



Development and use of an objective rating scale to evaluate the extent of home sewing
by Mary McCoy Wetzsteon

A THESIS Submitted to the Graduate Committee in partial fulfillment of the requirements for the degree of Master of Science in Home Economics
Montana State University
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Abstract:

An objective rating scale was developed to evaluate the extent of sewing done by homemakers of Boseman, Montana. With the aid of committees of homemakers and professional home economists, rating scales were formulated to measure three major aspects of sewing and from them a score was derived for 47 articles of sewing. These values were then applied to the sewing reports of 276 homemakers. The resultant scores were used as a basis for the study of factors thought to influence the amount and kind of home seeing.

Lower cost, satisfaction and enjoyment were the chief reasons for home sewing given by the homemakers. The greatest difficulties reported were in pattern alterations, and the construction, fitting and styling of garments. These homemakers devoted an average of four hours per week to their sewing activities.

Eighty-two percent of the homemakers were doing some sewing and had increased the total amount done during the two war years. Garments most frequently made were house dresses, aprons, and skirts for girls and women and pajamas for all family members. Many more articles were renovated during the two-year-war-time period than for the corresponding pre-war period.

The data were secured by questionnaires in which homemakers gave information concerning their family status and their sewing activities and problems. They were requested to estimate the amount of sewing done during the past four years, 1940 through 1943 to allow a comparison of the amount of sewing done in two years of war time with that done during the two pre-war years.

The development of the rating scales which make possible a quantitative evaluation of home sewing is considered the most valuable contribution of this thesis. This device should prove of value to those responsible for clothing curricula, to students as a means of judging their progress, to homemakers desiring an evaluation of their work and to those people interested in making studies relative to home sewing practices.

DEVELOPMENT AND USE OF AN OBJECTIVE RATING SCALE
TO EVALUATE THE EXTENT OF HOME SEWING

BY

MARY MCCOY WETZSTEON

A THESIS

Submitted to the Graduate Committee

in

partial fulfillment of the requirement

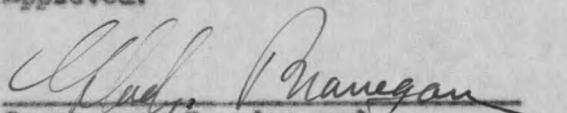
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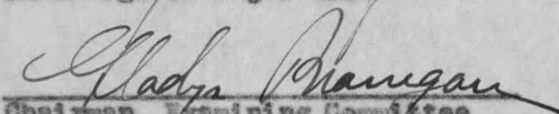
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ABSTRACT

An objective rating scale was developed to evaluate the extent of sewing done by homemakers of Bozeman, Montana. With the aid of committees of homemakers and professional home economists, rating scales were formulated to measure three major aspects of sewing and from them a score was derived for 47 articles of sewing. These values were then applied to the sewing reports of 276 homemakers. The resultant scores were used as a basis for the study of factors thought to influence the amount and kind of home sewing.

Lower cost, satisfaction and enjoyment were the chief reasons for home sewing given by the homemakers. The greatest difficulties reported were in pattern alterations, and the construction, fitting and styling of garments. These homemakers devoted an average of four hours per week to their sewing activities.

Eighty-two percent of the homemakers were doing some sewing and had increased the total amount done during the two war years. Garments most frequently made were house dresses, aprons, and skirts for girls and women and pajamas for all family members. Many more articles were renovated during the two-year-war-time period than for the corresponding pre-war period.

The data were secured by questionnaires in which homemakers gave information concerning their family status and their sewing activities and problems. They were requested to estimate the amount of sewing done during the past four years, 1940 through 1943 to allow a comparison of the amount of sewing done in two years of war time with that done during the two

pre-war years.

The development of the rating scales which make possible a quantitative evaluation of home sewing is considered the most valuable contribution of this thesis. This device should prove of value to those responsible for clothing curricula, to students as a means of judging their progress, to homemakers desiring an evaluation of their work and to those people interested in making studies relative to home sewing practices.

INTRODUCTION

Sewing has been recognized for many centuries as an important activity of the household. Originally, all sewing was done by hand and women had to devote considerable time to the making of garments and household textile articles. Learning to sew was one of the essential parts of the education of every young girl as many hands were required to supply the needs of a family. With the invention of the sewing machine, there came an increase in the amount of sewing one woman could accomplish which usually resulted in the production of a greater number of items. Later, when the power sewing machine was developed, ready-made articles began to appear on the market and homemakers were given a chance to choose whether they should make all of their garments and household textile furnishings or buy them in the finished form. There are indications that, for various reasons, most homemakers have found it desirable to continue to do some home sewing, although little is known about the actual amount being done. Only a few studies have been made which furnish information concerning the sewing activities of homemakers and they are not of recent date.

In The Household Budget published in 1917, Leeds (24) reported on the extent of clothing construction in 60 Pennsylvania homes. He found that 75 percent of the women were making at least a part of their clothing and were devoting an average of 5 3/4 hours weekly to sewing.

Sewing was one of the many household activities that were studied by Ward in 1920 (35) but her investigation was on a much larger scale than the one by Leeds, as she questioned 9724 women living in 33 of the northern and western states. Ward did not report whether all of a part of the

family clothing was made in the home nor the amount of the homemaker's time devoted to sewing, but according to her figures, 92 percent of all the homemakers were doing some family sewing with the following regional distribution: 95 percent in the western, 94 percent in the central and 86 percent in the eastern region. Even though the eastern region had the lowest percentage of women doing some home sewing this percentage was higher than the 75 percent reported by Leeds. However, the families studied by Leeds were urban, while those included in Ward's study were rural.

The Results of a Clothing Survey in Illinois by Wilkerson (36) covered one of the states in the central region which was included in the survey by Ward and since both studies were made in 1920 and through home demonstration agents in Co-operative Extension Work in Agriculture and Home Economics, it was assumed by the present writer that the same basic data were used. Wilkerson's report was more extensive than Ward's as she included the types of clothing made in the home. Questionnaires from 1400 rural women were used and of this number 20 percent made all of the family clothing, 65 percent made a part of the family clothing, 53 percent made children's clothing, and 15 percent made men's shirts.

Brown (9) questioned 60 graduates of home economics in 1922 to determine the amount and types of clothing most frequently made by them. She was interested in the trends of home sewing for the purpose of evaluating home economics curricula. These women did more sewing for children than for adults because "children's clothes are easier to make (and) can be made from used materials to advantage".

One-third of the 60 women made practically all of their children's clothing except that for older boys. Men's pajamas and underclothing were made by 43 percent of the women questioned and shirts by 31 percent while women's underwear and dresses were made by over 75 percent of the homemakers.

In 1923, students at Kansas State Agriculture College conducted a study relative to the cost of making garments at home as compared with the cost of similar ready-made garments. The study covered a period of two years and Glenton (18) in writing the report stated: "It would seem to pay to sew at home if there is no other job at hand which pays better. However, money is not the criterion for the decision." This study in no way attempted to determine the amount of sewing done by homemakers.

Another investigation which dealt with clothing and laundry problems was conducted by Hastie and Gorton (21) in 1926. A total of 4439 rural and urban families in Delaware, Pennsylvania, Nebraska, New York and Texas were questioned, and it was found that more rural homemakers were making various types of garments than were urban women.

One of the most extensive surveys on home sewing was reported in 1927 by O'Brien and Campbell (28) of the Bureau of Home Economics. This study attempted to obtain information on the trends of sewing from as many urban families as possible, since at that time practically all available data on home sewing were from rural homemakers. Reports were received from 1843 families in 32 states and the District of Columbia, 1175 of whom lived in cities. The investigators stated that the results did not show the total amount of home sewing, but information was gained as to the number of women making different kinds of garments. The kinds most frequently made

were summer wash dresses, house dresses, aprons, sleeping and undergarments. Aside from the kind of garments made and their relative importance as indicated by the number of women making them, other factors which influenced the amount of home sewing were studied including the reasons for sewing and difficulties encountered by the homemakers.

In these earlier studies concerning the extent and kind of home sewing there were few data with which present sewing activities could be compared and there was no mention of household textile furnishings made in the home. Furthermore, within the knowledge of the investigator, no study of the trends of home sewing has been published since 1927; yet between that date and the present time, many changes have occurred in the availability of ready-to-wear garments and textile furnishings as well as in the choice of yard goods and sewing accessories, improvements in patterns, and in sewing equipment. Different authorities have conflicting opinions concerning the way these changes have influenced the sewing activities in the home. (1) (16) (18) (39). The increased volume of ready-made articles give the impression that there is less home sewing while the increased sale of yard goods and patterns would indicate that home sewing is still an important part of household production (15).

Teachers and leaders who are directly connected with homemaking education as well as persons engaged in commercial work have expressed an interest in obtaining factual material concerning the sewing activities of homemakers. It was thought that an intensive study of activities in a typical community would be indicative of situations elsewhere.

The community selected for this study was Bozeman, Montana.

county seat of Gallatin County, a town of approximately 8,000 inhabitants, situated in an irrigated agricultural valley. It is also the site of Montana State College.

Before undertaking the study some information concerning recent trends in home sewing was obtained through interviews with the local merchants dealing in yard goods. In the opinion of these merchants there has been an increase in the amount of home sewing as evidenced by their records of annual sales of yard goods for several consecutive years. The figures supplied by one local merchant were as follows:

Sale of Yard Goods	
<u>Year</u>	<u>Index number</u>
1938	53
1939	58
1940	62
1941	61
1942 (base period)	100

At the time these data were furnished to the investigator, the sales figures for 1943 were incomplete, but the merchant indicated that the index number would show a decline because of a lessened supply of materials rather than a decrease in demand.

Further information volunteered by local merchants was to the effect that in the Bozeman stores at the present time, there are no serious shortages existing in any line of yard goods, but varieties of all fabrics are reduced. The consensus of opinion among the merchants was that the sale of yard goods, would offer a fair index of the amount of local home sewing.

Since current war-time conditions affect all normal procedures

it seemed desirable to include the amount of war-time sewing as well as that of pre-war years. A four-year period was selected for the study, the years 1940 and 1941 representing pre-war conditions and considered as reasonably normal years as they marked the period between a decade of depression and our entrance into World War II. The home sewing activities of 1942 and 1943 were regarded as representative of war-time conditions.

The study was planned to determine the amount and kind of sewing done by homemakers in Bozeman, Montana, and to investigate some of the influencing factors, such as the 1) family income and occupation, 2) reasons for home sewing, 3) difficulties encountered in sewing, 4) homemaker's training in the fundamental techniques of sewing, and 5) effects of present war-time conditions. A major objective of this study was the development of a rating scale by which home sewing could be evaluated. There seemed to be a real need for such a measuring device which would evaluate some of the most important characteristics common to all sewing, namely, 1) the total amount of time required, 2) the necessary preliminary planning together with the problems of cutting, and 3) the degrees of skill required for construction and fitting. Such an evaluation would also cover other variables such as the wide ranges in style, type, size, complexity of the article to be made and whether or not the articles were made of new or renovated material.

As a result of an analysis of these problems a rating scale was devised to permit an objective evaluation of all items of home sewing. The articles included in the questionnaire were given an assigned value

for each of the three major characteristics and an average of these was used for the final score. By applying the average score to each article in the homemakers sewing record a quantitative measurement was obtained and it was therefore possible to evaluate the accomplishments of each and study the influence of certain factors on the amount and kind of sewing. This study presents in detail the method by which the objective rating scale was developed and applied to evaluate the extent of sewing among the homemakers of Bozeman, Montana.

METHODS

In previous studies the extent of home sewing has been determined merely by gathering information on the types of garments made but with no attempt to estimate the actual amount of sewing by any unit of measure. Therefore, it seemed desirable to work out a method by which the total amount of sewing done by a homemaker could be evaluated, then test the worth of this method by using it to interpret or evaluate the sewing activities of the Bozeman homemakers.

In developing an objective rating scale that would assign a given value to each article made by sewing, it was necessary to analyze all procedures classified as "sewing" and determine the basic elements that were involved. These seemed to fall into three main headings, 1) the actual amount of time required to make an article, 2) the skill required for planning and cutting, and 3) the skill required for construction and fitting. A rating scale was then set up for each element which could be used in securing a score for each article.

The amount of time spent in sewing appears to be one of the most important elements because it varies with the type of article as well as with the homemakers standards of workmanship, skill, and speed, and the sewing equipment available. From personal experience and consultation with sewing experts, it was thought that sixty-four hours would cover the maximum amount of time required to make the most complicated article if the sewing ability of the homemaker and the degree of complexity of each article were assumed to be average. A scale ranging from one to 64 hours was then arbitrarily set up to permit an estimation of time required for

making the various articles. (Scale A). For convenience, the 64 hours were divided into eight periods of 8 hours each.

SCALE A. RATING SCALE FOR ESTIMATING THE NUMBER OF HOURS REQUIRED TO MAKE ARTICLES OF HOME SEWING

		Time required							
Days		1	2	3	4	5	6	7	8
Hours		1 - 8	9 - 16	17-24	25-32	33-40	41-48	49-56	57-64

In establishing a rating scale for evaluating the skill required for planning and cutting the various articles made, the investigator arbitrarily decided to distribute the degrees of skill within values of one to 32 points, (Scale B). This scale was arranged in four levels of eight points to allow for the different degrees of complexity and a brief description of the skills for each level was included.

A third rating scale was developed in a similar manner for an evaluation of the skill required in construction and fitting. (Scale C). Descriptions were also included in this rating scale to cover the variations in degrees of skill required at each level.

In using the rating scales to assign values to various articles of sewing it seemed desirable to secure the assistance of persons experienced in sewing. Two committees, one made up of nine homemakers, and the other composed of seven professional home economists were invited to express their judgment regarding the variations in degrees of complexity. (Appendix B). These committee members were chosen on the basis of their ability to make all of the garments in question, and for their general competency in making such an evaluation.

The committees were supplied with the following list of articles for which an evaluation was desired:

A. Girls and women garments

1) Slips; 2) panties, child's; 3) gowns; 4) pajamas; 5) house-coats, cotton; 6) aprons; 7) collars, cuffs and dickeys; 8) blouses and shirts, semi-tailored or dressmaker; 9) skirts; 10) jumpers; 11) jerkins; 12) house-dresses, washable cotton; 13) afternoon dresses; 14) formal dresses, sleeveless; 15) jackets, patch pockets, semi-sport, not tailored; 16) slacks, not including shirt; 17) snow-suits or ski-suits, unlined; 18) suits, dressmaker or semi-tailored, lined; 19) coats, summer, lined, dressmaker or semi-tailored.

B. Boys and men:

20) underclothing, cotton shorts; 21) pajamas; 22) shirts, sport; 23) trousers, boys, size 12, patch pockets; 24) suits; 25) snow-suits, unlined; 26) jackets, sport, patch pockets; 27) coats, young boys, semi-tailored.

C. Infants wear:

28) diapers; 29) gertudes; 30) bathrobes; 31) bunnings, crib or buggy; 32) sleepers; 33) play-suits, 1-piece sun-suit, bib-style; 34) rompers; 35) dresses, cotton; 36) shirt-pants-suit, suspender style, short pants; 37) coats, lined.

D. Household Sewing:

38) Curtains and draperies; 39) towels, dish; 40) sheets; 41) pillow cases, tubing; 42) quilts or comforters, hand-tied or machine-quilted; 43) spreads, plain with or without flounce; 44) table

cloths, hand hemmed; 45) napkins, place covers, hand hemmed; 46) slip-covers, overstuffed chair; 47) upholstery, overstuffed chair.

The committee members were also supplied with the following instructions:

1. In evaluating the garments and household articles listed the following assumptions are to be made:

- A. The homemaker's possession of a sewing machine
- B. The homemaker's possession of adequate sewing equipment
- C. The provision for adequate physical facilities for use of sewing equipment.

2. The following factors should be considered as average when judging sewing items:

- A. The homemaker's skill and speed
- B. Standards of workmanship
- C. Sizes and styles of articles
- D. The use of most common materials for a given type of article. (In a few cases, material has been specified)

3. It is not deemed feasible to consider the following factors when assigning values:

- A. Elaboration of garments by embroidery, crochet, or other forms of handwork or trim.
- B. The homemaker's preference for making certain types of articles
- C. Evaluation of quality of the workmanship or styling of finished article.

The two committees were then asked to rate the individual articles by Scale A and estimate the average number of hours required to complete each article of home sewing and to assign time values to each. The average individual estimates of both committees were tabulated. The homemakers gave consistently lower estimates of time than those of the professional group and an average of the two values was used. The range

of 64 hours on the scale was found adequate to cover all estimates.

Since both groups considered that time necessarily involved some consideration of the other factors of planning, cutting, constructing and fitting they recommended that only one-half of the actual amount of time be used as an assigned value in order not to overweight the time factor. (Table I.)

Each article was then given two more values, using Scales B and C by the committee of home economists. An average of all three assigned values was calculated and adopted as a score for each item of sewing. (Table II.)

The question arose as to the values to be assigned to renovated articles. The homemaker judges suggested an increase of 100 percent in the value of made-over articles to cover the extra time and skill involved in planning, ripping, cleaning, mending, piecing, and fitting in preparing the used material for cutting and construction. The opinions of the home economist committee relative to the amount that should be added to the original score varied from 20 to 100 percent for different items. It was arbitrarily decided to add 50 percent to the final average scores of all items when made of renovated material.

In order to avoid fractions in the final average score, it was necessary in a few instances to slightly adjust the average of the recommended values. When adjustments were needed on the time factor, the estimates of homemakers were favored. The final scores are considered as relative comparisons rather than absolute measurements. These average scores constitute the rating scale devised to measure the amount and kind

of sewing. (Table II).

The questionnaire method was used for the collection of information from 276 homemakers in Bozeman, Montana. The questions (Appendix A) were prepared by the investigator and approved by a selected list of home economists engaged in teaching, extension and research work. These questionnaires were accompanied by a letter, (Appendix B) explaining the study and with instructions (Appendix C) to increase the uniformity and accuracy of returns.

Personal and group interviews were arranged whenever possible and trained assistants aided in making additional contacts with homemakers. (Appendix D). Forty-five percent of the questionnaires were distributed by assistants through the home economics classes at the local junior and senior high schools. The balance of the questionnaires were secured through church organizations, women's clubs, educational and industrial groups.

A section of the questionnaire called for the opinion of the homemaker as to the convenience of location and arrangement of her sewing equipment. A measuring device was also needed to score the location as judged by the homemakers. A maximum number of 3 points was given when the homemaker indicated the location as "very good," 2 points for "satisfactory," and 1 point for "poor location." A poor location was considered worthy of one point on the basis of its availability to the homemaker, regardless of its convenience.

Comparisons of the amount and kind of equipment used in various households were impossible until a scoring device was established. This

was done with the assistance of the committee of home economists. The total number of equipment items included on the questionnaire was given a value of 100 points, which does not imply a perfect score for sewing equipment but was arbitrarily chosen as a convenient basis for comparing the amounts and kinds of sewing equipment. Scale D

To provide information concerning the amount and kind of sewing the homemakers were requested to list the number of garments and household articles they had made during the past four years, 1940 through 1943. The list included 19 garments for girls and women, 8 for boys and men, 10 for infants, and 10 household items to represent those most commonly made in the home with provision for the homemaker to indicate whether the articles were made from new or used materials. The four year period was divided equally into two year periods, 1940 and 1941 representing pre-war time and 1942 and 1943 war-time, to enable a comparison of trends in sewing and to determine any noticeable effect of war-time conditions.

After the data were tabulated the rating scales permitted a quantitative analysis of the sewing activities of 276 Bozeman homemakers, and it was therefore, possible to determine any relationship between the extent of sewing and certain factors believed to have an influence on the amount and kind of sewing. The factors studied included family size, income, and occupation, the amount of time the homemaker was able to devote to sewing, the reasons for sewing, difficulties encountered, and the homemaker's training in the fundamental techniques of sewing.

The tables presenting the results of this study have been based upon the actual number of answers to given questions. On the 276 question-

SCALE D. RATING SCALE FOR THE EVALUATION OF SEWING EQUIPMENT

Items of Equipment	Points	
	Individual Item	Total
A. Sewing machines (treadle or electric)		30
B. Attachments for machine		5
L. Working condition of machine (maximum)		10
1) good	10	
2) fair	5	
3) poor	0	
C. Sewing kit and cabinet		7
1) sewing kit	4	
2) sewing cabinet	3	
D. Shears		15
1) regular cutting	6	
2) embroidery	4	
3) buttonhole	1	
4) pinking	4	
E. Measures		8
1) tapeline	4	
2) ruler	1	
3) yardstick	2	
4) tailor's square	1	
F. Markers		4
1) tailor's chalk	1	
2) tracing wheel	1	
3) skirt marker	2	
G. Ironing boards		3
1) portable	2	
2) stationary	1	
H. Irons		9
1) non-regulated	2	
2) regulated	3	
3) steam	4	
K. Pressing cushions		2
Full-length mirror		5
Dress form		2
Total		100

naires returned, only one question was completely answered by all homemakers, namely, that concerning the amount and kind of sewing equipment available. The instructions accompanying the questionnaires directed the homemakers to write "N. A." (no answer) in the space provided if for any reason they preferred not to furnish the information. In some cases, spaces were left blank by the homemakers and the number of such questions was then omitted in calculating percentages.

RESULTS AND DISCUSSION

Application of Rating Scale to the Amount of Sewing Reported by Homemakers.

The time values derived by the use of scale A and presented in table I were the first measurements assigned to the 47 articles of sewing listed on the questionnaire. (Appendix A) The average of the assigned time values ranged from 1 to 31 points as recommended by the committee of homemakers and professional home economists, who considered that the amount of time required for making a tailored suit would be approximately 31 times greater than the time required for hemming a sheet. Values for other articles were computed by similar comparisons.

The next assignments of values were obtained by using scales B and C and are summarized in table II. These values were similar to those assigned for the time factor as they ranged from one to 30 points for sheets and suits, respectively. Several items that required only plain straight sewing were given values of 1 point, namely, sheets, pillow-cases, towels and diapers. The last two named items require so little work that each was assigned a value of one-third, but to avoid any number less than one in the final scores, one dozen of each of these articles was given a rating of 4 points. The average of the three values of 1) time, 2) skill in planning and cutting, and 3) skill in construction and fitting was used as the final score for each item of clothing and household textile furnishings and constituted the objective rating scale by which the amount and kind of sewing of each homemaker was measured. As for example, a homemaker who made a house dress at 14 points, an apron at 7 points and a pair of pajamas at 12 points, would have a total sewing score of 33 points.

TABLE I. HOURLY TIME VALUES ASSIGNED TO VARIOUS ARTICLES OF HOME SEWING BY COMMITTEES OF HOMEMAKERS AND HOME ECONOMISTS IN BOZEMAN, MONTANA. 1943

Articles	Assigned time values*		
	By home-	By home	Aver-
	makers	economists	age
	hr.	hr.	hr.
Sheet	1	1	1
Pillow cases, pair	1	1	1
Towels, three	1	1	1
Diapers, three.	1	1	1
Napkin, place cover	1	1	1
Panties	2	2	2
Bedspread	2	4	3
Bunting	2	4	3
Apron	2	4	3
Collar-cuffs, dickey.	2	4	3
Gertrude.	2	4	3
Play-suit	2	4	3
Gown.	2	4	3
Slip.	2	4	3
Curtains, draperies, pair.	3	5	4
Infant's bathrobe	3	5	4
Boy's shorts.	2	6	4
Sleepers.	4	4	4
Blouse, shirt.	2	6	4
Jerkin	4	4	4
Skirt	3	5	4
Table cloth	4	6	5
Quilt, comforter.	4	6	5
Infant's dress.	4	6	5
Jumper	4	6	5
Pajamas	4	6	5
Infant's shirt-pants suit	3	7	5
Housecoat	4	6	5
Rompers	5	7	6
Slacks	3	9	6
House-dress	4	8	6
Trousers.	4	8	6
Infant's coat	7	9	8
Jacket	7	9	8
Shirt	6	10	8
Formal dress.	7	8	8
Snow-suit, ski-suit	9	9	9
Afternoon dress	7	11	9
Chair upholstery.	10	16	13
Slip-cover.	12	20	16
Coat	27	27	27
Suit	30	32	31

*Assigned values equal one-half of the actual amount of time required.

TABLE II. VALUES ASSIGNED TO VARIOUS ARTICLES OF HOME SEWING AND THE AVERAGE SCORE OR "RATING SCALE" DERIVED FROM THESE VALUES. Bozeman, Montana, 1943.

Articles	Time ^a	Assigned values		Average Score
		Planning ^b and Cutting	Construction ^b and Fitting	
Sheet	1	1	1	1
Pillow cases, pair	1	1	1	1
Towels, three	1	1	1	1
Diapers, three.	1	1	1	1
Napkin, place cover.	1	1	1	1
Bedsread	3	4	5	4
Panties	2	6	4	4
Bunting	3	4	5	4
Table-cloth	5	3	10	6
Quilt, comforter	5	8	8	7
Apron	3	9	9	7
Collar-cuffs, dickey	3	9	9	7
Gertrude	3	9	9	7
Play-suit	3	9	9	7
Curtains, draperies, pair.	4	12	11	9
Infant's dress.	5	13	12	10
Infant's bathrobe	4	13	13	10
Boy's shorts	4	13	16	11
Rompers	6	13	14	11
Sleepers.	4	14	15	11
Gown	3	16	17	12
Slip	3	16	17	12
Blouse, shirt.	4	15	17	12
Jerkin	4	15	17	12
Jumper	5	15	16	12
Pajamas	5	14	17	12
Skirt	4	16	19	13
Infant's shirt-pants suit.	5	17	17	13
House-coat.	5	17	17	13
Slacks.	6	14	22	14
House-dress	6	18	18	14
Infant's coat	8	17	17	14
Snow-suit, ski-suit	9	18	15	14
Jacket	8	18	19	15
Trousers	6	20	25	17
Shirt	8	21	22	17
Formal dress.	8	21	22	17
Afternoon dress	9	23	25	19
Chair upholstery.	13	26	18	19
Slip cover.	16	26	21	21
Coat	27	28	29	28
Suit	31	29	30	30

a. Assigned by committees of homemakers and home economists in Bozeman, Montana (see Table I)

b. Assigned by committee of home economists.

These average values were used to calculate the estimated amount of sewing reported by 227 homemakers to evaluate the extent of their sewing activities. Within the knowledge of the present investigator there has been no similar measurement of sewing such as the one used in this study.

In the following tables which show the relationship of sewing scores to certain factors, the percentages given apply only to the answers received from 227 homemakers since 49 failed to report the amount of sewing done. Twenty-seven of these 49 homemakers indicated the kind of articles made but were unable to estimate the number. Their reports did signify however that it was their custom to make a wide variety of articles. Twenty-two of the 49 homemakers who did not denote either the type or the number of articles made proved they were doing some sewing by stating in another section of the questionnaire the number of hours per week allotted to this task. These 49 homemakers are hereafter referred to in the tables as a "no score" group.

Distribution of average yearly sewing scores

Because some homemakers reported the amount of sewing done for one, two, three, or four of the years (1940 through 1943) the total score for each was reduced to a yearly average as a more meaningful and comparable figure. The average score for all homemakers was found to be 185 points, table III, and ranging from zero to 1104 points. This score represents approximately two hours of sewing time per week exclusive of mending time. (Table XI)

TABLE III. DISTRIBUTION OF AVERAGE YEARLY SEWING SCORES FOR 227
HOMEMAKERS* BOZEMAN, MONTANA 1943

Scores	Homemakers		Scores	
	No.	pct.	Average	Range
1100 - 1199	1	.4	1104	
1000 - 1099	1	.4	1020	
900 - 999	1	.4	924	
800 - 899	1	.4	843	
700 - 799	2	.9	716	710 - 722
600 - 699	4	1.8	653	635 - 670
500 - 599	5	2.2	525	502 - 588
400 - 499	8	3.5	449	418 - 498
300 - 399	17	7.5	341	303 - 397
200 - 299	36	15.8	253	200 - 298
100 - 199	56	24.7	147	103 - 199
00 - 99	95	41.8	51	0 - 98
Totals	227	100	185	0 - 1104

* No score 49

To show the types of articles most commonly made in the home, a distribution of the 185 points was made by the investigator. (Table IV) Garments for girls and women represented the largest number of items on the questionnaire and accounted for 69 percent of all garments made by the local women. House dresses, sleeping garments and aprons were the items

most often made. These statements closely parallel the results shown in previous studies. (9) (28) Infants garments have accounted for only 7 percent of the typical score, but table VI shows that only 5 percent of the children included in this study were less than three years of age.

TABLE IV. NUMBER AND KIND OF ARTICLES COMPRISING AVERAGE YEARLY SEWING SCORES OF HOMEMAKERS. BOZEMAN, MONTANA 1943

Articles of sewing	Kinds of articles				Total score
	Girls and women	Boys and men	Infants	Household	
Apron	2				14
Blouse	1				12
Collar-cuffs or Dickey	1				7
Curtains, Draperies				1	9
Diapers			6		2
Dress					
Afternoon	1				19
House	2				28
Jumper	1				12
Napkin, or Place cover				1	2
Pajamas	1	2			36
Pillow cases				2	2
Sheets				1	1
Skirt	2				26
Sleepers			1		11
Towel				12	4
Total No.	11	2	7	17	185
pct. of total score	69	14	7	10	100

Some Factors Affecting Homemakers Sewing Scores

A portion of the questionnaire was devoted to the location of families and status of the members to provide a background for understanding some of the situations which might be responsible for affecting the

amount and kind of sewing.

TABLE V. DISTRIBUTION OF FAMILIES BY CITY DISTRICTS* AND HOMEMAKERS ANSWERING QUESTIONNAIRE. BOZEMAN, MONTANA 1943

Families	City districts**					Total
	North west	North east	South west	South east	No address given	
No. of families	503	644	1247	461		2855
No. of homemakers answering questionnaire	34	20	140	22	22	238
Pct. distribution of 276 questionnaires **	12.3	7.2	50.7	8.0	8.0	100

* Division points, Main Street and Tracy Avenue

** 38 rural homemakers accounting for 13.3 per cent of 276 questionnaires.

Distribution of families by city districts.

Through the use of the questionnaire, information was obtained from 276 homemakers residing in or near Bozeman, Montana. Of this number 238 were urban and 38 rural homemakers. It was interesting to note the percentage of Bozeman families represented by this study and how these urban families were distributed in four city districts. (Table V) The city directory for 1942 listed approximately 2855 families and is the latest available census that can be used. The number of urban homemakers answering the questionnaire represent 8.3 percent of the 2855 families. Twenty-two homemakers failed to indicate their addresses but it was assumed that they resided within the city limits. The majority (174) of the families

TABLE VI . DISTRIBUTION OF FAMILY MEMBERS BY AGE AND STATUS* BOZEMAN, MONTANA 1943

Age of members	Status in family										Total			
	Mother		Father		Sons		Daughters		Others					
	No.	per cent.	No.	per cent.	No.	per cent.	No.	per cent.	Male No.	Female per cent.	No.	per cent.		
40-over	122	46	167	68	1				3	25	17	43	310	27
36-40	63	24	26	11			2		1	8			92	8
31-35	41	15	24	10	4	2	4	1	1	8			74	7
26-30	25	10	20	8	5	2	5	2	3	25			58	5
19-25	13	5	8	3	31	12	36	12	2	17	6	15	96	9
13-18					75	29	151	49	1	8	13	33	240	21
7-12					76	29	63	20			1	2	140	12
4-6					31	12	23	8	1	9			55	5
0-3					35	14	25	8			3	7	63	6
Totals	264	100	245	100	258	100	309	100	12	100	40	100	1128	100
Pct. of 266		23		22		23		27		1		4		100

* Based on answers received from 266 homemakers.

co-operating in this study lived in the western part of the city and with the greatest concentration (140) in the southwest section which is adjacent to the Montana State College campus. This was partly due to the fact that more women in this section attended organized group meetings such as the ones through which the investigator made many of her contacts. All of the 276 families have been classified as living in Bozeman as the 35 rural families who live in or near the vicinity of Bozeman have this center as their mailing address and send their children to the Bozeman schools.

Distribution of members by age and status in family

The average size of the families was 4.24 members and therefore it was assumed that the typical family consisted of mother, father and two children. (Table VI) The figures are based upon answers received from 266 families as 10 homemakers failed to supply this information. Since a high proportion of the adults were over 36 years of age, including 70 percent of the mothers and 79 percent of the fathers, it was natural to find few young children represented. Twenty-six percent of the sons and 16 percent of the daughters were under six years of age as compared with 29 percent of the sons and 49 percent of the daughters in the 13 to 18-year-age groups. Many mothers of very young children are often unable to attend group meetings and few of them were interviewed. The distribution of nearly one-half of the questionnaires through the local high school home economics classes (Appendix D) partially accounts for the high percentage of 13 to 18-year-old daughters.

Because of the wording of the questionnaire which used the term mother rather than homemaker, the 4 percent of "other" females includes

several young homemakers without children. There was a homemaker in each of the families whether she was mother, young wife, older daughter, or grandmother.

Sewing scores in relation to size of family

In general, the average sewing score of the homemaker tends to increase with the size of the family, although an exception has been noted for the eight-member families. (Table VII) When the records were checked for this group it was found that in each case there was some person other than the homemaker doing a part or all of the home sewing. However, one homemaker in this group reported an average of 12 hours per week devoted to sewing, but failed to report the actual amount of sewing accomplished and it was impossible to give her a sewing score.

A majority of the 13 to 18-year-old daughters were in the larger families and many of them were taking home economics in the junior or senior high schools and very likely doing some of the home sewing. O'Brien and Campbell (28) also found that more garments were made as the number of members in the family increased.

Relation of Sewing Scores to Family Income and Husband's Occupation

Family income. A relatively large percent (90 percent) of the homemakers furnished information on the family income, although this question was optional. In figuring the average family income, the mid-point of the \$1000 intervals was used and the average income was found to be \$2951.61. (Table VIII) This seems to be a high average for a community so little affected by war-time industries. However, the

TABLE VII. HOMEMAKERS SEWING SCORES IN RELATION TO SIZE OF FAMILY*
BOZEMAN, MONTANA 1943

Size	Families		Sewing scores	
	No.	pct. of total	Average	Range
10	1	.4	89	
9	4	1.8	354	137 - 670
8	8	3.5	223	31 - 722
7	13	5.7	338	40 - 1104
6	10	4.4	323	16 - 1020
5	37	16.3	220	0 - 710
4	76	33.5	158	0 - 513
3	39	17.2	151	14 - 514
2	35	15.4	118	0 - 418
Not given	4	1.8	254	84 - 649
Totals	227	100	185	0 - 1104

* No score - 49 homemakers

size of the family income was requested and in many cases there was more than one wage earner in the family. Seventy-seven, or 28 percent of all the homemakers contributed to their family incomes through outside employment. In 6 percent of the cases there was no father to contribute to the income.

Husband's occupation. The classification of occupations is a condensation of the list provided in the United States Department of Labor Dictionary of Occupational Titles (46) which includes the following divisions:

1) professional and managerial, 2) clerical and sales, 3) service.

4) skilled and semi-skilled, 5) unskilled, 6) students and retired. From the information volunteered by the homemakers of Bozeman, a high percentage of the husbands were found to be in the professional and managerial class with incomes ranging from \$1000 to \$5000 and over. Probably the fact that a large number of the families were represented from the college district accounts for the high proportion of professional men. It was noted that 10 of the 22 families in the highest income group were engaged in agriculture. Bozeman is the shopping center of a prosperous agricultural valley and during war-times farm incomes are relatively high.

By using the income as the sole basis for comparison of sewing scores, the highest average score (232 points) appears at the \$1000 to \$1999 level in which are included one third of all homemakers employed outside the home. (Table IX) The lowest average scores (151) appear at the \$4000 to \$4999 level. No uniformity exists in the relationship between the family income and the homemakers sewing scores. However, there is a tendency for the higher sewing scores to appear at the lower income levels. In O'Brien and Campbell's study (28) the women who were making the greatest number of garments were in the \$2000 to \$2999 group. In the current study the highest average sewing score by occupational classification of the husbands was attained by the agricultural group. Other sewing scores for occupational classes appear in decreasing order as follows: 2) service, 3) unskilled, 4) skilled, 5) professional and managerial, 6) clerical and sales, and 7) students and retired. The rural

TABLE VIII . DISTRIBUTION OF FAMILIES BY INCOME AND OCCUPATION, BOZEMAN, MONTANA 1943

Family income	Husband's occupation*									Total	
	Profes- sional and manage- rial	Cler- ical and sales	Ser- vice	Agri- culture and for- estry	Skilled and semi- skilled	Un- skilled	Stu- dents and re- tired	No hus- band	Not given	No.	pct.
\$5000-over	11			10					1	22	8
4000-4999	15	1	2	8			1		2	29	11
3000-3999	37	1	1	10	3	1		2	4	59	21
2000-2999	23	10	10	7	20	2	2	3	1	78	28
1000-1999	3	3	4	9	12	3	3	7	5	49	18
000- 999		2		4		1		4		11	4
Not given	13	2	1	4	5			1	2	28	10
Total No.	102	19	18	52	40	7	6	17	15	276	
pct. of total	37	7	6	19	15	3	2	6	5		100

* Source of Classification: 1939 Dictionary of Occupational Titles Part II
U. S. Dept. of Labor and U. S. Employment Service, Washington, D. C.

TABLE IX . DISTRIBUTION OF SEWING SCORES IN RELATION TO FAMILY INCOME AND HUSBAND'S OCCUPATION
BOZEMAN, MONTANA 1943

Family income		Husband's occupation							Summary totals*	
		Profes- sional and manage- rial	Clerical and sales	Service	Agricult- ure and forestry	Skilled and semi- skilled	Un- skilled	Student and retired		Not given
\$5000-over	No. of cases	9			10				1	9 pct.
	Average score	101			257				67	178
\$4000-4999	No. of cases	13	1	2	6			1	2	11 pct.
	Average score	131	239	173	225			25	54	151
\$3000-3999	No. of cases	35	1	1	8	2	1		4	22 pct.
	Average score	149.	126	131	257	182	59		265	174
\$2000-2999	No. of cases	16	7	7	7	16	2	2	4	27 pct.
	Average score	139	95	128	243	193	122	70	271	165
\$1000-1999	No. of cases	3	3	4	9	9	3	3	10	20 pct.
	Average score	268	152	429	227	190	334	121	210	232
\$ 000- 999	No. of cases		1		4		1		3	4 pct.
	Average score		106		221		167		200	195
Not given	No. of cases	7	2		4	1			2	7 pct.
	Average score	277	156		355	23			17	233
No. of cases		83	15	14	48	28	7	6	26	227
Pct. of cases		37	7	6	21	12	3	3	11	100
Average scores		154	127	221	251	185	210	88	202	155.3
Pct. of total sewing score		30	5	7	29	12	4	1	12	100

*No. score - 49 homemakers

TABLE X. DISTRIBUTION OF EMPLOYED AND NON-EMPLOYED HOMEMAKERS BY SEWING SCORES *
BOZEMAN, MONTANA 1943

Sewing scores	Outside employment						No outside employment	Grand total		
	Full-time		Part-time		Total			No.	pct.	
	No.	pct.	No.	pct.	No.	pct.				
1100-1199						1	.4	1	.4	
1000-1099						1	.4	1	.4	
900- 999	1	.4			1	.4		1	.4	
800- 899	1	.4			1	.4		1	.4	
700- 799	1	.4	1	.4	2	.8		2	.8	
600- 699			1	.4	1	.4	3	1.4	4	1.8
500- 599	1	.4	1	.4	2	.8	3	1.4	5	2.2
400- 499	3	1.4			3	1.4	5	2.2	8	3.6
300- 399	3	1.4	1	.4	4	1.8	13	5.7	17	7.5
200- 299	7	3.1	3	1.4	10	4.5	26	11.5	36	16.0
100- 199	8	3.5	9	4.1	17	7.6	39	17.2	56	24.8
00- 99	19	8.3	7	3.1	26	11.4	69	30.3	95	41.7
Totals	44	19.3	23	10.2	67	29.5	160	70.5	227	100
Average scores	209		203				176		185	

* No score - 49 homemakers

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38
1

homemakers are inclined to spend slightly more time in sewing than those in urban areas which might give them a higher sewing score.

It was desired to determine the combined effect of family income and occupation on the amount of sewing, but the results are not conclusive because of the few cases occurring in most of the categories.

Employed homemakers. The sewing scores for homemakers employed outside the home were in general higher than the scores of those non-employed. (Table X) In analyzing the questionnaires showing scores of 500 or more points, it was seen that seven homemakers had employment outside the home as compared with eight having no such employment. It has been noted in table XI that a slightly greater amount of time was devoted to sewing by the women having work in addition to their homemaking.

Amount and distribution of sewing time by employed and non-employed homemakers

The homemakers were requested to indicate the number of hours per week that were allotted to sewing and the distribution of that time in mending, making new garments or articles for the household, or making renovated articles, as a means of comparing the sewing scores with the amount of time devoted to sewing. It was found that 209 homemakers spent an average of 4.07 hours per week on sewing with approximately one-half of that time required for mending. (Table XI) The time apportioned to sewing does not seem to vary greatly because of outside work of the homemaker, as it was noted that those homemakers having outside employment spent slightly more time in sewing than those having no such employment. The fact that many of the employed homemakers seem to do more sewing than those not gainfully employed might substantiate the contention that many homemakers work out-

side the home because of the necessity to supplement the family income, or it may indicate that outside work requires or results in a superior management of time.

TABLE XI. AMOUNT AND DISTRIBUTION OF SEWING TIME FOR EMPLOYED AND NON-EMPLOYED HOMEMAKERS. BOZEMAN, MONTANA 1943

Extent of employment	Home-makers (209)	Average sewing time per week	Distribution of sewing time for			
			Mending	Renovation	New garments	Household sewing
			No.	Hrs.	pct.	pct.
Full-time	41	4.1	60	10	15	15
Part-time	28	4.2	39	21	28	12
None	140	3.9	48	9	24	19
Average		4.07	49	13	22	16

The homemakers of Bozeman included in this study reported less average time for home sewing than was reported by certain other homemakers of Montana. Richardson (32) found that 48 homemakers in rural areas of Montana averaged 6 hours and 5 minutes per week for sewing and mending. Hastie and Gorton (21) stated that the amount of sewing accomplished by the rural homemakers exceeded that of the urban homemakers. One hundred and sixty-seven Bozeman homemakers indicated that the amount of sewing they did was limited because of lack of time for this household task, and many volunteered the information that during the current period, they were devoting a considerable amount of time to war work.

The homemakers were asked if they had regular weekly or seasonal plans for sewing. Eighty-one percent of the 258 women furnishing this information did their sewing irregularly or as the need arose, although many of them tried to include some sewing for each week.

Homemakers assistants. Eighty-seven of the homemakers had assistance with their household tasks which released more time for sewing while 95 of the women stated that there was some member in the family who assisted with the sewing. Fifty-two of these same homemakers reported both types of help. Of the 10 homemakers with the highest average yearly sewing scores of 795 points, all but one had help and of the 10 with the lowest average sewing scores of 12 points, seven had no help. The types of help received from the assistants as reported by the 95 homemakers were as follows: 30 were making their own clothing, 25 assisted with mending, 40 aided in miscellaneous ways including fitting, finishing of hems, handwork, and cutting.

Effect of the Amount and Location of Sewing Equipment on the Extent of Sewing

Amount and kind of sewing equipment. The amount of equipment available to the homemaker is a factor which must be considered when studying the extent of the homemakers sewing activities. The data secured from the local homemakers indicates that practically all are supplied with the necessary sewing equipment. (Table XII) Eighty-nine percent of these homemakers had some type of sewing machine which is the most important single item of equipment, and fifty percent had attachments for the machines. In the studies by O'Brien and Campbell (28), Ward (35), and Hastie and Gorton (21), the number of women owning machines from 90 to 95 percent which is similar to the percentage of Bozeman homemakers owning machines. The increase, since 1927, in the number of homemakers owning motor power machines is noticeable as O'Brien and Campbell reported only twenty-five percent of those homemakers who were living in cities

TABLE XII . KINDS OF SEWING EQUIPMENT OWNED BY 276 HOMEMAKERS
BOZEMAN, MONTANA 1943

Kind of equipment	Homemakers owning equipment	
	No.	Pct.
Machines		
1. Treadle	131	47
2. Electric portable	55	20
3. Electric cabinet	60	22
Attachments	142	51
Small Equipment Container		
1. Sewing kit	133	47
2. Sewing cabinet	83	30
Shears		
1. Regular cutting	260	94
2. Embroidery	85	31
3. Buttonhole	77	28
4. Pinking	73	26
Measures		
1. Tapesline	266	96
2. Ruler	203	74
3. Yardstick	201	73
4. Tailor's square	11	4
Markers		
1. Tailor's chalk	100	36
2. Tracing wheel	25	9
3. Skirt marker	93	34
Ironing boards		
1. Portable	234	85
2. Stationary	44	16
Irons		
1. Non-regulated	74	27
2. Regulated	197	71
3. Steam	6	2
Miscellaneous		
1. Pressing cushions	22	8
2. Mirror	152	55
3. Dress form	17	6

of 5000 to 10,000 population had motor power machines as compared with 47 percent in this study.

TABLE XIII. DISTRIBUTION OF HOMEMAKERS BY SEWING EQUIPMENT AND SEWING SCORES. BOZEMAN, MONTANA 1943

Equipment Scores	Homemakers		Sewing scores	
	No.	Pct.	Average	Range
90 - 100	1	.4	96	
80 - 89	24	8.7	83	80 - 87
70 - 79	73	28.2	74	70 - 79
60 - 69	86	31.2	66	60 - 69
50 - 59	48	17.4	57	50 - 59
40 - 49	8	3.0	45	40 - 48
30 - 39	7	2.5	33	30 - 39
20 - 29	14	5.0	24	21 - 28
10 - 19	10	3.6	16	10 - 19
0 - 9	0	.0	0	0 - 0
Totals	276	100	63	10 - 96

In order that more adequate comparisons could be made of the amount and kind of sewing equipment owned by the homemakers, scores were given to each item appearing on the questionnaire by using scale D. (Methods) The committee of professional home economists aided in the assignment of score values. All sewing machines, whether treadle or electric were given a score of 30 points with an additional 10 points if they were reported to be in good working order. It was arbitrarily decided that a machine in good working order was worthy of more points than one in a poor condition because of the added convenience and efficiency to the homemaker. When the scores of each item of equipment were applied to the records of 276 homemakers, it was found that the average equipment score was 63 points, which would likely be composed of scores for the following items, sewing machine, kit, shears, tape measures, irons and ironing boards and a large or full-length mirror.

While some of the equipment for which scores were given is not considered as essential to sewing, it does contribute to the efficiency with which the sewing may be accomplished.

TABLE XIV. DISTRIBUTION OF HOMEMAKERS BY EQUIPMENT AND SEWING SCORES IN RELATION TO FAMILY INCOME* BOZEMAN, MONTANA 1943

Family income		Equipment scores		Sewing scores	
		No. Answers	Average	No. Answers	Average
Amount	No.				
\$5000-over	22	22	65.0	20	176
4000-4999	29	29	65.03	25	151
3000-3999	59	59	64.56	52	174
2000-2999	78	78	60.15	61	165
1000-1999	49	49	61.42	44	232
000- 999	11	11	62.7	9	195
Not given	28	28		16	232
Totals	276	276		227	185

* No score - 49 homemakers

When the equipment and sewing scores were compared with the income of the family it was found that little relationship existed between the amount of the income and the scores for equipment. (Table XIV) The average equipment scores ranged only from 60 to 65 points for all income groups. The three-way comparison of sewing and equipment scores and the family income shows that the \$1000 to \$1999 income group having the highest sewing score had next to the lowest equipment score and the \$4000 to \$5000 group with the highest equipment score had the lowest sewing score.

Location of sewing equipment and sewing centers

Very little has been written about the convenience of home sewing equipment, but if the homemaker's time and energy is to be conserved, it would be well to give more consideration to this subject. The average Bozeman homemaker considered the arrangement of her sewing equipment and

conditions of work as satisfactory.

TABLE XV. PERCENTAGE DISTRIBUTION OF ROOMS USED AND ROOMS PREFERRED FOR SEWING. BOZEMAN, MONTANA 1943

	Rooms							Total pct.	No.
	Kitchen pct.	Dining pct.	Living pct.	Bed* pct.	Laundry pct.	Sewing pct.	Others pct.		
Percentage of rooms used for sewing	11.7	32.9	19.7	25.7	.4	4.8	5.6	100	249
Percentage of rooms preferred for sew- ing centers	24.3	20.7	9.4	29.6	4.7	4.8	6.5	100	276

* Includes 1st and 2nd floor bedrooms

Each homemaker was asked to report the room generally used for sewing and the closeness of the important items of sewing equipment to the actual sewing center. The rooms most commonly used were dining, bed, and living rooms, but the homemakers expressed their preference for first-floor bedrooms or kitchens as sewing centers. (Table XV) Four percent of the homemakers had sewing rooms and only 4.8 percent expressed a desire for a separate sewing room. These figures are not surprising when considering the average size of the homes and the limited time spent in sewing.

(Table XI).

Agan (1) has suggested the desirability of a room which she called a clothery to be located near the kitchen and arranged to take care of the laundering, repair, and construction of clothing. Such a multi-purpose room might be more practical in the home of average size than a sewing room which few of the women have or desire. Most of the homemakers (168) do their sewing only during the day-time and if such a clothery were

available to them, many needless steps might be avoided.

During the past few years much improvement in kitchens has resulted from the efforts of equipment companies and from people who are directly concerned with the problems of homemakers. If sewing centers more nearly paralleled the modern kitchens in attractiveness and convenience, it would be natural to expect an increased interest in home sewing.

Reasons for sewing

The homemakers were asked to check seven specific reasons for sewing and to list additional ones which applied to them. Lower cost accounted for 19 percent of the total 912 answers and was considered important by 66 percent of the homemakers and regardless of the family income. (Tables XVI and XVII) The next most frequently named reasons for home sewing were 2) garments more satisfactory, 16.2 percent, 3) better materials, 16 percent, and 4) enjoyment 15 percent. The homemakers enjoyment of sewing appeared to become more important in relation to other reasons given as the family income level increased. When economic pressure is reduced it is normal to find enjoyment as a more frequent motive for home sewing if the homemaker does an appreciable amount.

Shortages of ready-made articles constituted 10.9 percent of the reasons given, and table XXI shows that 8.5 percent of the homemakers considered the limited choice of materials as a difficulty associated with their sewing activities. These small percentages indicated that no acute

TABLE XVI . PROPORTION OF HOMEMAKERS STATING REASONS FOR SEWING (CLASSIFIED BY YEARLY SEWING SCORES) BOZEMAN, MONTANA 1943

Sewing scores	No. of home-makers*	Reasons for sewing							Total No.	Av. No. per person	
		Satisfaction		Economics			Others				
		Enjoy-ment more satis-fac-tory	Garments Better mate-rials	Better work-man-ship	Lower cost	In-creased family needs	Short-age of ready-made articles				
pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.				
1100-1199	1	.7	.7	.7	.9	.6	1.8	1.0		7	7
1000-1099	1		.7	.7	.9	.6				4	4
900- 999	1	.7	.7	.7	.9	.6				5	5
800- 899	1		.7	.7		.6		1.0		4	4
700- 799	2	.7	1.4	.7	.9	.6	1.8	2.0		9	4.5
600- 699	4	1.5	2.0	2.0	2.6	1.7	5.4	1.0		18	4.5
500- 599	5	2.2	2.0	2.0	2.7	1.1	5.4			17	3.4
400- 499	8	3.7	3.4	3.4	4.2	4.0	5.4	1.0		31	3.9
300- 399	17	5.8	7.4	6.9	8.8	7.4	8.9	10.0	2.6	68	4.0
200- 299	36	13.2	16.9	17.1	16.8	18.9	16.0	16.2	2.6	146	4.1
100- 199	56	19.0	19.6	21.9	17.7	23.4	16.0	16.2	23.7	182	3.3
00- 99	89	35.8	29.0	26.7	24.8	24.5	23.2	35.4	39.5	259	2.9
No score	44	16.7	15.5	16.5	18.6	16.0	16.1	16.2	31.6	162	3.8
Total No. of answers	265	137	148	146	113	175	56	99	38	912	
Pct. each reason to total		15.0	16.2	16.0	12.4	19.2	6.1	10.9	4.2		
Pct. of women giving these reasons		51.7	55.9	55.1	42.7	66.0	21.1	37.4	14.3	100	

* No answer - 11 homemakers

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shortage of textile materials has been felt in Boreman, and corresponds closely to the statements volunteered by the local merchants. (Introduction)

An increase in family needs seems to be a relatively unimportant reason for sewing for this group of homemakers, but it will be remembered from table VI that only 5 percent of the total family members were under the age of three years.

In addition to the specific information requested, many women volunteered additional reasons for sewing which included 1) better materials at lower cost, 2) better fitting garments, 3) more suitable styles, and 4) mending to make clothes last longer.

The reasons given for home sewing in this and preceding studies appear to be essentially the same, regardless of when they are requested. Wood, Lindquist, and Studley (39) in 1932 gave "lower cost and better material, better suiting of individual needs, and enjoyment" as the most outstanding reasons for home sewing. O'Brien and Campbell (28) concluded that 90 percent of the 1697 women interviewed by them were sewing because of the lower cost of home-made garments, and 75 percent of the women were sewing because they were able to obtain better materials for making garments.

Garments upon which savings might be effected through home sewing

In addition to giving lower cost as a reason for home sewing, many homemakers indicated certain kinds of articles upon which savings might be made. (Table XIX) From the statements of the homemakers, it appeared that garments for girls were considered the most important items of savings. Dresses, sleeping garments, and aprons accounted for the highest percentage of total answers. It was interesting to note the differences of opinion

TABLE XVII . PROPORTION OF HOMEMAKERS STATING REASONS FOR SEWING (CLASSIFIED BY INCOME GROUPS)
BOZEMAN, MONTANA 1943

Income	No. of home-makers*	Reasons for sewing								Total No.	Av. No. per person
		Enjoy-ment	Satisfaction			Economic		Others			
			Garments more satis-factory	Better mate-rials	Better work-man-ship	Lower cost	In-creased family needs		Short-age of ready-made articles		
	pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.			
\$5000-over	22	18.8	15.9	14.5	11.7	13.1	5.8	18.8	1.4	69	3.1
\$4000-4999	27	17.2	18.2	17.2	14.1	14.2	3.0	13.1	3.0	99	3.6
\$3000-3999	56	16.7	12.5	16.1	10.7	20.9	6.0	10.1	7.0	168	3.0
\$2000-2999	74	14.7	17.0	15.9	12.0	18.0	6.6	11.2	4.6	258	3.5
\$1000-1999	48	12.3	15.5	16.1	14.0	21.5	8.5	9.6	2.5	185	3.8
\$ 000-999	11	6.5	17.4	17.4	13.1	26.1	6.5	6.5	6.5	46	4.1
Not given	27	17.2	19.5	15	11.5	21.8	2.3	6.9	4.6	87	3.2
Total No.	265	137	148	146	113	175	56	99	38	912	3.4
Pct. of total reasons		15.0	16.2	16.0	12.4	19.2	6.1	10.9	4.2	100	

* No answer, 11 homemakers

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TABLE XVIII. PROPORTION OF HOMEMAKERS STATING REASONS FOR SEWING (CLASSIFIED BY TRAINING IN SEWING) BOZEMAN, MONTANA 1943

Home- makers train- ing in sewing	No. of home- mak- ers*	Reasons for sewing								Total No.	Av. No. per per- son
		Enjoy- ment	Satisfaction		Lower cost	Economic	Short- age of ready- made articles	Others			
			Garments more satis- fac- tory	Better mate- rials					Better work- man- ship		
pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.				
None	5		.7	.7		.5	1.8	2.0	5.3	8	1.6
Home	118	42.3	39.2	42.4	42.5	46.3	53.6	47.4	39.5	399	6.3
High School and others †	84	34.3	35.8	31.5	28.3	33.2	25.0	28.3	36.8	292	3.3
College and others	52	20.4	23.0	24.0	26.5	18.9	16.1	21.2	15.8	196	3.8
Not given	6	3.0	1.3	1.4	2.7	1.1	3.5	1.1	2.6	17	2.4
Total No.	265	137	148	146	113	175	56	99	38	912	

* No answer - 11 homemakers

on the question of savings. For example, two homemakers stated that a savings could be effected by making boys' pajamas, while two homemakers considered these items impractical to make.

TABLE XIX. PERCENTAGE OF ANSWERS SHOWING KINDS OF GARMENTS FOR FAMILY MEMBERS ON WHICH SAVINGS CAN BE EFFECTED THROUGH HOME SEWING BOZEMAN, MONTANA 1943

Kinds of garments	Garments made for family members					Total Answers	
	Infants pct.	Boys pct.	Girls pct.	Women pct.	Men pct.	No.	pct.
Under-clothing	35	2	39	20	4	42	4
Sleeping garments	17	20	28	19	16	288	20
Aprons	3		36	61		234	16
Dresses	8		45	47		298	20
Skirts	2		65	33		168	12
Blouses	2	4	57	37		148	10
Shirts	13	50	11	6	20	64	4
Suits	9	21	46	21	3	75	5
Coats	15	24	44	13	4	130	9
Number of answers	136	146	613	493	70	1457	
Pct. of total answers	9	10	42	34	5		100

A check list for household items upon which savings could be made was not included in the questionnaire, but some homemakers wrote in a total of 159 household items in addition to the garments mentioned.

Savings on types of household items	Pct. of answers
Curtains, draperies	28
Dish towels	18
Sheets and pillow cases	14
Quilts	6
Slip covers	6
Luncheon sets	4
Miscellaneous	24
Total -	100

A comparison of the opinions of the homemakers as to the savings that might

be effected through home sewing with the amount of sewing that was actually done by the homemakers shows a fairly close relationship. (Tables XIX and IV)

There has been much controversy over the subject of the costs of home-made and ready-made clothing. (12) (17) (57) (46) The homemaker must decide whether the time and energy spent in making clothing is warranted by the savings or satisfaction she is able to realize. If better materials are bought for making a garment than could be found in a ready-made garment of comparable style, the savings could be estimated only in the added length of time the garment would be usable. This would not always be desirable, particularly when styles change more quickly than they do under our present war-time "freezing" regulations.

Homemaker's training. Another factor which seemed to be relevant to the extent of homemakers sewing activities was the amount of training they had received in the fundamental techniques of sewing. Consequently information was sought to determine any relationship of the amount and kind of training to the sewing scores, the reasons for sewing, and the difficulties encountered. Tables XVIII, XX, XXI, and XXII are presented to show some of the effects of informal and formal training. Informal training refers to instruction received in the home, supplemented by aid from books, magazines or bulletins, while formal training is defined as that received in high school, college, or adult education groups. Instruction from the use of printed material as the only source of sewing help was not given by any homemaker and therefore has not been tabulated as a major type of training. The same was true for adult classes, since the 33 homemakers who had this type of instruction had also had some other

TABLE XX . DISTRIBUTION OF HOMEMAKERS BY SEWING SCORES AND TRAINING IN SEWING
BOZEMAN, MONTANA 1943

Sewing scores	No. of home-makers*	Types of sewing training									Total	
		Home	High School	Col- lege	Adult educa- tion groups	Books	Maga- zines	Bul- letins	Others	None		
		pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.		
1100-1199	1	16.7	16.7		16.6	16.7	16.7	16.6			100	6
1000-1099	1	20.0			20.0	20.0	20.0	20.0			100	5
900- 999	1	50.0					50.0				100	2
800- 899	1	50.0					50.0				100	2
700- 799	2	33.4	16.7			16.7	16.6	16.6			100	6
600- 699	4	44.5	11.1	11.1		11.1	11.1		11.1		100	9
500- 599	3	21.4	21.4	14.3	7.1	7.1	14.3	14.3			100	14
400- 499	8	26.1	13.0	8.7	8.7	17.5	13.0	13.0			100	23
300- 399	17	32.0	12.0	6.0	4.0	12.0	16.0	12.0	6.0		100	50
200- 299	36	39.9	16.5	7.2	2.0	9.3	19.6	10.3	4.2		100	97
100- 199	55	28.5	19.5	9.1	5.2	5.2	12.1	10.4	2.5	.7	100	154
00- 99	94	31.7	17.3	8.0	5.5	9.7	16.5	8.8	1.7	.8	100	237
No score	46	40.8	19.5	6.2	3.0	5.1	16.3	7.2		2.0	100	98
Total No.	269	224	121	52	33	60	124	68	16	5		703
PCT. OF TOTAL												
ANSWERS		32.0	16.8	7.7	4.7	8.6	17.4	9.7	2.3	0.8	100	

* No answer - 7 homemakers

TABLE XXI. PROPORTION OF HOMEMAKERS STATING DIFFICULTIES OF SEWING (CLASSIFIED BY TYPES OF SEWING TRAINING) BOZEMAN, MONTANA 1943

Home- makers sewing training era*	No. of home- mak- ers*	Difficulties of sewing											Av. per per- son	
		Actual sewing			Equipment		Personal physical				Lack of	Limited		None
		Use & Fit- ation prob- lem	Styl- ing	Lack of equip- ment	Incon- ven- ient locas- tion	Fa- tigue	eye strain	Irri- ta- tion	Others	time	choice of mate- rials			
pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.	pct.			
None	4	4.0	1.4	2.9			6.0	1.7	2.5	12.5	1.8	1.9		3.0
Home	113	64.0	50.0	40.0	47.0	31.4	48.0	40.0	46.5	45.9	43.7	43.2	3	2.4
Hi school	82	20.0	26.4	34.3	36.8	55.7	20.0	35.0	25.5	20.8	32.9	37.3	3	2.1
College	51	8.0	19.4	20.0	10.5	20.0	22.0	18.3	25.5	20.8	20.4	13.7	1	2.2
Not given	5	4.0	2.8	2.8	5.3	2.9	4.0	5.0			1.2	3.9		2.3
Total pct.		100	100	100	100	100	100	100	100	100	100	100		2.4
Total No.	25	25	72	35	38	35	50	60	43	24	167	51	7	
pct. of total diffi- culties	100	4.2	12.0	5.8	6.3	5.8	8.3	10.0	7.2	4.0	27.9	8.5		2.5

* No answer - 21 homemakers

TABLE XXII. PROPORTION OF HOMEMAKERS STATING DIFFICULTIES OF SEWING (CLASSIFIED BY TYPES OF SEWING TRAINING AND SEWING SCORES) BOZEMAN, MONTANA 1943

Home- makers train- ing in	No. of home- mak- ers	Scores*		No. of ans- wers**	Difficulties of sewing					Totals	No. of total No. (600)	
		No.	Av.		Actual sew- ing	Lim- ited choice of mate- rials	Equip- ment	Lack of time	Per- sonal phys- ical			
					pct.	pct.	pct.	pct.	pct.			pct.
None	5	4	193	4	20.0	6.6		20.0	53.4	100	15	2.5
Home-	123	100	201	113	24.5	8.2	10.8	27.1	29.4	100	269	44.8
Hi school	89	74	167	82	19.3	10.2	16.0	29.4	25.1	100	187	31.1
College	52	46	179	51	20.4	6.2	9.7	30.1	33.6	100	113	19.0
Not re- ported	7	3	223	5	25.0	12.5	18.8	12.5	31.2	100	16	2.6
Totals	276	227	185	255	132	51	73	167	177	100	600	
pct. of total (600)					22	8.5	12.1	27.9	29.5			100.

* No scores - 49 homemakers

** No answer - 21 homemakers

type of formal training.

There was a general tendency for the percentage of sewing difficulties to increase in an inverse ratio to the homemakers training in sewing. (Table XXI) Only 4 of the homemakers who were included in this classification had no sewing training, and reported few sewing difficulties, but their low scores indicated that little sewing was being done.

The highest average scores of 201 points were attained by those with only informal training as compared with an average score of 167 points for those homemakers having high school and college instruction. (Table XVIII). As a whole, the homemakers having had only home training reported the greatest number of difficulties in sewing and also stated fewer reasons for sewing.

The only other instance in which the effect of training was included in home sewing studies was the one made by Brown (9) in which all of the homemakers included were college home economics graduates.

Difficulties of sewing. In a study of home sewing it seemed important to learn what sewing difficulties were recognized by the homemakers. Lack of time ranked first in order of difficulties accounting for 27.9 percent of 600 answers received. (Tables XXI and XXII) The second most common difficulty was fitting which accounted for 12 percent of the answers. All of the answers received were organized under five major headings, namely, 1) actual sewing difficulties, 2) lack of equipment or inconvenient location of equipment, 3) limited choice of materials, 4) personal physical difficulties, and 5) lack of time. The personal physical difficulties and lack of time were the two most frequently mentioned although they

would not normally be considered as directly related to sewing processes. The actual sewing difficulties which included use and alteration of patterns, fitting problems, and styling represented 22 percent of the total number given and were named by 52 percent of the homemakers.

The fact that 55.9 percent of the women sew because garments are more satisfactory and 42.7 percent because of better workmanship (table XVI) indicates that at least this number had been able to meet their sewing problems to their own satisfaction.

O'Brien and Campbell (28) classed the difficulties of sewing included in their study under selection and construction. The construction problems were most often due to inability to fit garments, and to alter patterns satisfactorily.

Comparisons of pre-war and war-time sewing. One of the original objectives of this study was to determine the effect of war-time conditions on the extent of home sewing. (Table XXIII). The data for the 181 homemakers who reported sewing for both periods indicated that the homemakers were making more clothing and household articles from new and renovated material in 1942 and 1943 than during the years 1940 and 1941. This increase was 22 percent for the two war-time years over the two pre-war years.

The homemakers realization of the war-born necessity for the conservation of textile materials seems evident because of the marked increase in the number of renovated articles. The consumers' pledge: "I will buy carefully--I will take care of the things I have--I will waste nothing"

TABLE XXIII. COMPARISON OF THE AVERAGE AMOUNT AND KIND OF SEWING BY
HOMEMAKERS IN PRE-WAR AND WAR-TIME PERIODS
BOZEMAN, MONTANA 1943

Period	Total scores for the period	No. of home-makers making articles	Average number and kinds of articles made of			
			New material		Renovated material	
			Kinds	number	Kinds	Number
Pre-war	65,922	181	6.5	32.0	2.4	6.9
War-time	80,351	181	7.8	35.0	3.4	9.8
Increase (pct.)	22		20	9	38	42

has served to emphasize this form of war-time service. (51) While there was a decided increase in the total amount of sewing for the war-time period, it was not common for all homemakers. Some of the reasons given by homemakers for a decrease in sewing during the war-time years were outside employment and fewer members of the family at home to create a need for sewing. The reasons given for an increase in sewing during this period included shortages of ready-made articles, households newly established, and a recognition of the importance of sewing during the war time.

Value of Objective Rating Scale for Evaluation of the Extent of Sewing

The objective rating scale that has been used in this study is an original device to evaluate the extent of homemakers sewing activities. Previously the total amount of sewing was determined by the number of

garments made, but this method does not permit satisfactory comparisons because the types of home sewing are so diverse. Therefore, it seemed timely to develop a quantitative measure which would differentiate between simple and more complex articles and yield values which when totaled would result in a true picture of the work accomplished.

This method of measurement was evolved through an analysis of the major and minor processes of sewing. The major processes included 1) the time requirement, 2) skill in planning and cutting, and 3) skill in construction and fitting. Some aspects of sewing which were not included were the preliminary planning related to the fulfillment of needs or desires, the selection and purchase of patterns and materials, or the various forms of handwork, as these are not integral parts of the sewing process.

While only 47 articles have been assigned values, in the future any sewing item may be given a numerical value by first evaluating the work involved on the three rating scales and then averaging the resultant figures. Some minor readjustments of the score values may be found necessary to allow for changes in habits, styles of fashions.

It is anticipated that the method used in developing this rating scale could be used by those formulating home economics curricula for high school, college, or adult programs, as an aid in deciding upon the best sequence of articles to be made by students. The time values would have to be adjusted because of the inexperience of some of the students and to allow for the time required for instruction. This rating scale should be valuable to students in evaluating their own progress in sewing.

Homemakers may also use the rating scale to determine the actual amount of sewing that they do within a certain period of time. Such an objective measure of this one phase of the homemaker's contribution to the real income of her family would aid in an evaluation of her total job.

If professional home economists or others directly or indirectly interested in the trends of home sewing or the factors which influence home sewing, would follow the method used in developing this rating scale in making future investigations, numerical comparisons could be made with the results presented herein.

SUMMARY OF RESULTS

The extent of the sewing activities of Bozeman, Montana homemakers was evaluated by the use of an original device which measured some of the most important aspects of sewing. Rating scales were set up for the three major factors of sewing, namely, 1) time, 2) skill in planning and cutting, and 3) skill in construction and fitting, to insure an accurate evaluation of various articles of sewing. The values were assigned to each of 47 articles of sewing by judging committees of homemakers and professional home economists and then used by the writer in determining the extent of sewing reported by each of the homemakers.

The yearly average scores for all homemakers ranged from zero to 1104 points with an average score for the group of 185 points. Eighty-four percent of the homemakers were doing some sewing and the articles most frequently made were house dresses, aprons, skirts, and undergarments for girls and women and pajamas for all members of the family. The data indicate a 22 percent increase in the total amount of sewing for these homemakers during the war years, 1942 and 1943 over the preceding two pre-war years, 1940 and 1941.

Eighty-nine percent of the homemakers owned sewing machines and all had additional sewing equipment in varying amounts including shears, measures and some form of container for the small sewing equipment. Most homemakers considered the existing arrangements for their larger pieces of sewing equipment as satisfactory and stated that the dining room was the

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place most often used as a sewing center.

The most important reason given for home sewing was satisfaction, when better materials and better workmanship in homemade garments were included under this heading. Lower cost and enjoyment were named as the next most important reasons for home sewing. In the opinion of the homemakers the greatest savings were effected through the making of dresses, aprons and sleeping garments. The greatest number of difficulties encountered was connected with the use and alteration of patterns, and the fitting and styling of garments. Lack of time was given by 167 homemakers as a difficulty, but it can not be considered as an actual sewing difficulty.

A majority of the homemakers had had only home training in the fundamental techniques of sewing but additional help was usually obtained from printed materials such as books, magazines and bulletins. Even though high school training accounted for the next highest number of answers, all types of formal training appeared to have little effect on the total amount of sewing done. However, the homemakers having formal training gave a greater number of reasons for sewing and reported fewer difficulties.

The average family questioned consisted of four members with 46 percent of the mothers and 69 percent of the fathers over 40 years of age, nearly one-half of the daughters between the ages of 13 and 18, and a majority of the sons between 7 and 18 years of age.

The husbands were most frequently in the professional or managerial class and the average family income was \$2950, which included the incomes from 83 employed homemakers. The size of the income of these families seemed to have little effect on the amount of sewing done. En-

ployment outside the home and volunteer war work are responsible for added demands on the homemakers time.

An average of four unscheduled hours per week was devoted to sewing by the Bozeman homemakers with approximately one-half of that time spent in mending.

These results including the reasons for sewing, difficulties encountered in sewing, and the amount and kind of equipment used do not differ markedly from the results in studies previously reviewed. However, the present study included other factors such as the homemaker's training, occupation of husband and homemaker, the distribution of the homemaker's sewing time, assistance with sewing as well as other household tasks, and the effects of war-time conditions upon the extent of homemakers sewing activities.

The chief distinction held by this study is the fact that all factors which were thought to influence the amount and kind of home sewing were checked against a definite measure of the sewing done by each homemaker.

CONCLUSIONS

The method used in developing the objective rating scale is the most important contribution of this study. The scale itself should be tried out and revised in the light of the experience and opinions of more people proficient in sewing. This rating scale made possible a quantitative evaluation of the extent of the homemakers sewing activities. Through the use of this scale the homemakers were classified according to their sewing scores which permitted the study of the influence of certain factors on the amount and kind of sewing more accurately than would otherwise have been possible.

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1938. CLOTHING THE CHILD. 256 pp., McGraw Hill Book Co., Inc.,
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- (42) Zimmerman, C. C.
1936. CONSUMPTION AND STANDARDS OF LIVING. 602 pp., D. Van Nostrand
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APPENDIX A

SURVEY OF PRESENT TRENDS IN HOME SEWING IN BOZEMAN, MONTANA

- I. Name _____ Address _____
- II. Indicate No. of members in household within the following age groups:
& 0-3; 4-6; 7-12; 13-18; 19-25; 26-30; 31-35; 36-40; 40-over
- III. A. Mother: _____ : _____ : _____ : _____ : _____
 B. Father: _____ : _____ : _____ : _____ : _____
 C. Sons: _____ : _____ : _____ : _____ : _____
 D. Daughters: _____ : _____ : _____ : _____ : _____
 E. Others-Male: _____ : _____ : _____ : _____ : _____
 F. " -Female: _____ : _____ : _____ : _____ : _____
- IV. Husband's Occupation: _____
- V. Does homemaker work outside of home? A. Full time _____
 B. Part time _____
- VI. A) No. of rooms in home _____ B) What room is used for sewing? _____
- VII. REASONS FOR HOME SEWING. Check (✓)
- A. _____ Enjoyment
 B. _____ Increase in family needs
 C. _____ Garments more satisfactory
 D. _____ Lower cost
 E. _____ Better materials
 F. _____ Better workmanship
 G. _____ Shortage of ready-made articles
 H. List other reasons: _____
- VIII. MAIN DIFFICULTIES OF HOME SEWING. (check ✓)
- A. _____ Use and alteration of pattern
 B. _____ Fitting problems
 C. _____ Unable to make garments attractive or stylish
 D. _____ Lack of time
 E. _____ Lack of equipment
 F. _____ Limited choice of desirable materials
 G. _____ Inconvenient location of equipment
 H. _____ Fatigue J) _____ eye strain K) _____ irritation
 M. List other difficulties _____
- IX. Estimate the average No. of hours spent per week in sewing: _____
- X. Estimate the percentage of this time spent on: A) Mending _____ ;
 B) Renovating _____ ; C) New Garments _____ ; D) Household sewing _____
- XI. Do you set aside regular times for your sewing? Yes _____ No _____
- XII. Are Your plans: A) Weekly _____ B) Seasonal _____ C) Irregular _____
- XIII. Is there any member in your household who assists with sewing? _____
- XIV. If answer is yes, in what ways? _____
- XV. Do you have assistance with other household tasks so that you spend more time in sewing? _____
- XVI. Check (✓) the kind of training or help you have had in sewing techniques:
 A) Home _____ ; B) High School _____ ; C) College _____ ; D) Books _____ ; E) Magazines _____ ;
 F) Bulletins _____ ; G) Adult Education groups _____ .

- XVII. EQUIPMENT: Check (/) what you have-
- A. Sewing Machine: 1) Treadle ___; 2) Elec. Port. ___; Elec. Cab. ___
 - B. Attachments for machine _____
 - C. 1) Sewing kit ___; 2) Sewing cabinet _____
 - D. Shears: 1) Regular cutting ___; 2) Embroidery ___; 3) Buttonhole ___
4) Pinking _____
 - E. 1) Tapeline ___; 2) Ruler ___; 3) Yardstick ___; 4) Tailor's Square ___;
 - F. 1) Tailor's chalk ___; 2) tracing wheel ___; 3) skirt marker _____
 - G. Ironing boards: 1) Portable ___; 2) Stationary _____.
 - H. Irons: 1) non-regulated ___; 2) regulated ___; 3) steam _____
 - K. 1) Pressing cushions ___; 2) full-length mirror ___; 3) Dress form _____
 - L. Working condition of machine: 1) good ___; 2) fair ___; 3) Poor _____

- XVIII. LOCATION OF EQUIPMENT: Check (/)
- | | | | |
|--|-----------------|----------------------|---------|
| | 1) very
good | 2) satis-
factory | 3) Poor |
|--|-----------------|----------------------|---------|

- A. Do you consider your equipment conveniently located? _____
- B. Rate the following in relation to closeness to the sewing center..
 - 1) sewing machine _____
 - 2) pressing equipment. _____
 - 3) cutting table _____
 - 4) full-length mirror. _____
 - 5) storage space for supplies. _____
 - 6) closet space for hanging garments _____
 - 7) other work centers _____
- C. May sewing be done without frequent clearing away for other use of space? _____
- D. Rate the ease with which floor of sewing center is cleaned _____
- E. Do you have adequate light for:
 - 1) Day time sewing? _____
 - 2) Night time sewing? _____

- XIX. Do you do most of your sewing:
- | | |
|-------------------------|--------------------|
| A. During the day _____ | B. at night? _____ |
|-------------------------|--------------------|

- XX. Would you prefer having sewing center a part of, or close to:
- | | |
|--------------------|--------------------------|
| A. ___ kitchen | D. ___ 1st floor bedroom |
| B. ___ dining room | E. ___ 2nd floor bedroom |
| C. ___ living room | F. ___ laundry |
| | G. _____ Other location? |

- XXI. Of the types of sewing that you have done, which do you think resulted in the greatest savings in comparison to ready-made articles:
- | | Infants: | Boys | Girls: | Women: | Men |
|--------------------------------|----------|-------|--------|--------|-------|
| A. Underclothing | _____ | _____ | _____ | _____ | _____ |
| B. Sleeping garments | _____ | _____ | _____ | _____ | _____ |
| C. Aprons | _____ | _____ | _____ | _____ | _____ |
| D. Dresses. | _____ | _____ | _____ | _____ | _____ |
| E. Skirts | _____ | _____ | _____ | _____ | _____ |
| F. Blouses. | _____ | _____ | _____ | _____ | _____ |
| G. Shirts | _____ | _____ | _____ | _____ | _____ |
| H. Suits | _____ | _____ | _____ | _____ | _____ |
| I. Coats. | _____ | _____ | _____ | _____ | _____ |
| J. Household Sewing _____ | _____ | _____ | _____ | _____ | _____ |

XXII. CONFIDENTIAL: (To be used without names for comparison with national study.)

Income -- Within what range does your family income fall?

A) 000-1000 B) 1000-1999 C) 2000-2999 D) 3000-3999 E) 4000-4999 F) 5000-over
 _____ : _____ : _____ : _____ : _____ :

XXIII. AMOUNT AND KIND OF HOME SEWING: Estimate the number of articles

	War time 1942 & 1943		Pre-war 1940 & 1941	
	New Mat- erial	Renovated...	New Mat- erial	Renovated
A. Girls & Women:				
1. Slips	_____	_____	_____	_____
2. Panties	_____	_____	_____	_____
3. Gowns	_____	_____	_____	_____
4. Pajamas	_____	_____	_____	_____
5. Housecoats.	_____	_____	_____	_____
6. Aprons.	_____	_____	_____	_____
7. Collars, cuffs, dickies	_____	_____	_____	_____
8. Blouses, shirts.	_____	_____	_____	_____
9. Skirts.	_____	_____	_____	_____
10. Jumpers	_____	_____	_____	_____
11. Jerkins	_____	_____	_____	_____
12. House dresses	_____	_____	_____	_____
13. Afternoon dresses	_____	_____	_____	_____
14. Formal dresses.	_____	_____	_____	_____
15. Jackets	_____	_____	_____	_____
16. Slacks	_____	_____	_____	_____
17. Snow-suits, ski- suits	_____	_____	_____	_____
18. Suits	_____	_____	_____	_____
19. Coats	_____	_____	_____	_____
B. Boys and Men:				
20. Underclothing	_____	_____	_____	_____
21. Pajamas	_____	_____	_____	_____
22. shirts	_____	_____	_____	_____
23. Trousers	_____	_____	_____	_____
24. Suits	_____	_____	_____	_____
25. Snow-suits.	_____	_____	_____	_____
26. Jackets	_____	_____	_____	_____
27. Coats	_____	_____	_____	_____

B
MAD

XXIII. (cont'd)

	<u>War time 1942 & 1943</u>		<u>Pre-war 1940 & 1941</u>	
	<u>New Mat-</u>	<u>Renovated...</u>	<u>New Mat-</u>	<u>Renovated</u>
	<u>erial</u>	<u>erial</u>	<u>erial</u>	<u>erial</u>
C. Infant's wear:				
28. Diapers	_____	_____	_____	_____
29. Gertudes	_____	_____	_____	_____
30. Bathrobes	_____	_____	_____	_____
31. Buntings. . . .	_____	_____	_____	_____
32. Sleepers. . . .	_____	_____	_____	_____
33. Play suits	_____	_____	_____	_____
34. Rompers	_____	_____	_____	_____
35. Dresses	_____	_____	_____	_____
36. Shirt, pants, suits	_____	_____	_____	_____
37. Coats	_____	_____	_____	_____
D. Household Sewing:				
38. Curtains, draperies	_____	_____	_____	_____
39. Towels	_____	_____	_____	_____
40. Sheets.	_____	_____	_____	_____
41. Pillow cases. . . .	_____	_____	_____	_____
42. Quilts, comforters	_____	_____	_____	_____
43. Spreads	_____	_____	_____	_____
44. Tablecloths	_____	_____	_____	_____
45. Napkins, place covers	_____	_____	_____	_____
46. Slip covers	_____	_____	_____	_____
47. Upholstery.	_____	_____	_____	_____

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APPENDIX B

811 South 7th Street
Bozeman, Montana

To the Homemakers of Bozeman:

Shortly after Pearl Harbor, some of you signed the following pledge: "I will buy carefully--- I will take care of the things I have--- I will waste nothing". Everyone has done her part eagerly and unstintingly with excellent results in many lines, a few projects being: raising of Victory Gardens, preservation of foods, assisting with Red Cross surgical dressings, and serving as Nurse's Aides.

Now, seems to be the logical time for more concentrated efforts on a program of clothing conservation. We have been made aware of the necessity of such conservation through many channels, but little emphasis has been placed upon this phase of "home-front defense" in our community. For this reason, we are undertaking a survey of home sewing practices, difficulties and facilities in a representative group of local homes. While the results of this study will be mainly of interest to Bozeman homemakers, we believe the habits, needs and desires of this group constitute a fair cross-section of all Montana homemakers.

Raw materials normally used for civilian clothing and household textiles are now being diverted to military needs. One report states, that after a four-day battle at the front, half of the soldiers who took part have to be completely re-outfitted, and after a six-day battle, all of them must be re-clothed. This means that we are going to have to "buy carefully--- care for what we have--- and waste nothing". The more we do for ourselves, the more we will be assisting the war effort.

Will you help us to complete this survey by setting aside one-half to one hour of your already filled time, to give us the information we need? We shall be glad to send you a summary of the conclusions in which we plan to offer, first, suggestions for solving some of the main difficulties encountered in sewing, and second, to formulate various plans for improving sewing centers without necessarily requiring major structural changes in the homes. We feel that sewing centers deserve more attention to planning than they have received in the past, and should parallel our modern kitchens in attractiveness, interest and convenience.

Will you please fill out the enclosed schedule and return in the self-addressed stamped envelope? We thank you for your co-operation in helping us to make this survey.

Approved by:
/s/ Gladys Branegan
Advisor

/s/

Very truly yours
Mary Wetzsteon
Mary Wetzsteon
Graduate Student
Montana State College

APPENDIX C

INSTRUCTIONS FOR FILLING OUT HOME SEWING SURVEY SCHEDULE

If for any reason homemaker does not wish to answer any question, write in N.A. (no answer) to indicate that it was not over-looked. Questions not answered because of other reasons should be crossed out.

- I. Names may be omitted if desired. However, the original sheets are not used after data are transferred to cards, where personal identity is lost. Names are desired only when necessary to re-check schedule with homemakers.
- II. & III. Indicate number of persons by (1), (2), et cetera in the proper spaces.
- V. If homemaker has no outside occupation, write none below question. Otherwise, indicate type or kind of employment.
- VI. Bathrooms and halls are to be omitted in counting rooms.
- VII. B) Increase in family needs means increase in size of family.
- VIII. B) Indicate if possible, the particular fitting problems.
C) Influence on time and energy
- IX. Estimate normal weekly average. Show in addition, the number of weeks of intensive seasonal sewing within the year.
- X. Estimate percent as: $3/4$ or 75 percent. Be sure total equals 100 percent.
- XI. Based on weekly schedule, same as washing, ironing, et cetera.
- XII. B) Seasonal. Indicate the season in which the most sewing is done.
C) Irregular. Plans adjusted to fit needs and other activities.
- XIII. Indicate relationship of member
- XV. Indicate kind of assistance
- XVI. Home training may be from mother, neighbor, or self.
- XVII. A) If treadle machine has motor attached, indicate as electric
B) Indicate kind of attachment most commonly used
C) Sewing kit may be box, suitcase, bag, portable stand, screen, et cetera.
H) Sad-irons may be indicated as non-regulated
K, 2) A large, low-hung mirror may be checked as a full-length mirror.
- XVIII. Very good --- corner of room, sewing closet with window, or sewing room
Satisfactory -- most of large equipment centrally located
Poor -- No organization of equipment
D) Easily cleaned floor -- linoleum, congoleum rug, hard-wood, et cetera.
- XIX. Name articles in household sewing on which there are greatest savings.
- XXI. Income is needed for comparison with national study; will be treated confidentially and in no case used with any names.
- XXIII. Renovations include only making-over of garments; not to include mending or alterations of hems, et cetera. Sheets may be included, if cut down or remade.

APPENDIX D

ASSISTANTS AND GROUPS SUPPLYING COMPLETED QUESTIONNAIRES

	<u>No. of Questionnaires</u>	<u>Totals</u>
Assistants		
Gallatin County High School Home		
Economics Teachers	81	
Emerson Junior High School Home		
Economics Teacher	41	
Other Assistant	<u>15</u>	137
Groups		
Methodist Church	9	
A A U W Book Club	9	
Dames Club	9	
Mormon Church	9	
St. James Episcopal Church	8	
Christian Church	7	
Beall Park Nursery School	7	
Baptist Church	6	
Presbyterian Church Guild.	6	
Montana State College Nursery		
School Parents	4	
Arts and Crafts Club	3	
Hawthorne Parent Teachers Association..	3	
Emerson Parent Teacher Association . . .	3	
Gallatin Seed Pea Company	3	
South Methodist Church	<u>2</u>	88
Questionnaires distributed by mail and secured by personal interview	51	<u>51</u>
		276

APPENDIX E

COMMITTEES ASSISTING IN COMPUTING AVERAGE SCORES FOR
ARTICLES OF HOME SEWING

Committee of homemakers:

Mrs. D. T. Griffith
Mrs. T. Booth Holker
Mrs. E. B. Keller
Mrs. H. D. Korslund
Mrs. Carl Kraenzel
Mrs. R. E. Malsor
Mrs. A. H. Post
Mrs. H. E. Rodeberg
Mrs. H. M. White

Committee of home economists:

Miss Lucile Alexander
Teacher, Gallatin County High School
Miss Geraldine Clewell
Assistant Professor, Montana State College
Miss Martha Hensley
Clothing Specialist, Montana Home Economics Extension Service
Miss Ruth Holmes
Assistant Professor, Montana State College
Mrs. Marjorie Paisley
Instructor, Montana State College
Miss Ione Parker
Teacher, Emerson Junior High School
Miss Alda Torgerson
Assistant Director, Montana Farm Security Administration



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Development and use of an objective rating scale to evaluate the extent of

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