



An analysis of membership resignation at health clubs in Bozeman, Montana during the calendar year 1986

by David Kevin Melear

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Physical Education

Montana State University

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Abstract:

The purpose of this study was to analyze membership resignations at two health clubs in Bozeman, Montana during the calendar year 1986, in order to identify factors contributing to exercise nonadherence which may have been involved in the members' decision to resign their health club memberships.

A Consumer Health and Exercise Behavior Survey was administered to 150 resigned health club members chosen by a stratified random sample method. Fifty-one completed questionnaires were returned.

The subjects' responses to the questionnaire were analyzed in total, and according to whether the subjects had adhered to or not adhered to a regular exercise program while members of a health club. A Pearson correlation and a Chi-square contingency test were used to determine associations between exercise adherence and demographic and behavioral characteristics of the resigned members.

Two-thirds of the subjects were classified as nonadherers based upon their frequency of weekly exercise and exercise duration while members of a health club. Psychological factors which may have contributed to their nonadherence included improper goal-setting and unsatisfactory goal attainment ($p < .05$), self-motivation ($p < .05$), and perceived exertion or feelings of pain when exercising ($p < .10$). Situational factors which may have contributed to exercise nonadherence included the unavailability of free time to exercise ($p < .10$) and the conflict of exercise with social obligations or activities ($p < .05$).

Demographic associations were found between, age ($p < .05$), marital status ($p < .05$), income ($p < .10$) and exercise nonadherence, but were not determined to be contributing factors. Due to the unavailability of useful data, biological factors were not addressed.

It was concluded that psychological and situational factors may have contributed to the exercise nonadherence of the resigned health club members included in this study. Due to the pervasiveness of nonadherence among the resigned members, it was likely that a relationship existed between membership resignation and the inability to maintain a regular program of exercise.

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Physical Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

November 1988

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APPROVAL

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This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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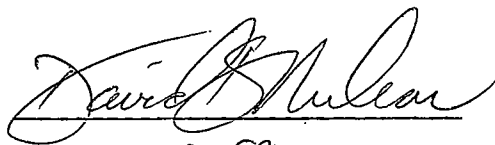
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ABSTRACT

The purpose of this study was to analyze membership resignations at two health clubs in Bozeman, Montana during the calendar year 1986, in order to identify factors contributing to exercise nonadherence which may have been involved in the members' decision to resign their health club memberships.

A Consumer Health and Exercise Behavior Survey was administered to 150 resigned health club members chosen by a stratified random sample method. Fifty-one completed questionnaires were returned. The subjects' responses to the questionnaire were analyzed in total, and according to whether the subjects had adhered to or not adhered to a regular exercise program while members of a health club. A Pearson correlation and a Chi-square contingency test were used to determine associations between exercise adherence and demographic and behavioral characteristics of the resigned members.

Two-thirds of the subjects were classified as nonadherers based upon their frequency of weekly exercise and exercise duration while members of a health club. Psychological factors which may have contributed to their nonadherence included improper goal-setting and unsatisfactory goal attainment ($p < .05$), self-motivation ($p < .05$), and perceived exertion or feelings of pain when exercising ($p < .10$). Situational factors which may have contributed to exercise nonadherence included the unavailability of free time to exercise ($p < .10$) and the conflict of exercise with social obligations or activities ($p < .05$).

Demographic associations were found between age ($p < .05$), marital status ($p < .05$), income ($p < .10$) and exercise nonadherence, but were not determined to be contributing factors. Due to the unavailability of useful data, biological factors were not addressed.

It was concluded that psychological and situational factors may have contributed to the exercise nonadherence of the resigned health club members included in this study. Due to the pervasiveness of nonadherence among the resigned members, it was likely that a relationship existed between membership resignation and the inability to maintain a regular program of exercise.

CHAPTER 1

INTRODUCTION

As with any service-oriented business operating in our economy today, the financial success of health clubs and fitness centers is dependent upon their ability to retain a stable clientele. In the case of commercial health clubs, a stable clientele is represented by a static or increasing membership base which provides revenue to the club through monthly charges. Excessive membership resignations can cause financial problems by: (1) decreasing cash flow during periods of low membership, (2) complicating operating budgets or cash flow projections which are dependent upon past performance and predictable events, and (3) reducing net profit and return on equity. In competitive situations where the market for new members is small, membership resignation can result in a substantial loss of present and future revenue. A high breakeven point can be expected for commercial health clubs with a large investment in racquetball courts, special aerobic exercise floors, high-tech cardiovascular exercise equipment, and well-equipped weight training rooms. In order to cover the fixed and overhead costs associated with elaborate facilities, management must be able to maintain a stable membership or face the consequences of negative cash flow, operating losses, and the ultimate possibility of going out of business.

Commercial health clubs offer a product to the general public; specifically, the facilities, supervision, and programs for the attainment and/or maintenance of physical fitness. When an individual purchases this product by acquiring membership in a club, it is generally assumed that the intent of the individual is to either begin a program of regular exercise or to continue one that has been already established. Conversely, when an individual resigns a health club membership, the intent may be to discontinue an established exercise program in order to join another club, to exercise at home, or to discontinue regular exercise completely. In essence, the problem of membership resignation can be analyzed in terms of an event which occurs as a result from the failure of the health club to help maintain an individual member's adherence to a program of regular exercise. In order to sustain financial productivity as a service-oriented business operation, factors contributing to membership resignation need to be identified by health club management, and then used to formulate an appropriate plan of action to maintain exercise adherence among their members and competitiveness within the health and fitness industry.

Statement of the Problem

The purpose of this study was to analyze membership resignations at two health clubs in Bozeman, Montana during the calendar year 1986, in order to identify factors involved in the members' decision to resign their health club memberships.

Hypothesis

It is hypothesized that health club members who had resigned but adhered to an exercise program would have different demographic and exercise behavior characteristics than the resigned members who were unable to adhere to an exercise program.

Definition of Terms

Exercise adherence - to maintain or not deviate from a regular exercise schedule.

Exercise nonadherence - to not maintain, to deviate from, or drop out of a regular exercise schedule.

Exercise - an activity which improves or alters metabolic capacity.

Exercise program - a planned schedule of regular exercise activity.

Health club/fitness center - a business operating primarily for the purpose of providing facilities, equipment, structure and supervision for an individual participating in an exercise program.

Psychological factors - those determinant factors of exercise adherence such as self-motivation, attitudes, physical fitness values, and perceived exertion or feelings of pain when exercising (Dishman, 1984).

Regular exercise activity/schedule - an exercise program which requires an exercise frequency of at least three days per week for a duration of at least twenty minutes per session.

Situational factors - those determinant factors of exercise adherence including sociological factors and perceived barriers to exercise (Dishman, 1984; Wankel, Yardley & Graham 1985).

Sociological factors - those determinant factors of exercise adherence such as social support and camaraderie, spousal or family support, and group participation.

Delimitations

This study has been delimited to members of health clubs who resigned their membership during the period January 1, 1986 to December 31, 1986 from Universal Sports and Courts or Summerhouse Spa in Bozeman, Montana. It has also been delimited to the responses of these members to questions administered through the use of the questionnaire used in the study.

Assumptions

During the course of this study, it was assumed that members responding to the questionnaire answered all questions and inquiries to the best of their knowledge and with complete candor.

CHAPTER 2

REVIEW OF LITERATURE

When analyzing the reasons for membership turnover in commercial health clubs or fitness centers, the importance of customer satisfaction must be recognized. In a commercial exercise setting, customer satisfaction can be described generally as the positive perception of the customer that he/she is being provided with proper facilities, supervision and structure to be able to increase personal physical fitness. Of equal importance, however, may be the expectation of the customer that he/she will be able to maintain a schedule of regular exercise through the programming offered at the health club/fitness center. If they find that they cannot adhere to a level of exercise necessary to improve or maintain their physical fitness, then customers will most likely resign their membership in favor of exercising on their own, or switch to another club. In this regard, understanding the concept of exercise adherence and its relationship to membership turnover is of utmost importance, because approximately half of the people who begin a health-related exercise program will drop out--most within three to six months of starting (Oldridge, Donner, Buck, Jones, Andrew, Parker, Cunningham, Kavanagh, Rechnitzer & Sutton, 1983). It is imperative that health club/fitness center managers are able to identify the factors contributing to nonadherence, and have sufficient knowledge to

implement appropriate steps to prevent program dropout and eventual membership resignation.

Factors that influence an individual's adherence or nonadherence to exercise is a relatively new concept in the area of physical fitness that has emerged as a subject for study. It is a concept which attempts to describe human traits and factors that are important when establishing and maintaining regular exercise regimens. The traits and factors associated with exercise adherence were identified as important factors in physical fitness programs as a result of studies conducted to determine why patients were dropping out of cardiac rehabilitation programs (Oldridge, Wicks, Hanley, Sutton & Jones, 1978; Oldridge, 1979; Andrew, Oldridge, Parker, Cunningham, Rechnitzer, Jones, Buck, Kavanaugh, Shepard, Sutton & McDonald, 1981; Shepard, Corey & Kavanaugh, 1981). The programs were generally structured and supervised to facilitate regular cardiovascular exercise by post-myocardial or coronary patients by providing structure and supervision. The Ontario-Heart Collaborative Study was a major longitudinal study conducted by the staff of seven Canadian universities and funded by the Ontario Ministry of Health. It was organized for the purpose of determining the effects of physical conditioning on the risk of post-myocardial reinfraction, and included the observation of 733 male participants in a supervised rehabilitative exercise program. The study was conducted over a period of time from 1972 to 1979. The researchers found that during the seven year period, 46.5 percent of the participants had dropped out of the exercise program, with the highest rate of dropout

occurring during the first six months of participation. A large percentage of those who dropped out identified psychosocial reasons for nonadherence, including lack of spousal support, lack of belief in the value of exercise, lack of individualized attention by the exercise program staff, and lack of enthusiasm about the exercise session. Other reasons commonly given for nonadherence included difficulty in attending on time, parking difficulties, and inconvenient facility location. The dropout rate of participants who lacked support from their spouse was three times that of those who experienced positive family reinforcement (Andrew, et al., 1981). The intensity and duration of an exercise session was found not to be a factor. Smokers were found to be two and one-half times more likely to drop out than nonsmokers, and blue collar workers were one and one-half times more likely to drop out than white collar workers (Oldridge, et al., 1983).

Other factors influencing adherence to exercise have been investigated. In a retroactive study conducted at the University of Wisconsin, certain morphological and physiological characteristics were identified as discriminating factors in the prediction of adherence to a supervised exercise program (Dishman, 1981). Through analysis of exercise program attendance and medical records accumulated during a five year period, Dishman found significant relationships between the adherence of exercise program participants and biological characteristics such as percent body fat, body weight, and metabolic capacity. Adult male participants who had lower body weight and percent body fat generally adhered longer to the

university supervised exercise program. Metabolic capacity was determined to be a significant factor only to the extent that it affected participants' self-perceptions of successful goal attainment and their relative improvement in physical fitness (Dishman, 1981).

In other studies, researchers have focused on identifying and explaining the psychosocial factors contributing to successful exercise adherence. In an independent study conducted in the state of Maryland, certain psychosocial factors were found to be strong predictors of leisure exercise behavior in Caucasian women between the ages of 25 and 65 (Noland & Feldman, 1985). The positive attitude of exercise participants toward physical fitness activity was found to be the strongest predictor of successful exercise adherence, whereas perceived barriers to exercise such as economic cost, family responsibility, fatigue, or lack of time was found to be a predictor of nonadherence, especially for younger women. Exercise locus of control, i.e. the perceived control over one's exercise behavior, and strong physical fitness values such as health, appearance, and fitness, were also found to be correlated with successful exercise adherence. A study of 321 participants of a fitness program at the McKay-Dee Hospital in Ogden, Utah had similar results (Allen, 1984). The researcher found that distinguishing characteristics of adherers included better self-perception concerning the effects of exercise, better self-motivation, and more successful goal-setting and time management abilities.

Sociological factors such as friendship, camaraderie and social encouragement in the exercise setting have been found to be important

contributors to exercise adherence (Wankel, 1985). The subjects of this particular study were 111 male participants of an employee fitness program. The researcher reported that the encouragement participants received from their job supervisor was the most important factor in exercise adherence, followed by friendship within the program, encouragement from friends at work, and encouragement from friends outside of work and outside the program. Among the nonadhering participants, the most frequently reported reasons for program withdrawal were inconvenient scheduling, loss of interest in the program, injury, and dissatisfaction with the rigid schedule and inconvenient location. The importance of social support to an individual's adherence to an exercise program was also reinforced by researchers in a four year study at a small college in Jackson, Mississippi (Martin, et al., 1984). The researchers found that participant adherence to an exercise program was higher when there was personalized instructor feedback rather than group feedback. This kind of social support entailed more personal interaction and enthusiasm on the part of the exercise leader when conducting an exercise class.

In summary, determinant factors of exercise adherence can be categorized as either psychological, biological or situational. The psychological factors determining exercise adherence include self-motivation, attitudes toward exercise, physical fitness values, and perceived exertion or feelings of pain when exercising (Dishman, 1984). Biological factors useful in predicting nonadherence to exercise would include physical characteristics such as a member's

body weight, percent body fat, symptoms of coronary heart disease, and smoking habits (Dishman, 1981; Oldridge, et al., 1983; Maddocks, 1984). Situational factors leading to a member's decision to drop out of an exercise program may include lack of social support and camaraderie, lack of spousal support, inconvenient facility location, inadequate facility parking, and time management problems (Allen, 1984; Andrew, et al., 1981; Dishman, 1984; Goodrick, et al., 1984; Noland, 1985; Wankel, 1985).

Various intervention strategies have been used by researchers in their attempts to increase adherence to exercise programs. These strategies have focused mainly on the manipulation of psychological and situational (sociological, environmental) factors affecting adherence. In a comprehensive, longitudinal study conducted by Martin, Dubbert, Katell, Thompson, Raczynski, Lake, Smith, Webster Sikora and Cohen (1984), six different strategies were implemented in an organized exercise program. These included personalized instructor feedback vs. group-oriented feedback, weekly lotteries for attendance, fixed vs. flexible goal-setting, distal vs. proximal goal-setting, distraction-based techniques for cognitive disassociation of discomfort during exercise, and relapse prevention through group dynamics. In a follow-up article, Martin and Dubbert (1984) suggested that these and other strategies can be categorized as behavior modification techniques which can be used to "shape" exercise behavior and thus help participants of exercise programs reach their optimal adherence potential. One of the primary goals of "shaping" is to establish a habit during the first eight to twelve

weeks of participation in an exercise program. Thereafter, it is important to implement strategies which maintain the individual's adherence.

Based upon the results of their 1984 study, as well as findings from other relevant studies, Martin and Dubbert suggested that the use of other behavior modification techniques such as reinforcement control, stimulus control, and behavior contracting would be useful during the acquisition stage of "learning the exercise habit". In addition, intervention strategies such as generalization training, reinforcement fading, self-control procedures, and relapse prevention training could be used during the maintenance stage of participation in an exercise program. Martin and Dubbert (1984) also pointed out the potential usefulness of advertising and marketing in each phase of establishing exercise adherence.

Based upon their studies of the interaction of self-motivation and exercise behavior, Wankel, Yardley and Graham (1985) suggested that intervention strategies can be categorized according to three perspectives: situational, personal, and interactional. Each of these perspectives focuses on different aspects of behavior modification, such as environmental factors (situational), individual personality traits and attitudes (personal), and the combination of environmental and individual factors (interactional). Self-motivation cannot be categorized according to these perspectives, rather, it should be considered as a separate exercise behavior unaffected by either situational or personal factors, or the interaction of both. It was found by the researchers that the

exercise adherence of both high and low self-motivated adults were similarly affected by situational intervention strategies.

Specifically, perceived choice, focused decision-making, and social support techniques were determined to be useful intervention strategies for facilitating regular attendance in a variety of exercise classes. In an earlier study, Wankel (1984) recognized the importance of individualized, behavioristic approaches such as decision-making and social support techniques to increase exercise adherence. The individualized, behavioristic approach was in contrast to the strategy of the health education approach which assumes that if people are informed about the health benefits of regular exercise, they will increase their physical activity.

Although relatively cost-effective in terms of the number of people reached, the mass media approach used by school health and physical education programs has had only limited success in promoting long-term health and exercise behavior changes. Wankel (1984) suggested that the mere desire for improved health or fitness is not a central factor which determines whether an individual will maintain adherence to an exercise program. Social support both within and outside the exercise setting, as well as the leisure and recreational aspects of exercise, have been found to be important considerations when providing the impetus for remaining active in an exercise program (Wankel, 1985). Wankel suggested that attempts should be made to develop camaraderie and social support within an exercise group, and to encourage social support beyond the exercise group. Strategies to

facilitate program enjoyment should be developed to present a program as a leisure experience and not merely an exercise workout.

CHAPTER 3

METHODOLOGY

The purpose of this study was to analyze membership resignations at two health clubs in Bozeman, Montana during the period from January 1 to December 31, 1986, in order to identify biological, psychological, situational, and demographic factors contributing to exercise nonadherence which may have been involved in the members' decision to resign their health club memberships.

Selection of Population and Sample

The population consisted of members of health clubs who resigned their memberships during the period January 1 to December 31, 1986 from Universal Sports and Courts or Summerhouse Spa in Bozeman, Montana. The Summerhouse Spa is a "women's only" health club providing free-weight and Nautilus circuit weight equipment, aerobics, and exercise supervision and counseling. Universal Sports and Courts offers free-weight and Nautilus circuit weight training, aerobics, racquetball courts, an indoor track, and exercise supervision. Both businesses offer locker rooms and jacuzzi facilities. A total of 1,125 members resigned their memberships from these health clubs during 1986, and constituted the subject population for this study.

For purposes of this study, a stratified, random sampling technique was used in choosing the subjects. Approximately thirteen percent of the total population, or 150 subjects, was selected at random with a proportional number of subjects being selected from the resigned membership of each club. Although the population was randomized, the researcher attempted to limit the number of student members selected to ten percent of the total sample. This obvious bias in favor of the non-student population was considered necessary in order to secure as high a response rate as possible from the subjects selected. Due to the transient nature of the student population, a very low response rate was expected from this strata of resigned members. It was also assumed that the most common reason for student member resignation was to relocate to another area after graduating, which was considered to be unimportant data for purposes of this study. The researcher attempted to identify student members through the use of a Montana State University student directory (1985-1986, 1986-1987 Fusser's Guide), or by using the membership records maintained by the health clubs. However, even with this method implemented, it was impossible to positively identify each resigned member as either a student or non-student for selection purposes. As such, the number of resigned student members could only be minimized and not absolutely limited.

The sampling technique consisted of assigning random three, four or five digit numbers to resigned members, and then selecting the sample subjects by use of a random number table. Each subject's name and address was recorded, along with an identification number to be

used for survey control purposes. This identification number was then used in conjunction with the returned questionnaire to ensure the confidentiality of the responding subject. An agreement was signed by both the health club manager and the researcher which served as an acknowledgement of each party's understanding of matters relating to the confidentiality of data, access to records, and entitlement to the results of the research project (Appendix A).

Collection of the Data

Data were collected through the use of a questionnaire, designated the Consumer Health and Exercise Behavior Survey (Appendix C). This questionnaire was designed by the researcher to identify certain factors contributing to exercise nonadherence which may have been involved in the members' decision to resign their health club memberships. It was based upon other questionnaires used in previous research conducted by Allen (1984), Maddocks (1983), Norrid (1984) and Ollison (1982), and was constructed according to the following requirements of the study:

1. Identification of psychological factors
2. Identification of biological factors
3. Identification of situational factors
4. Demographic information

The questionnaire was piloted prior to its administration to the subjects of the study. Pilot work was done by first having selected graduate students and faculty of the M.S.U. Department of Health and Human Development review the questionnaire and make suggestions for

its improvement. The questionnaire was then presented to an undergraduate class of sport management students who were directed to respond to all questions and provide criticism regarding its clarity and format.

Administration of the Survey

The Consumer Health and Exercise Behavior Survey was mailed to those subjects chosen previously by a stratified random sampling method. A stamped, self-addressed envelope was included to facilitate a prompt response. A cover letter accompanied the questionnaire explaining its purpose and the importance of the research being conducted (Appendix B). The letter was typed on official departmental letterhead and signed by the head of the department. A second mailing was made four weeks later in order to secure the response of as many subjects as possible.

Analysis of the Data

The subjects' responses to the questionnaire were compiled, and then analyzed using percentages. The subjects' responses were compiled and analyzed in total, and also according to whether they had adhered to or not adhered to a regular exercise program while a member of the health club. The adherers were defined as those individuals who maintained a program which included an exercise frequency of at least three days a week for a duration of at least twenty minutes per session. This categorization was determined by the subjects' responses to items 7 and 8 of the Consumer Health and

Exercise Behavior Survey (Appendix C). However, since none of the respondents reported an exercise duration of less than twenty minutes, categorization according to adherence was dependent only upon exercise frequency.

A Pearson correlation test was used to determine the existence of linear relationships between exercise frequency during membership and interval or ratio-scaled questionnaire responses. A chi-square contingency test was used to determine if associations existed between exercise adherence and certain categorical response questionnaire items. A contingency coefficient was computed to determine the relative strength of the association.

CHAPTER 4

RESULTS

Of the 150 questionnaires mailed, fifty-one were returned substantially completed for a 34% return rate. A returned questionnaire was determined to be substantially complete if at least 90% of the items of the questionnaire had been responded to by the subjects. A returned questionnaire was required to be substantially complete in order for it to be used meaningfully in the researcher's statistical analysis. Those items of the questionnaire not completed were treated separately as a "nonresponse" category in compiling the data. Seventy-five percent of the respondents were former members of Universal Sports and Courts and 25% were resigned members of Summerhouse Spa (Table 1). Eighteen respondents were classified as exercise adherers according to the frequency and duration of their exercise schedule while a health club member. Thirty-three respondents were classified as nonadherers. Descriptive statistics were compiled in the form of percentages. Questionnaire responses were analyzed descriptively according to three categorizations: responses from all returned questionnaires, those from exercise adherers, and those from exercise nonadherers (Tables 1-32). Statistical analysis included the use of a Pearson correlation test and a Chi-square contingency test (Tables 33-34).

Table 1. Completed questionnaires received from resigned members.

	% of Total Responses	<u>Adherers</u>		<u>Non Adherers</u>	
		%	% of Total	%	% of Total
Universal Sports & Courts	75	91	32	66	43
Summerhouse Spa	25	9	3	34	22
	100%	100%	35%	100%	65%

Demographics

From the data accumulated, an association was observed [χ^2 (1, $N=51$)=4.29, $p<.05$] between age and the ability to maintain a regular schedule of exercise. The adherers were a younger group than the nonadherers, with 67% being between the ages of 15-29 as compared to 36% of the nonadherers (Table 2).

Table 2. Age of Respondents.

	% of Total Responses	<u>Adherers</u>		<u>Non Adherers</u>	
		%	% of Total	%	% of Total
Age: (years) 15-19	8	17	6	3	2
20-29	39	50	17	33	22
30-39	39	33	12	43	27
40-49	10	--	--	15	10
50-59	4	--	--	6	4
60+	--	--	--	--	--
	100%	100%	35%	100%	65%

It was found that an association could not be made between adherence and gender (Table 3). However, a significant association

was observed [χ^2 (1, $N=51$)=7.95, $p<.05$] between adherence and marital status. Eighty-three percent of the adherers were single whereas 57% of the nonadherers were married (Table 4).

Table 3. Gender of Respondents.

	% of Total Responses	Adherers		Non Adherers	
		%	% of Total	%	% of Total
Sex: Male	45	57	20	40	25
Female	55	43	15	60	40
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 4. Marital Status of Respondents.

		% of Total Responses	Adherers		Non Adherers	
			%	% of Total	%	% of Total
Marital Status:	Single	57	83	29	43	28
	Married	43	17	6	57	37
		<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

An inverse correlation was found ($r=-.283$, $p=.10$) between income and those resigned members who maintained a regular schedule of exercise. Forty-nine percent of the adherers reported income below \$10,000 per year, with only 18% indicating annual income of over \$25,000. In comparison, only 28% of the nonadherers reported annual income below \$10,000, while 31% indicated yearly income in excess of \$25,000 (Table 5).

Table 5. Income of Respondents.

		% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
<hr/>						
1986 Annual Income						
5,000 or less	25	43	15	16	10	
5,001 - 10,000	10	6	2	12	8	
10,000 - 15,000	10	6	2	12	8	
15,001 - 25,000	29	27	10	29	19	
25,001 - 35,000	12	6	2	15	10	
Over - 35,000	10	6	2	12	8	
Not responding	4	6	2	4	2	
	<hr/> 100%	<hr/> 100%	<hr/> 35%	<hr/> 100%	<hr/> 65%	

No correlation was found between exercise adherence during health club membership and the education obtained by the resigned members (Table 6).

On the basis of these comparisons, it can be seen that the resigned members categorized as nonadherers were older, more affluent and more likely to be married than the adherers.

Table 6. Education obtained by respondents.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
<hr/>					
Educational Level					
Highest Level Completed:					
Secondary School	6	11	4	3	2
High-School Degree	55	48	18	57	37
Undergraduate College					
Degree	29	29	9	31	20
Masters Degree	8	6	2	9	6
Doctorate	2	6	2	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>
<hr/>					
Years of Education					
High-School Degree Only-					
Years Completed:					
1	--	--	--	--	--
2	--	--	--	--	--
3	4	11	4	--	--
4	14	11	4	15	10
College Degree Only-					
Years Completed:					
1	6	5	2	6	4
2	23	23	8	24	15
3	12	17	6	9	6
4	25	17	5	31	20
5	10	11	4	9	6
Masters Degree-Years					
Completed:					
1	--	--	--	--	--
2	2	--	--	3	2
3	--	--	--	--	--
4	--	--	--	--	--
Doctoral Degree-Years					
Completed:					
1	2	--	--	3	2
2	--	--	--	--	--
3	--	--	--	--	--
4	2	5	2	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Membership Duration

From the analysis of data, a significant association was found [χ^2 (1, $N=51$)=8.13, $p<.05$] between membership duration and the ability to adhere to an exercise program. Eighty-nine percent of the adherers were health club members for less than one year before resigning, compared to 48% of the nonadherers. The remaining 11% of adherers and 52% of nonadherers were members for more than one year (Table 7).

Table 7. Length of membership prior to resignation.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Less than 6 months	32	46	16	25	16
7-12 months	30	43	15	23	15
13-24 months	20	11	4	25	16
Over 2 years	18	--	--	27	18
	100%	100%	35%	100%	65%

Exercise Frequency and Duration

Frequency of exercise prior to membership as well as planned exercise frequency varied significantly between the two groups of resigned members. A significant correlation was found ($r=.393$, $p=.05$) between exercise adherence and weekly exercise frequency prior to becoming a member. Prior to health club membership, sixty-three percent of the adherers exercised at least three days per week compared to just 21% of the nonadherers (Table 8).

Table 8. Actual exercise frequency per week prior to becoming a member.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
None	21	6	2	29	19
1-2 Days	27	20	7	31	20
2-3 Days	16	11	4	19	12
3-4 Days	20	40	14	9	6
More Than 4 Days	16	23	8	12	8
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

A significant correlation was found ($r=.568$, $p=.05$) between planned frequency of exercise at the health club and actual weekly exercise while a member. Every respondent in the adherence group indicated a planned frequency of at least three days per week prior to becoming the member of a health club. Only 43% of the nonadherers had set similar goals (Table 9).

Table 9. Planned exercise frequency per week.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
None	--	--	--	--	--
1-2 Days	8	--	--	12	8
2-3 Days	29	--	--	45	29
3-4 Days	39	60	21	28	18
More Than 4 Days	24	40	14	15	10
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 10. Actual exercise frequency per week while a member.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
None	2	--	--	3	2
1-2 Days	24	--	--	37	24
2-3 Days	39	--	--	60	39
3-4 Days	25	71	25	--	--
More Than 4 Days	10	29	10	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

A significant correlation was found ($r=.411$, $p=.05$) between duration of exercise and adherence. Ninety-four percent of the adherers exercised for at least forty-minutes per session, compared to 66% of the nonadherers. None of the respondents in either group indicated an exercise duration of less than 20 minutes during their period of health club membership (Table 11).

Table 11. Average duration of an exercise session.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Less than 20 minutes	--	--	--	--	--
20-40 minutes	24	6	2	34	22
41-60 minutes	43	40	14	45	29
More than 60 minutes	33	54	19	21	14
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

The exercise frequency of 97% of the adherers either increased or remained the same during the membership period, while 43% of the nonadherers indicated that their frequency of weekly exercise

decreased (Table 12). There was not a significant change in exercise duration for either group during the membership period (Table 13).

Table 12. Change in frequency of exercise during the membership period.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Increased	10	17	6	6	4
Remained the Same	61	80	28	51	33
Decreased	29	3	1	43	28
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 13. Change in duration of an exercise session during the membership period.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Increased	16	29	10	9	6
Remained the Same	74	66	23	79	51
Decreased	10	5	2	12	8
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

In summary, it was found that the respondents who were exercise adherers while they were health club members had maintained regular weekly exercise prior to membership. The nonadherers experienced low exercise frequency prior to becoming a member, and overall did not increase exercise frequency to an adherence level during their membership period.

Other Factors Affecting Exercise Adherence

Other factors which may have contributed to members' exercise nonadherence were analyzed. No significant associations were found between the location, parking facilities or operating hours of the health clubs and the exercise nonadherence of the resigned health club members (Tables 14-16).

Table 14. Health club location was inconvenient.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	31	20	7	37	24
No	69	80	28	63	41
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 15. Health club parking facilities were satisfactory.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	88	89	31	88	57
No	12	11	4	12	8
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 16. Health club operating hours were convenient.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	84	89	31	82	53
No	16	11	4	18	12
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

An association was found [$\chi^2 (1, N=51)=3.12, p<.10$] between the availability of free time to exercise and the nonadherence of the resigned health club members. Sixty-nine percent of the nonadherers indicated a lack of free time available to exercise compared to 46% of the adherers (Table 17).

Table 17. Availability of free time to exercise at the health club.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	39	54	19	31	20
No	61	46	16	69	45
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

No significant associations were found between the frequency of exercising with friends, or socialization at the health club and the ability to adhere to an exercise program (Tables 18-19). However, a significant association was observed [$\chi^2 (1, N=51)=5.00, p<.05$] between exercise nonadherence and the perception of exercise as an activity conflicting with social obligations or activities.

Thirty-four percent of the nonadherers indicated that exercise did conflict with social obligations or activities, whereas only six percent of the adherers indicated that exercise caused a conflict (Table 20).

Table 18. Frequency of exercise with friends at the health club.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Most of the time	28	34	12	24	16
Some of the time	31	37	13	28	18
Seldom	39	29	10	45	29
Not responding	2	--	--	3	2
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 19. Frequency of socialization at the health club.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Most of the time	12	17	6	9	6
Some of the time	33	43	15	28	18
Seldom	51	40	14	57	37
Not responding	4	--	--	6	4
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 20. Exercise at the health club was a conflict with social obligations or activities.

	% of Total Responses	Adherers % of Total		Non Adherers % of Total	
Yes	24	6	2	34	22
No	76	94	33	66	43
	100%	100%	35%	100%	65%

The affect of spousal support on exercise adherence could not be determined due to the significant difference in marital status between the two groups. No significant associations were found between the enthusiasm of health club management, or health club staff, and exercise adherence. The majority of both groups indicated that neither the enthusiasm of the health club manager or staff provided motivation to exercise (Tables 21-22). All of the respondents from both groups indicated that they believed regular exercise would improve one's state of health (Table 23). Similarly, ninety percent of all respondents reported that their free time was well spent when exercising at the health club, with no observable difference between the two groups in that regard (Table 24).

Table 21. Motivation to exercise was provided by an enthusiastic health club management.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Most of the time	18	14	6	18	12
Some of the time	21	17	5	25	16
Seldom	61	69	24	57	37
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 22. Motivation to exercise was provided by an enthusiastic health club staff.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Most of the time	23	34	11	18	12
Some of the time	18	6	2	25	16
Seldom	57	60	22	54	35
Not responding	2	--	--	3	2
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 23. Regular exercise will improve your state of health.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	100	100	35	100	65
No	--	--	--	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 24. Free time was well spent when exercising at the health club.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	90	94	33	88	57
No	10	6	2	12	8
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

A significant association was found [χ^2 (1, N=51)=6.79, $p<.05$] between exercise adherence and the belief that satisfactory progress was being made towards achieving the respondents' exercise goals. Thirty-one percent of the nonadherers indicated that unsatisfactory progress was being made in achieving their exercise goals while a health club member, whereas 100% of the adherers reported that satisfactory progress was being made (Table 25).

Table 25. Satisfactory progress was being made in achieving exercise goals.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	80	100	35	69	45
No	20	--	--	31	20
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

As association was observed [χ^2 (1, N=51)=3.49, $p<.10$] between feelings of physical pain or discomfort and exercise nonadherence. Twenty-eight percent of the nonadherers regularly felt pain or

physical discomfort during exercise compared to only six percent of the adherers (Table 26). No difference was found between the two groups regarding feelings of low physical energy and the ability to exercise. Sixty-two percent of the adherers and sixty-nine percent of the nonadherers reported that feelings of low physical energy did not prevent them from exercising (Table 27). Cigarette smoking was not a factor contributing to exercise nonadherence. Ninety-seven percent of the nonadherers and ninety-four percent of the adherers did not smoke (Table 28).

Table 26. Regular feelings of pain or discomfort when exercising.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	20	6	2	28	18
No	80	94	33	72	47
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 27. Feelings of low physical energy prevents exercise.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Yes	31	34	11	31	20
No	69	66	24	69	45
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 28. Cigarette smoking.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
No, never	74	71	25	75	49
No, quit	22	23	8	22	14
Less than 1 pack/day	4	6	2	3	2
1-2 packs per day	--	--	--	--	--
More than 2 packs/day	--	--	--	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

On the basis of this analysis, it was found that the lack of free time, conflicts with social activities, unsatisfactory goal attainment, and feelings of pain or discomfort during exercise were possible factors contributing to the exercise nonadherence of the resigned health club members in this study.

Exercise Activities and Goals

The most popular exercise activities common to both groups were supervised aerobics, Nautilus weight training, and free weight training. Eighty-eight percent of the adherers and 71% of the nonadherers were involved primarily in those three activities (Table 29).

The improvement of physical appearance and the improvement of one's state of health were exercise goals which received emphasis from both groups. Other goals emphasized were weight control and feeling better physically. The analysis of data here is strictly descriptive in nature, and only attempts to provide a characterization of the two groups' exercise behavior (Table 30).

Table 29. Activities participated in during membership period.

	% of Total Responses	Adherers % of Total		Non Adherers % of Total	
Supervised Aerobics	25	28	10	25	15
Stationary Bicycling		--	--	--	--
Jogging	8	6	2	9	6
Nautilus Training	24	17	6	28	18
Weight Training	27	43	15	18	12
Racquetball	10	--	--	15	10
Rowing Machine	--	--	--	--	--
Jacuzzi, Sauna, Etc.	2	--	--	3	2
Socializing	--	--	--	--	--
Other	4	6	2	2	2
	100%	100%	35%	100%	65%

Reasons for Membership Resignation

The descriptive analysis of the reasons for the respondents' membership resignations revealed some interesting, but inconclusive characteristics of both groups. Thirty-four percent of the adherers indicated that they had resigned their membership due to relocation away from the Bozeman area, and 20% reported that a lack of free time to exercise was the primary reason. Thirty-one percent of the nonadherers indicated a lack of free time to exercise as a reason for membership resignation, while only 17% reported that relocation away from the Bozeman area was the primary cause (Table 31).

Of special interest is that although 34% of the adherers continued to exercise at home after resigning, a surprising 29% discontinued regular exercise altogether. Twenty-two percent of the nonadherers began exercising at Montana State University, 48%

continued to exercise at home, while only six percent discontinued exercise completely (Table 32).

Table 30. Exercise goals after joining the health club (in order of importance).

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
<u>Weight Control</u>					
1	18	11	4	22	14
2	24	29	10	22	14
<u>Increase Muscular Strength</u>					
1	14	14	6	12	8
2	14	23	8	9	6
<u>Improve Physical Appearance</u>					
1	23	29	9	22	14
2	25	29	10	23	15
<u>Have Fun and Reduce Stress</u>					
1	4	6	2	3	2
2	6	--	--	9	6
<u>To Feel Better Physically</u>					
1	16	17	6	15	10
2	19	8	3	25	16
<u>To Make New Friends</u>					
1	--	--	--	--	--
2	--	--	--	--	--
<u>To Improve State of Health</u>					
1	21	17	6	23	15
2	12	11	4	12	8
<u>Other</u>					
1	4	6	2	3	2
2	--	--	--	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 31. Reasons for membership resignation.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Moved away from the Bozeman area	23	34	12	17	11
Could no longer afford the cost	12	11	4	12	8
Injury or illness	2	--	--	3	2
Did not have enough time to exercise	27	20	7	31	20
Became dissatisfied with what the club had to offer	14	12	4	15	10
Other	20	17	6	22	14
Not responding	2	6	2	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 32. Post-resignation exercise program status.

	% of Total Responses	<u>Adherers</u> % of Total		<u>Non Adherers</u> % of Total	
Joined another club:					
Sports & Courts	2	6	2	--	--
Health Habit	8	6	2	9	6
Summerhouse Spa	2	--	--	3	2
Used the exercise facilities and programs at M.S.U.	17	8	3	22	14
Continued to exercise at home	43	34	12	48	31
Discontinued regular exercise	14	29	10	6	4
Other	12	11	4	12	8
Not responding	2	6	2	--	--
	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>100%</u>	<u>65%</u>

Table 33. Chi-square contingency test of demographic or behavioral characteristics associated with exercise adherence.

	Alpha	df	χ^2	C
Age	*.038	1	4.29	.279
Status	*.005	1	7.95	.367
Membership duration	*.004	1	8.13	.371
Free time available to exercise	** .078	1	3.12	.240
Conflict of exercise with social activity	*.025	1	5.00	.300
Perception of progress in achieving exercise goals	*.009	1	6.79	.343
Pain or discomfort during exercise	** .062	1	3.49	.253
df = degrees of freedom			* $p < .05$	
χ^2 = chi-square test statistic			** $p < .10$	
C = chi-square contingency coefficient				

Table 34. Correlation between demographic or behavioral characteristics and exercise adherence.

Demographic or Behavioral Characteristic Variable	Exercise Adherers (N=51)			
	Alpha	df	r_c	r
Income	.10	48	-.257	-.283
Frequency of exercise prior to membership	.05	50	.273	.393
Planned frequency of exercise at the health club	.05	50	.273	.568
Duration of exercise while a member of the health club	.05	50	.273	.411
Years of education	.05	50	-.273	-.012
df = degrees of freedom				
r_c = critical value of the sample coefficient r				
r = sample correlation coefficient				

CHAPTER 5

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Discussion

After analyzing the responses of adherers and nonadherers, it is possible to identify factors associated with adherence to or dropping out from an exercise program. Almost two-thirds of the respondents in this study were classified as nonadherers. It was apparent that those individuals were having problems maintaining a schedule of regular exercise which, if adhered to, would most likely have increased their level of physical fitness. If the main reason for maintaining a health club membership was to benefit from the results of a regular exercise program, then the behavioral characteristics of exercise nonadherers in comparison to exercise adherers could be indicative of factors which ultimately lead to product dissatisfaction and membership resignation.

Biological Factors

Cigarette smoking was the only item included in the Consumer Health and Behavior Survey which addressed biological factors. Since 96% of all respondents reported that they did not smoke, the effect of smoking on exercise adherence for purposes of this study has not been addressed.

Psychological Factors

Several psychological factors were found which may have contributed to the exercise nonadherence of health club members prior to their resignation. These factors were goal-setting and perceived goal attainment, self-motivation, and perceived exertion or feelings of pain when exercising.

In order to realistically expect physical fitness goals to be met, the planned frequency of weekly exercise must be adequate in order to meet those goals. The results of this study showed that only 43% of the nonadherers had planned to exercise at least three days each week. The remaining 57% had set unrealistic exercise goals. Not surprisingly, only sixty-nine percent of the nonadherers felt that satisfactory progress was being made in the attainment of those goals. The importance of the ability to set realistic exercise goals based upon an adequate frequency of planned weekly exercise was indicated by the responses of the adherers. One-hundred percent of the adherers reported that satisfactory progress was being made in the attainment of their exercise goals.

Self-motivation may also have been a factor contributing to the maintenance of an exercise program during a period of membership. Based upon the results of this study, it was found that 63% of the individuals in the adherence group exercised more frequently prior to becoming health club members than 79% of the individuals in the nonadherence group. It was also found that 94% of the adherers were able to exercise for a longer duration than 34% of the nonadherers.

and 97% were able to maintain or increase the frequency of their weekly exercise as compared to 43% of the nonadherers. Motivation to exercise in either group was found to be unrelated to the enthusiasm of the health club manager or staff. Spousal support was also eliminated as a potential contributing factor to exercise adherence in this study. Although both groups valued exercise as a health improvement activity, it was apparent that the adherers were more likely to succeed at maintaining an exercise program during their membership period. This success was in part due to exercise habits already established prior to joining a health club, and the self-motivation to sustain a level of exercise frequency and duration during their membership period. A significant percentage of individuals categorized as nonadherers regularly felt pain or discomfort while exercising. This association would indicate that the adherers had a better ability to dissociate pain or discomfort while exercising. Martin, et al. (1985) observed more successful adherence in subjects who were directed to practice cognitive dissociation during exercise sessions.

Situational Factors

Situational factors which may have contributed to the exercise nonadherence of resigned health club members included the availability of free time and the conflict of exercise with social obligations or activities. Although a substantial proportion of both groups reported that there was not adequate free time to exercise at

the health club, a significantly larger percentage of the adherers (69%) indicated a problem in this area than nonadherers (46%). A majority of both groups did not indicate any inconvenience related to the location, parking facilities, or operating hours of the health clubs; all factors which could contribute to an individual's perception of how much free time was being committed to exercise. It was found that the availability of free time to exercise was mainly dependent upon time management skills, a finding that substantiated those of Allen (1984) and Goodrick, et al. (1984). In some situations, however, time management may not be at issue. What actually influences an individual's perception of the availability of free time to exercise may be due to factors other than time management. A lack of personal value for exercise as a beneficial activity, or as an activity worthy of limited free time may be what is actually affecting an individual's perception of the availability of free time to exercise. In this study, however, a majority of both groups valued exercise at the health club as an activity improving one's state of health, as well as an activity in which free time was well spent. Accordingly, successful time management as it affected exercise adherence in this study was the result of personal efficiency and organizational skills rather than personal value prioritization.

No association was observed between exercise adherence and frequency of exercise with friends or frequency of socialization during exercise. This lack of association would suggest that neither

social support or camaraderie during exercise were factors contributing to the adherence of resigned members included in this study. However, a significant association was found between exercise adherence and an individual's perception of exercise at the health club as a conflict with social obligations or activities. One third of the nonadherers felt that exercise was a conflict as compared to only six percent of the adherers. It would require further study to determine exactly what effect social factors have in determining the exercise adherence of health club members.

Demographic Factors

Based on the results of this study, the resigned members categorized as nonadherers were older, more affluent, and more likely to be married than the adherers. No correlation was found between exercise adherence or nonadherence and education. No association was observed between gender and the ability to maintain an exercise program. These findings are descriptive of the population of interest and are useful in profiling the resigned health club member included in this study. Whether any of these demographic characteristics were factors which affected exercise adherence could not be determined from the results of this study.

Membership Duration

From the analysis of data, a significant association was found between membership duration and the ability to adhere to an exercise program. This is a surprising finding and one that is difficult to

interpret. Even though an individual's membership duration increased, it was not indicative of an increased ability to maintain an exercise program. Oldridge, et al. (1983) found that almost fifty-percent of the people who begin a health related exercise program will drop out, most within three to six months of starting. The association between membership duration and exercise nonadherence implies that other factors such as self-motivation, availability of free time, or social conflicts may make it increasingly difficult over time to maintain a regular exercise schedule.

Conclusions

Based upon the results of this study, factors which may have contributed to the exercise nonadherence of certain health club members in Bozeman, Montana who resigned their memberships in 1986, have been identified. These factors reflected different exercise behavior characteristics between resigned members who maintained a regular schedule of exercise during their membership period and those who did not. Since two-thirds of the resigned members responding to this study were unable to maintain a schedule of regular exercise at the health club, it was apparent that a relationship existed between exercise nonadherence and health club membership resignations.

Although the results of this study are not generalizable to other groups or exercise settings, similar differences in exercise behavior between adherers and nonadherers were found by other researchers to be factors affecting the ability to maintain a schedule of regular

exercise (Allen, 1984; Goodrick, et al., 1984; Martin, et al., 1984; Noland, 1985; Wankel, 1985). Certain demographic characteristics of the resigned members were found to be associated with exercise nonadherence, but were not determined to be contributing factors.

Recommendations

In a review of the literature regarding exercise compliance, Dishman (1986) suggested that exercise is a unique health behavior which cannot be fully explained by the results of past research. Likewise, the demands and reinforcements of exercise cannot be practically compared to those of other health behaviors. In addition, it has not been shown conclusively that the factors determining exercise adherence for one group can be used to predict adherence in another group in a different setting. The ramifications of these concepts to health club management, in conjunction with the results of this study, are three-fold. First, management should understand the interrelationship of customer satisfaction with exercise adherence. If a health club membership is being marketed as a means for maintaining physical fitness, then the success of that membership as a product is dependent upon the ability of the individual to maintain a schedule of regular exercise. Second, health club management and exercise leaders should be aware of factors affecting exercise adherence such as time management problems, social support, goal-setting, and motivation. Counseling or personal instruction should be made available to members who are

having problems maintaining a regular exercise schedule, or do not feel as if they are achieving their exercise goals. Group exercise settings such as supervised aerobics should be periodically evaluated through the use of attendance records or questionnaires. Both management and staff should be constantly aware of the importance of enthusiasm and interpersonal communication in promoting exercise adherence. Thirdly, before implementing policies and procedures to increase exercise adherence among its membership, management should understand how the diversity of individuals, groups, and exercise settings contribute to the uniqueness of exercise behavior. Exercise program intervention strategies implemented by health clubs will need to be modified in order to take into consideration the needs of each individual member or specific exercise group.

It is also recommended that further research be conducted regarding the exercise adherence of members of commercial fitness facilities such as health clubs. It is suggested that the focus of the research be directed towards the exercise behavior of individuals currently involved in exercise programs at commercial fitness facilities. The research should examine more closely how an individual's exercise adherence in a health club environment is affected by goal setting, time management, self-motivation, and social support.

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APPENDICES

APPENDIX A

AUTHORIZATION FOR ACCESS TO COMPANY RECORDS

Dr. Gary F. Evans
Professor of Sport and Leisure Management
Department of Health, Physical Education
and Recreation
Montana State University
Bozeman, MT 59717

Dear Dr. Evans:

I hereby authorize David K. Melear, graduate student of the Department of Health, Physical Education and Recreation at Montana State University, to have access to all Company records pertaining to membership resignations during the period January 1 to December 31, 1986. I understand that the purpose of this examination will be to select a sample of former members, mail to them a survey questionnaire, and to use their responses in order to complete a professional research project entitled "Reasons for Membership Resignations as Health Clubs in Bozeman, Montana during the Calendar Year 1986".

I understand that all specific information regarding these members will be kept confidential, and that only the responses of these members to the questionnaire will be mentioned in the results of the research project. It is also my understanding that a copy of the completed research project will be made to this Company upon completion. An analysis of questionnaire responses specific to the resigned membership of this club is not contemplated as a part of the research project, but will be made available upon request, subject to a fee charged by David K. Melear for out-of-pocket expense and personal time.

Authorized by

Date

Company Title

Acknowledged by: David K. Melear

Date

APPENDIX B

DEPARTMENTAL COVER LETTER



Montana State University
Bozeman, Montana 59717

Department of Health, Physical Education and Recreation
College of Education

Telephone (406) 984-4001

May 21, 1987

Dear Sir or Madam:

As part of our continuing efforts to study exercise and wellness habits, we would like to gather some information from you. The information obtained from you and others who have resigned their membership in a health club will be used in conjunction with a research project this department has endorsed. The information you provide will greatly assist us in determining the reasons why individuals in the Bozeman community have resigned their memberships in local health clubs. Your thoughtfulness in completing this questionnaire will not only help these businesses operate more efficiently in today's economy, but it will also contribute to our understanding of certain factors which affect exercise behavior.

All responses to this questionnaire will be held in strict confidence, and no individual will be identified with the information supplied to us. Once the project has been completed, the results of our research will be made available upon written request. Please help us in our effort by taking a few minutes of your time to complete this questionnaire. The success of this project is dependent upon your response. A pre-addressed, postage-paid envelope has been included for your convenience in returning the completed questionnaire.

Thank you. Your assistance in this endeavor is greatly appreciated.

Sincerely,

A handwritten signature in dark ink, appearing to read "Alex W. McNeil", written over a horizontal line.

Dr. Alex W. McNeil
Head, Department of Health, Physical Education
and Recreation
Montana State University

AWM:dm

APPENDIX C

CONSUMER HEALTH AND EXERCISE BEHAVIOR SURVEY

CONSUMER HEALTH AND EXERCISE BEHAVIOR SURVEY

Introduction

As part of our continuing efforts to study exercise and wellness habits, we would like to gather some information from you regarding your previous membership in a health club. The information obtained from you and others who have resigned memberships in health clubs will be used for graduate research at Montana State University. However, your individual responses to this questionnaire will be kept confidential.

The information provided by you and others will help us to determine why individuals in our community have resigned their memberships in health clubs.

SURVEY

Please mark an "X" indicating the ONE most appropriate answer.

Age: 15-19 ____ 20-29 ____ 30-39 ____ 40-49 ____
50-59 ____ 60 + ____

Sex: Male ____ Female ____ Status: Single ____ Married ____

Education-1986:	<u>High School</u>	<u>College</u>	<u>Masters</u>	<u>Ph.D.</u>
Years Completed:	1 2 3 4	1 2 3 4 5	1 2 3 4	1 2 3 4
Graduated	Yes No	Yes No	Yes No	Yes No

Occupation for more than six months during 1986:

Professional ____ Managerial ____ Clerical ____
Skilled Trade ____ Manual Labor ____ Student ____
Unemployed ____

1986 Annual Income: 0-5,000 ____ 5,001-10,000 ____
10,001-15,000 ____ 15,001-25,000 ____ 25,001-35,000 ____
over 35,000 ____

1) You were a member of: Sports & Courts ____
Summerhouse Spa ____

Please mark an "X" indicating the ONE most appropriate answer.

- 2) You resigned your membership at this health club because:

I moved away from the Bozeman area. _____
 I could no longer afford the cost. _____
 Of an injury or illness. _____
 I did not have enough free time to exercise. _____
 I became dissatisfied with what the club had _____
 to offer. _____
 Other (please indicate) _____

- 3) You were a member for: 0-6 months _____ 7-12 months _____
 13-24 months _____ over 2 years _____

- 4) What TWO activities did you participate in the most during the time you were a member? Please rank by placing a 1 or a 2 next to the most appropriate activity listed. Also, please indicate the percent of your total time spent in these two activities while a member of the club. (For example: Racquetball 1 - 60% Supervised aerobics 2 - 40%)

<u>Activity</u>	<u>% Time Spent</u>
Supervised aerobics _____	_____
Stationary bicycling _____	_____
Jogging _____	_____
Nautilus training _____	_____
Weight lifting _____	_____
Racquetball _____	_____
Rowing machine _____	_____
Jacuzzi, sauna, etc. _____	_____
Socializing _____	_____
Other (please indicate) _____	_____

- 5) How often during the week did you exercise prior to becoming a member of the health club?

None _____ 1-2 days _____ 2-3 days _____ 3-4 days _____
 More than 4 days _____

- 6) How often during the week did you plan to exercise at the health club?

None _____ 1-2 days _____ 2-3 days _____ 3-4 days _____
 More than 4 days _____

Please mark an "X" indicating the ONE most appropriate answer.

- 7) While a member, how often did you actually exercise during the week at the health club?

None ____ 1-2 days ____ 2-3 days ____ 3-4 days ____
More than 4 days ____

- 8) What was the average duration of your exercise session?

Less than 20 minutes ____ 20-40 minutes ____
41-60 minutes ____ More than 60 minutes ____

- 9) While a member, the frequency (number of days per week) of your exercise sessions:

Increased ____ Remained the same ____ Decreased ____

- 10) While a member, the duration (amount of time) your exercise sessions:

Increased ____ Remained the same ____ Decreased ____

- 11) Did you think that the location of the health club was inconvenient?

Yes ____ No ____

- 12) Were you satisfied with the parking facilities at the health club?

Yes ____ No ____

- 13) Did you feel that you had enough free time during the day to exercise at the health club?

Yes ____ No ____

- 14) Was the health club open during a time which you felt was convenient for you to exercise?

Yes ____ No ____

Please mark an "X" indicating the ONE most appropriate answer.

- 15) If you were involved in supervised aerobics, did you feel that classes were held at times convenient for you to participate?

Yes ____ No ____ Not applicable ____

- 16) How often were you able to exercise with friends at the health club?

Most of the time ____ Some of the time ____ Seldom ____

- 17) How often were you able to socialize at the health club?

Most of the time ____ Some of the time ____ Seldom ____

- 18) If married, how often were you able to exercise with your spouse at the health club?

Most of the time ____ Some of the time ____ Seldom ____

- 19) Did your exercise schedule at the health club conflict with social obligations or activities?

Yes ____ No ____

- 20) If married, did your exercise schedule at the health club conflict with marital obligations or activities?

Yes ____ No ____ Not applicable ____

- 21) While a member, how often did you feel that the enthusiasm of the health club manager motivated you to exercise?

Most of the time ____ Some of the time ____ Seldom ____

- 22) While a member, how often did you feel that the enthusiasm of the health club staff motivated you to exercise?

Most of the time ____ Some of the time ____ Seldom ____

Please mark an "X" indicating the ONE most appropriate answer.

- 23) Are you convinced that regular exercise will improve your state of health?

Yes ____ No ____

- 24) Do you believe that your free time was well spent when exercising at the health club?

Yes ____ No ____

- 25) Please rank in order of importance your THREE most important goals after deciding to participate in regular exercise at the health club. (1=most important; 2=important, but less than 1; 3=important, but less than 1 or 2)

Weight control

Increase muscular strength

Improve physical appearance

Have fun and reduce stress

To feel better physically

To make new friends

Improve state of health

Other (please indicate) _____

- 26) While a member of the health club, did you feel that you were making satisfactory progress in achieving that goal?

Yes ____ No ____

- 27) Do you regularly feel pain or physical discomfort when exercising?

Yes ____ No ____

- 28) Do feelings of low physical energy prevent you from exercising?

Yes ____ No ____

Please mark an "X" indicating the ONE most appropriate answer.

29) Do you smoke cigarettes?

No, never _____ No (quit) _____
Less than 1 pack per day _____ 1-2 packs per day _____
More than 2 packs per day _____

30) After resigning your membership at this health club, you have:

Joined another club: Sports & Courts _____
Health Habit _____
Summerhouse Spa _____

Used the exercise facilities and programs at M.S.U. _____
Continued to exercise at home _____
Discontinued regular exercise _____

GENERAL COMMENTS:

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