

THE RELATIONSHIP BETWEEN FEMININE GENDER ROLE STRESS, BODY IMAGE, AND EATING DISORDERS

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The Feminine Gender Role Stress (FGRS) scale was used in two studies to determine whether eating disorders could be linked to the cognitive tendency among women to appraise specific situations as highly stressful because of rigid adherence to the traditional feminine gender role. Study 1 showed the FGRS scale could distinguish eating disorders from other psychiatric disorders in an inpatient setting and from normal college women. This suggests that women who have eating disorders report higher than usual levels of stress as a result of rigid adherence to the traditional feminine gender role. Study 2 looked at cardiovascular reactivity to a "feminine" (i.e., body image threat) and a control stressor and determined the FGRS scale could predict which women are threatened by feminine stressors. Results from these studies suggest feminine gender role stress may be the missing link between cultural values of femininity and vulnerability for eating disorders.

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Ninety percent of all eating disorders are found in women (American Psychiatric Association, 1994). The cultural pressures toward thinness are obvious in our society. However, cultural influences do not fully explain why certain women develop problems with body image or eating, whereas other women do not. Adherence to the traditional feminine gender role may mediate cultural influences and the adoption of these values into one's life. Perhaps a rigid commitment to fulfilling imperatives of the feminine gender role, such as the focus on one's physical attractiveness and a need for approval by others, creates significant stress and explains why more women than men manifest eating disorders.

Clinicians who treat women with eating disorders describe them as excessively feminine in gender role orientation (Boskind-Lodahl, 1976; Boskind-White & White, 1987; Steiger, Fraenkel, & Pierre, 1989). Women with bulimia have been described as unassertive, dependent, and low in self-esteem, characteristics congruent with the feminine gender role. Recent interest in how the feminine gender role produces stress and mental health problems has led researchers to assess the influence of the traditional feminine gender role on the development of body image disturbance and eating disorders in women.

Empirical research has been conducted to determine whether individuals with eating disorders are different from other women in gender role orientation. Rost, Neuhaus, and Florin (1982) found that individuals with bulimia conform to more traditional feminine gender roles and hold less liberated attitudes about women than do controls. Likewise, the family of origin of women with bulimia is more traditional in gender roles for both women and men (Silverstein, Perdue, Wolf, & Pizzolo, 1988). Other research, however, has found no gender role differences. Srikameswaren, Honours, Leichner, and Harper (1984) found no differences in gender roles between anorexics, bulimics, and controls. Additionally, Striegel-Moore, Silberstein, and Rodin (1985) used the Personality Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1974) to classify individuals according to sex type and found no relationship between femininity and bulimia.

Thus, research evaluating femininity and disordered eating has found conflicting results. Perhaps this inconsistency is a function of the instruments used to measure femininity. Both the Bem Sex Role Inventory (BSRI; Bem, 1974) and the PAQ (Spence, Helmreich, & Stapp, 1974) assess more positive qualities of femininity and masculinity. For instance, items on the femininity scale of the BSRI include "compassionate" and "warm," whereas the masculine items include "self-reliant" and "independent." As a woman, warmth and compassion are important for the feminine gender role, but these are also noble qualities for anyone. It is unlikely the positive aspects of the feminine gender role pose a substantial problem for mental health; hence the difficulty in trying to find the link between the feminine gender role with these instruments and any form of

psychopathology. A construct that measures the negative aspects of the feminine gender role would be more useful.

Gillespie and Eisler (1992) developed the Feminine Gender Role Stress Scale (FGRS scale) to measure empirically the cognitive tendency among women to appraise specific situations as highly stressful because of commitments, beliefs, and values that are a result of rigid adherence to the traditional feminine gender role. Based on Lazarus and Folkman's (1984) model of stress appraisal and coping, and Wethington, MacLeod, and Kessler's (1987) assertion that certain events may affect women more than men, the FGRS scale was designed to measure "potential stressors that are particularly salient for women both as a result of personal agendas consistent with feminine gender role socialization and environmental contingencies that reinforce these agendas" (Gillespie & Eisler, 1992, p. 435). The FGRS scale was developed by asking individuals to discriminate between stressors for women and men. This contrasts with traditional sex roles scales such as the BSRI, which was developed by asking individuals to discriminate between *desirable* attributes for men and women (Bem, 1974). Hence, the construct of FGRS captures more of the negative aspects of the feminine gender role than the original construct of femininity and, therefore, should be more useful than traditional sex role scales for linking gender roles to psychopathology.

It is believed that feminine gender role stress, as a cognitive appraisal style or way of perceiving the world, varies among women. Women who have a lot of feminine gender role stress probably encounter more daily stress by perceiving more events as threatening to their femininity. Both the accumulation of stress and rigid adherence to the feminine gender role may produce vulnerability for psychopathology found predominantly in women. Because most eating disorders are diagnosed in women, it is hypothesized that the negative aspects of the feminine gender role are related to the development of these disorders. Two studies were conducted to examine the relationship of feminine gender role stress as measured by the FGRS scale (Gillespie & Eisler, 1992) to body image and eating disorders. If the negative aspects of the feminine gender role are associated with these disorders, then cognitive/behavioral interventions that target rigid adherence to the feminine gender role could be developed for prevention and treatment of eating disorders.

STUDY 1

Study 1 was a descriptive study of inpatients diagnosed with eating disorders. This study examined the ability of the FGRS scale to discriminate between young women who were hospitalized with an eating disorder and women hospitalized with different diagnoses or non-hospitalized college women.

Method

Participants

Every woman inpatient who was admitted to a private psychiatric hospital in Southwest Virginia over a 5-month period was invited to participate in this study. Study participation consisted of anonymous completion of the FGRS during the first 2 days after admission. Surveys were collected on a weekly basis, and the participant's initials and age were used to match the survey to her hospital file. The Axis I diagnosis was collected through this procedure.

During the 5-month period, a total of 45 inpatients participated in the study. Their diagnosis categorization included eating disorder ($n = 12$) depression or dysthymia ($n = 16$), substance abuse ($n = 2$), and schizoaffective disorder ($n = 4$). Psychiatric diagnosis could not be determined for 11 participants because they had been discharged and their chart removed before an Axis I diagnosis could be recorded. These 11 participants were not being treated in the eating disorders program. For data analysis, hospital participants in all diagnostic categories other than eating disorders were collapsed as an inpatient group ($n = 33$).

Using a mass testing approach, 310 college women from a large Southeastern university were recruited to take the FGRS scale. These women were presumed not to have a psychiatric diagnosis severe enough to require hospitalization and were thus considered to be a normal control group.

Inventories

The FGRS scale (Gillespie & Eisler, 1992) measures the cognitive appraisal (i.e., way of perceiving and interpreting events) of stressors that are particularly salient for women. Participants completed the 39-item FGRS scale by rating on a continuum from 0 = *Not at all Stressful* to 5 = *Extremely Stressful* how stressful each written situation would be for her. Situations include items such as "being perceived as overweight" and "having an intimate relationship without any romance." The 39-item scale was scored by summing the responses to each item.

Psychometric properties of the FGRS appear acceptable. The items significantly differentiate female from male stressors (Gillespie & Eisler, 1992). The test-retest reliability coefficient over a 2-week period was $r = .82$. Factor analysis using a common factor model revealed five homogeneous factors: (a) *Fear of Unemotional Relationships*, (b) *Fear of Physical Unattractiveness*, (c) *Fear of Victimization*, (d) *Fear of Behaving Assertively*, and (e) *Fear of not Being Nurturant*. Cronbach's coefficients of .83, .81, .77, .80, and .73, respectively, indicate internal consistency within the five factors. Convergent validity was demonstrated with a correlation of $r = .31$ between the FGRS and a measure of depression and with a correlation of $r = .43$ between the FGRS and a measure of daily hassles.

Discriminant validity between the FGRS and a measure of traditional femininity (i.e., PAQ) was shown with a low correlation of $r = .21$.

Conceptually, the entire FGRS construct is thought to be associated with eating disorders. However, certain FGRS factors may be particularly relevant to these problems. For instance, many women with body image concerns and eating disorders appear to manifest this dysfunction both as a result of and perhaps as a barrier to forming close and meaningful relationships. Thus, the FGRS *Fear of Unemotional Relationships* may play a role in eating disorders. FGRS Factor 2, *Fear of Physical Unattractiveness*, should clearly be associated with eating disorders. Cognitive appraisal of stress from body image concerns is central to the development of eating disorders (Thompson, 1990). Likewise, although a reality for most women, fear of being taken advantage of or victimized may be a more salient stressor for women with eating disorders. Although there is some debate surrounding this issue (Wooley, 1994), women susceptible to eating disorders may score higher on the FGRS *Fear of Victimization* factor because of the reality of this experience in their history. Additionally, the popularity of assertiveness training in treatment programs for women with eating disorders speaks to their conflict or lack of skills for behaving assertively because of traditional feminine socialization. Hence the FGRS *Fear of Behaving Assertively* factor should also be associated with eating disorders.

Hypotheses

Participants with an Axis I diagnosis for an eating disorder (i.e., anorexia or bulimia) should have significantly higher FGRS scores than inpatient participants with other diagnoses or college women.

Results and Discussion

FGRS scale scores and its factors were compared using one-way ANOVAs across the following diagnostic groups: inpatients diagnosed with eating disorders, psychiatric inpatients with other Axis I diagnoses, and college students. Results for inpatient scores on the FGRS scale and its factors are presented in Table 1. The FGRS scale significantly interacted with diagnostic category, $F(6, 338) = 2.27, p < .05$. More specifically, the full FGRS scale was able to discriminate eating disorder diagnoses from other inpatients without a diagnosis of an eating disorder, $t(354) = 3.6, p < .001$, and from college students without a psychiatric diagnoses, $t(354) = 2.9, p < .004$.

Additionally, as Table 1 illustrates, similar results were found for *Fear of Unemotional Relationships*, $F(2, 335) = 4.1, p < .02$, *Fear of Physical Unattractiveness*, $F(2, 335) = 10.9, p < .0001$, *Fear of Victimization*, $F(2, 335) = 3.4, p < .03$, and the *Fear of Behaving Unassertively*, $F(2, 335) = 4.2, p < .02$. Post hoc analyses indicated that participants with eating disorders scored significantly higher on each of the aforementioned FGRS factors compared to other psychiatric inpatients or college

Table 1

Mean and standard deviations for the FGRS scale and its factors by inpatient psychiatric diagnoses and for college females

Factor	<i>Psychiatric Inpatients with Axis I Diagnosis Other Than Eating Disorder</i>			<i>College Students Assumed No Diagnoses (n = 310)</i>
	<i>Eating Disorder Diagnoses (n = 12)</i>	<i>Eating Disorder (n = 33)</i>		
FGRS	148.6 _a ± 17.7	114.5 _b ± 39.6	124.2 _c ± 27.1	
Factor 1: Emotional Detachment	38.9 _a ± 7.9	31.4 _b ± 12.3	35.1 _c ± 8.4	
Factor 2: Physical Unattractiveness	32.2 _a ± 4.4	21.1 _b ± 9.8	22.3 _b ± 7.6	
Factor 3: Fear of Victimization	21.2 _a ± 2.6	16.6 _b ± 7.0	19.4 _c ± 5.6	
Factor 4: Unassertiveness	25.0 _a ± 3.7	20.0 _b ± 7.8	19.4 _b ± 6.0	
Factor 5: Failed Nurturance	31.9 _a ± 4.6	25.4 _b ± 10.3	27.4 _b ± 8.6	

Note: Values are mean ± SD. Means having the same subscript within each row are not significantly different using first a one-way ANOVA at $p < .05$. Means having a different subscript were found to be significantly different at the $p < .05$ level using post hoc t tests for pairwise comparisons.

students. These results show the FGRS scale and several of its factors are capable of discriminating eating disorder diagnoses from other inpatient diagnoses and from normal controls. This supports the hypothesis that the FGRS scale may be related to vulnerability for psychopathology, especially disorders thought to have a gender role component. This association between feminine gender role stress and eating disorders, however, does not explain which precedes the other. We hypothesize that scoring high in FGRS creates a vulnerability for an eating disorder. We also speculate that FGRS, as a cognitive style, results in this vulnerability because high-FGRS women are particularly sensitive to feminine cultural imperatives of physical attractiveness, emotionality in intimate relationships, assertiveness, and potential victimization. This sensitivity may cause chronic stress as the high-FGRS woman perceives her inadequacy in living up to these traditional feminine ideals.

STUDY 2

FGRS is conceptualized as an enduring cognitive style of appraisal for feminine stressors. Women who are high in FGRS are hypothesized to view their world through a gender-specific cognitive schema. These women are believed to see more challenges and threats to their femininity in their

daily happenings as well as experience more stress and distress when these situations occur. This is because rigid adherence to the traditional gender role is highly valued and salient for these women.

Study 2 sought to examine whether or not classification into high- versus low-FGRS groups could predict a stress response during a situation that challenged femininity related to physical appearance versus a gender-neutral control situation. It was hypothesized that women with high FGRS would perceive a situation related to body image as more threatening and stressful. High-FGRS women are believed to see the world and other people as judgmental and disapproving of their appearance. This cognitive style of appraising situations is thought to create a vulnerability for body image disturbance and eating disorders.

Method

In a 2×2 factorial design women scoring high versus low on the FGRS scale were randomly assigned to a situation involving either a "feminine" stressor or a gender-neutral control stressor with heart rate and systolic blood pressure reactivity assessed as dependent variables.

Participants

During Study 1, college women ($N = 310$) from a large Southeastern university were tested with the FGRS scale. The mean score was 124.2 ($SD = 27.1$) with a range of 26–180. Only high- (i.e., top 30th percentile) and low- (i.e., bottom 30th percentile) FGRS women were called back to participate in Study 2, which was identified as a "Health and Attitudes Study." The following number of participants were randomly assigned to each experimental group: high-FGRS stress group, $n = 27$; high-FGRS control group, $n = 28$; low FGRS stress group, $n = 26$; and low-FGRS control group, $n = 31$.

Inventories

The *Physical Appearance State and Trait Anxiety Scale-State* (PASTAS-State; Reed, Thompson, Brannick, & Sacco, 1991) was administered after the experimental protocol as a psychological dependent variable. The PASTAS-State contains 16 items for participants to rate current anxiety on a scale of 0 = *Not at all Anxious* to 4 = *Exceptionally Anxious*. Factor analyses using oblique rotation revealed a weight/appearance and a non-weight/appearance factor. Alpha coefficients ranged between $r = .82$ and $r = .86$ for the State version depending on the induced state of participants. This scale was used as a self-report psychological measure of situational body image anxiety.

A set of *manipulation check questions* was created to determine whether the feminine stressor versus the control stressor was producing an effect noticeable by participants. They were asked to rate on a continuum from 0 = *Not at all Stressful* to 7 = *Extremely Stressful* how stressful this

experiment was for them, how stressful would it have been if a woman had conducted the experiment rather than a man, how important it was for them to do well in this experiment, and how uncomfortable they were.

Apparatus

The following devices were used during Study 2: body fat skin calipers, a measuring tape, a stethoscope, a weight scale, and a tuning fork. Systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR) were measured by the IBS Corporation's Automatic Blood Pressure Monitor (model SD-700A; 1987). This device detects Karatkov vibrations to measure blood pressure and oscillometric pressure surges within the cuff for assessment of HR. Phase five is used in the assessment of DBP. Blood pressure accuracy for this instrument has been established within 3 mm Hg of those auscultated, and HR accuracy is within 2%, or one beat per minute.

Experimental Protocol

High- and low-FGRS participants were randomly assigned to a feminine stress condition¹ or a control condition. Participants were recruited by telephone and brought individually into the lab. A male experimenter greeted each participant, explained he would be assessing her physical health, and that she would be asked to fill out some questionnaires. Because the experimental session involved a male/female interaction, each session was videotaped for safety.

The experimental protocol consisted of resting baseline, anticipation, experimental, and recovery phases followed by a return-day baseline. The experiment took 2 days. On the first day, the participant went through a resting baseline in which she sat quietly in a comfortable chair and had her SBP and HR monitored at 1-min intervals. These cardiovascular readings continued at 1-min intervals throughout the experiment. The anticipation phase commenced after the experimenter told her what would occur during the exam. During the experimental phase, the experimenter conducted the physical exam and interview under either the feminine stress condition or control condition protocol. Following the physical exam and interview, participants completed the PASTAS-State. Then cardiovascular readings were recorded for 5 additional min for a recovery phase. Debriefing followed this recovery phase. The entire experiment lasted approximately 50 min. On the following day or shortly after, the participant returned to the lab for an additional 15 min of cardiovascular readings. This was the return-day baseline and was meant to capture each participant's basal SBP and HR readings without the potential stress of an experiment. HR and SBP cardiovascular reactivity over the experimental phases served as the dependent variables.

Feminine stress condition. During the anticipation phase, participants in this stress condition were told just prior to the first physiological measure that they would be experiencing an exam that would include having

their body fat percentage evaluated. The experimenter said, "I will be calculating how much fat you have." Participants were told women normally have a body fat percentage around 30%, college women about 25%, and models around 20%. At least three 1-min interval SBP and HR measures were recorded during the anticipation phase. The experimental phase consisted of the following brief exam and interview:

Waist Circumference: Participants were told they were having their waist thickness evaluated and a tape measure was drawn around her waist.

Skin fold width: Participants were told they were having their body fat evaluated and skin fold calipers were used to pinch the skin on the triceps muscle and the side of the neck.

Interview: Each participant was asked:

1. What is your height and weight?
2. Do you think your weight is appropriate for your height? We'll double check your weight on our scales before you leave.
3. Do you feel heavier than most women?
4. What part of your body are you most concerned about?
5. What size shoe do you wear?
6. What size clothes do you wear? (pants or dress)
7. Do you think that is about average?

Control Condition. Participants in the control condition were told during the anticipation phase that the purpose of the following exam would be to look at certain physiological measures to assess her physical health. Participants were told the goal of this experiment was to explore how individuals' attitudes and lifestyles affect their general health. At least three 1-min interval SBP and HR readings were recorded during the anticipation phase. The experimental phase consisted of the following brief exam and interview:

Lung fields: Participants were told they were having their lung fields evaluated and a stethoscope was used on the subject's back.

Auditory dominance: Participants were told they were having their auditory dominance evaluated. A tuning fork was struck and lifted from side to side of the subject's head. She was asked to identify direction with eyes closed.

Eye muscles: Participants were told their eye control was being assessed while they followed the experimenter's fingers from side to side.

Interview: Each participant was asked:

1. What is your age in years and months?
2. What year are you in school?
3. Do you think your age is appropriate for your year in school? We will check this with our school's average before you leave.
4. What is your major?
5. What classes are you most concerned about?
6. Do you think that most students have a tough time with these classes?
7. Do you think you are average in this regard?

Hypothesis

High-FGRS women should show more of a stress reaction as measured by cardiovascular reactivity in the feminine stress condition than do low-FGRS women. However, the dependent variable in the control condition should not differ among high- and low-FGRS women (i.e., predicted FGRS \times Condition interaction). High-FGRS women should report more body image anxiety as measured by the PASTAS-State scores in the feminine stress condition than low-FGRS women. However, the dependent variable in the control condition would not differ among high- and low-FGRS women (i.e., predicted FGRS \times Condition interaction).

Results

All analyses for physiological cardiovascular reactivity variables were conducted in a series of 2 (FGRS) \times 2 (Condition) repeated measures analyses of variance (RM-ANOVAs). Additionally, an ANOVA was performed on the PASTAS-State scores.

Physiological Results

Women tend to display more cardiovascular reactivity by way of increased HR than increased SBP, especially in response to social psychological stressors such as the feminine stressor used in this study (Baldwin & Clevenger, 1980; Collins & Frankenhaeuser, 1978; Graham, Cohen, & Schmajonian, 1966; Van Egeren, 1979). Therefore, HR analyses were considered the primary dependent variable and SBP secondary.

Analyses on HR yielded the greatest support for the Study 2 hypothesis. An RM-ANOVA evaluating HR reactivity between return-day baseline and the experimental phase found a significant interaction between FGRS category and experimental condition. High-FGRS women showed greater heart rate reactivity to the stress condition than did low-FGRS women or women in the control condition, $F(1, 106) = 2.96, p < .04$. Figure 1 shows relative HR reactivity when the return-day baseline for each FGRS by condition is set at zero. This graph most accurately represents the statistical model for an RM-ANOVA. High-FGRS women showed greater HR elevations than did low-FGRS women during the anticipation phase. This finding lends support for the first hypothesis, because high-FGRS women showed greater HR reactivity only in the stress condition, but not the control condition. Despite experimental condition, low-FGRS women showed similar stress.

Analyses for SBP lent some support for the first hypothesis. An RM-ANOVA between baseline and experimental SBP found a trend for interaction, $F(1, 107) = 1.79, p < .09$. High-FGRS participants in the stress condition showed an increase in SBP, while high-FGRS participants in the control condition showed a decrease in SBP between these phases. At the same time, it appears that low-FGRS-stress women showed a slightly

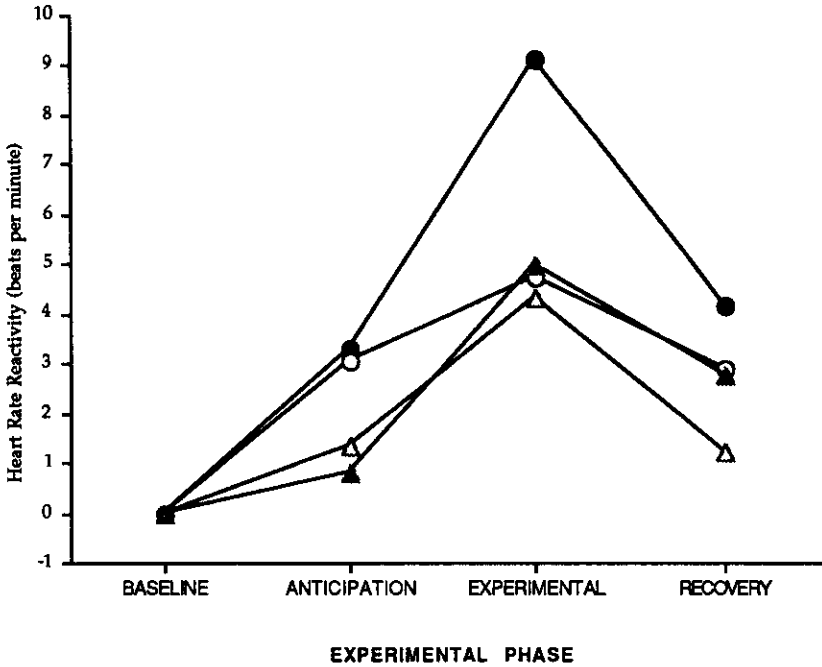


FIGURE 1. Relative Heart Rate Reactivity by FGRS and Condition.

greater increase in SBP than low FGRS-control participants relative to their initial baselines. Figure 2 illustrates this trend in interaction between the baseline and experimental phases.

Psychological Results

Analysis of variance on the PASTAS-State scores failed to yield the predicted interaction of FGRS category with condition. ANOVA across experimental groups on the manipulation check questions yielded some significant main effects. For instance, high-FGRS women, regardless of experimental condition, reported feeling more subjective stress than did low-FGRS women, $t(105) = 3.8, p < .0001$, one-tailed. This same effect was found for a variable assessing a hypothetical female experimenter versus the actual male experimenter, $t(105) = 1.9, p < .05$, one-tailed. Similarly, high-FGRS women, regardless of experimental condition, re-

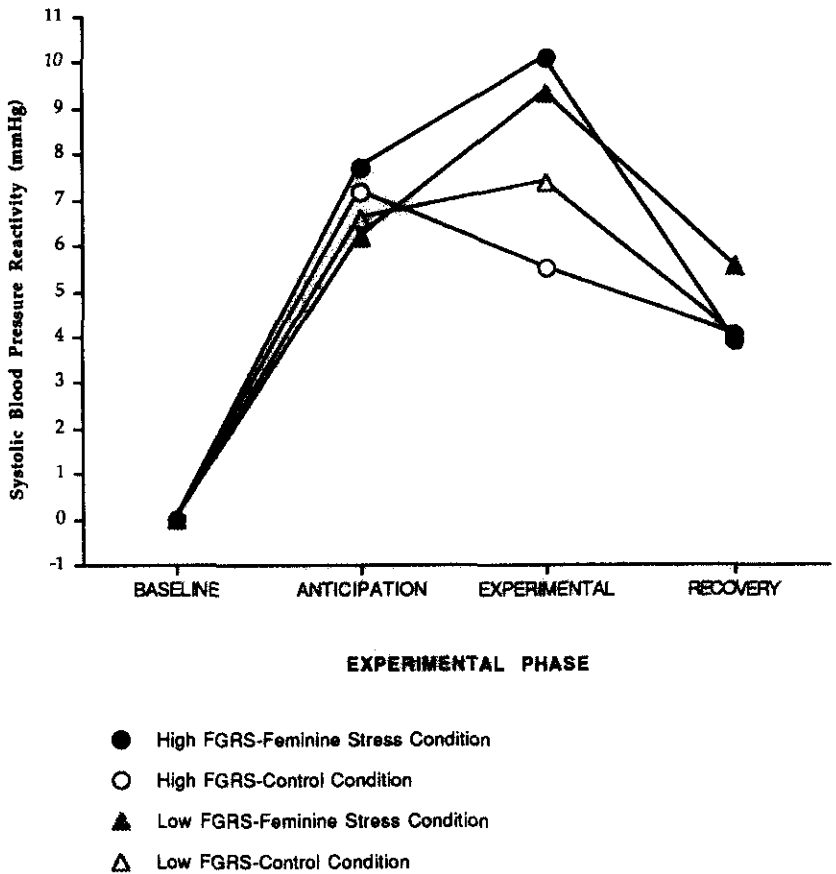


FIGURE 2. Relative Systolic Blood Pressure Reactivity by FGRS and Condition.

ported that it was more important for them compared to low-FGRS women to do well during the experiment, $t(105) = 3.2$ $p < .01$, one-tailed. Finally, high-FGRS women also reported more discomfort with the experiment regardless of experimental condition compared to low-FGRS women, $t(105) = 1.4$, $p < .05$, one-tailed.

Discussion

This study suggests that the FGRS Scale (Gillespie & Eisler, 1992) is a reasonable predictor of HR and a less accurate predictor of SBP reactivity to stress in a feminine stress situation that challenged body image. Women who score high on the FGRS scale self-report a tendency to experience stress when faced with situations that threaten or challenge rigid adher-

ence to the feminine gender role. Analyses of HR reactivity found the strongest statistical support for the FGRS scale as a predictor of women's stress in a situation threatening their body image. As hypothesized, the FGRS scale did not differentiate women in a similar situation that did not involve a female gender relevant stressor (i.e., control condition).

The PASTAS-State hypothesis was not supported. It was believed that women in the stress condition, especially high-FGRS participants, would report greater state body image anxiety as measured by the PASTAS-State. This predicted interaction was not found. Overall, women completing this experiment appeared quite relaxed. They had been sitting comfortably in a reclining chair for approximately 30 min with occasional interruptions by the experimenter running the protocol. While HR and SBP measures may have been sensitive enough to capture stress reactions, cognitive stress reactions were not reported on the PASTAS-State.

Manipulation check questions captured an entirely different effect. High-FGRS women compared to low-FGRS women, regardless of experimental condition reported more subjective stress, more motivation to perform well, and more discomfort. This implies that individuals high in FGRS may report feeling stress in a variety of situations compared to low-FGRS women. However, physiological measures suggested that high-FGRS women only experienced stress in the feminine stress condition, not the control condition.

It appears that the FGRS scale has potential for assessing stress appraisal related to feminine challenges. It is believed that women who experience distress in situations that challenge their body image, such as the feminine stress condition in this experiment, may be susceptible to developing body image disturbance or eating disorders. This elevated style of stress appraisal probably creates daily stressors for high-FGRS women. Women who are threatened by having their body fat assessed are also likely to be threatened by many other situations like viewing themselves undressed in a mirror or trying on clothes in a fashion store. These situations are common events for women. However, some women may appraise the situation as neutral (i.e., low FGRS), whereas other women may view the situation as stressful (i.e., high FGRS). Perhaps having high FGRS is the cognitive precursor to developing problems with body image or eating.

CONCLUSIONS

Previous research evaluating sex typing or gender role orientation between women with and without eating disorders has found conflicting results. It is argued that FGRS is associated with eating disorders. Previous research has missed this relationship perhaps because the instruments used (i.e., the BSRI and the PAQ) measure the more desirable and positive aspects of femininity.

The FGRS scale (Gillespie & Eisler, 1992), a measure of "women's tendency to experience stress when faced with threats and challenged to feminine gender role commitments" (p. 435), was used in two studies to explore its relationship with body image and eating disorders. The construct of FGRS shows promise in capturing the relationship between the negative aspects of the feminine gender role and vulnerability for eating disorders.

To determine if FGRS is high in women with existing eating disorders, Study 1 looked at the FGRS scale scores of women hospitalized with an Axis I diagnosis of anorexia or bulimia. These results support the hypothesis that self-reported gender role stress is significantly higher in women with existing eating disorders.

The relationship between FGRS and vulnerability for body image and eating problems is believed to express itself during body image or food-related encounters. Study 2 demonstrated how women high in FGRS evidenced a cardiovascular stress reaction in response to a body image threat exam, but not a gender-neutral exam. This was not shown in women low in FGRS. It may be that women high in FGRS view their world in terms of gender-specific challenges. For instance, obtaining the ideal slender physique portrayed by contemporary models and actresses is an unrealistic feminine challenge for most women. The challenge, however, is not internalized in all women. Only women who rigidly accept and attempt to fulfill the challenge are vulnerable to falling short and experiencing distress. Study 2 suggests women who are high in FGRS may experience more chronic stress because of having this cognitive style. High-FGRS women in Study 2, who experienced stress while having their body fat assessed, may be women who ascribe to the contemporary slender ideal of beauty.

Although women with eating disorders have been described in case studies as "overly feminine," perhaps the description should be "high in feminine gender role stress." Femininity, in itself, is not a pathological construct. Traits related to sensitivity and compassion are surely advantageous in contemporary society. However, rigid adherence to traditional femininity may have its stressful aspects. Traditional sex role scales such as the BSRI and the PAQ measure the more desirable aspects of femininity. The FGRS scale is a newly developed inventory designed to capture negative aspects of the feminine gender role. These two studies suggest that stress related to the feminine gender role may predispose some women to the development of body image problems and eating disorders. The data, however, is not fully conclusive. To argue that high FGRS influences the development of these disorders, prospective studies that are able to demonstrate that high gender role stress exists before the onset of an eating disorder would be necessary.

We are not suggesting FGRS is the only risk factor for body image problems and eating disorders. However, FGRS appraisal may help to

bridge the gap between feminine gender role socialization and women's differential risk for eating disorders over men's.

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NOTE

1. The experiment involved a stress or a control exam. Participants were not told that the experiment would be assessing their responses to potentially stressful situations. This kept participants from anticipating stress and enabled stress responses during the experiment to be attributed to the protocol. Thus, some deception was involved in this protocol; however, this experiment was fully approved by the departmental human subjects committee and the university institutional review board. This study also contained a stressor that appears offensive to women (i.e., having body fat measured by a male). However, like a treadmill stress test for heart disease, this protocol was believed to produce the minimal level of stress to capture on physiological measures, without inducing unnecessary stress. It is important to add here that women were not given feedback about their body fat, and in fact, the measure was bogus. This was explained during debriefing. Any stress encountered by participants was based on cognitive appraisal of the situation. Such situations presumably occur daily for women with high FGRS. Hence, the procedure used in this experiment was not considered extraordinary or dangerous.

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