

THESIS

LIBRARY
Michigan State
University

ABSTRACT

PHYSICAL ACTIVITY RECALL RECORD FOR ADULT WOMEN: VALIDATION OF THE METHOD

by Deann Lebeau

The Problem

The purpose of this research was twofold:

1. To develop a physical activity recall record for adult women which could be objectively scored and which would encompass homemaking, occupation, and leisure time.
2. To determine the validity of that method.

The Procedure

Data were obtained through the administration of an interview questionnaire to 38 adult women, ages 20 to 60 at the Human Energy Research Laboratory, Michigan State University. The interview forms were designed to estimate the physical activity of each respondent in terms of occupation, leisure, and homemaking during the preceding year.

An objective method of scoring the responses was developed based upon energy cost tables. Numerical values were assigned each activity according to intensity and frequency of participation. Each subject was objectively ranked with the most active respondent at the top and the

least active at the bottom according to numerical values. This was done for each of the four components and a yearly combined or total.

The reliability of the interpretation of the record was studied as follows:

1. Two judges subjectively ranked, independently, the responses of two randomly selected samples from the data. This was done for each component. Each judge ranked the two samples twice.
2. The first ranking was selected for comparison between judges.

The validity of the objective scoring system was assessed in the following manner:

1. The mean of the two judges' subjective ranks for each respondent was calculated for each component for the two samples. These mean ranks formed the criterion.
2. The ranks based on the objective scoring system were compared with average subjective rank.

The results showed a high consistency for each judge with herself, correlations ranging from .935 to 1.00.

Comparisons of subjective ranking between judges showed correlations of 1.00 for occupation, .31 to .91 for homemaking, .55 to .79 for leisure, and .27 to .89 for total activity.

Correlations between mean subjective rating of judges and objective scoring on each component and total were found to be from .995 to .998 for occupation, from .67 to .81 for leisure, .37 to .49 for homemaking, and from .64 to .67 for total activity

The Conclusions

The objectively scored physical activity recall record used in this research is not, in it's present form, a valid measure of assessing physical activity of women in daily activities.

The diversified correlations between judges (criterion measure) indicates a necessity for a revised questionnaire, particularly related to homemaking activities, which would include more specific answers from responses and permit less interpretative freedom in the judging process.

PHYSICAL ACTIVITY RECALL RECORD FOR ADULT
WOMEN: VALIDATION OF THE METHOD

By

Deann Lebeau

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Health, Physical Education, and Recreation

1965

34403
11-19-65

ACKNOWLEDGMENT

The author wishes to express great appreciation to Miss Janet A. Wessel Ph.D. of the Women's Physical Education Department at Michigan State University.

Dedicated to:

Mrs. Jerry J. Stedman without whose encouragement
I may never have had the opportunity to enter
graduate school.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENT	ii
DEDICATION.	iii
LIST OF TABLES	v
LIST OF APPENDICES	vi
 Chapter	
I. INTRODUCTION AND STATEMENT OF THE PROBLEM .	1
Purpose	2
Limitations	2
Definitions of Terms	3
II. REVIEW OF THE LITERATURE.	4
III. METHODOLOGY OF RESEARCH	8
Administration of the Questionnaire . .	8
Subjects	9
Development of the Scoring Tables . .	9
Method of Analysis	13
IV. RESULTS	15
Physical Activity Recall Record. . . .	15
Development of Scoring Tables	15
Validity of Recall Record.	16
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .	19
Summary	19
Source of data.	19
Development of scoring tables. . . .	20
Validity of Recall Record	20
Results of Research	21
Conclusions	21
Recommendations	22
SELECTED BIBLIOGRAPHY	24
APPENDICES.	29

LIST OF TABLES

Table	Page
1 Classification of Energy Expenditure for Five Work Ranges	10
2 Occupational Classifications	10
3 Leisure Classifications	11
4 Homemaking Classifications	12
5 Rank Order Correlations of Judges' Consistency With Groups	17
6 Rank Order Correlations Between Judges for Each Group	17
7 Rank Order Coefficients Comparing Ranks Based on Objective Scoring System with Average Subjective Rank	18

LIST OF APPENDICES

Appendix	Page
A. Questionnaire Forms	30
Homemaking and/or Work Last Week	31
Homemaking and/or Work Last 3 Months	32
Homemaking and/or Work 9 Months Before	33
Leisure Interests and Recreational Pursuits Last Week	34
Leisure Activities and Pursuits Last 3 Months and 9 Months Before.	35
B. Coding Procedure	36
Homemaking Scoring Table For Family Composition	41
Homemaking Scoring Table	42
Physical Activity Code Sheet--Homemaking.	44
Points for Arm Work in Occupation	45
Physical Activity Code Sheet Occupation	46
Points for Time Spent Sitting, Standing, Walking in Occupation	47
Points for Leisure Activities	48
Leisure Group Classifications	52
Physical Activity Code Sheet--Leisure.	54
Numerical Rank Card	57
Subjective Rank Card	57
C. Instructural Procedures for Using Scoring Tables and Code Sheets.	58
Proposed Physical Activities Recall Record Homemaking (Week Covered)	59
Proposed Physical Activities Recall Record Homemaking (Last 3 Months, Last 9 Months).	60
Proposed Physical Activity Recall Record-- Occupation	61
Proposed Physical Activity Recall Record-- Leisure	62
Occupation Activities	63
Leisure Activities	63
Homemaking.	64

CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

As our society becomes increasingly mechanized, the amount of physical activity necessary for maintenance of life continues to decrease. More specifically, the average American housewife of today expends far less energy in home maintenance than did housewives of previous generations, and very likely expends more than the housewife of the future.

Sufficient evidence has been collected which suggests a relationship between physical activity and health, i.e. cardiovascular diseases, obesity, serum cholesterol levels and others. As the amount of energy expenditure necessary for maintenance of life decreases, there is an increased need for concrete evidence supporting the tenent in question. However, lack of a quantitative measure of energy expenditure involved in daily living has been a major limiting factor in this area of research. Very little research has been done to assess physical activity levels in total daily living of women. Previous investigations fall primarily into two patterns:

CP

17

t

1

1

C

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1. Energy expenditure has been measured in specific tasks primarily concerned with men in occupation.
2. Assessment has been largely observational and concerned with only a fraction of a day.

In epidemiological studies it is not likely that large groups could be assessed quantitatively by indirect calorimetry to determine energy out go in everyday living.

There is a definite need, therefore, to develop a technique with which populations as well as individuals within populations can be classified according to physical activity levels. ie: light, moderate, active. In physical education, the ability to classify activity groups may help in gaining greater insight into the student's needs and aid in the planning of the program.

Purpose

The purpose of this research was twofold:

1. To develop a physical activity recall record for adult women which could be objectively scored and which would encompass homemaking, occupation and leisure time.
2. To determine the validity of that method.

Limitations

1. General limitations of the use of a questionnaire method of research include deliberate lack of cooperation from subjects, the inability of subjects

to recall specific items, and the tendency of subjects to inaccurately estimate time spent in a particular activity or the number of times he/she did a particular task.

2. The sample size was small, 38 adult women from the greater metropolitan area of Lansing, Michigan.
3. The sample was not randomly selected and consisted of volunteer subjects.

Definitions of Terms

1. Homemaking. All tasks performed by the subject which are concerned with the care of the home and/or family members.
2. Occupation. All gainful employment apart from the care of the home and/or family (student is listed as occupation).
3. Leisure. All activities in which subjects participate such as gardening, sports, hobbies, community activities, etc.

CHAPTER II

REVIEW OF THE LITERATURE

Many studies have been reported relating physical activity involved in daily living to areas as broadly stated as "positive health" as well as areas which can be considered more specific such as serum cholesterol levels, obesity, heart disease, and many others.

Passmore and Durnin (29) reviewed 137 studies relating to energy expenditure, summarizing in tabular form the energy requirements for domestic and industrial work as well as sports and recreational activities. This work was used extensively in the development of the scoring system utilized in this research.

When physical activities interview forms utilized in recent research are examined, it is found that few attempt to assess all components of daily living, and few attempt to quantify the ratings of physical activity numerically (11, 24, 33, 37).

Wessel and associates (41) made one of the first attempts to include all significant sources of energy expenditure involved in daily living.

Reiff (31) extensively studied physical activity and energy expenditure involved in occupation and leisure. He

compiled quantitative numerical scales based upon energy expenditure in Cal./min., a standard ratio of 5:2:1 for walking, standing, and sitting, and a common measure of expenditure involved in walking for one hour, on the flat, at a speed of three miles per hour. He assessed all activities and assigned numerical values based upon expenditure greater or less than this common measure. The information found in his study was utilized to a large extent in the development of scoring tables for this research.

The only study involving women and concerned with total activity patterns which also utilized numerical evaluations is one done by Herrold (16). She used energy expenditure expressed in Cal./min. as her basis for evaluation. This work was also utilized extensively in this research.

Another attempt at numerical evaluation of energy expenditure is the activity index employed by Johnson and associates (17) based upon caloric intake and physical activity of high school girls. These writers multiplied a caloric factor by total hours per week spent in activity. The products were then totaled and divided by seven to obtain and "activity index."

Stefanik and associates (34) utilized a five day recall record recording time spent in a particular activity, an estimation of intensity (light, moderate, severe), as well as an estimation of ability (beginning, intermediate,

3

6

2

6

3

3

5

3

2

4

4

5

7

2

1

2

1

1

1

1

1

1

1

1

1

advanced). The activities were grouped according to the energy requirements in terms of Cal./hr. From these groups, an average daily expenditure was calculated.

Other methods of assessment have been employed, however. One interesting method was used by both Chirico (6) and Stunkard (35). Both assessed the amount of physical activity of their subjects by having them wear pedometers for one or two weeks. The distance walked was then used as a quantitative measure of comparison.

Most previous rating attempts broadly classified physical activity by job title (19, 22, 23 25, 26, 32, 33). This immediately involves the problem of different types of activities classified under the same job title. Another characteristic of these investigations was the utilization of extremes (sedentary vs. very active). A rather complete list of numerical classifications of job titles can be found in the Dictionary of Occupational Titles (10).

Pearl (30) and Lehman (21), concerned only with occupation developed types of scales for energy demands based upon caloric expenditure.

Keys (20) has stated that only from prolonged direct or indirect calorimetric studies can one obtain quantitative accurate data on energy expenditure. He points out, however, that the direct or indirect calorimetric studies are limited because they are impractical to conduct under normal living conditions.

Many studies have used only a broad subjective classification of energy expenditure in daily living (23, 18, 5, 36). However, the subjective procedure has been adapted to individual research problems only, and there has been no serious attempt made to validate the procedure.

CHAPTER III

METHODOLOGY OF RESEARCH

Administration of the Questionnaire

The physical activity recall record was an interview questionnaire set up in three parts: weekly recall, which encompassed homemaking, occupation and leisure time; last three months preceding the week; and the previous nine months. Each subject was interviewed alone. Each interview required approximately 30 minutes. The interview began with the weekly physical activity recall form. Upon completion of the questions on this form, the interview proceeded to the activities performed during the last three months. Each subject was asked to recall any activities or any unusual situations which would make the weekly record not necessarily representative of daily activity of the past three months. Items such as seasonal cleaning as well as seasonal recreational activities were included here. The subject was asked to tell how her homemaking activities differed, what leisure pursuits differed and how, the number of times she participated in different leisure activities, and to describe the consistency of her occupation, if she had one listed. The third form was identical to the second with one exception: It was concerned with the nine months prior to the three months.

Subjects

All subjects were interviewed in the Human Energy Research Laboratory at Michigan State University. The questionnaire forms used may be found in the Appendix, page 26. The data was collected by two trained interviewers. The subjects were homemakers who lived in Lansing and East Lansing, Michigan. They ranged in age from twenty to sixty. All subjects used in the study were volunteers.

Development of Scoring Tables

The assignments of numerical values for each occupational, leisure, and homemaking activity was based upon energy expenditure. A search of the literature was made to obtain energy expenditure in Cal/min. for as many occupational, leisure and homemaking pursuits as possible. Most of the values were obtained in Passmore and Durnin (29). The activities were then grouped into five categories as classified by Christensen (7), and reported in Table I.

For those activities for which values could not be obtained, a subjective decision in regard to classification was made by estimating energy requirement and by referral to Reiff (31) and a U. S. Department of Labor publication (10). Examples of the classifications made for certain occupation, leisure, and homemaking activities are presented below.

TABLE 1
CLASSIFICATION OF ENERGY EXPENDITURE
FOR FIVE WORK RANGES

Work Load	K Cal/min.
Sedentary	1.5-- 2.4
Light	2.5-- 3.4
Moderate	3.5-- 4.9
Heavy	5.0-- 7.4
Very Heavy	7.5--12.0

TABLE 2
OCCUPATIONAL CLASSIFICATIONS

Moderate	Light
Laboratory Technician	Student
Secretary	Sales Clerk
Elevator Operator	Babysitter
Teacher	Physical Education Instructor
Sedentary	
Statistition	

The very heavy, and heavy, categories have been eliminated due to the fact that none of the occupations of the subjects exhibited that high an energy expenditure.

TABLE 3
LEISURE CLASSIFICATIONS

Very Heavy	Heavy
Wood Chopping	Water Skiing
Snow Skiing	Officiating Basketball
Competition Tennis	Gymnastics
Game Basketball	Hiking
Competition Badminton	Regular Tennis
Running	Painting House
Digging	Regular Badminton
	Non-game Basketball
	Competition Volleyball
	Softball Team Play
	Swimming (if swimmer)
	Squash
Moderate	Light
Lawn and Yark Work	Fishing (boat or shore)
Gardening	Bowling
Archery	Regular Volleyball
Swimming (if non swimmer)	Non-Team Softball
Dancing	Table Tennis
Bicycling--Walking	Horse Shoes
Fishing (stream)	Sailing
Conditioning Exercises	Carpentry
Canoeing--Rowing	Golfing
Horseback Riding	Archery
Skating	
Stacking Fire Wood	
Sedentary	
Reading	
Watching Television	
Playing Cards	
Playing Table Games	
Hand Crafts	
Working Puzzles	
Knitting	

TABLE 4
HOMEMAKING CLASSIFICATIONS

Very Heavy	Heavy
Washing Floors Polishing Floors Hanging Out Clothes Shoveling Snow Washing Walls Push-Pulling	Ironing Washing Windows Sweeping Vacuuming Bedmaking Wringing Wasy by Hand Putting Wash Through Mangle
Moderate	Light
Machine Wash Dusting Dust Mopping Picking up Clothes Sweeping Vacuuming Ironing	Meal Preparation Baking Washing Dishes Marketing Preserving Food Driving a Car Washing Small Clothes (by hand) Defrosting Ice Box Personal Care

A numerical weight was assigned to each group based on the approximate per cent of kilocalories per minute required when compared to the Very Heavy group. Therefore, Heavy activities were weighted approximately 70 per cent of the numerical value for Very Heavy activities, Moderate approximately 40 per cent, Light approximately 20 per cent, and Sedentary approximately 5 per cent.

The energy requirement of one hours walking, on the level, at approximately three miles per hour was chosen as a common unit of comparison for all activities and also

served as a reference for weighting walking, standing, and sitting in occupation and homemaking. A ratio of 5:2:1 for walking, standing, sitting was used in this study as was decided upon and applied successfully by Reiff (31).

The same common unit of comparison was also used to give a weighted value to arm patterns used in all components.

In summary, all components used the energy expenditure for one hour of walking as the basic unit from which weights were derived. The explanation of the coding procedure and all of the scoring tables necessary for coding are located in the Appendix.

Method of Analysis

A physical activity recall interview was developed which inquired about the physical activity involved in the subject's homemaking, occupation, and leisure over the year preceding the interview. Responses were subdivided into other components such as homemaking, occupation and leisure activity for the three months preceding the interview.

Two randomly selected samples from the data collected, each composed of nineteen completed interview forms, were then subjectively ranked by two judges independently. A subjective decision as to rank order of each subject's physical activity in each of four components (homemaking,

occupation, leisure, and total yearly combination) was made by consideration of the responses as recorded on the interview form. Each judge arranged each sample twice on each activity component. The Spearman rank correlation coefficients was used to illustrate each judges consistency in ranking within the set for the three components. The same statistical technique was utilized to compare results between judges.

Finally a mean was calculated for the two judge's subjective rank for each subject in occupation, leisure, homemaking, and all components. This was done for both groups. These mean ranks were correlated with the rankings based on the point totals.

CHAPTER IV

RESULTS

Physical Activity Recall Record

The interview questionnaire form was designed to estimate physical activity during the preceding year. Data was obtained for homemaking, occupation, and leisure which included the three-month period preceding the interview. These data were collected by two trained interviewers and provided information on 38 females, age 20 and over. These data form the basis of the present study.

Development of Scoring Tables

The first step in preparation of the scoring system was the construction of a table of energy costs for various occupation, leisure, and homemaking tasks. These are given in Tables 1-11 (Appendix B). The objective scoring procedure was based upon energy expenditure expressed in Cal./min. and compared to the energy requirement for Very heavy activities. Other factors considered include the energy requirement for walking on the flat at three miles per hour for one hour. All component classifications were based upon these identical units of comparison. Upon these criteria, each activity from each component was assigned a numerical

score. Each subject was objectively ranked according to Numerical value. This was done for each component.

Validity of Recall Record

In investigating the validity of the recall record, it was not feasible to employ an external criterion such as direct assessment of energy cost or making direct observations. The reliability of the interpretation of the record was studied as follows. Two randomly selected samples from the data collected, each composed of nineteen interview forms, were subjectively ranked by two judges independently with the most active respondent at the top and the least active at the bottom. This was done for each of the four components (occupation, leisure, homemaking, and combined or total) on the basis of responses recorded on the interview forms. Each judge ranked the two samples twice. The rank order correlations illustrating each judge's consistency in ranking within sets are presented in Table 5. Since the two rankings by each judge within each group correlated to highly, the first ranking was arbitrarily selected for the comparison between judges. The correlations between judges for each group are presented in Table 6. The mean of the two judge's subjective ranks for each respondent was then calculated for each component. This was done for both groups. These mean ranks formed the criterion for assessing the validity of the objective scoring system. Table 7 gives the rank order correlation coefficients of the comparison of the two groups of nineteen respondents.

TABLE 5

RANK ORDER CORRELATIONS OF JUDGES'
CONSISTANCY WITHIN GROUPS

Component	Judge I		Judge II	
	Group I N = 19	Group II N = 19	Group I N = 19	Group II N = 19
Occupation	1	1	1	1
Leisure	1	.998	.969	.998
Homemaking	.999	1	.966	.977
TOTAL	1	1	.983	.935

TABLE 6

RANK ORDER CORRELATIONS BETWEEN
JUDGES FOR EACH GROUP

Component	Group I	Group II
	N = 19	N = 19
Occupation	1	1
Homemaking	.915	.310
Leisure	.793	.552
TOTAL	.888	.271

TABLE 7

RANK ORDER COEFFICIENTS COMPARING RANKS
BASED ON OBJECTIVE SCORING SYSTEM
WITH AVERAGE SUBJECTIVE RANK

Component	Group I	Group II
	N = 19	N = 19
Occupation	.998	.995
Leisure	.671	.813
Homemaking	.370	.490
TOTAL	.670	.640

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this research was twofold:

1. To develop a physical activity recall record for adult women which could be objectively scored and which would encompass homemaking, occupation, and leisure time.
2. To determine the validity of that method.

Source of Data

This research was conducted at the Human Energy Research Laboratory, Michigan State University. The sample consisted of 38 adult women, ages 20 to 60. All subjects resided in the greater metropolitan area of Lansing, Michigan. The subjects were volunteers.

The physical activity recall record was an interview questionnaire. A trained interviewer spent from 30 minutes to an hour with each respondent inquiring about physical activity involved in the respondent's occupation, leisure, and homemaking activities. The interview forms were designed to estimate the physical activity during the preceding year. These data form the bases of the present study.

Development of Scoring Tables

An objective method of scoring the responses was developed based upon energy cost tables. Numerical values were assigned each activity according to intensity and frequency of participation. Each subject was objectively ranked with the most active respondent at the top and the least active at the bottom according to numerical values. This was done for each of the four components, namely, occupation, leisure, homemaking, and a yearly combined or total.

Validity of the Recall Record

The reliability of the interpretation of the record was studied as follows:

1. Two judges subjectively ranked, independently, the responses of two randomly selected samples from the data. This was done for each component. Each judge ranked the two samples twice within a period of three weeks.
2. The first ranking was arbitrarily selected for comparison between judges.

The validity of the objective scoring system was assessed in the following manner.

1. The mean of the two judges' subjective ranks for each respondent was calculated for each component for the two samples. These mean ranks formed the criterion.

2. The ranks based on the objective scoring system were compared with average subjective rank.

Results

The results showed a high consistence for each judge with herself, correlations ranging from .935 to 1.00.

Comparisons of subjective ranking between judges showed correlations of 1.00 for occupation, .31 to .91 for homemaking, .55 to .79 for leisure, and .27 to .89 for total activity.

Correlations between mean subjective rating of judges and objective scoring on each component and total were found to be from .995 to .998 for occupation, from .67 to .81 for leisure, .37 to .49 for homemaking, and from .64 to .67 for total activity.

Conclusions

The objectively scored physical activity recall record used in this research is not, in it's present form, a valid measure of assessing physical activity of women in daily activities.

The occupational measure used in this research would appear to be a valid one. However, only a small number of subjects exhibited any occupation other than homemaking. A larger number of subjects would be needed to assess the validity of this measure.

The fact that the correlations between judges (the criterion measure) were so diversified would indicate that the difficulty lies in the interpretation of responses on the questionnaire form. A revised questionnaire, particularly related to homemaking activities, which would include more specific answers and permit less interpretative freedom in the judging process is needed.

Further calculations indicate that the relationship between the subjective measure and the objective measure of total activity is higher when the subjects exhibiting occupation outside of the home are not considered at all. This may indicate a fallacy in the method of combining the scores of those subjects with an occupation.

Recommendations

Through re-evaluation of the methods of obtaining data, the kinds of data obtained and the interpretation of that data, the author wishes to make the following recommendations:

1. That a new and more specific questionnaire be devised for both leisure activities and homemaking activities. The new questionnaire should contain all of the possible activities in which the subject could have participated making it necessary for the interviewer to merely check those activities for which she obtains an affirmative response.

2. That more data should be obtained on the size and lay out of the home. i.e. number of floors, number of bathrooms, size of kitchen, location and type of washing machine. A weight factor should be devised for use in such calculations in the scoring system.
3. A different weight factor should be devised for combining all components in the objective scoring system.
4. That a list of all activities in occupation, leisure and homemaking be divided into general categories of energy expenditure, i.e. sedentary, light, moderate, heavy, very heavy. These then would be utilized as guide lines in subjective appraisal by judges.

It is anticipated that these procedures would yield a valid method for assessing physical activity in women in daily living.

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

1. Adelson, Sadgre and Keys, Ancil. "Diet and Some Health Characteristics of 123 Business and Professional Men, and Methods Used to Obtain the Dietary Information," ARS 62-11, September, 1960.
2. American Mutual Liability Insurance Company. Physical Abilities to Fit the Job. North Abington, Mass.: Sanderson Brothers, 1956.
3. Bonnardel, R. and Laugier, H. "Grids for the Determination and Selection of Occupation," Le Travail Humain, Conservatorie Des Arts et Metiers, Paris, 1933.
4. Brouha, L. Physiology in Industry. London: Pergamon Press, 1960.
5. Bruch, H. "Obesity in Childhood" (IV Energy Expenditure of Obese Children), American Journal of Diseases of Children, 60:1082, 1940.
6. Chirico, A. M., Stunkard, A. J. "Physical Activity and Human Obesity," New England Journal of Medicine, 263:935, November, 1960.
7. Christensen, E. H. Symposium on Fatigue. London: H. K. Lewis, 1953.
8. Cornell Miscellaneous Bulletin 28, New York State. "Homemaking Units," February, 1958.
9. Department of Health, Education and Welfare. "A Physical Activity Scale Assigned to the Detailed Occupation Code for Males." Washington, D. C.: National Office of Vital Statistics, 1957.
10. Division of Occupational Analysis, United States Employment Service. Dictionary of Occupational Titles, Volume II. Washington, D. C.: United States Government Printing Office, 1949.

11. Drake, R., Buechly, R. W., and Breslow, L. "An Epidemiological Investigation of Coronary Heart Disease in the California Health Survey Population," in Symposium: Measuring the Risk of Coronary Heart Disease in Adult Population Groups, American Journal of Public Health, 47:33 (Supp.), 1957.
12. Durnin, J. V. G. A. and Brockaway, J. M. "Determination of the Total Daily Energy Expenditure in Man by Indirect Calorimetry: Assessment of the Accuracy of a Modern Technique," British Journal of Nutrition, 13:41, 1959.
13. Edholm, O. G., Fletcher, J. G., Widdowson, E. M., and McCance, R. A. "Energy Expenditure and Food Intake of Individual Men," British Journal of Nutrition, 9:286-300, 1955.
14. Epidemiology of Cardiovascular Diseases Methodology, Hypertension and Arteriosclerosis. Supplement to American Journal of Public Health and The Nation's Health, 50: October, 1960.
15. Hanman, B. Physical Capacities and Job Placement. Stockholm, Sweden: Nardisk Rotogravyr, 1951.
16. Herrold, J. A. "An Exploratory Study to Investigate the Effectiveness of an Activity in Daily Living Among Homemakers." Unpublished Master's Thesis, Michigan State University, 1961.
17. Johnson, M. L., Burke, B. S., and Mayer, J. "Relative Importance of Inactivity and Overeating in the Energy Balance of Obese High School Girls," American Journal of Clinical Nutrition, 4:37, 1956.
18. Juel-Nielsen, N. "On Psychogenic Obesity in Children, II," Acta Paediatrica, 42:130, 1953.
19. Keys, A. "Occupational and Environmental Factors in the Development of Heart Disease," in Rosenbaum, F. F. and Belknap, E. L. Work and the Heart, P. B. Holber, 1959.
20. Keys, A. and Brozek, J. "Body Fat in Adult Man," Physiological Review, 33:245, 1953.
21. Lehman, G. Praktesche Arbeitsphysiologie. Stuttgart: Thieme, 1953.

22. Master, A. M. "Effort, Trauma, Occupation and Compensation in Heart Disease," Bulletin of New York Academy of Medicine, 17:778, 1941.
23. Miller, D. C., Turlson, M. F., McCann, M. B., White, P. D., and Stare, F. J. "Diet, Blood Lipids and Health of Italian Men in Boston," Annals of Internal Medicine, 49:1178, November, 1958.
24. Morris, J. N. Unpublished Physical Activities Interview. Social Medicine Research Unit, London, England, 1957.
25. Morris, J. N., Raffle, P. A., Roberts, C. C., and Parks, J. W. "Coronary Heart Disease and Physical Activity of Work," Lancet, 2:1053, 1953.
26. Morrison, S. L. "Occupational Mortality in Scotland." British Journal of Industrial Medicine, 14:130, 1957.
27. Orr, J. B. and Leitch, I. "The Determination of the Calorie Requirements of Man," Nutrition Abstracts and Reviews, 7:509, 1938.
28. Passmore, R., Thomson, J. G., and Warnock, G. M. "A Balance Sheet of the Estimation of Energy Entake and Energy Expenditure as Measured by Indirect Calorimetry, Using the Kofranyi-Michaels Calorimeter," British Journal of Nutrition, 6:253-264, 1952.
29. Passmore, R. and Durnin, J. V. G. A. "Human Energy Expenditure," Physiological Reviews, 35:1955.
30. Pearl, R. Studies in Human Biology, Chapter XI. Baltimore: Williams and Wilkins Company, 1942.
31. Reiff, G. G. "The Relationship of Physical Activity to Serum Cholesterol and Skinfold Fat in Adult Males." University of Michigan, School of Public Health, Department of Epidemiology and the Tecumseh Community Health Study, 1964.
32. Spain, D. M., and Bradess, V. A. "Occupational Physical Activity and the Degree of Atherosclerosis in 'Normal' Men. A Post Mortem Study," Circulation, 22:239, August, 1960.

33. Spain, D. M., and Bradess, V. A. "Relation of Sex, Age, and Physical Activity to Sudden Death from Coronary Arterial Occlusion," published in Rosenbaum, F. F., and Belknap, E. L. Work and the Heart, p. 283. New York: P. B. Hoeber, 1959.
34. Stefanik, P. A., Bullen, B., Heald, F., and Mayer, J. "Physical Performance, Skinfold Measurements, Activity Expenditures, and Food Consumption of College Women," Research Quarterly, 32:229, 1961.
35. Stunkard, A. "A Method of Studying Physical Activity in Man," American Journal of Clinical Nutrition, 8:595, 1960.
36. Tolstrup. Acta Paediatrica, 42:130-1953.
37. United States Employment Service. Estimates of Worker Trait Requirements for 4,000 Jobs. Washington, D. C.: U. S. Government Printing Office, 1955.
38. War Manpower Commission, Division of Occupational Analysis and Manning Tables. Physical Demands and Capacities Analysis. Oakland, California: Permanente Foundation, 1944.
39. Weight Control. A Collection of Papers Presented at the Weight Control Colloquium. Ames, Iowa: Iowa State College, 1955.
40. Weddowson, E. N., Edholm, O. G., and McCance, R. A. "The Food Intake and Energy Expenditure of Cadets in Training," British Journal of Nutrition, 8:147-155, 1954.
41. Wessel, J., Montoye, H. J., and Mitchell, H. "Physical Activity Assessment: By Recall Record," To be published in American Journal of Public Health, Spring, 1965.

APPENDICES

APPENDIX A
QUESTIONNAIRE FORMS

Code No. _____

HOMEMAKING AND/OR WORK LAST WEEK

Name _____ Date _____ Week Covered _____ to _____
 Last First Initial Interviewer _____

Homenaking and/or Work Last Week	How often did you do these activities?	Comment
<u>Regular Care of Home</u>		
Mopping-Sweeping-Vacuum	_____	_____
Picking up house (dusting)	_____	_____
Washing Floors	_____	_____
Washing Dishes	_____	Average Number per day of People _____
Meal Preparation	_____	Average Number of People served per day _____
Washing Clothes (tubfuls)	_____	No. of Tubfuls per week _____
Ironing Clothes	_____	Average Time Spent per week _____
Anyother Activities requiring physical effort that you did last week?		
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
What community work did you do last week?		
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Work other than Homemaking? Occupation _____ Where employed _____
 How long _____

On your job other than homemaking
 Total hours spent per week _____ Hours per day _____
 Number of days per week _____

How much time did you spend on your job?

	Hours
Seated	_____
Standing	_____
Walking	_____
In vigorous activity	_____
_____	_____
_____	_____

Code No. _____

HOMEMAKING AND/OR WORK LAST THREE MONTHS

Name _____
 Last First Initial
 Date _____

Interviewer _____
 Interview No. _____
 Week Covered _____ to _____

Were your homemaking and/or work activities during this week usual for this time of year (last 3 months)? If no, how was it different?

	Yes	No	How was it different?	During which months?
Washing dishes	_____	_____	_____	_____
Preparing meals	_____	_____	_____	_____
Physical Care of family	_____	_____	_____	_____
Washing clothes	_____	_____	_____	_____
Ironing clothes	_____	_____	_____	_____
Regular care of house	_____	_____	_____	_____
Other homemaking	_____	_____	_____	_____
Other work (occupation)	_____	_____	_____	_____
Community work	_____	_____	_____	_____

Were there anyother activities you did not cover here that required physical activity? Yes ___ No ___
 If yes, what were these activities?

Activities	About how often did you do _____ during the last 3 months?	During which months?
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Thinking about the things you do at home or at work together - how would you rate yourself as to the amount of physical activity you get compared to other women your age?

1. _____	2. _____	3. _____	4. _____	5. _____
I am much less active than others	I am somewhat less active than others	I am about the same as others	I am somewhat more active than others	I am much more active than others

NOTE: If other occupations, list name, place of work, hours per day, hours per week, and how long employed.

LEISURE INTERESTS AND RECREATIONAL PURSUITS LAST WEEK

Did you do any of these activities last week?

<u>Hobbies and Leisure Interests</u>	<u>Yes</u>	<u>No</u>	<u>Other Leisure or Recreational Pursuits</u>	<u>Yes</u>	<u>No</u>
1. Card playing	—	—	1. Lawn work and yard care	—	—
2. Ceramics	—	—	2. Work in flower or vegetable garden	—	—
3. Checkers, chess	—	—	3. Archery	—	—
4. Collecting objects	—	—	4. Swimming	—	—
5. Drawing	—	—	5. Skating	—	—
6. Leather crafts	—	—	6. Dancing	—	—
7. Painting	—	—	7. Bicycling (pleasure)	—	—
8. Sewing and/or knitting	—	—	8. Walking (pleasure)	—	—
9. Listening to records, TV, radio	—	—	9. Fishing	—	—
10. Weaving	—	—	10. Hunting	—	—
11. Working puzzles	—	—	11. Bowling	—	—
12. Billiards	—	—	12. Basketball	—	—
13. Carving woodcrafts	—	—	13. Volleyball	—	—
14. Croquet	—	—	14. Softball or baseball	—	—
15. Dramatics	—	—	15. Conditioning exercises	—	—
16. Playing musical instrument	—	—	16. Golf	—	—
17. Playing with children (give kind of activity)	—	—	17. Handball or squash	—	—
18. Any other hobbies or interests	—	—	18. Tennis	—	—
			19. Badminton	—	—
			20. Table tennis	—	—
			21. Sailing	—	—
			22. Canoeing or rowing	—	—
			23. Snow skiing	—	—
			24. Water skiing	—	—
			25. Other sports - games?	—	—

Code No. _____

LEISURE ACTIVITIES AND PURSUITS
LAST THREE MONTHS AND NINE MONTHS BEFORE

Name _____
 Last First Initial
 Date _____

Interviewer _____
 Interview No. _____
 Week Covered _____ to _____

Did you do any of the following during the last 3 months?

Complete the questions below - then ask above question pertaining to nine months before.

Enter Name of Activity	About how often did you participate during last three months?	Did you play in any tournaments during last 3 months?	How to cover rest of year, about how often did you participate during the 9 months before that?	During which months?	Did you play in any tournaments during last 9 months? Yes __, No __ If yes - how many?

1. How important do you consider physical recreational activity as part of your personal recreation or leisure compared to other women your age?

1. _____ 2. _____ 3. _____ 4. _____ 5. _____
 More important Somewhat more important About the same Somewhat less important Much less important

2. How much of your leisure time do you devote to physical recreational activities compared to other women your age?

1. _____ 2. _____ 3. _____ 4. _____ 5. _____
 I am much less active than others I am somewhat less active than others I am about the same as others I am somewhat more active than others I am much more active than others

3. To what extent do you have skills to participate in active sports and games during your recreation or leisure time compared to other women your age?

1. _____ 2. _____ 3. _____ 4. _____ 5. _____
 I am more skilled than others I am somewhat skilled than others I am about the same as others I am somewhat less skilled than others I am much less skilled than others

APPENDIX B
CODING PROCEDURE

Instructions for Use of Homemaking
Scoring Tables and Code Sheets

Homemaking code sheets are for all homaking activities combined.

From the weekly data form, place all activities in designated place on code sheet. Turn to the homemaking scoring tables, find the item to be considered and obtain a point value based upon the number of times the activity was done that week. Place point value opposite item in appropriate space provided on the code sheet.

From the three month form enter all changes on the code sheet. From the previous nine months enter all changes.

Assign homemaking units based upon size of family or times done, which ever is appropriate.

Obtain a subtotal by adding point value to unit value.

Return to data sheets and enter number of weeks done in appropriate column. Multiply subtotals by weeks done and add final column to obtain a grand total for homemaking.

Instructions for Use of Tables and
Occupation Code Sheet

1. From Table 2 enter the appropriate number of points on code sheet for the number of hrs./day spent in each of the activities, sitting, standing, walking.

Example: A sales clerk states on her interview form that she walks for 4 hours, stands for 3 hours and sits for one hour in an 8 hour day. She then receives on her code sheet:

1. Walk 20
2. Sit 1
3. Stand 6

2. Total this score and multiply by the number of days worked. This gives subtotal #1.
3. From Table 1 enter appropriate number of points on code sheet for the part of day spent in various types of arm patterns.

Example: A sales clerk spends part of her day stocking shelves, part carrying light objects, and part using no arm activity at all. She receives on her code sheet:

1. No points for no arm activity
2. 5 points for less than 1/4 day stocking shelves.
3. 3 points for less than 1/4 day lifting and carrying objects under 15 lbs.

4. Total this score and multiply by the number of days worked. This gives subtotal #2.
5. Add subtotals #1 and #2, multiply by the number of weeks worked during the past three months giving total occupational points for the last three months.

6. Repeat procedure for previous 9 months if different.
If the same, simply multiply by number of weeks worked during previous 9 months for total occupational points for that period.
7. Add both total occupations to get grand total occupation for the last complete year.

Instructions for Scoring Leisure Activities

1. From Table 3, obtain a point value based upon the activity and the number of times done. Enter the name of the activity and the point value under "activity" and "points" in the appropriate group. Choice of time here is governed by the response on the questionnaire as to whether it falls on the scoring table under number times/week or number times/month.

Example: The subject played badminton (a group II activity) twice a week during December, January, and February. From the table she is given 120 points for participating twice a week. Then multiply by number of months. In the event that she did not play regularly for the entire 3 month period, multiply the value listed under "each time" by the number of times she participated.
2. Repeat procedure and multiply by appropriate length of time for previous 39 weeks.

3. Repeat for all activities listed. NOTE: be sure to enter activity in proper group.
4. Add columns down to get subtotal in each group for 13 weeks and 39 weeks. Add these two values for total year in each group.
5. Total all groups to obtain total leisure points for entire year.

HOMEMAKING SCORING TABLE FOR FAMILY COMPOSITION

Activity	Point Value
I. Dishwashing	
2 Persons	2
3 Persons	3
4 Persons	4
5 Persons	5
6 Persons	6
II. Washing Clothes	.5 per tub
III. Ironing	
1- 9 Pieces	2
10-29 Pieces	6
30 or more Pieces	8
IV. Bedmaking	
2 Persons	1
3 Persons	2
4 Persons	4
5 Persons	5
6 Persons	6
V. Meal Preparation	
2 Persons	1
3 Persons	2
4 Persons	3
5 Persons	4
6 Persons	5

HOMEMAKING SCORING TABLE

Activity--Daily-Weekly	1-3	4-6	7-9	10-12	13-15	16 or more
I. Light						
Meal Preparation	1	2	3	4	5	6
Baking	1	2	3	4	5	6
Washing Dishes	1	2	3	4	5	6
Washing Small Clothes	1	2	3	4	5	6
Chauuffering	1	2	3	4	5	6
Marketing	1	2	3	4	5	6
II. Moderate						
Machine Wash						
Automatic	2	4	6	8	10	12
Machine wash/mangle	3	6	9	12	15	18
Picking up House						
Dusting, Sweeping	2	4	6	8	10	12
Tidying Beds	2	4	6	8	10	12
Vacuuming	2	4	6	8	10	12
III. Active						
Ironing	3	6	9	12	15	18

HOMEMAKING SCORING TABLE (Continued)

Activity--Weekly-Monthly	Each Time	2 times/month	3 times/month	1/week
I. Moderate				
Scrubbing-washing-waxing	3	6	9	12
Floors	3	6	9	12
Walls	3	6	9	12
Windows	3	6	9	12
Bedmaking (weekly)	3	6	9	12
II. Active				
Snow Shovelling	5	10	15	20
Moving, Pushing Furniture	5	10	15	20
III. Light				
Baking	1	2	4	6
Preserving	1	2	4	6

PHYSICAL ACTIVITY CODE SHEET
HOMEMAKING

Code No. _____
Age _____
No. In
Household _____

No. Adults _____
No. Children _____
Ages _____

Activity (Weekly)	Point (t) Value	Unit (=) Value	TOTAL (x)	Number Weeks (=)	TOTAL POINTS
Meal Preparation					
Baking					
Washing Dishes					
Washing Small Clothes					
Chauffering					
Marketing					
Machine Wash					
Automatic					
w/mangle					
Picking up House					
Dusting-Sweeping					
Tidying beds					
Vacuuming					
Ironing					

(Monthly)	Point (t) Value	Unit (=) Value	TOTAL (x)	Number Months (=)	TOTAL POINTS
Scrubbing, washing, wax					
Floors					
Walls					
Windows					
Bed Making (changing)					
Snow Shoveling					
Moving, Pushing Furniture					
Baking					
Preserving, Freezing					

GRAND TOTAL
PAST YEAR _____

POINTS FOR ARM WORK IN OCCUPATION

Activity	Part of Day Spent at Task		
	Less Than 1/4 Day	1/4 to less Than 1/2 Day	1/2 or more Per Day
I. Assembling or Manipulating			
1. Light Objects	2	4	6
2. Heavy Objects	3	5	8
3. Using Small Tools	3	6	10
4. Lifting or Handling Light Objects (less than 15 pounds).	3	6	10
II. Packing or Stocking Shelves	5	9	15
III. Pushing-Pulling			
1. Hand Cart	3	5	8
2. Objects 45-74 pounds	3	6	10
3. Objects 20-44 pounds	2	4	6
IV. Other Responses			
1. Scrubbing, Washing, Waxing	3	6	10
2. Carrying and Lifting (less than 15 pounds)	3	6	10

PHYSICAL ACTIVITY CODE SHEET

Occupation

Subj. no. ____ Int. date ____ Age ____

OCCUPATION last 13 weeks
1. Walk
2. Sit
3. Stand
Total
x days worked

Total ____

OCCUPATION rest of year (39 wks.)
1.
2.
3.
Total
x days worked

Total ____

4. Moderate Arm
5. Heavy Arm
6. Lift-Carry
Total
x days worked
Times Weeks Worked
Grand Total

4.
5.
6.
Total
x days worked
Grand Total

7. Last 3 months total occupation
8. Last 39 weeks total occupation
9. Grand total, occupation

- 7.
- 8.
- 9.

POINTS FOR TIME SPENT SITTING, STANDING,
WALKING IN OCCUPATION

Activity	Numbers of Hours Per Day									
	1	2	3	4	5	6	7	8	9	10
Walk	5	10	15	20	25	30	35	40	45	50
Sit	1	2	3	4	5	6	7	8	9	10
Stand	2	4	6	8	10	12	14	16	18	20

NOTE: If response is less than one hour, calculate that fraction of points for one hour.

POINTS FOR LEISURE ACTIVITIES

Activity	Each Time	2		3		1		2		3		4	
		Time	Month	Times	Month	Time	Week	Times	Week	Time	Week	Times	Week
1. Lawn and Yard Work	2		4	6		8		16		24		32	
2. Gardening	1		2	3		4		8		12		16	
3. Archery	2		4	6		8		16		24		32	
4. Swimming If Swimmer If Non-Swimmer	4		8	12		16		32		48		64	
	2		4	6		8		16		24		32	
5. Skating	3		6	9		12		24		36		48	
6. Dancing Social Square	3		6	9		12		24		36		48	
	4		8	12		16		32		48		64	
7. Bicycling--Walking 1/2 mile to 1 mile less than 1/2 mile	2		4	6		8		16		24		32	
	1		2	3		4		8		12		16	
8. Fishing Bank or boat Wade Stream	2		4	6		8		16		24		32	
	12		24	36		48		96		144		192	
9. Bowling Regular Team	1		2	3		4		8		12		16	
	2		4	6		8		16		24		32	

(Continued)

Activity	Each Time	2 Times Month	3 Times Month	1 Time Week	2 Times Week	3 Times Week	4 Times Week
10. Basketball, volleyball, Softball							
Basketball							
Game Play	20	40	60	80	160	240	320
Non Game	5	10	15	20	40	60	80
Volleyball							
Regular	3	6	9	12	24	36	48
Competition	12	24	36	48	96	144	192
Softball							
Team Play	15	30	45	60	120	180	240
Non Team Play	3	6	9	12	24	36	48
11. Conditioning Exercises							
Organized Program							
More than 20"	7	14	21	28	56	84	112
10 to 20"	4	8	12	16	32	48	64
Less than 10"	2	4	6	8	16	24	32
Not Organized Program							
More than 20"	6	12	18	24	48	72	96
10-20 min.	3	6	9	12	24	36	48
less than 10"	1	2	3	4	8	12	16
12. Golf							
9 holes	6	12	18	24	48	72	96
18 holes	10	20	30	40	80	120	160

(Continued)

Activity	Each Time	Times				1 Time Week	2 Times Week	3 Times Week	4 Times Week
		2 Month	3 Month	1 Month	2 Month				
13. Tennis, Badminton, Table Tennis									
Tennis									
Regular	15	30	45	60	120			180	240
Competition	25	50	75	100	200			300	400
Badminton									
Regular	15	30	45	60	120			180	240
Competition	25	50	75	100	200			300	400
Table Tennis									
Regular	3	6	9	12	24			36	48
Competition	5	10	15	20	40			60	80
14. Canoe--Row Pleasure	4	8	12	16	32			48	64
15. Gymnastics	10	20	30	40	50			120	160
16. Hiking	5	10	15	20	40			60	80
17. Horseback Riding	4	8	12	16	32			48	64
18. Horseshoes	2	4	6	8	16			24	32
19. Officiating Basketball	10	20	30	40	80			120	160
20. Sailing	2	4	6	8	16			24	32

Continued)

Activity	Each Time	2 Times Month	3 Times Month	1 Time Week	2 Times Week	3 Times Week	4 Times Week
21. Snow Skiing Regular Competition	20 25	40 50	60 75	80 100	160 200	240 300	320 400
22. Water Skiing	10	20	30	40	80	120	160
23. Wood Chopping 1 hour or less	20	40	60	80	160	240	320
24. Each Sedinatry	.5	1	1.5	2	4	6	8
25. Painting House	4	8	12	16	32	48	64
26. Squash	15	30	45	60	120	180	240

LEISURE GROUP CLASSIFICATIONS

Leisure Group I (Very Active)

Wood Chopping
Snow Skiing
Competition Tennis
Competition Badminton
Game Basketball

Leisure Group II (Active)

Water Skiing
Officiating Basketball
Gymnastics
Hiking
Regular Tennis
Regular Badminton
Non Game Basketball
Competition Volleyball
Softball Team Play
Swimming (if swimmer)
Painting House
Squash

Leisure Group III (Moderate)

Lawn and Yard Work
Gardening
Archery
Swimming (if non swimmer)
Dancing
Bicycling-Walking
Fishing (Wade Stream)
Conditioning Exercises
Golf
Canoe-Row
Horseback Riding
Skating

(Continued)

Leisure Group IV (Light)

Fishing (Boat or Shore)
Bowling
Volleyball (Regular)
Softball (Non Team Play)
Table Tennis
Horse Shoes
Sailing

Groups based upon average energy expenditure in Cal/min.
These values taken from and based upon Passmore and Durnin,
Christensen.

Any activities for which definite values could not be found
were subjectively placed with activities of similar intensity.

PHYSICAL ACTIVITY CODE SHEET

LEISURE

code no. _____

age _____

GROUP I (very active) last 13 wks. previous 39 wks.

ACTIVITY	POINTS	x	TIMES DONE	x	NO. MONTHS	TOTAL POINTS	x	TIMES DONE	x	NO. MONTHS	TOTAL
total											

total

GROUP II (active) last 13 wks. previous 39 wks.

total											

total

Group I total _____

Group II total _____

LEISURE (Continued)

Code no. _____

GROUP III (moderate) last 13 wks. previous 39 wks.

ACTIVITY	POINTS	x	TIMES DONE	NO. x MONTHS	TOTAL POINTS	x	TIMES DONE	NO. x MONTHS	TOTAL
total					total				

GROUP IV. (light) last 13 wks. previous 39 wks.

total					total				

Group.III total _____

Group IV total _____

LEISURE (Continued)

Code no. _____

GROUP V (sedintary) last 13 weeks

previous 39 weeks

ACTIVITY	POINTS	x	TIMES DONE	x	NO. MONTHS	TOTAL	POINTS	x	TIMES DONE	x	NO. MONTHS	TOTAL
total						total						

Group V total _____

Leisure Grand Total _____

NOTE: Number of weeks or number of months is needed because the scoring sheet gives points in terms of both. The subject may not have done activity all months or all weeks in each group. If this is so, use the value under "each time" and multiply it by the number of times done. Use the same procedure when activity has been participated in less than one time/month.

NUMERICAL RANK CARD

Code No.	Occup.	Leis.	Home.	All 3
Numerical Rank				
Total Points				

SUBJECTIVE RANK CARD

Code No.	Occupation	Leisure	Homemaking	Occupation, Leisure Homemaking
First Rank				
Second Rank				
_____ Rater's Name				

APPENDIX C

INSTRUCTIONAL PROCEDURES FOR USING SCORING
TABLES AND CODE SHEETS

PROPOSED PHYSICAL ACTIVITY RECALL RECORD

HOMEMAKING

Code No. _____

Week Covered _____ to _____

Date _____

Interviewer _____

Name _____
last first initial

Weight _____

No. in household _____

No. floors in home _____

No. adults _____

No. bathrooms _____

No. children _____

Size of kitchen _____

ages _____

No. beds used _____

Type of washing machine _____

dryer? _____ location _____

ACTIVITY	Done Last Year	Days Done Last Week	Average Duration of Time Spent		Comments
			Min.	Hours	
Washing Floors		1 2 3 4 5 6 7			
Polishing Floors		1 2 3 4 5 6 7			
Hanging Out Clothes		1 2 3 4 5 6 7			
Shoveling Snow		1 2 3 4 5 6 7			
Washing Walls		1 2 3 4 5 6 7			
Push-Pulling		1 2 3 4 5 6 7			
Wringing Wash by Hand		1 2 3 4 5 6 7			
Wash Through Mangle		1 2 3 4 5 6 7			
Ironing		1 2 3 4 5 6 7			No. Pieces Last Week _____
Washing Windows		1 2 3 4 5 6 7			
Sweeping		1 2 3 4 5 6 7			
Vacuuming		1 2 3 4 5 6 7			
Bedmaking (changing)		1 2 3 4 5 6 7			
Defrosting Ice Box		1 2 3 4 5 6 7			
Machine Wash		1 2 3 4 5 6 7			No. Tubfuls Last Week _____
Dusting		1 2 3 4 5 6 7			
Dust Mopping		1 2 3 4 5 6 7			
Picking Up Clothes		1 2 3 4 5 6 7			
Meal Preparation		1 2 3 4 5 6 7			No. People Per Day _____
Marketing		1 2 3 4 5 6 7			
Small Hand Washing		1 2 3 4 5 6 7			
Baking		1 2 3 4 5 6 7			
Preserving Food		1 2 3 4 5 6 7			
Washing Dishes		1 2 3 4 5 6 7			No. People Per Day _____
Driving a Car		1 2 3 4 5 6 7			
Others (Please List)		1 2 3 4 5 6 7			
		1 2 3 4 5 6 7			
		1 2 3 4 5 6 7			
		1 2 3 4 5 6 7			

PROPOSED PHYSICAL ACTIVITY RECALL RECORD
HOMEMAKING

Code No. _____
Date _____
Name _____

Last 3 Months _____
Last 9 Months _____

ACTIVITY	Days Done Last 3 Months							Days Done Last 9 Months							Average Duration of Time Spent		Comments
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	Min.	Hours	
Washing Floors	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Polishing Floors	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Hanging Out Clothes	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Shoveling Snow	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Washing Walls	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Push-Pulling	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Wringing Wasy by Hand	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Wash Through Mangle	1	2	3	4	5	6	7	1	2	3	4	5	6	7			No. Pieces Last Week _____
Ironing	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Washing Windows	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Sweeping	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Vacuuming	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Bedmaking (changing)	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Defrosting Ice Box	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Machine Wash	1	2	3	4	5	6	7	1	2	3	4	5	6	7			No. Tubfuls Last Week _____
Dusting	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Dust Mopping	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Picking up Clothes	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Meal Preparation	1	2	3	4	5	6	7	1	2	3	4	5	6	7			No. People Per Day _____
Marketing	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Small Hand Washing	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Baking	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Preserving Food	1	2	3	4	5	6	7	1	2	3	4	5	6	7			No. People Per Day _____
Washing Dishes	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Driving a Car	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
Others (Please List)	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
	1	2	3	4	5	6	7	1	2	3	4	5	6	7			
	1	2	3	4	5	6	7	1	2	3	4	5	6	7			

PROPOSED PHYSICAL ACTIVITY RECALL RECORD

OCCUPATION

Code No. _____

Date _____

Name _____

Occupation _____

Where employed? _____ How Long? _____

Total hours spent per week _____

Hours per day _____

Days per week _____

How much time per week do you spend on your job:

Hours

Seated _____

Standing _____

Walking _____

In vigorous activity _____

Describe your duties.

Did you have a vacation within the last year? _____

If so, how long was your vacation last year? _____

1

LEADER PHYSICAL ACTIVITY RECORD
LEADER

Code No. _____

Date _____

Name _____

ACTIVITY	Done Last Year	Times Done Last Week	Average Duration of Time Spent		Times Done Last 3 Months	Times Done Last 9 Months
			Min.	Hours		
Wood Chopping		1 2 3 4 5 6 7				
Snow Skiing		1 2 3 4 5 6 7				
Competition Tennis		1 2 3 4 5 6 7				
Game Basketball		1 2 3 4 5 6 7				
Competition Badminton		1 2 3 4 5 6 7				
Water Skiing		1 2 3 4 5 6 7				
Officiation Basketball		1 2 3 4 5 6 7				
Gymnastics		1 2 3 4 5 6 7				
Hiking		1 2 3 4 5 6 7				
Regular Tennis		1 2 3 4 5 6 7				
Painting House		1 2 3 4 5 6 7				
Regular Badminton		1 2 3 4 5 6 7				
Non-Game Basketball		1 2 3 4 5 6 7				
Competition Volleyball		1 2 3 4 5 6 7				
Softball Team Play		1 2 3 4 5 6 7				
Swimming (if swimmer)		1 2 3 4 5 6 7				
Squash		1 2 3 4 5 6 7				
Lawn and Yard Work		1 2 3 4 5 6 7				
Gardening		1 2 3 4 5 6 7				
Archery		1 2 3 4 5 6 7				
Swimming (non-swimmer)		1 2 3 4 5 6 7				
Dancing		1 2 3 4 5 6 7				
Bicycling--Walking		1 2 3 4 5 6 7				
Fishing (stream)		1 2 3 4 5 6 7				
Conditioning Exercises		1 2 3 4 5 6 7				
Canoe--Rowing		1 2 3 4 5 6 7				
Horseback Riding		1 2 3 4 5 6 7				
Skating		1 2 3 4 5 6 7				
Fishing (boat or Shore)		1 2 3 4 5 6 7				
Bowling		1 2 3 4 5 6 7				
Regular Volleyball		1 2 3 4 5 6 7				
Non-Team Softball		1 2 3 4 5 6 7				
Table Tennis		1 2 3 4 5 6 7				
Horse Shoes		1 2 3 4 5 6 7				
Sailing		1 2 3 4 5 6 7				
Reading		1 2 3 4 5 6 7				
Watching TV		1 2 3 4 5 6 7				
Playing Cards		1 2 3 4 5 6 7				
Playing Table Games		1 2 3 4 5 6 7				
Hand Crafts		1 2 3 4 5 6 7				
Working Puzzles		1 2 3 4 5 6 7				

SEDENTARY ACTIVITIES

Very Heavy (Standing-Walking) Light (Sitting-Sitting) Moderate (Sitting)

Physical Education Instructor Student Statistician

Sales Clerk
 Babysitter
 Laboratory Technician
 Secretary (Filing)
 Elevator Operator (Standing)
 Teacher (Classroom)

LEISURE ACTIVITIES

Very Heavy 7.5 Cal/Min. Light 5.0-7.4 Cal/Min. Moderate 3.1-4.0 Cal/Min.

Wood Chipping
 Snow Shoveling
 Competition Tennis
 Game Basketball
 Competition Badminton
 Running
 Diving

Water Skiing
 Officiating Basketball
 Gymnastics
 Hiking
 Regular Tennis
 Painting House
 Regular Badminton
 Non-Game Basketball
 Competition Volleyball
 Softball team play
 Swimming, if swimmer
 Squash

Lawn and Yard Work (Heavy Gardening)
 Gardening
 Archery
 Swimming (non-swimmer)
 Canoeing
 Ice Skating
 Fishing (stream)
 Conditioning Exercises
 Canoeing--rowing
 Horseback Riding
 Skating
 Stacking Fire Wood

Light 2.5-3.4 Cal/Min.

Carpentry
 Golfing
 Archery
 Fishing (Boat or Shore)
 Bowling
 Regular Volleyball
 Non-Team Softball
 Table Tennis
 Horse Shoes
 Sailing
 Light Gardening

Sedentary 1.5-2.4 Cal/Min.

Reading
 Watching TV
 Playing Cards
 Playing Table Games
 Hand Crafts
 Working Puzzles
 Knitting

MICHIGAN STATE UNIVERSITY LIBRARIES



3 1293 01733 8900