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FEAR RESPONSE OF RAPE VICTIMS

DISSERTATION

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The present investigation sought to explore the psychological responses of rape victims. A review of pertinent literature suggested a primary reaction of women to rape was fear, but the absence of controlled research and standardized observations limited the generalizability of these findings. A tripartate interpretation of fear--with autonomic, self-report, and avoidance behavior components--was proposed. In addition, the research attempted to document negative changes in self-concept and feelings of powerlessness resultant from the rape experience.

Difficulties in obtaining victim participation prompted revisions and alterations, thus the investigation was conducted in two phases. During Phase I, psychophysiological, psychometric, and interview data were obtained on 8 adult female rape victims (referred group) and 12 women selected for age and racial determinants (comparison group). Both groups were administered: (a) the Fear Survey Schedule (FSS III) (Wolpe, 1965) to which 42 rape-related items had been added; (b) a Q-sort technique comprised of 50 adjectives (some of which were standard items, others had been identified as victims' reactions to rape by previous studies);

and (c) the Internal-External Locus of Control Scale (Rotter, 1954). In addition, electrodermal responses were monitored during adaptation periods, and in response to the 120 items of the modified FSS III. A structured interview examined behavioral avoidance, social phobias, and life changes.

During Phase II, an additional 12 rape victims (recruited group) completed all assessment measures except the psychophysiological portion. Some data (obtained from interview, rape crisis center reports, and police reports) permitted analysis of demographic, biographic, and assault characteristics of 11 rape victims who refused to participate (non-participant group) in the investigation. Differential willingness of victims to participate in rape research may be related to monetary incentive, perceived purpose of the research, and previous experience with societal agents (doctors, police persons, and solicitors) concerning the assault.

Research findings supported a fear response of rape victims in the area of self-report and behavioral avoidance. Although overall FSS III scale totals failed to achieve significance, item analysis revealed differences between victim and comparison groups. Items which were endorsed by victims as very disturbing, and found to be most discrepant from the comparison subjects, were anal intercourse, guns, knives, weapons, feeling disapproved of, walking on a dimly lit street, and testifying in court. Behavioral avoidance

following rape was reflected in diminished social contacts and fewer outings. Victims also reported that their reason for changing residence was fear. The autonomic component of fear was not substantiated by the present research due to nonsaliency of the stimuli. Differences between groups on the Internal-External Locus of Control Scale were non-significant.

Q-sort items showed significant differences between victim and comparison subjects at retrospective (prerape) and present (postrape) sortings. Within rape-victim-group comparisons of the pre- and postrape sortings produced the most dramatic findings. Twenty-two of 50 items were rated by victims as significantly changed from pre- to postrape. Some items rated differently suggested clinical depression and anxiety: difficulty in sleeping, as well as lower ratings on items calm, happy, pleasant, relaxed, and higher ratings on items withdrawn, confused, and nervous. Fear reaction is suggested by increased suspiciousness, wary of members of opposite sex, and withdrawn. Other global characteristics also appeared changed; victims saw themselves as less happy, stable, and strong. Other differences appear to suggest changes in self-esteem, e.g., less attractive, less confident, and more insecure.



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## FEAR RESPONSE OF RAPE VICTIMS

Rape, a four-letter word seldom mentioned in the professional literature five years ago, is now a major social issue. That it is a problem for societal scrutiny and scientific focus is not surprising, considering its frequency and increasing numbers. According to the Federal Bureau of Investigation (FBI) Uniform Crime Reports, 37,900 forcible rapes were reported to police throughout the nation during 1970. By 1974, the number had increased to 55,200; by 1975, 56,090--an increase of 47.6% over a five-year period. As defined by the FBI, forcible rape is "the carnal knowledge of a female through the use of force or threat of force."

The FBI statistics regarding forcible rape, however, do not tell the entire story. Statutory rape, or offenses with underaged females, are not included in these statistics. According to the FBI, rape is severely underreported. A Law Enforcement Assistance Administration (LEAA) pilot survey found two rapes occur for every one reported (Chappell, 1976). The National Opinion Research Center (NORC) found the rate of actual rapes in the Chicago area to be 3 1/2 times higher than those reported (Glaser, 1970). Expressed more dramatically, once every 14 minutes of every night of the year a woman is a victim of forcible rape (Hursch, 1977).

Although rape cuts across all socioeconomic and occupational levels, there is some suggestion that students may be subjected to the greatest exploitation. In 1973, 27% of the rape victims in Memphis were students (Brownmiller, 1975). A study of Michigan college coeds (Kirkpatrick & Kanin, 1957) found that 1 in 15 had suffered "aggressively forceful attempts at sexual intercourse in the course of which menacing threats or coercive infliction of physical pain were employed" (p. 56).

In the opinion of Largen (1976), the impetus for rape reform and education of the public regarding rape originated largely from feminist-oriented, self-help groups. During 1974, rape was the topic of more than 500 speakouts and conferences (Time, 1975). Legal, medical, and police policies are frequent targets of rape reformists.

Legislative bodies in 11 states have either introduced or passed revised rape legislation. The goal of this legislation is more humane treatment of the victim and increased conviction rates for rapists. The responsiveness of physicians can be documented by revised medical protocols calling for standard procedures for gathering evidentiary material and more sympathetic treatment for the rape victim. Police forces are responding with special squads, sensitivity training, special decoys, and revised procedures for investigating rape calls. Feminists and others interested in humane

treatment for the victim have set up over 150 rape crisis centers across the nation (Largen, 1976).

A bill sponsored by Senator Mathias of Maryland, passed in 1974, established the National Center for the Prevention and Control of Rape within the National Institute of Mental Health. Six million dollars was appropriated for research to develop programs, provide a national clearing house of information concerning the victims and their families, to deal in a rehabilitative way with the offenders, and ultimately to curtail the crime of rape (Largen, 1976).

Although public consciousness has been raised concerning the issue of rape, some members of the scientific community in general--and some psychologists and analysts in particular--gave scant attention to the effects of sexual assault on the victim and may, in fact, have perpetuated myths concerning rape (Factor, 1954; Werner, 1972).

Historically, the culpability of rape was largely viewed as victim-related. The victim of rape was called a "precipitator" by Amir (1967). Ellenberger (1955) cited biblical, philosophical, psychological, and literary passages to establish "a psychological relationship" between the victim and her assailant. Child victims of sex offenses were described by Gagnon (1965) as seducers and provocators of the sex crime. Prevalence of the attitude that the woman "was asking for it" may in part have been due to the sex-role stereotype of the woman as seductress in sexual

encounters, and the man as the aggressor. This attitude was suggested in the case report of a rape written by Factor (1954), who reported that the attempted rape had the effect of altering the victim's behavior from "being reserved and sedate to a more careless attitude which permitted her to allow her skirt to scratch her thigh" (p. 244). The author also suggested that the victim expressed "feelings of guilt because of her unconscious complicity. The direct association (an interpretation made by the therapist) contains the wish that her assailant be freed to repeat the attempt successfully" (p. 244). Factor's interpretation suggested two things: (a) that the victim enjoyed the attempted rape, and (b) that the victim wished it would happen again. His interpretation does not represent the reality of the victim's reaction to rape. There are no data to support the belief that women who are raped enjoy it.

The account by Werner (1972) of a woman who was in therapy and was raped may be a clearer representation of a victim's reaction to rape. Werner reported that, following the rape, the patient regressed to a dependent state. She feared being alone and was hospitalized. Recalling the incident resulted in crying and anxiety. One month after the rape, the patient was still not working. Werner indicated that two months after the rape, the event became her excuse for not doing well in school. Thus, it appeared



that resolution of the experience was an ongoing process which can last months or even years.

### Descriptive Studies of Psychological Response to Rape

Reactions of the rape victim have been observed in larger numbers since the advent of the rape crisis centers. The first attempt at a systematic investigation of victims' reactions to rape was conducted by Sutherland and Sherl (1970), who saw 13 victims of rape ranging in age from 18 to 24. Victims were young white women "who had moved into a low-income (not necessarily black) community to implement [their convictions] about 'doing something real' in contemporary society" (p. 504). The exact occupations of these women were not reported. One may speculate that these women may have been involved in some aspect of community organization or social work. This speculation is supported by the author's statement that the victims "had a background consistent with accomplishment, independence, and apparent psychological health" (p. 504). Furthermore, two of the three case histories suggest community involvement--one victim was described as an "aide for a local poverty program," a second victim as an adult-education teacher in an inner-city school. Eight of the 13 victims were seen within 40 hours following the assault in a crisis-intervention context. "The purpose was to identify a specific predictable sequence of responses to rape . . . and to design a pattern of short-term mental health intervention placing

reliance on techniques of anticipatory guidance and crisis intervention" (p. 504).

Reactions of the victim were classified into three phases: acute reaction, outward adjustment, and integration and resolution. During Phase One, the acute reaction, one may witness shock and dismay. The victim may be agitated, incoherent, and highly aroused. Whether the victim reports the assault immediately is discussed within the acute reaction phase. "Those women who feel there has been no invitation, seduction, or willing compliance on their part generally make an immediate telephone call to the police or go to the nearest emergency facility" (p. 505). This was true of eight of the 13 women in the Sutherland and Sherl study. An inner sense of guilty involvement, confirmed by data from subsequent interviews, was experienced by the remaining five women.

During Phase Two, the outward adjustment phase, the victim may return to her ordinary life's work with an attitude of "all is well, I'm OK," or "I don't need any further help," which may be only a pseudo-adjustment. The victim may be denying other feelings, and a return to the daily routine does not constitute a resolution of the reactions to rape.

Phase Three, the integration and resolution phase, is described as beginning with an inner sense of depression and a need to talk. The two issues of the resolution phase

are a realistic appraisal of the event, feelings of complicity, and feelings toward the assailant. The onset of Phase Three is indeterminant--it may be linked to a specific incident or may have no visible precipitant.

Burgess and Holmstrom (1974) interviewed and followed 146 patients who came to the Boston City Hospital emergency room with a complaint of rape during a 1-year period. Of this population, the focus of their analysis was 92 adult women, ranging in age from 17 to 73, who had been victims of forcible rape. According to the authors, the sample of victims was quite heterogeneous with respect to socioeconomic class and ethnic group membership. The sample included various vocational and occupational interests, ranging from professional women to those supporting themselves on welfare. A distribution of marital status and age revealed over 50% of the victims to be single between the ages of 17 and 29.

The method of data gathering was face-to-face interview at the emergency room and telephone followup. An 85% rate of direct followup was reported, and an additional 5% were followed up via families, police, and service agencies.

The authors' expressed purpose in writing this report was to identify the immediate and long-term effects of rape as described by the victim. The victims' reactions, however, were presented in a scheme identified as the "rape trauma syndrome." The syndrome was discussed as having two phases--an acute phase of disorganization and a long-term process of reorganization.

During the acute phase, beginning immediately following the rape, the women showed two emotional styles, described by Burgess and Holmstrom (1974) as (a) the "expressed style," in which fear, anger, and anxiety were revealed through overt behaviors such as crying, sobbing, smiling, restlessness, and tenseness; and (b) the "controlled style," in which feelings were masked or hidden and a calm, composed, or subdued affect was seen.

Acute somatic reactions were seen in the first several weeks and included trauma caused by the rape itself--such things as bruises, soreness, and irritation were reported. Skeletal muscle tension was reported in the form of symptoms such as headache and fatigue. Gastrointestinal irritability took the form of stomach pains, changes in appetite, and feelings of nausea. Genitourinary disturbance was evidenced by symptoms such as vaginal discharge, itching, and burning sensations. Emotional reactions were reported to range from fear, humiliation, and embarrassment to anger, revenge, and self-blame.

During the long-term process or reorganization phase described by Burgess and Holmstrom (1974), victims often changed residence and phone numbers, and turned to persons in their families for support. Nightmares and dreams were also frequently reported by rape victims. The fears and phobic reactions experienced by the victim following rape were explained as "a defensive reaction to the circumstances

of the rape" (p. 984). Rado's term "traumatophobia" was used to describe the fears and phobias of rape victims. Common fears were the fear of being indoors or outdoors, of being alone or in crowds, fear of being approached from behind, and sexual fears. These reactions of victims were conceptualized from a crisis model, and treatment strategies were offered for management of the rape trauma syndrome from a crisis-intervention approach.

Psychodynamic approaches toward counseling the rape victim were described by Notman and Nadelson (1976). These counseling suggestions were apparently based on their experiences in the development of a rape-crisis program at Beth Israel Hospital in Boston, although the number of victims seen, the age of the victims, socioeconomic level, or method of observation were not specified.

The reaction of the rape victim is described by Notman and Nadelson (1976) in the following manner:

The rape victim usually has had an overwhelmingly frightening experience in which she fears for her life and pays for her freedom in the sexual act. Generally, this experience heightens a woman's sense of helplessness, intensifies conflict about dependence and independence, and generates self-criticism and guilt that devalue her as a person and interfere with trusting relationships, particularly with men. Other important consequences of

the situation are difficulty handling anger and aggression, and persistent feelings of vulnerability. Each rape victim responds to and integrates the experience differently depending on her age, life situation, the circumstances of the rape, her specific personality style, and the responses of those from whom she seeks support. (p. 409)

In an analysis similar to the Burgess and Holmstrom (1974) report, rape is conceptualized as a stressor by Notman and Nadelson. Four stages of the stress reaction are described:

1. Anticipatory or threat phase
2. Impact phase
3. Posttraumatic or "recoil" phase
4. Posttraumatic reconstitution phase.

During the anticipatory phase, the authors indicate that people protect themselves with defenses that allow the maintenance of an illusion of invulnerability with enough reality perception to protect themselves from actual danger.

During the impact phase, disintegration may occur in individuals who were formerly well-adapted. There may be disturbances in thinking as well as perception. Appropriate emotional expression, self-awareness, memory, and behavioral control return during the posttraumatic or "recoil" phase, although limited perspective and increased dependency

feelings may continue. While group support is important following the rape, women are often disappointed by the failure of significant others in their lives to validate their experience. Overt anger is notably absent in the victims of rape.

During the posttraumatic reconstitution phase, a "process occurs that may alter future life adjustment" (p. 409), since there may be a decrease in self-esteem because self-reassuring mechanisms may be lost. It is difficult to understand whether the authors are discussing maladaptive or adaptive responses to stress. They conclude by stating, "The reconstitution phase varies considerably with each individual; however, the patterns of response appeared to be similar to those reported in the other types of stress reactions we have discussed" (p. 410).

The victims of rape are described as displaying fear, anxiety, guilt, and shame, but little direct anger. The authors also address the role of unconscious fantasies in rape, acknowledging that there may be unconscious fantasies in which rape plays a part; however, "the universality of rape fantasies certainly does not make every woman a willing victim--or every man a rapist. The unconscious fantasy does not picture the actual violence of the experience" (p. 410).

Life-stage considerations or developmental issues of the young, single women, divorced or separated women, and middle-aged women victims were also discussed by Notman and

Nadelson (1976). Specific problems faced by the young, single woman are shame and guilt, feelings of vulnerability, concern about her ability to take care of herself.

The divorced or separated woman may face enormous guilt because of society's extra scrutiny of the divorced woman. Subsequent to the rape, such a woman may have feelings of inadequacy and, if she has children, concern over her ability to care for them.

Notman and Nadelson (1976) further indicate that issues for the middle-aged married woman are control and independence, as well as sexual adequacy. Although some of the issues discussed above may arise in victims in an immediate crisis period following the rape, the considerations and issues appear more appropriate for ongoing or long-term therapy. Counseling suggestions for the victim center upon utilizing existing support systems to offer reassurance, empathy, and patience.

The project report of the Committee on Women of the American Psychiatric Association (Hilberman, 1976), entitled "The Rape Victim," included a discussion of victims' reactions to rape. Again rape is discussed as a crisis. Notman and Nadelson's (1976) four phases of response to stress are described, as well as the stages of victim reactions (Sutherland & Sherl, 1970), and the rape-trauma syndrome (Burgess & Holmstrom, 1974).



The above descriptions of victim reactions to rape represent clinical observations made within the context of treatment programs. Whether these descriptions represent the reactions of all rape victims or only those reporting to the rape crisis centers or traditional treatment professionals is a basic research question which can only be answered by controlled studies. Secondly, the above descriptions lack specificity. A myriad of victim reactions are described, but what proportion of the sample experienced a particular reaction is not stated. In addition, the intensity and duration of the reactions are undetermined.

Although these studies present numerous methodological weaknesses (Kilpatrick & Veronen, 1977a), they have focused attention to an area of inquiry that had long been ignored by clinicians and researchers alike. They have identified general reactions of victims which may serve to guide future researchers.

#### Fear and Anxiety Responses Among Victims of Rape

Although the cultural stereotype may be that victims of rape experience tremendous guilt and shame, the accounts of victims suggest that fear is the most prominent response. Fears of dying, mutilation, rejection, or sex are among the fears identified.

A primary source for these observations is the work of Burgess and Holmstrom (1974), who wrote that the primary feelings expressed were fear of injury, mutilation, and

death. These feelings of fear are the source of the range of symptoms called the rape-trauma syndrome, an acute stress reaction to the threat of being killed. Victims reported that objects or persons similar to the actual rape incident produced intense emotional reactions. Frequent and disturbing thoughts about details of the assault were also reported.

In the long-term process of reorganization, victims often changed residences and phone numbers. Dreams and nightmares frequently continued. A common psychological defense seen in the victims was the development of fears and phobias specific to the circumstances of the rape. Victims develop phobic reactions to a wide variety of circumstances--being in crowds, for example. As one victim stated, "I haven't been socializing. I haven't any urge. This has really affected me. I haven't been out in a crowd since this happened" (p. 44). Some victims are reluctant to be by themselves after the rape. As one victim said about entering her apartment,

I am still looking behind doors. I always leave the door open when I enter. It is all I can do to get into the apartment and turn the light on. I just can't relax. I always think someone is there. (p. 44)

The women may develop fears related to idiosyncratic details of the assault, such as the odor of gasoline or

alcohol. A victim who worked as a saleswoman stated, "The other night, a male customer came in and had some of the same features--a moustache--as the guy who raped me. I could not go over and wait on him" (p. 45). Other victims describe feelings of suspicion and paranoia, as one who said that when she got on a bus, she felt that the bus driver and everyone on the bus knew she had been raped.

Feelings of agitation and confusion are also reported. A 35-year-old woman reported,

I get out of work and I am very nervous and afraid. I am not like I was. I leave work, and I can't wait to get home. I think of it all the time. It is a real fear. I worry that something will happen to me; maybe I will get it again on the street. People know people, you know. My thoughts really scare me. Maybe someone wants to hurt me because of this. (p. 45)

The occurrence of a second upsetting situation following a rape can easily produce additional fearful feelings. A 19-year-old victim related,

While at work, my typewriter and purse were stolen. It isn't that unusual for such a thing to happen. But I just panicked. I would look behind me when I got off the trolley. I took my name off the mailbox. I did everything I could to make myself anonymous. I got so

paranoid from this incident. Really shook me for days. (p. 45)

Some victims report a generalized or global distrust and wariness of all people.

I keep jumping when I walk anywhere. People really frighten me. So many things scare me. I never used to be frightened; didn't fear things. Now I can't stand it. I moved to a fourth-floor apartment and when it is locked, I wish it had bars in the windows. That would make me feel safe. One night, I went to bed and my roommate was out. I started hearing sounds. I was certain someone was there. My heart was beating so fast and I was trembling. Then my roommate came in and suddenly everything was O.K. I thought I'd die till she came in. (p. 46)

A fear of sex after the rape is often reported, resulting in the disruption of normal sexual styles. If the victim had no sexual experience prior to the rape, she has no experience for comparison and thus, no way to know if sex will always be so unpleasant. The fear increases for victims who had been sexually active when the boyfriend or husband urges the woman to resume their previous sexual pattern. Some women are facile and articulate about their lack of sexual desire after the rape:

I don't feel like having anything to do with men. I'd rather just avoid them. I had my boyfriend stay here with me for protection. He slept on the floor. He knew how I felt and he was good about it. He didn't like it, but he didn't hassle me. (p. 47)

Other fear reactions can be noted regarding sexual and affectionate responses with men in general. One victim commented six months following the rape experience,

For the first month, it was no go. I couldn't let my boyfriend get near me. I wouldn't let him know it bothered me but every now and then I would get this awful feeling. I still get it . . . Just a couple of weeks ago, I was with my family and an old family friend of my father's gave me a hug and I got cold and stiff. I said to myself, 'If Dad wasn't here, you would probably do something to me.' That was a terrible feeling--to have this paranoid feeling toward an old friend, but it is still how I feel about men, I guess. (p. 47)

Burgess and Holmstrom (1974) noted the reactions of women who were not sexually involved with a man at the time of the rape, citing one victim who stated that she was glad she was not involved with a man at the time of the assault because she had doubts about her ability to handle the

sexual aspect of the relationship. Two months following the rape, however, this victim said,

At first I thought it was good that I wasn't close to any man at that point in my life. But now I have a big question in my mind as to how I will be in a close relationship with a man. I know it has affected me in a sexual way, but I have no idea to what degree. (p. 47)

Problems of fear and anxiety in long-term adjustment have also been identified by Notman and Nadelson (1976), who note that issues which may arise in therapy at a later time are (a) mistrust of men; (b) sexual disturbance; and (c) phobic reactions. Evidence for these issues may be the victim's description of hesitancy and avoidance as well as clinical inductions of anxiety and depression.

Long-term adjustment may be further exacerbated by the fear resulting from the natural course of events that a victim faces if she elects to prosecute (Hursch, 1977).

If she lived alone at the time of the rape, she has probably moved in with someone else since the rape victims are plagued by nightmares and anxiety attacks in the middle of the night . . . but 8 or 9 months later, when she has only partially recovered her equilibrium and her interest in a normal social life, she is told that her case will be coming up in court. The fear, the

nervousness, the cold sweat in the middle of the night start to come back again. (p. 110)

The case history of a rape victim counseled by People Against Rape (Hughes a.k.a. Veronen, 1976) is a representative example of the specific problems mentioned above.

A 29-year-old white female was returning home from work on a major thoroughfare at 5:30 P.M. when her car stalled. After pulling her car to the side of the road, a red-and-white pickup truck-camper stopped and its two occupants offered to help her. The two men proceeded to beat her up, forcing her into the back of the truck at knife point. After stopping to purchase two pints of bourbon, one man raped her in the camper while the other drove to a deserted rural area. There she was raped and beaten by the driver. Following the rape, she experienced considerable anxiety over the sexual advances of her husband. She was unable to get into her car alone. Six months after the rape, she complained of being anxious in closed places, fearful of knives, anxious at the sight of violence on TV, anxious at the smell of bourbon and experiencing extreme fear when someone playfully but unexpectedly hugged her. She also could not go to bars or parties where men were drinking. (p. 6)

The aforementioned studies have identified fear and anxiety as primary responses of rape victims. Although there are commonalities in the accounts and interpretations of victim reactions, there are also notable discrepancies. Fear is identified as a motivator, a phobia, an emotional reaction, and an avoidance behavior. In one account, fear is engendered by reminiscent situations and in another account, fear resulted from actual situations. Victim's self-report, clinician observation, and interpretation are all discussed as indicants of fear. A systematic or conceptual model of fear is needed to organize existing data and to provide a guide to future research in the area.

Fear and Anxiety: Models for Assessment and Acquisition

Both research and clinical psychologists generally conceptualize fear and anxiety as constructs (Lang, 1968, 1969, 1970; Rachman, 1974, 1976) with three interrelated components: (a) verbal report of subjective feelings of distress and apprehension; (b) physiological arousal involving activation of the sympathetic branch of the autonomic nervous system; and (c) overt escape and/or avoidance behaviors. These components may co-vary, vary inversely, or vary independently (Rachman, 1976).

The component of verbal report of subjective fear has been assessed by written self-report instruments. The fear inventory, Fear Survey Schedule III (Wolpe & Lang, 1964),



and the Fear Thermometer (Walk, 1956), are representative measures of self-report of fear with established reliability.

Various measures of the autonomic nervous system have been monitored in studies of fear. Among these have been respiration, blood pressure, cardiac functioning, muscle tension, and electrodermal activity (EDA). There has been general and long-standing agreement that the galvanic skin response or EDA is a valid index of autonomic response to noxious or emotionally arousing stimuli (Katkin & Deitz, 1973; Kilpatrick, 1972; McCurdy, 1950).

Assessment of fear and anxiety, both in clinical and research settings, has been a frequent endeavor of psychologists throughout the past 20 years. The assessment of fear and anxiety among the victims of rape represents a logical extension of existing methodology to an area where empirical data is scant.

Explanation offered by rape researchers for the acquisition of rape-related fear and anxiety tend to be consistent with the theoretical orientation of the observer and the treatment settings in which the observations were made, e.g., crisis intervention and psychotherapy. The fear and phobic reactions of the rape victim were explained as "a defensive reaction to the circumstances of the rape" by Burgess and Holmstrom (1974, p. 984), and were identified by Werner (1972) as "an excuse" for not facing the demands of life. Another explanation for the acquisition and maintenance of

the fear and phobic reactions of the rape victim is the respondent or classical conditioning model (Hughes a.k.a. Veronen, 1976). The paradigm, well known by psychologists, will not be repeated herewithin; however, an explanation of classically conditioned fear of rape-related circumstances will be offered. A detailed explanation of classically conditioned fear in the rape victim is presented by Kilpatrick and Veronen (1977b). For most victims, the response at the time of assault has been one of abject terror. They literally fear for their lives. They are understandably and realistically responding to the threat of death. According to the classical conditioning model, stimuli paired with that threat of death will be able to evoke similar feelings of heightened autonomic arousal and avoidance. Secondly, in accordance with the principle of stimulus generalization, one would predict that situations similar or reminiscent of the rape scene would evoke feelings of fear to a lesser extent. The observation that victims exhibit fear responses in situations similar to the rape situation was thoroughly discussed in the section on fear and anxiety. Furthermore, counterconditioning and extinction as treatment approaches for reducing rape-related fear and anxiety would appear to hold great promise.

In summary, the methodology for assessment of fear and anxiety is well established. A three-component model of fear would yield empirical data in an area where standardized

observations are needed. In addition, the learning model for the acquisition and maintenance of rape-related fear has considerable heuristic value in parsimoniously explaining the fear following the rape, and also predicting the types of fears and avoidance responses which should occur most frequently.

#### Methodological Limitations of Rape Research

The investigations of the victim's emotional responses to rape present several methodological shortcomings. These responses have not been investigated in a systematic manner. The published accounts of victim responses have been based on naturalistic observations made within the context of treatment settings. Case histories and anecdotal reports have been used to demonstrate particular reactions.

The accounts of victim reactions lack specificity. A myriad of victim reactions are discussed. There are no indications what proportion of victims experience specific reactions. All victims of rape are grouped together, and there has been no analysis of subgroups of victims. Subject variables (such as biographical and demographical characteristics, circumstances surrounding the assault, degree of force used by assailant, and relationship of assailant to victim) have been identified as potential predictors of intensity and duration of victim reactions to rape (Kilpatrick & Veronen, 1977a), yet have not been considered in any rape research to date. Furthermore, the

absence of a control or comparison group makes existing descriptions of victim responses extremely tenuous.

### Rationale and Hypotheses of Fear Response

The discussion of victim emotional responses to rape, and more specifically the response of fear and anxiety, leads to the following conclusions: (a) systematic investigations of victim responses are lacking; (b) fear and anxiety appear to be significant problems of the rape victim; (c) technology and methodology for investigating fear and anxiety are extant; and (d) a conceptual model of fear and anxiety as responses which become classically conditioned to rape-related stimuli suggests treatment approaches which may be incorporated in the existing crisis-intervention model of treatment for victims of rape.

The present study sought to explore the following assumptions.

1. Biographic and demographic data would reveal no differences between rape victims and a comparison subject group who were not rape victims.

2. Psychophysiological measures of response to commonly feared and rape-related items would reveal the rape victim to be more highly aroused than comparison subjects.

3. Victims of rape are more fearful on self-report measures of fear, and more fearful of specific stimuli associated with rape, than the comparison group.

4. Victims of rape, because of powerlessness and helplessness experienced as a result of the assault, would score more external on a measure of locus of control reflecting a diminished sense of control over their environment.

5. Victims of rape would experience negative changes in self-concept as a function of the sexual assault.

6. A structured interview would reveal differences between rape victims and comparison subjects who were not rape victims in regard to residence changes, safety precautions, social contacts, and other indicants of behavioral avoidance.

#### Practical and Procedural Issues in Exploratory Research

The present research represented the first attempt to systematically study the psychological reaction of the victims of rape with standardized psychological measures. Furthermore, it was the first research investigation conducted on victims of rape in a nonclinical context. Without the benefit of previous findings, the research was, by definition, exploratory in nature. Decisions regarding the appropriateness of specific measurement techniques, procedures for subject selection and other research issues were made on the basis of what might logically be expected to work. In designing the present research, special consideration was afforded the victim-subjects of the study. Recognizing that present societal attitudes toward the victim still suggest that she somehow invited the act, it

was the concern of the researcher and counselors at People Against Rape (PAR) (the referral source of the rape victim subjects) that the victim might be intimidated and humiliated by the psychological inquiry. Among the considerations and concerns which were raised were the following.

1. The polygraph used in the present research to measure EDA is occasionally used as an evidentiary-gathering procedure by the police and, as such, it might have been expected to arouse apprehensions in some victims.

2. Violating the confidentiality and privacy of the victim by turning case histories and details of the victim over to the researcher created some problems. Since the victim and counselor had already established a trust relationship at the emergency room, it was thought that the victim's cooperation as a research subject should be obtained by the victim's counselor rather than by the researcher who was unknown to the victim. Thus, initially, the researcher obtained victims only by referral.

3. Another consideration was the type of stimuli which would enable meaningful data to be obtained, yet would be relatively nonstressful for the victim. Use of an audiotape recording of neutral, commonly feared, and rape-related items and situations was thought to be an approach which would yield data for inter- and intrasubject comparisons and yet would not be too stressful for the victim.

4. Concern was also voiced by PAR counselors regarding the victim's confusion over the role of the psychologist-researcher. A common belief among members of the lay community is that one only sees a psychologist if she or he is experiencing serious mental or emotional problems. The counselors were concerned lest they alarm their counselees by suggesting that she see a psychologist who was studying the fear and anxiety reactions of rape victims.

5. A consideration which arose later, but was not identified at the initial stages of the research, was the enormous time expenditure for the victim involved with police, detectives, prosecutors, and other personnel when she elects to report the rape and prosecute. These procedures may involve an estimated minimum of 20 hours, and upward to hundreds of hours if the case is complicated or the assailant is not immediately arrested. Given the emotional and physical drain of the rape itself, and the demands placed by the societal agents invested in arrest and prosecution, participation in a research project may be viewed as intrusive and relatively unimportant by the victim.

As some of the aforementioned concerns became realized and other unanticipated research issues emerged, it became apparent that revisions and alterations in the procedure were required if the study were to be completed and meaningful data obtained. Therefore, the present research was conducted in two phases.

## Phase I Method

### Subjects

The subjects of Phase I were 8 victims of rape aged 18 to 30. These subjects were obtained through the Charleston, South Carolina, rape crisis center, People Against Rape (PAR) and through referrals from professionals in the treatment community.

Criteria for subjects included the following: (a) minimum age of 16 years; (b) literate; (c) nonpsychotic; and (d) willingness to participate as demonstrated by their signing an informed consent agreement.

The PAR counselors were contacted by the researcher, informed of the details of the study, and urged to contact their current counselees to discuss the research project. Counselors were also requested to refer future victims to the researcher. If the victim indicated a willingness to participate, her name and phone number were given to the researcher, who, in turn, recontacted the victim to arrange a mutually convenient time for the research session. Additionally, the leader of a PAR peer-support group for recent rape victims was informed of the research project and urged to discuss it with current and future group members. The PAR peer-support group was a group of 46 victims with a PAR counselor as leader and was aimed at providing information as well as emotional support for victims who were experiencing difficulties or problems which were rape-related.



The above-described referral sources yielded 16 names. Of those referred, only 8 victims ultimately participated in the study. This group of 8 victims of Phase I comprised the referred group of the study. The remaining 8 victims either refused to participate or were judged ineligible for participation and were placed in the nonparticipant group. Subjects in this group were 11 victims of rape, aged 17-38; 8 were obtained from Phase I, the remainder were obtained from Phase II. Criteria for inclusion in the nonparticipant group were: (a) specific statement of refusal to participate; or (b) significant psychiatric or psychological disturbance.

The comparison group was composed of 12 women, aged 15-26, who had not been sexually assaulted and who matched the first 8 victim-subjects in age (within 2 years). Prior to research participation, each subject completed an informed consent form which is presented in Appendix A.

### Instruments

Fear inventory. The Wolpe-Lang Fear Survey Schedule III (1964) (FSS III), a 78-item inventory, was developed for use in behavior therapy settings to assess situations and items which individuals report as anxiety-arousing or fear-inducing. The initial FSS III schedule had five subscales: Animal fears, Tissue damage fears, Classical fears, Social interpersonal fears, and Miscellaneous fears. A sixth scale assessing Fear of failure/loss of self-esteem was developed by Kilpatrick, Sutker, Roitzsch, and Mason (1975) and has

been shown to be related to the A-trait measure of the State-trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).

Additional rape-related items were generated for inclusion in the FSS III, bringing the total number of fear-inventory items to 120. Five rape victims, members of a peer-support group who were not participating in the research study, identified items and situations which they experienced as anxiety-provoking or fear-engendering following their rape. These items were then inserted at random among the FSS III items. The modified Fear Survey Schedule III, which was scored according to the procedure described by Kilpatrick et al. (1975), is presented in Appendix B. A total fearfulness score was calculated by assigning 1 point to an item if it produced no disturbance, and 5 points if it produced very much disturbance. Intermediately disturbing items received points between 1 and 5.

PAR report and structured interview. Two sources were utilized to obtain information regarding biographic, demographic, and assault characteristics, as well as life changes which may have occurred as a function of the assault. The first source was the PAR report completed at the emergency room by the PAR counselor. A copy was forwarded to the researcher after the victim agreed to participate in the research study. In cases where information was missing from the PAR report, it was obtained by the researcher

during the structured interview completed at the time of the general fear assessment. Data were gathered with respect to changes in weight, residence, telephone number, travel, and frequency of social contacts. This interview form is presented in Appendix C.

Q sort. The Q-sort technique, originally developed by Stephenson (1936), and utilized by Rogers (1951) to assess changes in therapy, was adapted for use in the present study. A universe of adjectives and descriptions was selected and placed on cards. Subjects were required to sort the adjectives and descriptions along a 10-point normal distribution of "unlike me" to "like me." Selected for inclusion in the Q sort were statements made by victims following rape (Brownmiller, 1975; Burgess & Holmstrom, 1974). Other items selected were standard Q-sort adjectives (e.g., happy, calm, etc.) used in pre- and posttherapy assessment. Sortings were performed twice by all subjects. The first sort was a retrospective; the second was present. Victims were instructed to remember the way they were feeling during the days and week immediately prior to the rape and to sort the adjectives according to how they felt about themselves at that time. They sorted the same adjectives a second time according to how they felt about themselves since the rape (at the present time). Present time was defined as the time period of the past 2-3 days. Comparison group subjects sorted the adjectives according to how

they felt about themselves 3 months ago, and a second time according to how they felt about themselves at the present time. Three months was selected as the time of the retrospective sort for the comparison subjects since it corresponded to the approximate mean length of time post-rape for the victims.

In an effort to examine the dimension of change toward or away from adjustment, a positive and negative value was ascribed to each item in the Q sort. A mental health professional, well-versed in the special problems of women, and the researcher independently judged each of the 50 items as either positive or negative. Positive was defined as an adjective which was associated with, or descriptive of, a health-engendering situation. Negative was descriptive of a negative characteristic of a situation which led to a pathological condition. Thus, the item "happy" was judged to have a positive value, while "suspicious" was judged to have a negative value. There was complete agreement between the mental health professional's ratings and those of the researcher on the ascribed value of the items. Appendix D presents a copy of the Q-sort items with the value ratings for each item. Instructions for Q-sort administration are presented in the Q-sort protocol of Appendix E, the score sheet in Appendix F.

Internal-External Locus of Control Scale (I-E). The I-E, a 29-item, forced-choice measure, was developed by

Rotter (1954) to assess the degree to which individuals "perceive events in their lives as being a consequence of their own actions, and thereby controllable (internal control), or as being unrelated to their own behaviors, and therefore beyond personal control (external control)" (Lefcourt, 1972, p. 2). The I-E was administered as part of the psychometric fear assessment along with the Q sort and structured interview.

In addition to the 29 items of the I-E scale, a 9-item subscale was scored for personal control, P-C. This measured the extent to which the individual feels personally responsible for events in his or her life (Berzin & Ross, 1973). The I-E scale is included in Appendix G.

#### Apparatus

The experimental room was an IAC sound-attenuated chamber containing a comfortable chair for the subject and equipment necessary for attachment of GSR electrodes. The apparatus for recording responses was located outside the chamber. The instructions and all stimulus tapes were presented through a stereo Sony tape recorder. All auditory input to the subjects was prerecorded. The voice on the tape was that of the female researcher. The stimuli were audio-recorded items from the modified FSS III. Electrodermal activity was monitored on a Con-Sol GSR Bridge attached to a Grass Model 7A Polygraph. The active electrode, a curved Ag-Ag Cl electrode 3 cm<sup>2</sup> was placed on

the volar surface of the second finger of the left hand. A curved armband of 58 cm<sup>2</sup> was positioned on the upper portion of the left arm and served as the inactive electrode of a monopolar placement. Adhesive tape with a 2 cm<sup>2</sup> hole in it restricted current density to a 10 ua/cm<sup>2</sup> at the active electrode site. A .05M NaCl solution was used as electrode paste. Surface oils were removed by swabbing the electrode sites with acetone. This monitoring set-up follows closely the method used at Duke University Psychophysiology Laboratories (Shamavonian, Miller, & Cohen, 1968) and the Psychophysiological Laboratory at the Medical University of South Carolina (Kilpatrick, 1972; Kilpatrick et al., 1975).

#### Procedure

All participants were tested and monitored individually. Both psychometric and structured portions of the fear assessment were presented in counterbalanced order with the psychophysiological assessment procedures. One-half of the subjects completed the psychometric measures first, while the remainder completed the psychophysiological measures first.

The psychometric measurements, structured interview, and Q sort were conducted in a room outside the experimental chamber. Psychophysiological testing was conducted within the sound-attenuated chamber. The subject was seated in a comfortable recliner, electrodes were attached in the manner described previously, and the participant was instructed to

listen to the audiotape. The tape-recorded instructions were,

In a few minutes you will be listening to an audiotape. The voice on the tape will name a thing or situation. We want you to imagine what the voice is describing. In the meantime, you sit quietly and relax.

A 5-minute adaptation or rest period followed these instructions (Rest Period I, RP I), during which the resting levels of autonomic activity were monitored. After completion of RP I, the 120 stimulus items of the modified FSS III were presented individually via a Sony audiotape. The stimulus presentation was made within a 2-second interval. This interval was followed by an 18-second interstimulus interval (ISI). After all stimuli were presented, a voice instructed the subject that a second rest period of 5 minutes duration (RP II) would occur. A short debriefing session concluded the data collection procedures.

#### Psychophysiological Data Reduction and Analysis

A definition of relevant indices of electrodermal activity and method of data reduction is included in the following paragraphs.

A specific response is defined as a decrease in skin resistance of at least 200 ohms which occurred during the period .5-5 seconds following stimulus presentation.

A nonspecific response is a response of 200 ohms which occurs in the absence of known stimulus input. In the present study, the total number of nonspecific responses was calculated for RP I and RP II.

$\Delta C$  was defined as the magnitude of the first specific response of at least 200 ohms which occurred .5-5 seconds following the presentation of the instructions and following the first five stimulus items of the audiotape. The formula is  $\Delta C = 1/R_2 - 1/R_1$ , where  $R_1$  equals the base resistance level prior to stimulus onset, and  $R_2 = R_1 - \Delta R$ , the first change in resistance following the onset of the stimulus.

Three separate indices of psychophysiological arousal were analyzed:

1. Nonspecific responses within Rest Periods I and II;
2.  $\Delta C$ , the change in conductance, was recorded during the .5-5 seconds following the instructions and following responses to stimulus items 1-5;
3. Basal skin conductance level at the onset of the Rest Periods and at the end of each minute of the 5 minutes of Rest Periods I and II.

#### Phase II Method

##### Methodological Considerations

As the research progressed, problems and difficulties were encountered which required alterations and revisions in procedure and design. Foremost among the problems encountered was the difficulty in obtaining appropriate



victim-subjects. A second problem was the nonsalient stimulus items of the psychophysiological assessment.

During the period of July, 1976 to November, 1976, 49 women, aged 16 and over, had sought crisis counseling from PAR. Additionally, during the 3 months prior to the beginning of the study, 27 appropriately aged victims had been seen by PAR (Weel, 1976). Thus, of 76 potential research referrals, only 16 referrals had been made. Of these 16 referrals, only 8 actually participated in the research study. Contained in Appendix H are case histories of victims who were referred by counselors in PAR and by professionals in the community, but who were not included as subjects in the present investigation. It became apparent that if the study were to be completed and meaningful data collected, the procedure had to be revised.

Accordingly, the procedure for obtaining victim-subjects was revised in the following manner.

1. Permission was obtained from the executive board of PAR to contact victims directly. The researcher obtained access to the PAR files and obtained names and phone numbers from the counselor's report. Formerly, the researchers contacted the counselor who, in turn, then contacted the victim.

2. The research study was explained to the potential subject in general rather than specific terms. The study was explained: "This is a study investigating women's

emotional reactions to stressful situations, such as surgical operations, automobile accidents, and violent crimes, such as rape." The victim was led to believe she was not the only type of subject being investigated.

3. Research incentive of \$5.00 was offered for participation in the study, and transportation payment of \$5.00 was offered to victims who arranged their own transportation to the office.

4. Victims who were reluctant to leave their homes, either because of small children or other reasons, were tested in their homes.

5. The psychophysiological fear-assessment procedure was also deleted. Observation and data analysis of the psychophysiological responses of victim and comparison subjects revealed that the stimuli used were not salient. Habituation occurred within the first five stimulus presentations. Subjects in both the victim and comparison groups were observed to fall asleep during the stimuli presentations. Therefore, the psychophysiological assessment of fear was discontinued.

### Subjects

In Phase II, 20 victims were identified by the researcher as appropriate candidates. Of these, 15 were contacted, either by phone or by letter, and 12 served as subjects. Victim-subjects of Phase II comprised the recruited group. Presented in Appendix I is a discussion

of the circumstances surrounding victims who were contacted but did not serve as subjects during Phase II of the study. The 3 victims not serving as subjects were included in the nonparticipant group.

### Procedure

Potential subjects were contacted by phone; the revised rationale for testing was offered, and the incentive and transportation defrayment fee was explained. If the victim agreed to cooperate, a location for testing was designated and the appointment time was set. Seven of the 12 victims elected to be tested in their homes; the remainder came to the office. Of the 5 subjects coming to the office, transportation was arranged for 2 victims who lived in outlying areas where public transportation was not available. In those cases of home testing where the neighborhood was known to be a high-crime area, the researcher was accompanied by a companion. All subjects completed the revised Phase II informed consent agreement prior to completing the psychometric testing and the interview. (See Appendix J.)

Instructions for the modified FSS III, the I-E, the Q sort, and the structured interview were the same as those described in the Phase I Method of this study. Following the completion of the psychometric instruments and the interview, the subjects were paid their research incentive and transportation defrayment monies.

### Design for Phase I and Phase II

Subjects for this study were divided into four groups: Victim-subjects comprised three groups which included (a) 8 referred subjects, (b) 12 recruited subjects, and (c) 11 nonparticipant subjects; the fourth group of 12 comparison subjects was composed of nonvictims. Biographic, demographic and assault data for these subjects were obtained from the People Against Rape report and/or counselor, treatment personnel in the community, and in some cases, from clinical interviews with the subjects.

Due to the exploratory nature of this study, data analyses were conducted in stages. Comparisons were made among groups on (a) biographic and demographic characteristics, (b) characteristics surrounding the assault, (c) psychophysiologic measures, (d) psychometric data of the modified FSS III and the I-E, (e) Q-sort techniques, and (f) structured interview data.

The same observations and measurements were not collected on all groups due to procedural changes and difficulty in obtaining subject cooperation. Biographic and demographic data were obtained on all four groups. Psychophysiological data were collected on only the referred and comparison groups. The modified FSS III and I-E were obtained on the referred, recruited, and comparison groups. The Q sort and structured interview were also obtained on the referred, recruited, and comparison, but for purposes of analyses

the data of the two victim groups was combined; a detailed explanation of the rationale for pooling the referred and recruited groups can be found in the Results section.

Biographic, demographic, and assault data were analyzed by two methods--analysis of variance (ANOV) and chi square statistic. Continuous variables were analyzed within a single-factor ANOV design as described by Winer (1971). The independent variable was group membership: referred, recruited, nonparticipant, or comparison. The dependent measures analyzed were age and years of education.

The frequency of responses to the following biographic and demographic variables were analyzed with a 2 X 2 chi square statistic (McNemar, 1969):

1. Race, white/non-white
2. Marital status, single/non-single
3. Living arrangement, alone/others
4. Occupation, student/non-student.

Similarly, the assault variables were dichotomized and the frequency of responses analyzed via the chi square:

1. At home/not at home
2. Weapon/no weapon
3. Beaten/not beaten
4. Interracial: yes/no
5. Known/unknown
6. Reported/not reported
7. Founded/unfounded.

The psychometric measures of the modified FSS III and the I-E were analyzed with a single-factor ANOV. The independent variable was group membership: referred, recruited, or comparison. The dependent measures were the modified FSS III total score, the scores of the seven subscales of the FSS III, the I-E, and the P-C score.

The psychophysiological dependent measures within the rest periods--total nonspecific electrodermal responses and the mean conductance level--were analyzed via a 2 X 2 (Group X Rest Periods) unweighted means ANOV with repeated measures on the last factor. Group membership (comparison or referred) was the independent variable. The psychophysiological change in conductance,  $\Delta C$ , (which occurred following the instructions and the first five stimuli) was analyzed via an unweighted means repeated measure ANOV. The independent variables were group membership (referred or comparison) and rest periods (I or II); the dependent variable was the  $\Delta C$  score.

The Q-sort data were analyzed according to a 2 X 2 X 50 (Group X Time X Item) unweighted means ANOV with repeated measures on the last two factors. Independent variables were group membership (victim or comparison), time (retrospective or present), and Q-sort items. The dependent measure was the score on each item.

The frequency of dichotomized, yes/no, responses to questions of the structured interview (e.g., change in

residence, use of security system, change in telephone number, change in travel and social contacts) was analyzed via a chi square statistic. Again, the referred and recruited groups were combined into a single victim group.

### Results

Prior to an evaluation of the major hypotheses of the study, several important methodological issues surrounding data analysis required consideration. The first issue was whether or not the two groups of rape victims differed from each other and from the nonparticipant victims in the study. Evaluation of common biographic, demographic, and assault characteristics obtained from each of these three rape-victim groups would permit an estimation of the extent to which they represented either subjects of the same population or distinct samples of different populations. Additionally, examination of pertinent subject variables would enable judgments to be made as to: (a) whether nonparticipant victims differed in significant ways from the two participant groups; and (b) whether the two participant groups, referred and recruited, were sufficiently similar to permit pooling their data in subsequent comparisons with the nonvictim group.

Thus, the strategy adopted was to examine for important demographic, biographic, and assault differences among groups--and to assume that it was permissible to pool data from groups appearing similar on these important variables.

Differences on many dependent variables used in research have been known to originate from such subject characteristics as age, education, and race. In the present research, it was anticipated that the nature of the assault might also promote differences in psychological responses to sexual assault.

The first data examined within this section were the results of the demographic and biographic analyses. Since the psychophysiological data were collected only in Phase I, these were the next to be discussed. Finally, other data collected during Phase I and Phase II were reviewed which included results from the modified FSS III, I-E, Q sort, and structured interview.

#### Demographic, Biographic, and Assault Characteristics

Presented in Table 1 are the mean age and years of education values for all four groups.

Table 1

Mean and Standard Deviation Age and Years of Education of Rape Victims and Comparison Subjects

Group	Age		Years of Education	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Referred (N = 8)	19.87	3.56	12.37	1.68
Recruited (N = 12)	23.08	5.82	11.25	1.48
Nonparticipant (N = 11)	24.63	9.47	11.09	1.13
Comparison (N = 12)	19.58	2.90	13.41	1.37



A one-way analysis of variance revealed no significant difference among the referred, recruited, nonparticipant, and comparison subjects on the variable of age ( $F = 1.75$ ,  $df = 39$ ,  $p > .05$ ).

The comparison of all groups on the variable of education as evaluated by a one-way ANOV revealed a significant difference among the groups ( $F = 6.80$ ,  $df = 39$ ,  $p < .01$ )

Since the overall  $F$  showed significant differences among groups, the mean years of education of all groups were analyzed via the Neuman Keuls procedure. The comparison group had significantly more years of education than the nonparticipant ( $p < .05$ ) and the recruited group ( $p < .05$ ). Differences between means of other groups failed to reach statistical significance.

Table 2 presents a summary of the biographic and demographic characteristics of the four groups on the variables of race, marital status, living arrangement, and occupation.

The chi square statistic was used to evaluate whether observed discrepancies within the subcategories of each variable differed significantly among the groups. These analyses yielded the following results:

1. There was no significant difference among groups with respect to racial composition ( $\chi^2 = 7.28$ ,  $df = 3$ ,  $p < .10$ );

2. Significant differences in marital status were observed among groups ( $\chi^2 = 9.45$ ,  $df = 3$ ,  $p < .05$ ) when

Table 2

Summary of Biographic and Demographic Characteristics  
Expressed in Percentages

Characteristics	Group			
	Referred ( <u>n</u> = 8)	Recruited ( <u>n</u> = 12)	Nonparticipant ( <u>n</u> = 11)	Comparison ( <u>n</u> = 12)
Racial Composition				
White	87.5%	66.7%	63.6%	91.7%
Black	12.5%	33.3%	36.3%	8.3%
Marital Status				
Married	12.5%	8.3%	18.2%	16.7%
Divorced	12.5%	16.7%	18.2%	0.0%
Single	75.0%	66.7%	36.3%	83.3%
Separated	0.0%	0.0%	18.2%	0.0%
Widowed	0.0%	8.3%	9.1%	0.0%
Living Arrangement				
Alone	50.0%	8.3%	18.2%	8.3%
With Parents	25.0%	33.3%	45.4%	33.3%
With Husband	12.5%	0.0%	18.2%	16.7%

Table 2--Continued

Characteristics	Group			
	Referred ( <u>n</u> = 8)	Recruited ( <u>n</u> = 12)	Nonparticipant ( <u>n</u> = 11)	Comparison ( <u>n</u> = 12)
Living Arrangement (Cont.)				
With Roommate	12.5%	25.0%	9.1%	41.7%
With Children Only	0.0%	16.7%	18.2%	0.0%
With Boyfriends	0.0%	16.7%	0.0%	0.0%
Occupation				
Student	25.0%	16.7%	27.3%	100.0%
Teacher	12.5%	0.0%	0.0%	0.0%
Waitress	12.5%	33.3%	18.2%	0.0%
Clerk	12.5%	0.0%	0.0%	0.0%
Secretary	12.5%	0.0%	0.0%	0.0%
Other	0.0%	33.3%	27.3%	0.0%
No Occupation Reported	25.0%	16.7%	27.3%	0.0%

group members were classified as single or nonsingle. The classification of nonsingle included the status of divorced, separated, and widowed, as well as married. Visual inspection of this distribution suggested that a greater proportion of the nonparticipant group was nonsingle than was the case in the remaining groups.

Analysis of the living arrangement data indicated significant differences among groups on this variable as well ( $\chi^2 = 6.80$ ,  $df = 3$ ,  $p < .05$ ). This analysis compared the frequency of these subjects living alone versus those living with others. It appears that the referred victims live alone to a greater extent than do the recruited, nonparticipant, and comparison subjects.

With respect to occupational status, significant differences were observed among the groups ( $\chi^2 = 21.26$ ,  $df = 3$ ,  $p < .001$ ). Perhaps because of the relative youth of the sample, it was observed that many of the subjects were in school rather than employed. Therefore, the occupational status variable was subdivided into student or nonstudent status. All members of the comparison group were students; this was not the case for the three rape-victim groups.

In summary, analyses of biographic and demographic characteristics revealed the following similarities or differences among groups.

The three rape-victim groups were similar with respect to age, number of years of education, racial composition,

and occupational status; however, the groups differed in marital status and living arrangement. A greater proportion of the nonparticipant group was nonsingle, while a greater proportion of the referred group lived alone.

The comparison group differed from the nonparticipant and recruited groups on the number of years of education and from the three victim groups on the occupational variable of student status, but were similar to all rape-victim groups in age and racial composition. They were similar to the recruited and nonparticipant groups with regard to living arrangement, and similar to the referred group in number of years of education. In addition, the comparison group was similar to the referred and recruited groups in respect to the proportion that was single.

Contained in Table 3 is a summary of the three rape-victim groups on assault variables of location, use of force, beaten versus nonbeaten, interracial attack, relationship to assailant, report to police, and cases unfounded. Since there were no comparison group data for the assault variables, the referred, recruited, and nonparticipant groups were compared to determine whether there were significant differences with respect to the observed distribution of characteristics of the assault.

No significant differences were observed among the groups on the variable of location of assault ( $\chi^2 = 3.46$ ,

Table 3

## Summary of Assault Characteristics Expressed in Percentages

Assault Characteristics	Group		
	Referred ( <u>n</u> = 8)	Recruited ( <u>n</u> = 12)	Nonparticipant ( <u>n</u> = 11)
Location of Assault			
Open area	25.5%	8.3%	36.4%
Home of victim	25.5%	50.0%	18.2%
Someone else's home	37.5%	0.0%	18.2%
Automobile	12.5%	41.7%	27.3%
Use of Force			
Knife	0.0%	25.0%	9.1%
Gun	0.0%	33.3%	0.0%
Verbal threats	87.5%	33.3%	90.9%
Club	12.5%	8.3%	0.0%
Beaten			
Yes	25.0%	41.7%	27.3%
No	75.0%	58.3%	72.7%

Table 3--Continued

Assault Characteristics	Group		
	Referred	Recruited	Nonparticipant
Interracial Attack			
Yes	62.5%	16.7%	27.3%
No	37.5%	83.3%	72.7%
Relationship to Assailant			
Unknown	50.0%	50.0%	36.4%
Acquaintance	25.0%	50.0%	63.6%
Work-related	25.0%	0.0%	0.0%
Reported to Police			
Reported	87.5%	91.7%	72.7%
Not reported	12.5%	8.3%	27.3%
Unfounded Cases			
Charges dropped or unfounded cases reported	0.0%	9.1%	50.0%

Note. Comparison group not applicable.

$\underline{df} = 2, \underline{p} < .20$ ) when location was dichotomized whether at home or not at home.

Analysis of degree of force exercised in the assault indicated significant differences among the groups ( $\chi^2 = 10.68, \underline{df} = 2, \underline{p} < .01$ ). Inspection of this distribution revealed that a greater proportion of the assaults on the members of the recruited group involved use of a weapon than was the case for the other two victim groups.

Analysis of the data on whether victims were beaten or not yielded no significant differences among groups ( $\chi^2 = .55, \underline{df} = 2, \underline{p} < .80$ ). The variable of interracial attack was also nonsignificant ( $\chi^2 = 5.09, \underline{df} = 2, \underline{p} < .10$ ). The relationship of victim to assailant variable revealed no significant differences among the groups ( $\chi^2 = .53, \underline{df} = 2, \underline{p} < .80$ ) when the group members were classified as unknown or acquaintance.

No significant differences were observed among the groups in the variable of reporting the assault to the police ( $\chi^2 = 1.63, \underline{df} = 2, \underline{p} < .50$ ). However, on the variable of unfounded cases, a significant difference was observed ( $\chi^2 = 7.28, \underline{df} = 2, \underline{p} < .05$ ). Inspection revealed a higher proportion of the nonparticipant group with cases declared to be unfounded by the police.

A summary of the assault characteristics revealed the following similarities and differences among the victim groups: referred, recruited, and nonparticipant victim



groups were similar on the assault variables of location of assault, beaten versus nonbeaten, interracial attack, and victim relationship to assailant. The recruited group was different from the referred and nonparticipant groups in respect to the assault variable of use of weapon. The nonparticipant group was different from the other victim groups on the assault variable of unfounded cases.

One of the methodological issues addressed was the extent to which the rape-victim groups represented subjects of a single population of victims or were representative of various populations of victims. Data pertinent to this discussion have been analyzed in the previous section. In some ways, the nonparticipant group can be identified as different from the other two victim groups. Analysis of marital status indicated that more of these group members were married. Another difference was the markedly higher proportion of unfounded cases in this group.

The nonparticipant group refused to cooperate with the research and, as such, was different from the other victim groups. Whether the remaining referred and recruited groups are samples of the same population is again an empirical question. Analyses, thus far, have rendered comparable data. Subject characteristics of the two groups have been extremely similar, while assault characteristics were somewhat dissimilar.

Psychophysiological Measures

Table 4 presents a summary of the analysis of the total nonspecific responses produced by the two groups during the 5 minutes of the two Rest Periods.

Table 4  
Analysis of Variance for Total Nonspecific  
Response Data

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between Subject		19		
A (referred/comparison)	11.23	1	11.23	.19
Subject w/group	1,050.00	18	58.33	
Within Subjects		20		
B (Rest Periods)	163.30	1	163.30	5.11*
AB	1.44	1	1.44	.04
B X subject w/group	575.24	18	31.95	

$$*F_{.95} (1, 19) = 4.38$$

A 2 X 2 (Group X Rest Period) ANOV, with repeated measures on the last factor, yielded significant effect for Rest Periods ( $F (1, 19) = 5.11, p < .05$ ), but no significant effect for groups.

The number of nonspecifics decreased from Rest Period I to Rest Period II as demonstrated by the summary in Table 5.

Table 5  
Summary of Nonspecific Responses and Mean  
Conductance Scores

Responses/Scores by Group	Time	
	Rest Period I	Rest Period II
Referred Group ( $\underline{n} = 8$ )		
Nonspecific Total Responses	57	27
Mean Conductance	$.7169 \times 10^{-4}$	$.7770 \times 10^{-4}$
Comparison Group ( $\underline{n} = 12$ )		
Nonspecific Total Responses	103	49
Mean Conductance	$1.4865 \times 10^{-4}$	$1.6500 \times 10^{-4}$

The mean conductance scores were analyzed via a 2 X 2 (Group X Time) repeated measures ANOV, with repeated measures on the last factor. This analysis, presented in Table 6, yielded no significant main effect for groups, rest periods, or for the group by rest-period interaction. Mean conductance values are also presented in Table 5. Noteworthy is the consistency in the conductance level from RPI to RPII, confirming the researcher's observations that the stimuli were not arousing.

Table 6

Repeated Measures Analysis of Variance of Mean Conductance  
of Referred and Comparison Groups by Rest Periods

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between Subject		19		
A (Victim/Comparison)	133.7071 x 10 <sup>-4</sup>	1	133.7017 x 10 <sup>-4</sup>	1.78
Subject w/group	1,348.2132 x 10 <sup>-4</sup>	18	74.9007 x 10 <sup>-4</sup>	
Within Group		20		
B (Rest Period)	10.7249 x 10 <sup>-4</sup>	1	10.7249 x 10 <sup>-4</sup>	.69
AB	.8988 x 10 <sup>-4</sup>	1	.8998 x 10 <sup>-4</sup>	.05
B x subjects w/group	277.3541 x 10 <sup>-4</sup>	18	15.4086 x 10 <sup>-4</sup>	

A 2 X 6 (Group X Stimuli) measures ANOV, with repeated measures on the last factor, was used to analyze the change in conductance scores following the presentation of instructions and the first five stimuli for the referred and the comparison groups. Results of this analysis, presented in Table 7, revealed no significant main effects or interaction effects.

Table 7

Repeated Measures Analysis of Variance of Conductance  
Change Scores of Stimuli by Groups

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between Subjects		19		
A (Referred/Comparison)	5,251.00	1	5,251.00	.05
Subjects within group		18	98,672.00	
Within Subjects		100		
B (Stimuli)	2,938.00	5	587.60	.53
AB	970.00	5	194.00	.17
B x subjects within group	99,038.00	90	1,100.42	

In summary, electrodermal measure of nonspecific and baseline conductance levels failed to yield significant differences between the two groups. Furthermore,  $\Delta C$ , the index of electrodermal response to stimuli, revealed no significant differences between groups or among stimuli.

Table 8  
Means and Standard Deviations of Modified Fear Survey Schedule III Scores

Personality Variable	Group				F	p		
	Referred M	SD	Recruited M	SD			Comparison M	SD
Modified FSS III Total	328.62	25.35	320.00	84.30	292.50	61.67	.45	NS
Animal	15.75	6.69	19.08	7.02	15.50	5.33	1.09	NS
Tissue Damage	46.37	17.32	42.08	11.56	43.91	12.54	.23	NS
Classical	33.62	15.26	36.41	11.13	30.66	6.55	.80	NS
Social Interpersonal	44.50	17.66	39.50	10.95	40.91	9.76	.37	NS
Miscellaneous	28.62	13.45	26.91	7.19	26.16	5.16	.22	NS
Failure	45.12	19.25	42.75	13.98	40.91	9.93	.20	NS
Rape	114.62	42.68	113.25	33.87	94.41	21.66	1.29	NS

Note. Nonparticipant group not applicable.

### Psychometric Data

Modified Fear Survey Schedule III. Eight separate single-factor ANOVs were conducted on total scores and the seven subscale scores of the modified FSS III. No significant differences among the groups were revealed on these scores ( $p > .05$ ,  $df = 2.28$ ). Presented in Table 8 are the means, standard deviations, and  $F$  values of the referred, recruited, and comparison groups.

Internal-External Locus of Control. Total I-E scores were analyzed via a one-way ANOV. No significant differences among the referred, recruited, and comparison groups were obtained ( $p > .05$ ,  $df = 2.28$ ). Presented in Table 9 are the mean, standard deviation, and  $F$  values for the I-E test.

Also included in Table 9 are the mean, standard deviation and  $F$  values for the Personal Control Scale. A one-way ANOV revealed no significant difference ( $p > .05$ ,  $df = 2.28$ ) among the three groups.

Pooling Victim Groups. The similarity of the two victim groups on subject characteristics and responses to the modified FSS III and I-E suggested that pooling of victim data was justified. Practical considerations regarding the nature of the  $Q$ -sort data reinforced this approach. The 50 adjectives analyzed as prescores, postscores, and difference scores on the 3 groups would produce 450 separate analyses, rendering data interpretation difficult, particularly considering the small sample size. A preferred strategy,

Table 9  
 Means and Standard Deviations of Internal-External  
 Locus of Control and Personal Control Scores

Personality Variable	Group				F	p		
	Referred M	SD	Recruited M	SD			Comparison M	SD
Locus of Control Total	10.25	3.05	10.41	3.62	10.00	3.61	.04	NS
Personal Control	3.62	1.50	3.33	1.61	3.25	1.76	.20	NS

Note. Nonparticipant group not applicable.



permissible within the framework of an exploratory study, was to pool the two victim groups and to first analyze the Q-sort data via a 2 X 2 X 50 (Group X Time X Items) analysis of variance, with repeated measures on the last two factors. Because of the psychometric characteristics of the Q-sort procedure, i.e., the sum of scores across items is identical for all subjects, many of the partitions of variance within this analysis are not relevant. However, an evaluation of the group X time X item interaction would permit the determination of the extent to which groups respond to individual items differentially over the two time periods. If this significant interaction is obtained, then it is suggested that subsequent item comparisons are justified. This step-wise analysis reduces the chance of a Type One error. Item scores during the two time periods for each of the two groups could be examined to determine (a) difference between victim and comparison groups on the retrospective sort, (b) difference between the two groups with respect to current scores, and (c) differences between groups with respect to change scores on each item.

Q Sort. Presented in Table 10 is a summary of the 2 X 2 X 50 (Group X Time X Item) ANOV with repeated measures on the last two factors. The analysis revealed a significant 3-way interaction ( $F, 48, 1372; p < .01$ ).

Table 10  
 Repeated Measures Analysis of Variance  
 of Q-Sort Scores

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between Subject		31		
A (Victim/Comparison)		2		
Subject with groups		29		
Within Subjects		2,970		
B (Time)		1		
AB (Victim x Time)		1		
Error (b) B x subject w/group		28		
C (Item)		49		
AC		49		
C x subject w/group		1,372		
BC (Time x Item)		49		
ABC	682.86	49	13.94	5.34*
BC x subject w/groups	3,558.78	1,372	2.59	

\*p < .01

Three further analyses were performed to examine the specific group X time X item interaction. First, item mean values for the two groups were compared for the retrospective sort. Secondly, the present sort-item mean values for groups

were compared. Item comparisons were performed via the  $t$  statistic. Thirdly, the difference or change scores within groups were calculated. Item mean values of retrospective sort were subtracted from item mean values of the present sort. The difference between the means was then divided by the standard error to obtain a  $t$  score. The  $t$  analysis of the items of the retrospective sort revealed significant differences ( $p < .05$ ,  $df = 30$ ) between victim and comparison groups on seven items. The victim group scored significantly higher than the comparison group on three positive items, and significantly lower than the comparison group on four negative items, as presented in Table 11.

Table 11  
Significant Q-Sort Items of Retrospective Sort

Item Name	Item Value	Victims		Comparison		$t$	$p$
		$\bar{M}$	$\bar{SD}$	$\bar{M}$	$\bar{SD}$		
Confused	-	3.90	1.62	5.17	1.85	2.05	.05
Happy	+	6.70	1.66	4.75	2.80	2.52	.02
Impatient	-	4.40	1.70	6.00	1.76	2.54	.02
Insecure	-	3.45	2.52	5.17	1.90	2.04	.05
Relaxed	+	5.40	2.16	3.67	1.72	2.36	.05
Sad	-	3.15	1.78	5.33	2.70	2.52	.02
Strong	+	5.55	2.23	3.58	1.50	2.71	.02

Comparison of the items of the present sort by group revealed significant differences ( $p < .05$ ,  $df = 30$ ) on 14 items, as presented in Table 12.

Table 12  
Significant Q-Sort Items of Present Sort

Item Name	Item Value	Victims		Comparison		<u>t</u>	<u>p</u>
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Affectionate	+	4.50	1.60	6.08	2.02	2.43	.05
Calm	+	3.05	1.43	4.83	1.58	3.27	.01
Careful	+	6.40	1.67	5.00	1.30	2.48	.02
Difficulty in sleeping	-	5.50	1.85	3.17	2.21	3.20	.01
Enraged	-	4.20	1.82	2.50	1.57	2.68	.02
Happy	+	4.00	1.95	6.25	1.82	3.29	.01
Humiliated	-	4.50	1.97	2.83	1.34	2.59	.02
Humorous	+	4.60	1.43	6.17	1.53	2.93	.01
Lively	+	3.80	1.99	5.67	1.50	2.80	.01
Pleasant	+	4.70	1.56	6.00	1.28	2.43	.05
Suspicious	-	6.25	1.89	3.33	2.06	4.09	.01
Vulnerable	-	3.65	1.81	5.58	1.50	3.10	.01
Wary of members of opposite sex	-	5.45	1.67	3.75	1.42	2.94	.01
Withdrawn	-	4.45	2.78	2.42	2.54	2.06	.05

The victim group was significantly lower on 6 of 7 positive items, and significantly higher on 6 or 7 negative items. The victim group scored higher than the comparison group on items: difficulty in sleeping, enraged, humiliated, suspicious, wary of the opposite sex, and withdrawn. In addition, the victim group rated certain items (affectionate, calm, happy, humorous, lively, and pleasant) significantly lower than the comparison group. Two items, careful and vulnerable, were in the opposite direction--careful, an item ascribed as positive value, was rated higher by the victim group than by the comparison group; while vulnerable, a negative characteristic, was rated lower by the victim group than by the comparison group.

Within-victim-group analyses were performed on change scores calculated by subtracting the mean value for the item at retrospective sort from the mean value of the item at the present sort. A summary of the 22 items, which were found to be significantly different between groups, is depicted in Table 13. The victim group changed significantly ( $p < .05$ ) in a negative direction on 14 of the positive items, i.e., the victim group's mean score on these items decreased from pre- to postrape sort. A significant change in a positive direction was observed on the remaining 8 negative items, i.e., the victim group's mean score increased on the negative items from prerape to postrape sort. Analyses of change scores from the comparison group (present/3-months-ago)

Table 13

Q-Sort Items Significantly Changed for Victim Group

Item Name	Item Value	Mean Difference	<u>t</u>	<u>p</u>
Affectionate	+	-1.50	2.30	.05
Attractive	+	-1.20	2.35	.05
Calm	+	-1.75	2.42	.05
Confident	+	-1.60	2.64	.02
Confused	-	1.75	2.80	.02
Difficulty in sleeping	-	1.80	2.62	.02
Disgusted	-	1.60	2.53	.05
Easily pleased	+	-1.95	2.47	.05
Happy	+	-2.70	3.44	.01
Humorous	+	-1.25	3.06	.01
Insecure	-	1.95	2.31	.05
Lively	+	-1.95	3.14	.01
Nervous	-	2.40	2.70	.02
Pleasant	+	-1.65	3.27	.01
Proud	+	-1.85	2.83	.01
Relaxed	+	-2.50	3.40	.01
Responsible	+	-1.45	2.99	.01
Stable	+	-2.20	3.04	.01
Strong	+	-1.70	2.32	.05
Suspicious	-	2.85	4.50	.01
Wary of members of opposite sex	-	2.35	3.90	.01
Withdrawn	-	2.40	3.16	.01

revealed a significant difference ( $t = 2.33$ ,  $p < .05$ ,  $df = 11$ ) on the single item, humorous (mean difference = 1.25), which was rated higher at present sort than at retrospective sort. A graphic depiction of all Q-sort-item mean values of victim and comparison groups for retrospective and present sorts is included in Appendix K.

### Structured Interview

The final portion examined was the results of the structured interview. Data were evaluated with the chi square statistic. Categories were: yes/no and victim/comparison groups. Table 14 presents a summary of the "yes" responses to the structured interview.

There was no difference between victim and comparison groups with respect to change of residence ( $\chi^2 = .006$ ,  $df = 1$ ,  $p < .99$ ), or intent to change residence ( $\chi^2 = 1.36$ ,  $df = 1$ ,  $p < .30$ ). The most frequent reason given for a change of residence or intent to change residence among the victim group was feeling afraid and unsafe. This was reported by 5 of the 13 victims. Six members of the comparison group had changed residence or planned to change residences at the time of the interview. The reason given for change of residence by 3 of the 6 comparison group members was a move on campus to attend school.

Analyzing the victim and comparison groups with respect to safety precautions revealed a significant difference on the question regarding locking the door when at home

Table 14  
 Summary of Structured Interview Percentage  
 of "Yes" Responses

Item	Group	
	Victims ( <u>n</u> = 20)	Comparison ( <u>n</u> = 12)
Residence Change		
Since rape/within 3 months	40%	41%
Intent to change residence	25%	8%
Reason: Fear	38%	0%
School	7%	60%
Other	55%	40%
Safety		
Locked door when home	90%	50%
Locked door when not at home	95%	16%
Changed lock system	50%	0%
Telephone		
Present in home	75%	91%
Of those with phones:		
Change in phone number	26%	36%
Phone number unlisted	20%	9%
Reduction in travel since rape/ within 3 months	40%	8%
Reduction in Social Contact since rape/within 3 months	75%	16%
Used weapon for safety	40%	25%
Weight loss greater than 10 pounds	35%	0%



( $\chi^2 = 9.6$ ,  $df = 1$ ,  $p < .01$ ) and regarding a change in the lock system ( $\chi^2 = 8.72$ ,  $df = 1$ ,  $p < .01$ ). Inspection of responses indicated that a higher proportion of the victim group reported locking their doors when at home. In addition, a greater proportion of the victim group reported changing their lock system than did the comparison group. Both groups presented comparable data regarding locking their doors when not at home ( $\chi^2 = .42$ ,  $df = 1$ ,  $p < .60$ ).

No significant differences were observed between the groups with respect to presence of a telephone within the home ( $\chi^2 = .29$ ,  $df = 1$ ,  $p < .70$ ), change of telephone number ( $\chi^2 = .34$ ,  $df = 1$ ,  $p < .60$ ), or unlisted status of telephone number ( $\chi^2 = .26$ ,  $df = 1$ ,  $p < .70$ ).

A comparison with respect to a reduction in travel and outings revealed a significant difference between groups ( $\chi^2 = 3.72$ ,  $df = 1$ ,  $p < .05$ ). A greater proportion of the victim group reported a reduction in travel than the comparison group--furthermore, 7 of the 8 attributed the reduction direction directly to fear resulting from the rape. The variable of reduced social contact was highly significant ( $\chi^2 = 10.24$ ,  $df = 1$ ,  $p < .01$ ). A greater proportion of victims reported reduced social contact than did the comparison group.

Analysis of the variable of possession of a weapon revealed no significant difference ( $\chi^2 = .74$ ,  $df = 1$ ,  $p < .40$ ).

Inspection of the data revealed that a great portion of both groups had weapons.

Analysis of the variable of weight loss of 10 pounds or greater revealed a significant difference between groups ( $\chi^2 = 6.72$ ,  $df = 1$ ,  $p < .01$ ). Inspection of the data revealed that no member of the comparison group reported a weight loss of 10 pounds or greater.

In summary, victim and comparison groups were similar with respect to variables of residence change and intent to change residence, change of phone number, locking doors when not at home, and possession of a weapon. The groups were dissimilar regarding their reasons for moving, locking of doors when at home, reduction of travel and reduction of social contact.

#### Post Hoc Analyses of Modified FSS III Data

While the previously discussed analyses of modified FSS III scores indicated that there were no significant mean differences among referred, recruited, and comparison groups, visual inspection of the standard deviations of these data, presented in Table 8, suggested the existence of possible differences among groups in regard to within-group variability scores. Therefore, Snedecor's procedure as described by McNemar (1969) was used to test for significant differences between the variances of groups. Results of these analyses revealed the existence of no significant differences ( $p > .05$ ) between the variances of FSS III scores of the referred and

recruited groups on the total FSS III scale, and 6 of the 7 subscale variance comparisons. The only variance comparison found to be significant was the miscellaneous fear subscale ( $F = 3.49$ ,  $df = 7, 11$ ,  $p < .05$ ). Thus, the FSS III scores of the groups were combined for all FSS III scores except the miscellaneous subscale scores, and the variances of the combined group scores were compared to variances of the FSS III scores of the comparison group. Presented in Table 15 are the results of these analyses which revealed that the combined victim group had significantly higher variances on the classical and rape subscales of the Modified FSS III.

Table 15  
Summary of Variance Ratios of Modified FSS III  
and Subscales

Measure	$F$	$p$
Fear Survey Schedule Total	2.60	NS
Animal	1.68	NS
Classical	3.71	.05
Failure	2.54	NS
Social interpersonal	2.00	NS
Tissue damage	1.22	NS
Rape	2.84	.05

Note.  $F = 2.66$ ,  $n_1 = 19$ ,  $n_2 = 11$ ,  $p < .05$

The existence of greater variability of fear scores among members of the victim group having been at least partially confirmed, the next step was to determine whether some items on the Modified FSS III had been endorsed more frequently by the victim group. Items rated as producing very-much-disturbance were identified separately for each subject in the victim and comparison groups. The percentage of subjects in the victim and comparison groups endorsing each item as very-much-disturbing was determined. These percentages of subjects so endorsing an item were subjected to two analyses.

Table 16

Modified FSS III Items with Largest Fear Differences  
Between Victim and Comparison Groups

Item	Fear Difference
1. Anal Intercourse	46.7%
2. Guns	36.7%
3. Knives	36.7%
4. Weapons	36.7%
5. Feeling Disapproved of	35.0%
6. Testifying in Court	31.7%
7. Walking on Dimly Lit Street	28.3%
8. Binding Clothing	25.0%
9. Drunken People	25.0%
10. Being Alone	25.0%
11. Venereal Disease	25.0%

First, the aforementioned scores of the comparison group on each of the 120 items were subtracted from the corresponding item score for the victim group. The resulting percentage difference scores on each item were rank ordered, and examination of these data, presented in Table 16, revealed 11 items upon which there were 25-percentage-point discrepancies or greater. The victim group rated themselves as being more disturbed than the comparison group by anal intercourse, guns, knives, weapons, feeling disapproved of, testifying in court, walking on dimly lit streets, binding clothing, being alone, drunken people, and venereal disease.

Table 17

## Ten Modified FSS III Items Most Disturbing for Victims

Item	% of Victims
1. Anal Intercourse	55%
2. Venereal Disease	50%
3. Guns	45%
4. Weapons	45%
5. Knives	45%
6. Walking on Dimly Lit Street	45%
7. Suffocation	40%
8. Testifying in Court	40%
9. Feeling Disapproved of	35%
10. Dead People	35%

A second analysis of these scores was accomplished by rank ordering the victim group percentage endorsement scores, thereby generating the list of most-fear-producing items for the victim group, which is described in Table 17. Content analysis of these ten items suggests that these most frequently feared situations are rape-related.

### Discussion

Often in exploratory research, more issues are raised than settled. Such was the case with the present investigation. The design, as originally conceptualized, would have provided a thorough, comprehensive map of the fear response. As conducted, however, many parameters of the rape-fear response remained unsurveyed. The results of the present study do not definitively define the fear response of the rape victim, but suggest methodological approaches and instruments which may yield a more refined study.

### Biographic, Demographic, and Assault Variable Findings

A question which has been raised at various points in the present research study concerns the similarity of the victim subgroups. The issue now to be addressed is the degree of similarity between the present victim sample and victim samples used in other research studies. A discussion of the biographic and demographic findings will provide the framework by which comparisons can be made with other studies.

With respect to the variable of age, the mean age of victim groups ranged from 19.58 to 24.63 years. There were

no significant differences among the groups in age, although the nonparticipant group ranged in age from 17 to 46 years, showing the greatest age variability. Previous research investigations of rape have also reported a youthful sample. That the present victim samples are comparable in age to victims in the Charleston area is supported by the 1976 report of victims counseled by People Against Rape (PAR) (Saunders, 1976) in which mean victim age was 19. Other investigations have reported rape-victim samples in late teens and early 20s, with ages ranging from 18 to 24 (Sutherland & Sherl, 1970). The Burgess and Holmstrom (1974) Boston City Hospital sample reported 50% of the victims seen in their crisis facility were aged 17-29. Amir (1967) reported that the 15 to 19-year age group was the highest for both offenders and victims.

Racial composition of the present victim groups was not significantly different among groups, yet it underrepresents the victim population of 55% Black contained in the Charleston rape-victim sample reported by Saunders (1976). Whether the racial composition of the present sample is different from samples used by other researchers is sometimes difficult to assess. All 13 members of the Sutherland and Sherl (1970) sample were White. Data provided by Burgess and Holmstrom (1974) were insufficient to assess the racial composition of their sample. This was also true of the data provided by Notman and Nadelson (1976).

Analysis of the variable of marital status has, without exception, found the majority of the victims to be single (Amir, 1967; Burgess & Holmstrom, 1974; Saunders, 1976; Sutherland & Sherl, 1970). Members of the referred and recruited victim groups of the present study were also predominantly single. The nonparticipant group, however, represented an exception to this trend, with a greater proportion being nonsingle.

Although a commonly held belief is that the majority of rape victims live alone, this belief remains unverified by data. In the present study, living arrangement was found to be significantly different among the victim groups. Although 50% of the referred group members were living alone at the time of the rape, the percentages were markedly less for the recruited and nonparticipant groups. The 1976 Charleston study (Saunders, 1976) found that most victims lived with their biological family. The information provided by other researchers is insufficient to determine the living arrangements of the victims in their samples.

Occupationally, the three victim groups of the present study were similar. With only one exception, victim occupations represented the lowest end of the occupational scale. Overall, the most frequent occupational category endorsed was that of waitress, followed by equal distributions in the categories of no occupation and student. The no-occupation category was endorsed by victims who had not held jobs



previously or had never held jobs for more than a 3-month period of time. Although the emotional responses of the rape victims were the primary focus of the interview, many problems relating to employment and finances were identified by the victims. That victims of rape hold low occupational positions has also been reported by Amir (1967). According to his report, over 90% of the victims were at the low end of the occupational scale. The Sutherland and Sherl (1970) report did not specify an occupation, but alluded to social work or community organizational work as the principal occupation of their sample members.

With respect to years of education, the nonparticipant and referred groups were significantly different. The non-participant group had fewer years of education than the recruited and referred groups. Again, data provided by other researchers are insufficient to permit a direct comparison. However, one may speculate that the victims seen at Boston City Hospital represented a wide spectrum of educational experiences. On the basis of the occupational interest of the victims in the Sutherland and Sherl study (1970), it might be expected that these victims were a slightly more educated group than subjects of the present study.

#### Psychophysiological Measures

That autonomic activity (e.g., increased heartbeat, clammy palms, and trembling knees) appears to be a feature

of fear can hardly be argued. The present study hypothesized that victims of rape would display higher arousal to commonly feared and rape-related stimuli than comparison subject counterparts as measured by psychophysiological indices of arousal. It was anticipated that victims would reflect this heightened arousal by (a) higher skin conductance levels than nonvictims, (b) greater numbers of nonspecific responses, and (c) greater changes in conductance following stimuli presentations.

The current investigation failed to provide evidence to support the above hypotheses. An analysis of mean conductance level of victim and comparison groups at rest yielded nonsignificant results. Furthermore, the mean conductance levels were higher for the comparison group than for the victim group, although not significantly so. In addition, the number of nonspecific responses (predicted to be higher for the victim than for the comparison group) was also higher for the comparison group, although this difference was not significant. Consistent with other findings, the change in conductance scores in response to stimuli were also greater for the comparison group than the victim group, although this difference also failed to achieve statistical significance.

Although it was predicted that the victims of sexual assault would find polygraph hookup, psychophysiological instrumentation, and the dimmed experimental chamber anxiety

provoking, the data obtained in the present study support an opposite notion.

How are these results best explained? A tenable explanation is that potentially responsive victims self-selected not to participate in the study. Since all potential subjects were told the purpose of the study (the assessment of fear and anxiety in the rape victim) and the methodology involved (the polygraph), it may be that persons who would have been highly aroused by the situation chose not to participate.

Secondly, evidence suggests that the stimuli were not anxiety provoking. Perhaps differential autonomic responsiveness of victims and nonvictims would occur only under greater stress. Since the stimuli used were nonstressful, it may be that the psychophysiological hypothesis did not receive an adequate test.

Another alternate hypothesis may be that because of the stress of the rape, victims become emotionally exhausted and tired. Finding themselves in a safe place (such as in a hospital and away from the threat of strange men, the streets, etc.), they are able to relax completely. Alternatively, the high level of stress following the rape may place such great stress on the physiological system of the victim that exhaustion of the physiological response may occur. A stress-exhaustion model has been thoroughly investigated by Selye (1956).

Accepting a tripartate theory of fear and anxiety (Paul, 1966; Rachman, 1976), it may be unreasonable to assume that fear will always manifest itself through the psychophysiological channel. Thus, the possibility exists that there are no real differences between the groups. However, an increased sample size and the use of more salient stimuli are required before these hypotheses can be adequately evaluated.

#### Q-Sort Findings

The hypothesis that victims of rape experience negative changes in self-concept as a result of sexual assault was well supported by the Q-sort analysis. The present, or postrape, sort revealed the victims to be lower in their ratings of positive characteristics of themselves, as well as higher in self-ratings of negative characteristics. The adjectives selected as most like them by victims postrape were: nervous, suspicious, careful, confused, and impatient. These selections are markedly discrepant from the retrospective, or prerape, selected adjectives. The highest rated victim adjectives during the prerape period were: happy, pleasant, affectionate, determined, and independent.

Negative items most changed from pre- to postrape sort were: suspicious, nervous, and withdrawn. Positive items which decreased most were: happy and relaxed. An examination of both the number and content of items which changed from pre- to postrape sort lends support to the hypothesis

that victims of rape experience a negative shift in self-concept. Twenty-two items were found to change significantly from pre- to postsort for the victim subjects, whereas only one item was found to change significantly for the comparison subjects.

The marked difference in the victims' sortings from pre- to postrape is in sharp contrast to the stability of the item ratings observed among the comparison group. The consistency of the two sortings of the comparison group, coupled with the changes which occurred among the victim group, suggest that the Q sort is an instrument sensitive to changes in victim self-evaluation and, as such, this technique may hold promise as an instrument for assessment of change in victim self-concept. Also important to note is the existence of marked contrast effect in which the victims appeared to idealize their prerape status, thereby making their present postrape situation appear to be even more dismal.

#### Internal-External Locus of Control

The hypothesis that victims of rape (because of the powerlessness and helplessness experienced as a function of sexual assault) would exhibit a more external locus of control than a comparison group of nonvictims failed to be supported by the results. Mean and standard deviation values were similar among the groups and quite similar to the normative values. Although feelings of helplessness

and powerlessness are often expressed by victims of rape, use of the I-E scale to assess this construct may be inadequate. Recent research suggests that the locus of control is best described as a personality trait measure (Kilpatrick, Dubin, & Marcotte, 1974; Lefcourt, 1972). In the present study, the perception of control may be a result of pre-existing personality characteristics, mood states, and/or the nature of the assault. Among those victims who successfully resist during the assault, subsequent perception of control may differ from perception of control in victims whose attempts to resist were unsuccessful. Investigation of such parameters in future research may prove more fruitful than present efforts.

#### Modified FSS III Findings

Perhaps the most important of the hypotheses to be evaluated was the self-report rating of fear. Contrary to prediction, there were no overall mean differences in total fear scores or subscale fear scores between victim and comparison groups. However, closer examination revealed that the victim group displayed greater variability in particular areas. Subsequent examination revealed clear differences between groups with respect to the content of individual fear items rated as substantially disturbing. Content analysis of those items clearly suggested rape-related situations (e.g., guns, knives, anal intercourse, etc.). Furthermore, that specific items were differentially

endorsed by victims clearly indicates the existence of strong fears which are rape-related. Indicative of the magnitude of rape-related fear responses is the fact that such a large percentage of victims rated these items as very much disturbing. Utilizing standardized observations and an appropriate comparison group, the present research confirmed the unsystematic observations of others (Burgess & Holmstrom, 1974; Sutherland & Sherl, 1970) that a fear response does exist in victims of rape.

At least two directions for future research are suggested by these findings. First, the data suggest that an appropriate strategy for assessment of fear and anxiety is the use of individual items on the FSS III rather than overall fear scores.

A stronger case for the existence of rape-related anxiety would be made by first identifying stimuli present in rape and then examining subsequent responses to fear survey items, predicting maximum response of those items relevant to a particular rape experience. The origin of these items and current data suggest the desirability of including additional rape-related items in the modified fear survey, perhaps to be generated by victims themselves.

Of clinical relevance in the management of the rape victim is the high percentage (31.7%) of victims who rated themselves as very much disturbed at the prospect of testifying in court. This suggests a need for pretrial counseling

as well as for possible legal reforms in what is perceived by victims as highly stressful courtroom procedures.

#### Structured Interview

Findings generated by the structured interview partially support the hypothesis that indices of behavioral avoidance would be observed in victims. Specific behavioral avoidance as manifested by changes in residence was predicted, and the data indicated that a high percentage of victims moved following the rape. However, many members of the comparison group also moved, suggesting that young women may tend to move frequently irrespective of a sexual assault. The reasons given for moving differed for the two groups, however. Victims indicated they were moving because of feeling unsafe and fearful, whereas none of the comparison group offered fear as a reason for moving.

Safety needs appear to be paramount to the victim of rape. The high percentage of victims who change locks and who lock their doors while at home attests to their concerns in this area.

Changes in telephone number appeared to follow changes of residence. There were no differences between victim and comparison groups with regard to this variable. The greatest discrepancy between victim and comparison groups related to travel, outing, and social contacts. In these three areas, the victims were significantly more restricted in



their life styles. Victims attributed changes in their behavior to fear and discomfort in those situations.

The significantly greater weight loss reported by the victim group may reflect anxiety, depression, or a combination of these clinical symptoms. With respect to possession of weapons, there was no significant difference between groups. A proportion of both groups had weapons--40% of the victim group and 25% of the comparison group indicated they had either guns, knives, or clubs.

Three preliminary findings of victim avoidance behavior suggest that social situations, travel, and outings by oneself are the areas most disrupted by the assault.

#### Limitations of Present Research and Implications for Future Research

Although methodologically more advanced than previous research, the present investigation still presents particular shortcomings. Use of a comparison group provided a contrast and anchor for mediating and interpreting findings which would otherwise have been uninterpretable, but the appropriateness and adequacy of the present comparison group is debatable. The comparison group had significantly more years of education than two of the victim groups. With respect to occupational status, the comparison group was comprised of students while the victim groups were diversified among the low occupational strata. An important area

which influences the generalizability of findings relates to the nature of the sample.

The division into groups of nonparticipant and participant victims represents a methodological advancement over previous rape research. The data obtained suggest that all victims of rape are not alike, and that those who volunteer to participate in research may not be representative of all victims. Analyses of the subgroups provide some tentative conclusions and raise issues for speculation regarding victims as participants versus nonparticipants in research. There was no age difference among rape victim groups. The nonparticipant group was found to be significantly less well-educated than the referred group, with the recruited group intermediate between the two. Significantly more nonparticipants had been married or were currently married than was the case in the other two victim groups. The greater representation of married women in the nonparticipant group may suggest that these women have family responsibilities which preempt participation in research, or that social pressure from spouses may preclude them from participating. With respect to occupation, by far the greatest number of victims of all groups occupy low-status jobs or are unemployed.

The most interesting finding about assault characteristics concerns cases judged unfounded. Among the nonparticipant group, 50% of the cases were declared

unfounded by police. This is in contrast to 0.0% for the referred group and 9.1% for the recruited group. Although cases may be unfounded for a variety of reasons (e.g., the victim may drop charges, the police may have insufficient evidence, there may be conflict in testimony, etc.), it may suggest to the victim and other people involved in the case that there is some question as to whether, indeed, it was a "real" rape. As such, the victim would be reluctant to participate in rape research in which the circumstances of the assault and her reactions to it are to be investigated. These data suggest a positive correlation between the prosecutability of the case and the victim's willingness to participate in rape research and, as such, has important methodological implications for subsequent research.

Finally, it should be remembered that this study represented a cross-sectional investigation of the fear response in victims of rape who were seen from 1 week to 4 months after the incident. It might be expected that fear and anxiety subsequent to a rape experience would change over time. Therefore, any comprehensive evaluation of this subject would require a longitudinal study in which relevant parameters of the fear and anxiety response would be measured at appropriate time intervals following the assault.

#### Summary

Present research findings indicate that victims of rape experience certain types of rape-related fear. Although a

tripartate theory of fear was proposed, findings supported a fear response in the areas of self-report and behavioral avoidance only. Negative devaluation in victim self-concept was well supported by the present research.

Q-sort descriptions for the two groups were significantly different for both retrospective and present sorts. Surprisingly, victims rated higher on some positive items and significantly lower on negative items of the retrospective sort, suggesting an idealized or "all was perfect" attitude prior to the rape.

Comparison of the groups on the postrape and present sortings suggested that victims of rape are different from nonvictims in regard to global characteristics such as happy, pleasant, and affectionate. A dimension of fear also appears to emerge in the significant differences between groups on items of carefulness, suspiciousness, and wariness of the opposite sex. Additionally, modified FSS III results suggest that violent or life-threatening aspects of the rape are more fear-engendering and create greater avoidance than the sexual aspects of rape. Victims endorse guns, knives, and weapons among the most disturbing items; but the items of sexual intercourse, a man's penis, nude men, and sexual fantasies are not ranked differently for the rape victim and comparison groups. The exceptions, however, are the items of anal intercourse and venereal disease which, although sexual in nature, may have violent

or destructive overtones. Interview data regarding safety (locking of doors and changing residences due to fear) suggest again the greatest victim disturbance may be due to the life-threatening nature of the assault.

## Appendix A

## Phase I Informed Consent Agreement

(One copy to be retained in record and one copy given to individual.)

I, \_\_\_\_\_, do hereby consent to fill out a Fear Inventory Questionnaire, to sort cards which may be descriptive of me, answer questions about my emotional reactions to various situations, and listen to an audiotape while I imagine the thing or scene which the tape describes. I understand that during the time I listen to the tapes I will wear electrodes which will monitor my heart rate and skin resistance. Electrodes are small metal discs which are attached to the third finger of the left hand and the left upper arm.

Ms. \_\_\_\_\_ has explained to me that the electrodes will be attached to my finger and arm with adhesive tape. I understand that these electrodes do not produce current and cannot harm me. I further understand that the audiotapes may describe situations which may make me slightly anxious, fearful or otherwise emotionally aroused and that this research may later help researchers develop effective ways to treat people who are upset. I understand that any anxiety or fear I experience while listening to the tapes is expected to be brief. I understand that counseling is available following this procedure

## Appendix A--Continued

if I become upset. All information which is gathered will be confidential.

Ms. \_\_\_\_\_ has agreed to answer any inquiries that I may have concerning the procedures and has informed me that I might also contact the Medical University Human Research Committee (792-3094) directly. This Committee administers the agreement with the United States Department of Health, Education, and Welfare covering protection of human subjects.

I understand that I am free to withdraw my consent and discontinue participation at any time. Discontinuation will in no way jeopardize my ability to receive treatment at the Medical University of South Carolina.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Person Obtaining Consent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

## Appendix B

## Modified Fear Survey Schedule

The items in this questionnaire refer to things and experiences that may cause fear or unpleasant feelings. Put a check in the column that describes how much you are disturbed by it nowadays.

	Not at All	A Little	A Fair Amount	Much	Very Much
1. Parking lots					
2. Being in a car alone					
3. People who seem insane					
4. Crawling insects					
5. Being on an elevator alone					
6. Falling					
7. Human blood					
8. Automobiles					
9. Anal intercourse					
10. People with deformities					
11. Noise of vacuum cleaners					
12. Dogs					
13. Guns					
14. Loud voices					
15. Speaking in public					
16. Tough-looking people					
17. Darkness					
18. Strange shapes					
19. Closed spaces					



## Appendix B--Continued

	Not at All	A Little	A Fair Amount	Much	Very Much
20. Being teased					
21. Going out with new people					
22. Sick people					
23. Pregnancy					
24. Worms					
25. Cats					
26. Dentists					
27. Entering a room where other people are already seated					
28. Fire					
29. Thunder					
30. Watching violence on T.V. or movies					
31. Answering the phone					
32. Receiving injections					
33. Sight of deep water					
34. Parting from friends					
35. Seeing other people injected					
36. Journeys by bus					
37. Enclosed places					
38. Doctors					
39. Being criticized					
40. Premature heart beats					

## Appendix B--Continued

	Not at All	A Little	A Fair Amount	Much	Very Much
41. Homosexuals					
42. Emergency rooms					
43. Being awakened at night					
44. Sirens					
45. Binding clothing					
46. Failure					
47. Open wounds					
48. Choking					
49. Cemeteries					
50. Suffocation					
51. Feeling disapproved of					
52. Being in a strange place					
53. Weapons					
54. Knives					
55. Watching sexual activity on T.V. or at movies					
56. Walking on a dimly lit street					
57. Pick-up truck					
58. Witnessing surgical operations					
59. Crossing streets					
60. Being alone					
61. Sound of doorbell					

## Appendix B--Continued

	Not at All	A Little	A Fair Amount	Much	Very Much
62. Not being believed					
63. People playfully wrestling					
64. Drunken people					
65. Sudden noises					
66. Venereal disease					
67. A man's penis					
68. Dead animals					
69. Mice					
70. Sexual intercourse					
71. Parties					
72. Stopping at a stoplight					
73. Blind dates					
74. Dreams					
75. Prospect of a surgical operation					
76. Looking foolish					
77. Strangers					
78. Door slamming					
79. Lesbians					
80. Dead people					
81. People talking about you					
82. Sleeping alone					
83. People behind you					

## Appendix B--Continued

	Not at All	A Little	A Fair Amount	Much	Very Much
84. Being in an elevator					
85. Shadows					
86. Sexual fantasies					
87. Making mistakes					
88. High places on land					
89. Animal blood					
90. Looking down from high buildings					
91. Testifying in court					
92. Feeling rejected by others					
93. Imaginary creatures					
94. Bats					
95. Dirt					
96. Journeys by train					
97. Journeys by car					
98. Losing control					
99. Nude women					
100. Airplanes					
101. Crowds					
102. Birds					
103. Medical odors					
104. Feeling angry					
105. People in authority					

## Appendix B--Continued

	Not at All	A Little	A Fair Amount	Much	Very Much
106. Flying insects					
107. Angry people					
108. Dull weather					
109. Talking to police					
110. Sight of fighting					
111. Being watched working					
112. Harmless snakes					
113. Large open spaces					
114. Ugly people					
115. One person bullying another					
116. Being ignored					
117. Nude men					
118. Lightning					
119. Voices					
120. Bars					

## Appendix C

## Structured Interview

1. Have you changed residence within  
the time since the rape? (for rape victims)  
the past 3 months? (for nonrape subjects)
2. Do you plan to move in the near future?  
If moved or planning to move, why?
3. Do you lock your doors when you are at home?
4. Do you lock your doors when you are not at home?
5. Has there been a change in your locks within  
the time since the rape? (for rape victims)  
the past 3 months? (for nonrape subjects)
6. Do you have a telephone in your home?
7. Have you changed your telephone number within  
the time since the rape? (for rape victims)  
the past 3 months? (for nonrape subjects)
8. Is your telephone number listed?
9. Has the amount you travel or the number of outings  
diminished within  
the time since the rape? (for rape victims)  
the past 3 months? (for nonrape subjects)
10. Has your number of social contacts been reduced within  
the time since the rape? (for rape victims)  
the past 3 months? (for nonrape subjects)
11. Has your weight changed within  
the time since the rape? (for rape victims)  
the past 3 months? (for nonrape subjects)

## Appendix D

Q-Sort Items with Ascribed Value

<u>Item</u>	<u>Ascribed Value</u>	<u>Item</u>	<u>Ascribed Value</u>
1. Affectionate	+	21. Happy	+
2. Appreciative	+	22. Heroic	+
3. Assertive	+	23. Humiliated	-
4. Attractive	+	24. Humorous	+
5. Calm	+	25. Impatient	-
6. Careful	+	26. Independent	+
7. Competent	+	27. Insecure	-
8. Confident	+	28. Lively	+
9. Confused	-	29. Nauseated	-
10. Dependable	+	30. Nervous	-
11. Determined	+	31. Pleasant	+
12. Difficulty in concentrating	-	32. Proud	+
13. Difficulty in sleeping	-	33. Relaxed	+
14. Disgusted	-	34. Reluctant to participate in social events	-
15. Easily angered	-	35. Responsible	+
16. Easily embarrassed	-	36. Revengeful	-
17. Easily pleased	+	37. Sad	-
18. Enraged	-	38. Self-blaming	-
19. Exploited	-	39. Self-pitying	-
20. Frequent headaches	-	40. Serious	+

## Appendix D--Continued

<u>Item</u>	<u>Ascribed Value</u>	<u>Item</u>	<u>Ascribed Value</u>
41. Stable	+	46. Unsure of opinion	-
42. Strong	+	47. Unsure of self	-
43. Suspicious	-	48. Vulnerable	-
44. Tearful	-	49. Wary of members of opposite sex	-
45. Tremulous	-	50. Withdrawn	-



Appendix E  
Q-Sort Protocol

1. Fifty cards, containing one adjective or description per card, are shuffled into random order by the researcher.

2. The researcher instructs the subject: "I want you to remember back"--

(for rape-victim subjects) "to the time before the rape. Remember the 2 or 3 days which preceded the rape and sort these cards into two piles, one of which was like you then, the other of which was unlike you or least like you then."

(for comparison subjects) "to a period of time 3 months ago. Remember what was going on at that time and sort these cards into two piles, one of which was like you then, the other of which was unlike you or least like you then."

3. The researcher clarifies the meaning of particular words that may be unclear or unfamiliar.

4. Following the sorting of the cards into the two piles, the researcher counts the cards to insure that there are 25 in each pile. If the piles are unequal, the subject is instructed to go through the stack that has the extra cards and make the necessary adjustment. For example, "You have 28 card in the 'like you' stack; please go through the cards and take the three that are least like you and place those cards in the pile that is unlike you."

## Appendix E--Continued

5. After the piles have been adjusted so there are 25 in each pile, the researcher takes the pile that is "most like" the subject and arranges them on the table so the subject can read the descriptions on all cards. The subject is then instructed to select the one card which was "most like" her at that particular time. After this selection has been made, the researcher records the selection on the Q-sort worksheet, which has been appropriately identified with date, time of sort (either prerape or 3 months ago) and the subject's name. The subject is then instructed to select the 3 adjectives which were next "most like" the subject. For example, "Now select three adjectives or descriptions which were next most like you (3 months ago or prior to the rape)." Following the selection of the 3, the number increases to 5, then 7. After the 7 "most like" the subject have been selected, the remaining 9 cards are gathered up by the researcher and recorded on the worksheet.

6. The pile of cards "unlike me or least like me" is arranged on the table so the subject can read all the descriptions. The subject is then instructed to select the one adjective of the 50 which was "most unlike" her at that period in time. This selection is recorded and then 3, 5, and 7 adjectives which were most unlike her are requested. The remaining 9 adjectives are gathered and recorded.

## Appendix E--Continued

7. Both piles of cards are then shuffled together and the subject is instructed to sort again into two piles-- "like me" and "unlike me"--according to how descriptive the adjectives are of her at the present time or now. Present time or now is explained to mean the past 2 or 3 days, not just at the moment.

8. The procedure described above (#5 and #6) is then repeated until the sort has been completed and all responses have been recorded on the Q-sort worksheet.



## Appendix G

## Internal-External Locus of Control

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: Obviously there is no right or wrong answer. Circle the letter (a or b) of the alternative you have selected.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice: Do not be influenced by your previous choices.

- 1) a. Children get into trouble because their parents punish them too much.  
b. The trouble with most children nowadays is that their parents are too easy on them.
- 2) a. Many of the unhappy things in people's lives are partly due to bad luck.  
b. People's misfortunes result from the mistakes they make.
- 3) a. One of the major reasons why we have wars is because people don't take enough interest in politics.  
b. There will always be wars, no matter how hard people try to prevent them.
- 4) a. In the long run people get the respect they deserve in this world.  
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
- 5) a. The idea that teachers are unfair to students is nonsense.  
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

## Appendix G--Continued

- 6) a. Without the right breaks one cannot be an effective leader.  
b. Capable people who fail to become leaders have not taken advantage of their opportunities.
- 7) a. No matter how hard you try some people just don't like you.  
b. People who can't get others to like them don't understand how to get along with others.
- 8) a. Heredity plays the major role in determining one's personality.  
b. It is one's experiences in life which determine what they're like.
- 9) a. I have often found that what is going to happen will happen.  
b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
- 10) a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.  
b. Many times exam questions tend to be so unrelated to course work that studying is really useless.
- 11) a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.  
b. Getting a good job depends mainly on being in the right place at the right time.
- 12) a. The average citizen can have an influence on government decisions.  
b. This world is run by the few people in power, and there is not much the little guy can do about it.
- 13) a. When I make plans, I am almost certain that I can make them work.  
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
- 14) a. There are certain people who are just no good.  
b. There is some good in everybody.
- 15) a. In my case getting what I want has little or nothing to do with luck.  
b. Many times we might just as well decide what to do by flipping a coin.

## Appendix G--Continued

- 16) a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.  
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
- 17) a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.  
b. By taking an active part in political and social affairs the people can control world events.
- 18) a. Most people don't realize the extent to which their lives are controlled by accidental happenings.  
b. There really is no such thing as "luck."
- 19) a. One should always be willing to admit mistakes.  
b. It is usually best to cover up one's mistakes.
- 20) a. It is hard to know whether or not a person really likes you.  
b. How many friends you have depends upon how nice a person you are.
- 21) a. In the long run the bad things that happen to us are balanced by the good ones.  
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
- 22) a. With enough effort we can wipe out political corruption.  
b. It is difficult for people to have much control over the things politicians do in office.
- 23) a. Sometimes I can't understand how teachers arrive at the grades they give.  
b. There is a direct connection between how hard I study and the grades I get.
- 24) a. A good leader expects people to decide for themselves what they should do.  
b. A good leader makes it clear to everybody what their jobs are.
- 25) a. Many times I feel that I have little influence over the things that happen to me.  
b. It is impossible for me to believe that chance or luck plays an important role in my life.

## Appendix H

Description of Nonparticipant Victims  
of Phase I

The following represent a brief description of the non-participant victims of Phase I of the study. These victims had been referred to the researcher through People Against Rape counselors and treatment personnel in the community.

Case #1 had been pulled into a car and raped by two men while a woman, who was an accomplice of the rapists, watched. The victim remembered the license number of the car and was able to give a detailed description of the car and the assailants. The victim reported the rape to the police and was seen in the emergency room for a medical examination.

The victim was counseled in the emergency room by a PAR member. At the time of PAR followup, the victim was visited by the counselor and the researcher. The purpose of the research was explained and the victim's cooperation was requested. The victim reported that since the rape she was staying locked in her house for days on end. Her only social contact was her husband. She spoke angrily about the police involvement in her case. She claimed nothing had been done and she had not heard from the police. She indicated that her husband had seen the assailant on several occasions, but the police continued to do nothing. After considerable discussion concerning her anger toward the police, she agreed to cooperate with the researcher and participate in the study.



## Appendix H--Continued

An appointment was scheduled for the following Monday. She indicated that she had no transportation. It was agreed that the researcher would provide transportation to and from the hospital for her. At the appointed time, the researcher went to the victim's home. The victim did not answer the door. The researcher left a written message requesting that the victim call in, but the victim did not. Later the same week, a message was again left requesting that the victim call the researcher at the office. She called the office but would not schedule an appointment. The reason she gave for nonparticipation was that her husband refused to give her permission for participation. Furthermore, she stated that her only reason in reporting the crime was to punish the assailants. Since the police had still not apprehended the assailants, she indicated that she did not want to be bothered by PAR counselors or the researcher.

Case #2 was referred to the researcher through the People Against Rape peer-support group. She had attended one group meeting and was judged by the counselor as a likely candidate for research participation. At the time of phone contact, she willingly set an appointment time for the following week and indicated she would provide her own transportation to the hospital. At the appointed time, she failed to show. During a telephone followup conversation

## Appendix H--Continued

with the victim, she indicated that she was doing fine, but did not want to participate in the research.

Case #3 was referred by her PAR counselor who indicated that she was suffering significant fear and anxiety. According to her counselor, she was unable to stay in her own home alone. Her attendance at work had been sporadic and she was very fearful of men. She was contacted by phone by the researcher and an appointment was scheduled. During the phone conversation she indicated that she "needed help" and would be eager to talk to someone about the feelings which she was experiencing. She failed to show up at the appointed time. A second appointment was set with the victim which she again failed to keep. Three additional attempts to contact the victim proved unsuccessful. Messages left for the victim with relatives requesting that she call the researcher at the office were left unanswered. At the final contact with a sister of the victim, it was revealed that the victim had moved to Texas.

Case #4 was referred to the researcher by her sister who indicated the victim had been depressed and unhappy at periodic intervals throughout the past 6 months. She had been raped approximately 8 months prior to the initial appointment. Her primary complaint was doubt concerning her sexual conduct. At the time of the rape, she had been a virgin. During the year following the rape incident, she

## Appendix H--Continued

had sexual intercourse with two young men whom she had been dating. She asked whether the rape had changed her and made her promiscuous. The victim was naive and expressed rigid ideas regarding women's roles. Within the interview, it was revealed that several life changes had occurred during the past year in addition to the rape. She had left home and entered college as a freshman, was living in a coeducational dormitory, and was receiving significant amounts of attention as a top woman athlete on her campus. All of these factors were discussed as potential contributors to her change in sexual behavior. At the conclusion of the initial interview, a subsequent session was scheduled in which the victim would participate in the research study. The victim did not keep the subsequent appointment and upon telephone followup, indicated that she felt much better and did not wish to participate in the research study.

Case #5 was referred through her PAR counselor to the researcher. The counselor cited problems of fear, anxiety, depression, and sexual disfunctions as complaints of the victim. During the initial interview with the victim, the following history was given: two previous rapes at ages 12 and 22; two marriages both ending in divorce at ages 16 and 21; one suicide attempt at age 23; brief periods of employment as a secretary and waitress throughout the past 3 years; a disruptive home environment which included three dying

## Appendix H--Continued

elderly relatives; and numerous other problems. She reported that she was currently engaged to be married and although she did not love her fiance, she would marry him to get out of the house. A mental status exam revealed affective and cognitive disturbance. The woman was assessed to have significant psychiatric problems and judged inappropriate for participation in the present research study. Attempts to follow-up proved unsuccessful.

Case #6 was raped and beaten by her former husband. Immediately following the incident, she reported to PAR and the emergency room. In addition, she participated in two of the People Against Rape peer-support group sessions. At the time she was contacted, she agreed to participate in the rape research, and an appointment was set, but at the scheduled time she failed to show. During a followup conversation with the victim, she indicated that she did not wish to participate in the research at the present time but would call back at a later date when "a few things cleared up." She was called again one month later, and on this occasion she refused to schedule an appointment.

Case #7 was referred through a friend of her older sister. She was raped by her father after returning home after an extended period of time away from the home. According to the friend's report, she was experiencing sleep disturbance and crying, as well as significant fear and

## Appendix H--Continued

anxiety. She was counseled briefly on the telephone and an appointment was set for her to come to the office. The morning of the appointment, the victim called to say that she did not want to talk about it and indicated that she wanted to handle her problems by herself. Three days later, her sister called, stating that the victim was unimproved and another appointment was set. Again, on the day of the appointment, the victim cancelled. No further attempts were made to contact the victim.

Case #8 was raped following an automobile accident apparently caused by her drunken driving. Her companion left the scene to get help and a car stopped, the driver offering her a ride home. The victim accepted the offer and was raped at knife point, her purse was stolen, and she was left on the railroad tracks several blocks from the accident.

The victim was referred to the researcher by a PAR counselor who indicated that the victim felt dirty, scared, and was experiencing nightmares. At the time of the telephone contact with the researcher, she presented a very confused story about her current status. She alternately claimed to be "doing well" and "falling apart." An appointment was set which she did not keep. A followup phone call suggested that the victim's behavior was highly erratic. She was subsequently admitted to a psychiatric unit where

## Appendix H--Continued

she was diagnosed as suffering from a conversion reaction. She left the hospital against medical advisement. Due to the severity of the victim's psychiatric disturbance, she was assessed inappropriate for research participation.

## Appendix I

### Subject Recruitment Attempts of Phase II

During Phase II of the present study 20 victims of rape were judged by the researcher as potential research subjects. Twelve of the 20 served as research subjects. An account of the remaining 8 victims is included in the following paragraphs.

#### Nonparticipant Subjects

Three of the 8 cases mentioned above were included in the nonparticipant group.

Case #9 was raped at knifepoint by an 18-year-old black male who attended the same high school as the victim. The victim and her mother were contacted by the researcher, the purposes of the research explained, and the victim's cooperation was requested. The victim's mother placed the decision of participation on the victim. The girl indicated that she wanted a few days to consider it; when the researcher called back again requesting her cooperation, the victim refused to participate and indicated she just wanted to forget about the whole thing.

Case #10 was allegedly raped by three cadets from a local military academy. During the initial phone contact with the victim, she agreed to participate in approximately 10 days. Her deferment to a later time was justified as she claimed she had matter to attend to regarding her deceased

#### Appendix I--Continued

husband's business estate. At the second inquiry, she agreed to participate and an appointment was set, which she failed to keep. Two subsequent appointment times were also not kept. Followup with the PAR counselor indicated that the victim had dropped the charges against the cadets and that the recall of the rape incident was markedly different during subsequent police questioning than it had been at the time of her initial statement. The PAR counselor suspected alcohol abuse and was attempting to make the appropriate referral. In consideration of the PAR counselor's report, no subsequent attempts were made to elicit the victim's cooperation and participation in the research.

Case #11 agreed to participate in the research and indicated that she would provide her own transportation to the downtown office. She failed to show up at the appointed time and, during a telephone followup, indicated she did not want to participate in the research nor talk about the rape. She offered the excuse that her boyfriend did not want her answering any questions about the rape.

#### Other Recruitment Attempts

Of four letters sent to victims who had unpublished telephone numbers or who lived in outlying districts which could not be readily visited, one letter was returned by the post office with a stamp indicating that the address was incorrect. One of the remaining three victims responded



## Appendix I--Continued

by calling the office and subsequently became a participant. There was no response to the other two inquiries.

Two case reports provided telephone numbers which had been disconnected. Attempts to follow up through relatives and employers indicated that one of the persons had moved out of the state, and the second person failed to return the researcher's call.

## Appendix J

## Phase II Informed Consent Agreement

(One copy to be retained in record and one copy given to individual.)

I, \_\_\_\_\_, do hereby consent to fill out a Fear Inventory Questionnaire, to perform a card sorting task, to complete various paper and pencil measures, and to answer questions about emotional and behavioral reactions to various situations, some of which may be anxiety provoking. I understand that discussing stressful situations may make me slightly anxious, fearful, or otherwise emotionally aroused. The benefit of the research is that it may help researchers understand women's reactions to stress and to develop treatment procedures. I understand that counseling is available following this procedure if I become upset. All information which is gathered will be confidential. I understand that I will be paid \$5.00 for participation in this research.

Ms. Lois Veronen has agreed to answer any inquiries that I may have concerning the procedure and has informed me that I might also contact the Medical University Human Research Committee (792-3094) directly. This Committee administers the agreement with the United States Department of Health, Education, and Welfare covering protection of human subjects.

## Appendix J--Continued

I understand that I am free to withdraw my consent and discontinue participation at any time. Discontinuation will in no way jeopardize my ability to receive treatment at the Medical University of South Carolina.

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Witness

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Signature

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Person Obtaining Consent

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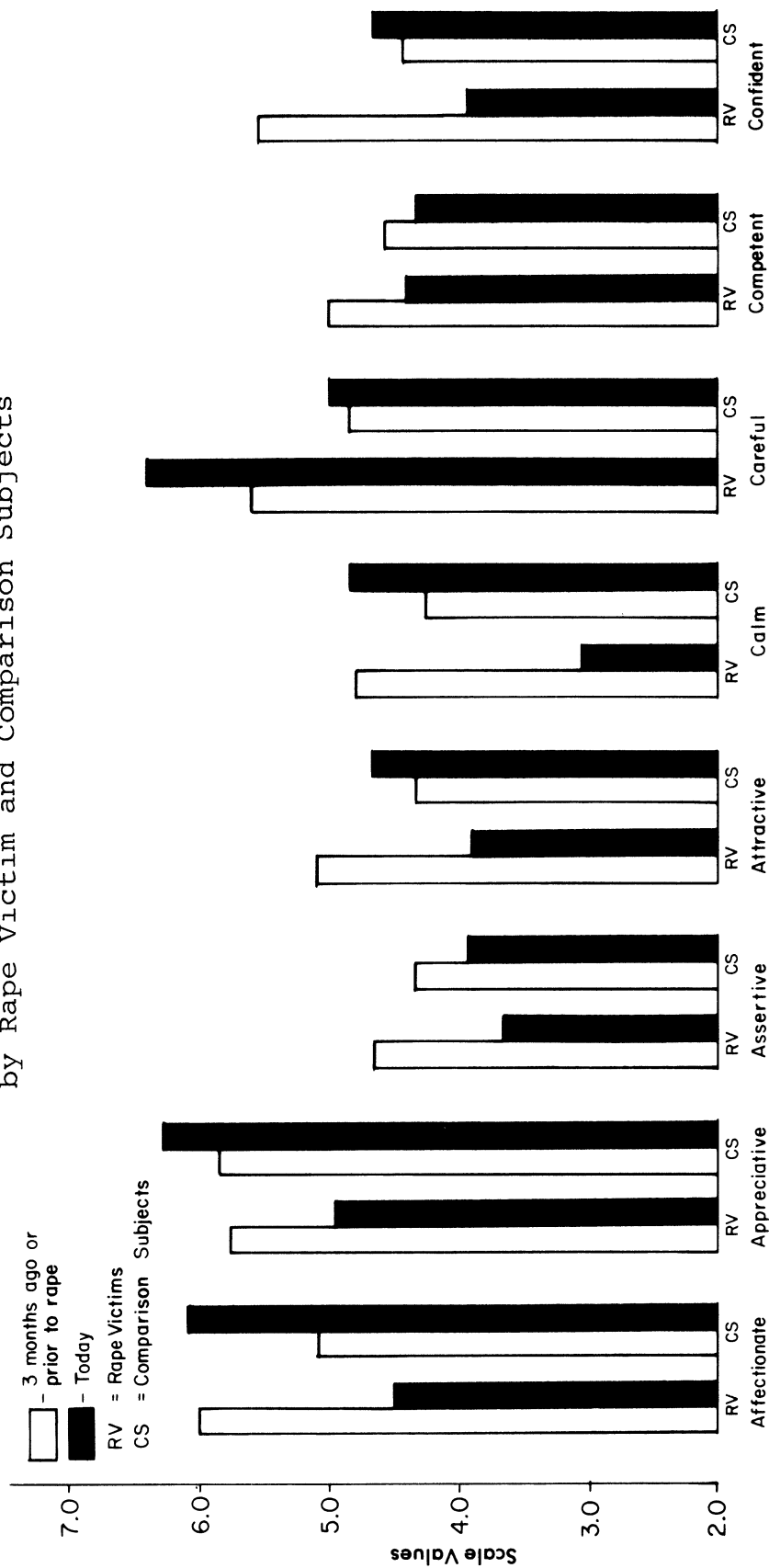
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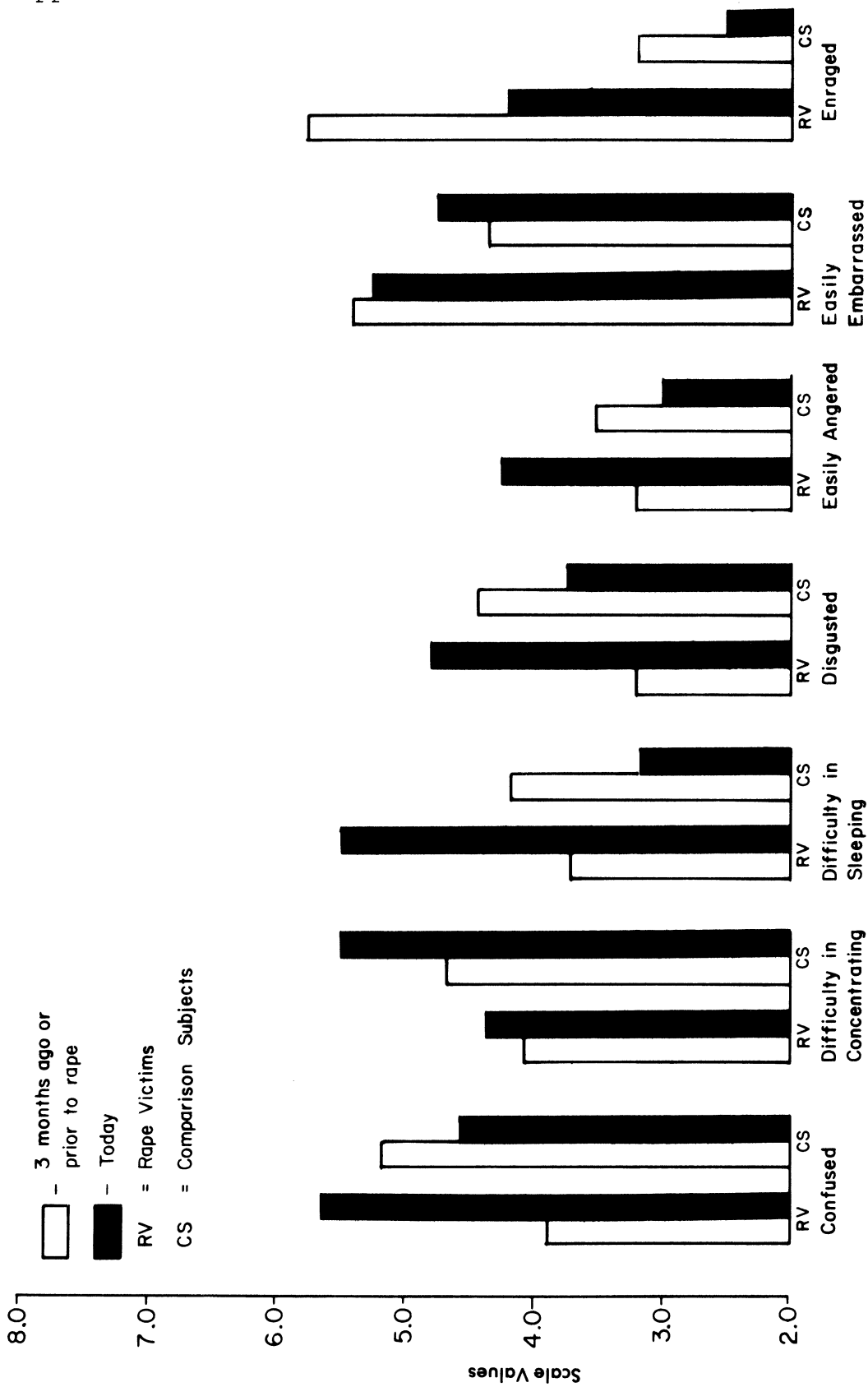
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Appendix K

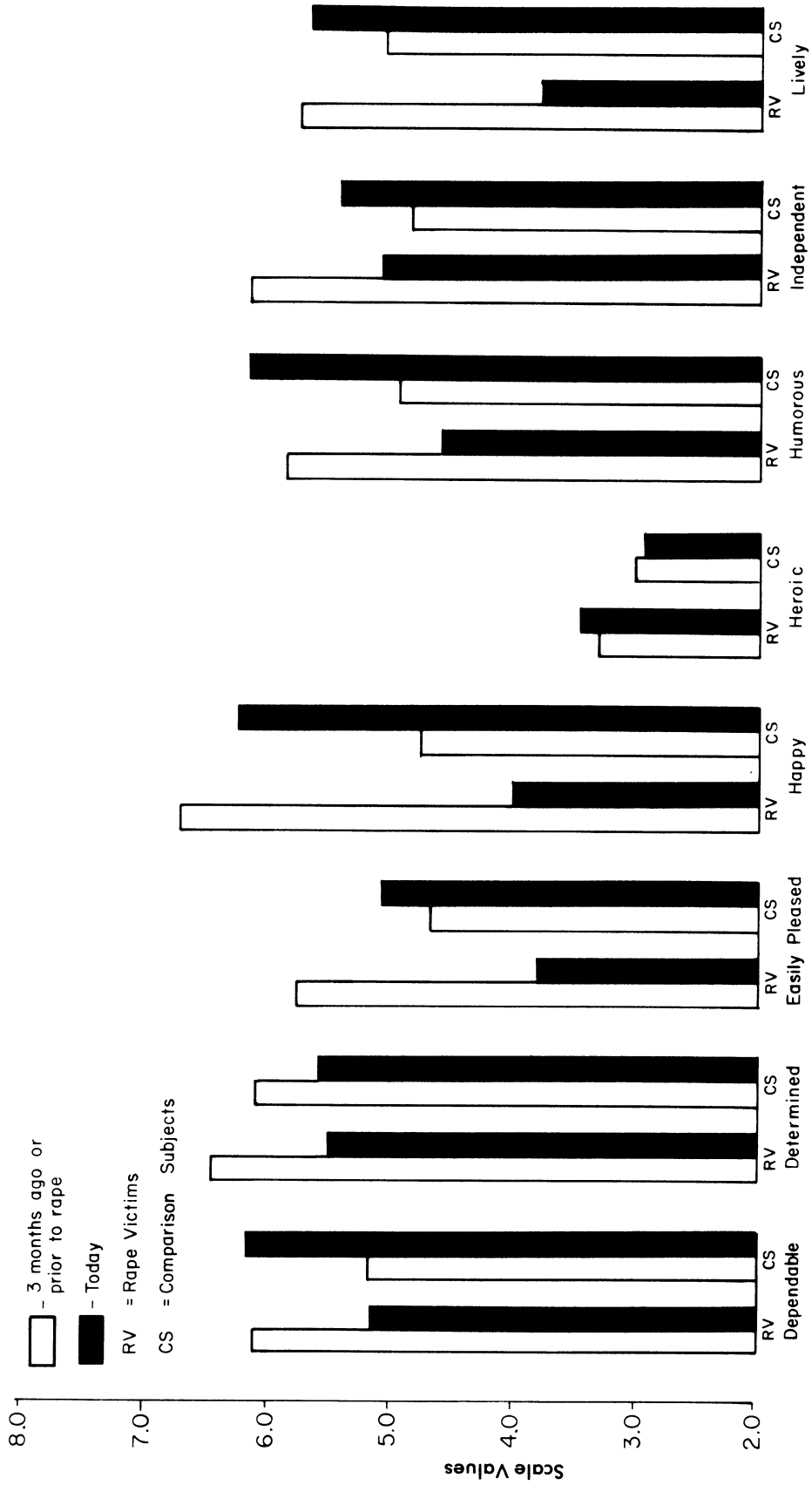
Graphic Representation of 50 Q-Sort Items  
by Rape Victim and Comparison Subjects



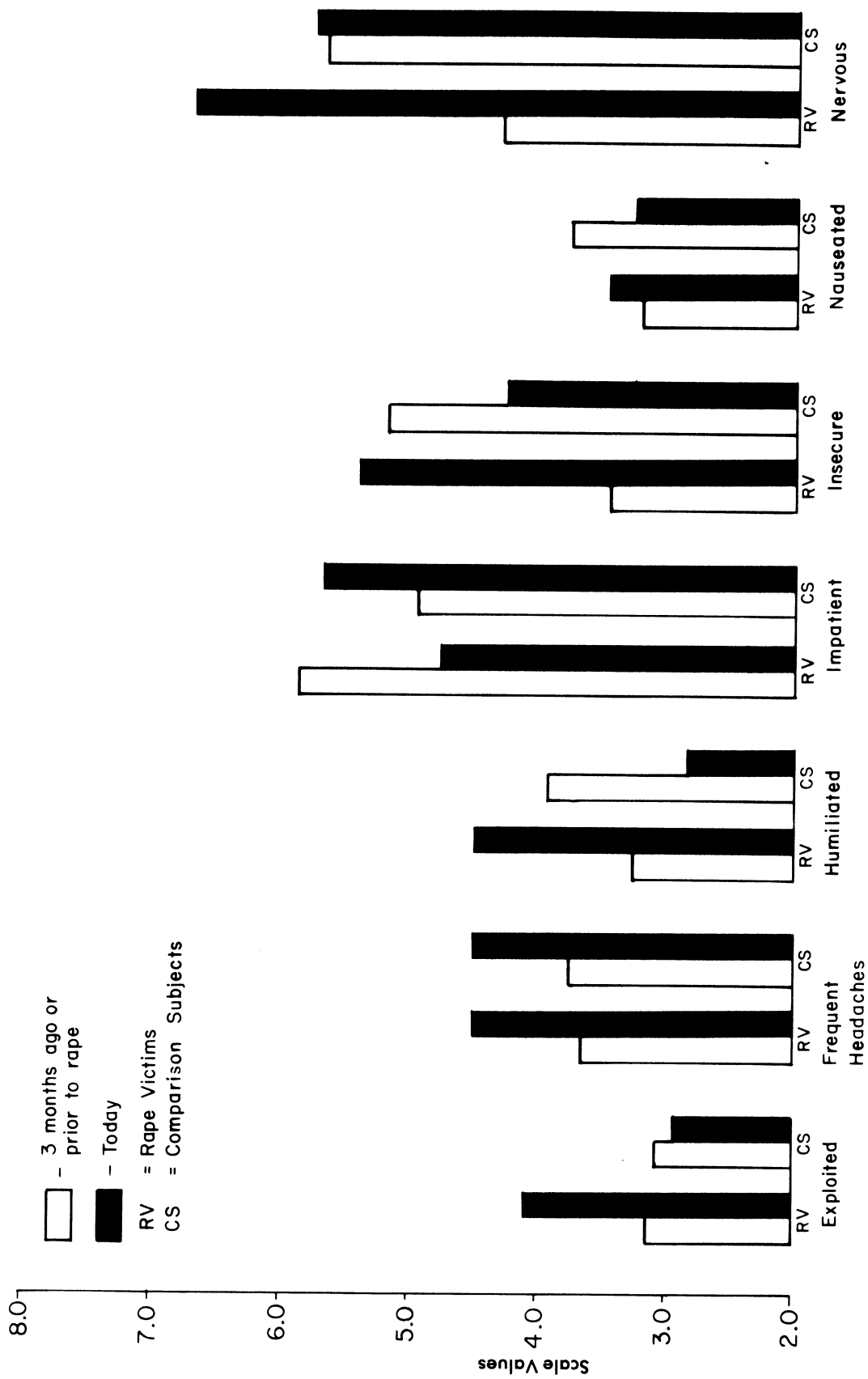
Appendix K--Continued



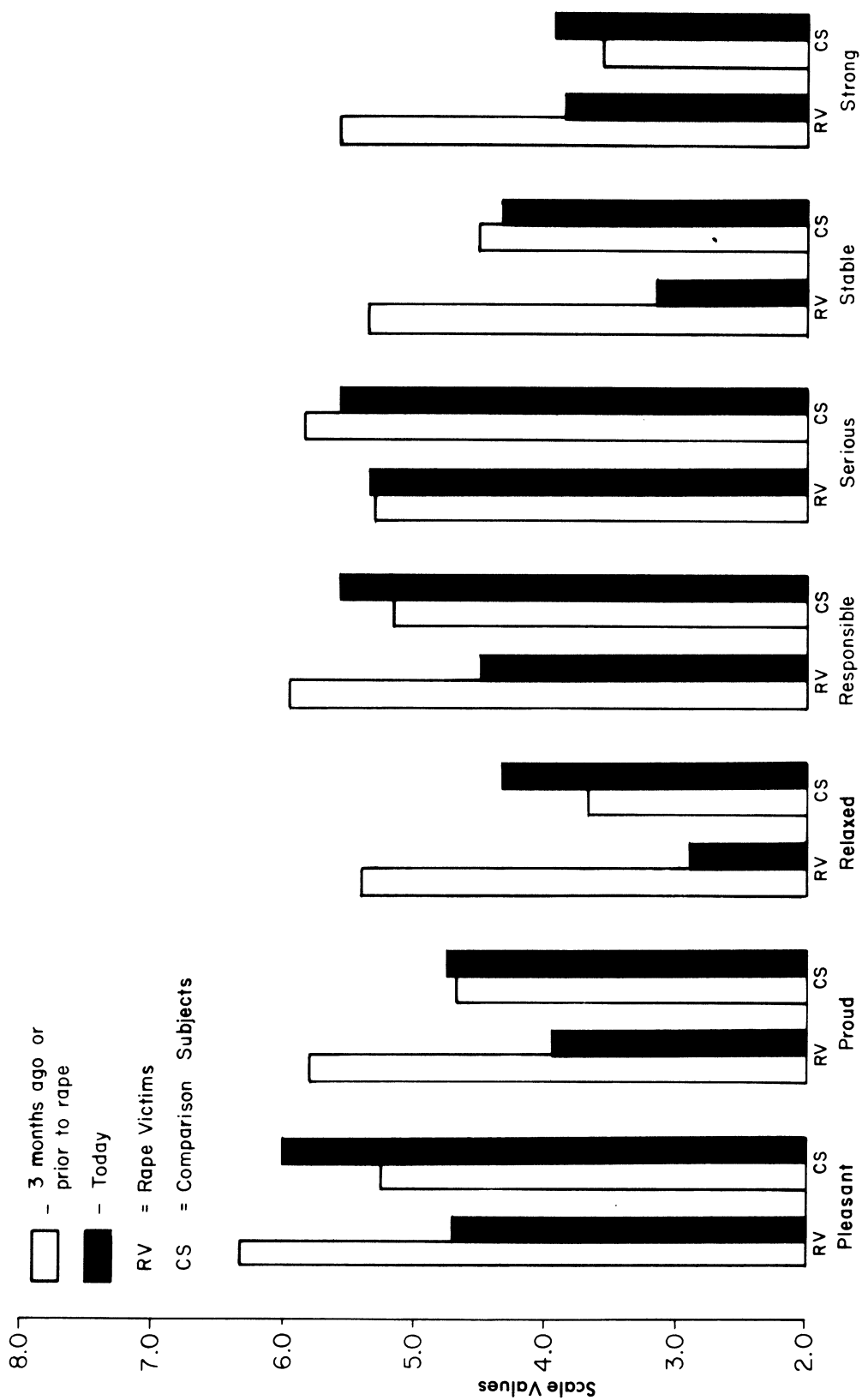
Appendix K--Continued



Appendix K--Continued

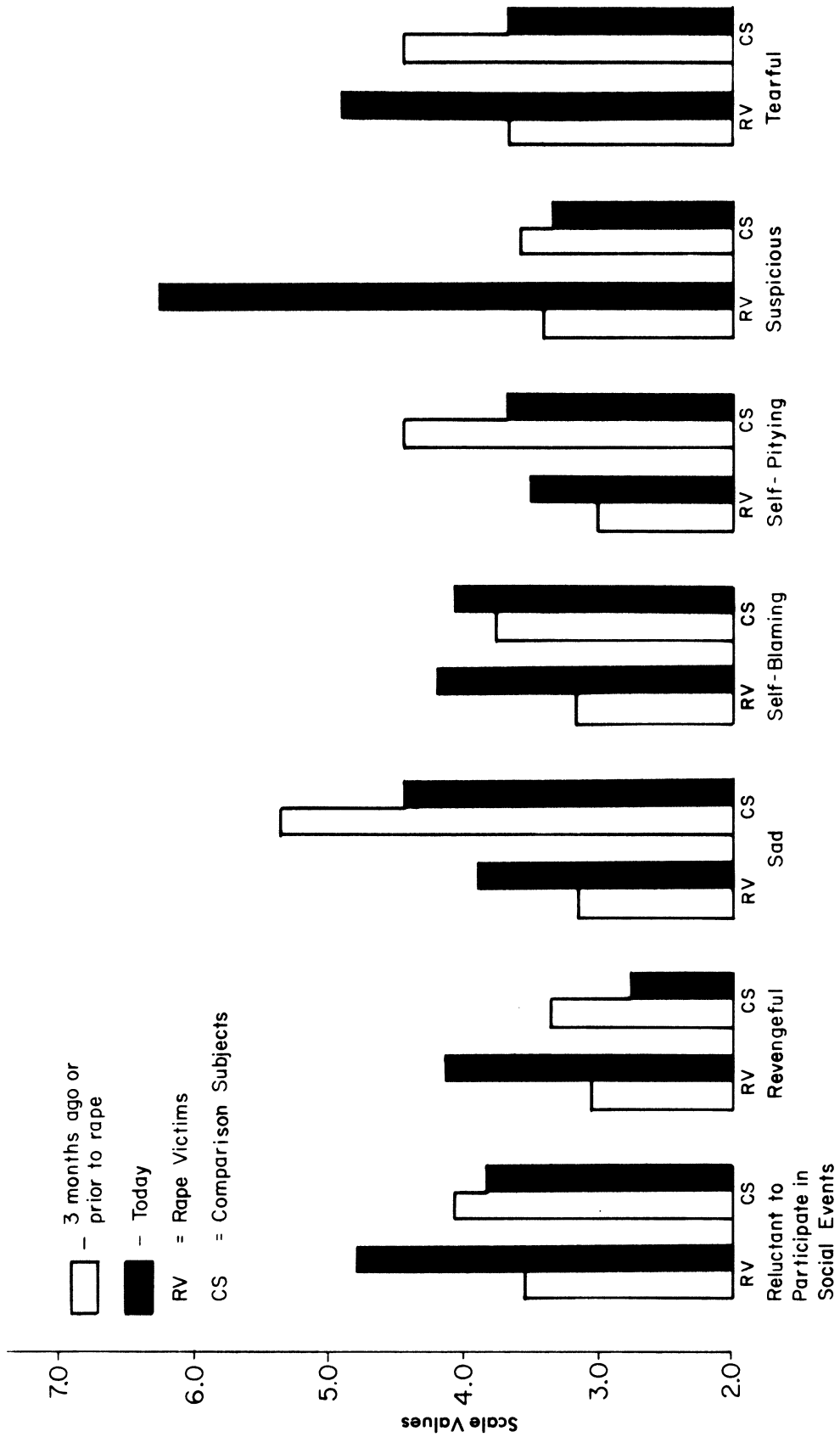


Appendix K--Continued

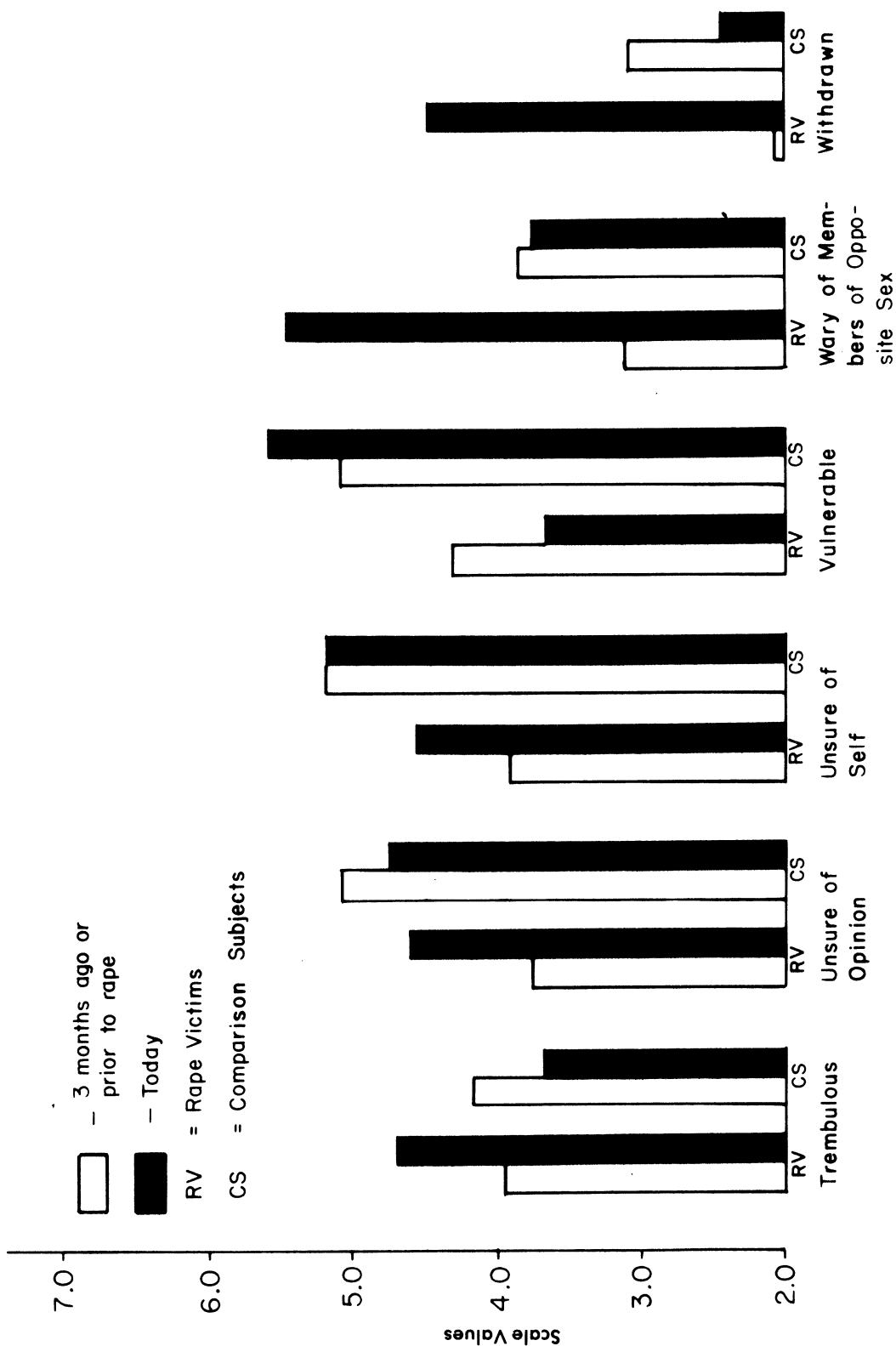




Appendix K--Continued



Appendix K--Continued



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