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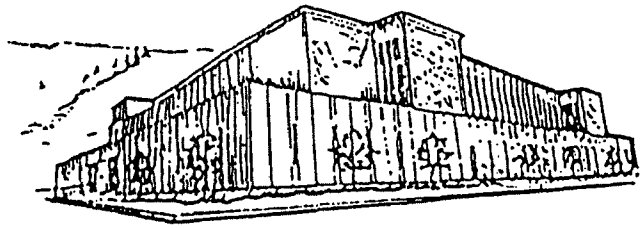
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THE CONSTRUCT VALIDITY OF THE
STOCKARD-JOHNSON MEASURE OF SEX DIFFERENCES
AS A MEASURE OF EXPRESSIVENESS AND INSTRUMENTALITY

by

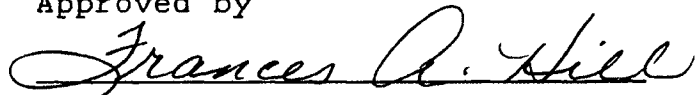
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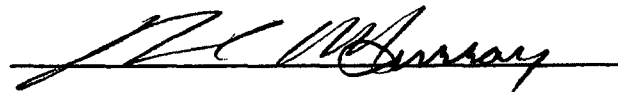
M.A., Temple University, 1982

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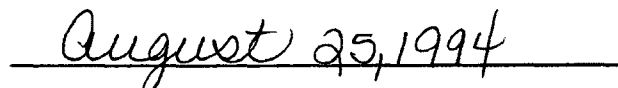
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Clinical Psychology

The Construct Validity of the Stockard-Johnson Measure of Sex Differences as a Measure of Expressiveness and Instrumentality (62 pp.)

Director: Frances Hill, Ph.D. *FH*

In the study presented here, evidence regarding the construct validity of the Stockard-Johnson Measure of Sex Differences (S-JMSD) is examined. This instrument attempts to avoid many of the conceptual and empirical problems reported with earlier measures of role-based psychological differences between men and women by separating out the concept of autonomy from the trait domains considered more central to these differences. In addition, the S-JMSD was developed with a clearer theoretical/conceptual rationale than was present for similar measures in the past. A self-report instrument designed to assess instrumental and expressive behaviors, the Instrumental and Expressive Behavior Inventory--revised (IEBI-r), was utilized to provide evidence of construct validity. The subjects were asked to complete the relevant scales of two other, more widely used measures related to psychological sex differences, the Spence Personal Attributes Questionnaire (PAQ) and the original Bem Sex Role Inventory (BSRI), and the constructs tapped by the S-JMSD, the PAQ, and the BSRI were compared. Results indicated that the S-JMSD expressiveness scale was the best predictor of self-reported expressive behaviors, although the S-JMSD instrumentality scale did not predict self-reported instrumental behaviors. The PAQ was the best predictor of instrumental behaviors, and the BSRI added somewhat to this prediction, but these measures did not predict expressive behaviors. Consistent with previous findings, the most notable sex difference in responding was that females tended to rate themselves higher in expressiveness than did males. Measures of instrumentality and masculinity were found to be weakly to moderately correlated with social desirability; the short BDI (Beck Depression Inventory, short form) was strongly related to social desirability. The expressiveness scales of the S-JMSD and the IEBI-r were found to be negatively related to depression, suggesting that these measures represent a more positive construal of this trait cluster as compared with older measures.

INTRODUCTION

Role-based psychological differences between men and women, psychological differences thought to be related to unequal participation in certain roles (Hoffman & Hurst, 1990), have been the subject of much research. Most instruments measuring role-based psychological differences have used the terms "femininity" and "masculinity" to refer to patterns of traits thought to be associated with traditional female and male roles, respectively. The terms "expressiveness" (for the traditional female pattern) and "instrumentality" (for the traditional male pattern) have been used frequently as well. According to Bem (1974), masculinity and femininity historically and cross-culturally have often been associated with instrumental and expressive orientations, respectively. Bem defines instrumentality as a focus on cognitive or goal- and achievement-oriented activities, while expressiveness is an affective, relationship-oriented approach. Proposed relationships between the original terms, masculinity and femininity, and the alternatives, instrumentality and expressiveness, have not been specified consistently in the literature, however; the two sets of terms are sometimes used interchangeably and sometimes differentiated, contributing to some of the conceptual confusion in this area.

Early measures of role-based psychological differences were constructed simply on the basis of differential responding by males and females, and they treated these patterns of responses as forming one bipolar dimension; in other words, femininity and masculinity were conceptualized as opposite and mutually

exclusive. These assumptions were questioned in a major review of the literature in this area by Constantinople (1973), and, largely in response to these criticisms, new measures were designed and old measures were adapted. In this second wave of instruments measuring role-based psychological differences, masculinity and femininity generally have been seen as separate dimensions, and have been conceptualized as orthogonal or uncorrelated. These measures are usually known as androgyny measures, referring to the fact that an individual can score high on both dimensions.

The original version of the Bem Sex Role Inventory (BSRI) (Bem, 1974), one of the most widely used of these instruments, consists of three scales, the femininity (F), masculinity (M), and social desirability scales, with twenty items each. Items consist of an adjective or short descriptive phrase, and respondents are instructed to rate, on a scale of 1 to 7, how true each item is for her or him. The femininity scale consists of items judged by female and male judges to be significantly more desirable for a woman than for a man in American society, and masculinity items are those judged significantly more desirable for a man. The social desirability scale is composed of items judged to be equally desirable (or neutral) for both sexes, and it is designed to assess the response style of socially desirable self-presentation. Bem (1974) reported very low correlations between femininity and masculinity scores in her study of the instrument, very good internal consistency, and

adequate test-retest reliability.

A shortened version of the BSRI (usually referred to in the literature as "the short BSRI") was developed by Bem (1979) to address some psychometric problems which had been pointed out in the literature; it included femininity and masculinity scales, but not the social desirability scale. The items "feminine" and "masculine," as well as some items which had been shown to be less socially desirable than the rest of the items, were dropped from the original BSRI in this version. Although some authors have agreed with Bem that these changes were important (Spence, 1983), the original BSRI appears to be more frequently used and discussed in the literature.

The internal validity of the original BSRI was supported in a study by Schmitt and Millard (1988). There also has been some empirical support for the convergent and discriminant validity of the original BSRI; specifically, the femininity and masculinity scales of the original BSRI were shown to have convergent validity with respect to the femininity and masculinity scales of the Adjective Check List, and discriminant validity with respect to measures of nurturance and dominance (Ramanaiah & Martin, 1984).

There also has been a considerable amount of criticism directed at both versions of the BSRI, although attention appears to have been focused more on the original BSRI. Some of these criticisms resulted from a study by Edwards and Ashworth (1977) in which the authors failed to replicate the item selection

procedures of the original BSRI. Edwards and Ashworth suggested that the sex-role conceptions upon which the BSRI was based were already (five years after its construction) obsolete. However, the item selection strategy of the original BSRI was later reexamined and cross-validated in a study by Walkup and Abbott (1978). These authors suggested that the methodology used by Edwards and Ashworth (1977) was significantly different from that used in the construction of the original BSRI by Bem, and that this could account for the findings of Edwards and Ashworth. Other authors concluded from these two studies that the item selection process used by Bem in the construction of the BSRI was unstable and therefore questionable (Locksley & Colten, 1979).

While Walkup and Abbott (1978) found no problem with Bem's item selection procedure, they did find problems with the social desirability scale of the original BSRI. One-half of the supposedly neutral (i.e., equally desirable for both sexes) items of the social desirability scale of the original BSRI were not rated as neutral by the judges in the Walkup and Abbott study. This finding was supported by a later study using the Spanish language version of the original BSRI (Lara-Cantu & Suzan-Reed, 1988).

The Personal Attributes Questionnaire (PAQ) (Spence, Helmreich, & Stapp, 1974), another widely used instrument in this area, was developed prior to the publication of the original BSRI and without knowledge of it. Spence (1983) describes the PAQ as a personality test which contains traits which stereotypically

differentiate women and men, but which are desirable for people generally. The trait clusters of the PAQ are most commonly referred to as "expressiveness" and "instrumentality." The PAQ and the short BSRI have been shown to be empirically very similar (i.e., the scales show high levels of convergent and discriminant validity), and it has been suggested that they might be used interchangeably (Lubinski, Tellegen, & Butcher, 1983).

Spence (1983) is careful to point out the significant difference in the theoretical underpinnings of the two instruments, however. The BSRI (both versions) is said to indicate global self-concepts of femininity and masculinity and the degree of sex-role identification. According to Spence and her colleagues, the PAQ measures only expressive and instrumental trait clusters, and should not be interpreted as reflecting femininity and masculinity; Spence and her colleagues argue that these trait clusters are essentially what is measured by the BSRI as well. In fact, Spence (1983) expressed regret that she and her colleagues did not move away from using the terms "femininity" and "masculinity" more quickly.

In an unpublished manuscript, Hill, Weltzien, and Cole (1982) expressed a more fundamental concern about the difficulty in using the terms "femininity" and "masculinity," and they proposed that this difficulty leads to problems in constructing measures and in interpreting their results. These authors suggested that there is a logical impasse involving the terms being used. Specifically, while female-ness and male-ness are

said to be discrete and dichotomously distributed, the traits and descriptions subsumed under the terms "femininity" and "masculinity" are continuous in their distribution. Unfortunately, the concepts of femininity and masculinity acquire a misleadingly absolute character through their linguistic connection with "female" and "male." Hill et al. proposed that this difficulty is inherent in the terms, and that "femininity" and "masculinity" are not useful in the exploration of psychological gender differences for this reason.

Myers and Gonda (1982) considered what was, in their view, another fundamental issue: the meaning of "femininity" and "masculinity," as understood by people generally. These authors found that the responses of their large sample to questions of the definition of "femininity" and "masculinity" generally were not related to the item content of the BSRI. Gender, sex-appropriate physical characteristics, and appearance were the most frequent responses given.

There are other reasons for considering a change in terminology in this research as well. The assumption of orthogonality (i.e., that there is an independent or uncorrelated relationship between femininity and masculinity), which underlies most currently used instruments measuring role-based psychological differences, has been questioned in various places in the literature (Feather, 1978; Marsh & Myers, 1986; Wong, McCreary, & Duffy, 1990). Interestingly, there is evidence that the relationship between femininity and masculinity seems to vary

with the instrument used, the sex of the respondent, and the characteristics of the sample (Myers & Gonda, 1982). Major, Carnevale, and Deaux (1981) offer evidence that femininity and masculinity are perceived by people in general as being unidimensional and bipolar; i.e., if a person is perceived as having traits associated with one gender, it is thought that she or he will not have traits associated with the other. This may well be a linguistic issue, such as the one raised by Hill and her colleagues (1982).

On the other hand, according to Major et al. (1981), the literature suggests that the traits of expressiveness and instrumentality seem to be independent empirically as well as in the way they are perceived by people generally. Thus, the concepts of expressiveness and instrumentality seem to manifest a clearer, more consistent relationship with one another, as compared to the concepts of femininity and masculinity. Perhaps this is because the referents of "expressiveness" and "instrumentality" are more clearly specified than those of "femininity" and "masculinity," which are sometimes used to refer to a whole domain of behaviors and attitudes related to being female and male, respectively, and sometimes used more narrowly. In addition, "expressiveness" and "instrumentality" seem better to reflect the domains of some role-based psychological differences, in that they are relatively independent of biological sex as well as of one another.

Deaux (1987) reviewed the literature in this area and

discussed the confusion and lack of clarity in terms and concepts that have plagued researchers, partly as a result of the different theoretical bases of the BSRI and the PAQ, the measures most frequently used. Deaux noted in particular that attempts to measure self-described femininity and masculinity have had difficulty distinguishing between a global construct and specific attitudes and behaviors. As has been discussed above, the BSRI purports to assess global self-concepts of masculinity and femininity and degree of sex-role identification, while the PAQ was constructed to measure only the trait clusters of expressiveness and instrumentality. Yet the two instruments are used in research in this area as though they measure the same constructs; indeed, as has been pointed out, the evidence suggests that the short BSRI and the PAQ are very similar in terms of the empirical results they have generated (Lubinski, Tellegen, & Butcher, 1983).

To clarify terms and to facilitate empirical tests of underlying theoretical propositions, Deaux (1987) proposed that behavioral referents of terms used in this area of research needed to be specified clearly. In an earlier comment on one particular study and on the empirical use of these measures generally, Gilbert (1985) had called for similar caution in research in the area; she urged that concepts be more carefully defined and differentiated, and that the psychometric properties and limitations of available instruments be attended to.

There have been a number of investigations regarding the

relationship of expressiveness and instrumentality to broader role-related behaviors and attitudes. Deaux (1984), in her review of the literature, observed that the evidence at that time was accumulating that the PAQ and the BSRI were predictive of expressive and instrumental behaviors, but not of other domains of gender-related behavior. In a later review, Deaux (1987) reiterated this point and added that biological sex had been shown to be a better predictor of these broader domains of behavior than had the BSRI or the PAQ. Spence and Sawin (1985) reported from their review of the literature that investigations of the relationship of the BSRI and the PAQ to other role-related behaviors and attitudes had found the relationships to be small at best and variable in pattern. Long (1990) also reported that the literature did not appear to support Bem's contention that sex-role phenomena were strongly interrelated.

Further evidence supporting the position of Spence and her colleagues was offered in one study which attempted to show that patterns of responses to the BSRI and the PAQ would be reflected in specific patterns of expressive and instrumental behavior (Holmbeck & Bale, 1988). Holmbeck and Bale developed a self-report measure tapping a number of expressive and instrumental behaviors, the Instrumental and Expressive Behavior Inventory (IEBI), and subjects were asked to report the frequency with which they had engaged in those behaviors over the period of the previous month. In this way, information about behavior patterns across time and a number of situations was obtained. The results

of their preliminary research using this instrument supported the idea that the femininity (BSRI) and expressiveness (PAQ) scales tended to predict expressive (and not instrumental) behaviors, and that the masculinity (BSRI) and instrumentality (PAQ) scales tended to predict instrumental (and not expressive) behaviors, to a significant degree.

Taylor (1984) also reported findings that appear to support the concurrent validity of the BSRI as a measure of expressiveness and instrumentality. It should be noted that Taylor used a revised scoring procedure for the items of the original BSRI, utilizing the most agreed-upon suggestions from four different factor analyses reported in the literature, so that eight femininity items ("shy," "flatterable," "loyal," "feminine," "soft-spoken," "gullible," "childlike," and "does not use harsh language") were deleted and two ("helpful" and "friendly") added, and three masculinity items ("athletic," "analytical," and "masculine") were deleted. Taylor showed that the BSRI, when revised in this way, is useful in estimating the traits of expressiveness and instrumentality and in predicting corresponding behavior.²

Helmreich and his colleagues (1979) observed, on the basis of their review of the literature as well as their own empirical study, that the PAQ and the BSRI demonstrate construct and

²It should be noted that, while these findings suggest that the PAQ and the BSRI do measure expressive and instrumental trait clusters, they do not in themselves rule out the possibility that these instruments also measure broader role-related characteristics.

predictive validity in the measurement of expressive and instrumental traits, as opposed to broader sex roles or other sex-related phenomena (Helmreich, Spence, & Holahan, 1979). A number of other authors have also concluded on the basis of the accumulated evidence that Spence and her colleagues were correct in positing that both the PAQ and the BSRI are in fact measuring trait clusters which might better be referred to as expressiveness and instrumentality, rather than broader gender roles (Deaux, 1984; Gilbert, 1985; Wong, McCreary, & Duffy, 1990).

Factor analyses have helped to shed some light on the psychometric problems of the BSRI and the PAQ. Constantinople (1973), in her far-reaching review of the early research in this area, had suggested that femininity and masculinity (as measured by instruments which preceded the BSRI and the PAQ) were actually multidimensional and complex, and she questioned the utility of lumping each set of dimensions together. Several authors (Gill, Stockard, Johnson, & Williams, 1987; Marsh & Myers, 1986; Wong, McCreary, & Duffy, 1990) offer evidence suggesting that the factor structure of each scale of the BSRI and the PAQ (as well as some other similar measures) are also complex and multidimensional. That is, the scales of the BSRI and the PAQ each appear to consist of a number of separate components, and these components are not strongly correlated with one another (Deaux, 1987). Some authors have concluded from the available data that differing empirical findings with regard to the factor

structure of femininity and masculinity may be, in fact, partially artifacts of the different instruments used in this area (Marsh & Myers, 1986; Wong, McCreary, & Duffy, 1990).

In addition, it appears that factor loadings of responses from sex-typed individuals (i.e., feminine females and masculine males) differ from factor loadings of responses from non-sex-typed individuals. Specifically, sex-typed persons in one study responded to the items of the original BSRI on the basis of their perceived connections to a bipolar feminine-masculine dimension, while non-sex-typed persons responded as if femininity and masculinity were more independent of one another (Larsen & Seidman, 1986). This seems consistent with some of the later theoretical propositions of Bem (1981) in her gender schema theory, in which she proposed that sex-typed individuals tend cognitively to organize their experiences and behaviors in terms of their relationship to the roles and expectations appropriate to her or his sex, while non-sex-typed individuals utilize schemata other than gender in their cognitive organization.

Other basic questions about the conceptual clarity and theoretical bases, as well as about the psychometric structure of the PAQ and the BSRI, have been raised. Pedhazur and Tetenbaum (1979), in their critique of the BSRI, agree with Constantinople's (1973) comments with regard to the empirical construction of earlier measures and point out that empirical construction is appropriate only when simple prediction (or criterion-related validity) is the issue. Pedhazur and Tetenbaum

(1979) criticize the construction of the BSRI as relying more on empirical than on theoretical methods. Gill and her colleagues (1987) agree with this position and extend the criticism to the PAQ, observing that theoretical propositions were developed by Bem and Spence and colleagues only after the selected items were inspected. These authors point out that, while patterns of personality characteristics which differ across sex often have been the subject of theoretical discussions, the empirical measures which have been developed for research in this area have generally not attended to these theories. Gill and her colleagues further note that the theories which have been shown to be most useful have not been based on the concepts of masculinity and femininity.

To summarize what has been said about the measurement of role-based psychological differences, the instruments most frequently used, the BSRI and the PAQ, have been criticized on a number of grounds. They were not constructed with a theoretical framework in mind, and the scales appear to lack the unidimensionality and orthogonality (or independence from one another) which they were originally said to manifest. Perhaps the most troubling difficulties have arisen from the fact that the two instruments are empirically and psychometrically very similar, while the authors' conceptions of what is being measured are different in some important ways. As a result, there has been considerable confusion with regard to what the scales measure or even what they should be called, and the scales

themselves, the concepts, and the terms have often been used interchangeably. Most of the empirical evidence at this point suggests that Spence and her colleagues were correct in positing that the scales of both the PAQ and the BSRI measure expressive and instrumental trait clusters, rather than broader role-related behaviors and attitudes.

Despite the numerous problems in this area of research, there has been some compelling evidence that the kinds of role-based psychological differences that are measured by the BSRI and the PAQ are of some importance in the study of mental health and well-being. For example, in overall psychological adjustment, masculine-typed and androgynous individuals (as measured by the BSRI and the PAQ) generally have been found to be at an advantage over feminine-typed persons (of either sex) in terms of personal adjustment and self-esteem (Adams & Sherer, 1982; Adams & Sherer, 1985; Orlofsky & Windle, 1978) and in terms of resistance to depression (Whitley, 1984). (In reporting these patterns of results, the reviewers took into consideration the possible effects of sex-role stereotypes and biases related to sex differences in self-disclosure.) In addition, some empirical studies suggest that femininity (as measured with scales of this type) is negatively correlated with personal effectiveness (Adams & Sherer, 1985).

The relationships between psychological health and the kinds of psychological characteristics measured by the BSRI and the PAQ, while not strong, are particularly interesting when the

consistently higher rate of depression among women is considered (Mollica, 1989). Specifically, it appears that the role-related psychological characteristics more or less expected of women in this particular sociocultural context may leave them vulnerable to depression as well as other problems. The literature in the area of the psychology of women can be seen as revolving around this theme as well. It is thought that traditional role-based expectations and pressures have undermined women's abilities to function with consistent competence and effectiveness, especially when it comes to asserting their own needs and exercising authority (Libow, Raskin, & Caust, 1982). Thus, the importance of continuing research in the area of role-based psychological differences, and of elucidating the related social expectations and their relationship to psychological well-being, seems clear.

Gill, Stockard, Johnson, and Williams (1987) were among the critics of the BSRI (including the short BSRI) and the PAQ. These authors suggested a new measurement device (originally developed by Johnson, Stockard, Acker, & Naffziger, 1975), later named the Stockard-Johnson Measure of Sex Differences (S-JMSD). The S-JMSD was based on the theoretical work of Talcott Parsons (1951), who was the first to use the terms "expressive" and "instrumental" in describing the roles typically adopted by women and men in our social system, although Johnson and her colleagues defined the terms more narrowly than had Parsons. An expressive orientation was defined by Johnson et al. as being one which places importance on facilitating processes of social

interaction; an instrumental orientation was defined as one which is primarily concerned with the attainment of goals outside of social interaction processes, i.e., with individualistic or achievement-related goals (Gill et al., 1987).

Gill and her colleagues posit that these orientations might have their origins in early mother-child relationships, and they cite psychoanalytic theorists (Horney, Deutsch, and Chodorow, who derived their theories from that of Freud) as well as more general social theorists (Talcott Parsons and Hartley) as offering explanations of early sex role development along these general lines. Specifically, in this mother-child context, the female child learns role-related patterns rather directly, from her (same-sex) mother, while the male child must eventually differentiate himself from this context in order to learn the patterns expected of him. Luepnitz (1988) interprets the process described by Chodorow in The Reproduction of Mothering as follows:

The girl's identity ... is founded on a sense of continuity with her original relationship, while the boy's is founded on discontinuity from his....

There is, thus, a psychological renunciation, a cutoff (from mother) in the early experience of the male that does not occur, or does not occur to the same degree, for the female.

If expressiveness, then, is characteristic of the mother, this pattern, and the primary relationship itself, are what is

renounced by the son. (The assumption here is that the mother is the primary caretaker of the children; it will be interesting to note the possibly profound implications of increased caretaking by fathers in our time.)

Crucial to this definition of expressiveness is the emphasis on socioemotional skill, interdependence, and relationality, and the exclusion of characteristics such as emotionality, passivity, and dependence. Expressiveness and instrumentality are both seen as potentially active orientations, which can involve taking initiative at times. In this way, the authors separated out the concept of autonomy, which is measured by a third scale of the S-JMSD. Gill and her colleagues point out that factor analyses of the PAQ and the BSRI have provided fairly consistent support for a separate dimension which might be described in this way.

In contrast, these authors contended that the BSRI and the PAQ confound passivity and dependence with expressiveness, helping to perpetuate sex-role stereotypes. For example, the adjectives "shy", "yielding", "childlike," and "soft-spoken" are part of the femininity scale of the original BSRI², and "emotional" is included in the corresponding PAQ scale. In addition, the BSRI masculinity scale contains a number of items that would appear to reflect autonomy, as does the corresponding PAQ scale, according to Gill and colleagues.

Thus, the authors of the S-JMSD utilized a method of scale

²Some of the offending items were dropped in the short BSRI; however, the original BSRI continues to be the version that is most frequently used in research.

construction that was more clearly rational and theory-based than was the construction of the BSRI and PAQ. Having defined their concepts in terms of Parsons' theory, seven judges who were conversant with this theoretical basis chose adjectives from the Gough Adjective Checklist to reflect both positive and negative aspects of the three dimensions of expressiveness, instrumentality, and autonomy. Items upon which there was agreement (at least five out of seven judges) were then administered to a sample of 265 undergraduate students, with roughly equal numbers of women and men. The subjects were to rate themselves on a four-point Likert scale ranging from "very true of me" to "very untrue of me." Factor and cluster analyses of these responses revealed several clear dimensions for both women and men, which were labeled "positive expressive," "positive instrumental," and "autonomy." Smaller clusters were found for the negative aspects of each dimension. (Gill et al. used only the items representing the positive pole of each dimension in later replications, to simplify the instrument and to make it more comparable to the BSRI and the PAQ.) The grouping of "positive expressive" did emerge as separate from emotionality and the acting out of emotions. Also, the items representing positive expressiveness formed a more unified group than other dimensions.

Four replications were conducted by Gill and her colleagues with samples roughly equal in numbers of women and men but different in terms of age, socioeconomic and work status, and

knowledge about gender role issues. The results of the original study were generally confirmed in these replications. Specifically, there was a strong, unidimensional factor which was called "expressiveness" (composed of items originally judged to be positive expressive). Items which had been selected by the judges as positive instrumental seemed to be actually composed of two separable dimensions, which were called "industrious" and "analytical"; autonomy items seemed to fall into two dimensions as well--"forceful" and "adventurous." Coefficients alpha suggested that each scale was internally consistent; intercorrelations among the scales were reported to be moderate in size and generally positive. The only consistent sex difference in these findings was in expressiveness; women in every group and time period (in the original study done in 1972, and in replications done in 1982, 1983, and 1984) reported higher levels of expressive traits than did men. Gill and her colleagues raise the question of whether this is in fact the main factor in role-based psychological sex differences, or whether future studies will show sex differences in instrumentality and autonomy as well.

Another issue which remains unresolved with regard to the measurement of role-based psychological differences is the impact of social desirability on these measures. All of the measures being examined here are self-report inventories, and for this reason, may be vulnerable to response styles, particularly social desirability (Nunnally, 1967). The authors of the Instrumental

and Expressive Behavior Inventory (IEBI) recommend that this issue be explored with regard to their measure as well (Holmbeck & Bale, 1988).

The present study was undertaken, then, in order to explore the construct validity of the S-JMSD, that is, to investigate the utility of re-defining expressiveness and instrumentality in the way that Gill et al. have done, and of considering autonomy as separate from these traits. To do this, subjects' self-reported expressiveness and instrumentality on the S-JMSD were used to predict expressive and instrumental behaviors (as self-reported on the IEBI). The ability of the S-JMSD to predict self-reported behaviors was compared with the ability of the BSRI and the PAQ to predict the same behaviors. The S-JMSD, the BSRI, and the PAQ were also compared (through correlational techniques) to clarify the degree of conceptual overlap present in the corresponding scales of these measures. Sex differences in responding to the S-JMSD were investigated and compared with the findings of Gill et al. In addition, the social desirability of all measures administered was explored, and the ability of all scales administered to predict depression scores on the Beck Depression Inventory, short form (the short BDI) was considered as well.

HYPOTHESES

1. It was hypothesized that the S-JMSD would better predict self-reported expressive and instrumental behaviors than would the original BSRI or the PAQ.
2. It was hypothesized that S-JMSD scores would correlate moderately with scores from the original BSRI and the PAQ.
3. It was hypothesized that the original BSRI and the PAQ would predict self-reported expressive and instrumental behaviors moderately well.
4. It was hypothesized that female subjects would rate themselves higher in expressiveness, as measured by the S-JMSD, than would male subjects. A lack of consistent sex differences in the instrumentality and autonomy dimensions was expected.

Design. The present study was designed to provide further construct validation to the Stockard-Johnson Measure of Sex Differences (S-JMSD) by determining how well it predicts patterns of self-reported expressive and instrumental behavior. This aspect of the construct validity of the S-JMSD was compared with that of the relevant scales of the PAQ and the original BSRI (i.e., the expressiveness and instrumentality scales of the PAQ and the femininity and masculinity scales of the BSRI).

Sex differences in response patterns were noted and compared with the results obtained by Gill et al. (1987). The social desirability of all four measures was also estimated with the SD Scale (Edwards, 1957), which measures the tendency to respond in

a socially desirable manner when describing oneself in a testing situation. The ability of SD scores to predict particular patterns of scores on the S-JMSD, the BSRI, the PAQ, and the IEBI was examined. In addition, the short form of the Beck Depression Inventory (short BDI) was administered, and the ability of the other scales to predict depression scores on the short BDI was investigated.

Definitions. The current work's understanding of the terms expressiveness, instrumentality, and autonomy was based on the factors identified in the study by Gill et al. (1987).

"Expressiveness" was defined as including such items as sympathetic, understanding, pleasant, considerate, good-natured, warm, and obliging. "Instrumentality" was defined by such items as thorough, efficient, industrious, planful (the "industrious" dimension of instrumentality), as well as analytical, foresighted, and rational (the "analytical" dimension).

"Autonomy" includes descriptors such as stern, forceful, aggressive, outgoing, assertive, independent, and active (the "forceful" dimension), as well as daring and adventurous (the "adventurous" dimension).

Socially desirable responding was defined as Edwards recommends, as a tendency to respond "true" when an item reflects a socially desirable trait or behavior and "false" when it does not. According to Edwards, such a tendency is acquired through social reinforcement and is closely related to cultural norms (Walsh, Tomlinson-Keasey & Klieger, 1974).

METHODS

Subjects. Subjects for this study were 230 college students enrolled in undergraduate psychology classes at the University of Montana. Most subjects received experimental credit for their participation; however, this varied somewhat depending upon the preference of the instructors. (Some instructors saw the study as unrelated to course content, and declined to give credit for participation.) Questionnaires from a total of 19 subjects were not used in any of the analyses, because of irregularities in the administration or because the questionnaires were incomplete. Of the 211 remaining subjects, 125 were females and 86 were males, a ratio of about 1.5 to 1. Subjects ranged in age from 18 to 50, with 79% in the 18-25 age range. In ethnicity, 89% of the subjects were Caucasian, about 6% were Native American, and there were small numbers of subjects with other ethnic backgrounds. The subjects were randomly divided into main and cross-validation samples, containing 136 and 75 subjects, respectively, for the stepwise multiple regressions. For other analyses, these samples were combined. The proportion of male to female subjects was approximately the same for both samples (.43 and .36, respectively).

Instruments used. The original BSRI has been described above. Test-retest reliability has been estimated to be between .76 and .94, and coefficient alpha (internal consistency) has been found to range from .75 to .90 (Long, 1990). Only the femininity and masculinity scales of the original BSRI were used in this study.

Responses on each 20-item scale were added, so that higher scores reflect higher levels of femininity or masculinity.

The PAQ has also been discussed above. Respondents are asked to circle the letter (A to E) that describes where she or he falls on a scale described by two extreme descriptors (e.g., "not at all independent" to "very independent"). Only the expressiveness and instrumentality scales were used for this study, each consisting of eight items whose scores are summed for the scale score, so that higher scores reflect higher levels of the trait. The expressiveness and instrumentality scales have been shown to be significantly and positively correlated with one another ($r=.14$ for females, $r=.47$ for males). Two measures of the internal consistency of the PAQ have been reported. Part-whole correlations for the scales have ranged from .19 to .70 (all $p=.05$ or better). Alpha coefficients for the expressiveness scale were .84 for women and .79 for men, and for the instrumentality scale they were .94 for women and .85 for men.

The S-JMSD, described above, consists of 45 items, with 7 expressiveness items, 7 instrumentality items, 9 autonomy items, and the rest filler items. Respondents are asked to mark whether each item is very true, somewhat true, somewhat untrue, or very untrue of her or him. The scales have been shown to be fairly consistent internally, although the instrumentality scale showed the lowest and most variable (from sample to sample) levels of internal consistency. Coefficients alpha for the expressiveness scale ranged from .74 to .83, for the instrumental scale from .39

to .77, and for the autonomy scale from .63 to .76. The intercorrelations between scales were found by Gill et al. (1987) to be generally positive and moderate in size.

The IEBI also has been described above. The IEBI was revised for the purposes of this study (after consulting with the lead author of the article introducing the IEBI), eliminating the items which were not found to be meaningful in the original study. This revised version, hereafter referred to as the IEBI-r, retained a total of 33 keyed items, with 13 on the expressive scale, 10 on the lack of instrumentality scale, 8 on the competitive/assertive scale, and 2 on the persistent scale. The latter three scale scores are combined for the instrumentality score, with the total lack of instrumentality score subtracted from the sum of the other two. The number of filler items retained (15) was approximately half the number of keyed items, as was true of the original instrument. Subjects were asked to respond on a 5-point Likert scale how often they had engaged in particular behaviors over the past month. Higher scale scores indicated higher levels of the type of behavior in question. The original IEBI had Cronbach alpha coefficients of expressive: .82, lack of instrumentality: .75, competitive/assertive: .69, and persistent: .45. Intercorrelations between the scales were low to moderate, so that these scales appear to be relatively independent (Holmbeck & Bale, 1988).

As mentioned above, the SD scale was used to measure social desirability. The SD scale consists of 39 items taken from the

MMPI, all reflecting socially desirable responses, so that a high score (total of items marked "true") is reflective of high socially desirable responding. Ratings of SD scale item values by different judges, ranging from 1 for extremely socially undesirable to 9 for extremely socially desirable, have been shown to be highly reliable and highly correlated (Edwards, 1967). The SD scale differs from other instruments purported to measure social desirability in that responses to Edwards' SD Scale tap modal or typical ways of socially desirable responding, as opposed to the improbable, nonmodal responses which are keyed in the Marlowe-Crowne SD Scale (Crowne and Marlowe, 1960) and in the Lie scale of the MMPI (Hathaway and McKinley, 1951; Edwards, 1990).

The BDI is a simple questionnaire used to identify depression in patients in various settings. The original BDI was reported to have a split-half reliability of .93, and it was shown to have good concurrent validity with clinical ratings and other psychological instruments measuring depression. Unlike some other measures of depression, it has been shown to discriminate between anxiety and depression fairly well. The short BDI consists of 13 items from the original 21-item version, chosen for their high correlations with the original BDI (.96 overall) and with clinical ratings of depression (.61, as compared to the original BDI's correlation of .59 with clinical ratings; Beck & Beck, 1972).

Procedures. Subjects were given information about what was expected of them in the overall instructions (see Appendix A), and they were then asked to provide some demographic information about themselves (see Appendix B). The F and M scales of the original BSRI, the SD Scale, the expressiveness and instrumentality scales of the PAQ, the S-JMSD, the IEBI-r, and the Beck Depression Inventory, short form (see Appendix C for all measures) were then administered (in that order) at one sitting to groups of students which varied in number from 3 to 20. The directions accompanying each measure were read aloud by the experimenter before the subjects began work on that instrument. Completion of these 5 paper-and-pencil measures required approximately 35 minutes. The students were then given information about the scheduling of the debriefing meetings, which were held on different days and at different times to ensure convenience. Students were encouraged to attend a debriefing meeting, but they were informed that it was not required to attend these meetings in order to receive credit. (The vast majority of subjects did not take advantage of the debriefing meetings, but the few who did attend seemed genuinely interested in the study and its results.)³

Analyses. Stepwise multiple regression techniques were used to

³In scoring the short BDI, there was the unanticipated problem that some subjects indicated suicidal intent and/or severe levels of depression. After consultation with supervisors, the experimenter contacted the subjects involved, met with them, and followed up with appropriate referrals and consultations.

test the first hypothesis (that S-JMSD scores would account for more of the variance in IEBI-r scores than would BSRI or PAQ scores), as well as the third hypothesis (that the BSRI and the PAQ would predict IEBI-r scores moderately well). Cross-validation of these results was done with a separate sample. Correlational techniques were used to assess the relationship between the S-JMSD and the BSRI and PAQ (hypothesis 2). The mean self-ratings of female and male subjects (from the main sample) on each scale were compared using t-tests (hypothesis 4). SD scale scores were among the variables used in the multiple regressions as possible predictors of IEBI-r scores; correlations of SD with each other scale administered were also computed. In addition, stepwise multiple regression of the short BDI on each scale was done, to investigate which of the scales might be good predictors of depression as measured by the short BDI; cross-validation of these results was done as well.

RESULTS

Hypotheses 1 and 3. It was expected that the S-JMSD would better predict self-reported expressive and instrumental behavior, as measured by the IEBI-r, than would the BSRI or the PAQ. Table 1 shows the results of stepwise multiple regressions

Insert Table 1 about here

of the IEBI-r expressiveness and instrumentality scales, using gender, social desirability, and the corresponding scales of the BSRI, the PAQ, and the S-JMSD as predictors. These results provide partial support for Hypothesis 1; the S-JMSD expressiveness scale was the best predictor of expressive behavior as reported on the IEBI-r (high S-JMSD scores predicted high IEBI-r scores), although even this predictor did not account for a large percentage of the variance in IEBI-r expressiveness scores (15.92%). The next best predictor of IEBI-r expressiveness scores was gender, with females tending to score higher than males; this raised the variance accounted for to 19.45%. In partial contradiction of Hypothesis 3, which stated that scores on the BSRI and the PAQ would predict self-reported expressive and instrumental behaviors moderately well, the BSRI femininity scale and the PAQ expressiveness scale were not important predictors of IEBI-r expressiveness scores (i.e., they did not meet the criteria to enter the prediction equation). The multiple regression findings for expressiveness were supported by

cross-validation; surprisingly, the variance accounted for in the cross-validation sample was 35%, a considerable improvement over the variance accounted for in the main sample (1.8 times as much variance accounted for). That is, the S-JMSD expressiveness scale and gender predicted IEBI-r expressiveness scores better in the cross-validation sample than they had in the main sample.

The prediction of IEBI-r instrumentality scores was another matter. The S-JMSD instrumentality scale never met the criteria for entering into the prediction equation. The PAQ instrumentality scale best predicted IEBI-r instrumentality scores (high PAQ scores predicted high IEBI-r scores), accounting for 44.4% of the variance. Social desirability was the next best predictor, with high social desirability corresponding to high IEBI-r instrumentality scores, and increasing the variance accounted for to 50.52%. The BSRI masculinity scale added a relatively small amount of predictive power, with high scores predicting high IEBI-r instrumentality scores (for a total of 53.64% of the variance accounted for). These results were supported by cross-validation, using the same equation with a second sample, which showed that the variance accounted for in this sample was 43.16%, a shrinkage of about 20% when compared with the variance accounted for in the main sample. Thus, Hypotheses 1 and 3 were both only partially supported by the results.

More information about the relationship of the IEBI-r scales with corresponding scales of the other instruments is included in

Table 2, which is a matrix of Pearson product moment correlations

 Insert Table 2 about here

of all scales administered with one another. The IEBI-r expressiveness and instrumentality scales show significant positive correlations with each of the corresponding scales of the BSRI, the PAQ, and the S-JMSD, although the relationships vary in strength. The weakest relationship appears to be that of the IEBI-r instrumentality scale with the S-JMSD instrumentality scale, with $r=.356$ ($df=209$, $p<.0005$). The strongest relationship is that of the IEBI-r instrumentality scale with the PAQ instrumentality scale, with $r=.634$ ($df=209$, $p<.0005$).

Hypothesis 2. Hypothesis 2 predicted that S-JMSD scales would be moderately correlated with corresponding scales from the BSRI and the PAQ. Table 2 includes the Pearson product moment correlations obtained for pairs of these scales. Hypothesis 2 was essentially supported by these results. The S-JMSD expressiveness scale was highly and positively correlated with the BSRI femininity scale ($r=.678$, $df=209$, $p<.0005$) and with the PAQ expressiveness scale ($r=.706$, $df=209$, $p<.0005$). The S-JMSD instrumentality scale was less strongly correlated with the BSRI masculinity scale ($r=.356$, $df=209$, $p<.0005$) and the PAQ instrumentality scale ($r=.381$, $df=209$, $p<.0005$), although both of these were highly significant as well. In addition, these data indicate that the corresponding scales of the BSRI and the PAQ

are highly and positively correlated with one another ($r=.710$, $df=209$, $p<.0005$, for both sets of scales).

Hypothesis 4. Hypothesis 4 predicted that female subjects would rate themselves higher in expressiveness, as measured by the S-JMSD, than would male subjects, and that no consistent sex differences in the S-JMSD instrumentality or autonomy scales would be evident. Table 3 shows the results of a set of t -tests

 Insert Table 3 about here

using data from the main sample to explore the possibility of sex differences in responding to each of the scales administered. As hypothesis 4 predicted, females did rate themselves considerably higher in expressiveness, as measured by the S-JMSD, than did males ($t=4.46$, $df=134$, $p<.001$), and no sex differences in S-JMSD autonomy scores were evident.

However, female subjects also rated themselves slightly higher in instrumentality, as measured by the S-JMSD, than did male subjects ($t=2.06$, $df=134$, $p=.042$). A data plot of these results ruled out the possibility that this finding was due to a few extreme scores among female subjects. Interestingly, males' scores on the S-JMSD instrumentality scale took the form of a more or less normal distribution, while females' scores seemed to form a bimodal distribution.

Other sex differences. Table 3 shows the results of t -tests which used data from the main sample to explore possible sex

differences in responding to all other measures. There was an overall pattern to these results in the sense that females rated themselves considerably higher on the BSRI femininity scale, on the PAQ expressiveness scale, and on the IEBI-r expressiveness scale (t values ranged from 3.89 to 4.46, all $df=134$, $p<.001$), as compared to male subjects. Another significant sex difference was that males scored somewhat higher on the IEBI-r competitive/assertive scale ($t=2.21$, $df=134$, $p=.029$) than did females.

The S-JMSD autonomy scale. Table 2 shows relatively strong and highly significant positive correlations of the S-JMSD autonomy scale with the BSRI masculinity scale, the PAQ instrumentality scale, and the IEBI-r instrumentality scale ($r=.739$, $.624$, and $.582$, respectively, all $df=209$, $p<.0005$). A weaker, but significant, positive correlation is shown with the S-JMSD instrumentality scale ($r=.266$, $df=209$, $p<.01$). The S-JMSD autonomy scale does not appear to be significantly correlated with the BSRI femininity scale, the PAQ expressiveness scale, or the S-JMSD expressiveness scale, although a weak, but significant, positive correlation is evident with the IEBI-r expressiveness scale ($r=.232$, $df=209$, $p<.01$).

The S-JMSD autonomy scale was significantly and positively correlated with SD ($r=.332$, $df=209$, $p<.0005$). There was also a significant negative correlation of the S-JMSD autonomy scale with the short BDI ($r=-.314$, $df=209$, $p<.01$), although the S-JMSD was not among the good predictors of the short BDI in the

stepwise multiple regression (see Table 4). As was stated above, no significant sex differences in responding to the S-JMSD autonomy scale were evident (see Table 3).

Social desirability. Pearson product moment correlations of the SD scale with each other scale are included in Table 2. Social desirability appears to be significantly correlated, in a positive direction, with all scales measuring instrumentality and masculinity, although the strength of the relationship varies considerably (r ranges from .256, $df=209$, $p<.01$, to .556, $df=209$, $p<.0005$). As mentioned above, there was a significant, but relatively small, positive correlation of SD with the S-JMSD autonomy scale ($r=.332$, $df=209$, $p<.0005$), and there was also a significant, strong negative correlation of SD with the short BDI ($r=-.695$, $df=209$, $p<.0005$). Other variables do not appear to be significantly correlated with SD.

In addition, the SD scale was among the predictor variables in the multiple regressions shown in Table 1. As was discussed above, SD was the second best predictor of IEBI-r instrumentality scores, with high SD scores predicting high IEBI-r instrumentality scores. SD was not an important predictor of IEBI-r expressiveness scores (i.e., it did not meet the criterion to enter the prediction equation).

Results of a stepwise multiple regression with gender, social desirability, and all other scales administered predicting scores on the short BDI are shown in Table 4. The SD scale was

Insert Table 4 about here

the best predictor of depression as reported on the short BDI, with low SD scores predicting high BDI scores, accounting for a large proportion of the variance (47.07%). (These data are explored further in the next section.)

Depression. Table 2 includes correlations of scores on the short BDI with scores on all other measures administered. It appears from these data that, while scores on the BSRI femininity scale and the PAQ expressiveness scale are unrelated to depression scores, all other scales demonstrate a significant negative relationship to depression. That is, high scores on the S-JMSD autonomy scale, the BSRI masculinity scale, the PAQ instrumentality scale, the S-JMSD instrumentality scale, and the IEBI-r instrumentality scale appear to be associated with relatively lower scores on the short BDI (i.e., lower levels of depression), and vice-versa. These correlations varied in strength from $r = -.181$ ($df=209$, $p < .05$) for the S-JMSD instrumentality scale, to $r = -.517$ ($df=209$, $p < .0005$) for the IEBI-r instrumentality scale. Interestingly, the S-JMSD expressiveness scale and the IEBI-r expressiveness scale also appear to have significant negative correlations with the short BDI, although these relationships are not strong ($r = -.180$, $df=209$, $p < .05$, and $-.273$, $df=209$, $p < .01$, respectively).

As stated above, social desirability was the best predictor

of short BDI scores, with low SD predicting high scores on the short BDI, accounting for a large proportion of the variance (47.07%). Prediction of short BDI scores was improved appreciably by adding the IEBI-r expressiveness scale to the equation (total variance accounted for was 54.30%), with low IEBI-r expressiveness scores corresponding to high scores on the short BDI. The IEBI-r lack of instrumentality scale was the next best predictor, with high lack of instrumentality scores corresponding to high scores on the short BDI, but it added little to the total predictive power (total variance accounted for was 56.44%). The S-JMSD instrumentality scale was the only other of the 14 predictors to meet the criteria for entering the equation, with high instrumentality scores predicting high scores on the short BDI, but it contributed only a little more to the prediction (total of 58.73% variance accounted for). Cross-validation using the first two predictors only (given that the latter two added little to the predictive power) supported these results, accounting for 46.24% of the variance in the cross-validation sample (about 15% shrinkage).

DISCUSSION AND CONCLUSIONS

Social desirability. Social desirability was found to be weakly to moderately correlated with the instrumentality and masculinity scales of all instruments administered in this study, as well as with the autonomy scale of the S-JMSD. Social desirability was also the second best predictor of self-reported instrumental behaviors. It appears fairly clear that the measurement of instrumentality and autonomy with these scales is seriously confounded with patterns of socially desirable responding. In light of this finding, results reported here concerning these scales are weakened and must be considered tentative. It might be recommended that future research focus on measures, and on items, tapping the domain of instrumentality, but relatively neutral with regard to social desirability. In the case of instrumentality, this may be particularly challenging, since instrumentality is fairly consistently valued in our society. However, unless the effect of socially desirable self-presentation can be separated out from patterns of more genuine responding with regard to these domains, the meaning of any results obtained is unclear.

Strong negative relationships between SD and scores on the short BDI were also noted, and SD was the best predictor of short BDI scores, accounting for a large proportion of the variance. This limits the conclusions related to depression that can be drawn from this study. It would be expected, however, that a self-report measure of depression such as this would be highly

correlated with social desirability in a non-clinical population; with clinical populations, the short BDI might be a more useful measure.

Predicting expressive and instrumental behavior. Because of the S-JMSD's more solid theoretical basis, and because it attempts to clarify the constructs of expressiveness and instrumentality along lines supported by previous factor analyses (by separating out the concept of autonomy), the S-JMSD was hypothesized to be an improvement over the BSRI and the PAQ in terms of ability to measure the traits of expressiveness and instrumentality, and thus in ability to predict self-reported expressive and instrumental behavior (Hypothesis 1). This hypothesis was supported in the sense that the S-JMSD expressiveness scale was the best predictor of expressive behavior, as measured by the IEBI-r expressiveness scale, although not a large proportion of the variance in IEBI-r expressiveness scores was accounted for by the S-JMSD. The hypothesis was not supported in that the S-JMSD instrumentality scale was not a good predictor of IEBI-r instrumentality scores. Taken as a whole, the S-JMSD does not appear to predict self-reported expressive and instrumental behavior very well.

It was also hypothesized that the BSRI and the PAQ would predict self-reported instrumental and expressive behavior moderately well (Hypothesis 3). There was partial support for this hypothesis, in that the PAQ instrumentality scale was shown to be quite a good predictor of self-reported instrumental

behavior, with the BSRI masculinity scale adding (after SD) a little to the predictive power. However, the PAQ and the BSRI did not predict self-reported expressive behaviors at all.

Thus, none of these instruments (the S-JMSD, the BSRI, or the PAQ), when taken as a whole, is a good predictor of self-reports of expressive and instrumental behavior, as measured by the IEBI-r. In predicting behavior, it would probably be most useful to consider the scales of these instruments separately-- i.e., to use the S-JMSD expressiveness scale with the PAQ instrumentality scale. Predictions of behavior obtained in this way could be expected to be fairly accurate with regard to instrumentality, but far less so with regard to expressiveness. Clearly, further research is needed to explore the measurement and prediction of expressiveness.

The IEBI-r is considered to be less subjective than trait measures such as the BSRI or the S-JMSD, since it is more concrete in nature, but it remains an indirect measure of behavior. The IEBI-r would be best used as part of a behavioral assessment package, including peer report and/or observations, for example. While self-report is receiving increased support in the assessment of behavior, when used in this way it generally is preceded by specific training and consists of systematic note-taking on a regular basis. In completing the IEBI-r, respondents are required to report on the frequency of a long list of various behaviors over the past month; clearly, questions about the accuracy of these memories are relevant. For these reasons,

conclusions regarding the IEBI-r as a measure of behavior must be interpreted cautiously.

Information about the conceptual overlap of corresponding scales of the instruments administered in this study can be gleaned from some of the correlations obtained. There are clear, positive relationships between the expressiveness and instrumentality scales of the IEBI-r and the corresponding scales of the S-JMSD, the BSRI, and the PAQ. To the extent that a person's self-ratings with regard to a particular trait can be expected to reflect the same person's self-report of behaviors associated with that trait, significant, positive relationships would be expected. However, the overlap does not generally account for much of the variance in these scores, suggesting that the constructs of expressiveness and instrumentality are being used in somewhat different ways in the IEBI-r as compared to the other instruments. Still, this pattern of results would add some support to the growing body of evidence that the BSRI and the PAQ, as well as the S-JMSD, are most appropriately viewed as measures of the traits of expressiveness and instrumentality. The relationship of these personality traits to the more global constructs of femininity and masculinity and/or to sex roles, and, indeed, the usefulness and validity of such construct hierarchies has yet to be determined.

An examination of the correlations of the S-JMSD expressiveness scale with the corresponding scales of the BSRI and the PAQ reveals fairly close, positive relationships between

them. In addition, the BSRI femininity scale and the PAQ expressiveness scale appear to be closely related to one another. The BSRI masculinity scale and the PAQ instrumentality scale are also closely related to one another, although the S-JMSD instrumentality scale has a weaker relationship to these two scales. Thus, the prediction that the scales of the S-JMSD would correlate moderately with the corresponding scales of the BSRI and the PAQ (Hypothesis 2) is essentially supported. The S-JMSD construct of expressiveness seems conceptually rather close to the construct of femininity in the BSRI and that of expressiveness in the PAQ. The S-JMSD construct of instrumentality is related to masculinity in the BSRI and instrumentality in the PAQ, but the relationship is not a close one.

As has been discussed above, Gill et al. (1987) posited that femininity and masculinity in the BSRI and expressiveness and instrumentality in the PAQ were confounded with autonomy, and the S-JMSD was constructed with the intention of separating out the concept of autonomy from those of expressiveness and instrumentality. Thus, the scales of the S-JMSD would be expected to differ from the corresponding scales of the BSRI and the PAQ to some extent. The correlations of the S-JMSD autonomy scale with the scales of the BSRI and the PAQ, as well as with the other scales of the S-JMSD, suggest that the construct of autonomy overlaps considerably with masculinity in the BSRI and instrumentality in the PAQ, and that it overlaps somewhat with

instrumentality in the S-JMSD. However, it is not related to femininity in the BSRI or expressiveness in the PAQ or the S-JMSD. Autonomy, as measured by the S-JMSD, also seems closely related to instrumentality in the IEBI-r, while its relationship with expressiveness in the IEBI-r is weak.

It can be concluded from this that the S-JMSD has indeed defined instrumentality in a different way, separating out characteristics related to autonomy to some degree. The S-JMSD autonomy scale has a good deal more in common with older masculinity and instrumentality scales than does the S-JMSD instrumentality scale. Expressiveness in the S-JMSD, however, appears to be relatively similar to the constructs of femininity and expressiveness in older measures.

Given adequate construct validity of the S-JMSD autonomy scale (which has not yet been demonstrated), these findings would suggest that autonomy was confounded with masculinity in the BSRI and instrumentality in the PAQ, but not with femininity and expressiveness in the same instruments. Alternatively, if (as Gill et al. have posited) the BSRI and the PAQ do confound femininity and expressiveness with autonomy (e.g., "shy," "yielding," etc.) to any significant degree, then it appears that the S-JMSD autonomy scale does not measure the construct in an accurate or complete way.

Sex differences. It was hypothesized that female subjects would show a significant tendency to score higher on the S-JMSD expressiveness scale as compared to male subjects, but that no

significant sex differences in responding to the other S-JMSD scales would be evident (Hypothesis 4). Females in the main sample did tend to score considerably higher on the S-JMSD expressiveness scale (as well as on the BSRI femininity scale and the PAQ and IEBI-r expressiveness scales) than did males. There were no sex differences in responding to the autonomy scale.

There were no large sex differences in responding to the S-JMSD instrumentality scale, or to any of the other scales measuring instrumentality or masculinity. Males tended to rate themselves slightly higher on the IEBI-r competitive/assertive scale. Females actually scored slightly higher on the S-JMSD instrumentality scale, as compared to males. The bimodal distribution of females' scores on this scale is an interesting finding which might be pursued in future research; might this be related to a sense of constricted choices for women--the adoption of, versus rebellion against, traditional sex roles? That is, do women feel that they have to choose one or the other, as opposed to a wider range of behavioral options? Another possibility for further study is the idea that some women are scoring high in instrumentality on the S-JMSD in part because it is not as closely related to autonomy as were older measures. While these are interesting and, in the latter case, unpredicted results, the size of the differences is not large, and might be an artifact of this sample (college students, and more women than men).

It appears, then, that this pattern of sex differences is consistent with the theoretical conceptions behind the S-JMSD and

with the findings of Gill et al. (1987), that the largest difference between the self-descriptions of women and men is not that women rate themselves less instrumental or less autonomous than do men, but that they rate themselves higher in expressiveness. Corroboration of this finding is not surprising, since Gill et al. reported that this pattern was consistent across a large and diverse group. It does provide further support for the position of Gill and her colleagues that it is expressiveness alone that is the differentiating factor in role-based psychological sex differences.

In broader theoretical terms, this would provide suggestive evidence for the theory discussed above, that these differences are based in early mother-child relationships, in which the male feels pressured to reject expressive patterns, and the emphasis on relationship itself, in order to differentiate himself. To take a more behavioral point of view, if females' ratings of themselves as higher in expressiveness and in instrumentality on the S-JMSD are an accurate reflection of their characteristics, perhaps that is because they have a same-sex model of expressive and instrumental traits available to them. Males might be at a disadvantage in not having same-sex models available to them as much of the time, and in that the same-sex models, when present, do not tend to manifest expressiveness. This self-perpetuating cycle, as stated above, assumes that primary caretaking of children is by mothers; it will be very interesting to note the effect of increased rates of caretaking by fathers. Will it

begin to look like instrumentality is the biggest psychological sex difference (with girls rejecting it, in order to differentiate themselves from fathers who are primary caretakers)? Or might expressiveness prove to be more closely allied with the caretaking role itself than with gender? Given a significant increase in caretaking by fathers, this would be an interesting question for future research.

Depression. Consistent with previous findings in this area, depression (as measured by the short BDI) was found to be unrelated to scores on the BSRI femininity scale and the PAQ expressiveness scale. Also consistent with past research, depression did have significant negative relationships with the masculinity and instrumentality scales of all measures administered, as well as with the S-JMSD autonomy scale. In an interesting departure from previous findings with the BSRI and the PAQ, the expressiveness scales of both the S-JMSD and the IEBI-r were negatively correlated with depression, and the IEBI-r expressiveness scale was the second best predictor (after social desirability) of depression scores. Not all of these relationships were strong, but they suggest a more positive construction of expressiveness (as compared with femininity in the BSRI and expressiveness in the PAQ), one which is, at least to some extent, associated with resistance to depression in the way that masculinity and instrumentality have been shown to be.

It is clear that the female role in our society has changed considerably in the last 25 years in ways that might help women

to resist depression (e.g., expectations are more flexible, allowing for more achievement and self-fulfillment). Perhaps the authors of more recent measures tapping the role-related domains of expressiveness and instrumentality (specifically, the S-JMSD and the IEBI-r) have anticipated and perceived these changes. To the extent that women are able to move away from the older roles and expectations (e.g., as described by the BSRI and the PAQ) and toward the newer ones, some decrease in their rate of depression might be predicted. If women adopt new kinds of roles and rates of depression are unchanged, other kinds of explanations will need to be pursued in future research.

Some points about future research using measures of depression warrant discussion here. It should be noted that responses indicating suicidal thinking and/or intentions and severe levels of depression can be anticipated even in a non-clinical population, and specific procedures for dealing with this issue should be outlined. The possibility of subjects' reactivity to depression measures (i.e., the idea that subjects' symptoms might be exacerbated somehow by the testing) should be considered and contributes to experimenters' responsibility to be attentive to such responses. Issues related to reactivity, confidentiality, and informed consent need careful clarification in any given study and in research in this area generally.

Thus, it does appear from this research that women rather consistently describe themselves as more expressive when compared to men. The S-JMSD is interesting in that it overlaps

conceptually with older measures of female role-related behavior, yet it both provides a more positive construction of these patterns of behavior and predicts self-reported expressive behavior better than the other measures studied. It is clear that the measurement and prediction of expressiveness requires further empirical study, and it appears that it may be important to track the relationship of changing roles to any changes in rates of depression in women, in the interest of better understanding and intervening with these phenomena.

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TABLE 1

Results of stepwise multiple regressions of the expressiveness and instrumentality scales of the IEBI-r on gender, social desirability, and corresponding scales of the BSRI, the PAQ, and the S-JMSD. Step 1 shows the best predictor, step 2 adds the variable which contributes the most after that, and further steps add any variables which make other significant contributions to the prediction of expressiveness and instrumentality. (N = 136)

IEBI expressiveness scale			
Step	1	2	
Constant	19.04	28.54	
S-JMSD expressiveness scale Coefficient	1.15	0.94	
Gender* Coefficient		-3.2	
R-sq.	15.92	19.45	
(No other variables entered or removed.)			

IEBI instrumentality scale			
Step	1	2	3
Constant	-33.14	-36.54	-40.72
PAQ instrumentality scale Coefficient	1.28	0.97	0.61
SD scale Coefficient		0.42	0.44
BSRI instrumentality scale Coefficient			0.141
R-sq.	44.40	50.52	53.64
(No other variables entered or removed.)			

*Gender was coded 1 = female, 2 = male.
F to enter = 4.0; F to remove = 2.0.

TABLE 2

Matrix of Pearson product moment correlations of each scale administered with each other scale. (N = 211)

	BSRI-f	BSRI-m	SD	PAQ-e	PAQ-i	SJ-e	SJ-i
BSRI-m	-.002						
SD	.009	.294**					
PAQ-e	.710***	.009	-.066				
PAQ-i	-.072	.710***	.508***	-.001			
SJ-e	.678***	.025	.136	.706***	-.003		
SJ-i	.204*	.356***	.256**	.151	.381***	.270**	
SJ-a	-.085	.739***	.332***	-.036	.624***	.052	.266**
IEBI-e	.373***	.184*	.111	.385***	.138	.441***	.183*
IEBI-c	-.210*	.278**	.178*	-.106	.337***	-.033	.164*
IEBI-l	.032	-.450***	-.592***	-.012	-.522***	-.100	-.262**
IEBI-p	.205*	.192*	.102	.245**	.243**	.256**	.312**
IEBI-i	-.109	.535***	.556***	-.005	.634***	.106	.356***
sh-BDI	-.077	-.285**	-.695***	-.016	-.414***	-.180*	-.181*

	SJ-a	IEBI-e	IEBI-c	IEBI-l	IEBI-p	IEBI-i
IEBI-e	.232**					
IEBI-c	.403***	.313**				
IEBI-l	-.407***	-.058	.008			
IEBI-p	.199*	.268**	.314**	.046		
IEBI-i	.582***	.291**	.676***	-.703***	.373***	
sh-BDI	-.314**	-.273**	-.212*	.529***	-.033	-.517***

BSRI-f = BSRI femininity scale
 BSRI-m = BSRI masculinity scale
 SD = Social Desirability scale
 PAQ-e = PAQ expressiveness scale
 PAQ-i = PAQ instrumentality scale
 SJ-e = S-JMSD expressiveness scale
 SJ-i = S-JMSD instrumentality scale
 SJ-a = S-JMSD autonomy scale
 IEBI-e = IEBI-r expressiveness scale
 IEBI-c = IEBI-r competitive/assertive scale
 IEBI-l = IEBI-r lack of instrumentality scale
 IEBI-p = IEBI-r persistent scale
 IEBI-i = IEBI-r instrumentality scale
 sh-BDI = short BDI

*p < .05

**p < .01

***p < .0005

TABLE 3

Results of a series of t tests exploring possible sex differences in responding to each scale administered (main sample, $N = 136$, 77 females and 59 males).

Scale	Means		t value*	p
	female	male		
BSRI femininity scale	98.86	91.00	4.17	<.001
BSRI masculinity scale	97.31	99.03	0.69	.493
Social desirability scale	29.286	30.525	1.24	.215
PAQ expressiveness scale	32.597	30.220	4.09	<.001
PAQ instrumentality scale	28.597	29.525	1.26	.208
S-JMSD expressiveness scale	24.558	22.576	4.46	<.001
S-JMSD instrumentality scale	22.130	21.169	2.06	.042
S-JMSD autonomy scale	26.286	25.763	0.82	.410
IEBI-r expressiveness scale	48.390	43.34	3.89	<.001
IEBI-r competitive/assertive scale	20.701	22.576	2.21	.029
IEBI-r lack of instrumentality scale	24.052	24.373	0.33	.739
IEBI-r persistent scale	6.896	6.339	1.92	.057
IEBI-r instrumentality scale	3.545	4.542	0.71	.482
short BDI	4.078	4.034	0.00	.957

*Rounded to two places.

TABLE 4

Results of a stepwise multiple regression of the short BDI on gender and all other scales administered. (N = 136)

Step	1	2	3	4
Constant	20.83	27.21	20.71	16.24
Social desirability Coefficient	-.562	-.523	-.445	-.484
IEBI expressiveness scale Coefficient		-.164	-.152	-.169
IEBI lack of instrumentality scale Coefficient			.151	.159
S-JMSD instrumentality scale Coefficient				.28
R-sq.	47.07	54.30	56.44	58.73

(No other variables entered or removed.)

F to enter = 4.0; F to remove = 2.0.

APPENDIX A

Overall Instructions

Welcome, and I would like to thank you all in advance for your cooperation today/tonight. I am conducting a research project in which I am asking people to answer a number of questions about themselves. I would like to discuss this research with anyone who is interested after all the measures have been completed. I will not be able to answer your questions about the research today/tonight, but there will be three meetings held at different times for the purpose of explaining the project and answering any questions you might have. If you will look at the loose sheet clipped to the top of your packet, you will see that it has listed the three meeting times. I hope that at least one of these times will be convenient for you. This sheet also contains my name, the name and code letter of this experiment, and the number of credits you will receive for completing this experiment. Take this top sheet with you when you leave after the experiment. Are there any questions about that?

Each of you should have a stapled packet and a pencil. If you need a pencil or have a question during the test, please raise your hand. The top sheet of your stapled packet should be the Information Sheet. This is the only sheet on which you will put your name. After you complete the experiment today/tonight, I will remove the top sheet from the rest of the packet, and the top sheets will be kept in a secure place. This is to ensure that the information you provide about yourself is kept confidential. Please fill out your name, your Psych. 100 section and your instructor's name (so that we can give you experimental credit), your address and phone number (in case I need to contact you about important missing information), your age, the number of years of college you have completed, and at the bottom report your sex by putting a check mark next to "female" or "male." Please look up when you are finished.

There will be five sections all together for you to complete. Some of them are very short, and some are longer. I will read the directions for each section and then ask you to begin. Some of the questions may seem a little silly, and some of them may sound repetitive to you. Please respond to the items in each measure as honestly as you can to describe yourself. At the bottom of each page will be printed either, "Go on to the next page," or "STOP here." When you reach the bottom of a page that says "STOP here", please look up so that I can tell when you are ready, and we can all move on to the next section as soon as everyone is ready. Please do not go on to other sections until you are told to do so. Are there any questions?

Now fold over the Information Sheet so that you have Measure #1 on top. (Directions at the top of each section will be read by the experimenter aloud before subjects begin the section.)

APPENDIX B

INFORMATION SHEET

Name: _____

Your Psych. 100 Section No.: _____

Your Instructor's Name: _____

Your Address: _____

Your Telephone Number: _____

Your Age: _____ No. of years of college completed: _____

Check one: _____ Female _____ Male

Check one: _____ Caucasian _____ Native American

 _____ Hispanic _____ Afro-American

 _____ Other

APPENDIX C

MEASURES

SECTION 1: BSRI (F and M scales)

SECTION 2: SD Scale

SECTION 3: PAQ (exp. and inst. scales)

SECTION 4: S-JMSD

SECTION 5: IEBI-r

SECTION 6: short BDI

SECTION 1

For each characteristic, select a number from the scale below which most accurately describes how you see yourself. Write the number in the space provided. Please respond to the items in numerical order.

Never or almost never	Infre- quently	Occasion- ally	Half of the time	Often	Fre- quently	Always or almost always
1	2	3	4	5	6	7
1. self-reliant		_____		21. makes decisions easily		_____
2. yielding		_____		22. compassionate		_____
3. defends own beliefs		_____		23. self-sufficient		_____
4. cheerful		_____		24. eager to soothe hurt feelings		_____
5. independent		_____		25. dominant		_____
6. shy		_____		26. soft-spoken		_____
7. athletic		_____		27. masculine		_____
8. affectionate		_____		28. warm		_____
9. assertive		_____		29. willing to take a stand		_____
10. flatterable		_____		30. tender		_____
11. strong personality		_____		31. aggressive		_____
12. loyal		_____		32. gullible		_____
13. forceful		_____		33. acts as a leader		_____
14. feminine		_____		34. childlike		_____
15. analytical		_____		35. individualistic		_____
16. sympathetic		_____		36. does not use harsh language		_____
17. has leadership abilities		_____		37. competitive		_____
18. sensitive to the needs of others		_____		38. loves children		_____
19. willing to take risks		_____		39. ambitious		_____
20. understanding		_____		40. gentle		_____
				STOP here.		

SECTION 2

DIRECTIONS: Read each statement and decide whether it is TRUE as applied to you or FALSE as applied to you. Indicate your answer by circling the T or F. BE SURE TO ANSWER EVERY QUESTION.

- T F 1. My hands and feet are usually warm enough.
- T F 2. I find it hard to keep my mind on a task or job.
- T F 3. Most any time I would rather sit and daydream than do anything else.
- T F 4. My sleep is fitful and disturbed.
- T F 5. My family does not like the work I have chosen (or the work I intend to choose for my life work).
- T F 6. I am happy most of the time.
- T F 7. I am very seldom troubled by constipation.
- T F 8. I am liked by most people who know me.
- T F 9. I cry easily.
- T F 10. I do not tire quickly.
- T F 11. I frequently notice my hand shakes when I try to do something.
- T F 12. Criticism or scolding hurts me terribly.
- T F 13. It makes me impatient to have people ask my advice or otherwise interrupt me when I am working on something important.
- T F 14. I dream frequently about things that are best kept to myself.
- T F 15. I sweat very easily even on cool days.
- T F 16. I have had periods in which I carried on activities without knowing later what I had been doing.
- T F 17. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.
- T F 18. I am not afraid to handle money.
- T F 19. Life is a strain for me much of the time.

Please go on to the next page.

- T F 20. I am easily embarrassed.
- T F 21. I cannot keep my mind on one thing.
- T F 22. When in a group of people I have trouble thinking of the right things to talk about.
- T F 23. I feel anxiety about someone or something almost all the time.
- T F 24. I have been afraid of things or people that I knew could not hurt me.
- T F 25. I am not usually self-conscious.
- T F 26. It does not bother me particularly to see animals suffer.
- T F 27. My parents and family find more fault with me than they should.
- T F 28. I feel hungry almost all the time.
- T F 29. I worry quite a bit over possible misfortunes.
- T F 30. No one cares much what happens to you.
- T F 31. It makes me nervous to have to wait.
- T F 32. I usually expect to succeed in things I do.
- T F 33. I can easily make other people afraid of me, and sometimes do for the fun of it.
- T F 34. I blush no more often than others.
- T F 35. I am never happier than when alone.
- T F 36. I shrink from facing a crisis or difficulty.
- T F 37. I sometimes feel that I am about to go to pieces.
- T F 38. I have reason for feeling jealous of one or more members of my family.
- T F 39. People often disappoint me.

STOP here.

SECTION 3

The items below inquire about what kind of a person you think you are. Each item consists of a pair of characteristics, with the letters A-E in between. For example:

Not at all artistic A...B...C...D...E Very artistic

Each pair describes contradictory characteristics--that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to circle the letter which describes where you fall on the scale. For example, if you think you have no artistic ability, you would circle A. If you think you are pretty good, you might circle D. If you are only medium, you might circle C, and so forth.

- | | | |
|--|-----------------------|--|
| 1. Not at all independent | A....B....C....D....E | Very independent |
| 2. Not at all emotional | A....B....C....D....E | Very emotional |
| 3. Very passive | A....B....C....D....E | Very active |
| 4. Not at all able to devote self completely to others | A....B....C....D....E | Able to devote self completely to others |
| 5. Very rough | A....B....C....D....E | Very gentle |
| 6. Not at all helpful to others | A....B....C....D....E | Very helpful to others |
| 7. Not at all competitive | A....B....C....D....E | Very competitive |
| 8. Not at all kind | A....B....C....D....E | Very kind |
| 9. Not at all aware of feelings of others | A....B....C....D....E | Very aware of feelings of others |
| 10. Can make decisions easily | A....B....C....D....E | Has difficulty making decisions |
| 11. Gives up very easily | A....B....C....D....E | Never gives up easily |

Please go on to the next page.

- | | | |
|--|-----------------------|------------------------------------|
| 12. Not at all self-confident | A....B....C....D....E | Very self-confident |
| 13. Feels very inferior | A....B....C....D....E | Feels very superior |
| 14. Not at all understanding of others | A....B....C....D....E | Very understanding of others |
| 15. Very cold in relations with others | A....B....C....D....E | Very warm in relations with others |
| 16. Goes to pieces under pressure | A....B....C....D....E | Stands up well under pressure |

STOP here.

SECTION 4

Below is a list of adjectives. Please put a check () on the line that best tells how true the description is of you.

VT Very True
 ST Somewhat True
 SU Somewhat Untrue
 VU Very Untrue

I AM	<u>VT</u>	<u>ST</u>	<u>SU</u>	<u>VU</u>		<u>VT</u>	<u>ST</u>	<u>SU</u>	<u>VU</u>
considerate	—	—	—	—	spendthrift	—	—	—	—
active	—	—	—	—	thorough	—	—	—	—
quitting	—	—	—	—	submissive	—	—	—	—
curious	—	—	—	—	efficient	—	—	—	—
dependent	—	—	—	—	self-pitying	—	—	—	—
analytical	—	—	—	—	stern	—	—	—	—
assertive	—	—	—	—	independent	—	—	—	—
good-natured	—	—	—	—	suggestible	—	—	—	—
lazy	—	—	—	—	sympathetic	—	—	—	—
intuitive	—	—	—	—	industrious	—	—	—	—
daring	—	—	—	—	vindictive	—	—	—	—
fearful	—	—	—	—	unrealistic	—	—	—	—
foresighted	—	—	—	—	pleasant	—	—	—	—
quarrelsome	—	—	—	—	touchy	—	—	—	—
rational	—	—	—	—	unfriendly	—	—	—	—
warm	—	—	—	—	planful	—	—	—	—
shiftless	—	—	—	—	under- standing	—	—	—	—
obliging	—	—	—	—	reckless	—	—	—	—
irritable	—	—	—	—					

Please go on to the next page.

VT Very True
ST Somewhat True
SU Somewhat Untrue
VU Very Untrue

aggressive	—	—	—	—	outgoing	—	—	—	—
forceful	—	—	—	—	self- confident	—	—	—	—
adventurous	—	—	—	—	unkind	—	—	—	—
excitable	—	—	—	—	timid	—	—	—	—

STOP here.

SECTION 5

The following list contains common human behaviors. Please rate on this 5-point scale how often you have behaved this way in the past month.

NOT AT ALL in the past month	RARELY in the past month	SOMETIMES in the past month	OFTEN in the past month	VERY OFTEN in the past month
----- 1	----- 2	----- 3	----- 4	----- 5

The numbers form a scale between two extremes. You are to choose a number which describes where you fall on the scale. For example, if you feel you have "Planned an outing" very often in the past month, you'd rate that behavior with a 5; if you feel that you have rarely "Planned an outing", you'd rate it with a 2; if you have not "Planned an outing" at all in the past month, put a 1 in the space.

PUT A NUMBER IN THE SPACE THAT DESCRIBES YOUR BEHAVIOR
IN THE PAST MONTH

- 1. Changed my mind about what to wear in the morning. _____
- 2. Visited a friend. _____
- 3. Hugged someone. _____
- 4. Attended a meeting of a club or organization. _____
- 5. Did a favor for someone. _____
- 6. Eaten a nice meal alone. _____
- 7. Taken a risk. _____
- 8. Ignored someone. _____
- 9. Asked someone a personal question. _____
- 10. Taken the advice of a friend. _____
- 11. Told a secret to a friend. _____
- 12. Lost in a game. _____
- 13. Sang. _____

Please go on to the next page.

NOT AT ALL in the past month	RARELY in the past month	SOMETIMES in the past month	OFTEN in the past month	VERY OFTEN in the past month
1	2	3	4	5

- 14. Decided what to wear the night before. _____
- 15. Ran to an appointment/class. _____
- 16. Scheduled my whole week. _____
- 17. Laughed with someone. _____
- 18. Avoided eye contact with someone. _____
- 19. Watched T.V. for more than two hours at a time. _____
- 20. Allowed someone to make a decision for me. _____
- 21. Took part in a competitive activity. _____
- 22. Blushed. _____
- 23. Forgot to brush my hair in the morning. _____
- 24. Met someone I did not like. _____
- 25. Giggled. _____
- 26. Attended a social function by myself. _____
- 27. Hidden what I was feeling. _____
- 28. Got into a movie without paying. _____
- 29. Kept working on something when I was exhausted. _____
- 30. Arrived early for an appointment. _____
- 31. Couldn't think of what to say. _____
- 32. Complimented someone. _____
- 33. Been asked to speak louder. _____
- 34. Made a decision which affected a group. _____
- 35. Given up on a task. _____
- 36. Requested something from a stranger. _____

Please go on to the next page.

NOT AT ALL in the past month	RARELY in the past month	SOMETIMES in the past month	OFTEN in the past month	VERY OFTEN in the past month
1	2	3	4	5

- 37. Organized my room. _____
- 38. Participated in an athletic activity. _____
- 39. Had difficulty making a decision. _____
- 40. Discussed politics with someone of a different view-
point. _____
- 41. Touched someone of the same sex during a conversation. _____
- 42. Avoided situations in which I might have been stared at. _____
- 43. Did something creative. _____
- 44. Comforted a friend. _____
- 45. Spent a few hours outdoors. _____
- 46. Stayed with a problem until I arrived at a solution. _____
- 47. Participated in an election of some kind. _____
- 48. Was embarrassed by something I did. _____

STOP here.

SECTION 6

This is a questionnaire. On the questionnaire are groups of statements. Please read the entire group of statements in each category. Then pick out the one statement in that group which best describes the way you feel today, that is, right now! Circle the number beside the statement you have chosen. If several statements in the group seem to apply equally well, circle each one.

Be sure to read all the statements in each group before making your choice.

- A. 3 I am so sad or unhappy that I can't stand it.
2 I am blue or sad all the time and I can't snap out of it.
1 I feel sad or blue.
0 I do not feel sad.
- B. 3 I feel that the future is hopeless and that things cannot improve.
2 I feel I have nothing to look forward to.
1 I feel discouraged about the future.
0 I am not particularly pessimistic or discouraged about the future.
- C. 3 I feel I am a complete failure as a person (parent, husband, wife).
2 As I look back on my life, all I can see is a lot of failures.
1 I feel I have failed more than the average person.
0 I do not feel like a failure.
- D. 3 I am dissatisfied with everything.
2 I don't get satisfaction out of anything anymore.
1 I don't enjoy things the way I used to.
0 I am not particularly dissatisfied.
- E. 3 I feel as though I am very bad or worthless.
2 I feel quite guilty.
1 I feel bad or unworthy a good part of the time.
0 I don't feel particularly guilty.
- F. 3 I hate myself.
2 I am disgusted with myself.
1 I am disappointed in myself.
0 I don't feel disappointed in myself.
- G. 3 I would kill myself if I had the chance.
2 I have definite plans about committing suicide.
1 I feel I would be better off dead.
0 I don't have any thoughts of harming myself.

Please go on to the next page.

- H. 3 I have lost all of my interest in other people and don't care about them at all.
2 I have lost most of interest in other people and have little feeling for them.
1 I am less interested in other people than I used to be.
0 I have not lost interest in other people.
- I. 3 I can't make decisions at all anymore.
2 I have great difficulty in making decisions.
1 I try to put off making decisions.
0 I make decisions about as well as ever.
- J. 3 I feel that I am ugly or repulsive-looking.
2 I feel that there are permanent changes in my appearance and they make me look unattractive.
1 I am worried that I am looking old or unattractive.
0 I don't feel that I look any worse than I used to.
- K. 3 I can't do any work at all.
2 I have to push myself very hard to do anything.
1 It takes extra effort to get started at doing something.
0 I can work about as well as before.
- L. 3 I get too tired to do anything.
2 I get tired from doing anything.
1 I get tired more easily than I used to.
0 I don't get any more tired than usual.
- M. 3 I have no appetite at all anymore.
2 My appetite is much worse now.
1 My appetite is not as good as it used to be.
0 My appetite is no worse than usual.

APPENDIX D

OUTLINE OF DEBRIEFING PRESENTATION

- I. Express appreciation for subjects' cooperation and overview
- II. Historical and social context of psychological gender differences
- III. Importance of the area
 - A. possible connections to depression in women
 - B. possible connections to Type A behavior and heart attacks in men
- IV. Difficulties encountered in this area of research
 - A. stereotypes
 - B. confusion and lack of clarity in terms
- V. The Stockard-Johnson Measure of Sex Differences
 - A. apparent advantages of this measure
- VI. My research
 - A. measures completed by subjects
 - B. confidentiality
 - C. analysis of the data
 - D. expected results and discussion of implications
 - E. some future directions for research in this area
- VII. Question and answer period
- VIII. Circulate sign-up sheet to receive summary of results

APPENDIX E

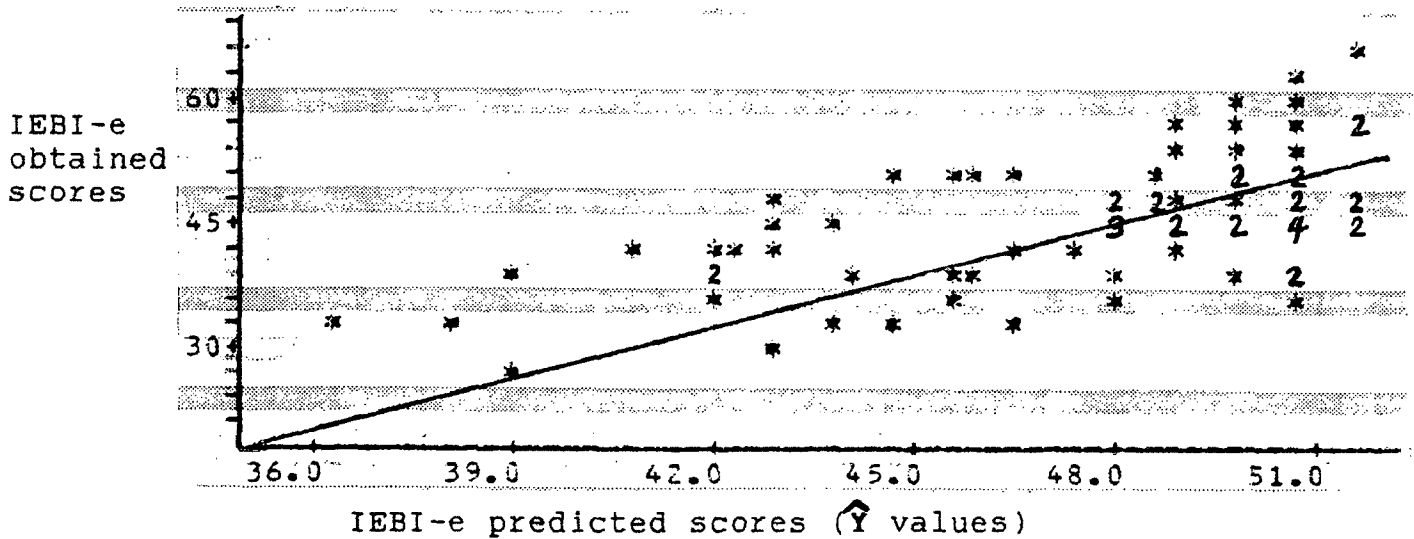


Figure 1. Scatter diagram of IEBI-e scores obtained by the cross-validation sample (Y values) plotted against IEBI-e scores predicted by the regression equation for these subjects (\hat{Y} values).

Figure 1, a scatter diagram of IEBI-e obtained scores from the cross-validation sample plotted against IEBI-e scores predicted by the regression equation for these subjects, reflects an effort to explore the anomalous statistical finding that the regression equation accounted for considerably more of the total variance in the cross-validation sample than it had in the main sample.

Visual inspection of the plot reveals that there are a number of scores which fall directly on the regression line, suggesting the possibility that these scores were overly influential in terms of the variance accounted for, inflating this statistic.

However, visual inspection of the regression line as a whole suggests that it does describe the relationship between obtained and predicted scores in the cross-validation sample fairly well, and that it may have accounted for as much as 35% of the variance in this sample. Since main and cross-validation samples were randomly chosen, systematic differences between them would not be expected. An alternative explanation, then, is that in the main sample the variance accounted for by the regression equation may have been underestimated, and that it should be considered a conservative estimate.