988-8613
36	Martial Arts Institute	1485 Marine Dr., N.Van.	988-4515

TYPES OF ORGANIZED PHYSICAL ACTIVITIES AVAILABLE

Note: Under the heading Organizations Providing the Activity, only the code numbers are given. To get full name, address, and telephone number for further information, refer to page 2 of the catalogue.

<u>Type of Activity</u>	<u>Organizations Providing the Activity</u>
adult fitness	1, 2, 4, 6, 8, 15, 16, 17, 20, 12.
badminton	1, 4, 8, 5, 10, 11, 12, 13, 26.
ballet	4, 8, 18, 21.
ballroom dancing	1, 4, 8, 11, 22.
basketball	4.
belly dancing	1.
bicycling	13.
carpet bowling	4, 8.
cricket	35.
curling	4, 24, 26, 28.
eurythmy	1.
golf	1.
gymnastics	8.
hiking and backpacking	13, 32.
judo	4.
karate	11, 36.
kung fu	1, 13, 36.
lawn bowling	27, 29.
modern (creative, jazz) dance	1, 18, 19, 20, 21.
mountaineering	1, 32.
scottish dancing	1.
skating	1, 9, 26.
ski conditioning	2, 4.
skin & scuba diving	1, 4.
soccer	11.
softball	13.
squash	25, 26
swim conditioning	4, 5, 24, 26.
swim lessons	4, 5, 7, 13, 26, 28.
synchronized swimming	4.
tae quan do	36,
tai chi	4.
tennis	1, 2, 4, 5, 8, 10, 23, 24, 26, 28, 30.
volleyball	4, 10, 12, 13.
yoga	1, 2, 4, 8, 5, 11, 17.

FITNESS CIRCUITS

Bridgman Park	East Keith Road at Lynn Creek, North Van
Ambleside Park	13th St. and Marine Dr., West Van
Parc Verdun	Gallagher and Marine Dr., West Van

SAWDUST RUNNING TRAILS

William Griffin Park	800 Blk Queens, North Vancouver
Bridgman Park	East Keith Road at Lynn Creek, North Van
Draycott Park	between Westover and Draycott, North Van
Eldon Park	Ruby and Sunset Blvd, North Van
Ambleside Park	13th St. and Marine Dr., West Van
Parc Verdun	Gallagher and Marine Dr., West Van

RUNNING TRACKS

Mahon Park	West 16th and Jones, North Van
Handsworth Sec School	1044 Edgewood, North Van
North Van Sec School	210 East 23rd, North Van
Sutherland Jr. Sec	1860 Sutherland, North Van
West Van Sec School	1750 Mathers, West Van

TRAILS

		<u>terrain</u>
Grouse Mountain	top of Capilano Road	hilly
Black Mountain	Hwy 99 & Horseshoe Bay turnoff	hilly
Hollyburn	West Vancouver	variable
Capilano (canyon) Park	Capilano River Area	variable
Seymour Prov. Park	Mount Seymour	hilly
Lynn Canyon	Ft of Peters Rd off Lynn Valley	hilly
Baden Powell Trail	Deep Cove to Horseshoe Bay	hilly
Greenwood Park	Ridgeway and 23rd, North Van	variable
Heywood Park	McKay & 19th St., North Van	hilly
Cates Park	3900 Blk Dollarton Hwy	variable
McKay Creek Park	Roosevelt Cres at McKay,	hilly
Hay Park	1900 Blk Inglewood, West Van	flat
Klahanie Park	Belle Isle St., West Van	flat
Lighthouse Park	Marine Dr. and Beacon, West Van	variable
Leyland Park	Braeside and Fuiton Ave,	hilly
McKechine Park	Bayridge and Mathers, West Van	variable
North Piccadilly Park	Clovelly Walk, West Van	flat
Parc Verdun	Gallagher and Marine Dr,	flat
Tantalus Park	Nelson Ave and Marine Dr.	hilly
West Bay Park	Marine Dr. and Maple Lane	hilly
Woodward Park	Capilano River Bank	variable
Whytecliff Park	Marine Dr. and Lorne Ave	variable
Caulfield Park	Picadilly and Marine Dr.	flat
Centennial Walk	Beach 19th to 24th St, W. Van	flat
Cypress Falls Park	Woodgreen Place, West Van	variable
Douglas Woodward Park	17th St. and Union Ave	hilly

BIKE ROUTE

In West Vancouver, 4½-5 miles are presently marked and has variable terrain. Starting from Marine Drive and Capilano River, go behind Park Royal, through Ambleside Park, west on Argyle to 18th, north on 18th to Bellevue, west on Bellevue to 29th, north on 29th to Mathers then west on Mathers to McKechnie Park. (Route is presently marked to Bellevue and 29th. The route is on a bike path and quiet residential streets.)

SWIMMING POOLS

Mahon Park	West 16th and Jones, North Van	Outdoor
European Health Spa	3751 Delbrook, North Van	Indoor
Riveria Swimming & Fitness Center	148 West 14th North Van	Indoor
North Van Rec Center	123 East 23rd, North Van	Indoor
Ambleside Park	13th and Marine Dr., West Van	Outdoor

PUBLIC TENNIS COURTS

		<u>no. of courts</u>
Princess Park	Princess and Osborne, North Van	2
Upper Lynn Park	Underwood and Dempsey, North Van	2
Welch Ship Park	Welch and Redwood, North Van	2
Boulevard Park	Grande Blvd and 13th St., North Van	4
Cates Park	3900 Blk Dollarton Hwy, North Van	2
Delbrook Park	Delbrook and Queens, North Van	2
Eldon Park	Ruby and Sunset Blvd, North Van	2
Murdo Fraser Park	Elizabeth Way and Paisley, North Van	7
Myrtle Park	Banbury Rd. and Summerside N. Van	4
Argyle Sec School	1131 Frederick Rd, North Van	4
Balmoral Junior Sec	3365 Mahon, North Van	2
Carson Graham Sr. Sec	2145 Jones Ave, North Van	4
Delbrook Sr. Sec.	631 West Kings Rd, North Van	3
Handsworth Sec. School	1044 Edgewood, North Van	3
North Van Sec School	210 East 23rd, North Van	2
Sutherland Jr Sec.	1860 Sutherland, North Van	2
Windsor Sec.	931 Broadview Dr., North Van	4
Glenmore Park	Glengarry and Glenmore Dr., West Van	2
Larson Bay Park	Gleneagles Drive, West Van	1
Parc Verdun	Gallagher and Marine Dr., West Van	3
29th and Marine Park	29th and Marine Dr., West Van	2
West Van Rec. Centre	22nd and Marine, West Van	3
Westridge Park	3600 Blk Westridge, West Van	1
Whytecliff Park	Marine Dr. and Lorne Ave, West Van	2
North Van Rec Centre	123 East 23rd North Van	2
Sentennial Sec School	1250 Union St., West Van	2
West Van Sec School	1750 Mathers, West Van	3
Altamont Playground Park	Gisley Ave and Roseberg Ave. W. Van	2
Ambleside Park	13th and Marine Dr., West Van	2
Burley Drive Park	10th St. and Burley Dr., West Van	1 (grass)
Cypress Falls Park	Woodgreen Place, West Van	1

GENERAL INFORMATION

1. There are very few programs available for adults during the months of July and August. Most run throughout the school year beginning in September and ending in May or June.
2. Specific times and locations of programs are not given. This would have made the catalogue too lengthy and unmanageable. However a pattern does occur. In general, the programs offered take place at the following times:

For men - evenings Monday through Thursday and noon hours Monday through Friday.

For women - evenings Monday through Thursday and mornings and afternoons Monday through Friday.

Very few Friday evening or Saturday and Sunday classes exist.

3. School gymnasiums are available for any non-profit community group for self-organized activities (eg. weekly badminton). Almost all elementary schools and all secondary schools are suitable for badminton, basketball, volleyball etc. . West Vancouver school gyms are free and North Vancouver school gyms require a nominal fee for seasonal use. Many community groups now play regularly September through May but much space is still available. For further information contact:

West Vancouver School Board - 922-9151
North Vancouver School Board- 987-8141

4. Facilities are also available in three community centers in North Van - Capilano Hall (Capilano Road and Upper Levels), Sey-Lynn Hall (Mt. Highway and Hunter), and Lynn Valley Hall (3500 block Lynn Valley Road) For further information contact Diane Ready or Perry Kulak at the North Vancouver Recreation Commission (985-8261)
5. Adult Education courses in a variety of physical activities are offered by the School Board through the year at nine schools in West Van and fifteen schools in North Van.
6. Not all activities are offered throughout the entire year. Many are offered seasonally. Detailed information should be gained from each individual organization.

APPENDIX 10

**ARTICLE ACCOMPANYING CATALOGUE INFORMATION IN
NORTH SHORE NEWSPAPERS**

ARTICLE ACCOMPANYING CATALOGUE INFORMATION IN NORTH SHORE NEWSPAPERS
KEEP FIT AND ENJOY MORE

Or, run for fun not your life!

Special to the Times
 By GORD STEWART

Recent articles on fitness in Canadian newspapers and magazines conjure up an alarming picture — out of breath, middle-aged Canadians struggling up a flight of stairs while senior citizens in Scandinavian countries jog effortlessly along forest trails.

It would appear that there is some kind of crusade on to prove, once and for all, that Canadians of all ages are less fit than their European counterparts. The thrust of this campaign is all wrong.

We should not dwell on the fact that we may be less fit than Scandinavians. Instead, we should stress a new lifestyle, similar to theirs, in which exercise plays an important role.

We can keep fit and enjoy it more.

THINK POSITIVE

Perhaps what is needed is something positive and a little closer to home. This can be started by making people more aware of opportunities available to them. With the support of the North Shore Health Department and guidance from a number of doctors at Lions Gate Hospital, such an attempt was made this summer.

Information was gathered on all facilities and programs which are available for adult physical activities on the North Shore. The information provided on this page points out the wealth of opportunity right here in our own community.

One would certainly be hard pressed to find better opportunity in any city in Europe or elsewhere in Canada.

Our mountains are covered with many beautiful and challenging hiking trails and our beaches are excellent for swimming and boating. Tennis courts are in abundance and a number of running tracks and trails provide opportunity for the avid "jogger". Fitness circuits with sawdust-based running tracks can be found in three parks, with plans for two more in the very near future.

VARIETY

Many organizations offer excellent programs for adults who wish to have competent leadership, to participate in a group,

or to receive some type of instruction. The North Van Rec Centre, the North Shore Family YMCA, the West Van Community Centre and School Board Adult Education offer a wide variety of physical activity classes for adults. From fitness classes to volleyball, ballroom dancing to yoga, the opportunity is certainly there.

The best long-term motivation is to find an activity you like, not do something because you think it's good for you.

THE TIMES — Wednesday, September 11, 1974