

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

FASHIONS FOR INDEPENDENT LIVING:

AN EFFECTIVENESS STUDY

A thesis submitted in partial satisfaction of the
requirements for the degree of Master of Science in

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by

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ABSTRACT

FASHIONS FOR INDEPENDENT LIVING:

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by

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Master of Science in Home Economics

The field of Home Economics has played a part in meeting the clothing needs of the disabled. Dress and fashion are important in promoting a positive image and in use as a rehabilitation tool.

The audio-visual presentation, "Fashions for Independent Living," was developed and evaluated, through the use of an opinionaire, to determine its effectiveness in introducing clothing adaptations for a variety of disabling conditions. The presentation was presented for evaluation to fifty-four people who had either some knowledge of sewing or some knowledge of the clothing problems of the disabled. A majority of the respondents

thought the presentation was effective or very effective.

Based on the results of the opinionnaire recommendations for further study included developing slide presentations aimed at the needs of the elderly, disabled children, paraplegic or quadriplegic individuals, and investigating other educational methods of dispersing information about specialized clothing needs.

CHAPTER I

INTRODUCTION

The purposes of this study were to develop and determine the effectiveness of an educational slide presentation, "Fashions for Independent Living," through the use of an opinionaire. "Fashions for Independent Living" was intended to create awareness about the clothing needs of individuals who have temporary or permanent physical limitations. The program was designed to be used, primarily by educators, as appealing and practical introductory material that would initiate discussion of clothing adaptations for the disabled.

Objectives

The objectives of the study were

I. To study how effective the presentation was in introducing clothing adaptations to the observers.

A. To find out if the presentation introduced any new ideas to the observers for modifying clothes for those who are physically limited.

B. To find out whether the observers thought the clothing portrayed in the presentation was suitable for wear in a business atmosphere.

II. To discover the extent to which the observers had

altered clothes to make dressing easier, either for themselves or for another person.

III. To determine whether the presentation was perceived as an educational tool by those who were involved or planned to become involved with education and/or rehabilitation.

A. To survey the types of settings in which the above individuals felt the presentation could be used.

B. To survey the types of other materials the above individuals would like to see developed in this area.

Justification

Practical and informative educational materials that increase awareness of clothing needs for the disabled are needed for home economists, educators, rehabilitation therapists, and others concerned with developing personal independence in disabled individuals, including dressing and clothing choice. This information is important because it should promote a greater understanding between those who are able-bodied and those who have physical limitations. It could also contribute to the physical and psychological well-being of those adults who have physical disabilities.

The slide presentation, "Fashions for Independent Living," is a visual addition to current literature pertaining to clothing for the disabled. It is important

because it has potential for distribution to medical teaching units, community groups, colleges, universities, and self-help instructional classes or workshops.

Definitions

Ruston (1982:2) defined disability and handicap as follows:

Disability is the word now used to describe the loss or reduction of ability to do things or, to use a technical term, the loss of functional ability.

Handicap describes the disadvantage of having a disability or impairment and the restriction this imposes on a person.

These definitions have been used by Wright (1960:9) and supported by Hoffman (1979:8).

Webster's New Collegiate Dictionary (1976:667) defined limited as "confined within limits, restricted." The term physically limited was used on the opinionnaire and in the slide presentation "Fashions for Independent Living" to refer to an individual who has some physical limitation or restriction that affects dressing ability.

Rehabilitation has been defined by Acton (1982:147) as

the coordinated application of medical, educational, vocational, and social measures to enable a disabled individual to achieve maximum independence and to participate as fully as possible in the society of which he or she is a part.

CHAPTER II

REVIEW OF LITERATURE

Clothing has a dual nature as both a social response and personal stimulus (Hartmann, 1949). Hartmann (1949:296) described the value and function of clothes as follows:

Clothes are, therefore, "valuable" (in the larger psychological sense which embraces more than the narrowly economic) only to the degree that they enhance the value-experiences of the persons who wear them or who are otherwise affected by them. In other words, the subjective worth of any article of attire is proportionate to its contribution to some sort of extension or differentiation or enrichment of the self. The self with that piece of clothing must become a better self than it is without; otherwise, the item either makes no vital difference or fails to fulfill its function.

On a personal level, attractive and fashionable clothes lift anyone's spirit and enhance self-esteem (Beasley, 1977; "How to Select Clothing for Children," 1969; Hoffman, 1979; Rusk and Taylor, 1959). On the social level, attractive and fashionable clothes can serve as a powerful nonverbal communicator for both the able-bodied and the disabled in that they may help establish positive first impressions and increase the status of the wearer (Conner, Peters, and Nagasawa, 1975; Douty, 1963; Hamid, 1968 and 1969; Hoffman, 1979; Horn and Gurel, 1981; Hoult, 1954; Lambert, 1972; Newton, 1976;

Nielsen and Kernalleguen, 1976; Rosencranz, 1962). Especially important for the disabled is the use of clothing as a tool to create an attitude shift from an observer seeing a physically disabled person to seeing a well-dressed person with a physical disability.

The Importance of Dress and Fashion in
Promoting a Positive Image

Attitudinal barriers may be more formidable than physical barriers for the disabled. A stigma is often attached to an individual with a physical disability. It is a result of "an undesired differentness from what we had anticipated" (Goffman, 1963:5). Frequently those individuals are devalued in society and perceived as having an inferior status (Livneh, 1982; McDaniel, 1976; Thomas and Wolfensberger, 1982; Wright, 1960). Miller (1982:266) pointed out that persons with visible disabilities were "likely to be evaluated and judged on the basis of categorical membership in the class of 'disabled' or 'handicapped' instead of on individual characteristics."

These negative attitudes stem from the standards, norms, and expectations woven into the social and cultural fabric of Western society. Among the components contributing to this socio-cultural conditioning is the emphasis of concepts relating to personal appearance.

Wright (1960:255) explained that

although attitudes towards physique vary among different groups, it is more than likely that all societies place a value on "body-beautiful" and body-whole." We do know that what is defined as "body-beautiful" and "body-whole" varies, however.

Other authors have also noted that

the ideals of physical attractiveness of a society, any society, are arbitrary. A man who would be handsome in one country might be considered homely in another. Nevertheless, the standards of a given society are stamped into the personalities of members of that society almost from birth. Americans, for instance, have definite notions of acceptable appearance: in terms of height, body build, profile, and skin condition. Hollywood did not invent these standards--although movies probably deserve credit (or blame) for narrowing the range of acceptable variation (Bredemeier and Toby, 1960:18).

Research studies indicate that dress plays an important part in impression formation (Conner, Peters, and Nagasawa, 1975; Douty, 1963; Hamid, 1968 and 1969; Lambert, 1972; Miller, 1982; Nielsen and Kernaleguen, 1976). Since attitudes are, to a great extent, based upon first impressions, it makes sense to use clothing to promote positive attitudes and increase one's value and status. A positive image in the eyes of the public may encourage the "realization that a physical disability does not prevent an individual from being socially functional and economically productive" (Kernaleguen, 1978:2).

The appearance of a disabled individual has a direct bearing on employment. Dillon (1980) indicated that dress can have an effect on the employer's estimation of an

individual's ability. Schwab and Sindelar (1973:34) maintained that "self-care in dressing is a major step toward developing the independence which may lead to employability." Macartney (1973) reported that clothing and dressing problems that remained unsolved may make it difficult for the disabled individual to enter employment. Dillon (1980:125) advised, "Dress for the job you want, not the job you have," and referred to this prescription as a folkloric response to image building which supported the view that upgrading one's image may have a "profound effect" on one's career.

Thomas and Wolfensberger (1982:356) discussed how positive identification can improve public attitudes:

...because disabled adults who are dressed in a fashion that is appropriate and valued by the society for its adults are more likely to be viewed in a positive light than if they are dressed in clothes that make them appear child-like, normalization implies that such people should be enabled and supported to develop and maintain personal appearances which meet positive cultural expectations and norms for the appearance of persons of the same age. Other people will be more likely to identify with a devalued person whom they perceive as "well-dressed" than with one who is clothed in outlandish or outmoded attire, or in shabby, torn, ill-fitting garb.

Clothing, successfully used to "normalize" personal appearance, has been termed an "optimal value pattern" (Hartmann, 1949). In Horn and Gurel's (1981:7) words, "the maximum good" has been achieved.

The Importance of Dress and Fashion as a Rehabilitation Tool

Clothing that has been selected for attractiveness and function has been successfully used as a rehabilitation tool (Newton, 1976; Reich, 1976), as it tends to lift the spirits and self-esteem of the individual (Beasley, 1977; Goldsworthy, 1981; "How to Select Clothing for Children," 1969; Hoffman, 1979; Rusk and Taylor, 1959). Hallenbeck (1966) suggested that functional features in clothing encouraged independence and promoted adjustment to a disability by meeting an individual's psychological and physical needs. Ahrbeck and Friend (1976) agreed that a feeling of high esteem could raise a person's rehabilitation potential by noting two aspects of enhanced self-esteem: confidence in appearance through attractive and well-fitting garments and increased independence through the use of self-help features.

Fashionable clothing need not be restricted only to the able-bodied nor should it be, for it is of great importance in meeting the psychological needs of the physically disabled (Feather, Martin, and Miller, 1979). Attractive and fashionable elements in clothes such as style, cut, color, design, texture, and decoration can help meet an individual's psychological needs. Many authors have echoed this principle and have stressed the importance of clothing that is similar to what others of

the same peer group are wearing (Beasley, 1977; Friend, Zaccagnini, and Sullivan, 1973; Hoffman, 1979; Hotte, 1979; Lamb, 1977; Schwab and Sindelar, 1973; Thomas and Wolfensberger, 1982). Many physically disabled individuals, however, find it difficult to buy attractive, fashionable ready-to-wear garments with self-help features that would meet their physical and functional needs.

In order to fulfill an individual's needs for both fashion and function, garments may be custom-made or altered or adapted from existing or ready-to-wear clothes. There has been research conducted that deals with both areas and there are several written sources available that describe and illustrate custom designed or adapted clothing that will accommodate a variety of physical disabilities. Among them are Beasley (1977), Bowar (n.d.), Bumphrey and Stevens (1981), Caddel (1977), Forbes (1971), Goldsworthy (1981), Hale (1979), Hotte (1979), Kernaleguen (1978), Macartney (1973), Muscular Dystrophy Association (1979), Ruston (1982), and Yep (1977). Reich (1976:292) indicated that altering or adapting existing or ready-to-wear clothes was often the simplest and least expensive solution to the problem "of meeting the special needs of a diverse, hard-to-reach segment of the population."

Individuals who need more than a few adaptations may feel overwhelmed. A variety of physical disabilities,

however, may require the same basic alterations. Even though each individual has unique and specific needs caused, for example, by injury, birth defects, accident, or disease, the areas of common physical limitations may be divided into six portions of the body. Reich (1980) outlined these portions as the lower leg, lower torso, upper torso, neck, arms, and hands. The shift from concentration on the source of the problem to the body area allows a greater number of people to make use of the knowledge available in the area of clothing adaptations.

Influencing Factors

There are some basic factors concerning garments that will aid in rehabilitation. Being able to dress appropriately in garments that encourage independence and are comfortable, serviceable, and safe is a primary concern for those who are disabled. Certain clothing designs and features as well as careful selection of fabrics can help meet that concern.

Encouraging independence is important as a part of the rehabilitation process (Ahrbeck and Friend, 1976; Hallenbeck, 1976). Dressing may seem like a simple task for the able-bodied; however, Hoffman (1979), Newton (1976), Rusk and Taylor (1959) and Ruston (1982) focused on its complexity as it requires coordination, manipulative ability and dexterity, sensation, a sense of balance, and a range of motion, as well as strength in

most of the muscles of the body. Because dressing involves so much of the body, it can often be a slow, painful, and frustrating experience. It is therefore advantageous to create as little exertion as possible when dressing (Beasley, 1977). Macartney (1973) mentioned that fewer clothes will simplify dressing.

Self-help features are fundamental in reducing the amount of work a person must expend to dress. Most clothing not only limits body movement to a certain degree; it also increases the body's workload by as much as ten percent (Reich, 1976:290). Several authors have identified self-help features that encourage independence and reduce the amount of work required to dress. These features include large openings for the head, arms and legs; openings that can be easily reached, such as front openings; a minimum number of fasteners or fasteners that are easy to manipulate, such as large buttons, velcro® or elastic; and fabrics that stretch or give. All of these factors make clothing easier to put on and take off.

Rudd (1965:373) advised,

When considering dressing as a rehabilitation procedure, it must be remembered that the essential point is that the patient should dress himself as far as his abilities allow him, with only minor help or "tidying-up" contributed by the nurse.

There are instances, however, in which the disabled individual lacks the ability to dress without aid. In those cases where the individual is in need of a dresser

or helper, the garments should also have features that make them simple and quick to put on or take off. Garments that open flat, have back zippers, or have large openings are especially helpful (Macartney, 1973). Examples of these types of adaptations are shown in Kernaleguen (1978), Macartney (1973), and Ruston (1982).

Fabrics have certain comfort factors which are important to the individual when it comes to meeting physical needs. In their study, Nessley and King (1980:66) found that "for added comfort, fabrics for paraplegics and quadriplegics needed to breath, needed to be absorbent, and needed to be lightweight, insulative and easily cared for." Macartney (1973), Reich (1980), and Ruston (1982) further described many of these textile comfort features. Highlighted by these three authors were five primary comfort features: absorbency, elasticity, warmth, texture, and weight.

Absorbency is an important comfort factor. Perspiration varies according to the person and the environment. Disabled individuals may perspire heavily. Chairbound individuals who cannot move around may have special perspiration problems resulting from areas of the body that receive insufficient fresh air, for example, under heavy breasts or in the groin. Knitted fabrics and toweling tend to absorb perspiration. Natural fibers and viscose rayon tend to absorb moisture, "breathe" and help

regulate the body temperature. Many synthetic fibers do not. Polyester and nylon may also hold body odors. Some synthetic fibers, such as polypropylene, can be used as "one-way" fabrics, if backed by a layer of absorbent material. By the physical property of wicking, moisture is carried to the outside of the fabric (Macartney, 1973; Reich, 1980; Ruston, 1982).

Static electricity is related to the absorbency of fibers. Synthetic fibers, which tend to be low in absorbency, tend to accumulate static electric charges on their surface. Blends of natural and synthetic fibers will help reduce static charges while at the same time giving the consumer easy-care qualities (Macartney, 1973; Reich, 1980; Ruston, 1982).

Elasticity influences comfort because it allows freedom of movement. It makes dressing and undressing easier, which saves human energy and reduces frustration. The strain on the seams of a garment can be reduced if the garment is made of stretch fabric. It is important to choose a resilient fabric which will return to its normal shape after tension has been released; otherwise, the garment will become shapeless. Knitted fabrics stretch more than woven ones, and woven fabrics will stretch more if the garment has been cut on the bias. Small amounts of spandex in woven fabrics will also provide comfort stretch (Macartney, 1973; Reich, 1980; Ruston, 1982).

Warmth can affect comfort because the body attempts to maintain a constant internal temperature. Clothes maintain warmth by creating an insulating layer or layers of still air around the body in order to prevent the loss of body heat. For individuals who are unable to differentiate between normal temperatures and extreme heat or cold, it is especially important that clothes protect them from excessively high or low temperatures. This protection is also important if the disabled person has decreased circulation of blood due to lack of mobility. Quilted, knitted, or pile fabrics will help keep an individual warm, as will a lined garment (Macartney, 1973; Reich, 1980; Ruston, 1982).

The texture of a garment contributes to comfort. Fabrics may feel pleasant or unpleasant to an individual. Fabrics that are soft and warm feeling are usually the most comfortable. These fabrics tend to contain a high proportion of natural fibers. The texture of synthetic fibers has, however, been improved through the use of texturing. Fine cotton or viscose rayon or texturized synthetic fibers tend to be most flexible and comfortable. Stiff materials such as denim, rough tweeds, sailcloth, or heavy taffeta are uncomfortable for individuals who sit for long periods of time. "Hairy" fabrics and some woolens may irritate sensitive skin, allergies, or extensive scar tissue. Also, slippery fabrics, worn on

the body and on the bed, will give an individual increased mobility and may help prevent bedsores. However, two slippery fabrics placed together make it difficult for a person to sit up or stay seated (Macartney, 1973; Reich, 1980; Ruston, 1982).

Weight plays a significant role in the area of comfort. Heavy clothes are difficult to put on and take off. They may aggravate pain and restrict movement. Clothes do not have to be heavy to be warm. Several lightweight layers of clothing may be warmer and more comfortable than one heavy layer. A windproof outer layer, such as a quilted coat or parka, will keep an individual warm without restricting movement. Recommended fibers and fabrics include wool or acrylic knitwear, single or double jersey of various fibers, and pile, quilted, or brushed fabrics of nylon or polyester (Macartney, 1973; Reich, 1980; Ruston, 1982).

Garments that are serviceable need to be able to withstand wear. Many authors have stressed this durability factor (Friend, Zaccagnini, and Sullivan, 1973; "How to Select Clothing for Children," 1969; Hale, 1979; Hoffman, 1979; Hotte, 1979; Macartney, 1973; Muscular Dystrophy Association, n.d.; Reich, 1980; Rusk and Taylor, 1959; Ruston, 1982; and Yep, 1977). Some areas of a garment can be reinforced in order to prolong its usefulness. Lining a garment, especially in places that

may be subjected to excessive rubbing (e.g. under the arms for crutch users or at places that are rubbed by braces), will extend the wearlife of the garment.

Easy care is also an aspect of serviceability. The launderability of the fabric should be considered when purchasing garments. Fabrics with wash and wear qualities, made of synthetic fibers or blends, will require minimal work to maintain.

Many authors have emphasized the aspect of safety, especially for disabled individuals. "Carefully selected clothes can reduce hazards" (Messer, 1977:4). Whenever a person is near a source of fire, such as cigarettes or a furnace, heater, or stove, protection should be taken. Fabrics of some fibers, including cotton, flax, rayon, acrylics, and acetate, burn quickly. Fabrics of flame retardant fibers such as modified modacrylics are available. There are also many fabrics that have flame retardant finishes applied to them. High phosphate synthetic detergents are usually required in the laundering of these fabrics in order to maintain the flame retardant finishes (Macartney, 1973; Reich, 1980; Ruston, 1982).

Even though slippery fabrics may improve mobility, slippery clothes may cause a person to fall while being lifted. The soles of new shoes are often slippery and

should be roughened in order to prevent accidental falls (Ruston, 1982).

Some clothes may be unsafe in certain situations; for example, clothes that are too tight may bind or cause friction for those people who have diminished sensations. Elastic may restrict the circulation and cause swelling. Clothes that are too loose or too long may trip an individual or may become caught in the wheels of a wheelchair (Macartney, 1973; Ruston, 1982).

Conditions for Rehabilitation

Ruston (1982) explained that a rehabilitation training program should begin with undressing because it requires less energy than dressing. Optimum conditions should be provided for any individuals who are learning or re-learning how to dress. These conditions include enough time to feel unrushed or to experiment with different clothes or new methods of dressing; privacy and warmth, especially when putting on underwear; enough space in which to maneuver; garments laid out within easy reach and in order of how they are put on; assistance and aids available when necessary; and good lighting and a mirror, along with other suitable furnishings, such as a non-slip surface floor, stable furniture for support, and chairs or a bed at a height that allows the person dressing to "put both feet flat, at right angles to knees, on the floor when sitting" (Ruston, 1982:20). Similar conditions also

apply to those individuals who require a dresser or helper to dress them.

An open, flexible mind that maintains a willingness to experiment as to the easiest or least painful way to undress or dress will be a great asset in rehabilitation (Ruston, 1982).

Historical Aspects of Self-Help Clothing

Although original literature was not found, some authors refer to the first mention of special clothing for the disabled occurring in the early 1930's. Articles were written about imaginative parents and grandparents who utilized full-length openings on dresses and nightgowns which made it easier to dress disabled children (Schwab and Sindelar, 1973; Wagner, 1963). These modifications, however, did not seem to carry over into other garments (Wagner, 1963).

Fasteners were emphasized as a part of the garment to be modified. Hooks and eyes, buttons and snaps were the most common fasteners used on garments at that time. The introduction and subsequent increased use of zippers in children's self-help clothing made it easier for children to dress themselves or for them to be dressed by someone else (Schwab and Sindelar, 1973; Wagner, 1963).

The 1940's brought additional interest in self-help clothing and dressing techniques for disabled children. Wagner (1963) referred to articles written by therapists

in the fields of rehabilitation and orthopedic public health nursing addressing this topic. Research in the field of normal child development was also going on at this time at universities and colleges, where "studies were being started relative to fabrics and to the design of children's clothing" (Wagner, 1963:59).

In the early fifties, the Institute for Crippled and Disabled in New York City developed objective rating scales for attaining self-care in the demands of daily life. These scales are now entitled "Activities for Daily Living." The rating scales included items on dressing and undressing, measuring both speed and skills. As the difficulties of dressing and the time involved with clothing became apparent, concern shifted from fasteners to the intentional choice of garments that would be specifically suited for an individual's needs. Literature recommending types of garments that would solve a particular clothing problem was being produced in addition to that which emphasized the need for careful selection of clothes (Schwab and Sindelar, 1973; Wagner, 1963). The University of Connecticut had developed a clothing chart by 1950. It was designed to help parents select children's clothing and teach their children how to dress themselves in relationship to normal child growth and development. These charts were also used by therapists to help disabled children develop skills in dressing and

undressing (Hoffman, 1979; Wagner, 1963).

The work started at the Institute for Crippled and Disabled was continued at the Eastern New York Orthopedic Hospital-School (Sunnyview) in Schenectady, New York, and at the Institute of Physical Medicine and Rehabilitation in New York City. Schwab and Sindelar (1973) refer to this as the Institute of Rehabilitation Medicine (IRM); all other sources refer to it as the Institute of Physical Medicine and Rehabilitation.

A major advancement in the area of clothing for disabled adults took place in 1955, with the Institute of Physical Medicine and Rehabilitation appointing Helen Cookman, a well-known fashion designer, to investigate the clothing problems of disabled patients at the Institute (Hallenbeck, 1966; Hoffman, 1979; Rusk and Taylor, 1959; Schwab and Sindelar, 1973; Wagner, 1963; Zimmerman, 1963). An organized study that isolated and recorded the dressing problems of patients was done through interviews and observation (Zimmerman, 1963). Garments were then designed to be suitable for as many persons and problems as possible. Each garment was tested for "function, utility, and fabric choice," and attention was also given to the closures (Rusk and Taylor, 1959:1599).

An outgrowth of Cookman's work was a pilot collection of seventeen Functional Fashion garments that were presented publicly in 1959 to a national convention of

occupational therapists. The publicity from these garments brought many inquiries asking where the Functional Fashions could be purchased.

A non-profit, independent organization, Clothing Research and Development Foundation, was established (circa 1960) with the help of a grant from the Office of Vocational Rehabilitation. The basic purpose of the foundation was to develop and to promote clothing that would enable disabled individuals to dress themselves with minimal or no aid. Helen Cookman was the executive director, and she worked closely with the Institute of Physical Medicine and Rehabilitation as well as with other rehabilitation organizations. The foundation also started a program with top New York designers in which, for a few years, a segment called Functional Fashions was included in their fashion collections. Unfortunately, the manufacturing and distributing of the original Functional Fashions did not run as smoothly as anticipated. No mass market was found for the garments; however, in 1961 the Institute of Physical Medicine and Rehabilitation published "Functional Fashions for the Physically Handicapped," which was the result of Cookman's three-year study ("Creating Fashions for the Physically Handicapped," 1964; Hallenbeck, 1966; Hoffman, 1979; Wagner, 1963).

Clothing for the disabled has been a continuing interest of the Institute of Home Economics in the

Agricultural Research Service of the U.S. Department of Agriculture, where Clarice Scott was then a clothing specialist. In 1959 "Clothing Needs of Physically Handicapped Homemakers" appeared in the Journal of Home Economics. This article was the result of the first phase of a study done by Scott in which she interviewed seventy disabled homemakers living in metropolitan Washington, D.C., as to the types of clothing they wore and their likes and dislikes in styles and designs. The second phase of the study was published in 1961 in a government bulletin, "Clothes for the Physically Handicapped with Features Suitable for All Women." This phase was the development of at-home, everyday clothing based on the information collected from the interviews (Hallenbeck, 1966; Hoffman, 1979; Scott, 1959; Wagner, 1963).

The 1960's brought the involvement of the American Home Economics Association, County Extension Home Economists, and Extension Clothing Specialists, who included the clothing needs of the physically disabled as a part of their programs (Hoffman, 1979).

Another significant step in the area of specialized clothing took place in 1962 through the Vocational Guidance and Rehabilitation Services (VGRS) of Cleveland, Ohio. Dorothy Behrens, who was the Director of Special Clothing Design and Head of the Sewing Department, had been asked by operators of area nursing homes to design a

dress for their elderly women patients as an alternative to the hospital-type gowns worn. A back-wrap dress was designed and was successful in easing some dressing problems, and several other garment designs followed. By late 1963, there was a public showing of the seventeen garments that had been designed at the national convention of the National Rehabilitation Association in Miami Beach, Florida. By January, 1974, Dorothy Behrens was the designer and director of a separate department of VGRS, "Specially Designed Clothing." The clothes made through this department by skilled disabled workers are sold through a mail-order catalog ("Creating Fashions for the Physically Handicapped," 1964; Hallenbeck, 1966; Hoffman, 1979; Schwab and Sindelar, 1973).

On the current market several catalogs specialize in clothing needs of the physically disabled. Examples of these are Fashion-Able, begun by Mrs. Van Davis Odell, who, after becoming paralyzed, discovered that there were no undergarments on the market that would meet her special needs; and Leinenweber, Inc., of Chicago, which specializes in men's custom tailoring ("Creating Fashions for the Physically Handicapped," 1964; Hallenbeck, 1966; Hoffman, 1979; Schwab and Sindelar, 1973). Sears Home and Health Care Catalog contains "casually stylish" adapted clothing designed by Judy Falk of Chicago (Henkin, 1983).

The Role of Home Economists

Home Economists have taken an active part in analyzing the needs of and in developing clothing adaptations and designs for those individuals who are physically disabled. Home Economists trained in the areas of textiles and clothing can offer practical information to individuals about how to meet their clothing needs. Since disabled individuals usually have special additional clothing considerations, the Home Economist may find a place in health care services or rehabilitation.

Schwab (1968) noted that Home Economists brought a unique background into rehabilitation. Wang and Bricker (1971) outlined contributions that could be made in the field of textiles and clothing by Home Economists regarding the use and care of textiles and clothing. Reich and Shannon (1980) and Shannon and Reich (1979) have done extensive research on common physical limitations and clothing related needs. White and Dallas (1977) achieved successful results in meeting the special clothing needs of a physically disabled girl by combining the talents of an occupational therapist and a clothing designer. Watkins (1974) and Quinn (1978) have designed courses in which students are able to use their creativity in designing functional and aesthetic clothing.

Recent Developments

Attention to clothing needs of the disabled was

highlighted in 1981, which was the International Year of the Disabled. In November of that year, at California State University, Northridge (CSUN), a grant was applied for (by the author) from the CSUN Foundation for the development of slides and garments titled "Adaptations for Ready-to-Wear Clothing for Independent Living." A similar approach was being taken in Oregon, where the Oregon Home Economics Association and the Multiple Sclerosis Society of Portland sponsored "Fashions for the Disabled" ("Clothing with a Special Function," 1982) and at Iowa State University, where "A Fashionable Approach for the Mobility Impaired" was being investigated ("Interest in Clothing for the Handicapped Continues," 1981).

The most recent information describing current programs in this area comes from the Thirteenth Annual Report and Balance Sheet of the Disabled Living Foundation in London, England (Turnbull, et al., 1983:67), in which the Clothing Advisory Service was "involved during the year in attempting to increase and improve teaching and information material on all aspects of clothing and footwear."

CHAPTER III

METHODOLOGY

The methodology used in preparing the educational slide presentation, "Fashions for Independent Living," and in developing the opinionnaire to determine the effectiveness of the presentation is summarized below.

Development of Slide Presentation Phase I

Specific disability problems were identified and solutions researched. Several areas were studied, including body strength and mobility, garment design, aided dressing, accommodation of braces or casts, incontinence, and environmental protection.

Body Strength and Mobility

Some disabilities greatly reduce the energy level of an individual. Limited strength and/or mobility makes independence in dressing difficult. Independence in dressing can be encouraged with the use of easy on-and-off features, such as front openings; garments that open flat; Velcro® fasteners that replace seams, buttons, or buckles; or garments that can be draped onto or across the wearer.

Garment Design

Ready-to-wear garments and patterns are designed for people who have the ability both to stand and sit.

Individuals who are confined to wheelchairs, for example, find the excess bulk from jackets designed at an ordinary hip-length uncomfortable to sit upon. In this instance, the excess bulk can be cut away from the back portion of the jacket, or the entire jacket may be shortened.

Aided Dressing

In the event that dressing cannot be accomplished unaided and that it is necessary to enlist the help of an attendant, garments may be adapted in a way that makes them easy for a dresser to dress an individual. A good example is the placement of a zipper or other opening down the center back of the garment, which allows the dresser flexibility while dressing the individual.

Accommodation of Braces or Casts

Some parts of ready-to-wear garments, such as pant legs, may not be large enough to fit over a brace or a cast. Opening the seams of such garments and inserting zippers, snaps, or Velcro® in order to reclose the garment will help accommodate braces or casts.

Incontinence

Incontinence and toileting problems often cause difficulty because they involve partial undressing.

Garments, such as drop-seat pants that open in the back, will help an individual with this problem. Garments that open flat help accommodate the placing and holding of an incontinence pad.

Environmental Protection

Protection from the environment, especially rain, is a concern for those individuals confined to a wheelchair. Specially designed rainwear is available which will accommodate this situation.

Development of Slide Presentation Phase II

Garments, fabrics, and necessary notions were purchased, keeping within an established budget. Garments were selected from ready-to-wear racks, keeping in mind ease of adaptability and fashion and attractiveness that would lend itself to a business atmosphere. A few fashion garments were specially made to illustrate solutions to specific problems that had been researched.

The ready-to-wear garments were adapted to meet the problems a disabled individual might encounter during dressing activities. The garments were displayed at "A Very Special Arts Festival" at CSUN in 1982.

Slides were taken before and after the adaptations were made. The slides were arranged in a logical manner, and a script was developed to narrate the sequence. The

narration was recorded onto reel-to-reel tape and background music was mixed in. Two final cassette tapes were produced from the original tape, one with an audible pulse and one without.

Pilot Study: Opinionaire

An opinionaire was developed to determine if the educational slide presentation was effective in introducing clothing adaptations. The slide presentation was shown and the opinionaire was given to a pilot group of seventeen people, comprised of the Home Economics Faculty at Santa Monica College and CSUN students enrolled in an upper division Home Economics course, Independent Living for Individuals with Disabilities.

The pilot study opinionaire was evaluated. One question was added, "Did the presentation introduce any new ideas to you for modifying clothes for the physically limited?"

Application of Opinionaire

The slide presentation was shown and the revised opinionaires were distributed to fifty-four people. The sample was comprised of students in Culver City Adult School's Family Sewing class (Spring, Summer, and Fall, 1983), students in Santa Monica College's Pattern Analysis and Design class (Spring and Fall, 1983) and to members of the Disabled Students Organization at CSUN (Fall, 1983).

CHAPTER IV

RESULTS AND DISCUSSION

Demographic information was asked on the opinionaire in order to determine a profile of the respondents.

Profile of Respondents

The answers to questions 1-3 were used to compile a profile of the respondents. There was a total of fifty-four people responding to the opinionaire. Six of the respondents (11.1%) were male and forty-seven (87.0%) were female, with one (1.9%) respondent not answering the question. The ages and education levels of the respondents varied. Tables 1 and 2 outline a profile of the respondents.

Table 1
Age of Respondents

Age Group	Frequency	Percent
18-25	14	25.9
26-35	23	42.6
36-45	9	16.7
46-55	3	5.6
56-65	4	7.4
Over 65	1	1.9

Table 2
Education Levels of Respondents

Education	Frequency	Percent
Less than grade 12	2	3.7
High School Diploma	7	13.0
College Freshman	8	14.8
College Sophomore	11	20.4
College Junior	9	16.7
College Senior	3	5.6
College Graduate	9	16.7
Post Graduate	5	9.3

Responses to Opinionaire Questions

4. Did the presentation introduce any new ideas to you for modifying clothes for the physically limited?

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
Yes	49	90.7
No	3	5.6
No Answer	2	3.8

5. The outerwear in this presentation was specifically chosen for its suitability in a business atmosphere. Was it appropriate?

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
Yes	53	98.2
No	1	1.9
No Answer	0	0.0

6. How effective was the presentation in introducing clothing adaptations?

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
5 (very effective)	28	51.9
4.5 (write-in)	2	3.7
4	20	37.0
3	2	3.7
2	0	0.0
1 (not effective)	0	0.0
No Answer	2	3.7

7. Have You ever altered clothes to make dressing easier?

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
Yes	17	31.5
No	36	66.7
No Answer	1	1.9

If "yes," who were the alterations for?

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
Yourself	7	41.2
Another Person	6	35.3
Both	4	23.5

8. Please suggest any additional modifications that could be made to similar garments.

See discussion section.

Questions 9 and 10 were prefaced with, "If you plan to become or are an educator, or if you work with people who have problems dressing because of a physical limitation, please answer questions 9 and 10. These questions were answered by 33.3% of the respondents.

9. Do you see this presentation as an educational tool?

<u>Response</u>	<u>Frequency</u>
Yes	18
No	0

If "yes," in what setting(s)?

A. Medical teaching units (physical rehabilitation, nurse's education)

12 responses 66.7%

B. Community groups (senior citizens, peer-counseling for the disabled, etc.)

14 responses 77.8%

C. College or university departments concerned with problems of the disabled

7 responses 38.9%

D. Seminars or workshops

8 responses 44.4%

E. One-to-one counseling

8 responses 44.4%

F. Other (please specify)

See discussion section.

10. What other materials like this would you like to see developed?

See discussion section.

Discussion

The opinionnaire was developed from the objectives set forth in the introduction.

Objective I

I. To study how effective the presentation was in introducing clothing adaptations to the observers.

A. To find out if the presentation introduced any new ideas to the observers for modifying clothes for those individuals who are physically limited.

B. To find out whether the observers felt the specifically chosen clothing portrayed in the presentation was suitable in a business atmosphere.

Opinionnaire Results I. A total of 92.6% rated the presentation's effectiveness as a "4" or above, on a scale of 1-5, indicating that the presentation was effective in introducing clothing adaptations to the observers. Over half (51.9%) of the observers thought the presentation was very effective and rated it as a "5." Only 3.7% rated it as a "3," and 3.7% did not answer the question. Similar results were found in the pilot study.

Almost all (98.2%) of the observers thought that the outerwear shown in the presentation was appropriate for a business atmosphere. The clothing in the presentation was specifically chosen in order to emphasize the importance of clothing adaptations or alterations for professionally-

oriented individuals. In the pilot study, all of the respondents thought that the clothing was suitable for a business atmosphere.

Objective II

II. To discover the extent to which the observers had altered clothes to make dressing easier, either for themselves or for another person.

Opinionaire Results II. Almost one-third of the observers (31.5%) had altered clothes to make dressing easier. Of those who had altered clothes, 41.2% had done so for themselves, 35.3% had done so for others, and 23.5% had altered clothes for both themselves and for others.

The researcher thought that this question might elicit numerous answers to the next question, which was "Please suggest any additional modifications that could be made to similar garments." A few suggestions were made: the use of lacings as a garment closure, the use of elastic panels in skirts to eliminate the bulk of gathers, the replacement of the zipper in men's pants, and the use of tall sizes in order to provide more "sitting room."

Objective III

III. To determine whether the presentation was perceived as an educational tool by those who were involved or planned to become involved with education and/or rehabilitation.

A. To survey the types of settings in which the above individuals felt the presentation could be used.

B. To survey the types of other materials the above individuals would like to see developed in this area.

Opinionnaire Results III. One third (33.3%) of the respondents in the study and almost two-thirds (64.7%) of the respondents from the pilot study answered this set of questions (numbers 9 and 10 on the opinionnaire). All who answered in this area saw the presentation as an educational tool useful in a variety of areas.

The setting of "Community Groups" (senior citizens, peer-group counseling for the disabled, etc.) received the most responses (77.8% from the main study and 100% from the pilot study). "Medical Teaching Units" (physical rehabilitation and nurse's education) received the next highest percent of responses from the study (66.7%). In the pilot study, however, the second highest number of responses (81.8%) went to the setting of "College or University departments concerned with the problems of the disabled." This category, however, received the fewest responses (38.9%) from the study. It was speculated that the high percentage from the pilot study was because the population of that group consisted of teaching faculty and upper division university students. This orientation of respondents might account for the fact that they

emphasized the use of the slide presentation in an educational setting. The "Seminars or workshops" setting and the "One-to-one counseling" setting each received 44.4% of the responses from the study. Similar results for these settings were found in the pilot study (54.6% and 45.5% respectively). The open-ended "Other" category received no responses from the study; however, suggestions from the pilot study included self-improvement groups, church groups, Independent Living Centers, and classroom sewing settings for older adults.

Other materials that those individuals would like to see developed included a slide presentation with the focus on children's clothes; adaptations or alterations in evening clothes, swimwear, and footwear; assistive devices and aids; and printed material to hand out in the form of an accompanying manual or booklet.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

An educational slide presentation, "Fashions for Independent Living," was developed as a result of research in the area of clothing needs of the disabled. In order to determine its effectiveness, an opinionaire was distributed to fifty-four people. The slide presentation was judged to be effective by a large majority of respondents. They provided comments to support their high ratings, such as, "excellent," "great," and "very well put together." Other comments indicated that the presentation introduced new ideas to individuals: "I had never considered clothing for the handicapped--this film just made me aware" and "I am not aware of the particular needs of the handicapped, so I saw solutions before I understood the problem."

Lastly, some individuals noted the similarities between disabled and able-bodied individuals related to fashion and encouraged further research. "Some of the adaptations are great for kid's clothes, too!" and "Fashion is not only good for normal people, but disabled people need some kind of fashion too. So it is a great idea developing this fashion for independent living--keep continuing!"

Recommendations for Further Study

Recommendations for further study include

1. Development of a slide presentation aimed at the needs of disabled children or the elderly,
2. Development of a slide presentation that deals with other areas of adult clothing, for example, sportswear, evening wear, or swimwear,
3. Investigation into the specialized clothing needs of paraplegic and quadriplegic individuals or amputees,
4. Evaluation of dressing aids and coordination of aids with self-help clothing, and
5. Investigation of other educational methods of dispersing information about specialized clothing needs, aimed at able-bodied individuals who will be working with the disabled, in order to increase understanding and to encourage the best possible care for the disabled.

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APPENDIX A

OPINIONAIRE

FASHIONS FOR INDEPENDENT LIVING OPINIONAIRE

The program you have just seen was funded by the CSUN Foundation. As writer and director of the presentation, I would like your opinion of the contents and effectiveness of the program. Your input will help develop a successful program. Thank you for your time.

1. Sex: ☐ Male ☐ Female
2. Age: ☐ 18-25 ☐ 46-55
☐ 26-35 ☐ 56-65
☐ 36-45 ☐ Over 65
3. Education completed:
☐ Less than grade 12 ☐ High School Diploma
College: ☐ Freshman ☐ Junior ☐ Graduate
☐ Sophomore ☐ Senior ☐ Post Graduate
4. Did the presentation introduce any new ideas to you for modifying clothes for the physically limited?
☐ Yes ☐ No
5. The outerwear in this presentation was specifically chosen for its suitability in a business atmosphere. Was it appropriate?
☐ Yes ☐ No
6. How effective was the presentation in introducing clothing adaptations?

very effective				not effective
<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
7. Have you ever altered clothes to make dressing easier?
☐ Yes ☐ No
If "yes," who were the alterations for?
☐ Yourself ☐ Another person
8. Please suggest any additional modifications that could be made to similar garments.

If you plan to become or are an educator, or if you work with people who have problems dressing because of a physical limitation, please answer questions 9 and 10.

9. Do you see this presentation as an educational tool?

☐ Yes ☐ No

If "yes," in what setting(s)?

☐ Medical teaching units (physical rehabilitation, nurse's education)

☐ Community groups (senior citizens, peer-counseling for the disabled, etc.)

☐ College or university departments concerned with problems of the disabled

☐ Seminars or workshops

☐ One-to-one counseling

☐ Other (please specify) _____

10. What other materials like this would you like to see developed?

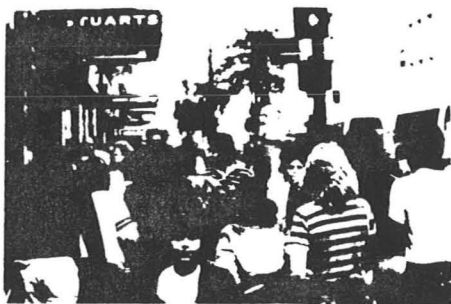
Additional comments welcome:

APPENDIX B

FASHIONS FOR INDEPENDENT LIVING



This slide presentation is designed to encourage awareness of the clothing needs of the disabled. Clothing which is fashionable need not be restricted to the able-bodied. The following pictures and narration describe simple alterations that can be made on Ready-to-Wear garments to enhance an individual's independence in dressing.



01.



02.



03.



04.



05.



06. The clothes we wear have a profound effect on how we see ourselves and how we are seen by others.



07. Disabilities may be temporary or lifelong. Any one of us could find ourselves in a situation that requires special clothing.



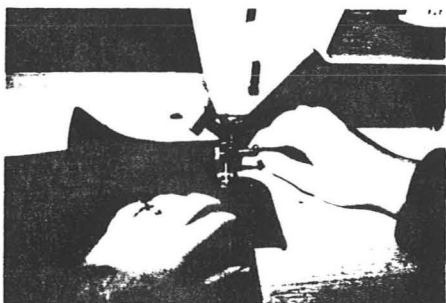
08. Carefully selected clothing can offer people with physical limitations a combination of beauty and functional features.



09. Independence in dressing helps the disabled focus on their ability, not their disability.



10. Each disabled person has special requirements generally not found in mass-produced garments.



11. By applying basic sewing skills and a little ingenuity, Ready-to-Wear garments can be adapted to accommodate many physical limitations.



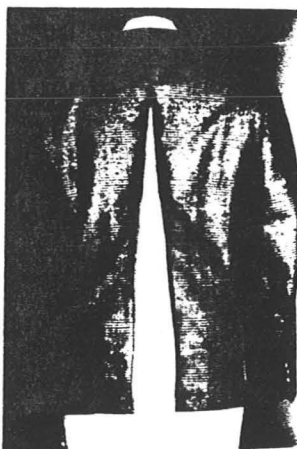
12. This display, from an Arts Festival, illustrates some changes that can be made to a man's suit.



13. This jacket had a back panel, which made one alteration simple. The regular length of the back of a suit jacket...



14. ...was shortened three inches to eliminate excess fabric. This will provide greater comfort for a person confined to a wheelchair.



15. A zipper has been applied to the center back to make it easier for a dresser to dress someone with limited overall mobility.



16. A closer look at the side of a matching vest that buttons down the front...



17. ...and the top shoulder shows areas that can be modified.



18. This vest had one side seam replaced with a separating zipper, and one shoulder seam replaced with Velcro®. Both demonstrate adaptations that require less effort when dressing a person with limited mobility.



19. The button-down-the-front shirt with button cuffs now has the addition of a set-in center back zipper, much like the jacket.



20. The cuffs have had the buttons resealed with elastic thread. This allows a person to slip a hand through without the need to button and unbutton.



21. A tie completes the suit.



22. The full-length tie has been pre-tied. The part beneath the collar has been cut away.



23. Velcro® was fastened to the underside of the cut tie and also to the shirt, beneath the collar. The loop-side of the Velcro® was attached to the collar and the hook-side to the tie for easier laundering.



24. The front and cuffs of this shirt have been closed with Velcro®. The buttons have been resewn on top. This is a good alternative to traditional buttons for an individual who has limited hand movement.



25. The suit pants have a zipper placed on the outseam of the leg. This could accommodate a leg brace or a cast.



26. Women's clothes may be modified in the same manner.



27. A hip-length jacket can be uncomfortable for a person who is seated in a wheelchair for long periods of time.



28. Excess fabric was eliminated by shortening the jacket three inches all the way around.



29. The matching skirt originally had a back closing.



30. This style was selected because the two front seams could be used to create a front opening. The back zipper was removed and the seam stitched shut. It was replaced by two zippers...



31. ...placed in the front seams. Oversized hooks and eyes hold the waistband together. A front opening provides easier dressing for many types of disabilities.



32. This classic style dress closed with buttons from the neck to the waist, making it difficult to put on and take off. After cutting open the center front from the waist to the hem...



33. ...the front of the dress was closed with a strip of Velcro® from the neck to the hem. Grosgrain ribbon was used to face the area that was cut open. The buttons were removed and re sewn on top of the buttonholes to camouflage the alteration.



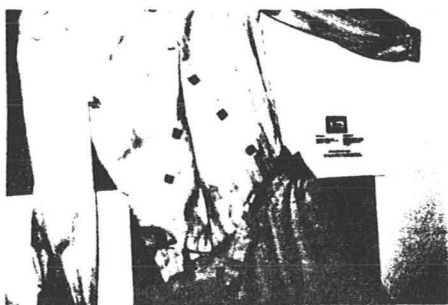
34. This button-down-the-front blouse with a tie bow...



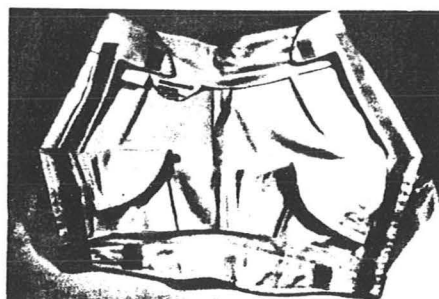
35. ...now has Velcro® closures. Since it presented the same obstacles as a man's shirt and tie, it was altered in the same way. Many adaptations work equally well for men, women, the young or the elderly.



36. These pants have a button closure on one side of the front.



37. The other side seam was opened...



38. ...and both sides were modified to close with Velcro®.



39. New buttons were purchased to sew on both sides. This design feature makes putting on and taking off the garment much easier.



40. Children's overalls demonstrate an additional way to alter pants. The inseam was cut open and reclosed with a row of snaps. This is more convenient to take on and off, especially over leg braces.



41. Nightwear is often cumbersome, particularly when it is necessary to use the toilet. This long gown with a closed back...



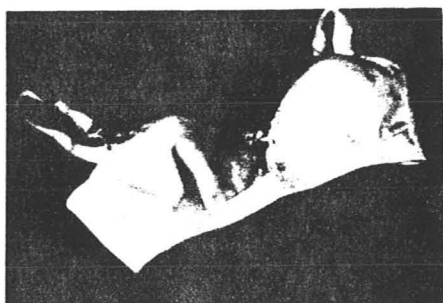
42. ...was easily converted to one with a back overlap. The back was slashed open from yoke to hem. Some of the gathering at the yoke was released to form an overlap. Small strips of Velcro® were used to hold the back closed.



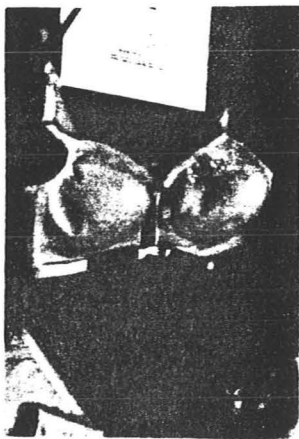
43. Undergarments, as well as outer garments, may be modified. A full length slip...



44. ...had a zipper inserted down the center front. A front opening is useful for someone who cannot lift her arms over her head.



45. Bras that hook in the back are not convenient for a person with limited hand, arm or upper torso movement. Back fastening bras may be altered...



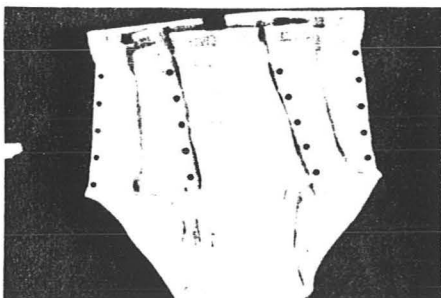
46. ...to fasten in the front. The back has been stitched shut. The front has been opened and reclosed with Velcro® and a loop ring at the lower edge. The upper edge is secured by a large hook and eye.



47. Pantyhose may be changed to incorporate easy on and off features. An original adaptation was made by inserting two zippers, one on either side, to a sturdy pair of pantyhose.



48. Ladies panties have had Velcro® added to one side to simplify pulling them up over a leg brace or immobile leg. This also provides easier toileting.



49. The same type of adaptation may be done on men's briefs, using Velcro® or snaps. This adaptation facilitates the placing and holding of an incontinence pad. It also makes it easier for a dresser to dress someone with limited overall mobility.



50. Another modification for easier toileting would be to separate the front panel from the back, and then apply a strip of Velcro® in order to reclose the garment.



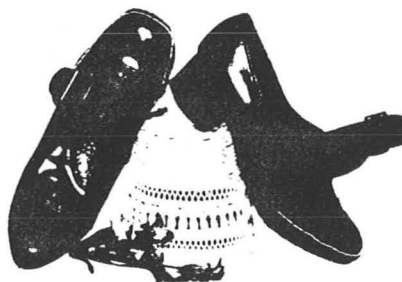
51. A larger neck opening can be added to the neckline of an undershirt by cutting open the shoulder seam and adding a row of snaps.



52. Socks can be difficult to put on if a person has limited mobility. Small loops of twill tape may be applied to the top edge of the socks. An assistive device can then be used to spread the socks open.



53. Oxford-style shoes with laces can have the regular laces replaced with elastic. This change is helpful for people with swollen feet, or for those who have difficulty tying shoe laces.



54. Slip-on shoes that have a strap and buckle over the front have had the buckle attached to the strap and a strip of Velcro® added to close the shoe. Less effort is required to put on or take off these shoes.



55. This jumpsuit was constructed with a drop seat, and a tie closing in the front.



56. There is a strip of Velcro® to help hold the seat up. Velcro® was also used on the shoulder straps. Easier dressing and toileting were considerations in this design.



57. A knit shoulder cape is warm as well as beautiful. Since there are no armholes, it can be readily draped across the shoulders with little exertion. The cuffs have been knitted in to hold the cape in place.



58. Keeping dry while in a wheelchair is often a challenge. The rain repellent half-sack with a hood was designed to be hooked over the foot rest of a wheelchair.



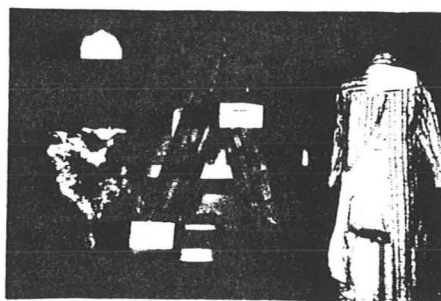
59. The zippered mummybag on the right is also rain repellent. It has a detachable hood and slits for a person's hands.



60. This two-piece rain cover-up consists of a leg bag and a zippered poncho.



61. The detachable hood is beside it. All of the rainwear was designed to provide lightweight protection from the rain for the wheelchair bound.



62. Creative adaptations can accommodate a variety of special needs. The possibilities are unlimited.



63. This is just a sample of what can be done to make fashions for independent living.

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65.

SPECIAL CLOTHING ADAPTATIONS
Jumpsuit Darleen Haas
Knit Cape Lorraine Harmon
Rain Wear Teresa Shea-Welland

ORIGINAL CLOTHING ADAPTATIONS
Pantyhose Diane Lewis-Goldstein

Assisted by Members of the Clothing for
Special Groups Class, Spring 1982
California State University, Northridge
Under the instruction of Dorothy Blackman

67.

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69.

Production Coordinator
PEGGY LAIRD

66.

Clothing in this program was exhibited
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Northridge

68.

Produced by the



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70.

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