

AN ABSTRACT OF THE THESIS OF

DELORES ANN LEBER for the degree of MASTER OF SCIENCE in
CLOTHING, TEXTILES, AND RELATED ARTS presented on April 29,
1981.

TITLE: DIFFUSION OF INFORMATION ABOUT CLOTHING TO ADULTS
WITH ORTHOPEDIC LIMITATIONS

Abstract approved: Redacted for Privacy
Ardis W. Koester

The purpose of this study was to propose recommenda-
tions for improved diffusion of clothing information to
orthopedically limited adults.

A sample of 180 orthopedically limited adults residing
in the Willamette Valley of Oregon was selected using
mailing lists from the Oregon Governor's Conference for the
Handicapped, from Oregon State University Department of
Handicapped Services, and additional names and addresses
provided by some respondents.

A mailed questionnaire was designed to examine five
demographic characteristics, including sex, age group,
educational level, physical limitations, and annual house-
hold incomes; and the sources of information available to,
used by, and preferred by the respondents. A total of 91
usable questionnaires (50.6% return rate) were included in
this study.

The initial mailing and a three-week follow-up of non-
respondents included a hand-signed cover letter, the

questionnaire booklet, and a first class, stamped return envelope. A postal card follow-up was mailed to all subjects one week following questionnaire distribution. As a token reward, a bibliography of available clothing information for the handicapped was mailed to all respondents.

Descriptive statistics were utilized to examine the demographic variables, and the sources of information available to, used by, and preferred by the sample. Chi-square tests were used to analyze the hypothesis for each information source. The .05 significance level was established. Recommendations pertinent to diffusion of clothing information to orthopedically limited adults are made for each information source based upon chi-square test results and the percentage frequency of respondents who prefer but do not use each source. Recommendations are made either to maintain, develop, or reject diffusion efforts for individual sources. As a supplement to the recommendations, sources where expanded availability would enhance diffusion are identified, and further prioritized to determine those most deserving of expansion efforts.

Results of the analyses indicate: (1) Respondents are nearly equally representative of each sex, 20 years and older (78.1% are age 30-59), educated at or beyond the high school level (93.4%), are multiply handicapped (70.4%), and receive annual household incomes of less than \$10,000 (60.5%). (2) The information sources available to more

than 80% of the respondents include friends, television, newspapers, radio, and family. (3) The information sources used by more than 49% of the respondents for clothing information include catalogs, newspapers, friends, family, and salespersons. (4) The information sources preferred by more than 50% of the respondents for clothing information include catalogs, family, newspapers, friends, pamphlets, popular magazines, newsletters, television, salespersons, and county extension bulletins.

The following recommendations are proposed in terms of promoting effective diffusion of clothing information to orthopedically limited adults: (1) Maintenance of current diffusion efforts and continued use is recommended for the sources both currently used and preferred by the respondents, including newspapers, catalogs, correspondence courses, family, friends, salespersons, television, and radio. (2) Further development of diffusion efforts is recommended for the sources preferred but currently underutilized, including books, popular magazines, newsletters, pamphlets, county extension bulletins, workshops, rehabilitation programs, adult education classes, college/university classes, films, filmstrips, and video-taped programs. (3) Rejection of expanded diffusion efforts is recommended for the sources neither used nor preferred, including tape-recorded messages, slide programs, and computerized programs.

As a supplement to the recommendations, it is suggested that expanded availability of the information sources preferred but not readily available be considered for county extension bulletins, catalogs, pamphlets, video-taped programs, workshops, newsletters, computerized programs, and filmstrips. Further prioritization indicated the following sources to be most deserving of expansion efforts: county extension bulletins, pamphlets, newsletters, workshops, catalogs, and video-taped programs.

DIFFUSION OF INFORMATION
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TO ADULTS WITH
ORTHOPEDIC LIMITATIONS

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Typed by Rebecca L. Johnson for Delores Ann Leber.

DEDICATION

This thesis
is dedicated in memory of
my father,
LAWRENCE DEWITT SMITH,
for his love, understanding, and encouragement.
He is to be admired
for his strength, endurance, and positive attitude,
although becoming increasingly debilitated
as a result of
more than 40 major surgeries
within 8 years.

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DIFFUSION OF INFORMATION ABOUT CLOTHING
TO ORTHOPEDICALLY IMPAIRED ADULTS

CHAPTER I. INTRODUCTION

Clothing is especially important for persons with physical limitations because it may conceal or disguise the stigma of a physical handicap (Goffman, 1961, pp. 39-40). One's social status, psychological well-being, and physical participation may be communicated through one's clothing (Lauer & Handel, 1977, pp. 250-254), and

"no matter what a person's physical capacities, he does not want to appear different from other people . . . From the standpoint of physical or muscular activity, most clothing is hampering to a certain degree. Not only does it limit body movement, but it increases the workload of the body up to as much as 10 percent." (Reich, 1976, p. 290).

The tasks of dressing oneself and of finding comfortable fashionable clothing that fits well need not be time-consuming and frustrating experiences for people with special needs.

There is a considerable amount of information available to a few professionals on how to select clothing, how to adapt a current wardrobe, how to alter sewing patterns, and how to construct clothing that will facilitate and encourage independent living and boost the self esteem of persons with physical limitations. Some of the available information includes catalogs of ready-to-wear and custom

design apparel for special needs, catalogs of self-help dressing devices, and books, pamphlets, theses, professional journals, and newsletter articles on various aspects of clothing selection, adaptation, and construction. A review of literature indicates that clothing information for people with special needs does exist. However, the problem is that the information is primarily available to a limited number of professionals, and it is not currently being communicated to much of the physically limited population (Adams & Mead, 1978, p. 1; Gahring, 1976, p. 2; Reich, 1978, p. 2).

How, then, can clothing information be most effectively communicated from professional clothing educators to the handicapped population? Information may be diffused using written media, audio-visual media, personal contacts, or a combination of two or more of these methods. It is possible that the orthopedically limited population may prefer to use books, pamphlets, popular magazines, newspapers, catalogs, newsletters, county extension bulletins, or correspondence courses. Or they may prefer to receive information via television, radio, tape-recordings, films, filmstrips, video-tapes, or computers. On the other hand, fashion shows, adult education classes, college and university classes, workshops, rehabilitation programs, county extension agents, salespersons, family, or friends may provide important opportunities for face to face communication.

Although numerous media exist, it is not known which sources are preferred by the orthopedically limited adult population for the diffusion of clothing information.

Little data exist on the actual sources of educational media available to, utilized by, and preferred by adults with various limitations. Most of the previous research, program development, and available media have focused upon school-age children (Tickton, 1971, p. 625), omitting handicapped adults. Therefore, it is necessary to investigate the media sources available to, utilized by, and preferred by the disabled adult population in order to provide suggestions for future information dissemination.

Definition of Terms

For this study, the following definitions have been assigned to the terms used:

Adult:

Persons 20 years of age and older.

Clothing Information:

Knowledge related to clothing selection, adaptation, and construction.

Diffusion:

"The process by which an idea spreads" (Rogers, 1970, p. 20).

Multiple Handicaps:

A combination of two or more disabling conditions, such as amputation and paralysis.

Orthopedic Limitations:

"Deformities, diseases and injuries of the bones and joints," for example, paralysis, amputations, arthritis (Guralnik, 1966, p. 527).

Physically Handicapped:

"Persons . . . partially or completely limited in their ability to carry on their major activity (work, keep house, go to school)" (Vocational Rehabilitation Division, 1978, p. 4) due to limited mobility, visual impairments, or other physically disabling conditions.

Special Needs:

Limitations created by the physically handicapping condition, causing a unique situation for the individual that would not exist if there were no handicap.

Statement of the Problem

"It has become apparent that disabled people often do not know what they are entitled to, they do not know what is available, they do not know what they need, and they do not know who to ask or how to go about obtaining help" (Gamwell & Joyce, 1966, p. 65).

"Lack of local expertise to aid physically disabled in their community with clothing related problems is a reality" (Yep & Yep, 1976, p. 4). The investigator examined the current sources of information available to, utilized by, and preferred by orthopedically impaired adults who reside in the Willamette Valley of Oregon in order to provide recommendations on how better to diffuse the available information on clothing selection, adaptation, and construction to this population.

The investigator selected the orthopedically impaired adult population from the many types of physical disabilities because research and observation indicate that this segment of the population seems to have the greatest need for clothing information. Clothing may be a help or a hindrance. It may pose physical and/or psychological

barriers, or, on the other hand, enhance one's appearance, camouflage one's disability, and consequently improve one's self esteem. Therefore, effective diffusion of the available clothing information is essential.

Specific Objectives of the Study

The purpose of this research is:

(1) To describe the selected sample of orthopedically impaired adults, 20 to 70 years of age, who reside in the Willamette Valley region of Oregon.

(2) To determine how the selected sample is currently obtaining information about clothing.

(3) To determine how the selected sample prefers to obtain information about clothing.

(4) To make recommendations on how to diffuse information effectively about clothing to orthopedically impaired adults based upon the sources of information that are currently available to, used by, and preferred by this population.

Justification of the Study

Today there are more than 30 million physically handicapped people in the world (Reich, 1977, p. 1). Of that 30 million people, approximately 215,581 physically handicapped men and women, 18 to 64 years of age, reside in Oregon. Over 68 percent of this population, approximately 146,600

people, are located in the Willamette Valley (Vocational Rehabilitation Division, Oregon, 1978, p. 4). According to the 1970 President's Committee Census Study,

"one out of every eleven adult Americans is disabled. Fifty-two percent of these disabled adults have incomes of less than \$2,000 a year. Sixty percent of these disabled adults never finished high school. The lowest official poverty level--the poorest of the poor--has a proportion of handicapped people that is twice as high as the non-handicapped population" (President's Committee on Employment of the Handicapped, 1970, p. 5).

Statistics indicate the handicapped population has increased 7.5 times in less than 25 years. The figures listed below represent the numbers of handicapped school-age children enrolled in special programs in the United States from 1947 to 1971 (Statistical Abstract of the United States, 1978, p. 363):

<u>1947-48</u>	<u>1958</u>	<u>1963</u>	<u>1970-71</u>
357,000	838,000	1,467,000	2,676,000

Many of these handicapped individuals have special clothing needs. Research findings from Rusk's study at the Institute of Physical Medicine in New York, 1959 to 1962, indicate that clothing needs of the handicapped differ from those of the non-handicapped. "Clothing problems centered around the need for:

1. Design to permit greater social acceptance and increased self esteem by severely disabled persons.
2. Design to permit greater ease in putting on and removing garments by individuals with limited muscle strength and limited range of motion in various joints and by individuals who rely on braces, crutches, wheelchairs, etc.

3. Fabric choice to resist undue wear caused by greater tension on cloth as a result of more strenuous physical activities required by disabled persons in dressing and undressing and undue wear caused by friction of braces, crutches and wheelchairs" (Gahring, 1976, p. 2).

The results of Reich's year-long survey of 2,900 handicapped people in Arizona indicate that improper fit of clothing affected 72% of the respondents, uncomfortable clothing affected 64%, inappropriate fabric characteristics affected 59%, and problems with clothing care affected 52% (Reich, 1978, p. 2). According to the research findings from a survey of clothing preferences of the disabled adult population in Champaign-Urbana, Illinois, clothing fit, fabric care, garment ease, and fasteners presented the greatest problems for the respondents (Adams & Mead, 1978, p. 1). "The Institute of Physical Medicine in New York City, which has been one of the centers most concerned with clothing problems of the physically disabled over the years, found that approximately one-half of the patients interviewed still had clothing related problems upon discharge from the rehabilitation facility" (Yep, 1976, p. 4). These statistics indicate there is a definite need for clothing information by the handicapped population. However, how can this information be diffused to the people in need?

According to the National Goals and Guidelines for Research in Home Economics (A.H.E.A., 1970, p. 42), the Home Economics Research Assessment Planning Project Report

(A.H.E.A., 1978, p. 77), the Government Reports Annual Indexes for 1976 and 1977 (p. SU790), and research findings of Yep and Yep (1976, p. 4) and Reich (1976, p. 291), an immediate need exists for information on methods of disseminating the available knowledge about clothing selection, adaptation, and construction to the handicapped. In addition, the Vocational Rehabilitation Act of 1973, Public Law 93-112, authorizes programs and services such as diffusion of clothing information that will increase the vocational potential and independence of handicapped individuals (U.S. Statutes at Large, 1976, p. 355).

There was a lack of research and information on diffusion of clothing information to orthopedically limited adults. Little was known about the actual media sources available to, utilized by, and preferred by this population. Therefore, it was necessary to investigate the results of existing media sources in order to provide recommendations on how to diffuse effectively the available clothing information in the future.

The results of this study provide specific recommendations on how best to use existing information sources to diffuse clothing information to the orthopedically limited adults who reside in the Willamette Valley. It is anticipated that this information will encourage clothing educators to disseminate clothing information utilizing the most effective means of diffusion to meet the various needs

of individuals with orthopedic limitations. It is also anticipated that the statistical data will be utilized by media specialists and health care professionals, such as doctors, nurses, therapists, educators, sociologists, and psychologists, in addition to para-professional volunteers, friends, and family members who work with the orthopedically handicapped. The results may also be utilized by manufacturers and retailers in terms of how to publicize effectively their specialized clothing and self-help dressing devices to orthopedically limited adults. Recommendations for future studies are also made.

Limitations of the Study

The following limitations were acknowledged:

1. The sample was purposefully, not randomly, selected with the intent of obtaining persons with orthopedic limitations from the Oregon Governor's Conference of the Handicapped mailing list, names and addresses provided by the Oregon State University Director of Handicapped Services, and names furnished by some respondents, and therefore may not be representative of all orthopedically limited adults in Oregon.
2. The sample was limited to orthopedically handicapped individuals, regardless of other handicaps. This study omitted persons who have no orthopedic limitations but may have hearing, visual, and/or emotional impairments,

or have epilepsy or mental retardation.

3. The sample was limited to orthopedically limited adults who reside within the Willamette Valley, and therefore may not be representative of all orthopedically limited adults in Oregon.

Assumption of the Study

The following assumption was acknowledged:

Persons will actually utilize the sources of information that the respondents indicate they would prefer to utilize.

CHAPTER II. REVIEW OF RELATED LITERATURE

A review of literature reveals that little research has been conducted to explore the diffusion of information about clothing to adults with orthopedic limitations. Consequently, literature about the diffusion of innovations was reviewed and related to the diffusion of clothing information.

According to Rogers and Shoemaker, "crucial elements in the diffusion of new ideas are the innovation which is communicated through certain channels over time among members of a social system" (1971, p. 18). In this study, the innovation is information about clothing, which may be communicated using various information sources, among members of the orthopedically limited adult social system. The review includes literature related to: (1) the innovation -- clothing information for adults with orthopedic limitations, (2) diffusion of innovations, (3) diffusion and the social system, and (4) communication of the innovation.

Innovation -- Clothing Information for Adults with Orthopedic Limitations

An innovation may be defined as "the rearrangement of existing ideas" (Ryan, 1969, p. 85), or "any idea, practice or material artifact perceived to be new by the relevant unit of adoption" (Zaltman, Duncan, & Holbek, 1973, p. 10;

Zaltman, 1973, p. 98), or "an idea, practice, or object perceived as new by the individual" (Rogers & Shoemaker, 1971, p. 19). According to Zaltman, et al., the term innovation can mean three different things: (1) an invention, the creation of a new concept or product; (2) the adoption of a new idea or product; or (3) an "idea, practice, or material artifact that has been invented or that is regarded as novel independent of its adoption or non-adoption" (1973, pp. 7-8). For this study, the innovation is defined as information about clothing selection, adaptation, and construction for orthopedically impaired adults, and is perceived as a relatively new product to this population, in accordance with Zaltman's and Rogers' and Shoemaker's definitions of an innovation.

How the Available Clothing Information is Transmitted

There is currently much information about clothing selection, adaptation, and construction available for persons with various physical limitations. Most of this information exists in the form of written media, including books, pamphlets, catalogs, newsletters, county extension bulletins, bibliographies, theses, professional journals, and newspaper articles. A comprehensive list of the available written media is included in Appendix D, Clothing Information for Adults with Orthopedic Limitations -- A

Bibliography. In addition to written media, clothing information has been diffused utilizing various personal information sources, including fashion shows for the handicapped (Allen, 1963; Lamb, 1977, p. 282), special clothing design classes and workshops (Lamb, 1977, p. 278; Quinn, 1977, p. 34), clothing design and construction contests (Associated Press, 1971), rehabilitation programs (Ahrbeck & Friend, 1976, pp. 295-296), and county extension agents (Lamb, 1977, p. 281). A limited amount of audio-visual media in the form of slide-tape programs, video-tapes, 16 mm films, and filmstrips is also available (Lamb, 1977, p. 282).

"Information related to the selection, adaptation or construction of clothing for special needs is available" (Lamb, 1977, p. 282). Yet many handicapped people, their families, para-professionals (volunteer agencies, nurses aides), and professionals (therapists, psychologists, sociologists, doctors, nurses, educators) are unaware of its existence. According to Lamb, "circulation of materials should be extended since much of the information seems to be aimed at professionals rather than at the general public" (1977, p. 281). Therefore, it is important to explore the current diffusion of this innovation in order to provide recommendations on how to disseminate effectively the available clothing information.

Diffusion of Innovations

Diffusion may be defined as the creation and communication of a novelty (Ryan, 1969, p. 136), or "the process by which something spreads" (Robertson, 1971, p. 53), or, more specifically, "the process by which innovations are spread to members of a social system" (Rogers & Shoemaker, 1971, p. 12). For this study, diffusion is recognized as the process by which information about clothing selection, adaptation, and construction is spread to adults with orthopedic limitations.

Empirical Research Related to Diffusion

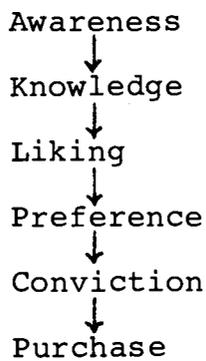
No empirical studies could be found directly related to the diffusion of clothing information to handicapped persons. Diffusion research has traditionally been conducted in the fields of anthropology, early sociology, rural sociology, education, medical sociology, communication, marketing, and, additionally, agricultural economics, geography, general sociology, and psychology (Robertson, 1971, pp. 21-24; Rogers & Shoemaker, 1971, pp. 48-70; Zaltman, Kotler & Kaufman, 1972, pp. 94-96). Studies within these fields include empirical research related to the diffusion of the following renowned innovations: the steel ax, the horse, water boiling, city manager government, ham radios, postage stamps, weed sprays, hybrid seed, fertilizers, latrines, medical drugs, vaccinations, family planning methods,

kindergarten, driver training, modern math, programmed instruction, and news events, to name a few examples (Rogers & Shoemaker, 1971, pp. 48-70).

Stages of Diffusion

A variety of models exist to describe the stages of diffusion of an innovation from its conception to either acceptance or non-acceptance of the innovation. The following diagram, excerpted from Zaltman, et al. (1973, p. 61), outlines the most prominent models for the diffusion of an innovation.

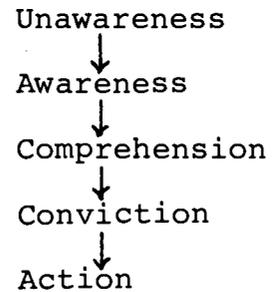
Lavidge & Steiner (1961)



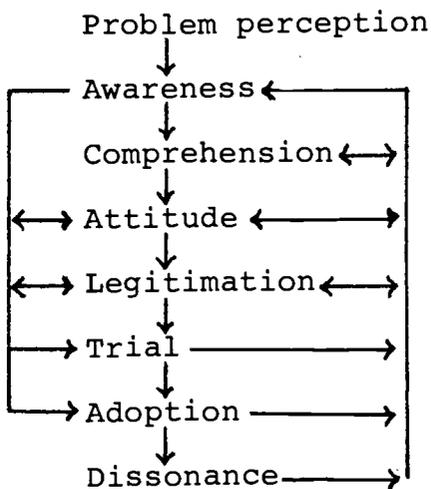
Rogers (1962)



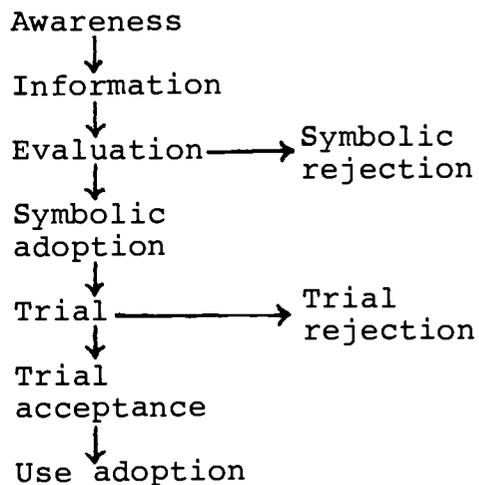
Colley (1961)



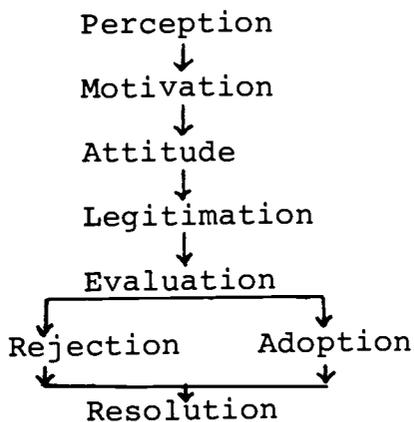
Robertson (1971)



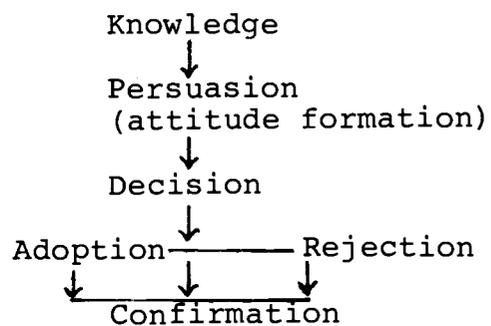
Klonglan & Coward (1970)



Zaltman & Brooker (1971)



Rogers & Shoemaker (1971)



In general, there are two basic stages for all of the models: (1) the initiation stage, and (2) the implementation stage. During the initiation stage, exploration of the innovation occurs. A knowledge and awareness of the innovation is the first process, succeeded by the formulation of attitudes (positive, negative, or neutral) toward the innovation. The innovation is subsequently evaluated and a decision is made by the individual or society to implement or not to implement the innovation. The second major stage of the diffusion of an innovation, implementation, concerns the actual utilization of the innovation. The initial implementation involves a trial of the innovation. If the initial implementation process proves successful, the diffusion of the innovation culminates with a continued and sustained implementation (Zaltman, et al., 1973, pp. 60-70). It should be noted that rejection of an innovation may occur at any stage.

Diffusion and the Social System

The diffusion of an innovation may be based upon several interrelated and interdependent factors including the stage of adoption, type of information source, age of adopter, social status of adopter, economic status of adopter, and education of adopter (Rogers & Shoemaker, 1971, p. 32). This portion of the review of literature will

explore the relationship between diffusion and the social system.

Social system may be defined as "a collectivity of units which are functionally differentiated and engaged in joint problem solving with respect to a common goal" (Rogers & Shoemaker, 1971, p. 28). For this study, the social system is that of the orthopedically impaired adult population.

Characteristics of the Social System

The social system consists of two levels, including (1) the megasystem, and (2) society in general, consisting of those individuals influenced by and inclusive of the megasystem. "Changes in the structure and functioning of either level, but especially level one, constitute social change" (Zaltman, et al., 1973, p. 2). These changes, whether they may occur at the individual level (megasystem) or at the social system level, are interrelated and interdependent (Rogers & Shoemaker, 1971, pp. 10-11). As change occurs, the social structure may act "to impede or facilitate the rate of diffusion and adoption of new ideas through what are called 'system effects'," which are the methods by which a system's social structure influences the behavior of individual members (Rogers & Shoemaker, 1971, p. 29). The "social structure defines the boundaries within which innovations diffuse" (Robertson, 1971, p. 27).

Diffusion and Social System Theories

Two early theories regarding the social system as it relates to the diffusion of an innovation are known as the "trickle down" theory, and the "horizontal effect" theory. According to Simmel (1904), innovations tend to diffuse in a vertical flow from upper to lower social classes. This theory was supported by the phenomenon that upper classes would adopt new fashions before lower classes adopted them. However, today some fashions tend to trickle up (tight-fitting clothes and bright colors, for example) as well as trickle down. The "horizontal effect" theory suggests that diffusion occurs among individuals of the same social class, in a horizontal flow, as described by Katz and Lazarsfeld (1955) in Robertson (1971, pp. 44-45).

Social Factors Influencing Diffusion

Some social factors that influence the diffusion of an innovation are age, education, income, and group membership (Robertson, 1971, pp. 43-44; Zaltman, et al., 1972, p. 107). According to Zaltman, the diffusion rate depends upon the functional literacy, educational level, social status (wealth), age, and cosmopolitanness of the potential adopter of the innovation (1973, p. 227). Education and social status are positively related to innovativeness and the effect of age upon innovativeness varies from study to study (Robertson, 1971, p. 93). "Typically, the innovative early

adopters are youthful, of high socio-economic status, well-educated, and highly participatory in social affairs" (Ryan, 1969, p. 165). Additionally, social factors also influence the type of information source(s) utilized in the diffusion process. Research indicates that persons who utilize more cosmopolite information sources are "younger, have a higher social status, have a more favorable financial position, have more specialized operations, and have a type of mental ability different from that of" persons who utilized more localite information sources (Rogers, 1970, pp. 172-177). Personal influence, as opposed to mass media influence, is "less pronounced at lower social class levels, and most pronounced at middle class levels" (Robertson, 1971, p. 209). For this study, sex, age group, educational level, type(s) of physical limitations, and annual household income were the social indicators utilized to describe the sample.

Communication of the Innovation

According to Rogers and Shoemaker, "communication is essential for social change" and for the diffusion of an innovation (1971, pp. 6-12). Communication may be defined as "the process by which messages are transferred from a source to a receiver" (Rogers & Shoemaker, 1971, p. 11). This process or flow of communication may be described as one in which "a source sends a message via channels to the

receiving individual" (Rogers & Shoemaker, 1971, p. 11). For this study, the source is the point of origin of the clothing information, such as a clothing extension specialist or other clothing educators. The message is information about clothing for orthopedically impaired adults. The channels may be mass media (television, radio, newspapers, magazines, etc.) and/or interpersonal information sources (family, friends, salespersons, county extension agents, etc.), and the receiving individuals are adults with orthopedic limitations.

Models of Communication Flow

Four models have been developed to describe the flow of communication for the diffusion of an innovation. These are the "hypodermic needle," the one-step flow, the two-step flow, and the multi-step flow models. The "hypodermic needle" model, current in the 1930's and 1940's, was based upon the stimulus-response principle in relation to the use of mass media for communication. Mass media was the source or stimulus, viewed as a giant hypodermic needle, injecting mass audiences with mass messages to receive an anticipated response (Rogers & Shoemaker, 1971, pp. 203-204). However, the "hypodermic needle" model assumes that the message reaches the receiver and that the receiver will respond "in accordance with the communicator's goal"

(Robertson, 1971, p. 123). The one-step flow model, a modification of the "hypodermic needle," is also based upon the principle that messages are communicated directly to the receiver. In this case, the one-step flow model does not assume that the message reaches all receivers equally, nor that the receivers' responses will be the same (Rogers & Shoemaker, 1971, p. 208). The two-step flow model is characterized by the influence of an intermediary interpersonal channel in addition to the mass media channels. The two-step flow model includes (1) the transfer of information from sources to opinion leaders or change agents, and then (2) the influence from opinion leaders directly to their followers (Rogers & Shoemaker, 1971, p. 205). The multi-step flow model suggests that there are a variety of ways messages may be processed in the communication flow to the receiver. Because it allows for such variability in the communication process, the multi-step flow model is currently the most widely accepted and utilized communications flow model (Rogers & Shoemaker, 1971, p. 209).

Communication Channels

The type of communication channel, or "means by which the message gets from the source to the receiver" (Rogers & Shoemaker, 1971, p. 24), utilized in the communication process may influence the adoption or non-adoption of an innovation. The two primary communication channels are media

and personal influence channels (Midgley, 1977, p. 29; Zaltman, 1973, p. 183). According to Zaltman, media may be subdivided into (1) mass media, "print and electronic channels that reach great numbers of people," such as television, radio, magazines, and newspapers; and (2) specialized media, "those print and electronic communication vehicles that are addressed to particular audiences," such as slides, newsletters, and annual reports (1973, pp. 182-183). Personal influence channels may be subdivided into (1) mass meetings, such as rallies, demonstrations, assemblies, and programs directed at large audiences; (2) small groups, such as negotiation teams, and threat squads "to reach a limited number of target individuals or groups;" and (3) individual visits, such as lobbying, and personal phone calls for one-to-one contact and influence (Zaltman, 1973, pp. 182-184). Because of the inherent differences between media and personal influence channels, each has its advantages and disadvantages for the diffusion of innovations.

Media. As previously described, media are the external communication sources of the social system (Midgley, 1977, p. 90). They are characterized as impersonal, mediated, public, and providing only a one-way flow of communication. The primary disadvantage of media is a lack of clarification during the one-way communication that may lead to misunderstanding. The major advantage is that media are highly

accessible. It is suggested that media be utilized during the early stages of adoption, and it is recognized that media are most important at the awareness and knowledge levels of the diffusion of an innovation (Robertson, 1971, p. 158; Rogers & Shoemaker, 1971, p. 255; Zaltman, 1973, p. 226).

Personal information sources. According to Robertson, "other people often may be the most important information source in the process" of diffusion (1971, p. 35). Midgley states, "verbal communication is a powerful and effective source of influence on individual behavior" (1977, p. 111). And, according to Brittain,

"face-to-face contact is more flexible, provides feedback and instantaneous modification of the message, it is more likely to raise issues and arguments of immediate personal influence in making a decision, and the receiver is more likely to be rewarded by approval" (1970, pp. 82-83).

Because interpersonal communications are two-way communications, allowing for clarification of issues and personal contact, they are more effective overall (Robertson, 1971, p. 158). The primary disadvantage is inaccessibility to some personal information sources. The most obvious advantage of interpersonal communications is its speed in bringing word of new developments" (Brittain, 1970, p. 78). For example, it takes little time for a message to pass from person to person, including the give-and-take clarification process, and is often termed the "grapevine." Interpersonal

communication also "performs a kind of current awareness service" (Brittain, 1970, p. 78) and is less of a perceived risk by the potential adopter. Research indicates that personal information sources are most important during the later stages of adoption, and this face-to-face communication is recommended for influencing adoption of an innovation during the diffusion process (Robertson, 1971, p. 45; Rogers & Shoemaker, 1971, p. 225; Zaltman, 1973, p. 221).

Information Sources Available, Used, and Preferred for the Diffusion of the Innovation to Orthopedically Impaired Adults

There is currently little research, if any, related to the availability, use, and preference of specific information sources by orthopedically limited adults. Furthermore, there is a lack of research pertinent to the media preferences of any handicapped adults.

The Bureau of Education for the Handicapped, United States Office of Education, established the National Center on Educational Media and Materials for the Handicapped (NCEMMH) at Ohio State University on June 1, 1972 in accordance with Public Law 91-230 (Belland, 1973, p. 7). The purpose of NCEMMH is to deliver instructional materials, design instructional materials, and provide information about new practices and materials for the education of handicapped persons (Belland, 1973, p. 7). However, the primary emphasis has been on the education of handicapped children.

The National Instructional Materials Information System (NIMIS), a clearing house affiliate of NCEMMH, is a "computer-based, on-line, interactive retrieval system" to help teachers and parents educate children (Oldsen, 1976, p. 48). Public Law 94-142, The Education for All Handicapped Children Act of 1975, assures children of a "free" and "appropriate" education based upon the special needs of each individual (Lance, 1976, p. 14). However, the mandate for special education for the handicapped ceases when individuals enter adulthood. According to recommendations of the 1976 Oregon Governor's Conference on Handicapped Individuals, an extension of the 1976 White House Conference of the Handicapped, the "age limit of 21 years should be eliminated from current legislation for education of the handicapped. Life span concept education from birth to grave should be substituted" (Thorne, 1976, p. 50); however, this ideal is not reached. Many special programs have been developed for handicapped children, while little research and program development have been directed at the media available to, used by, and preferred by handicapped adults.

CHAPTER III. PROCEDURE

The steps of the investigation include development of the hypothesis and analyses, selection of the population to be examined, identification of the sample, selection of the site, formulation of the questionnaire, pre-administration of the variable measures, data collection, and statistical analysis procedures.

Analyses and Hypothesis

The following descriptive analyses and hypothesis were examined based upon the specific objectives of the study:

Analysis I. The demographic characteristics of the sample.

Analysis II. The sources of information available to the sample.

Analysis III. The sources of information used by the sample to obtain information about clothing selection, adaptation, and construction.

Analysis IV. The sources of information preferred by the sample to obtain information about clothing selection, adaptation, and construction.

Hypothesis. There is a direct relationship between the sources of information used to obtain clothing information and the sources the sample prefer to use to obtain clothing information.

Selection and Development of Measures and Scoring

A mailed questionnaire survey was selected as the most appropriate measurement tool to assess the sources of information available to, used by, and preferred by the orthopedically limited adults who reside in the Willamette Valley due to characteristics of the population. Interviews were not utilized in order to avoid any limitations that may be presented during face-to-face interaction due to the stigma of a handicap (Goffman, 1961, pp. 39-40). Objective questions and a concise format (three pages printed on both sides) were designed to facilitate response by persons with various orthopedic limitations and to increase the questionnaire return rate, as suggested in Dillman's "Total Design Method" for the development of questionnaire-type surveys (1978). It was necessary for respondents simply to check the appropriate responses for each question.

This study was conceptualized with regard to Rogers' diffusion of innovations theory. The measures were based upon the investigator's modification of Rogers' basic elements of diffusion, and include (1970, p. 12):

1. A description of the social system . . .

Some social factors (demographic characteristics) that influence diffusion were utilized for this study, including sex, age group, educational level, type of physical limitation, and annual household income of the orthopedically limited

adult population who reside in the Willamette Valley.

2. Communication of the innovation . . .

The media sources available to, utilized by, and preferred by the population to obtain the innovation were identified.

3. The innovation . . .

The innovation was defined as information about clothing selection, adaptation, and construction for adults with orthopedic limitations.

This study focuses upon the first two elements of diffusion, as is indicated above. A description of the demographic variables, and identification of the media sources available to, utilized by, and preferred by the respondents to obtain the innovation (clothing information) were analyzed using a questionnaire-type survey.

Selection of the Sample

Names and addresses of 140 orthopedically limited adult men and women, 16 to 70 years of age, who reside in the Willamette Valley were identified using a mailing list from the Oregon Governor's Conference of the Handicapped that was pre-coded according to type of disability. The mailing list of the participants was provided by Judy Hadley, a member of the Oregon Architectural Barriers Council in Portland. The OABC is a non-profit organization that serves

people with various limitations and other interested persons. An additional 24 names and addresses were provided by the Oregon State University Director of Handicapped Student Services, Pam Walker, and 16 more names were subsequently furnished by some respondents. All of the identified persons were contacted to participate in this study.

The total population available included all of the orthopedically limited adults who reside in the Willamette Valley. The sample used in this study is limited in size because laws regulate the strict confidentiality of medical and rehabilitation records. Therefore, accessibility to and identification of handicapped persons is limited, and is recognized as a limitation of this study.

Selection of the Geographic Location

The Willamette Valley in western Oregon was selected as the research site because nearly 70% of Oregon's physically handicapped population reside in this area (Vocational Rehabilitation Division, 1978). Thus, there was a greater opportunity for the investigator to obtain an adequate sample size, as opposed to selecting a smaller geographic location. As a result of the proximity to several highly populated cities, including Portland, Salem, and Eugene, the respondents may have more access to and opportunity to use various sources of information. Accessibility to sources of information was a consideration in selecting

the research site, and omission of 30% of Oregon's physically handicapped population who live outside the Willamette Valley is recognized as a limitation of the study.

The Willamette Valley is defined as an area approximately 100 miles long by 50 miles wide, extending from the Columbia River in the north to Cottage Grove in the south, and from the Pacific Coastal mountain range in the west to the Cascade mountain range in the east, as described in the Atlas of Oregon (Loy, 1976, p. 41).

Collection of Data

The questionnaire was pre-administered to ten specialists in the areas of instructional resources and materials, survey and research, extension media and education, handicapped student services, educational media, readability, speech and communications, English composition, psychological questionnaires, and information. Some statements were reworded for clarity and completeness. The content, prediction, and construction characteristics of the measurement tool were determined to be valid by the ten specialists.

The format of the questionnaire was based upon Dillman's "Total Design Method" (1978). Each questionnaire was prefaced with a hand-signed explanatory letter printed on Oregon State University School of Home Economics letterhead. Cover letters were personalized with the name and

address of the subject and included the actual mailing date. Questionnaires were constructed in a booklet format. They were printed on 8-1/2" x 11" 16 pound light yellow stock, stapled together to create a booklet consisting of three concise pages. Both sides of each page were utilized to minimize the visual experience of the questionnaire and to control postage costs. A numerically identified, stamped, number nine business reply envelope was addressed to the Oregon State University Home Economics Department and enclosed to facilitate responses. Names and addresses of the potential respondents were individually typed on Oregon State University business envelopes, size number ten. First class postage was affixed to the envelope, and the cover letter, questionnaire, and return envelope were folded and placed inside for mailing. A postal card follow-up was mailed to all subjects one week following questionnaire distribution to thank those who returned the questionnaire and to remind those who had not yet returned the questionnaire. Three weeks following the first mailing another cover letter and replacement questionnaire were sent to those who had not responded. As a token reward, a bibliography of available clothing information was mailed to all respondents upon receipt of each completed questionnaire. See Appendix C.

Demographic Characteristics of the Respondents

Sex

The Bureau of the Census indicates that 47% of the handicapped population is female, whereas 51% of the non-handicapped population is female (President's Committee on Employment of the Handicapped, 1970, p. 7). To compare the sample to the national average, respondents were asked to indicate their sex, and their response was assigned a code for the purpose of statistical computation:

<u>Sex</u>	<u>Code</u>
Female	1
Male	2

Age Group

"The handicapped population is considerably older than the general population of America . . . Two-thirds of the handicapped population between 16 and 64 are 45 years old and older" (President's Committee on Employment of the Handicapped, 1970, p. 7). To determine the age of the sample, respondents were asked to indicate their approximate age, and their response was assigned a code for the purpose of statistical computation:

<u>Age group</u>	<u>Code</u>
15 years and under	1
16 to 19 years	2
20 to 29 years	3
30 to 39 years	4
40 to 49 years	5
50 to 59 years	6
60 to 69 years	7
70 years and over	8

Educational Level

According to statistics from the Bureau of the Census, "the handicapped people of America have had less schooling than the non-handicapped" (President's Committee on Employment of the Handicapped, 1970, p. 6). To determine the educational level of the sample, respondents were asked to check the highest level of formal education completed, and their response was assigned a code for the purpose of statistical computation:

<u>Years completed</u>	<u>Code</u>
Grade school or less (grades 0-8)	1
Some high school (grades 9-11)	2
High school graduate (grade 12)	3
Some college or specialized training (13-15)	4
College or university graduate (16 years)	5
Post-graduate work in college	6
Graduate degree	7

Type of Physical Limitation

The following list of physical limitations was modified from the R-300 diagnostic categories as used in the PULSES-Barthel Index, an empirical study that examined "persons with various degrees of functional limitations" to determine the type or types and number of disabilities per respondent (Koshel & Granger, 1978, pp. 102-106). To determine a description of the physical limitations of the sample, respondents were asked to indicate the part or parts of their body that had limited or no function, and their response was assigned a code for the purpose of statistical computation:

<u>Physical limitation</u>	<u>Code</u>
One upper limb	1
Two upper limbs	2
One lower limb	3
Two lower limbs	4
One side	5
Both sides	6
Back, trunk and/or spine	7
Other	8

Respondents selected more than one answer if they were multiply handicapped.

Annual Household Income

"The handicapped people of America have had lower earnings than the non-handicapped" (President's Committee on Employment of the Handicapped, 1970, p. 6). Therefore, the distribution of annual household income extends from below poverty level (\$2,999 or less) to \$50,000 and over. To determine if the annual household income of the sample corresponds with the national average, respondents were asked to indicate their approximate annual income, and their response was assigned a code for the purpose of statistical computation:

<u>Annual income level</u>	<u>Code</u>
Less than \$2,999	1
\$3,000 to \$5,999	2
\$6,000 to \$9,999	3
\$10,000 to \$15,999	4
\$15,000 to \$19,999	5
\$20,000 to \$24,999	6
\$25,000 to \$49,999	7
\$50,000 and over	8

Communication of the Innovation . . . Clothing Information

Data concerning question items regarding communication of the innovation (clothing information) were based upon the information sources readily available to, the information sources used to receive clothing information, and the information sources preferred to be used for clothing information by the orthopedically limited adult sample. The availability, use, and preference of the various information sources were examined using a self-administered questionnaire survey. A Likert-type scale of YES - NO - ??? was formulated to investigate the sources available to, used to receive general information by, and used to receive clothing information by the sample. A second Likert-type scale of Not Prefer, Prefer, and Most Prefer was utilized to examine the degree of preference toward the individual sources for clothing information.

Information may be diffused using three basic modes of communication: written media, personal information sources, and audio-visual media. Specific information sources for each of the three modes of communication were further identified as follows:

Written media

Books	Newsletters
Newspapers	Pamphlets
Popular magazines	County extension bulletins
Correspondence courses	Catalogs

Personal information sources

Workshops	County extension agents
Rehabilitation programs	Family
Adult education classes	Friends
College/university classes	Salespersons

Audio-visual media

Television	Tape-recorded messages
Radio	Slide programs
Filmstrips	Video-taped programs
Films	Computerized programs

In addition, respondents were provided the option to specify other information sources not listed by writing the name of the medium in the blank "Other" space. Also, note that county extension agents were not included in the data analysis procedures due to a typographical error in

Questions 2. and 3. (repetition of county extension bulletins instead of county extension agents) on the questionnaire.

Sources of Information Available to the Respondents

Question 1. was formulated in order to learn more about the general information sources available to the orthopedically limited adult population. Respondents were asked to indicate either YES, NO, or I DON'T KNOW to the following interrogative statement for each medium:

(Q-1) Is this source readily available to you?

Answers were coded for analysis as follows:

<u>Answer</u>	<u>Code</u>
No	1
I don't know	2
Yes	3

The percentage of each response for each medium was calculated and was reported in frequency distribution tables organized according to written media, personal information sources, and audio-visual media.

Sources of Information Used by the Respondents to Obtain General Information During the Past Year

Question 2. examines the information sources used for general information acquisition by the respondents. Respondents were asked to indicate either YES, NO, or I DON'T KNOW

to the following interrogative statement for each medium:

(Q-2) Did you use this source for ANY information
during the past year?

The answers were coded for analysis, percentages calculated, but were not reported because they were not useful to this study. Analyses of the relationships between the sources used to obtain general information and (1) sources used for clothing information, or (2) sources preferred for clothing information would not produce results that would help to improve the diffusion process, as originally planned. Therefore, discussion regarding Question 2. was omitted on grounds of otherwise inefficient use of energy and resources.

Sources of Information Used by the Respondents to Obtain
Information About Clothing Selection, Adaptation, and
Construction

Question 3. was formulated in order to learn more about the information sources used specifically to receive clothing information by the orthopedically limited adults. The sample was asked to indicate either YES, NO, or I DON'T KNOW to the following interrogative statement for each medium:

(Q-3) Have you ever used this source for information
ABOUT YOUR CLOTHING?

The answers were coded for analysis, percentages calculated, and tables reported in the same manner as Question 1.

Sources of Information Preferred by the Respondents to Obtain Information About Clothing Selection, Adaptation, and Construction

Question 4. examined the information sources adults with orthopedic limitations would prefer to use for ideas and information about their clothing. The respondents were asked to indicate the sources of information they would prefer to use in order to learn more about selecting, altering, and constructing their clothing if the media were readily available. A Likert-type scale of Not prefer, Prefer, and Most prefer was utilized for the following interrogative statement for each medium:

(Q-4) Which sources would you prefer to use for clothing information if they were readily available?

The answers were coded for analysis utilizing the following continuum:

<u>Answer</u>	<u>Code</u>
Not prefer	1
Prefer	2
Most prefer	3

Each medium was analyzed according to its perceived preference. The percentage of each response for each medium was calculated (Prefer and Most prefer answers were combined to form one preference grouping), and was reported in frequency distribution tables organized according to written media, personal information sources, and audio-visual media.

Analysis of Data

Descriptive statistics were employed for Analyses I, II, III, and IV utilizing frequency distribution tables. The following variables were analyzed: sex, age group, educational level, physical limitations, annual household income, media availability, media used for clothing information, and media preferred to be used for clothing information.

One hypothesis was tested for each information source using the chi-square statistic to analyze the nominal data. The chi-square test was selected to determine if a statistically significant relationship exists between the two variables: (1) the sources of information currently used to obtain clothing information, and (2) the sources of information preferred to be used to obtain clothing information for each media item. The .05 significance level was used as the criterion for identification of significant relationships.

Determination of the Basis for Recommendations for Each Information Source

Recommendations for each information source were made in terms of promoting effective diffusion of clothing information to orthopedically limited adults. Recommendations were made either (1) to maintain current diffusion efforts for the sources both used and preferred, or (2) to develop

diffusion efforts for the sources preferred but currently underutilized, or (3) to reject further diffusion efforts for the sources neither used nor preferred by the respondents. Recommendations were based upon chi-square test results and the percentage frequency (chi-square cell) of the respondents who prefer to use but do not use each information source to obtain clothing information. The criteria for recommendations are stated in Table 18.

Index of Potential Expansion Priority

As a supplement to the recommendations for improved diffusion, two analytic steps were implemented in an effort to prioritize the importance of expansion of the sources of information. These analyses were based upon the availability, preference, and use of each source. First, the sources preferred but not readily available were identified by subtracting total preference percentage points from availability percentage points for each source. A positive figure indicates that availability exceeds preferred use and, therefore, underutilization of an existing source. Expansion of a source's pure availability (such as creating more of it) is not ordinarily deemed advisable for such a source. A negative figure indicates user preference in excess of availability. Therefore, expanded availability of the sources yielding negative percentages is suggested for improved diffusion. Second, sources were prioritized by

subtracting the "availability minus preference" percentage points from the "preferred but not used" percentage points. This calculation yields a corrected indicator of where best potential expansion exists in view of associated waste of developmental effort. It describes the proportion of respondents preferring a source of information as adjusted for the proportion already having that source available and choosing not to utilize it. The higher the index, the greater the combination of usage potential and nonavailability and, therefore, the greater the importance of increasing pure availability of an information source, as distinct from enhancing diffusion potential of what is already available. A negative index, in contrast, indicates current availability already in excess of usage potential and recommends decreased emphasis in favor of attention to alternate information sources. Scores are listed in rank-order, with the highest numbers representing the sources most deserving of expansion priority and the lowest numbers representing the sources least deserving of expansion. Sources are grouped according to recommendations of high, moderate, low, and negative expansion priority.

CHAPTER IV. RESULTS

The presentation of findings has been organized into six main sections: (1) findings related to the response rate; (2) findings related to the analyses based upon five demographic characteristics, the sources of information available, the sources of information used to obtain information about clothing, and the sources of information preferred to obtain clothing information; (3) findings related to the hypothesis; (4) findings related to the recommendations for each source; (5) findings related to the expansion priority of each information source; and (6) findings related to the responses to the open comment portion of the questionnaire.

Presentation of Findings Related to the Response Rate

Of the 180 questionnaires mailed to potential respondents, there were 91 usable responses, 8 unusable responses, 44 wrong addresses, and 37 nonresponses. The eight unusable responses included four unanswered questionnaires, three questionnaires completed by persons not orthopedically limited, and one questionnaire indicating the nonrespondent to be deceased. The 91 usable responses included some partially unanswered questionnaires. Based upon the 136 correct addresses, an adjusted response rate of 61.9 percent was received. However, the actual response rate is 50.6 percent (see Table 1).

TABLE 1
RESPONSE RATE

Responses	Frequency	Percent
Usable	91	50.6
Unusable	8	4.4
Wrong addresses	44	24.4
Nonresponses	37	20.6
Total	180	100.0

Presentation of Findings Related to the Analyses

Demographic Characteristics of the Respondents

Sex. Table 2 provides a description of the sample according to sex. More than one-half (52.7%) of the respondents were male, and 46.2% were female. One person (1.1%) did not respond to Question 5.

TABLE 2
DESCRIPTION OF THE SAMPLE BY SEX

Sex	Frequency	Percent
Female	42	46.2
Male	48	52.7
Nonresponse	1	1.1
Total	91	100.0

Age group. The distribution of age groups among the respondents ranged from 20-29 years to over 70 years (see Table 3). Nearly one-third (31.9%) of the respondents were within the 30-39 age group, and nearly one-half (46.2%) were 40-59 years of age. At each end of the spectrum, only 13.2% comprised the 20-29 age group, and 6.6% were age 60 and over. Two persons (2.2%) failed to report their age group.

TABLE 3
DESCRIPTION OF THE SAMPLE BY AGE GROUP

Age group	Frequency	Percent
15 and under	0	0
16-19	0	0
20-29	12	13.2
30-39	29	31.9
40-49	21	23.1
50-59	21	23.1
60-69	4	4.4
70 and over	2	2.2
Nonresponse	2	2.2
Total	91	100.1

Note. Total percent is not equal to 100 due to rounding.

Educational level. Table 4 provides a description of the sample according to educational level. Most of the respondents completed the high school level or beyond (93.4%), with the exception of five persons. Nearly one-half (49.5%) completed some college or specialized training.

In addition, more than one-third (36.3%) held baccalaureate degrees, completed some post-baccalaureate work, and/or held a graduate degree. One person (1.1%) failed to respond to Question 7.

TABLE 4
DESCRIPTION OF THE SAMPLE BY EDUCATIONAL LEVEL

Education completed	Frequency	Percent
Eight years or less	4	4.4
Some high school	1	1.1
High school graduate	7	7.7
Some college or specialized training	45	49.5
College or university graduate	11	12.1
Post graduate work in college	12	13.2
Graduate degree	10	11.0
Nonresponse	1	1.1
Total	91	100.1

Note. Total percent is not equal to 100 due to rounding.

Physical limitations. Tables 5 and 6 summarize the quantity and type of physical limitations of the sample. A total of 202 limitations were listed by 89 respondents. Each respondent indicated from one to five different limitations. Two-thirds (66.0%) of the respondents indicated one or two limitations, with the most persons (38.5%) checking two physical limitations. More than one-fourth (28.6%) specified three or four different limitations, and three

persons (3.3%) indicated five physical limitations. Two persons omitted Question 8 (see Table 5).

Respondents were asked to describe their physical limitation or limitations by indicating the part or parts of the body affected. The frequencies for the eight possible physical limitation categories are listed in Table 6. Limited use or inability to use both lower limbs was the most frequent response, affecting 58 different persons and comprising 28.7% of the total limitations. Forty-six persons (22.8% of the total limitations) indicated limitations of the trunk, back, and/or spine. Limitations of one upper limb and both upper limbs constituted 9.9% and 12.9%, respectively, and total nearly one-fourth of all limitations. Limited use or inability to use both sides (4.0%) or one side (2.5%) affected the least number of respondents.

Twenty-five persons (12.4% of the total limitations) specified the following "other" categories: multiple sclerosis (five persons); cerebral palsy (four persons); rheumatoid arthritis (two persons); quadraplegia (two persons); achondroplasia (two persons); head, ears, eyes (two persons); stomach and bladder (two persons); coordination (two persons); chronic phlebitis (one person); paralysis below the shoulders (one person); grip strength (one person); and hands, wrists, elbows, shoulders, and heart (one person).

TABLE 5

DESCRIPTION OF THE SAMPLE BY NUMBER OF PHYSICAL LIMITATIONS

Number of limitations	Frequency	Percent
1	25	27.5
2	35	38.5
3	15	16.5
4	11	12.1
5	3	3.3
Nonresponse	2	2.2
Total	91	100.1

Note. Total percent is not equal to 100 due to rounding.

TABLE 6

DESCRIPTION OF THE SAMPLE BY TYPE OF PHYSICAL LIMITATION

Physical limitation	Frequency	% of total limitations	% of respondents
One upper limb	20	9.9	22.0
Two upper limbs	26	12.9	28.6
One lower limb	12	5.9	13.2
Two lower limbs	58	28.7	63.7
One side	5	2.5	5.5
Both sides	8	4.0	8.8
Back, trunk and/or spine	46	22.8	50.5
Other	25	12.4	27.5
Nonresponse	2	.9	2.2
Total	202	100.0	n/a

Annual household income. The frequency distribution of annual household income levels is presented in Table 7. More than one-half (60.5%) of the respondents indicated an annual household income of less than \$10,000. Nineteen respondents (20.9%) comprised the three middle income groups of \$10,000 - \$24,999, and 9.9% indicated an income of \$25,000 - \$49,999. One person (1.1%) constituted the \$50,000 and over income group. Seven persons (7.7%) failed to report their annual household income.

TABLE 7

DESCRIPTION OF THE SAMPLE BY ANNUAL HOUSEHOLD INCOME

Annual income level	Frequency	Percent
\$2,999 or less	16	17.6
\$3,000 - \$5,999	27	29.7
\$6,000 - \$9,999	12	13.2
\$10,000 - \$14,999	9	9.9
\$15,000 - \$19,999	5	5.5
\$20,000 - \$24,999	5	5.5
\$25,000 - \$49,999	9	9.9
\$50,000 and over	1	1.1
Nonresponse	7	7.7
Total	91	100.1

Note. Total percent is not equal to 100 due to rounding.

Sources of Information Available to the Respondents

Written media. The frequency distribution for the total scores obtained on the availability of written media are listed in Table 8. The data indicate that six of the eight written media sources were available to more than 60% of the respondents. The most readily available source was newspapers (87.9%), succeeded by popular magazines (76.9%), books (72.5%), and catalogs (70.3%). The least available were correspondence courses (36.3%), and county extension bulletins (39.6%).

Personal information sources. Table 9 provides frequency distribution scores related to the availability of personal information sources. A majority of respondents indicated that friends (90.1%) and family (82.4%) were available. More than one-half indicated the availability of salespersons (68.1%), college/university classes (64.8%), adult education classes (61.5%), and rehabilitation programs (56.0%). Workshops (37.4%) and county extension agents (40.7%) were the least available.

TABLE 8

FREQUENCY DISTRIBUTION OF RESPONSES ON THE AVAILABILITY OF WRITTEN MEDIA

Written media	Yes		No		???		Nonresponse	
	n	%	n	%	n	%	n	%
Books	66	72.5	13	14.3	8	8.8	4	4.4
Newspapers	80	87.9	5	5.5	4	4.4	2	2.2
Popular magazines	70	76.9	13	14.3	5	5.5	3	3.3
Newsletters	57	62.6	16	17.6	15	16.5	3	3.3
Pamphlets	55	60.4	14	15.4	19	20.9	3	3.3
Catalogs	64	70.3	15	16.5	11	12.1	1	1.1
County extension bulletins ^a	36	39.6	33	36.3	17	18.7	5	5.5
Correspondence courses ^a	33	36.3	28	30.8	24	26.4	6	6.6
Totals & average percentages	461	63.3	137	18.8	103	14.2	27	3.7

Note. Total n = 91 for all questions.

^aPercent is not equal to 100 due to rounding

TABLE 9

FREQUENCY DISTRIBUTION OF RESPONSES ON THE AVAILABILITY OF PERSONAL INFORMATION SOURCES

Personal information sources	Yes		No		???		Nonresponse	
	n	%	n	%	n	%	n	%
Workshops ^a	34	37.4	31	34.1	21	23.1	5	5.5
Rehabilitation programs	51	56.0	20	22.0	15	16.5	5	5.5
Adult education classes	56	61.5	18	19.8	13	14.3	4	4.4
College/university classes	59	64.8	17	18.7	10	11.0	5	5.5
County extension agents ^a	37	40.7	23	25.3	25	27.5	6	6.6
Family	75	82.4	12	13.2	1	1.1	3	3.3
Friends	82	90.1	7	7.7	0	0	2	2.2
Salespersons	62	68.1	12	13.2	10	11.0	7	7.7
Totals & average percentages	456	62.6	140	19.2	95	13.1	37	5.1

Note. Total n = 91 for all questions.

^aPercent is not equal to 100 due to rounding.

Audio-visual media. The frequency distribution data in Table 10 indicate television (89.0%) and radio (86.8%) are the most available audio-visual media sources. Percentages for the remaining audio-visual sources range from a high of 36.3% to a low of 17.6%, including tape-recorded messages, films, filmstrips, slide programs, video-taped programs, and computerized programs, successively.

In addition to the 24 information sources listed, four individuals also indicated pattern books, professional journals, the Bible, and physicians as available sources of information.

Sources of Information Used by the Respondents to Obtain Information About Clothing Selection, Adaptation, and Construction

Written media. More than one-half of the respondents indicated that they use catalogs (64.8%) and newspapers (56.0%) to receive information about their clothing. The remaining six written sources were used by less than one-third of the respondents for clothing information, with percentages ranging from 33.0% to 4.4%, and including popular magazines, books, pamphlets, newsletters, county extension bulletins, and correspondence courses (see Table 11 for frequency distribution scores).

TABLE 10

FREQUENCY DISTRIBUTION OF RESPONSES ON THE AVAILABILITY OF AUDIO-VISUAL MEDIA

	Yes		No		???		Nonresponse	
	n	%	n	%	n	%	n	%
Audio-visual media								
Television	81	89.0	5	5.5	3	3.3	2	2.2
Radio	79	86.8	7	7.7	3	3.3	2	2.2
Tape-recorded messages ^a	33	36.3	29	31.9	24	26.4	5	5.5
Films ^a	31	34.1	31	34.1	24	26.4	5	5.5
Filmstrips ^a	24	26.4	34	37.4	28	30.8	5	5.5
Slide programs ^a	23	25.3	32	35.2	31	34.1	5	5.5
Video-taped programs ^a	16	17.6	38	41.8	31	34.1	6	6.6
Computerized programs ^a	16	17.6	38	41.8	32	35.2	5	5.5
Totals & average percentages	303	41.6	214	29.4	176	24.2	35	4.8

Note. Total n = 91 for all questions

^aPercent is not equal to 100 due to rounding.

TABLE 11

FREQUENCY DISTRIBUTION OF RESPONSES ON WRITTEN MEDIA USED TO OBTAIN CLOTHING INFORMATION

Written media	Yes		No		???		Nonresponse	
	n	%	n	%	n	%	n	%
Books	24	26.4	58	63.7	2	2.2	7	7.7
Newspapers	51	56.0	32	35.2	2	2.2	6	6.6
Popular magazines	30	33.0	50	54.9	4	4.4	7	7.7
Newsletters	15	16.5	69	75.8	1	1.1	6	6.6
Pamphlets	22	24.2	59	64.8	3	3.3	7	7.7
Catalogs	59	64.8	25	27.5	1	1.1	6	6.6
County extension bulletins	9	9.9	75	82.4	1	1.1	6	6.6
Correspondence courses	4	4.4	79	86.8	1	1.1	7	7.7
Totals & average percentages	214	29.4	447	61.4	15	2.1	52	7.1

Note. Total n = 91 for all questions.

Personal information sources. Friends, family, and salespersons were the personal information sources most used to obtain clothing information by the respondents, with percentages of 54.9%, 52.7%, and 49.5%, respectively. The four remaining personal information sources were used by less than 10% for clothing information. Workshops and rehabilitation programs were each used by only 6.6%, and adult education programs and college/university classes were each used by 5.5% of the respondents (see Table 12).

Audio-visual media. According to the data on frequency distribution statistics in Table 13, most respondents indicated little use of audio-visual media to receive clothing information. Although television was used by more than one-third (36.3%), and radio by one-fourth (25.3%) of the respondents for clothing information, the six remaining AV media percentages ranged from 6.6% to 2.2%.

In addition to the 24 information sources listed, one respondent cited Goodwill Industries as a source used for clothing information.

TABLE 12

FREQUENCY DISTRIBUTION OF RESPONSES ON
PERSONAL INFORMATION SOURCES USED TO OBTAIN CLOTHING INFORMATION

Personal information sources	Yes		No		???		Nonresponse	
	n	%	n	%	n	%	n	%
Workshops	6	6.6	76	83.5	3	3.3	6	6.6
Rehabilitation programs	6	6.6	78	85.7	2	2.2	5	5.5
Adult education classes	5	5.5	78	85.7	2	2.2	6	6.6
College/university classes	5	5.5	76	83.5	3	3.3	7	7.7
Family	48	52.7	35	38.5	2	2.2	6	6.6
Friends	50	54.9	33	36.3	1	1.1	7	7.7
Salespersons ^a	45	49.5	38	41.8	2	2.2	6	6.6
Totals & average percentages	165	25.9	414	65.0	15	2.4	43	6.7

Note. Total n = 91 for all questions.

^aPercent is not equal to 100 due to rounding.

TABLE 13

FREQUENCY DISTRIBUTION OF RESPONSES ON
AUDIO-VISUAL MEDIA USED TO OBTAIN CLOTHING INFORMATION

	Yes		No		???		Nonresponse	
	n	%	n	%	n	%	n	%
Audio-visual media								
Television	33	36.3	50	54.9	2	2.2	6	6.6
Radio	23	25.3	61	67.0	1	1.1	6	6.6
Tape-recorded messages	6	6.6	77	84.6	1	1.1	7	7.7
Films	5	5.5	77	84.6	2	2.2	7	7.7
Filmstrips	3	3.3	78	85.7	2	2.2	8	8.8
Slide programs	2	2.2	80	87.9	2	2.2	7	7.7
Video-taped programs	2	2.2	78	85.7	2	2.2	9	9.9
Computerized programs	2	2.2	79	86.8	3	3.3	7	7.7
Totals & average percentages	76	10.4	580	79.7	15	2.1	57	7.8

Note. Total n = 91 for all questions.

Sources of Information Preferred by the Respondents to Obtain Information About Clothing Selection, Adaptation, and Construction

Written media. Data on the frequency distribution of responses about the written media preferred for clothing information are listed in Table 14. The most preferred written medium was catalogs (76.9%), succeeded by newspapers (66.0%), pamphlets (62.1%), popular magazines (56.1%), newsletters (56.1%), and county extension bulletins (50.6%). Among the written media least preferred are correspondence courses (61.5%), and books (39.6%).

Personal information sources. According to the data in Table 15, family (67.1%) and friends (66.0%) are the most preferred personal information sources, closely followed by salespersons (51.7%). The sources least preferred are workshops and college/university classes (48.4% each), rehabilitation programs and adult education classes (44.0% each), and county extension agents (41.8%).

TABLE 14

FREQUENCY DISTRIBUTION OF RESPONSES ON
WRITTEN MEDIA PREFERRED FOR CLOTHING INFORMATION

Written media	Prefer		Not prefer		Nonresponse	
	n	%	n	%	n	%
Books ^a	42	46.2	36	39.6	13	14.3
Newspapers ^a	60	66.0	17	18.7	14	15.4
Popular magazines ^a	51	56.1	26	28.6	14	15.4
Newsletters ^a	51	56.1	27	29.7	13	14.3
Pamphlets ^a	57	62.7	21	23.1	13	14.3
Catalogs	70	76.9	9	9.9	12	13.2
County extension bulletins ^a	46	50.6	32	35.2	13	14.3
Correspondence courses	20	22.0	56	61.5	15	16.5
Totals & average percentages	397	54.6	224	30.8	107	14.7

Note. Total n = 91 for all questions.

^aPercent is not equal to 100 due to rounding.

TABLE 15
 FREQUENCY DISTRIBUTION OF RESPONSES ON
 PERSONAL INFORMATION SOURCES PREFERRED FOR CLOTHING INFORMATION

	Prefer		Not prefer		Nonresponse	
	n	%	n	%	n	%
Personal information sources						
Workshops ^a	33	36.3	44	48.4	14	15.4
Rehabilitation programs ^a	37	40.7	40	44.0	14	15.4
Adult education classes ^a	38	41.8	40	44.0	13	14.3
College/university classes ^a	31	34.1	44	48.4	16	17.6
County extension agents ^a	36	39.6	38	41.8	17	18.7
Family ^a	61	67.1	18	19.8	12	13.2
Friends ^a	60	66.0	19	20.9	12	13.2
Salespersons ^a	47	51.7	33	36.3	11	12.1
Totals & average percentages	343	47.2	276	38.0	109	15.0

Note. Total n = 91 for all questions.

^aPercent is not equal to 100 due to rounding.

Audio-visual media. Audio-visual media were preferred less than written media and personal information sources to receive clothing information. The data on frequency distributions in Table 16 indicate that television (51.7%) and radio (42.9%) were most preferred. Among the media least preferred, more than one-half of the respondents indicated they did not prefer tape-recorded messages (68.1%), computerized programs (65.9%), slide programs (62.6%), video-taped programs (59.3%), filmstrips (58.2%), and films (57.1%).

TABLE 16
 FREQUENCY DISTRIBUTION OF RESPONSES ON
 AUDIO-VISUAL MEDIAL PREFERRED FOR CLOTHING INFORMATION

	Prefer		Not prefer		Nonresponse	
	n	%	n	%	n	%
Audio-visual media						
Television ^a	47	51.7	31	34.1	13	14.3
Radio ^a	39	42.9	39	42.9	13	14.3
Tape-recorded messages	15	16.5	62	68.1	14	15.4
Films	24	26.4	52	57.1	15	16.5
Filmstrips	23	15.3	53	58.2	15	16.5
Slide programs	20	22.0	57	62.6	14	15.4
Video-taped programs	21	25.3	54	59.3	14	15.4
Computerized programs	17	15.7	60	65.9	14	15.4
Totals & average percentages	208	28.6	408	56.0	112	15.4

Note. Total n = 91 for all questions.

^aPercent is not equal to 100 due to rounding.

Presentation of Findings Related to the Hypothesis

In addition to the descriptive statistics related to the availability, use, and preference of each information source as previously provided in Presentation of Findings Related to Analyses II, III, and IV, chi-square tests were employed to analyze the nominal data for each information source. The chi-square test was selected to determine if a statistically significant relationship exists between the two variables: (1) the sources of information currently used to obtain clothing information; and (2) the sources of information preferred to be used to obtain clothing information for each media item. The .05 significance level was used as the criterion for identification of significant relationships. Resultant chi-square values are reported in Table 17.

Hypothesis. There is a direct relationship between sources of information used to obtain clothing information and sources the respondents prefer to use to obtain clothing information.

A significant chi-square value indicates that a direct relationship exists between the source of information used to obtain clothing information and the source preferred to be used to obtain clothing information. Therefore, when a statistically significant chi-square value is found, the

TABLE 17

CHI-SQUARE TEST RESULTS FOR RELATIONSHIP
BETWEEN SOURCES USED AND SOURCES PREFERRED
TO OBTAIN CLOTHING INFORMATION

Information sources	Chi-square values
Written media:	
Books	3.30
Newspapers	5.96*
Popular magazines	3.48
Newsletters	3.52
Pamphlets	4.52*
Catalogs	9.59**
County extension bulletins	2.93
Correspondence courses	4.71*
Personal information sources:	
Workshops	.65
Rehabilitation programs	6.16*
Adult education classes	6.01*
College/university classes	8.92**
Family	16.82***
Friends	11.96***
Salespersons	8.72**
Audio-visual media:	
Television	20.17***
Radio	16.56***
Tape-recorded messages	1.81
Films	4.20*
Filmstrips	.48
Slide programs	.79
Video-taped programs	.46
Computerized programs	

Note. df = 1
 * p ≤ .05
 ** p ≤ .005
 *** p ≤ .001

hypothesis is accepted for that particular information source.

A non-significant chi-square value indicates that no relationship exists between the two variables. Consequently, when a statistically non-significant chi-square value occurs, the hypothesis cannot be accepted for that particular information source.

Direct relationships were found to exist. The chi-square test to determine the relationship between the use and preferred use of the following information sources for the purpose of obtaining clothing information by orthopedically limited adults produced significant chi-square values at or beyond the .05 level ($df = 1$) established for this study. The results indicate that statistically significant relationships were found to exist for each of the following information sources. Relationships at or beyond the .001 level include television ($\chi^2 = 20.17$), family ($\chi^2 = 16.82$), radio ($\chi^2 = 16.52$), and friends ($\chi^2 = 11.96$). Relationships significant at the .005 level include catalogs ($\chi^2 = 9.59$), college and/or university classes ($\chi^2 = 8.92$), and salespersons ($\chi^2 = 8.72$). Relationships significant at the .05 level include rehabilitation programs ($\chi^2 = 6.16$), adult education classes ($\chi^2 = 6.01$), newspapers ($\chi^2 = 5.96$), correspondence courses ($\chi^2 = 4.71$), pamphlets ($\chi^2 = 4.52$), and films ($\chi^2 = 4.20$) (see Table 17).

No relationships could be confirmed. The results for each of the following sources failed to attain the .05 significance level established for this study, indicating that no relationships were found to exist between the use and preferred use of ten sources, including newsletters, popular magazines, books, county extension bulletins, tape-recorded messages, computerized programs, slide programs, workshops, filmstrips, and video-taped programs (see Table 17).

Presentation of Findings Related to the
Recommendations for Each Information Source

Recommendations pertinent to effective diffusion of clothing information to orthopedically limited adults are made for each information source. Recommendations are made either (1) to maintain, (2) to develop, or (3) to reject existing diffusion efforts for each information source.

Basis for Recommendations

Recommendations are based upon a combination of chi-square test results and the percentage frequency (chi-square cell) of the respondents who prefer to use but do not currently use each information source. The 25% frequency level is selected as the most direct and accurate indicator of efficiency of use of an existing information source. The criteria for recommendations regarding diffusion efforts are as follows.

Base 1. When the chi-square test yields a statistically significant relationship between the use and preferred use of an information source and the proportion of respondents preferring but not using that source is less than 25%, the existence of effective current diffusion efforts is indicated and, consequently, it is recommended that diffusion efforts be maintained for that source.

Base 2. When the chi-square test yields a statistically significant relationship and the proportion of respondents preferring but not using a given source is 25% or more, further development of diffusion efforts is recommended, the justification being that the information source has not yet achieved its maximum effective use despite a statistically significant association.

Base 3. When the chi-square test yields a statistically non-significant relationship and the proportion of respondents preferring but not using a given source is 25% or more, the existence of ineffective diffusion efforts is indicated and it is recommended that diffusion efforts be developed for that source.

Base 4. When the chi-square test yields a statistically non-significant relationship and the proportion of respondents preferring but not using a given source is less than 25%, rejection of expanded diffusion efforts is recommended on grounds of otherwise inefficient use of energy and other resources (see Table 18).

TABLE 18
 CRITERIA FOR RECOMMENDATIONS
 REGARDING DIFFUSION EFFORTS

Base	Chi-square	% Preferred but not used	Recommendations
1	significant	< 25	maintain
2	significant	≥ 25	develop
3	non-significant	≥ 25	develop
4	non-significant	< 25	reject

The total number of respondents for each chi-square test varies from 69 to 74 (of 91 questionnaires) due to computer omission of the respondents' incomplete answers to Questions 3. (Have you ever used this source for information ABOUT YOUR CLOTHING?) and/or 4. (Which sources do you prefer to use for clothing information?).

The findings related to the recommendations for each information source are summarized in Table 19.

TABLE 19
FINDINGS RELATED TO THE RECOMMENDATIONS FOR EACH INFORMATION SOURCE

Information sources	<u>χ^2</u>	<u>% Preferred & not used</u>	<u>Recommendations</u>
Written media:			
Books	3.30	31.0	develop
Newspapers	5.96*	22.5	maintain
Popular magazines	3.48	34.3	develop
Newsletters	3.52	48.6	develop
Pamphlets	4.52*	46.4	develop
Catalogs	9.59**	20.3	maintain
County extension bulletins	2.93	50.0	develop
Correspondence courses	4.71*	23.6	maintain
Personal information sources:			
Workshops	.65	38.6	develop
Rehabilitation programs	6.16*	39.7	develop
Adult education classes	6.01*	40.3	develop
College/university classes	8.92**	30.4	develop
Family	16.82***	17.6	maintain
Friends	11.96***	20.3	maintain
Salespersons	8.72**	19.1	maintain
Audio-visual media:			
Television	20.17***	19.1	maintain
Radio	16.56***	24.3	maintain
Tape-recorded messages	1.81	12.1	reject
Films	4.20*	25.3	develop
Filmstrips	.48	26.8	develop
Slide programs	.79	22.2	reject
Video-taped programs	.46	27.1	develop
Computerized programs	1.19	18.3	reject

Note. df = 1
* $p \leq .05$; ** $p \leq .005$; *** $p \leq .001$

Books

The chi-square test to determine the relationship between the current use and preferred use of books for the diffusion of clothing information to orthopedically limited adults produced a value of 3.30 ($df = 1$). The results failed to attain a statistically significant relationship at the .05 level established for this study.

As presented in Tables 19 and 20, more than half (52.1%) of the respondents indicated a preference for books, and nearly one-third (31.0%) have not used but would prefer to use books to receive information about their clothing. Only 31.0% have previously used books for clothing information.

A statistically non-significant chi-square value and a frequency of 31.0% of respondents who prefer but do not currently use books for clothing information indicate ineffective diffusion at present. Therefore, it is recommended that books on clothing selection, adaptation, and construction be written, published, and distributed to adults with orthopedic limitations, and also, possibly, to their family, friends, and salespersons of specialized clothing since these sources are also preferred and used.

TABLE 20

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF BOOKS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	27	38.0	22	31.0	49	69.0
	Yes	7	9.9	15	21.1	22	31.0
	Total	34	47.9	37	52.1	71	100.0

Note. $\chi^2 = 3.30^\#$
 $df = 1$
 $\#p > .05$

Newspapers

The chi-square test to determine the relationship between the current and preferred use of newspapers to diffuse clothing information to adults with orthopedic limitations produced a value of 5.96 (df = 1). The results were statistically significant at the .05 level.

More than three-fourths (77.4%) of the respondents indicated a preference for newspapers, and 22.5% have not used but would prefer to use newspapers to receive information about their clothing (see Tables 19 and 21). Nearly two-thirds (63.4%) have previously used newspapers for this purpose.

A statistically significant chi-square value and frequency of less than 25% (22.5%) of respondents who prefer

but do not use newspapers for clothing information indicate the existence of effective current diffusion efforts for this source. Therefore, maintenance of current diffusion efforts, including continued publication of newspaper articles on clothing selection, adaptation, and construction for orthopedically limited adults, is recommended.

TABLE 21

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
NEWSPAPERS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	10	14.1	16	22.5	26	36.6
	Yes	6	8.5	39	54.9	45	63.4
	Total	16	22.6	55	77.4	71	100.0

Note. $\chi^2 = 5.96^*$
df = 1
* $p \leq .05$

Popular Magazines

The chi-square test to determine the relationship between current use and preferred use of popular magazines for the diffusion of clothing information to adults with orthopedic limitations produced a value of 3.48 (df = 1). The results failed to attain a statistically significant relationship at the .05 level established for this study.

A total of 64.3% of the respondents indicated a preference for popular magazines to receive information about their clothing. More than one-third (34.3%) have not used popular magazines for clothing information but indicate a preference, as reported in Tables 19 and 22. Only 38.6% have previously used this source for clothing information.

A statistically non-significant chi-square value plus a frequency of 34.3% of respondents who prefer but do not use popular magazines to obtain clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that articles related to clothing selection, adaptation, and construction for orthopedically limited adults be published in popular magazines, especially those magazines utilized by this population, and distributed to them.

TABLE 22

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF POPULAR
MAGAZINES FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	19	27.1	24	34.3	43	61.4
	Yes	6	8.6	21	30.0	27	38.6
	Total	25	35.7	45	64.3	70	100.0

Note. $\chi^2 = 3.48^\#$
df = 1
$p > .05$

Newsletters

The chi-square test to determine the relationship between current use and preferred use of newsletters for the diffusion of clothing information to orthopedically limited adults produced a value of 3.52 ($df = 1$). The results failed to attain the .05 significance level established for this study.

Two-thirds (66.2%) of the respondents indicated a preference for newsletters to obtain information about their clothing, and nearly one-half (48.6%) have not used but would prefer to use newsletters for clothing information. Only 20.3% have previously used newsletters for clothing information (see Tables 19 and 23).

A statistically non-significant chi-square value and a frequency of 48.6% of respondents who prefer but do not currently use newsletters for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that articles related to clothing selection, adaptation, and construction be written and published in newsletters, and mailed to adults with orthopedic limitations, and also, possibly, to their family, friends, and salespersons of specialized clothing since these sources are also used and preferred.

TABLE 23

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
NEWSLETTERS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	23	31.1	36	48.6	59	79.7
	Yes	2	2.7	13	17.6	15	20.3
	Total	25	33.8	49	66.2	74	100.0

Note. $\chi^2 = 3.52^\#$
df = 1
p > .05

Pamphlets

The chi-square test to determine the relationship between current use and preferred use of pamphlets to diffuse clothing information to adults with orthopedic limitations produced a value of 4.52 (df = 1). The results were significant at the .05 level.

As presented in Tables 19 and 24, nearly three-fourths (73.2%) of the respondents indicated a preference for pamphlets, and nearly one-half (46.4%) have not used but would prefer to use pamphlets for clothing information. Only 29.6% have previously used pamphlets to obtain information about their clothing.

A statistically significant chi-square value plus a frequency of 46.4% of respondents who prefer but do not use

pamphlets for clothing information indicate ineffective diffusion at present. Therefore, it is recommended that pamphlets on clothing selection, adaptation, and construction be developed, published, and distributed to adults with orthopedic limitations, and also, possibly, to their family, friends, and salespersons of specialized clothing since these sources are also preferred and used.

TABLE 24

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
PAMPHLETS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	17	23.9	33	46.4	50	70.3
	Yes	2	2.8	19	26.8	21	29.6
	Total	19	26.7	52	73.2	71	99.9

Note. Percent is not equal to 100 due to rounding.
 $\chi^2 = 4.52^*$
 $df = 1$
 $* p \leq .05$

Catalogs

The chi-square test to determine the relationship between current and preferred use of catalogs to diffuse clothing information to adults with orthopedic limitations produced a value of 9.59 ($df = 1$). The results were significant at the .005 level.

A majority (89.2%) of the respondents indicated a preference for catalogs, and 20.3% have not used but would prefer to use catalogs to receive information about their clothing. However, 68.9% currently use and also prefer catalogs for clothing information (see Tables 19 and 25).

A statistically significant chi-square value and a frequency of less than 25% (20.3%) of respondents who prefer but do not use catalogs for clothing information indicate the existence of effective current diffusion efforts for this source. Therefore, maintenance of current diffusion efforts, including continued publication and distribution of catalogs that contain information on clothing selection, adaptation, and construction for orthopedically limited adults, is recommended.

TABLE 25

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
CATALOGS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	6	8.1	15	20.3	21	28.4
	Yes	2	2.7	51	68.9	53	71.6
	Total	8	10.8	66	89.2	74	100.0
<u>Note.</u>	$\chi^2 = 9.59^{**}$						
	df = 1						
	** $p \leq .005.$						

County Extension Bulletins

The chi-square test to determine the relationship between current use and preferred use of county extension bulletins for the diffusion of clothing information to orthopedically limited adults produced a value of 2.93 (df = 1). The results failed to attain a statistically significant relationship at the .05 level established for this study.

As reported in Tables 19 and 26, 59.5% of the respondents indicated a preference for county extension bulletins, and 50.0% have not used but would prefer to use this source to receive information about their clothing. Only 10.8% have previously used county extension bulletins for clothing information.

A statistically non-significant chi-square value plus a frequency of 50.0% of respondents who prefer but do not use county extension bulletins for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that county extension bulletin articles on how to select, adapt, and construct clothing be developed, published, and distributed to orthopedically limited adults, and their family, friends, and salespersons of specialized clothing since these sources are also used and preferred.

TABLE 26

RELATIONSHIP BETWEEN USE AND PREFERRED
USE OF COUNTY EXTENSION BULLETINS FOR THE
DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	29	39.2	37	50.0	66	89.2
	Yes	1	1.3	7	9.5	8	10.8
	Total	30	40.5	44	59.5	74	100.0

Note. $\chi^2 = 2.93^\#$
df = 1
$p > .05$

Correspondence Courses

The chi-square test to determine the relationship between current use and preferred use of correspondence courses for the diffusion of clothing information to adults with orthopedic limitations produced a value of 4.71 (df = 1). The results were significant at the .05 level.

A total of 27.8% of the respondents indicated a preference for correspondence courses, and 23.6% have not used but also prefer to use correspondence courses to obtain information about their clothing. The majority (70.8%) indicated that they do not use and do not prefer to use correspondence courses, and only 4.2% currently use and also prefer to use this source for clothing

information (see Tables 19 and 27).

A statistically significant chi-square value and a frequency of less than 25% (23.6%) of respondents who prefer but do not use correspondence courses for clothing information indicate the existence of effective current diffusion efforts. Therefore, because correspondence courses are both used and preferred, maintenance is recommended, including continued correspondence course offerings on how to select, adapt, and construct clothing for orthopedically limited adults.

TABLE 27

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF CORRESPONDENCE COURSES FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	51	70.8	17	23.6	68	94.4
	Yes	1	1.4	3	4.2	4	5.6
	Total	52	72.2	20	27.8	72	100.0

Note. $\chi^2 = 4.71^*$
 $df = 1$
 $* p \leq .05$

Workshops

The chi-square test to determine the relationship between current use and preferred use of workshops to

diffuse clothing information to orthopedically limited adults produced a chi-square value of .65 (df = 1). The results failed to attain a statistically significant relationship at the .05 level established for this study.

As reported in Tables 19 and 28, 42.9% of the respondents indicated a preference for workshops, and 38.6% have not used but would prefer to use workshops to receive information about their clothing. Only 7.2% have previously used workshops for clothing information.

A statistically non-significant chi-square value plus a frequency of 38.6% of respondents who prefer but do not use workshops for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that workshops on clothing selection, adaptation, and construction be developed and presented to this population, and their family, friends, and salespersons of specialized clothing since these sources are also used and preferred.

TABLE 28

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
WORKSHOPS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	38	54.3	27	38.6	65	92.9
	Yes	2	2.9	3	4.3	5	7.2
	Total	40	57.2	30	42.9	70	100.1

Note. Percent is not equal to 100 due to rounding.
 $\chi^2 = .65\#$
 $df = 1$
 $\# p > .05$

Rehabilitation Programs

The chi-square test to determine the relationship between current use and preferred use of rehabilitation programs for the diffusion of clothing information to orthopedically limited adults produced a value of 6.16 ($df = 1$). The results were significant at the .05 level.

Nearly one-half (46.5%) of the respondents indicated a preference for rehabilitation programs, and 39.7% have not used but would prefer to use rehabilitation programs to obtain information about their clothing. Only 6.8% have previously used this source for clothing information (see Tables 19 and 29).

A statistically significant chi-square value plus a

frequency of 39.7% of respondents who prefer but do not use rehabilitation programs for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that rehabilitation programs provide information on how to select, adapt, and construct clothing for their orthopedically limited clients.

TABLE 29

RELATIONSHIP BETWEEN USE AND
PREFERRED USE OF REHABILITATION
PROGRAMS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	39	53.4	29	39.7	68	93.1
	Yes	0	0	5	6.8	5	6.8
	Total	39	53.4	34	46.5	73	99.9

Note. Percent is not equal to 100 due to rounding

$$\chi^2 = 6.16^*$$

$$df = 1$$

$$* p \leq .05$$

Adult Education Classes

The chi-square test to determine the relationship between current use and preferred use of adult education classes to diffuse clothing information to adults with orthopedic limitations produced a value of 6.01 (df = 1). The results were significant at the .05 level.

As presented in Tables 19 and 30, nearly one-half (47.2%) of the respondents indicated a preference for adult education classes, and 40.3% have not used but would prefer to use this source to receive information about their clothing. Only 6.9% have previously used adult education classes for clothing information.

A statistically significant chi-square value and a frequency of 40.3% of respondents who prefer but do not use adult education classes for clothing information indicate ineffective diffusion at present. Therefore, it is recommended that adult education classes presenting information on how to select, adapt, and construct clothing for adults with orthopedic limitations be developed and taught to this population, and also, possibly, to their family, friends, and salespersons of specialized clothing since these sources are also used and preferred.

TABLE 30

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF ADULT
EDUCATION CLASSES FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	38	52.8	29	40.3	67	93.1
	Yes	0	0	5	6.9	5	6.9
	Total	38	52.8	34	47.2	72	100.0

Note. $\chi^2 = 6.01^*$
df = 1
* $p \leq .05$

College and/or University Classes

The chi-square test to determine the relationship between current use and preferred use of college and/or university classes for the diffusion of clothing information to adults with orthopedic limitations produced a value of 8.92 (df = 1). The results were significant at the .005 level.

A total of 37.6% of the respondents indicated a preference for college and/or university classes, and 30.4% have not used but would prefer to use this source to receive information about their clothing. Only 7.2% have previously used these sources for clothing information (see Tables 19 and 31).

A statistically significant chi-square value plus a

frequency of 30.4% of respondents who prefer but do not use college and/or university classes for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that college and/or university classes presenting information on how to select, adapt, and construct clothing for adults with orthopedic limitations be developed and taught to this population, and also, possibly, to their family, friends, and salespersons of specialized clothing since these sources are also used and preferred.

TABLE 31
RELATIONSHIP BETWEEN USE AND PREFERRED
USE OF COLLEGE/UNIVERSITY CLASSES
FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	43	62.3	21	30.4	64	92.7
	Yes	0	0	5	7.2	5	7.2
	Total	43	62.3	26	37.6	69	99.9

Note. Percent is not equal to 100 due to rounding.
 $\chi^2 = 8.92^{**}$
 $df = 1$
 $** p \leq .005$

Family

The chi-square test to determine the relationship between current use and preferred use of one's family members for the diffusion of clothing information to orthopedically limited adults produced a value of 16.82 ($df = 1$). The results were significant beyond the .001 level.

As presented in Tables 19 and 32, nearly three-fourths (73.7%) of the respondents indicated a preference for family members to provide them with information about their clothing. Only 17.6% have not used but would prefer to use their family for clothing information. A majority (60.3%) have previously utilized their family for clothing information.

A statistically significant chi-square value plus a frequency of less than 25% (17.6%) of respondents who prefer but do not use their family for clothing information indicate the existence of effective current diffusion efforts for this source. Therefore, maintenance of current diffusion efforts, including provisions of additional information on how to select, adapt, and construct clothing for adults with orthopedic limitations utilizing other information sources is recommended for family members of this population.

TABLE 32

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
FAMILY FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	14	19.2	15	17.6	29	39.7
	Yes	3	4.1	41	56.1	44	60.3
	Total	17	23.3	56	73.7	73	100.0

Note. $\chi^2 = 16.82^{***}$
df = 1
*** $p \leq .001$

Friends

The chi-square test to determine the relationship between current use and preferred use of one's friends to diffuse clothing information to adults with orthopedic limitations produced a value of 11.96 (df = 1). The results were significant at the .001 level.

Three-fourths (75.7%) of the respondents indicated a preference for friends to provide them with information about their clothing, and 20.3% have not used but would prefer to use this source. A majority, (62.2%) have previously utilized their friends for clothing information (see Tables 19 and 33).

A statistically significant chi-square value plus a frequency of less than 25% (20.3%) of respondents who

prefer but do not use their friends for clothing information indicate the existence of effective diffusion efforts for this source. Therefore, maintenance of current diffusion efforts, including provisions of additional information on how to select, adapt, and construct clothing for adults with orthopedic limitations, is recommended for friends of this population.

TABLE 33

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF FRIENDS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	13	17.6	15	20.3	28	37.9
	Yes	5	6.8	41	55.4	46	62.2
	Total	18	24.4	56	75.7	74	100.1

Note. Percent is not equal to 100 due to rounding.
 $\chi^2 = 11.96^{***}$
 df = 1
 $*** p \leq .001$

Salespersons

The chi-square test to determine the relationship between current use and preferred use of salespersons for the diffusion of clothing information to orthopedically limited adults produced a value of 8.72 (df = 1). The results were significant at the .005 level.

As reported in Tables 19 and 34, more than one-half (59.6%) of the respondents indicated a preference for salespersons to provide them with clothing information, and 19.0% have not utilized but would prefer to use salespersons for clothing information.

A statistically significant chi-square value plus a frequency of less than 25% (19.0%) of respondents who prefer but do not use salespersons to receive clothing information indicate the existence of effective current diffusion efforts for this source. Therefore, maintenance of current diffusion efforts, including provisions of additional information on how to select, adapt, and construct clothing for adults with orthopedic limitations is recommended for salespersons who work with this population.

TABLE 34

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF SALESPERSONS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	20	27.0	14	19.0	34	46.0
	Yes	10	13.5	30	40.6	40	54.1
	Total	30	40.5	44	59.6	74	100.1

Note. Percent is not equal to 100 due to rounding.
 $\chi^2 = 8.72^{**}$
df = 1
 $^{**} p \leq .005$

Television

The chi-square test to determine the relationship between current use and preferred use of television to diffuse clothing information to adults with orthopedic limitations produced a value of 20.17 (df = 1). The results were statistically significant beyond the .001 level, and indicated the strongest relationship in this study.

A total of more than one-half (57.0%) of the respondents indicated a preference for television, and 19.5% have never used but would prefer television to receive information about their clothing. However, 37.5% currently use and prefer this source, and another 37.5% do not use nor prefer television for clothing information (see Tables 19 and 35).

A statistically significant chi-square value paired with a frequency of less than 25% (19.5%) of respondents who prefer but do not use television for clothing information indicate the existence of effective current diffusion efforts for this source. Therefore, maintenance of current diffusion efforts, including a continuance of television programs (possibly utilizing the Public Broadcast stations) that deal with clothing information, is recommended. This source may be used by persons with orthopedic limitations, their friends, family, and salespersons of specialized clothing since these sources are also used and preferred.

TABLE 35

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
TELEVISION FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	27	37.5	14	19.5	41	57.0
	Yes	4	5.6	27	37.5	31	43.1
	Total	31	43.1	41	57.0	72	100.1

Note. Percent is not equal to 100 due to rounding.
 $\chi^2 = 20.17^{***}$
 $df = 1$
 $*** p \leq .001$

Radio

The chi-square test to determine the relationship between current use and preferred use of radio for the diffusion of clothing information to adults with orthopedic limitations produced a value of 16.56 ($df = 1$). The results were significant beyond the .001 level.

As presented in Tables 19 and 36, a total of one-half (50.0%) of the respondents indicated a preference for radio to receive information about their clothing, but fewer than one-fourth (24.3%) have not used and also prefer to use radio for clothing information. However, 25.7% currently use and prefer radio, whereas 45.9% have not used and do not prefer radio for clothing information.

A statistically significant chi-square value plus a frequency of less than 25% (24.3%) of respondents who prefer but do not use radio for clothing information indicate the existence of effective current diffusion efforts for this source. Therefore, maintenance of current diffusion efforts, including continued radio broadcasts of ideas on how to select, adapt, and construct clothing for orthopedically limited adults, is recommended.

TABLE 36

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
RADIO FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	34	45.9	18	24.3	52	70.2
	Yes	3	4.1	19	25.7	22	29.8
	Total	37	50.0	37	50.0	74	100.0

Note. $\chi^2 = 16.56$ ***
df = 1
*** $p \leq .001$

Tape-recorded Messages

The chi-square test to determine the relationship between current use and preferred use of tape-recorded messages for the diffusion of clothing information to adults with orthopedic limitations produced a chi-square

value of 1.81 ($df = 1$). The results failed to attain the .05 level established for this study.

A total of 17.8% of the respondents indicated a preference for tape-recorded messages, and 12.1% have not used but would prefer to use this source to receive information about their clothing. A majority (78.1%) do not use and also do not prefer to use tape-recorded messages for clothing information (see Tables 19 and 37).

A statistically non-significant chi-square value and a frequency of less than 25% (12.1%) of respondents who prefer but do not use tape-recorded messages for clothing information indicate that the majority of respondents neither use nor prefer to use this source. Therefore, rejection of expanded efforts is recommended for tape-recorded messages based upon otherwise inefficient use of time, energy, and other resources.

TABLE 37

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF TAPE-RECORDED MESSAGES FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	57	78.1	11	12.1	68	93.2
	Yes	3	4.1	2	2.7	5	6.8
	Total	60	82.2	13	17.8	73	100.0

Note. $\chi^2 = 1.81^{\#}$
 $df = 1$
 $\# p > .05$

Films

The chi-square test to determine the relationship between current use and preferred use of films for the diffusion of clothing information to orthopedically limited adults produced a value of 4.20 ($df = 1$). The results were statistically significant at the .05 level.

As reported in Tables 19 and 38, a total of 29.5% of the respondents indicated a preference for films, and one-fourth (25.3%) have not used but would prefer to use films to obtain information about their clothing. A majority (69.0%) indicated that they do not use and also do not prefer to use films for clothing information.

A statistically significant chi-square value plus a frequency of 25.3% of respondents who prefer but do not use

films for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that films on clothing selection, adaptation, and construction be produced and shown to adults with orthopedic limitations, possibly at workshops, rehabilitation programs, adult education classes, college/university classes, and/or television programs since these sources are preferred and/or used. It is also recommended that films of specialized clothing be shown to family, friends, and salespersons, since these sources are also used and preferred.

TABLE 38

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
FILMS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	49	69.0	18	25.3	67	94.3
	Yes	1	1.5	3	4.2	4	5.7
	Total	50	70.5	21	29.5	71	100.0

Note. $\chi^2 = 4.20^*$
df = 1
* $p \leq .05$

Filmstrips

The chi-square test to determine the relationship between current use and preferred use of filmstrips for the

diffusion of clothing information to adults with orthopedic limitations produced a value of .48 ($df = 1$). The results failed to attain a statistically significant relations at the .05 level established for this study.

A total of 28.2% of the respondents indicated a preference for filmstrips, and more than one-fourth (26.8%) have not used but would prefer to use filmstrips to obtain information about their clothing. A majority (70.4%) indicated they have not used and also do not prefer to use filmstrips for clothing information (see Tables 19 and 39).

A statistically non-significant chi-square value and a frequency of 26.8% of respondents who prefer but do not use filmstrips for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that filmstrips on how to select, adapt, and construct clothing for adults with orthopedic limitations be produced and shown (possibly presented at workshops, rehabilitation programs, adult education classes, and college and university classes since these sources are also used and/or preferred) to family, friends, salespersons of specialized clothing, as well as to persons with orthopedic limitations.

TABLE 39

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
FILMSTRIPS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	50	70.4	19	26.8	69	97.2
	Yes	1	1.4	1	1.4	2	2.8
	Total	51	71.8	20	28.2	71	100.0

Note. $\chi^2 = .48\#$
df = 1
$p > .05$

Slide Programs

The chi-square test to determine the relationship between current use and preferred use of slide programs for the diffusion of clothing information to orthopedically limited adults produced a value of .79 (df = 1). The results failed to attain the .05 significance level established for this study.

A total of 23.6% of the respondents indicated a preference for slide programs for the purpose of obtaining clothing information, and 22.2% have not used but would prefer to use this source. Three-fourths (75.0%) have not previously used and also would not prefer to use slide programs for information about their clothing (see Tables 19 and 40).

A statistically non-significant chi-square value plus a frequency of less than 25% (22.2%) of respondents who prefer but do not use slide programs indicate that most respondents neither use nor prefer to use slide programs for clothing information. Therefore, rejection of expanded diffusion efforts is recommended for slide programs based upon otherwise inefficient use of time, energy, and other resources.

TABLE 40

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF
SLIDE PROGRAMS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	54	75.0	16	22.2	70	97.2
	Yes	1	1.4	1	1.4	2	2.8
	Total	55	76.4	17	23.6	72	100.0

Note. $\chi^2 = .79\#$
df = 1
$p > .05$

Video-taped Programs

The chi-square test to determine the relationship between current use and preferred use of video-taped programs for the diffusion of clothing information to adults with orthopedic limitations produced a value of .46 (df = 1).

The results failed to attain a statistically significant relationship at the .05 level established for this study.

As presented in Tables 19 and 41, a total of 28.5% of the respondents indicated a preference for video-taped programs to obtain information about their clothing. Although a majority (70.0%) have not previously used and also do not prefer to use this source, more than one-fourth (27.1%) have not used but would prefer to use video-taped programs for clothing information.

A statistically non-significant chi-square value plus a frequency of 27.1% of respondents who prefer but do not use video-taped programs for clothing information indicate ineffective diffusion efforts at present. Therefore, it is recommended that video-taped programs on clothing selection, adaptation, and construction for adults with orthopedic limitations be developed, produced, and marketed for individual use by this population, their family, friends, salespersons of specialized clothing, as well as educators of workshops, rehabilitation programs, adult education classes, and college/university classes since these sources are also used and/or preferred.

TABLE 41

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF VIDEO-TAPED PROGRAMS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	49	70.0	19	27.1	68	97.1
	Yes	1	1.4	1	1.4	2	2.8
	Total	50	71.4	20	28.5	70	99.9

Note. Percent is not equal to 100 due to rounding
 $\chi^2 = .46^\#$
 $df = 1$
 $\# p > .05$

Computerized Programs

The chi-square test to determine the relationship between current use and preferred use of computerized programs for the diffusion of clothing information to orthopedically limited adults produced a value of 1.19 ($df = 1$). The results failed to attain the .05 significance level established for this study.

As reported in Tables 19 and 42, 19.7% of the respondents indicated a preference for computerized programs to obtain clothing information, and 18.3% have not used but would prefer to use this source. A majority (78.9%) have not previously used and also would not prefer to use computerized programs for information about their clothing.

A statistically non-significant chi-square value plus a frequency of less than 25% (18.3%) of respondents who prefer but do not use computerized programs for clothing information indicate that a majority of respondents neither use nor prefer to use this source. Therefore, rejection of expanded diffusion efforts is recommended for computerized programs based upon otherwise inefficient use of time, energy, and other resources.

TABLE 42

RELATIONSHIP BETWEEN USE AND PREFERRED USE OF COMPUTERIZED PROGRAMS FOR THE DIFFUSION OF CLOTHING INFORMATION

		PREFERENCE					
		Not prefer		Prefer		Total	
		n	%	n	%	n	%
USE	No	56	78.9	13	18.3	69	97.2
	Yes	1	1.4	1	1.4	2	2.8
	Total	57	80.3	14	19.7	71	100.0

Note. $\chi^2 = 1.19\#$
 $df = 1$
 $\# p > .05$

Presentation of Findings Related to the
Potential Expansion Priority of Each Information Source

The importance of expanding the availability of individual information sources was explored as a supplement to the recommendations for effective diffusion of clothing information. Two analytical steps were implemented in an effort to prioritize the importance of expansion of the sources of information with regard to availability, preference, and use. First, the sources preferred but not readily available were identified by calculating the difference between the availability of and preferred use of each information source. Second, the sources were prioritized and rank-ordered for potential development according to a corrected indicator by calculating the difference between the "preferred but not used" percentage points and the "availability minus preference" percentage points. Consequently, the information sources that need further availability were identified. Whereas the main body of the analysis speaks to maximum use of current sources, this section directs attention to the importance of the physical expansion of some sources relative to others.

Availability Relative to Preference of Each Information Source.

Areas where increased availability would appear to be useful for enhanced diffusion were identified. The sources of information preferred but not readily available were identified by subtracting total preference percentage points from availability percentage points for each source (see Table 43). Eight sources yielded negative percentages, indicating the importance of expanding the availability of these sources as a supplement to diffusion. These eight sources include, in rank order, county extension bulletins (-19.9%), catalogs (-18.9%), pamphlets (-12.8%), video-taped programs (-10.9%), workshops (-5.5%), newsletters (-3.3%), computerized programs (-2.1%), and filmstrips (-1.8%). Of the sources preferred but not readily available, one (catalogs) was recommended for maintenance in the previous recommendations section; six (county extension bulletins, pamphlets, video-taped programs, workshops, newsletters, and filmstrips) were recommended for development; and one (computerized programs) was recommended for rejection.

TABLE 43
 AVAILABILITY RELATIVE TO PREFERENCE
 OF EACH INFORMATION SOURCE

Information sources	Avail- ability %	Preference %	Availability minus preference %
Written media:			
Books	72.5	52.1	20.4
Newspapers	87.9	77.4	10.5
Popular magazines	76.9	64.3	12.5
Newsletters	62.9	66.2	-3.3
Pamphlets	60.4	73.2	-12.8
Catalogs	70.3	89.2	-18.9
County extension bulletins	39.6	59.5	-19.9
Correspondence courses	36.3	27.8	8.5
Personal information sources:			
Workshops	37.4	42.9	-5.5
Rehabilitation programs	56.0	46.5	9.5
Adult education classes	61.5	47.2	14.3
College/university classes	64.8	37.6	27.2
Family	82.4	73.7	8.7
Friends	90.1	75.7	14.4
Salespersons	68.1	59.6	8.5
Audio-visual media:			
Television	89.0	57.0	32.0
Radio	86.8	50.0	36.8
Tape-recorded messages	36.3	14.8	21.5
Films	34.1	29.5	4.6
Filmstrips	26.4	28.2	-1.8
Slide programs	25.8	23.6	2.2
Video-taped programs	17.6	28.5	-10.9
Computerized programs	17.6	19.7	-2.1

Note. Expanded availability of the sources yielding negative percentages is suggested for improved diffusion.

Index of Potential Expansion Priority

As a supplement to the recommendations for diffusion of clothing information to orthopedically limited adults, the information sources were further prioritized with regard to availability, preference, and use, and listed in rank-order, indicating where a need for potential expansion exists (see Table 44). Sources were prioritized by subtracting the "availability minus preference" percentage points (as reported in Table 43) from the "preferred but not used" percentage points (as reported in Table 19). The scores are listed in rank-order, with the highest numbers representing the sources most deserving of expansion and the lowest numbers representing the sources least deserving of expansion. With regard to availability, preference, and use, this calculation yields a corrected indicator of where potential expansion lies in view of associated waste of developmental effort and is to be regarded only as a supplement to the previous recommendations.

According to this corrected indicator, high expansion priority is indicated for six sources: county extension bulletins (69.9%), pamphlets (59.2%), newsletters (51.9%), workshops (44.1%), catalogs (39.2%), and video-taped programs (38.0%). In comparison to the previous recommendations section, all sources indicating high expansion priority were previously recommended for development, except catalogs, which were recommended for maintenance.

TABLE 44
INDEX OF POTENTIAL EXPANSION PRIORITY

Information sources	Preferred & not used %	-	Availability minus preference %	=	Totals %
High expansion priority:					
County extension bulletins	50.0		-19.9		69.9
Pamphlets	46.4		-12.8		59.2
Newsletters	48.6		-3.3		51.9
Workshops	38.6		-5.5		44.1
Catalogs	20.3		-18.9		39.2
Video-taped programs	27.1		-10.9		38.0
Moderate expansion priority:					
Rehabilitation programs	39.7		9.5		30.2
Filmstrips	26.8		-1.8		28.6
Adult education classes	40.3		14.3		26.0
Popular magazines	34.3		12.5		21.8
Films	25.3		4.6		20.7
Computerized programs	18.3		-2.1		20.4
Slide programs	22.2		2.2		20.0
Low expansion priority:					
Correspondence courses	23.6		8.5		15.1
Newspapers	22.5		10.5		12.0
Salespersons	19.1		8.5		10.9
Books	31.0		20.4		10.6
Family	17.6		8.7		8.9
Friends	20.3		14.4		5.9
College/university classes	30.4		27.2		3.2
Negative expansion priority:					
Tape-recorded messages	12.1		21.5		-9.4
Radio	24.3		36.8		-12.5
Television	19.1		32.0		-12.9

Moderate expansion priority is indicated for seven sources: rehabilitation programs (30.2%), filmstrips (28.6%), adult education classes (26.0%), popular magazines (21.8%), films (20.7%) computerized programs (20.4%), and slide programs (20.0%). All sources indicating moderate expansion priority were previously recommended for development, except computerized and slide programs, which were recommended for rejection due to apparent lack of availability.

Low expansion priority is indicated for seven sources: correspondence courses (15.1%), newspapers (12.0%), salespersons (10.9%), books (10.6%), family (8.9%), friends (5.9%), and college and/or university classes (3.2%). All sources indicating low expansion priority were previously recommended for maintenance, except books and college/university classes, which were recommended for development.

Negative expansion priority is indicated for three audio-visual media: tape-recorded messages (-9.4%), radio (-12.5%), and television (-12.9%). Radio and television were previously recommended for maintenance, and tape-recorded messages were recommended for rejection.

Results of Open Comments

Space on the back page of the questionnaire was provided for optional open-ended questions and comments. Of the 91 respondents, 33 furnished supplementary information. Most of the comments emphasized the degree to which clothing was or was not a problem to the individual respondents. In addition, requests for information, solutions to fitting problems, examples of life experiences related to particular limitations, and suggestions for the diffusion of information to the orthopedically limited population were provided.

A general summary of the comments follows. Eleven respondents indicated that clothes are definitely a problem for them. Eight respondents indicated that clothing is no longer a problem for them because they either sew most of their clothes or purchase sale or inexpensive clothing. Five respondents indicated that they have no need for special clothing. This group stressed their ability to care for their own personal needs, and a desire for total independence. Two respondents suggested solutions related to the diffusion of clothing information to the orthopedically limited population (a hotline for communicating new ideas, and publication in the magazine Accent on Living were advised). Seven other miscellaneous comments were offered. Specific comments are listed in Appendix D.

CHAPTER V. CONCLUSIONS

This was an exploratory study designed to investigate the information sources available to, utilized by, and preferred by the orthopedically limited adult population, with the primary purpose of proposing recommendations for effective diffusion of clothing information. The major objectives of the study were: (1) to describe the selected sample of orthopedically impaired adults, 16 to 70 years of age, who reside in the Willamette Valley region of Oregon; (2) to determine how the selected sample is currently obtaining information about clothing; (3) to determine how the selected sample prefers to obtain information about clothing; and (4) to recommend how to diffuse effectively information about clothing to orthopedically limited adults based upon the sources of information that are currently available to, used by, and preferred by this population.

Conclusions Related to the Analyses

Descriptive statistics were utilized to examine Analyses I, II, III and IV. The analyses were based upon five demographic characteristics, the sources of information available, the sources of information used to obtain clothing information, and the sources of information preferred to

be used to obtain clothing information. The following conclusions have been formulated regarding the analyses posed.

Analysis I. Demographic Characteristics of the Respondents.

Sex. According to the Bureau of Census, 47% of the handicapped population is female (President's Committee on Employment of the Handicapped, 1970, p. 7). The descriptive statistics in Table 2 indicate that more than one-half (52.7%) of the respondents were male and 46.2% were female. These statistics closely approximate the national average.

Age group. The national average indicates, "Two-thirds of the handicapped population between 16 and 64 are 45 years old and older" (President's Committee on Employment of the Handicapped, 1970, p. 7). However, only 50.6% of the respondents of this study were between 40 and 60 years of age, and only 4.4% were between 60 and 69 years of age. This discrepancy may be due to a sampling limitation. The sample was purposefully, not randomly, selected from the mailing list for the Oregon Governor's Conference of the Handicapped, a list of potential respondents provided by the Oregon State University Director of Handicapped Services, and names voluntarily submitted by respondents. It is possible that persons attending the Governor's Conference, Oregon State University, and acquaintances of respondents are younger than the national average, and

therefore may not be representative of all orthopedically impaired people in Oregon.

According to Rogers, persons who utilize more cosmopolitan information sources are younger than persons who use more localite information sources (1970, pp. 172-177), and "innovative early adopters [of an innovation] are youthful" (Ryan, 1969, p. 165). The majority (78.1%) of respondents in this study were 30 to 59 years of age.

Educational level. Most of the respondents (93.4%) indicated completion of a high school education or beyond. Nearly one-half (49.5%) completed some college or specialized training, and more than one-third (36.3%) held baccalaureate degrees, completed some post-baccalaureate work, and/or held a graduate degree. These statistics provide a contrast to the Bureau of Census findings, which indicate, "the handicapped people of America have had less schooling than the non-handicapped" (President's Committee on Employment of the Handicapped, 1970, p. 6). The disparity among studies is possibly due to a sampling limitation. It is likely that orthopedically impaired adults who attend conferences, a university, or are acquainted with the respondents are more highly educated than the average handicapped individual. It is possible that the educational level of the handicapped has increased during the ten years since the Bureau of Census findings. It is also important to note

that persons with higher educational levels generally tend to be "highly participatory in social affairs" (Ryan, 1969, p. 165), and may respond more frequently to self-administered questionnaire-type surveys than persons with little education.

Type of physical limitations. The majority of respondents (70.4%) indicated they were multiply handicapped, by specifying from two to five different limitations (38.5%), succeeded by one (27.5%), three (16.5%), four (12.1%), and five (3.3%) limitations, as reported in Table 5.

Physical mobility is a definite factor to examine when considering the diffusion of information to orthopedically limited adults. Nearly three-fourths of the respondents are multiply handicapped and, of these handicaps, nearly two-thirds have limitations of both lower limbs, one-half have limitations of the back, trunk, and/or spine, and one-fourth have limitations of both upper limbs.

Annual household income. The distribution of annual household income levels presented in Table 7 reveals that nearly two-thirds (60.5%) of the respondents indicated an annual household income of less than \$10,000. These statistics support the thesis, "The handicapped people of American have had lower earnings than the non-handicapped" (President's Committee on Employment of the Handicapped, 1970, p. 6).

A contrast exists between the relatively low annual household income, with a majority of respondents indicating \$9,999 or less, and a high educational level, with most (86.9%) indicating education beyond the high school level. Although persons with various physical limitations may achieve educationally, most must live on a relatively low annual household income.

Analysis II. Sources of Information Available to the Respondents.

Overall analysis of the information sources reveals that the following sources are available to more than 80% of the respondents: friends, television, newspapers, radio, and family. Audio-visual media comprise the least available sources, including films, filmstrips, slide programs, video-taped programs, and computerized programs. Generally, written media (except correspondence courses) and personal information sources, plus television and radio, were available to nearly two-thirds of the respondents, whereas audio-visual media (except television and radio) were available to one-third.

Analysis III. Sources of Information Used by the Respondents to Obtain Information About Clothing Selection, Adaptation, and Construction.

The sources of information used by more than 49% of the respondents to obtain information about clothing selection, adaptation, and construction are catalogs, newspapers, friends, family, and salespersons. The two main sources used for clothing information are written media, and the other three are personal information sources. All other sources are used by less than 37% of the respondents for clothing information.

Analysis IV. Sources of Information Preferred by the Respondents to Obtain Information About Clothing Selection, Adaptation, and Construction.

The sources of information preferred by more than 50% of the respondents to obtain information about clothing selection, adaptation, and construction are catalogs, family, newspapers, friends, pamphlets, popular magazines, newsletters, salespersons, television, and county extension bulletins. Six of the preferred sources are written media, three are personal information sources, and one is an audio-visual medium. The remaining sources were preferred by less than 47% of the respondents.

Conclusions Related to the Hypothesis

One hypothesis was postulated to examine the possible relationships between the information sources currently used to diffuse clothing information and the sources the sample prefer to use. The .05 significance level was used as the criterion for identification of significant relationships. The following conclusions are based upon the results of the chi-square analyses.

Hypothesis. There is a direct relationship between the sources of information used to obtain clothing information and the sources the respondents prefer to use to obtain clothing information.

A direct relationship was found to exist between the use and preferred use of the following sources of information, and, consequently, the hypothesis was accepted for each of the following sources: newspapers, pamphlets, catalogs, correspondence courses, rehabilitation programs, adult education classes, college/university classes, family, friends, salespersons, television, radio, and films.

A direct relationship between the use and preferred use of the following information sources could not be established, and, consequently, the hypothesis could not be accepted for each of the following sources: books, popular magazines, newsletters, county extension bulletins,

workshops, tape-recorded messages, filmstrips, slide programs, video-taped programs, and computerized programs.

Conclusions Related to the Recommendations
for Each Information Source

Prior to this study little research, if any, provided recommendations regarding improved, effective diffusion of available clothing information directly to persons in need of this information. Therefore, a sample of orthopedically limited adults was asked to indicate the sources of information that are (1) available to them, (2) currently used by them to obtain clothing information, and (3) preferred to be used to receive clothing information if readily available. The criteria for recommending the sources of information to be utilized in terms of promoting improved, effective diffusion of clothing information are based upon chi-square test results and the percentage frequency of respondents who prefer but do not use each information source. Recommendations were made either to maintain, develop, or reject diffusion efforts for each source based upon the findings of this study. Refer to Table 18 for the criteria for recommendations and Table 19 for the resultant recommendations.

Maintenance

Maintenance of current diffusion efforts is recommended for eight sources that the respondents indicated are both used and preferred. Specific suggestions for continued use of these sources are also provided. It is recommended that the following diffusion efforts be continued with relation to clothing selection, adaptation, and construction for adults with orthopedic limitations: (1) publications of newspaper articles; (2) publication and distribution of catalogs; (3) correspondence course offerings; (4) family assistance; (5) friends' assistance; (6) salespersons' assistance; (7) television programs; and (8) radio broadcasts. Provisions of additional clothing information to family, friends, and salespersons are also suggested in order for these people to better assist their orthopedically limited acquaintances.

Development

Further development of diffusion efforts is recommended for 12 sources that the respondents indicated are preferred but currently underutilized. It is recommended that the following diffusion efforts be provided with relation to clothing selection, adaptation, and construction for adults with orthopedic limitations: (1) books be written, published, and distributed; (2) articles be published in

popular magazines, especially those magazines utilized by this population, and distributed; (3) newsletter articles be written, published, and mailed*; (4) pamphlets be developed, published, and distributed*; (5) county extension bulletin articles be developed, published, and distributed*; (6) workshops be developed and presented*; (7) rehabilitation programs provide clothing information*; (8) adult education classes be developed and taught*; (9) college and university classes be developed and taught*; (10) films be produced and shown*; (11) filmstrips be produced and shown*; and (12) video-taped programs be developed, produced, and marketed*.

Rejection

Rejection of expanded diffusion efforts is recommended for three sources that the respondents indicated are neither preferred nor used. Based upon otherwise inefficient use of time, energy, and other sources, rejection of expanded diffusion efforts is recommended for tape-recorded messages, slide programs, and computerized programs.

It is anticipated that the previous recommendations will be helpful to persons diffusing the available clothing

Note. * These sources may also be utilized by family, friends, salespersons, and clothing educators since these sources are also used and preferred.

information to adults with orthopedic limitations, and, ultimately, that the persons in need of clothing information will actually receive this information via communication channels that are most useful and preferred by them. In addition, expanding the availability of the information sources that are preferred but not used was explored.

Conclusions Related to the Potential
Expansion Priority of Each Information Source

As a supplement to the recommendations for improved diffusion of clothing information to adults with orthopedic limitations, the importance of expanding the availability in relation to the preference and use of each information source was explored. First, areas where increased availability would be useful for enhanced diffusion were identified by calculating the difference between the availability of and preferred use of each information source. As a result, eight sources yielded negative percentages, indicating the importance of expanding the availability of these sources, which include county extension bulletins, catalogs, pamphlets, video-taped programs, workshops, newsletters, computerized programs, and filmstrips (see Table 43).

The information sources were further prioritized according to a corrected indicator by subtracting the "availability minus preference" percentage points from the "preferred but not used" percentage points for each source.

Resultant scores were listed in rank-order, with the highest numbers representing the sources most deserving of expansion and lowest numbers representing the sources least deserving of expansion. According to the corrected indicator, high expansion priority was indicated for county extension bulletins, pamphlets, newsletters, workshops, catalogs, and video-taped programs. Moderate expansion priority was indicated for rehabilitation programs, filmstrips, adult education classes, popular magazines, films, computerized programs, and slide programs. Low expansion priority was indicated for correspondence courses, newspapers, salespersons, books, family, friends, and college/university classes. Negative expansion priority was indicated for tape-recorded messages, radio, and television (see Table 44).

CHAPTER VI. SUMMARY AND RECOMMENDATIONS

SUMMARY

Statement of the Problem

Little data exist on the actual sources of educational media available to, utilized by, and preferred by adults with various orthopedic limitations. Most of the previous research, program development, and available media have focused upon school-age children (Tickton, 1971, p. 675), omitting handicapped adults. According to Gamwell and Joyce (1966, p. 65),

"It has become apparent that disabled people often do not know what they are entitled to, they do not know what is available, they do not know what they need, and they do not know who to ask or how to go about obtaining help."

"Lack of local expertise to aid physically disabled in their community with clothing related problems is a reality" (Yep & Yep, 1976, p. 4).

The orthopedically impaired adult population was selected from the many types of physical disabilities because research and observation indicate that this segment of the population seems to have the greatest need for clothing information. Clothing that is both functional and attractive may enhance one's appearance, camouflage one's limitation, improve one's self esteem, and improve

one's social image, as opposed to becoming a physical, psychological, and/or social barrier.

This was an exploratory study designed to investigate the information sources available to, utilized by, and preferred by the orthopedically limited adult population, with the primary purpose of proposing recommendations for effective diffusion of clothing information. The four main objectives of this study were: (1) to describe the population of orthopedically impaired adults, 16 to 70 years of age, who reside in the Willamette Valley region of Oregon; (2) to determine how the population is currently obtaining information about clothing; (3) to determine how the population prefers to obtain clothing information; and (4) to make recommendations on how to diffuse information about clothing to orthopedically impaired adults based upon the sources of information that are currently available to, used by, and preferred by this population.

Procedure

Selection and Development of Measures

A mailed questionnaire was developed to assess the sources of information available to, used by, and preferred by the orthopedically limited adults who reside in the Willamette Valley. Objective questions and a concise

format were designed to facilitate response by persons with various orthopedic limitations, and to increase the questionnaire return rate.

The measures were based upon the investigator's modification of Rogers' diffusion of innovations theory, which include (1) a description of the social system, (2) communication of the innovation, and (3) the innovation itself (Rogers, 1970, p. 12). The questionnaire was designed to examine the first two elements of diffusion, and the innovation was identified as information about clothing selection, adaptation, and construction for people with special needs.

Measures to describe the sample consisted of five objective questions representing five demographic characteristics. Respondents indicated their sex, age, educational level, type of physical limitation, and annual household income from among the groups specified.

Communication of the innovation was measured by four sets of questions, and based upon the following measures: general media availability (Q-1); media used to receive any information during the past year (Q-2); media used to receive information about clothing (Q-3); and media preferred for information about clothing (Q-4). Each of the four sets of questions consisted of a series of 25 items categorized within three main subheadings: Written Media -- including books, newspapers, popular magazines,

newsletters, pamphlets, catalogs, county extension bulletins, and correspondence courses; Personal Contacts -- including workshops, rehabilitation programs, adult education classes, college/university classes, county extension agents, family, friends, and salespersons; Audio-visual Media -- including television, radio, tape-recorded messages, films, filmstrips, slide programs, video-taped programs, and computerized programs; and Other -- optional space was provided for respondents to suggest additional information sources.

The measures of general media availability (Q-1), media used to receive any information during the past year (Q-2), and media used to receive information about clothing (Q-3) consisted of YES - NO - ??? type questions. Respondents were asked to indicate (Q-1) if each of the 24 information sources was readily available to them or not, (Q-2) if they had used each of the 24 information sources to receive any information during the past year or not, and (Q-3) if they had ever used each of the 24 information sources to receive information about their clothing or not.

The measure of media preferred for information about clothing (Q-4) utilized a Likert-type scale of Most Prefer, Prefer, and Not Prefer. For this measure respondents were asked to indicate the sources of information they would prefer to use to learn more about selecting,

altering, and constructing their clothing if these media were readily available.

Selection of the Sample and Geographic Location

One-hundred-eighty orthopedically impaired adult men and women, 16 to 70 years of age, who reside in the Willamette Valley geographic region of Oregon were selected to participate in this study. The sample population was purposefully selected using a mailing list from the Oregon Governor's Conference of the Handicapped that was pre-coded according to type of disability, using an additional list of names and addresses furnished by the Oregon State University Director of Handicapped Student Services, and using names and addresses provided by respondents who utilized space on the back page of the questionnaire for this purpose. All identified persons were contacted to participate in this study.

Collection of Data

The data collection process was based upon Dillman's "Total Design Method" (1978) for questionnaire-type surveys. Following pre-administration of the questionnaire to ten specialists in the areas of instructional resources and materials, survey and research, extension media and education, handicapped student services, educational media, readability, speech and communications, English composition,

psychological questionnaires, and information, the revised questionnaire was constructed in a booklet format to minimize the visual experience of the questionnaire and printed on light yellow paper. The initial mailing included the questionnaire, prefaced with a personalized, hand-signed cover letter, and a return envelop with first class postage affixed and addressed to the Oregon State University Home Economics Department. A postal card follow-up was mailed to all subjects one week following questionnaire distribution. Subjects who failed to respond to the questionnaire within three weeks were sent a replacement questionnaire, follow-up letter, and return envelope. As a token reward, a bibliography of available clothing information for the handicapped was mailed to all respondents upon receipt of each completed questionnaire. A total of 91 usable questionnaires (50.6%) were included in this study.

Analysis of Data

Descriptive statistics were utilized to examine Analyses I, II, III, and IV. Chi-square tests were employed to determine if a statistically significant relationship exists between the two variables, (1) the sources of information currently used to obtain clothing information, and (2) the sources of information preferred to be used to obtain clothing information for each media

item. The .05 significance level was used as the criterion for identification of significant relationships.

Recommendations for each information source were made in terms of promoting effective diffusion, and were based upon chi-square test results and the percentage frequency of respondents who prefer but do not use each source. Recommendations were made either to maintain, develop, or reject diffusion efforts for individual information sources.

To supplement the recommendations, sources where expanded availability would enhance diffusion were identified, and all sources were further prioritized to determine those most deserving of expansion efforts.

Results and Conclusions

Results of the Analyses

Sex. More than one-half (52.7%) of the respondents were male and 46.2% were female. These statistics closely approximate the national average.

Age group. Although the age level among the adults surveyed for this study was lower (30-39 years was the largest age group) than the national average of 45 years and older, the majority of the respondents (78.1%) were 30-59 years of age.

Educational level. Most of the respondents (93.4%) indicated completion of a high school education or beyond.

Physical limitations. Nearly three-fourths (70.4%) of the respondents indicated they were multiply handicapped. Limitations of both lower limbs; the back, trunk, and/or spine; both upper limbs; and one upper limb were the most frequent responses.

Annual household income. Nearly two-thirds (60.5%) of the respondents indicated an annual household income of less than \$10,000.

Sources of information available to the respondents. The following sources are available to more than 80% of the respondents and include friends, television, newspapers, radio and family.

Sources of information used by the respondents to obtain information about clothing selection, adaptation, and construction. The following sources are used by more than 49% of the respondents to obtain clothing information and include catalogs, newspapers, friends, family, and salespersons.

Sources of information preferred by the respondents to obtain information about clothing selection, adaptation, and construction. The following sources are preferred by

more than 50% of the respondents to obtain clothing information and include catalogs, family, newspapers, friends, pamphlets, popular magazines, newsletters, salespersons, television, and county extension bulletins.

Results of the Hypothesis

Hypothesis. There is a direct relationship between the sources of information used to obtain clothing information and the sources the respondents prefer to use to obtain clothing information. A statistically significant chi-square value was indicated, and consequently, the hypothesis was accepted for each of the following sources of information: television, family, radio, and friends at the .001 level; catalogs, college and/or university classes, and salespersons at the .005 level; and rehabilitation programs, adult education classes, newspapers, correspondence courses, pamphlets, and films at the .05 significance level. Statistically non-significant chi-square values were indicated, and, consequently, the hypothesis could not be accepted for the remaining information sources including books, popular magazines, newsletters, county extension bulletins, workshops, tape-recorded messages, filmstrips, slide programs, video-taped programs, and computerized programs.

Recommendations for Each Information Source

The following recommendations were made in terms of promoting effective diffusion of clothing information to orthopedically limited adults. Recommendations were to either maintain, develop, or reject diffusion efforts for individual information sources based upon the criteria stated in Table 18. Resultant recommendations are reported in Table 19.

Maintenance of current diffusion efforts is recommended for the sources both used and preferred. Maintenance is suggested for eight sources: newspapers, catalogs, correspondence courses, family, friends, salespersons, television, and radio.

Further development of diffusion efforts is recommended for the sources preferred but currently underutilized, including books, popular magazines, newsletters, pamphlets, county extension bulletins, workshops, rehabilitation programs, adult education classes, college and/or university classes, films, filmstrips, and video-taped programs.

Rejection of expanded diffusion efforts is recommended for the sources neither used nor preferred, which include tape-recorded messages, slide programs, and computerized programs.

Results of the Potential Expansion
Priority for Each Information Source

Expanded availability was considered for eight information sources, as a supplement to the recommendations for effective diffusion. The following sources of information were preferred but not readily available, and include county extension bulletins, catalogs, pamphlets, video-taped programs, workshops, newsletters, computerized programs, and filmstrips.

The information sources were further prioritized with regard to availability, preference, and use, and listed in rank-order, indicating where a need for potential expansion exists, and may be considered strictly as a supplement to the previous recommendations for diffusion. High expansion priority was indicated for county extension bulletins, pamphlets, newsletters, workshops, catalogs, and video-taped programs. Moderate expansion priority was indicated for rehabilitation programs, filmstrips, adult education classes, popular magazines, films, computerized programs, and slide programs. Low expansion priority was indicated for correspondence courses, newspapers, salespersons, books, family, friends, and college/university classes. Negative expansion priority was indicated for tape-recorded messages, radio, and television.

RECOMMENDATIONS

For Use of the Present Study

The ultimate goal of this study was to provide specific recommendations in terms of promoting effective diffusion of clothing information to orthopedically limited adults who reside in the Willamette Valley. It is anticipated that the results of this study may encourage clothing educators to disseminate the available clothing information utilizing the most effective means of diffusion to meet the various needs of adults with orthopedic limitations. It is also anticipated that the results may be utilized by clothing educators in other geographic locations, media specialists, doctors, nurses, therapists, sociologists, psychologists, and para-professionals, such as friends, family members, and volunteers who work with the orthopedically limited. In addition, the results may be of value to manufacturers and retailers with relation to effective publicizing and diffusing of their specialized clothing and self-help dressing aids to this population.

The following recommendations are proposed to promote effective diffusion of clothing information to adults with orthopedic limitations, and are based upon the findings of this study:

1. Maintenance of current diffusion efforts and continued use is recommended for the sources both currently used and preferred by the respondents (see Table 19), including newspapers, catalogs, correspondence courses, family, friends, salespersons, television, and radio.
2. Further development of diffusion efforts is recommended for the sources preferred but currently underutilized (see Table 19), including books, popular magazines, newsletters, pamphlets, county extension bulletins, workshops, rehabilitation programs, adult education classes, college and/or university classes, films, filmstrips, and video-taped programs.
3. Rejection of expanded diffusion efforts is recommended for the sources neither used nor preferred (see Table 19), including tape-recorded messages, slide programs, and computerized programs.
4. Expanded availability of the information sources preferred but not readily available is suggested for county extension bulletins, catalogs, pamphlets, video-taped programs, workshops, newsletters, computerized programs, and filmstrips (see Table 43), as a supplement to the diffusion recommendations.
5. The Index of Potential Expansion Priority (see Table 44) is recommended for consideration when determining the sources most deserving of development.

For Future Study

Parallel studies to examine the availability, utility, and preferences of various media to receive clothing information could be conducted in geographic locations where there are established clothing programs for people with special needs. A comparison between the study in Oregon, where no established programs appear to exist, and studies in complementary geographic locations where there are established programs, such as Alabama (Beasley, Burns, & Weiss, 1977; Hall, 1978), Alberta, Canada (Kernaleguen, 1978), Illinois (Hoffman, 1979), Iowa (Yep, 1974), Kansas (Ahrbeck & Friend, 1976), London, England (Lord, 1970; Disabled Living Foundation, 1971), Minnesota (Bower, 1977), Nevada (Reich, 1979), New York (Cookman, 1961; Corrigan, 1971), Ohio (Vocational Guidance & Rehabilitation Services), or Texas (Caddel, 1977) could provide contrasting results.

Because family and friends were most preferred, most available, and also currently utilized as personal information sources for orthopedically impaired adults to acquire clothing information, the study could be adapted to investigate the diffusion of specialized clothing information, more specifically, to family and friends of this population.

Specific media sources, such as popular magazines (or books, etc.) could be studied in depth to determine the most appropriate magazines (or books, etc.) to utilize when

diffusing clothing information to orthopedically limited adults.

Although research indicates that clothing professionals perceive a need for the diffusion of clothing information to persons with physical limitations (Adams & Mead, 1978, p. 1; Gahring, 1976, p.2; Reich, 1978, p. 2), some of the respondents of this study questioned or rejected their need for clothing information. See Appendix D, Results of Open Comments. Therefore, further research could be conducted to determine if the orthopedically limited adult population of Oregon actually perceive a need for clothing information or not. In addition, future studies could also determine whether or not this population is aware that information on clothing selection, adaptation, and construction for various limitations does exist.

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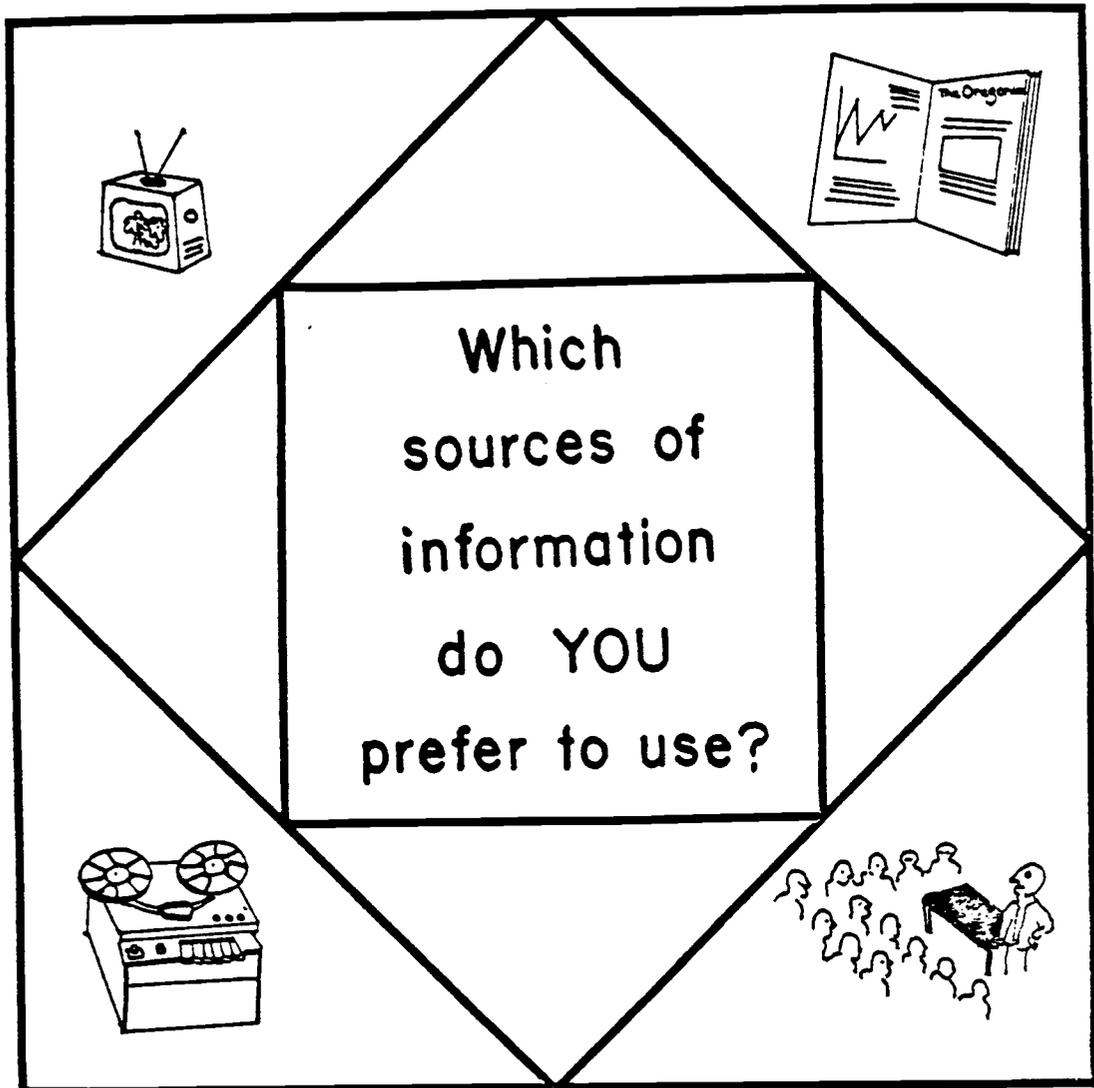
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APPENDICES

APPENDIX A

THE QUESTIONNAIRE



School of Home Economics
Department of Clothing,
Textiles and Related Arts
Oregon State University
Corvallis, Oregon 97331

Please help us
so we can help you!!!

First, we would like to learn more about the general information sources that are available to you.

Q-1 Please read the list below. Indicate if YOU consider each of the following sources to be readily available to you or not.

YES means that source is readily available to you.

NO means that source is not readily available to you.

??? means you do not know if that source is available to you or not.

Check (✓) one answer for each source, for example:
 YES NO ???

Information Sources:		Q-1 Is this source readily available to you?		
Written Media	1 Books	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	2 Newspapers	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	3 Popular Magazines	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	4 Newsletters	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	5 Pamphlets	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	6 Catalogs	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	7 County Extension Bulletins . .	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	8 Correspondence Courses	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
Personal Contacts	9 Workshops	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	10 Rehabilitation Programs	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	11 Adult Education Classes	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	12 College/University Classes . .	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	13 County Extension Agents	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	14 Family	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	15 Friends	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	16 Salespersons	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
Audio-Visual Media	17 Television	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	18 Radio	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	19 Tape-recorded Messages	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	20 Films	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	21 Filmstrips	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	22 Slide Programs	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	23 Video-taped Programs	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	24 Computerized Programs	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>
	25 Other (Please specify below): .	YES <input type="checkbox"/>	NO <input type="checkbox"/>	??? <input type="checkbox"/>

Next, we would like to learn more about the information sources you use for GENERAL information and for CLOTHING information.

- Q-2** In the first column, please indicate if you have used that source to receive ANY INFORMATION during the past year or not.
- Q-3** In the second column, please indicate if you have ever used that source to receive INFORMATION ABOUT YOUR CLOTHING or not.

YES means you have used that source.
 NO means you have not used that source.
 ??? means you do not know if you have used that source or not.

Information Sources:		Q-2 Did you use this source for ANY information during the past year? (Check (✓) your answers)			Q-3 Have you ever used this source for information ABOUT YOUR CLOTHING? (Check (✓) your answers)		
		YES	NO	???	YES	NO	???
Written Media	1 Books	YES	NO	???	YES	NO	???
	2 Newspapers	YES	NO	???	YES	NO	???
	3 Popular Magazines	YES	NO	???	YES	NO	???
	4 Newsletters	YES	NO	???	YES	NO	???
	5 Pamphlets	YES	NO	???	YES	NO	???
	6 Catalogs	YES	NO	???	YES	NO	???
	7 County Extension Bulletins	YES	NO	???	YES	NO	???
	8 Correspondence Courses .	YES	NO	???	YES	NO	???
Personal Contacts	9 Workshops	YES	NO	???	YES	NO	???
	10 Rehabilitation Programs .	YES	NO	???	YES	NO	???
	11 Adult Education Classes .	YES	NO	???	YES	NO	???
	12 College/University Classes	YES	NO	???	YES	NO	???
	13 County Extension Bulletins	YES	NO	???	YES	NO	???
	14 Family	YES	NO	???	YES	NO	???
	15 Friends	YES	NO	???	YES	NO	???
	16 Salespersons	YES	NO	???	YES	NO	???
Audio-Visual Media	17 Television	YES	NO	???	YES	NO	???
	18 Radio	YES	NO	???	YES	NO	???
	19 Tape-recorded Messages .	YES	NO	???	YES	NO	???
	20 Films	YES	NO	???	YES	NO	???
	21 Filmstrips	YES	NO	???	YES	NO	???
	22 Slide Programs	YES	NO	???	YES	NO	???
	23 Video-taped Programs . .	YES	NO	???	YES	NO	???
	24 Computerized Programs . .	YES	NO	???	YES	NO	???
	25 Other (Please specify): .	YES	NO	???	YES	NO	???

Next, we would like to learn more about the information sources you would prefer to use for ideas and information about your clothing.

Q-4 What sources of information, if any, would you prefer to use to learn more about selecting, altering and constructing your clothing if they were readily available?

MOST PREFER means you would prefer to use this source often for clothing information.
 PREFER means you would prefer to use this source occasionally for clothing information.
 NOT PREFER means you would never use this source for clothing information.

Q-4
 Which sources do you prefer to use
 for clothing information?
 (Check (✓) one answer for each source)

<u>Information Sources:</u>				
Written Media	1 Books	MOST PREFER	PREFER	NOT PREFER
	2 Newspapers	MOST PREFER	PREFER	NOT PREFER
	3 Popular Magazines	MOST PREFER	PREFER	NOT PREFER
	4 Newsletters	MOST PREFER	PREFER	NOT PREFER
	5 Pamphlets	MOST PREFER	PREFER	NOT PREFER
	6 Catalogs	MOST PREFER	PREFER	NOT PREFER
	7 County Extension Bulletins	MOST PREFER	PREFER	NOT PREFER
	8 Correspondence Courses	MOST PREFER	PREFER	NOT PREFER
Personal Contacts	9 Workshops	MOST PREFER	PREFER	NOT PREFER
	10 Rehabilitation Programs	MOST PREFER	PREFER	NOT PREFER
	11 Adult Education Classes	MOST PREFER	PREFER	NOT PREFER
	12 College/University Classes	MOST PREFER	PREFER	NOT PREFER
	13 County Extension Agents	MOST PREFER	PREFER	NOT PREFER
	14 Family	MOST PREFER	PREFER	NOT PREFER
	15 Friends	MOST PREFER	PREFER	NOT PREFER
	16 Salespersons	MOST PREFER	PREFER	NOT PREFER
Audio-Visual Media	17 Television	MOST PREFER	PREFER	NOT PREFER
	18 Radio	MOST PREFER	PREFER	NOT PREFER
	19 Tape-recorded Messages	MOST PREFER	PREFER	NOT PREFER
	20 Films	MOST PREFER	PREFER	NOT PREFER
	21 Filmstrips	MOST PREFER	PREFER	NOT PREFER
	22 Slide Programs	MOST PREFER	PREFER	NOT PREFER
	23 Video-taped Programs	MOST PREFER	PREFER	NOT PREFER
	24 Computerized Programs	MOST PREFER	PREFER	NOT PREFER
	25 Other (Please specify below):	MOST PREFER	PREFER	NOT PREFER

Finally, we would like to ask you a few questions about yourself to help us interpret the results.

Please mark one answer for each question by placing a check mark (✓) in front of the most accurate response.

Q-5 What is your sex?

FEMALE

MALE

Q-6 What is your age?

15 YEARS AND UNDER

16 TO 19 YEARS

20 TO 29 YEARS

30 TO 39 YEARS

40 TO 49 YEARS

50 TO 59 YEARS

60 TO 69 YEARS

70 YEARS AND OVER

Q-8 Please describe your physical limitation(s). Check the part(s) of your body that are affected. (More than one answer may be marked if appropriate.)

ONE UPPER LIMB

BOTH UPPER LIMBS

ONE LOWER LIMB

BOTH LOWER LIMBS

ONE SIDE

BOTH SIDES

BACK, TRUNK AND/OR SPINE

OTHER (SPECIFY BELOW):

Q-7 What is the highest grade you have completed?

GRADE SCHOOL OR LESS (0-8)

SOME HIGH SCHOOL (9-11)

HIGH SCHOOL GRADUATE (12)

SOME COLLEGE OR SPECIALIZED TRAINING (13-15)

COLLEGE OR UNIVERSITY GRADUATE

POST-GRADUATE WORK IN COLLEGE

COMPLETED GRADUATE DEGREE

Q-9 What was your approximate total household income, before taxes, for 1978?

\$2,999 OR LESS

\$3,000 TO \$5,999

\$6,000 TO \$9,999

\$10,000 TO \$14,999

\$15,000 TO \$19,999

\$20,000 TO \$24,999

\$25,000 TO \$49,999

\$50,000 AND OVER

Thank you very much for completing this questionnaire.

In the event that you are acquainted with other persons with orthopedic limitations who live in the Willamette Valley, we would greatly appreciate their names and addresses for this study.

NAME _____

ADDRESS _____

NAME _____

ADDRESS _____

If you have any questions or comments please feel free to use this space for that purpose.

A self-addressed, stamped envelope is enclosed for your reply.

Please return this questionnaire to:

Dolly Leber
Department of Clothing, Textiles and Related Arts
Oregon State University
Corvallis, Oregon 97331

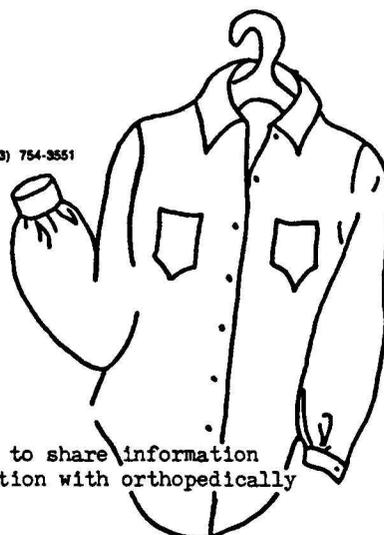
APPENDIX B

COVER LETTERS AND FOLLOW-UP POSTAL CARD

School of
Home Economics



Corvallis, Oregon 97331 (503) 754-3551



Name of Recipient
Street Number
City, Oregon Zip Code

Name of Recipient,

We need your help! We are trying to find out how to share information about clothing selection, adaptation and construction with orthopedically limited adults who live in the Willamette Valley.

You have been selected from the list of participants at the Governor's Conference on the Handicapped to help us. YOUR opinions are a very important part of this study.

All of the information you share with us will be strictly confidential.

Will you please help by returning your completed questionnaire in the stamped, self-addressed envelope as soon as possible? Your return envelope is numbered so that we can send reminders to only those who have not returned their questionnaires.

When you return your questionnaire, you will receive a list of companies that provide ready-to-wear clothing and dressing aids, and a list of books and pamphlets on clothing for special needs. I sincerely hope this list will help you find or adapt clothing that is comfortable, fashionable, easy to put on and take off and well-fitting.

I will be happy to answer any questions you might have. Please write or call. My telephone number is (503) 752-8510.

Thank you very much for your help.

Sincerely yours,

Dolly Leber
Dolly Leber
Research Coordinator

Redacted for Privacy

Ardis W. Koester
Extension Textiles & Clothing Specialist
Research Advisor

POST CARD FOLLOW-UP

Date Mailed

Last week a questionnaire on the information sources you prefer to use for clothing information was mailed to you.

If you have already returned the questionnaire to me, I would like to express my sincere thanks. If not, please do so today. There is no way to substitute for the answers you can provide.

If by chance you did not receive a questionnaire, or it has been misplaced, please contact me in Corvallis at 752-8510. Another copy will be mailed to you immediately.

When you return your questionnaire you will receive a complimentary list of companies that provide ready-to-wear clothing and dressing aids, and a list of books and pamphlets on clothing for special needs.

Dolly Leber
Research Coordinator

School of
Home Economics



Corvallis, Oregon 97331 (503) 754-3551



Name of Recipient
Street Number
City, Oregon Zip Code

Name of Recipient,

As of today, my records indicate that you have not yet returned your completed questionnaire on the information sources you prefer to use when selecting and adapting your clothing.

Your response is an essential part of this survey; the accuracy of this study depends upon your participation. There is no way to substitute for the answers you can provide.

I assure you the information you share with us will be tabulated as part of the entire sample. In no way will your response be linked to your name.

Will you please take a few minutes now to complete this survey? A replacement copy of the questionnaire and a stamped, self-addressed return envelope are enclosed for your convenience.

When you return your completed questionnaire, you will receive a complimentary list of companies that provide ready-to-wear clothing and dressing aids, and a list of books and pamphlets on clothing for special needs.

If you have any questions about this survey, please feel free to include them with your questionnaire or to contact me in Corvallis at 752-8510.

I hope to hear from you soon.

Sincerely yours,

Dolly Leber

Dolly Leber
Research Coordinator

Redacted for Privacy

Ardis W. Koester
Extension Textiles & Clothing Specialist
Research Advisor

APPENDIX C

CLOTHING INFORMATION FOR ADULTS WITH ORTHOPEDIC LIMITATIONS
A BIBLIOGRAPHY

CLOTHING INFORMATION FOR ADULTS WITH ORTHOPEDIC LIMITATIONS

** A BIBLIOGRAPHY **

Books:

Hoffman, Adeline M.
Clothing for the Handicapped, the Aged, and Other People with Special Needs
 Charles C. Thomas, Publisher, Bannerstone House, 301-327 East Lawrence Avenue,
 Springfield, Illinois.
 1979, 192 pages, COST: \$12.50.

Kernaleguen, Anne
Clothing Designs for the Handicapped
 The University of Alberta Press, 450 Athabasca Hall, University Campus,
 Edmonton, Alberta.
 1978, 271 pages, COST: \$15.00.

Pamphlets:

The Arthritis Foundation
Self-Help Manual for Arthritis Patients
 1818 Southeast Division, Portland, Oregon.
 (no date), COST: free.

Beasley, M.C., Burns, D., and Weiss, J.
Adapt Your Own: A Clothing Brochure for People with Special Needs
 Division of Continuing Education, University of Alabama, P.O. Box 2987,
 University, Alabama 35486.
 July 1977, COST: ?

Bowar, Miriam T.
Clothing for the Handicapped: Fashion Adaptations for Adults and Children
 Sister Kenny Institute, Publications-A.V. Department, Chicago Avenue at 27th
 Street, Minneapolis, Minnesota 55407.
 1977, 40 pages, COST: \$2.00.

Caddel, Kay
Measurements, Guidelines and Solutions: A Manual for Solving Problems for
 Persons with Physical Disabilities
 Vintage Press, Route 8, Box 12T2, Lubbock, Texas 79407
 1977, COST: \$2.75.

Central Council for the Disabled
Aids to Independence
 25 Mortimar Street, London W1, England.
 (no date), COST: ?

Cookman, Helen
Functional Fashions for the Physically Handicapped
 Institute of Physical Medicine and Rehabilitation, Public Unit, New York University
 Medical Center, 400 East 34th Street, New York, New York 10016
 1961, COST: \$1.00.

Corrigan, A.B.
Living with Arthritis
 Grosset and Dunlap, 51 Madison Avenue, New York, New York.
 1971, COST: ?

Danzig, Aaron L.
Handbook for One-Handers
 Federation of the Handicapped, 211 West 14th Street, New York, New York 10011.
 1966, COST: \$1.00.

Newsletters:

Beasley, M.C., Weiss, J.M.

On Your Own (A monthly publication with articles related to independent living.)

University of Alabama, P.O. Box 2987, University, Alabama 35486.

COST: ?

Bibliographies:

Beasley, Mary Catherine, Burns, Dorothy, and Weiss, Janis M.

Resource Materials on Clothing and Rehabilitation

University of Alabama, ON YOUR OWN program, Continuing Education in Home Economics,
Division of Continuing Education, University, Alabama 35486.

1977, COST: ?

Berdahl, Ella Mae

A Selected Bibliography on Handicapped

Home Economics Extension Service, U.S. Department of Agriculture, Superintendent of
Documents, Washington, D.C.

1977, COST: ?

Schwab, Lois O.

Homemaker Rehabilitation: A Selected Bibliography

President's Committee on Employment of the Handicapped, 1111 - 20th Street Northwest,
Washington, D.C. 20210.

1977, COST: ?

Women's Committee, President's Committee on Employment of the Handicapped

Rehabilitation for Independent Living: A Selected Bibliography, 1978

1111 - 20th Street Northwest, Washington, D.C. 20210.

COST: free, 33 pages.

Catalogs of Ready-to-Wear, Custom Design Apparel, and Self-Help Dressing Aids:

Amputee Shoe and Glove Exchange

1635 Warwickshire Drive, Houston, Texas 77077.

Brownlee, Margaret; Crites, Linda; Harless, Mary

I Can Do It Myself! Clothing for Special People with Special Needs

3773 Peppertree Drive, Eugene, Oregon 97402 Phone: (503) 342-2997.

COST: free catalog on ready-made and custom-design clothing.

Caddel, Kay

The Natural Creations. (adapted clothing and sewing patterns)

Textile Research Center, Texas Tech University, P.O. Box 4150, Lubbock, Texas 79409

COST: free.

Clothing Research and Development Foundation, Inc.

One Rockefeller Plaza, Suite 1912, New York, New York 10020.

Fashion Able

Self-Help Items for Independent Living: Easy On Easy Off Clothing

Rocky Hill, New Jersey 08553.

COST: 25¢, (adaptive clothing and self-help aids)

Gerber Family Health Care

Snap-On Cotton/Vinyl Stretch Pants with Disposable Absorbant Pads for the Incontinent.

445 State Street, Fremont, Michigan 49412

COST: free brochure.

Disabled Living Foundation

Clothing Advisor, 346 Kensington High Street, London W14, England.

Clothing Fastenings for the Handicapped and Disabled

1971, COST: ?

Dressmaking for the Disabled: Adapting Paper Patterns

(no date), COST: ? , 27 pages.

Footwear: What to Get and Where to Get It

(no date), COST: ? , 85 pages.

Protective Garments

1971, COST: ?

Sewing Notes: Advice on How to Adapt Existing Clothing

1971, COST: ? , 50 pages.

England, M.D.

Footwear for Problem Feet

Disabled Living Foundation, 346 Kensington High Street, London W14, England.

1973, COST: \$1.20.

Gamwell, Ann M., and Joyce, Florence

Problems of Clothing for the Sick and Disabled

Disabled Living Foundation, 346 Kensington High Street, London W14, England.

November 1966, 75 pages, COST: ?

Gilbert, Arlene E.

You Can Do It From a Wheelchair

Arlington House Publishers, New Rochelle, New York, 10802.

1973, COST: ?

ICTA Information Center

Clothing -- Suggestions for the Physically Handicapped

Bromma, Sweden

December 1971, COST: ?

Jay, P.E., et. al.

Helping Yourselves: A Handbook for Hemiplegics and Their Families

British Council for Rehabilitation of the Disabled, 25 Mortimar Street, London W1, England.

1966, COST: ?

Lord, Joan

Clothing for the Handicapped and Disabled in the Hospital or Community

Shirley Institute, Manchester, England.

October 1970, COST: ?

Macartney, P.

Clothes Sense for Handicapped Adults of All Ages

Disabled Living Foundation, 346 Kensington High Street, London W14, England.

June 1973, COST: \$2.00.

Martin, Marian

Patterns Based on Designs by Clarice L. Scott

New York Journal American, 100 Pattern Department, 232 West 18th Street, New York, New York

(no date), COST: ?

Norwegian Rheumatism Society

Clothing for the Handicapped

Norsk Revmatiker Forbund, Professor Dahlgate, 32, Oslo, 2, Norway.

Rogers, E.E., and Stevens, B.M.

Dressmaking for the Disabled

The Association of Occupational Therapists, 251 Brompton, London S.W.3, England.

1966, COST: ?

Ruston, Rosemary

Dressing for the Disabled

The Disabled Living Foundation, 346 Kensington High Street, London W1, England.
1977, COST: \$2.00.

Public Health Service Publication No. 1814

Flexible Fashions: Clothing Tips and Ideas for Women with Arthritis

U.S. Government Printing Office, Superintendent of Documents, Washington, D.C. 20402.
1968, COST: ?

Scott, Clarice L.

Clothes for the Physically Handicapped Homemaker

U.S. Government Printing Office, Superintendent of Documents, Washington, D.C. 20402.
May 1960, COST: ?

Talon/Velcro Consumer Editor

Convenience Clothing and Closures

4150 East 51st Street, New York, New York 10022
(no date), COST: free.

Washam, Veronica

The One-Hander's Book

The John Day Company, 10 East 53rd, New York, New York.
1973, COST: ?

County Extension Bulletins:

Burton, Alice M., and Trotter, Virginia Y.

Easy Fashions for You, Cooperative Extension Service Leaflet EC 66-2208

Nebraska Heart Association and Extension Services, Lincoln, Nebraska.
1967, COST: free.

A Guide for Leaders in Clothing Programs, Extension Pamphlet #32

Home Economics Research Department, Agriculture Research Service, United States
Department of Agriculture, Office of Information, Washington, D.C. 20250
Issued 1965, Reissued 1967, COST: free.

Hall, Vondalyn

Appearance Makes a Difference in the Later Years, Circulation HE-143

Alabama Cooperative Extension Service, Auburn University, Auburn, Alabama.
1978, COST: free.

Henshaw, Edith, and Barriers, Dorothy

Physically Handicapped: Aids to Self-Help in Homemaking, Grooming and Clothing, HE #137

Agricultural Extension Service, Raleigh, North Carolina.
(no date), COST: free.

Simonet, Judith

Clothing for the Physically Limited

Cooperative Extension Association of Monroe County, Home Economics Division,
249 Highland Avenue, Rochester, New York 14620.
(no date), COST: free.

Tharp, B.J.

The Handicapped--Clothing Implications, Clothing News and Research Findings

Cooperative Extension Service, Pennsylvania State University, University Park, Pennsylvania
1964, COST: free

Yep, Jacquelyn O.

Clothes to Fit Your Needs (How to select and adapt clothing for special needs), Pam. #570.

Cooperative Extension Service, Textiles and Clothing, 153 MacKay Hall, Iowa State
University, Ames, Iowa.
September 1974, COST: 25¢.

Handee for You (Semi-custom made clothing for physically handicapped women.)
7674 Park Avenue, Lowville, New York 13367

Helen's Shoe Service
Route #4, Red Wing, Minnesota 55066

Leinenweber, Inc.
What the Custom Tailored Wheelchair Garment Can Do for You. (garments for men)
Brunswick Building, 69 West Washington Street, Chicago, Illinois 60602.

Levi Strauss and Company
Did You Know? (Custom fit levis and self adaptations for the physically limited.)
6621 Geyer Springs Road, Little Rock, Arkansas 72209 Attention: Dept. 8888 (free)

Lowman, Edward W.
Self-Help Devices for the Arthritic
Publication Unit, Institute of Physical Medicine and Rehabilitation, New York
University Medical Center, 400 East 34th Street, New York, New York 10016.

National Odd Show Exchange
Ruth Feldman, 3100 Neilson Way-220, Santa Monica, California 90401.

Parke, Davis and Company
Unigard Incontinent Pants and Pads
Medical-Surgical Division, Detroit, Michigan 48232 (free brochure)

PTL (Put Together with Love)
Apparel Manufacturing for the Elderly and Physically Handicapped
P.O. Box 364, Stillwater, Oklahoma 74074.

Robinault, Isabel Pick
Functional Aids for the Multiply Handicapped
Medical Department, Harper and Row, 2350 Virginia Avenue, Hagerston, Maryland 21740
COST: \$14.95, #SBN 06-142276-2

Self Help Devices
Institute of Physical Medicine and Rehabilitation, New York University Medical Center,
400 East 34th Street, New York, New York 10016.

Sears and Roebuck (Custom tailors garments for special limitations)
Check with your local store for further information.

Shannon's Shut-Ins
Ready to Wear for Wheelchair Women and Girls
12039 Southeast Stark, Portland, Oregon 97216

"Shopping Center" for the Physically Disabled
Fascale Corporation, 40 East 40th Street, New York, New York.

Techni Flair, Designers and Manufacturers of Resident Wear (free brochure)
White River Industries, Box 266, Cotter, Arkansas 72626

Vocational Guidance and Rehabilitation Services
2239 East 55th Street, Cleveland, Ohio 44103
1. Functionally Designed Clothing and Aids for Chronically Ill and Disabled
2. Men's and Ladies Fashions for the Wheelchair Set
3. People Helping People: Clothing Aids for Physically Disabled COST: \$1.00

If you have further questions, please feel free to write to me at:

Department of Clothing, Textiles and Related Arts
Oregon State University
Corvallis, Oregon 97331

I hope this list will help you to find clothing that is comfortable, fashionable,
easy to put on and take off, and well-fitting!

Sincerely, Dolly Leber

APPENDIX D

THE RESULTS OF OPEN COMMENTS

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Space on the back page of the questionnaire was provided for optional open-ended questions and comments. Of the 91 respondents, 33 furnished supplementary information. The questions and comments were classified according to content, and quoted or summarized in the following text.

Eleven respondents indicated that clothes are a problem:

"I make and create all my clothes. Boughten clothes never fit so I learned by trial and error to create to suit my needs."

Requests for information on shirts with greater back expansion for a person confined to a wheelchair were made.

"It is difficult for me to shop. A catalogue with specialized clothing would be very much appreciated."

"Thank you for contacting me . . . my husband . . . is very much in need of information about suitable clothing for him. As I have very poor eyesight I cannot read newspapers nor other publications for information."

" . . . would appreciate any information that you could send him regarding men's clothing that have sleeve and waistband fasteners designed for persons who have partial paralysis of the fingers and can't grip well enough to button a button."

" . . . clothes are a problem . . . I resent being held down by clothes."

"This sounds like a good program. One that is very much needed, and I would like to stay informed on the newest ideas and developments."

"I would like to see a sewing program that wouldn't conflict with mealtime." Also, describes medical problems, life experiences, and states a desire to learn to sew better.

"To my knowledge no one has yet looked at the disabled person with an eye to what looks good in the way of clothing . . . Convenience is important, to be sure, but let's give some attention to elegance and style."

"I make most of my clothes because I'm taller than average, 5'10-1/2". A friend helps me alter patterns . . . "

"There ought to be a program . . . where handicapped person[s] can be taught to achieve independent living as I have."

Eight respondents indicated that clothing poses only a slight problem:

"The only real problem . . . is locating quality shoes since my feet are different sizes."

"To me it [was] insignificant because I don't really have any problems with clothing that doesn't fit. Because I do most of my own sewing."

"I feel somewhat at a loss about this entire survey, as I see that it has no real consequence concerning my particular handicap . . . the only problem I have with clothing is with a pants leg being too long on one side, or stylish shoes which will not accomodate a 3/4 inch lift."

"Most of the clothing I use is ordinary, everyday wear . . . of sizes a bit large to allow me freedom of movement and yet not so large as to get tangled in prosthetics, etc." The most difficult items to find are winter jackets, coats, sweaters, and boots.

"My personal limitations don't require special clothing, except that I nearly always wear pull-on stretch knit pants, largely to hide ungainly braces, and partly because my circulation is poor . . . This sounds like an interesting study . . . you might like to come to an Architectural Barriers Committee meeting."

"I do most of my own sewing of clothes or buy from a store."

"My clothes are usually tailor-made by Sears, Roebuck & Co."

"I usually buy as I would if I did not have any handicap. Very few alterations, if any have to be made . . . [I] use the expert advice of the salesperson."

Five respondents indicated no need for special clothing:

"I am completely able to take care of my personal needs."

"I have always made my own way and think of myself as normal." This respondent indicates personal achievements of earning a degree from O.C.E., is self-supporting, and has never depended upon welfare.

"I do not need special clothing."

"My orthopedic impairment DOES NOT preclude me from using the customary sources for my clothing needs. This questionnaire is NOT applicable to me."

"Clothes are no problem for me what-so-ever." This respondent indicates purchasing inexpensive or sale clothing, and constructing most of the necessary clothing.

Nine miscellaneous comments were received:

"I subscribe to magazine Accent on Living. So do other handicapped people I know and that would be a good place to advertise."

"Why is this questionnaire limited to clothing?"

One respondent requested the questionnaire results.

One respondent requested information on gems and minerals.

One respondent indicated frustration because [he/she] is trying to find work, but feels discriminated against due to a handicap.

"It seemed somewhat ridiculous."

"How come you are able to waste the taxpayers money on drivel like this? The fact that college is sponsoring this still makes it a waste."

"Good idea!"

"Good luck."