CONSUMER SATISFACTIONS AND DISSATISFACTIONS WITH MEN'S DURABLE PRESS SLACKS AND SHIRTS

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ABSTRACT

CONSUMER SATISFACTIONS AND DISSATISFACTIONS WITH
MEN'S DURABLE PRESS SLACKS AND SHIRTS

by Arla W. Karl

Durable press finishing of garments and piece goods is the most important development in the textile industry within the last decade. Numerous textile and industrial journals have cited results of laboratory studies relating to the effectiveness of this "no-iron" finish.

The purpose of this study was to investigate consumers' satisfactions or dissatisfactions with men's durable press slacks and shirts. Specific objectives were: (1) to determine the over-all level of consumer satisfaction or dissatisfaction with men's durable press slacks and shirts under conditions of normal wear and care; (2) to assess which components, i.e. appearance, comfort, fit, durability, and ease of care are most important in determining satisfaction or dissatisfaction with these garments; and (3) to relate individual components of satisfaction to the general components of satisfaction.

It is hypothesized that over-all level of satisfaction is positively related to satisfaction with appearance, comfort, fit, durability, and ease of care, and that consumers are satisfied with the over-all retention of fabric smoothness, and intended creases or pleats after repeated wearings and cleanings.

A structured questionnaire was distributed to a random sample

of qualified married student couples at Michigan State University. Qualified respondents owned two or more pairs of durable press slacks and/or shirts which had been cleaned a minimum of three times. The questionnaire was to be filled out by both husband and wife and was based on their best- and least-liked of the two types of garments. Frequency of response tables were used to analyze the data.

Results obtained from the statistical analysis are applicable only to similar populations. The conclusions were: (1) the majority of respondents rated all four garments, best- and least-liked men's durable press slacks and shirts, average or above-average on over-all level of satisfaction; (2) the over-all level of satisfaction appeared to be related to appearance, comfort, fit, durability and ease of care for the best-liked durable press slacks and shirts but not for the least-liked of the two types of garments at the above average level of satisfaction. It should be noted that only a very small per cent of respondents indicated below average satisfaction on over-all level of satisfaction or on satisfaction with all of the major components. It was concluded that the over-all level of satisfaction was more related to all of the major components of satisfaction at the above average level for the best-liked durable press slacks and shirts than for the least-liked garments; (3) no relationships could be drawn from the data regarding a correlation between the minor components of satisfaction, e.g., the number of times a garment had been worn and cleaned, with the major components, e.g., appearance, comfort, fit, durability and ease

of care; and (4) most consumers were satisfied with the over-all fabric smoothness of the durable press slacks and shirts after cleaning.

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By

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CHAPTER I

INTRODUCTION

Durable press finishing of garments and piece goods is the most important development in the textile industry within the last decade. Numerous textile and industrial journals have cited results of laboratory studies relating to the effectiveness of this "no-iron" finish. Little research has been conducted, however, to ascertain the performance of durable press garments under conditions of normal wear and care.

The consumer's desire for the "no-iron" concept has been long recognized. Hull (35) states,

> that consumers want and demand easy care characteristics of little or no ironing . . . and resistance to wrinkling in a growing list of apparel and household products is evidenced by the rapid expansion in the production of easy care, woven fabrics since 1955.

The impetus for the development of the durable press process came from the Koret Company of California, a garment manufacturer. Koret requested their supplier of 100 per cent cotton dress goods to apply a wash-and-wear finish to the fabric, but to dry it at a lower temperature to minimize the curing or cross-linking of the resin finish.

> After cutting and sewing the fabric, Koret found an oven heating process would complete the curing or cross-linking of the finish, and this would result in a garment whose pleats and over-all garment shape were durable to many launderings and tumble dryings (29).

The durable press process differs from a wash-and-wear process, in which the resin finish is cured while the fabric is in the flat state (60). A durable press process also requires higher concentration of chemicals, higher curing temperatures, new curing techniques, and improved garment fabrication (68).

Koret was granted a patent for the deferred cure durable press process in 1961.

Durable press is a term

> . . . that describes the ability of a garment to keep its shape-retaining properties throughout its life. This means sharp creases, flat seams, and smooth appearance of the fabric after wearing, washing, and drying.' In addition the wear life of the durable press garment must be equal to or better than that of the garment it replaces. The wear life is necessary to have long lasting consumer acceptance and satisfaction (42).

The first 100 per cent cotton durable press men's slacks were placed on the market in February, 1964. Consumer demand for this "no-iron" innovation was considerable. However, it was soon evident that the early durable press slacks had some drawbacks. Excessive strength loss and lowered abrasion resistance were the major problems. Such losses were caused by the high concentration of cross-linking resins required and the prolonged curing of the fabric at high temperatures. The losses were so extensive that the slacks could not meet minimum wear standards (71). These slacks were just the beginning of the breakthrough for durable press (81). Durable press has become a multi-billion dollar business in less than two years as a result of extensive research.

> In 1965, textile finishers prepared and sensitized about 300 million yards of fabric for durable press markets, and the forecast for 1966 indicates that at least 500 million yards will be processed. Durable press today accounts for about 95% of the trouser and slack markets (about 170 million pairs were processed since 1965) and is rapidly saturating men's shirting markets, and moving into many outerwear and domestic markets (71).

Despite the vast research that has been done in developing durable press technology, little has been done to assess the ultimate serviceability and satisfactory performance during use of durable press garments. Graham (51) of the Sears Roebuck and Company testing laboratories, said,

> It is hard to simulate in the lab the stresses a garment suffers when a boy of twelve slides into home plate or falls on the gym floor. But if you are selling durable press to millions of consumers, it's imperative to know.

I. FOCUS OF THE STUDY

The primary aim of this study was to determine the general level of consumer satisfaction with men's durable press slacks and shirts under conditions of normal wear and care. Such information would supplement existing industrial laboratory studies.

The specific assumptions, objectives and hypotheses guiding this study are as follows:

Assumptions:

1. A questionnaire is an effective method of collecting data.
2. Durable press processes change fabric performance properties.
3. Consumers desire garments which require little or no ironing.

Objectives:

1. To determine the over-all level of consumer satisfaction or dissatisfaction with men's durable press slacks and shirts under conditions of normal wear and care.
2. To assess which components, i.e., appearance, comfort, fit, durability, and ease of care are most important in determining satisfaction or dissatisfaction with men's durable press slacks and shirts.
3. To relate individual components of satisfaction to the general components of satisfaction, i.e., appearance, comfort, fit, durability, and ease of care.

Hypotheses:

1. Over-all satisfaction is positively related to satisfaction with appearance, comfort, fit, durability, and ease of care.
2. Consumers are satisfied with the over-all retention of fabric smoothness, and intended creases or pleats after repeated wearings and launderings.

II. DEFINITIONS

Catalyst. A substance which accelerates a chemical reaction (78).

Cellulosic fibers. Those textile fibers that come from natural plant sources; seed, bast, leaf and fruit fibers (20).

Cross-linking resin or agent. A chemical which reacts with the chemical structure of a fiber so as to form indissoluble bonds. It gives the fabric a "memory" for the cured form whether this form be flat or shaped (14).

Cure. The use of heat to fix chemicals permanently in a fabric. This process stabilizes and induces cross-linking of the chemicals (78).

Durable press. The term can refer to a chemical process, finish, fabric, or garment. A durable press finish gives a fabric or garment the ability to retain its over-all smoothness, press, and shape for the life of the fabric or garment. Fabrics of 100 per cent thermoplastic fiber composition do not require a chemical finish to achieve durable press qualities. These fabrics attain over-all smoothness and a durable pressed shape through the use of special pressing equipment.

Fabric "memory." The property of a fabric to retain its original form (78).

Findings. The supplementary fabrics used in making a garment--pocketing, waistband fabric, zipper tape, lining and interlining, etc. In durable press fabrics it is important that these be treated with durable press finishes in the same manner as the shell fabric (78).

High wet modulus rayon. A rayon which differs in molecular structure from conventional rayon. This type of rayon has a lower degree of water absorption, resists caustic solutions, has higher wet strength, and high elastic recovery (20).

Hot head press. A newly developed type of pressing machine designed for pressing durable press garments. It generates greater heat than former presses (450 to 500 degrees Fahrenheit) and pressure of up to six tons. The press is equipped with automatic precision controls (78).

Impregnation. The process of treating a fabric with a chemical compound (78).

Polyester fibers. A long chain synthetic polymer composed of at least 85 per cent by weight of an ester of dihydric alcohol and terephthalic acid (20).

Resin. This term includes various chemical compounds used in finishing fabrics. The resins are polymerized on the fabric or yarn to give so-called "permanent finishes". The purpose of the finish is to impart crease resistance, dimensional stability, better hand or crease retention (48).

Sensitized. A fabric which has been treated with a cross-linking chemical, dried, but not cured. The fabric remains in the sensitized condition until the proper degree of heat is applied (78).

Thermoplastic fibers. The property some fibers have of becoming plastic under heat (20).

Thermosetting resin. A chemical compound which can be permanently set or cured through the use of heat (78).

Wash-and-wear. Fabrics which may be washed and worn without ironing because of the shrink- and wrinkle-resistant finishes applied to the fabric (20).

CHAPTER II

REVIEW OF LITERATURE

The new durable press garments are an outgrowth of efforts by fabric manufacturers, garment fabricators, and retailers to improve existing wash-and-wear finishes (38). Durable press, optimistically called permanent press, often is claimed in advertisements to never need ironing. Such a claim does not allow for variables in fibers, finishes, construction methods, and pressing. Neither does it account for differences in temperatures and length of curing. Nevertheless, after making 25,000 evaluations of durable press garments from 42 manufacturers, the Good Housekeeping Institute states that consumers

> . . . can expect excellent performance from Durable Press if the right fiber, fabric and finish combinations are present, and if proper techniques are used in laundering (88).

The following topics relating to durable press processes and garments will be included in the review of literature: industrial processes, fibers and fiber blends used, problems encountered, standards which have evolved, and new developments.

I. PROCESSES USED FOR DURABLE PRESS FINISHING

The "miracle" concept of durable press is achieved by modifications of earlier wash-and-wear processes such as higher concentrations of cross-linking chemicals, new curing sequences and techniques, and improved garment fabrication (68). Distinctions between brands may be a subtle variation in one of the chemical bath formulations or there

may be a major change such as an alteration in fiber or fiber blend composition (68).

All durable press processes can be classified into four general categories. These are post-cure, pre-cure, re-cure or double-cure, and no-cure (78).

The terms post-cure, delayed-cure, and deferred-cure refer to the same process. The fabric is impregnated with a cross-linking compound or resin which reacts only with the cellulosic fiber component (33). The cellulose constituent for most garments is cotton or high wet modulus rayon fibers. Cellulosic fibers are combined with polyester, nylon, or acrylic fibers (78). Minimal or no curing of the resin occurs since the fabric impregnated with cross-linking resin is dried at a low temperature. After the "sensitized" fabric is cut, sewn into a garment, and pressed into the desired shape, the garment is cross-linked or cured in a special curing oven which reaches temperatures of 300 to 400 degrees Fahrenheit (76). The fabric then has a "memory" for its new sewn and pressed shape. Only the cellulosic fibers are affected by this cross-linking resin. The other component used, which is always a thermoplastic fiber, is formed into the desired shape during pressing and oven curing (3,32,71).

The second classification of durable press processes is the pre-cure process. After impregnating thermoplastic and cellulosic fibers with a cross-linking resin, the fabric is cured while in the flat state. The fabric is cut and sewn, then exposed to high temperatures and pressures to mold the fabric into the desired creased and contoured garment

shape. This process is achieved with a "hot head press" equipped with automatic precision controls which deliver heat of about 500 degrees Fahrenheit and pressures up to six tons. Thermoplastic fibers are consequently softened and reshaped (57). No oven curing is necessary after hot head pressing (8).

Both the post-cure and pre-cure processes involve chemicals reacting with the cellulosic fiber components; however, the processes differ. A post-cured garment is shaped primarily by the cross-linking of the cellulosic fiber component during the oven curing process. A pre-cured garment is shaped by the hot head presses which mold the fibers into the garment shape; the over-all fabric smoothness, however, depends on the cross-linking of cellulosic fibers.

Re-cure or double-cure processing is the third method of achieving durable press qualities in fabrics and garments. Although this process utilizes thermoplastic and cellulosic fiber blends as do the post- and pre-cure methods, the difference is that a special cross-linking reactant and catalyst are required. Eighty-five per cent or more of the cross-linking takes place while the fabric is in the flat state because of this modification in chemicals (69,78). After fabrication the garments are pressed on hot head presses. The heat and steam from pressing break the cross-links formed in the flat fabric; the cross-links are then reformed into a new garment form.

A fourth approach to durable press is the no-cure or fiber blend and fabric construction procedure, which relies on the inherent thermoplastic properties of the fibers being used and does not depend

on chemical treatments. Polyesters are generally blended with acrylic or nylon fibers; thus, both components are thermoplastic. Durable press and shape in no-cure garments is attained through hot-head pressing which forms the 100 per cent thermoplastic fibers into the desired shape. Careful cooling of the garment assures the maintenance of this set shape. The disadvantage of this process is that the 100 per cent thermoplastic fiber contents are more expensive initially than thermoplastic-cellulosic blends (69,78).

Comparing the different processes, Claude Lee (42), of DuPont, states,

> . . . we have studied and worked with them all. At this time, we can honestly say that we have seen satisfactory garments made by all the processes that meet the durable press standards.

The pre-cure and post-cure are the most common of the basic methods used. There has been a good deal of controversy as to which method is better. Doniger (34) of MacGregor-Doniger's states that his firm concludes that both methods should be used depending on the fabric chosen.

The MacGregor-Doniger Company determined that the use of pre-cured fabrics followed by hot-head pressing and then post-curing gave better results than pre-cured fabrics plus hot-head pressing alone. Consequently, MacGregor-Doniger is oven curing all their outer-wear garments, whether made of post-cured or pre-cured fabric. This manufacturer claims that oven-curing is necessary to obtain a superior level of shape retention and smoothness desired in outer-wear garments.

> Each finish has its place. . . . Pre-cure is almost perfect for permanent press shirts and it is equally apparent that post-cure is the right route to a pleated skirt. It is also very clear that from a purely theoretical point of view, anything having a shape other than flat should be post-cured. It could even be contended that shirts should be post-cured to set the hems flat and thus prevent them from ballooning (32).

Lee (42) indicates that "with the polyester/cotton fabrics the pre-cure process has been a contender in durable press." Some of the reasons are that: (1) in the high percentage blends there is enough thermoplastic fiber to be heat set to give flat seams and durable creases, (2) the pre-cured fabrics are washed after curing by the finishers and thus there is no change in hand when the consumer launders the garment, (3) there are fewer changes in manufacturing required and less equipment involved, and (4) the garments made from pre-cured fabrics can usually be altered successfully (42). One disadvantage is that the pre-cure process requires higher temperatures to cure heavier weight fabrics than lighter weight fabrics, thus decreasing fiber strength during curing. As a result the post-cure route has been most widely used for heavier weight fabrics such as those used in men's slacks.

The "McCall's Sportswear Merchandiser" (45) states that at present most manufacturers indicate a preference for post-cured slacks and pre-cured shirts. However, all garment manufacturers do not agree which process produces the most satisfactory slacks or shirts (45,46). The standards maintained during durable press processing are more influential in producing satisfactory products than the processes themselves.

Several recent durable press processes deserve attention; they are the irradiation process, and advances in durable press cotton processing.

> The durable press electronic irradiation process developed by Deering Milliken, Inc., is being marketed under the trademark 'Visa.' (62,74,32). The purpose of irradiation is to achieve higher standards of durable press in post-cured 65% Dacron polyester and 35% cotton fabrics (32).

Irradiation permits easy release of soil and oily stains with normal home laundry procedures--a feature previously unobtainable in polyester and cotton fabrics. The need for cross-linking agents may be reduced or eliminated; thus, this process would increase abrasion resistance of the fabric (62).

Many new developments have occurred in all-cotton durable press fabrics since the first all-cotton durable press slacks in 1964 (10). The National Cotton Council, as well as many manufacturers, finishers, and chemical producers, has devoted considerable effort to developing new fabric constructions, processes, and chemicals. Among the significant developments are the following: (1) use of lower curing temperatures, (2) addition of surface polymers to the fibers, (3) differential cross-linking of the fabric, (4) mercerization or micro-stretching to increase the initial strength of the fabric (78,39), (5) wet-cure processing, (6) monomer grafting and deposition, which builds polymers into fabric structure, (7) double-cure processing, and (8) new cross-linking chemicals, which increase crease-angle and wash- wear ratings of the fabric (9,10).

Durable press garments are manufactured by four basic processes:

the post-cure, pre-cure, re-cure or double-cure, and no-cure processes. Each process is capable of producing high quality durable press garments if high standards are maintained at every level of production. Durable press finishes, processes, and fabrics are being continually improved; this not only up-grades existing durable press garments, but also makes possible new end uses.

II. FIBERS AND FIBER BLENDS USED IN DURABLE PRESS FABRICS

Selecting a fabric for treatment with a durable press finish is a complex enigma. Many of the properties which greatly affect durable press performance

> . . . such as fabric weight, yarn size, construction, fabric style, color, pattern, etc. are really not choices at all for most garment manufacturers because garment styling and fashion greatly limit the allowable variations in these properties (32).

One hundred per cent cotton was used in the first durable press garments because the durable press procedure depended on thermosetting resins being fixed in cellulosic fibers. For early durable press fabrics, the sole laboratory test was a tensile strength test. Cotton rated high in tensile strength, but in later wear tests, cotton was found to have very poor abrasion resistance (54).

The second development in durable press fabrics was to blend nylon fibers with the cotton fibers. Blending improved the abrasion resistance over all-cotton durable press fabrics, but lessened the tensile and tear strength, and reduced the dimensional stability (54).

A third advance was achieved by blending polyester fibers with cellulosic fibers. These polyester fibers improved the hand, weight, appearance, strength, abrasion resistance, and dimensional stability of the fabric (21). However, difficulties were encountered in dyeing the polyester fibers (70).

New fibers and fiber blends, too numerous to mention, are currently being used on an experimental basis for durable press fabrics and garments (42,32,76,84,78).

Polyester and cellulosic fiber blends and 100 per cent cotton fabrics predominate over all the fiber blends and fibers used in durable press. Polyester and cotton blends containing at least 50 per cent polyester have proven to be superior to blends containing a lower percentage of polyester in styling, performance, and cost demands for garments now treated with durable press finishes (32).

Laboratory tests by both Milliken, Inc., and DuPont (42) indicate that the 65 per cent polyester and 35 per cent cotton blend is superior to other blends and blend levels.

> Laboratory tests show that the abrasion resistance, tear and grab strength, after chemical treatment and curing are significantly higher than in the lower percentage blends (42).

Specifically, wear tests by Milliken, Inc. show the 65 per cent polyester and 35 per cent cotton blend wears about 35 per cent longer than the 50/50 blend (62).

Polyester and Avril high wet modulus rayon must be considered an important blend for durable press fabrics. The first polyester and Avril rayon blends were tested in 1964; this blend has become more

prominent, especially in the men's slack field (84).

The advantages of a 50 per cent polyester and 50 per cent Avril rayon fiber blend over a 50 per cent polyester and 50 per cent cotton fiber blend include: (1) a more uniform appearance, (2) the deletion of the necessity to mercerize the fabric before dyeing, (3) softer initial hand, and (4) higher abrasion resistance (84).

All cotton durable press products have advantages over the polyester and cellulosic fiber blend fabrics. Cotton durable press is completely insensitive to temperature; therefore, the necessity of special handling in either washing or drying is eliminated. Durable press cottons can be successfully dried by either machine or line drying. Polyester and cotton blend fabrics, in contrast, must be tumble-dried for a satisfactory appearance (71,19,9). White cotton durable press fabrics do not develop a dingy or grayish color after laundering as do polyester and cellulosic fiber blends. Consumer opinions have shown a preference for the higher absorbency and softer hand of all-cotton durable press fabrics. Durable press cottons are more opaque, a characteristic preferred by some consumers. Yarn-dyed products and prints are easier to produce in all-cotton fabrics. In addition, cutting, sewing, and pressing all-cotton fabrics present few processing problems, which aids in reducing the cost of the end product (9). All-cotton durable press fabric is not an inferior product. Most of the garments carried in all-cotton have top wash-wear ratings for crease retention and appearance after laundering (10).

It must be stated that although polyester and cellulosic fiber

blends and 100 per cent cotton durable press fabrics predominate over the multitude of possible fibers and fiber blends, the selection of a fiber blend depends on the end use for which the fabric is intended. However, the polyester and cotton fiber blends are the only fabrics which demonstrate the clear cut superiority over the complete range of fabric weights for all end use areas (68,42).

Future technological changes may produce new fibers and fiber blends which are as satisfactory or superior to the fibers and blends presently being used.

III. PROBLEMS ENCOUNTERED IN DURABLE PRESS GARMENTS AND PROCESSING

Regardless of the durable press procedure used, there are advantages, disadvantages, and problems. The problems evident in durable press garments include: fabric deterioration or strength loss, over-all fabric discoloration, fibrillation, stains, alterations, seam puckering, pressing, odor, shrinkage, pilling, stiffening of hand, and spontaneous curing. Through technical research and experience some of the problems have been solved, but some have only been controlled and continue to give difficulties (30).

Fabric deterioration or strength loss is the main problem in durable press garments (2). Cross-linking, which takes place only in the cellulosic fibers, greatly weakens the tensile strength and abrasion resistance of the fibers. Deterioration is caused by the high concentration of cross-linking chemicals needed and the high temperatures

used during the curing process. One solution to the problem is to blend the cellulosic fibers with other fibers, such as nylon or polyester, which are unaffected by the chemicals (67).

Over-all fabric discoloration is caused by sublimation or migration of dyestuffs, loss of color due to light, laundering or ozone. Discoloration is presenting a challenge to industry (14,30,34,68). Optical brighteners are being added to white durable press fabrics to alleviate the yellowing problem.

Fibrillation or lightening of the fabric, particularly along the sharp creases (pocket edges, zipper flys, collars, and cuffs), during wear and laundering, remains an obstacle in providing satisfactory garments.

Oil-based stains are a major problem in durable press garments of polyester and cellulosic fiber blends. Home laundering does not effectively remove the stains from the fabric. The oil-staining problem of polyesters is due to the smooth surface of the fiber which permits the fiber to "wick," and the oleophilic nature of the polyester. Several new finishes and laundry products are being developed to alleviate the problem (7).

Garment alterations present a serious problem. Lengthening or enlarging a garment is impossible because the creases originally pressed in the garment cannot be eliminated (68). Comments from J. C. Penney Co., Hug-Tab Corp., Pellon Corp., and J. P. Stevens and Company indicate the problem may be overcome in the near future.

Jay (34) suggests the possible use of

> . . . chemical sprays to break down the finish to allow re-sewing and other chemicals for refinishing, table-top ovens in stores for re-curing and garments shipped with unfinished lengths to the retailer to be finished in the store--either by use of the small ovens or by the retailer finishing the item or length at the point of sale and having the consumer press, after washing, only that part of the garment that has been adjusted.

A method of altering developed by the Hug-Tab Corporation involves the use of a press-on tape. The tape is said to be easy to apply and stabilizes the pre-set crease as well as the new cuff crease (67).

A chemical spray developed by J. P. Stevens and Co. may be used by retailers or in the home for removing and/or imparting creases in apparel. The new spray, "Alter-Ease," requires no change in existing technology for durable press. The consumer can set cuffs, hems, and creases with an ordinary iron even after the garment has been worn and laundered (5,11).

Some limitations to the use of "Alter-Ease" are: the fabrics must be at least part cellulosic; the original stitching marks of the seams remain if a garment is altered; and there is a "frosted" look to the fabric due especially to abrasion wear along such areas as cuff folds when a cuff is lengthened (49).

Pellon Corporation has developed a non-woven material which can impart cuffs to previously uncuffed durable press trousers. A web applied to paper and transferred with a hot iron to the trouser cuff like a decal gives a permanent crease to the fabric (25).

Seam puckering or poor seam appearance warrants considerable research. New sewing techniques, adjustment of fabric and thread

tension, use of fewer stitches per inch, use of mercerized cotton or synthetic sewing thread, employment of compatible linings, interlinings, and pocket fabrics which are similar in shrinkage and durability, are all important in improving seam appearance (4,5,47,57).

Pressing is a critical step in the durable press process. Any wrinkles pressed into a garment remain for the life of the garment.

The thermosetting resins which are sometimes used in durable press processing give off an unpleasant odor (60). The unpleasant odor can be overcome by laundering the completed, cured garment; however, laundering is not practical because of the added expense to the manufacturer. Some cross-linking resins which have been developed do not have an unpleasant odor; two of the compounds which fulfill this requirement are an imidazoline compound and a sulfone compound (60).

Shrinkage during the curing or heat-setting process is a definite problem. Some manufacturers have overcome the problem by cutting the garment pieces one-half size larger for a specific size.

Many fabric blends exhibit a pilling problem. The fibers tend to "tease" out of the fabric in areas which receive abrasion. Fiber ends form tiny fiber balls on the surface, resulting in an unsightly appearance. These pills cling to the fabric surface and do not break off easily.

Stiffening of the fabric hand is sometimes a problem that occurs after laundering, due to the finishes and curing procedures used (2). Softeners have been developed which, when added to durable press resin treatments for 100 per cent cotton, polyester and cellulosic fiber

blends, or acrylic and cellulosic fiber blends, impart a soft hand and excellent drapeability to the fabric (65).

Spontaneous curing is a problem encountered in the deferred cure process. The sensitized fibers, while in storage, partially cross-link before the garment is cut, sewn, and pressed into the desired shape. Spontaneous curing, as well as the odor problem, can be solved by the use of imidazoline or sulfone compounds (60,67,30). However, in a paper presented to the AATCC in May, 1966, Alexander (2) indicated that spontaneous curing still occurs.

Some improvements being made by several manufacturers to overcome durable press problems include: (1) improved uniformity of cotton and polyester fibers in preparation for spinning the yarns; (2) reduced defects in the differential tensions in weaving; (3) increased control of mercerization, bleaching, and heat treatment of the fabric in preparation for dyeing; (4) improved temperature control and uniformity in dyeing; (5) increased penetration of the dye in the cotton and polyester fiber components; (6) improved uniformity of the dyed fabrics to achieve even pick-up of the chemical finishes; (7) improved uniformity in drying and curing the chemical finish; (8) greater control of fabrics in storage prior to cutting; (9) improved cutting techniques to eliminate the introduction of wrinkles into the fabric; (10) careful selection of findings to avoid differential shrinkage and consequent seam puckering when the garment is laundered; and (11) more uniformity in pressing techniques (29).

The problems facing durable press manufacturers have been

numerous; the main problems are fabric deterioration, discoloration, fibrillation, and alteration. Some of these difficulties have been solved, some minimized, while others remain definite problems. The majority of the problems have been reduced, however, as evidenced by the current domination of durable press in certain consumer markets.

IV. STANDARDS FOR DURABLE PRESS GARMENTS

Acceptable consumer standards for all types of fabrics and end uses must be developed for durable press garments. Standards must be maintained at all levels of production, from the fiber producer to the garment finisher (4,77).

Stavrakas (75), manager of soft goods testing for J. C. Penney Company, Inc., emphasized the importance of standards when he said,

> The key to the continued success of permanent press is eternal vigilence. Each segment of the industry must be willing to not only continue its present concentrated efforts in achieving total performance, but the industry as a whole must expand this effort. The consumer is thrilled and surprised by the performance of the first entries into the field. We are now at the point where the pipelines are about filled, the novelty will soon be over, and madam consumer will begin to look more critically at these new products.

There is nothing vague about standards in the textile industry. The textile testing scientist can assign a rating which is a specific number or per cent based on tests universally accepted by the industry (78). Different standards are essential for each fabric and end use.

One area of utmost importance is the use of compatible thread, linings, interlinings, and slide fasteners for durable press garments. These components must exhibit the same shrinkage, color-retention,

"sew-ability," stiffness, and tensile strength in addition to being a suitable weight for the durable press fabric with which they are used. This compatibility is necessary to achieve a particular styling result, to add life and stability to parts of the garment, and to achieve satisfactory appearance (81).

Standards are difficult to establish since there is no single test which can be given to a durable press fabric or garment to determine the tensile strength, tear strength, abrasion resistance, dimensional stability, fabric smoothness, and crease retention of any durable press fabric or garment (75).

However, one group, The Subcommittee on Simulated End Use of the AATCC Research Committee has been working to establish a standard abrasion resistance test for fabric using an automatic washer and dryer. The goal of this group's work has been to find a test method which can be used to determine the approximate wear life of durable press garments with reasonable correlation among various testing laboratories (89).

It is important to both the consumer and the manufacturer that standards be set-up and maintained so that the total performance of the textile end product is adequate for the end use. These standards include retention of color, creases or pleats, dimensional stability, absence of seam puckering and wrinkles, and durability of finish in both home and commercial laundry procedures (28).

V. NEW DEVELOPMENTS

Durable press, first introduced in men's slacks, has now expanded into many diverse end uses. Men's shirts, both woven and knit (23,84); women's sportswear, dresses, and undergarments (44); children's clothing; and rainwear (53) are among the ready-to-wear garments being finished by durable press processes.

Pre-cured durable press piece goods in polyester and cotton blends are available both in lightweight fabrics and heavier fabrics such as corduroy (79). Kodel polyester and cotton blend durable press fabrics are being used for draperies and bedspreads (37). Sheets and pillowcases in polyester and cotton, and polyester and Avril rayon blends, are other new durable press household items (84).

New fibers and fiber blends being investigated which show promise for durable press include Fiber 60, an acetylated rayon, Avril rayon and wool blends (23), and wool blends with acrylic or polyester fibers (22). These new fibers and fiber blends will extend the range of end uses of durable press.

Durable press has grown to include numerous end uses since the advent of men's durable press slacks; it has brought a whole new dimension to the soft goods industry (81). The number of end uses for durable press will certainly multiply as research in the field continues.

CHAPTER III

METHODS AND PROCEDURES

I. BASIS OF QUESTIONNAIRE

A structured questionnaire was devised for gaining the desired information on consumer satisfactions and dissatisfactions with the best-liked and least-liked men's durable press slacks and shirts owned and used by the respondents. The questionnaire was designed to be answered by the couples answering as one; the responses of each couple, therefore, were reported as one frequency in the analysis of data section, and in the tables in Appendix B.

The basic format of the questionnaire was established with the assistance of an academic advisory committee[1] and Dr. Barbara Densmore.[2] Previous consumer satisfaction surveys were also used as references (15, 16, 17).

II. PRETEST

A pretested questionnaire was used as the basis for the final form of the questionnaire. Members of the Michigan State University textiles and clothing staff plus eight student couples were asked to

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[1]The committee members were: Mrs. Kathryn Riedel, Dr. Mary Gephart, and Mrs. Stephania Winkler.

[2]Dr. Barbara Densmore was a summer staff member from Pennsylvania State University College of Home Economics.

fill out the questionnaire. Each respondent was requested to designate which questions were unclear, to give suggestions for revision of the questionnaire, and to indicate the length of time required to complete the questionnaire. The suggestions were incorporated into the final form of the questionnaire which appears in Appendix A.

III. SELECTION OF SAMPLE

The population consisted of couples living in Spartan Village, a married student housing complex at Michigan State University in East Lansing, Michigan. It was decided that male students who wear washable slacks and shirts daily, and their wives who care for the garments, together would be able to make valid judgements on these durable press garments.

A statistical method was used to assure a random sampling of the population. Numbered buildings in Spartan Village were selected by using a table of random numbers. Each building contained eight to twelve apartment units. The residents of every apartment in the buildings selected were considered as part of the sample.

The interviewer attempted to contact apartment residents several times. It was impossible to contact some of the residents; in addition, some of the apartments were un-rented. There were 222 apartments in the selected buildings. One hundred eighty-eight couples were personally contacted and instructed as to the purpose of the study, and the procedure for completing the questionnaire. Questionnaires were left with those qualified couples expressing willingness to participate

in this study, and later picked up by the interviewer at a time convenient to the respondents.

Qualified respondents were defined as those who owned two or more pairs of durable press slacks and/or shirts which had been cleaned a minimum of three times. One hundred and one couples out of 188 contacted were qualified to be included in this study. Five of the distributed questionnaires could not be secured, and six of the returned questionnaires were too incomplete to use; thus, 90 questionnaires were used for the basis of this study. Fifty-one couples were qualified to answer the questions pertaining to both durable press slacks and shirts, 33 were qualified to fill out only the columns pertaining to durable press slacks, and six couples were qualified to evaluate only durable press shirts.

IV. STATISTICAL ANALYSIS

Statistical analysis of this study is based on frequency of response tables which were computed on a Control Data Corporation 3600 computer. Frequency of response tables were primarily used to gain background information about the best-liked and least-liked durable press slacks and shirts. This statistical method was also used to relate appearance, comfort, fit, durability, and ease of care to the over-all level of satisfaction with the best- and least-liked slacks and shirts. Selection of this form of analysis was based on advice from Dr. T. V. Hanurav, a consultant in the Michigan State University

statistics department, and on information concerning analysis forms gleaned from similar studies.

Originally chi square values were computed for the correlation tables in the analysis of data section; chi square values were also computed for relationships between some of the minor components of satisfaction and the major components of satisfaction--appearance, comfort, fit, durability, and ease of care. However, it was found that more than 20 per cent of the cells contained frequencies of less than five; this made any apparently significant chi square values invalid. The tables used in the analysis of data, thus, show only the relationships between over-all level of satisfaction and the major components of satisfaction, but the tables do not indicate if the relationships were significant.

Questions appear in the questionnaire which are not included in the analysis of data. The questions were originally asked to aid in analyzing the potential relationships. However, it was found that the responses of the majority of the respondents on certain questions were too similar to be of value in the analysis of the data. The complete frequency of response for the questions asked, nevertheless, appear in Appendix B.

Free response questions were included in the questionnaire (see Appendix A, p. 70). The analysis of these questions was deleted because the answers given merely repeated what the respondent had indicated in the structured portion of the questionnaire.

CHAPTER IV

ANALYSIS OF DATA

I. INTRODUCTION

The reasons a respondent might give for satisfaction or dissatisfaction with a particular garment are potentially numerous. Five major components of satisfaction, i.e., appearance, fit, comfort, durability, and ease of care, were selected as criteria for evaluating men's durable press slacks and shirts (15,16,17). It was hypothesized that these components directly relate to the over-all level of garment satisfaction. In addition, there are minor components of satisfaction. For example, the number of times a garment had been worn and cleaned could influence a respondent's ratings on over-all level of satisfaction, appearance, and ease of care.

The purpose of this data analysis is to show what relationships, if any, exist between the major components of satisfaction and over-all level of garment satisfaction. A secondary objective is to determine if minor components of satisfaction, such as color retention, ease of stain removal, etc., influence the major components of satisfaction. These objectives will be achieved using frequency of response tables. The tables used will appear in this section, and the complete frequency of response for each question asked the respondents in the questionnaire will be found in Appendix B.

II. BACKGROUND INFORMATION

The majority of respondents in this sample were 18 to 25 years old. Seventy-six per cent of the men were full time students; 12 per cent were part time students. Thirty-four per cent of the women were full time homemakers; 57 per cent were students or employed outside the home in addition to being homemakers. (For the complete frequencies of response, see Appendix B, Tables XXII, XXIII, XXIV, p. 83). These categories indicate that the majority of respondents were in the same age group, and the majority of male respondents were in the same occupation.

The majority of the respondents answering the questions on durable press slacks and shirts based their answers on the use of two to four pairs of slacks, and/or two or three shirts, all of which had been cleaned a minimum of three times. Of the total sample of 90 responding couples, 91 per cent were qualified to answer the questions pertaining to durable press slacks, while 51 per cent were qualified pertaining only to durable press shirts. Some of the qualified respondents did not answer every question. Others failed to follow directions on specific questions and filled in only one column, thus not comparing their best-liked durable press slacks or shirt with their least-liked garment in the same category.

Failure to compare best- and least-liked garments may have been due to the fact that respondents felt they did not have a best- and least-liked durable press garment. The ratings of best- and least-liked

were not defined in this study and were personal value judgements of the respondents. In addition, it is possible that the best- and least-liked garments in each category were the same brands, similar colors, and had been worn and cleaned the same number of times. As a result, the no response category is quite large in some of the frequency of response tables (see Appendix B). The complete frequency of response tables concerning the number of durable press slacks and shirts owned and worn by the respondents appear in Appendix B, Tables XXV, XXVI, pp. 84 and 85.

III. OVER-ALL LEVEL OF SATISFACTION

The over-all level of satisfaction is a personal value judgement based on the respondent's experience with the garments owned. Consequently two different respondents would not necessarily rate identical garments equally. The respondents were therefore asked to rate their durable press slacks and/or shirts in one of three categories--above average, average, or below average satisfaction.

The over-all level of satisfaction with the four garments, best- and least-liked durable press slacks and shirts, can be seen in Table I, which shows that 91 per cent of the respondents indicated average or above average satisfaction with their best-liked slacks. Fifty-nine per cent of the respondents indicated average or above average satisfaction with their least-liked slacks. For durable press shirts, 65 per cent of the respondents rated their best-liked shirts average or above average on over-all level of satisfaction, whereas

TABLE I

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS ON OVER-ALL LEVEL OF SATISFACTION WITH MEN'S DURABLE PRESS SLACKS AND SHIRTS

	SLACKS				SHIRTS			
	Best-liked		Least-liked		Best-liked		Least-liked	
OVER-ALL LEVEL OF SATISFACTION	Frequency of response	Per cent	Frequency of response	Per cent	Frequency of response	Per cent	Frequency of response	Per cent
Below average	0	0	13	14	2	2	7	8
Average	18	20	44	49	19	21	37	41
Above average	64	71	9	10	39	44	7	8
No response	8	9	24	27	30	33	39	43
Total	90	100	90	100	90	100	90	100

49 per cent rated their least-liked shirt average or above average on over-all level of satisfaction.

The questions pertaining to over-all level of satisfaction and level of satisfaction with appearance, comfort, fit, durability, and ease of care can be found in Appendix A, Questions 10-15, pp. 75 and 76.

IV. RELATIONSHIP OF OVER-ALL LEVEL OF SATISFACTION TO APPEARANCE

The total frequency of response for the relationship between over-all level of satisfaction and appearance, comfort, fit, durability, and ease of care, varies from 90 due to the fact that many respondents failed to answer every question. The per cents used in the analysis of data are based on the frequency of response for each specific table. In analyzing the data gleaned from the tables, the above average level of satisfaction was used to determine apparent relationships between over-all level of satisfaction and the major components of satisfaction.

There appeared to be a correlation between the respondents rating on over-all level of satisfaction and the ratings given on appearance for men's best-liked durable press slacks and shirts. Seventy-six per cent of those responding rated their best-liked durable press slacks above average on over-all level of satisfaction and appearance. A total of 99% of those responding rated their best-liked slacks average or above.

Only nine per cent rated their least-liked durable press slacks above average on both components--over-all level of satisfaction and appearance. However, 77% of those responding rated their least-liked slacks average or above on the same components.

Fifty-seven per cent of those responding ranked their best-liked durable press shirts above average on both over-all level of satisfaction and appearance; however, 95% rated the same garments average or above on the same variables.

Of those responding on the questions relating to over-all level of satisfaction and appearance for men's least-liked shirts, eight per cent considered these shirts above average in both aspects. Seventy-eight per cent, nevertheless, rated their least-liked durable press shirts average or above average on the same aspects.

The difference between the number of times the best-liked and least-liked durable press slacks and shirts had been cleaned was not appreciable (see Appendix A, Question 9, p. 74; Appendix B, Table XXXII, p. 88). No relationship appeared to exist between the number of times the garments had been cleaned and the rating given on the over-all level of satisfaction and appearance.

The color of the garments after wear and cleaning did not influence either the respondents' rating of the garments on the over-all level of satisfactions or appearance. The majority of those responding indicated no change or only a slight change in color had taken place after wear and cleaning (see Appendix A, Question 17, p. 76; Appendix B, Table XL, p. 92).

This data indicates that the respondents' rating on appearance was related to the over-all level of satisfaction (at the above average level of satisfaction) with the best-liked durable

VI. RELATIONSHIP OF OVER-ALL LEVEL OF SATISFACTION TO FIT

There appeared to be a correlation between fit and the over-all level of satisfaction at the above average level of satisfaction for the best-liked durable press slacks and shirts, but not for the least-liked garments of the population surveyed. Sixty-six per cent of those responding rated their best-liked slacks above average in both aspects, 100% rated them average or above average. Fifty-seven per cent considered their best-liked durable press shirts above average on over-all level of satisfaction and fit, whereas 96% rated the same garments average or above average.

Only eight per cent rated their least-liked slacks above average, however 77% rated their least-liked slacks average or above. For the best-liked durable press shirts, 12% rated them above average on both components--over-all level of satisfaction and fit; 86%, nevertheless, did rate these same garments average or above average on the same variables.

Since more respondents' rated their best-liked durable press garments above average on over-all level of satisfaction and fit, fit appears to be an important contributor as to whether or not a consumer will be satisfied with a particular garment. Shrinkage may be a reason for this correlation, as respondents expressed that more of their least-liked durable press garments shrank after cleaning than did their best-liked garments (see Appendix A, Question 21, p. 77; Appendix B, Table XLIV, p. 94).

VII. RELATIONSHIP OF OVER-ALL LEVEL OF SATISFACTION TO DURABILITY

There seemed to be a stronger relationship between over-all level of satisfaction and durability for the best-liked durable press garments at the above average of satisfaction than for the least-liked durable press garments in each category. Sixty-four per cent considered their best-liked slacks above average on over-all level of satisfaction and durability, but 99% rated them average or above. Fifty-four per cent evaluated their best-liked durable press shirts as above average, as compared to 99% who rated them average or above.

For the least-liked durable press slacks, only ten per cent rated their garments above average on over-all level of satisfaction and durability although 74% rated them average or above average. A small per cent of the respondents, four per cent, rated their least-liked shirts above average even though 87% rated the same durable press garment average or above average.

Respondents were asked to judge how long the durable press garments wore in contrast to similar garments without a durable press finish (see Appendix A, Question 25, p. 78). The majority of respondents who felt qualified to make judgements, reported that both the best- and least-liked of each type of garment wore as long as similar garments which did not have a durable press finish (see Appendix B, Table XLVIII, p. 96).

TABLE IV

RESPONDENTS' CHOICES ON OVER-ALL LEVEL OF SATISFACTION AND APPEARANCE FOR MEN'S BEST-LIKED DURABLE PRESS SHIRTS

	APPEARANCE							
OVER-ALL LEVEL OF SATISFACTION	Frequency of response to above average satisfaction	Per cent	Frequency of response to average satisfaction	Per cent	Frequency of response to below average satisfaction	Per cent	Totals Frequency of response	Per cent
Above average satisfaction	34	57	5	8	0	0	39	65
Average satisfaction	8	13	10	17	1	2	19	32
Below average satisfaction	0	0	1	2	1	2	2	4
Totals	42	70	16	27	2	4	60	101*

*Averages may make total vary slightly from 100%.

It is generally known that most resin finishes make a fabric less absorbent; low absorbency makes a fabric feel warmer. Respondents were asked to evaluate the apparent warmth of the durable press garments under consideration (see Appendix A, Question 24, p. 77). Respondents, however, did not indicate that the durable press garments felt warmer during wear than garments without a durable press finish (see Appendix B, Table XLVII, p. 96). Consequently, no apparent relationship exists between the warmth of durable press slacks and shirts and the rating given on comfort by the respondents.

Durable press processing tends to change the hand or stiffness of a fabric. Respondents were asked to rate their garments on this aspect (see Appendix A, Questions 22, 23, p. 77). Fabric stiffness was not indicated as a problem for the majority of the best- and least-liked of all garments (see Appendix B, Tables XLV, XLVI, p. 95). Thus, this factor did not affect the respondents' rating on comfort.

It is concluded that at the above average level of satisfaction, and the over-all level of satisfaction and comfort are more related for the best-liked durable press garments. A smaller difference exists between the ratings on over-all level of satisfaction and comfort for the best- and least-liked garments when above average and average ratings are amalgamated.

Although over 50% of those responding indicated that both their best- and least-liked durable press slacks had been worn more than 50 times, slightly less than 50% reported that their durable press shirts had been worn 50 or more times. Many respondents did not feel that 50 times was a sufficient number of times to evaluate the durability of the garment.

Seam and fabric splitting is a problem with some durable press garments as a result of the durable press finishing process. In this study, seam and fabric splitting were not listed as problems with the durable press garments evaluated by the respondents (see Appendix A, Questions 26, 27, p. 78; Appendix B, Tables XLIX, L, p. 97).

A question was also asked pertaining to areas which might show wear before the garment itself was worn out (see Appendix A, Question 29, p. 78). Twenty-three per cent of those responding checked areas which showed wear, e.g., edges of the garment, zipper fly, and creases, for the best-liked durable press slacks; 56% indicated no problem areas with their best-liked slacks. However, for the least-liked slacks, a slightly larger percentage, 28%, indicated that fraying existed in areas exposed to the greatest abrasion.

For both the best- and least-liked durable press shirts, almost 50% of the respondents indicated that the edges of the garment frayed (see Appendix B, Table LII, p. 98). Although the majority of respondents rated durability average or above (see Appendix B, Table XXXVII, p. 91), the respondents definitely indicated that there were areas which showed wear before the garment was worn out.

No definite conclusion can be drawn from the data obtained to explain the stronger correlation between over-all level of satisfaction and durability for the best-liked garments.

VIII. RELATIONSHIP OF OVER-ALL LEVEL OF SATISFACTION TO EASE OF CARE

There appeared to be a more significant correlation between over-all level of satisfaction and ease of care at the above average level of satisfaction for the best-liked durable press garments. Seventy-one per cent of those responding indicated above average satisfaction for their best-liked slacks; 98% indicated average or above average satisfaction with the same garments. Only 14% indicated above average satisfaction for these components for their least-liked durable press slacks but 87% rated the same garments average or above average.

For the best-liked durable press shirts, 51% indicated above average satisfaction; 97% indicated average or above average satisfaction for the same garments. However, for the least-liked durable press shirts, a small minority, 12%, rated their garments above average, whereas 82% rated these garments average or above average on over-all level of satisfaction and ease of care.

The respondents were asked to indicate the methods used to dry the durable press garments (see Appendix A, Question 32, p. 79). The majority of durable press slacks and shirts were drip dried or drier dried which are the preferred methods (2). (See Appendix B, Table LV, p. 100).

TABLE XXI

RESPONDENTS' CHOICES ON OVER-ALL LEVEL OF SATISFACTION AND EASE OF CARE FOR MEN'S LEAST-LIKED DURABLE PRESS SHIRTS

	EASE OF CARE							
OVER-ALL LEVEL OF SATISFACTION	Frequency of response to above average satisfaction	Per cent	Frequency of response to average satisfaction	Per cent	Frequency of response to below average satisfaction	Per cent	Totals Frequency of response	Per cent
Above average satisfaction	6	12	1	2	0	0	7	14
Average satisfaction	14	27	21	41	2	4	37	72
Below average satisfaction	0	0	1	2	6	12	7	14
Totals	20	39	23	45	8	16	51	100

Respondents were also asked to evaluate the smoothness of the seams, the sharpness of the creases, and the over-all fabric smoothness of the durable press garments after cleaning (see Appendix A, Questions 36, 37, 38, p. 79). The amount of pressing required for the durable press garments under consideration was also requested (see Appendix A, Question 39, p. 80). The majority of respondents indicated that the seams were not puckered after cleaning for slacks, but more indicated seam puckering was a problem for shirts. The majority of respondents also reported that the intended creases remained sharp, and that the over-all fabric appearance was smooth (see Appendix B, Tables LIX, LX, LXI, pp. 102 and 103). In addition, durable press garments required no pressing or only "touch up" pressing according to the majority of those responding. More respondents indicated "touch-up" pressing was required for the durable press shirts than for durable press slacks. (See Appendix B, Table LXII, p. 103).

Staining is a problem with durable press fabrics according to literature; oil-based stains have been particularly difficult to remove in laboratory testing done by various companies. A question pertaining to the ease of removing stains was asked (see Appendix B, Question 41, p. 80). In this study, problems with oil-based stains were encountered by the majority of respondents reporting on durable press slacks, and by a minority reporting on durable press shirts. In some instances, removal of oil-based stains was considered very difficult, but in others the stains were not considered difficult

to remove. No apparent relationship seemed to exist between the ease of removal of oil-based stains and the respondents' rating of the garment as their best- or least-liked garment (see Appendix B, Table LXIV, p. 104).

The question pertaining to beverage stains revealed that most respondents had no experience with beverage stains, and most of those who had, did not find them too difficult to remove (see Appendix A, Question 42, p. 80; Appendix B, Table LXV, p. 105).

The responses on the minor components, i.e. drying method, seam puckering, pressing required, and stain removal, indicate why over-all level of satisfaction and ease of care were rated average or above average for all four garments. The responses on the minor components do not, however, explain why a larger per cent of the best-liked of the two types of durable press garments were rated above average.

IX. SUMMARY

There appeared to be a correlation between over-all level of satisfaction at the above average level and appearance, comfort, fit, durability and ease of care for both the best-liked durable press slacks and shirts; only a small per cent of respondents indicated above average satisfaction between over-all level of satisfaction and the separate components for their least-liked durable press slacks and shirts.

When the average and the above average levels of satisfaction were combined in the tables, the majority of respondents' answers

indicated that over-all level of satisfaction was related to appearance, comfort, fit, durability, and ease of care for all four garments.

In conclusion, this limited study reveals that the major components of satisfaction are more related to the over-all level of satisfaction at the above average level for the respondents' best-liked durable press slacks and shirts, than for their least-liked garments.

CHAPTER V

SUMMARY, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

I. SUMMARY

This study was designed to determine the over-all level of consumer satisfaction or dissatisfaction with men's durable press slacks and shirts, to assess which major components of satisfaction, i.e., appearance, comfort, fit, durability, and ease of care, were most influential in determining satisfaction, and to ascertain if certain minor components of satisfaction, e.g., the number of times a garment has been worn and cleaned, influenced respondents' ratings on the major components of satisfaction.

The hypotheses to be tested were: the over-all satisfaction is positively related to satisfaction with appearance, comfort, fit, durability, and ease of care; and consumers are satisfied with the over-all retention of fabric smoothness and intended creases or pleats after repeated wearings and cleanings.

A questionnaire was devised to gather the data. The interviewer personally contacted potential respondents in the randomly selected sample to ascertain if the couple was qualified and willing to fill out the questionnaire. Questionnaires were left at the apartment of the qualified and willing respondents; the questionnaires were picked up by the interviewer at a time convenient to the respondents.

Conclusions in this study are based on frequency of response tables which were computed on a 3600 Computer.

II. CONCLUSIONS

Results obtained from the analysis of data are applicable only to similar populations. Upon completion of this study the following conclusions were drawn:

1. The majority of respondents rated all four garments, best- and least-liked men's durable press slacks and shirts, average or above in over-all level of satisfaction.

2. The over-all level of satisfaction appeared to be related to appearance, comfort, fit, durability, and ease of care for the best-liked durable press slacks and shirts but not for the least-liked of the two types of garments at the above average level. Thus, all the major components of satisfaction seemed to be important in determining the difference in level of satisfaction which the respondents expressed between their best- and least-liked garments.

It should be noted that only a very small per cent of respondents indicated below average satisfaction on over-all level of satisfaction or on satisfaction with all of the major components.

Only limited conclusions were made because of the nature of the data which is based on consumers' personal opinions. Also, it was not found feasible to use chi square analyses in evaluating the respondents' choices since in all cases more than 20 per cent of the cells in any one table contained frequencies of less than five.

Therefore, it can be concluded that the over-all level of satisfaction was more related to all of the major components of satisfaction at the above average level of satisfaction for the best-liked durable press slacks and shirts. Thus, an original hypothesis seemed to be supported for the best-liked durable press garments, but not for the least-liked garments.

3. No relationships could be drawn from the data regarding a correlation between the minor components of satisfaction, e.g., the number of times a garment had been worn and cleaned, with the major components, i.e., appearance, comfort, fit, durability, and ease of care. The vast number of variables did not facilitate the computation of chi square values, and the responses were so similar that percentage of responses could not be used to support a conclusion regarding a potential relationship.

4. Most consumers were satisfied with the over-all fabric smoothness of the durable press slacks and shirts after cleaning. The majority of respondents indicated that no pressing or only "touch up" pressing with an iron was required for durable press slacks; a larger percentage of respondents indicated that "touch up" pressing was necessary for durable press shirts. Although it can be concluded that these consumers were more satisfied with the press retention of durable press slacks than shirts, it is felt that consumers are generally satisfied with the press and crease retention of both men's durable press slacks and shirts. An original hypothesis, therefore, was supported.

III. LIMITATIONS

The limitations in this study include the following:

1. Responses were based on consumers' personal experiences and opinions. Consequently two different respondents would not necessarily rate identical garments equally. A consumer study, therefore, cannot give the most precise kind of information.

2. In most instances, respondents based their evaluations of durable press slacks and shirts on two to four garments.

3. The type of wear and care given the garments was similar in the majority of cases. Most of the male respondents were students; the majority of women cared for the garments in the Spartan Village laundries. Thus, these women had access to tumble dryers, a recommended drying method for durable press slacks and shirts if garments are to have a wrinkle free appearance and good crease retention after cleaning (2,54).

4. It is possible that the best- and least-liked garments in each category were the same brands, similar colors, and had been worn and cleaned the same number of times. This limited the respondents' ability to define best- and least-liked garments.

5. Respondents did not follow both verbal and written directions in filling out the questionnaire. This resulted in a large no response category for some questions.

IV. RECOMMENDATIONS

The entire textile and garment industry, as well as the consumer, are interested in the durable press, no-iron concept. Further research to analyze consumer responses is warranted to enable the manufacturers to produce better durable press garments.

Suggestions for further research are:

1. To conduct a similar study on durable press slacks or shirts separately.

2. To determine consumer satisfaction with one type of durable press garment in conjunction with a laboratory study on the same kind of garment.

3. To perform a similar study on one type of durable press garment condensing the number of choices wherever possible in the questionnaire, and placing the free response questions before the structured questions.

4. To conduct a similar study at a later date when consumers have owned and used a larger number of durable press slacks and shirts for a longer period of time.

5. To use a structured personal interview to ascertain similar types of information on one kind of durable press garment.

6. To ascertain consumer satisfaction with men's garments other than durable press slacks and shirts.

7. To investigate consumer satisfaction with children's and women's durable press garments.

8. To determine consumer satisfaction with durable press household items such as sheets, pillowcases, draperies, and bedspreads.

APPENDIX A

Schedule Number	0 - 2
Study I. D. Karl	3 - 6
Card Number	7 - 8

SATISFACTIONS AND DISSATISFACTIONS WITH MEN'S DURABLE PRESS SLACKS AND SHIRTS

Introduction

There are many garments on the markets today treated by the manufacturers to give them easy care features. The newest ones are durable press (or permanent press) garments. This means that garments can be laundered and/or dry cleaned with little or no ironing. The garments retain their smooth surface throughout wear.

I am interested in how consumers actually feel about men's durable press shirts and slacks in use.

General Instructions

1. This questionnaire is to be filled out by the husband and wife together. Some of the questions can only be answered by the husband (e.g. comfort of the garment). Some of the questions, such as those pertaining to garment care, may be best answered by the wife. Thus, it is necessary for the husband and wife to fill out this questionnaire together.

2. The questionnaire asks about four garments: the best and least liked men's durable press slacks owned and the best and least liked men's durable press shirts owned. The husband should decide which pair of his durable press slacks and which durable press shirts he likes best and which he likes least.

   Each shirt and each pair of slacks chosen should have been laundered or dry cleaned at least <u>three times</u>.

3. It may be less confusing to go through the questionnaire twice. Check all the answers pertaining to slacks and then do those pertaining to shirts or vice versa.

Arla W. Karl - Textiles, Clothing and Related Arts Department

Background Information

1. Age (check appropriate category)

	Husband	Wife	Card 01
1. 18 - 25	_____	_____	9 - 10
2. 26 - 30	_____	_____	
3. 31 - 40	_____	_____	
4. Other	_____	_____	

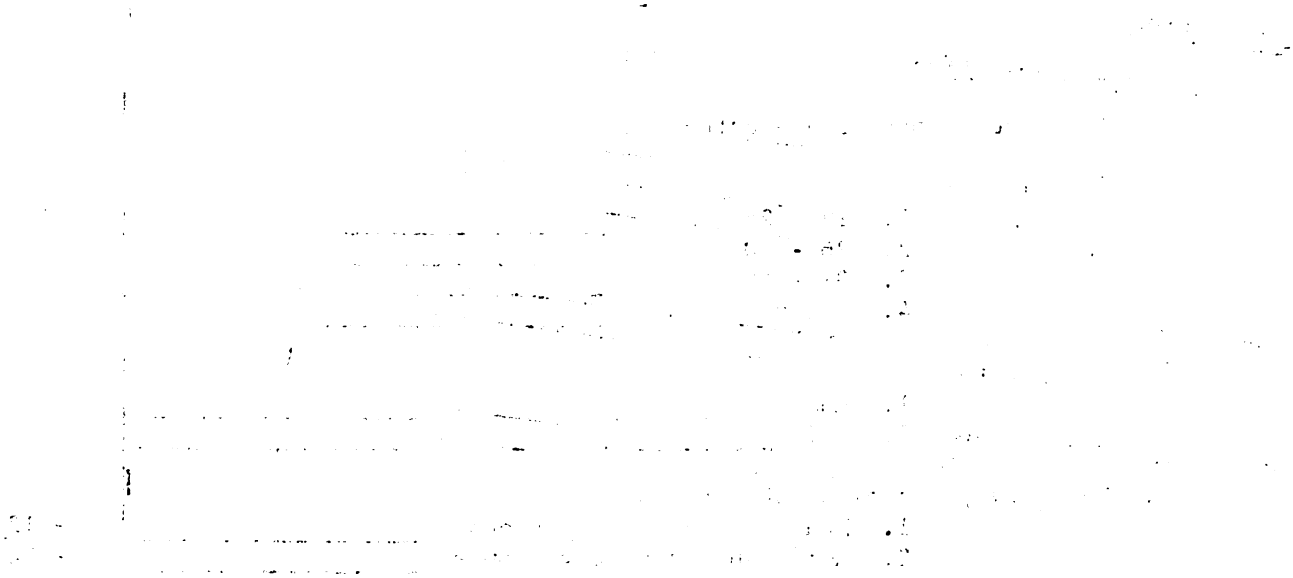
2. Occupation
   1. Husband _____
   2. Wife _____

3. How many pairs of durable press
   1. Men's slacks have you owned _____ 11 - 12
   2. Men's shirts have you owned _____ 13 - 14

General Information About Garments Chosen

1. Brand name (specify if known):
   1. Best liked slacks _____
   2. Least liked slacks _____
   3. Best liked shirt _____
   4. Least liked shirt _____

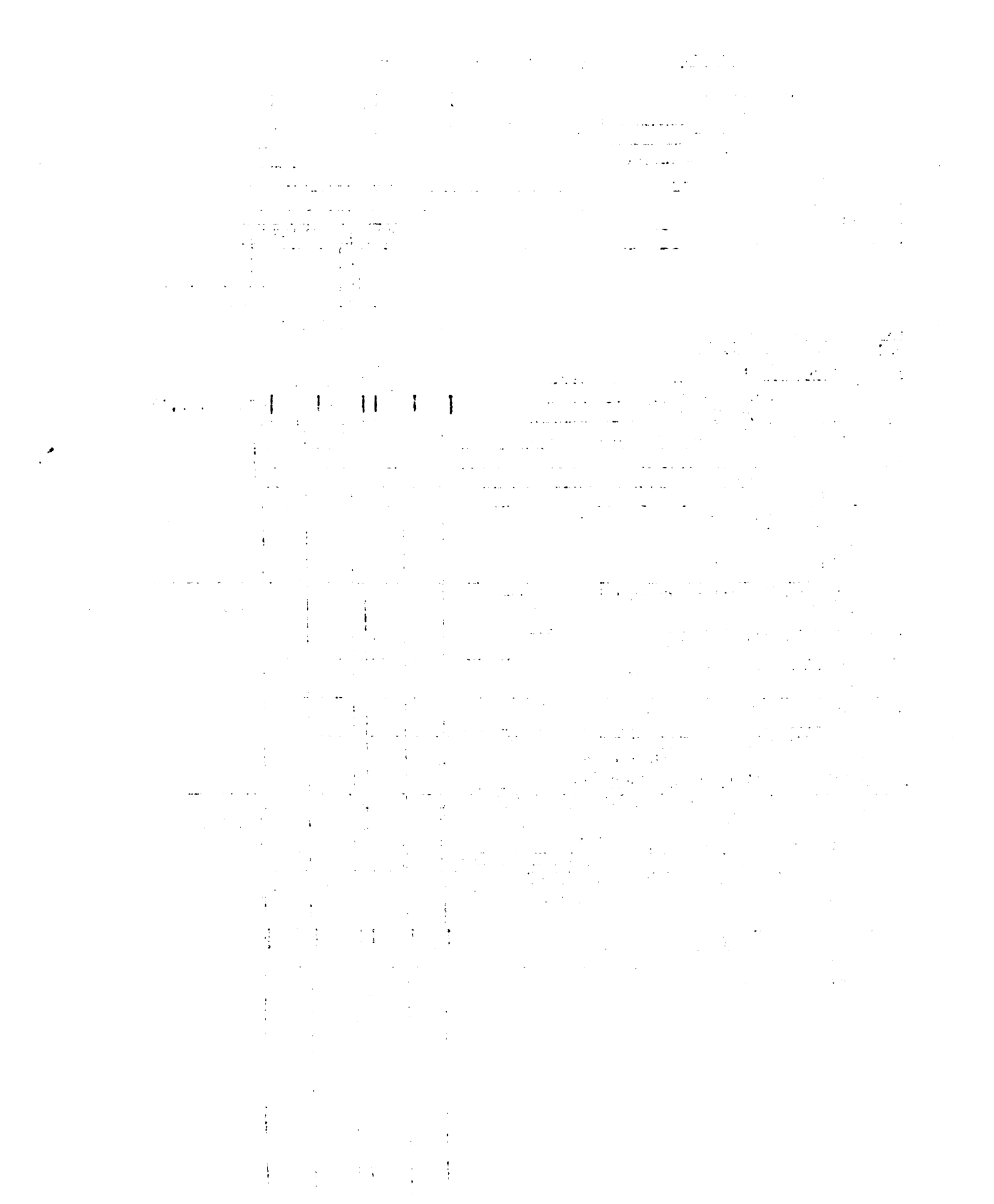
	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
2. Fiber content on label (check appropriate column for each garment):					15,16,17,18
1. Polyester/cotton or polyester/rayon					
2. Nylon/cotton					
3. No indication on label					
4. Do not recall					
5. Other fiber content (specify if known)					
3. Color (check appropriate column for each garment):					19,20,21,22
1. Plain dark color (e.g. navy, black, dark brown) or dark plaid					
2. Medium plain color or medium colored plaid					
3. Light color (e.g. beige, light yellow) or light colored plaid					
4. White					
4. Type of store where purchased (check appropriate column for each garment):					23,24,25,26
1. Department store (e.g. Knapp's)					
2. National chain store (e.g. Penny's, Sears)					
3. Variety store (e.g. Woolworths)					
4. Men's specialty store (e.g. Small's, Jacobson's)					
5. Discount store (e.g. Yankee Stadium)					
6. Received as a gift					
7. Other (specify)					



General Information About Garments Chosen

1. Brand name (specify if known):
   1. Best liked slacks _____
   2. Least liked slacks _____
   3. Best liked shirt _____
   4. Least liked shirt _____

	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
2. Fiber content on label (check appropriate column for each garment):					15,16,17,18
1. Polyester/cotton or polyester/rayon					
2. Nylon/cotton					
3. No indication on label					
4. Do not recall					
5. Other fiber content (specify if known)					
3. Color (check appropriate column for each garment):					19,20,21,22
1. Plain dark color (e.g. navy, black, dark brown) or dark plaid					
2. Medium plain color or medium colored plaid					
3. Light color (e.g. beige, light yellow) or light colored plaid					
4. White					
4. Type of store where purchased (check appropriate column for each garment):					23,24,25,26
1. Department store (e.g. Knapp's)					
2. National chain store (e.g. Penny's, Sears)					
3. Variety store (e.g. Woolworths)					
4. Men's specialty store (e.g. Small's, Jacobson's)					
5. Discount store (e.g. Yankee Stadium)					
6. Received as a gift					
7. Other (specify)					



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	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
5. Approximate price paid If purchased on sale, indicate original price, not the sale price. (check appropriate column for each garment):					27,28,29,30
1. Less than $2.00					
2. $2.00 - 3.49					
3. $3.50 - 4.49					
4. $4.50 - 5.49					
5. $5.50 - 8.75					
6. $8.75 or more					
7. Received as a gift - do not know price					
8. Unable to recall					
6. Length of time owned (check appropriate column for each garment):					31,32,33,34
1. 1 month or less					
2. 1 - 3 months					
3. 3 - 6 months					
4. 6 months - 1 year					
5. 1 - 2 years					
6. More than 2 years					
7. Frequency of wear during an average week (check appropriate column for each garment):					35,36,37,38
1. Worn less than once a week					
2. Worn once a week					
3. Worn 2 - 3 times a week					
4. Worn 4 - 5 times a week					
5. Worn 6 - 7 times a week					
8. Total number of times garment has been worn (check appropriate column for each garment):					39,40,41,42
1. Less than 5					
2. 6 - 10					
3. 11 - 15					
4. 16 - 20					
5. 21 - 30					
6. 31 - 40					
7. More than 40 (give approximate number for each garment)					
9. Total number of times laundered (check appropriate column for each garment):					43,44,45,46
1. 5 or less					
2. 6 - 10					
3. 11 - 15					
4. 16 - 20					
5. Other (please specify)					

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Overall Garment Satisfaction

Rate each of the selected garments on the following items.

	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
10. Over-all satisfaction with the garment (check appropriate column for each garment):					47,48,49,50
1. Very unsatisfactory or very poor					
2. Somewhat unsatisfactory					
3. Neither unsatisfactory nor satisfactory (average)					
4. Somewhat satisfactory					
5. Very satisfactory or very good					
11. Appearance (check appropriate column for each garment):					51,52,53,54
1. Very unsatisfactory or very poor					
2. Somewhat unsatisfactory					
3. Neither unsatisfactory nor satisfactory (average)					
4. Somewhat satisfactory					
5. Very satisfactory or very good					
12. Comfort (check appropriate column for each garment):					55,56,57,58
1. Very unsatisfactory or very poor					
2. Somewhat unsatisfactory					
3. Neither unsatisfactory nor satisfactory (average)					
4. Somewhat satisfactory					
5. Very satisfactory or very good					
13. Fit (check appropriate column for each garment):					59,60,61,62
1. Very unsatisfactory or very poor					
2. Somewhat unsatisfactory					
3. Neither unsatisfactory nor satisfactory (average)					
4. Somewhat satisfactory					
5. Very satisfactory or very good					
14. Durability (check appropriate column for each garment):					63,64,65,66
1. Very unsatisfactory or very poor					
2. Somewhat unsatisfactory					
3. Neither unsatisfactory nor satisfactory (average)					
4. Somewhat satisfactory					
5. Very satisfactory or very good					

	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
15. Ease of care (check appropriate column for each garment):					67,68,69,70
1. Very unsatisfactory or very poor					
2. Somewhat unsatisfactory					
3. Neither unsatisfactory nor satisfactory (average)					
4. Somewhat satisfactory					
5. Very satisfactory or very good					
After rating the garments on general satisfaction, check the appropriate items which influenced your rating.					
Garment Appearance					
16. Appearance of garment when purchased (check appropriate column for each garment):					71,72,73,74
1. No wrinkles present in garment					
2. Wrinkles present but they could be pressed out					
3. Wrinkles present but they could not be pressed out					
17. Color of garment after wear (check appropriate column for each garment):					75,76,77,78
1. No change					
2. Slight change					
3. Distinct color change (i.e. color faded noticeably or white garments yellowed)					
4. Dark colors become "frosted" all over (i.e. white surface appearance)					
5. Fabric color lightened along creases					
6. Other (specify)					
18. Appearance of garment after a days wear (check appropriate column for each garment):					Card 02
1. Fabric remains smooth and wrinkle free throughout the day (i.e. the garment could be worn another day without pressing if not soiled)					9,10,11,12
2. Garment slightly wrinkled					
3. Garment very wrinkled (i.e. wrinkles across body of garment or vertically which are unsightly)					

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	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
Fit of Garments					
19. Fit of the garment in the lengthwise direction when purchased (check appropriate column for each garment):					13,14,15,16
1. Adequate in length (i.e. the crotch of the slacks, the pant legs, the shirt tails, and sleeves were adequate in length)					
2. Garment was not adequate in length					
3. Garment was cut too long					
20. Fit of the garment in width when purchased (check appropriate column for each garment):					17,18,19,20
1. Garment was adequate in width (i.e. slacks were wide enough through the hips and legs, shirts were wide enough through the body and sleeves, and collar was large enough around)					
2. Garment was not adequate in width					
3. Garment was cut too full					
21. Fit of garment after laundering (check appropriate column for each garment):					21,22,23,24
1. Garment remained same size					
2. Garment shrank slightly but it was still wearable					
3. Garment shrank to a great extent (i.e. it was no longer comfortable or wearable)					
4. Garment stretched due to laundering process					
Comfort of Garment					
22. Garment when purchased (check appropriate column for each garment):					25,26,27,28
1. Fabric felt stiff and uncomfortable					
2. Fabric did not feel stiff					
23. Garment after laundering (check appropriate column for each garment):					29,30,31,32
1. Fabric felt stiff					
2. Fabric did not feel stiff					
24. Garment during wear (check appropriate column for each garment):					33,34,35,36
1. Felt warmer than similar garments without a durable press finish					
2. Felt as warm as those without durable press finish					
3. Felt cooler than those garments without a durable press finish					

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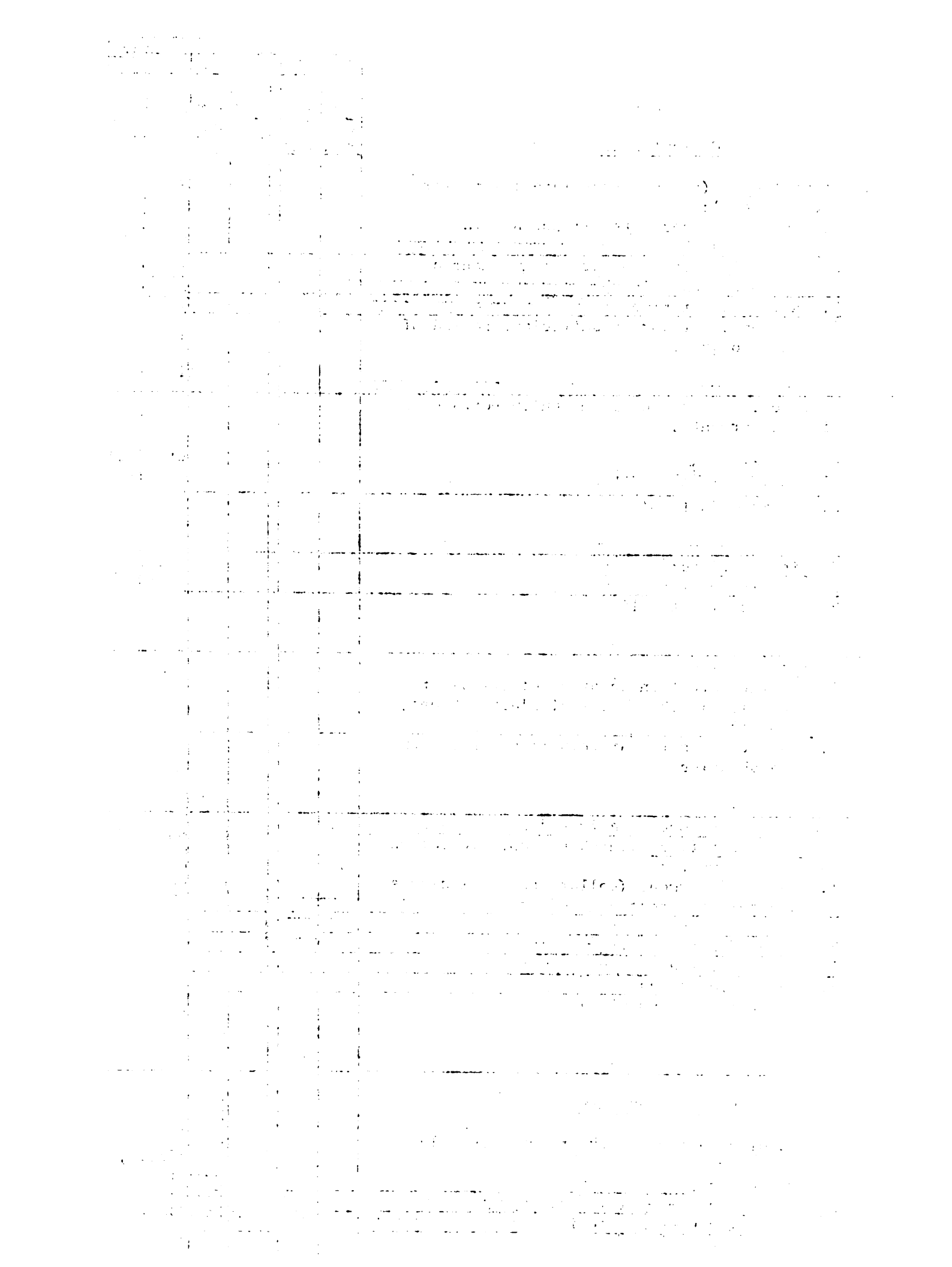
	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
Garment Wear					
25. Garment wore (check appropriate column for each garment):					37,38,39,40
1. As long as garments without a durable press finish					
2. Slightly less than garments without a durable press finish					
3. A very short time					
4. Garments not worn a sufficient period of time to judge					
Check the following paired items which pertain to each of your garments.					
26. Seam splitting:					41,42,43,44
1. Seams split					
2. Seams didn't split					
27. Fabric splitting:					45,46,47,48
1. Fabric split					
2. Fabric didn't split					
28. Fabric abrasion:					49,50,51,52
1. Fabric wore thin in areas of stress or abrasion (such as seat of slacks, knees, elbows)					
2. Fabric did not wear thin in areas of stress and abrasion					
29. Indicate which one area frayed or showed any signs of wear first (check appropriate column for each garment):					53,54,55,56
1. Edges of garment (collar, cuffs of slacks and shirts, front edge of shirt)					
2. Pocket edges					
3. Edge of zipper fly					
4. Crease of slacks					
5. No problem areas					
6. Other (please specify)					
Care of Garments					
30. Method of cleaning (check appropriate column for each garment):					57,58,59,60
1. Dry clean					
2. Send to commercial laundry					
3. Automatic washing machine					
4. Hand wash					



	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
31. If washed in an automatic washing machine (check appropriate column for each garment):					61,62,63,64
1. Garment is allowed to go through the complete machine cycle					
2. Garment is removed before the last spin cycle					
32. Drying method (check appropriate column for each garment):					65,66,67,68
1. Line dried					
2. Drip dried (hung up dripping wet)					
3. Dried in the dryer					
4. Dried in the extractor with no further drying process					
5. Dried in extractor followed by tumble drying					
33. If dried in the dryer (check appropriate column for each garment):					69,70,71,72
1. Garment dried less than 5 minutes					
2. Garment dried 5 - 10 minutes					
3. Garment dried 11 - 20 minutes					
4. Garment dried 21 - 30 minutes					
5. Garment dried more than 30 minutes					
34. If dried in the dryer (check appropriate column for each garment):					73,74,75,76
1. Durable press garments are removed from the dryer before the dryer stops					
2. Garments are removed immediately after the dryer stops					
3. Garments are removed when convenient					
35. After removal from dryer do you (check appropriate column for each garment):					77,78,79,80
1. Hang on hanger					
2. Fold					
3. Other (please specify)					
Appearance of Garment After Laundering					
Check the following paired items which pertain to each of your garments.					Card 03
36. Seams:					9,10,11,12
1. Seams are puckered					
2. Seams are not puckered					

	SLACKS		SHIRTS		
	Best Liked	Least Liked	Best Liked	Least Liked	
37. Creases:					13,14,15,16
1. Creases remain sharp					
2. Creases do not remain sharp					
38. Overall appearance of garment:					17,18,19,20
1. Fabric in general is smooth					
2. Fabric in general is wrinkled					
39. After laundering and drying by any of the methods listed above do you (check appropriate column for each garment):					21,22,23,24
1. "Touch-up" unsprinkled garment with a dry iron					
2. "Touch-up"garment with a steam iron					
3. Sprinkle garment and then press it					
4. No "touch-up" pressing is necessary					
40. If you do press the garments, indicate which one area needs the most pressing (check appropriate column for each garment):					25,26,27,28
1. Seams					
2. Detail areas (such as creases, pockets, collars, cuffs)					
3. No problem areas					
Stain Removal					
41. Do you find it difficult to remove oily stains (e.g. stains caused by skin oil on shirt collars or food stains such as butter or salad dressing etc. spilled on garments)(check appropriate column for each garment):					29,30,31,32
1. Very difficult to remove					
2. Not too difficult to remove					
3. Easy to remove					
4. Fabric has not been stained					
42. Removal of beverage stains (check appropriate column for each garment):					33,34,35,36
1. Very difficult to remove					
2. Not too difficult to remove					
3. Easy to remove					
4. Fabric has not been stained					

43. List the things especially liked about the durable press garments you have owned:
1. Slacks

2. Shirts

44. List the things especially disliked about the durable press garments you have owned:
1. Slacks

2. Shirts

43. List the things especially liked about the durable press garments you have owned:
1. Slacks

2. Shirts

44. List the things especially disliked about the durable press garments you have owned:
1. Slacks

2. Shirts

APPENDIX B

TABLE XXII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS ON AGE

AGE	Husband	Wife
18-25	60	70
26-30	17	14
31-40	10	3
Over 40	1	1
No response	2	2

TABLE XXIII

FREQUENCY OF RESPONSE OF WIVES ON OCCUPATION

OCCUPATION	Wives
Homemaker	31
Student	15
Other	40
No response	4

TABLE XXIV

FREQUENCY OF RESPONSE OF HUSBANDS ON OCCUPATION

OCCUPATION	Husbands
Student only	68
Student and other	11
Non-student	8
No response	3

TABLE XXV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS ON THE NUMBER OF DURABLE PRESS SLACKS OWNED

NUMBER OF SLACKS	Number of respondents	Per cent of total number of slacks for qualified respondents
0	6	-
1	0	-
2	22	27
3	16	19
4	19	22
5	12	14
6	7	8
7	0	0
8	4	5
9	1	1
10	2	2
12	1	1
TOTALS 345	90	99*

*Averages may make total vary slightly from 100%.

TABLE XXVI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS ON THE NUMBER OF DURABLE PRESS SHIRTS OWNED

NUMBER OF SHIRTS	Number of respondents	Per cent of total number of shirts for qualified respondents
0	26	-
1	8	-
2	19	33
3	12	23
4	4	7
5	8	14
6	5	9
7	2	4
8	3	5
9	1	2
10	0	0
11	0	0
12	1	2
24	1	2
TOTALS 254	90	101*

*Averages may make total vary slightly from 100%.

TABLE XXVII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO FIBER CONTENT OF MEN'S DURABLE PRESS SLACKS AND SHIRTS

FIBER CONTENT	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Polyester/cotton or polyester/rayon	32	11	42	24
Nylon/cotton	1	3	2	3
Other fiber content	2	3	3	5
No indication on label or do not recall	40	43	10	17
No response	15	30	33	41

TABLE XXVIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO COLOR OF MEN'S DURABLE PRESS SLACKS AND SHIRTS WHEN PURCHASED

COLOR OF GARMENT	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Plain dark color or dark plaid	57	24	7	8
Medium plain color or medium colored plaid	16	10	12	9
Light color	1	29	12	15
White	0	0	24	17
No response	16	27	35	41

TABLE XXIX

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO TYPE OF STORE WHERE MEN'S DURABLE PRESS SLACKS AND SHIRTS WERE PURCHASED

	SLACKS		SHIRTS	
TYPE OF STORE	Best-liked	Least-liked	Best-liked	Least-liked
Department store or men's specialty store	52	35	27	22
National chain store	23	14	21	11
Variety or discount store	2	10	1	7
Received as gift	3	2	4	10
No response	10	29	36	39

TABLE XXX

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO APPROXIMATE PRICE PAID FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

	SLACKS		SHIRTS	
APPROXIMATE PRICE PAID	Best-liked	Least-liked	Best-liked	Least-liked
$5.49 or less	12	20	38	32
$5.50 or more	64	39	13	11
Received as a gift or do not recall	5	5	7	6
No response	9	26	32	41

TABLE XXXI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO NUMBER OF TIMES THE DURABLE PRESS SLACKS AND SHIRTS HAD BEEN WORN

NUMBER OF TIMES GARMENT HAD BEEN WORN	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
0- 5	0	0	0	0
6-15	2	0	0	0
16-30	0	1	2	1
31-50	2	1	2	6
50 and over	71	52	44	39
No response	17	34	42	44

TABLE XXXII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO TOTAL NUMBER OF TIMES MEN'S DURABLE PRESS SLACKS AND SHIRTS WERE CLEANED

NUMBER OF TIMES GARMENT WAS CLEANED	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
5 or less	13	12	4	11
6-10	17	11	13	10
11-15	12	11	16	12
16-20	22	16	10	7
21 or more	7	5	6	4
No response	19	35	41	46

TABLE XXXIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO OVER-ALL LEVEL OF SATISFACTION WITH MEN'S DURABLE PRESS SLACKS AND SHIRTS

OVER-ALL LEVEL OF GARMENT SATISFACTION	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least liked
Below average (satisfaction)	0	13	2	7
Average (satisfaction)	18	44	19	37
Above average (satisfaction)	64	9	39	7
No response	8	24	30	39

TABLE XXXIV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO OVER-ALL LEVEL OF SATISFACTION WITH APPEARANCE OF MEN'S DURABLE PRESS SLACKS AND SHIRTS

OVER-ALL LEVEL OF SATISFACTION WITH APPEARANCE	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Below average	1	9	2	6
Average	14	44	16	32
Above average	68	13	42	13
No response	7	24	30	39

TABLE XXXV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO OVER-ALL LEVEL OF SATISFACTION WITH COMFORT WITH MEN'S DURABLE PRESS SLACKS AND SHIRTS

OVER-ALL LEVEL OF SATISFACTION WITH COMFORT	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least liked
Below average	1	5	2	2
Average	22	38	11	27
Above average	60	23	46	23
No response	7	24	31	38

TABLE XXXVI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO OVER-ALL LEVEL OF SATISFACTION WITH FIT FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

OVER-ALL LEVEL OF SATISFACTION WITH FIT	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Below average	0	5	0	1
Average	26	39	17	24
Above average	57	21	43	25
No response	7	25	30	40

TABLE XXXVII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO OVER-ALL LEVEL OF SATISFACTION WITH DURABILITY FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

OVER-ALL LEVEL OF SATISFACTION WITH DURABILITY	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Below average	1	10	1	4
Average	25	34	15	22
Above average	55	19	38	21
No response	9	27	36	43

TABLE XXXVIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO OVER-ALL LEVEL OF SATISFACTION WITH EASE OF CARE FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

OVER-ALL LEVEL OF SATISFACTION WITH EASE OF CARE	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Below average	1	8	2	8
Average	16	35	20	23
Above average	66	22	37	20
No response	7	25	31	39

TABLE XXXIX

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO APPEARANCE OF DURABLE PRESS SLACKS AND SHIRTS WHEN PURCHASED

APPEARANCE OF GARMENT WHEN PURCHASED	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
No wrinkles present or wrinkles could be pressed out	81	58	57	46
Wrinkles present which could not be pressed out	0	4	1	3
No response	9	28	32	41

TABLE XL

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO COLOR OF DURABLE PRESS SLACKS AND SHIRTS AFTER WEAR AND CLEANING

COLOR OF GARMENT (AFTER WEAR AND CLEANING)	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
No change	65	37	51	37
Slight change	16	18	9	10
Distinct change	1	9	0	2
No response	8	26	30	41

TABLE XLI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO APPEARANCE OF MEN'S DURABLE PRESS SLACKS AND SHIRTS AFTER A DAY'S WEAR

APPEARANCE OF GARMENT AFTER A DAY'S WEAR	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Not wrinkled	71	30	40	21
Slightly wrinkled	11	26	17	18
Very wrinkled	0	8	2	10
No response	8	26	31	41

TABLE XLII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO FIT IN LENGTHWISE DIRECTION OF MEN'S DURABLE PRESS SLACKS AND SHIRTS WHEN PURCHASED

FIT IN LENGTHWISE DIRECTION	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Adequate	74	48	57	45
Too short	3	4	1	2
Too long	4	12	0	2
No response	9	26	32	41

TABLE XLIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO FIT IN CROSSWISE DIRECTION OF MEN'S DURABLE PRESS SLACKS AND SHIRTS WHEN PURCHASED

FIT IN CROSS-WISE DIRECTION	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Adequate	75	46	54	43
Not adequate	5	15	0	2
Too full	0	2	4	6
No response	10	27	32	39

TABLE XLIV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO FIT OF MEN'S DURABLE PRESS SLACKS AND SHIRTS AFTER CLEANING

FIT OF GARMENT AFTER CLEANING	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Garment remained same size	76	47	57	44
Garment shrank slightly	5	14	2	5
Garment size changed greatly	0	2	0	1
No response	9	27	31	40

TABLE XLV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO STIFFNESS OF FABRIC OF MEN'S DURABLE PRESS SLACKS AND SHIRTS WHEN PURCHASED

STIFFNESS OF FABRIC WHEN PURCHASED	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Stiff	18	15	11	13
Not stiff	64	50	47	38
No response	8	25	32	39

TABLE XLVI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO STIFFNESS OF FABRIC OF MEN'S DURABLE PRESS SLACKS AND SHIRTS AFTER CLEANING

STIFFNESS OF FABRIC AFTER CLEANING	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Stiff	9	6	3	3
Not stiff	71	56	56	47
No response	10	28	31	40

TABLE XLVII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO WARMTH OF MEN'S DURABLE PRESS SLACKS AND SHIRTS DURING WEAR

WARMTH OF GARMENT DURING WEAR	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Garments felt warmer than garments without a durable press finish	14	13	5	7
Garments felt the same	62	47	38	33
Garments felt cooler	5	4	14	10
No response	9	26	33	40

TABLE XLVIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO LENGTH OF TIME MEN'S DURABLE PRESS SLACKS AND SHIRTS WORN

LENGTH OF TIME DURABLE PRESS GARMENTS WORN	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
The same as garments without a durable press finish	54	40	36	29
A very short time	3	8	2	4
Garments not worn a sufficient number of times to judge	23	16	17	16
No response	10	26	35	41

TABLE XLIX

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO SEAM SPLITTING IN MEN'S DURABLE PRESS SLACKS AND SHIRTS

SEAM SPLITTING (IN DURABLE PRESS GARMENTS)	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Seams split	14	24	3	5
Seams did not split	65	40	54	44
No response	11	26	33	41

TABLE L

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO FABRIC SPLITTING IN MEN'S DURABLE PRESS SLACKS AND SHIRTS

FABRIC SPLITTING (IN DURABLE PRESS GARMENTS)	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Fabric split	5	5	2	3
Fabric did not split	75	59	55	45
No response	10	26	33	42

TABLE LI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO FABRIC ABRASION FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

FABRIC ABRASION	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Fabric wore thin in areas which received abrasion	24	26	5	8
Fabric did not wear thin	54	37	50	42
No response	12	27	35	40

TABLE LII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO AREAS WHICH FRAYED OR SHOWED WEAR IN MEN'S DURABLE PRESS SLACKS AND SHIRTS

FRAYED OR WORN AREAS	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Edges of garment	4	5	16	14
Pocket edges	9	9	0	0
Zipper fly	2	1	0	0
Crease of slacks	6	10	0	0
No problem areas	50	32	35	31
No response	19	33	39	45

TABLE LIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO METHOD OF CLEANING FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

METHOD OF CLEANING	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Dry clean	7	4	0	0
Commercial laundry	1	1	3	3
Automatic washing machine or hand wash	71	59	55	47
No response	11	26	32	40

TABLE LIV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO WHEN MEN'S DURABLE PRESS SLACKS AND SHIRTS ARE REMOVED FROM AN AUTOMATIC WASHING MACHINE

REMOVAL FROM AUTOMATIC WASHING MACHINE	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
After the machine cycle is completed	65	54	48	44
Before the last spin cycle	7	5	5	2
No response	18	31	37	44

TABLE LV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO DRYING METHOD USED FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

DRYING METHOD	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Drip dried or dried in a tumble dryer	60	50	46	35
Line dried or dried in an extractor followed by tumble drying	12	10	8	9
Dried in an extractor only	2	1	3	4
No response	16	29	33	42

TABLE LVI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO THE NUMBER OF MINUTES MEN'S DURABLE PRESS SLACKS AND SHIRTS WERE DRIED IN THE DRYER

NUMBER OF MINUTES GARMENTS DRIED IN THE DRYER	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
1-10	36	31	32	27
11-20	19	14	6	6
21 or more	7	6	5	3
No response	28	39	47	54

TABLE LVII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO WHEN MEN'S DURABLE PRESS SLACKS AND SHIRTS ARE REMOVED FROM THE DRYER

	SLACKS		SHIRTS	
REMOVAL FROM DRYER	Best-liked	Least-liked	Best-liked	Least-liked
Before or immediately after dryer stops	56	45	39	32
When convenient	6	7	4	4
No response	28	38	47	54

TABLE LVIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO HOW MEN'S DURABLE PRESS SLACKS AND SHIRTS ARE HANDLED AFTER REMOVAL FROM THE DRYER

	SLACKS		SHIRTS	
AFTER REMOVAL FROM THE DRYER	Best-liked	Least-liked	Best-liked	Least-liked
Garments are hung on a hanger or folded	59	48	41	36
Other	5	5	4	3
No response	26	37	45	51

TABLE LIX

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO APPEARANCE OF SEAMS ON MEN'S DURABLE PRESS SLACKS AND SHIRTS AFTER CLEANING

	SLACKS		SHIRTS	
SEAM APPEARANCE	Best-liked	Least-liked	Best-liked	Least-liked
Puckered	8	13	15	18
Not puckered	72	52	44	31
No response	10	25	31	41

TABLE LX

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO APPEARANCE OF CREASES AFTER CLEANING OF MEN'S DURABLE PRESS SLACKS AND SHIRTS

	SLACKS		SHIRTS	
CREASE APPEARANCE	Best-liked	Least-liked	Best-liked	Least-liked
Sharp	76	41	39	27
Not sharp	4	23	12	15
No response	10	26	39	48

TABLE LXI

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO OVER-ALL FABRIC APPEARANCE OF MEN'S DURABLE PRESS SLACKS AND SHIRTS AFTER CLEANING

APPEARANCE AFTER CLEANING	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Smooth	71	45	45	26
Wrinkled	6	16	10	21
No response	13	29	35	43

TABLE LXII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO PRESSING REQUIRED FOR MEN'S DURABLE PRESS SLACKS AND SHIRTS

PRESSING REQUIRED	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
"Touch-up" pressing with a steam or dry iron	31	35	35	30
Pressing after garment is sprinkled	4	5	7	9
No pressing is required	40	21	13	8
No response	15	29	35	43

TABLE LXIII

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO AREAS WHICH REQUIRE PRESSING ON MEN'S DURABLE PRESS SLACKS AND SHIRTS

AREAS WHICH REQUIRE PRESSING	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Seams and detail areas	26	30	28	28
No problem areas	29	20	18	12
No response	35	40	44	50

TABLE LXIV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO REMOVAL OF OIL BASED STAINS ON MEN'S DURABLE PRESS SLACKS AND SHIRTS

REMOVAL OF OIL BASED STAINS	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Very difficult	16	24	14	10
Not too difficult	27	16	12	9
Fabric has not been stained	38	27	32	31
No response	9	23	32	40

TABLE LXV

FREQUENCY OF RESPONSE OF NINETY RESPONDENTS TO REMOVAL OF BEVERAGE STAINS ON MEN'S DURABLE PRESS SLACKS AND SHIRTS

REMOVAL OF BEVERAGE STAINS	SLACKS		SHIRTS	
	Best-liked	Least-liked	Best-liked	Least-liked
Very difficult	4	4	4	4
Not too difficult	29	23	14	7
Fabric has not been stained	47	38	39	38
No response	10	25	33	41

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