

A DESCRIPTIVE STUDY OF THE RELATIONSHIP
OF EMPLOYEE SRE (SURVEY OF RECENT
EVENTS) TEST SCORES AND USE OF
UNSCHEDULED LEAVE

A THESIS
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DEDICATION

To my husband, Jerome, and to my children,
Jerome, Kenny, Mary, Bob, and Bill, for:

- their LOVE
- their Support
- their PATIENT UNDERSTANDING

and for their ACCEPTANCE of T.V. dinners
and microwave "re-runs" as a normal part
of life

To Beth for "marrying us" in spite of our
life style

To my parents for:

- giving me life
- love
- and guidance in a belief in GOD and
myself

To my friends:

- Who said, "You can't..."
- and those who asked "Why not?"

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CHAPTER I

INTRODUCTION

The delivery of patient care is a twenty-four hour per day process. To provide for this process, health care employees must be scheduled for twenty-four hours per day, seven days per week. If these employees are not on duty as scheduled, a hardship is imposed on those employees who are on duty. The normal stress encountered in working in a health care facility often causes a high level of physical and mental tension and stress. When this level is increased because of increase in the number of patient care assignments due to use of unscheduled leave by fellow health care employees, a cycle is established for the perpetuation of increasing levels of stress (Neiderbaumer 1977, p. 4).

Stress, according to Selye (1978, Concepts of Stress and Stress Management Seminar, Houston, Texas) is "essentially the rate of all wear and tear caused by life." Life is a process of adaptation to the circumstances in which we exist. This process of adaptation is known as the "general adaptation syndrome" or GAS. The premise of GAS is that living beings have the ability to set into motion

a group of physiological reactions to various noxious environmental agents. This response states that perceived stress on an organism causes an alarm reaction to initiate a form of resistance. This resistance can be in the form of fight or flight in the primitive organism or in the form of assessment in a more developed organism. This innate response is continued until a process of adaptation or exhaustion is reached.

With the development of tools to measure stress levels in humans, it is now possible to identify persons having a "high risk" of developing problems in the resistance phase of response to stress.

This thesis will describe the measurement of levels of stress of a group of health care delivery employees as determined by a standardized tool and their response to environmental and life stress as documented by use of unscheduled leave in absence from work.

Statement of Problem

The study was directed toward identifying the relationship existing between health care employee SRE scores and their use of unscheduled leave.

Statement of Purpose

The purpose of this study was:

1. To identify life stress variables consistently listed by a group of health care employees according to the Schedule of Recent Experience (SRE) tool
2. To document the amount of unscheduled leave hours used by this group of health care employees
3. To examine the relationship of the life stress variables on the SRE and the use of unscheduled leave hours of the group of health care employees

Background and Significance

Assurance of a high level of consistent patient care can only be insured through adequate staffing by competent health care personnel (Di Vincenti 1972, p. 103). To provide this type of care qualified health care personnel must be provided in sufficient numbers, be adequately trained, and be on duty as scheduled twenty-four hours a day, seven days a week, fifty-two weeks a year (Swanburg 1976, pp. 36-37).

Rapid changes in scientific and technological knowledge and the high expectations in the practice of health care delivery have caused increasing levels of stress among health care employees. These stress levels affect the employee's ability to function based on the perception of the stressor and on the method of resistance evidenced by his resulting coping behavior (Cleland 1965, pp. 292-298; Holsclaw 1965, pp. 35-45; Olsen 1977, pp. 43-44; Selye 1977, pp. 35-42).

Positive relationships between stressful life situations, such as a job, an occurrence of illness, and escape methods of coping, were identified by Bell (1977, pp. 136-141). The fact that these behaviors tend to cluster during or following periods of stress has been repeatedly observed and studied (Rabkin and Struening 1976, pp. 1013-1020).

Use of the "fight or flight" response to the stress as a physiologic response for survival continues to be a documented method of coping. However, many times social stigma prevents the health care employee from using these methods of coping; thus, leaving no socially acceptable outlet for the energy derived, creating further stress (Sutterley 1979, pp. 1-30).

Stress is becoming recognized as one of the components of any disease (Rabkin and Struening 1976, p. 1013). Illness itself is generally associated in its early onset with a number of potential factors:

- (1) the presence of stressful environmental conditions;
- (2) perceptions of the individual of the stress; (3) his ability to cope with or adapt to these conditions;
- (4) genetic predisposition to a disease; and (5) the presence of a disease agent.

In this context the stress concept can explain why some people are more prone to illness than others. Stress, in general, is a broad concept describing the organism's response to environmental demands. It encompasses external events that influence individuals and populations and their perceptions and interpretations of such events (Rabkin and Struening 1976, p. 1014).

Redfern (1978, pp. 231-249) cites research by Kagan and Lewis who have done a vast amount of research in the area of the association between stress and illness. She also reports on studies by Volicier and Burns of both animals and humans done over ten years which have shown a statistical relationship between many kinds of psychosocial experiences, physiologic change, and onset of illness. Madison and Viola (1968, p. 297) have found that widows and widowers show significantly increased

illness rates, compared to control subjects, within one year following their bereavements.

When the health care employee is deprived of visible use of the "fight or flight" escape mechanism, use of unscheduled leave as a means of escape is a more socially acceptable means of coping.

In 1949, Drs. Thomas Holmes and Richard H. Rahe devised a list of forty-two life change events common to a majority of the population. These life change units (LCU's) combined to make the Social Readjustment Rating Scale (SRRS). These changes are stressful in varying degrees in nature; however, one theme common to all items is the individual's perception of the amount of stress in each event (Peznecker and McNeil 1975, pp. 442-443).

The major premise in the use of the SRE and SRRS to measure stress is that stress can be identified and measured. Each stress situation in one's life pattern requires a change in the coping method. In the health care field one method can be measured, such as through flight using illness or absence from being on duty.

Hypothesis

There will be no statistically significant relationship between the SRE scores and the use of unscheduled leave for health care employees.

Definition of Terms

1. Stress: The individual's perception and response to harmful or potentially harmful conditions, consisting of physiological and psychological reactions, both immediate and delayed.
2. Stressor: Personal life change which alters the individual's social setting, which evokes some adaptive or coping behavior.
3. Life Stress Variable: Social stressors such as bereavement, marriage, or loss of job, which alter the individual's social setting.
4. LCU: Life Change Units are values assigned by the constant referrent technique by Thomas Holmes and Richard Rahe regarding the significance of certain life events regardless of social variables.
5. SRE: Schedule of Recent Experiences by Homes and Rahe. A questionnaire developed in 1967 consisting of demographic data and recent experience data.

6. SRRS: Social Readjustment Rating Scale by Holmes and Rahe, developed in 1967. A method for scaling the life event and life style items.
7. Health Care Employees: Persons employed in the process of health care delivery, in this case, members of Nursing Service in a federal hospital employed in this capacity for at least six months.
8. Unscheduled Leave Hours: Any leave or absence from the job, either annual or sick leave, utilized on an unscheduled basis measured by number of hours.

Limitations

The population is limited to the health care employees in one service in a federal hospital and is not generalized to the larger population.

Delimitations

1. The population will be health care employees, employed full time, for at least six months, in Nursing Service, in a federal institution.
2. The time frame was from September 1, 1978, to March 1, 1979, for data collection, tabulation, and verification.
3. The data were collected, tabulated, verified, and described by the researcher.

Assumptions

1. All participants answered the questionnaire honestly.
2. All participants filled out the questionnaire accurately.
3. All participants could read and speak English.

Summary

Stress is a subject of critical importance when dealing with methods of coping by health care employees. Recognition of stress, its effects on the body systems, and the reaction to it by "flight" are the areas studied in this paper. The primary purpose of this study was to identify life stress variables, according to the Schedule of Recent Experience and to describe what relationship, if any, exists between employee SRE scores and use of the coping mechanism of flight through unscheduled leave.

Overview of Following Chapters

A discussion of some of the research studies concerning stress, stressors, and reactions of persons to stress are presented in Chapter II, "Review of Literature." Chapter III, "Procedure for Collection and Treatment of Data," reveals: (1) the setting and population for the

study; (2) a discussion of the tools; (3) methodology of data collection; and (4) procedure for treatment of data. Chapter IV, "Analysis of Data", presents an analysis of the findings. Chapter V, "Summary, Conclusions, Implications, and Recommendations," (1) summarizes the study; (2) presents conclusions derived from the data obtained; (3) identifies implications; and (4) offers recommendations for further research.

CHAPTER II

REVIEW OF LITERATURE

Stress has been studied both professionally and non-professionally. Many of these studies are about the implications of the effects of stress on the physiological function of the organism.

In non-professional journals--Ladies' Home Journal and Reader's Digest, etc., have numerous articles about stress coping styles, and "recipes" for coping. Industry and the major telephone companies have many documented studies about stress and the effects on their employees.

The majority of studies in the health care field have been on critical care employees, operating room personnel, and trauma unit personnel. These studies have identified the effects of stress on the physiological function of the employees and documented illnesses following the periods of stress. However, there are few studies that describe measurable stress levels with measurable responses (Rabkin and Struening 1978, pp. 1013-1020; Holmes and Rahe 1967, pp. 213-218; Rahe, Mahan, and Arthur 1970, pp. 401-406).

Stress has been described not only as the "spice of life" but as "life itself" by Selye. In his writings on stress and organism response he defines stress as the "non-specific response of the body to any demand made upon it." The demand is referred to as a stressor and response to it is dependent upon the General Adaptation Syndrome (GAS) of the individual. Relationship between the stressor and the GAS is individual and is based on individual perception of the stress (Selye 1956, p. 83).

Studies by Huckaby and Jagla (1979, pp. 21-26) describe the effects of stress on the bio-physio-psycho-social systems of employees as reflected in a notable decrease in efficiency, in lowered morale, in lowered work performance, and in increased illnesses.

Health care administrators have long recognized the effects of stress; however, there is lack of empirical data to identify consistent stress-producing factors. Huckaby and Jagla (1979, pp. 21-26) classify stressors into four major categories: (1) stressors erupting from interpersonal communication problems; (2) stressors resulting from need for an increase in knowledge base; (3) stressors due to environment; and (4) stressors stemming from rigors of patient care requirements. The degree of stress manifestation is dependent upon the

individual's perception of the event and on his coping and adaptive mechanisms. How an individual deals with stressors is also dependent to a large degree on the amount of knowledge he possesses of the stressor and on the amount of perception of control he has over it. If a person perceives an internal locus of control, stress can be managed. However, perception of external control can have debilitating effects (Huckaby and Jagla 1979, pp. 21-26).

Work situations producing stress within a critical care unit were described by Hay and O'Hern (1972, pp. 281-395). In critical care areas the work environment plus the type of care performed produce a situation over which little control is possible. The fast pace within the units plus the constant visibility of health care employees produce stress. This stress must be denied or masked as is demonstrated by the almost hysterical actions of personnel following a cardiac resuscitation or other critical intervention. Groups in critical care units must work closely with each other. Many times this closeness causes personnel to be unwilling to use withdrawal as a coping mechanism. A continuous stressful environment eventually leads to collective detriment to the group. Since the environment

necessitates group cohesiveness and cooperation, the stressed individual must resort to "flight" (i.e., resignation or reassignment) (Hay and O'Hern 1972, pp. 281-395).

Management of stress according to Janis and Wheeler (1979, pp. 66-76 and 121-122) is dependent upon individual coping through either the establishment of a contingency plan or through complacency regarding the stress. Another style is defensive avoidance using the common strategies of (1) rationalization (it can't happen to me); (2) procrastination ("nothing needs to be done about it now....later"); and (3) buck passing ("it's not my problem"). Some persons develop a hyper-vigilance in dealing with stress, and seek out avenues of escape almost at a panic rate.

The method of stress management used by some members of industry subscribes to the principle of vigilance. This principle is basically: (1) the threat exists; (2) a solution is possible; (3) there is enough time; and (4) information can be evaluated in an unbiased manner. This information is classified according to expected consequences on a balance sheet into four main categories: (1) utilitarian gains or losses for self; (2) utilitarian gains or losses for

significant others or co-workers; (3) self-approval or disapproval; and (4) approval or disapproval of significant others or co-workers. This balance technique is used in conjunction with a stress inoculation technique consisting of mental imagery about possible coping actions and reactions or group role playing.

Writings by Sutterley (1979), Farin and Valigura (1979), and Garbin (1979) describe the close relationship of stress and the quality of work by health care delivery employees. The perception of stress and coping mechanism are learned responses based on the GAS. Hartl (1979, pp. 91-100) describes stress as "that physical and emotional experience which results from a requirement to change from the condition of the moment to any other condition." This includes the premise that unresolved stress continues to "grow" and often manifests itself in inappropriate responses to situations (Sutterley 1979, pp. 1-29; Farin and Valigura 1979, pp. 43-52; Hartl 1979, pp. 91-100; Garbin 1979, pp. 87-95).

The identification of stress, the perceptions about its threat, and the management of it are also described by Olsen (1977, pp. 43-48); Bell (1977, pp. 136-141); Glass (1977, pp. 56-58); Menninger (1978, pp. 80-83); and Selye (1977, pp. 35-42).

The additional fact that stress can be pleasant (eustress) as well as threatening (disstress) has been described by Selye (1979, pp. 60-70). Stress is necessary for the quality of life and can be adapted or interpreted by each individual at his will. Some people thrive on stress and interpret this stimuli as more pleasant than threatening; others perceive all stress as threat or distress. Persons may thrive on "hyperstress (racehorses) or on hypostress (turtles)." Personal interpretation is based on: (1) identification of individual stress level; (2) selection of goals and self-motivation principles; and (3) altruistic egotism (Selye 1974; Cherry 1978, pp. 60-70).

During the late 1940's Dr. Thomas Holmes and Dr. Richard Rahe conducted studies on stress in the U.S. Navy and at the University of Washington. Their studies identified certain life events that produce stress in cross-cultural populations. These life events were incorporated into a scale and identified as life change units (LCUs). Repeated studies of groups validated these LCUs as being stress-producing (Rahe, Mahen, and Arthur 1970). Additional studies resulted in the delegation of a numerical value to each LCU and allowed a numerical total of stress level to be established for each person

being studied. With the establishment of a numerical score, it became possible to identify critical levels of stress as reflected by participant response either through illness or other coping mechanisms. Repeated studies have validated the reliability of use of this tool (Rabkin and Struening 1976, pp. 1013-1020; Rahe and Arthur 1978, pp. 3-15; Rahe, Mahan and Arthur 1970, pp. 401-406).

Studies of groups of health care employees in the United States have had a focus on stress and the resultant occurrence of illness. Criteria for identification of stress were varied (Glass 1978, pp. 34-40; Bell 1977, pp. 136-140). However, Redfern (1978, pp. 231-249) describes replicated studies done by Frogett in 1970, Taylor in 1967, Jones in 1971, and Clark in 1975 in the United Kingdom which identify specific health care personnel and their absences from duty. These absences were grouped into three categories: (1) person/personality variables; (2) work context variables; and (3) external variables. The categories did not specifically identify stressors. However, all identified that rewards or sanctions had little effect on absence (Redfern 1978, pp. 231-249).

Summary

The survey of literature yielded much information about: (1) stress and studies on stress levels, coping mechanisms and resultant manifested symptoms or behavior; (2) employee absences documented by industry; (3) absences in the health care field were not studied using consistent criteria; (4) recent life experiences influence adaptation; and (5) correlation of life change and illness symptoms has been documented.

The following chapter outlines the methodology utilized in implementing the study.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

Introduction

The following methodology was used to identify life stress variables in health care employees. Surveyed employees completed a standardized tool measuring LCUs for two years and use of unscheduled leave for each employee was verified via the official time card record. All participants in this study were informed both verbally and in writing (Appendix C) of the study's purpose.

This was a descriptive study based on expo-facto data. Data were collected by one investigator thereby eliminating a possible problem of inter-investigator reliability. Collection was done in February 1979. The sample consisted of one hundred health care employees in the Nursing Service Department of a Federal hospital situated in Central Texas.

Setting

The study was conducted at a 675-bed federal hospital in Central Texas. One hundred health care

employees in the 400-member department of Nursing Service were surveyed. Agency permission for the study was obtained prior to initiation. The survey was conducted on the premises, and surveyed employees were on duty at the time (Appendix A).

Population

The participants of the study consisted of a convenience sample of one hundred health care employees who were assigned to the Department of Nursing Service in a federal hospital in Central Texas. The department of Nursing Service has an average of 400 employees. The first one hundred employees who were approached who agreed to participate in the survey were selected for the study. Consent by the employees was obtained verbally and in writing by the investigator (Appendix B and Appendix C). The signature of each participant on the consent form was witnessed by other nursing personnel on duty and by the investigator.

Tools

Tool #1 - Schedule of Recent Experiences (SRE)

The Schedule of Recent Experiences (SRE) was a questionnaire developed in 1967 by Holmes and Rahe at the

University of Washington. The design of the SRE consists of a broad spectrum of life changes, including physical and psycho-social areas of life adjustment. The SRE consists of forty-two questions to be considered for each of the following time frames: 0-6 months, 6-12 months, 12-18 months, and 18-24 months (Appendix D).

Tool #2 - Social Readjustment Rating Scale
(SRRS)

After developing the questionnaire SRE, numerical value (termed "Life Change Units") was assigned to each item. This value was determined by the first groups of persons surveyed. They were asked to assign a value to each item (100 - 1,000) and values were then rank ordered (Appendix F).

Reliability

The SRE and SRRS has a test-retest reliability of correlations ranging from .26 to .90, according to studies by Holmes, Rahe, et al. (Rabkin and Struening 1976, p. 1015).

Validity

A validity, according to Kerlinger (1973, p. 458) was "representativeness or sampling adequacy of the content--the substance, the matter, the topics--of a measuring instrument." Most investigators working in measurement of stress in life events research since 1967 have adopted or modified the 43-item checklist of Holmes and Rahe as the tool identifies common situations that signify or require change in adjustment by the individual (Rabkin and Struening 1976, p. 1014).

Data Collection

After permission from the appropriate institutions was obtained, the Chief of Nursing Service and the supervisors were approached for permission to contact employees on duty. One hundred employees were contacted individually and in small groups. The purpose of the study, the method for collection of data, use of the tool, and the request for permission to check official leave cards were explained. Interested employees signed two informed consent forms (Appendix B and Appendix C) as directed by the institution.

Each participant was given the SRE to complete. The SRE answer sheet was assigned a number, and this code number was noted on the consent form. Use of the code number insured anonymity.

Verification of hours of unscheduled leave was done at the unit level by the investigator and was documented for each employee according to his code number. Unscheduled leave hours were tabulated for the period of September 1, 1978, to March 1, 1979. This time frame of six months was checked to coincide with the 0-6 month SRE score to be correlated. Unscheduled leave included both sick leave and annual leave and was documented.

Treatment of Data

The analysis of data was to be done through the t-test. However, due to the size of the sample and to the information desired, the data were analyzed using the Pearson Product-Moment correlation method. This method uses more information contained in the measure. A level of 0.05 was selected by the researcher as being statistically significant. The formula used was:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2 (N\sum Y^2 - (\sum Y)^2)}}$$

SRE scores and leave hours were correlated for the six-month period of September 1, 1978, to March 1, 1979, only. SRE scores for all four time periods were included in Table 12 for interest only.

Analysis of demographic data was by simple percentages only.

Summary

One hundred health care employees employed in a federal hospital in Central Texas in the Department of Nursing Service were involved in this study. Two standardized tools, the SRE and the SRRS, were used in the collection of data on stress scores. Leave hours were verified by official unit leave cards. The data were analyzed using the Pearson Product-Moment correlation test for statistical significance between SRE scores and use of leave hours. Demographic data were described by simple percentages.

CHAPTER IV

ANALYSIS OF DATA

One hundred health care employees assigned to Nursing Service agreed to participate in the study. These employees included Registered Nurses, Licensed Vocational Nurses, and Nursing Assistants. Ninety-three completed the SRE. Seven withdrew or did not complete the survey. They were given this option verbally and in writing prior to the study (Appendix A and Appendix B).

Demographic Data

Demographic data were described for the group that completed the survey. This group consisted of forty-nine Registered Nurses, twenty-one Licensed Vocational Nurses, and twenty-three Nursing Assistants. This sample was fairly representative of the identified levels of employees in Nursing Service at the institution studied for this time period. This was purely incidental since the population was drawn from a convenience sample (Tables 1, 2, and 3).

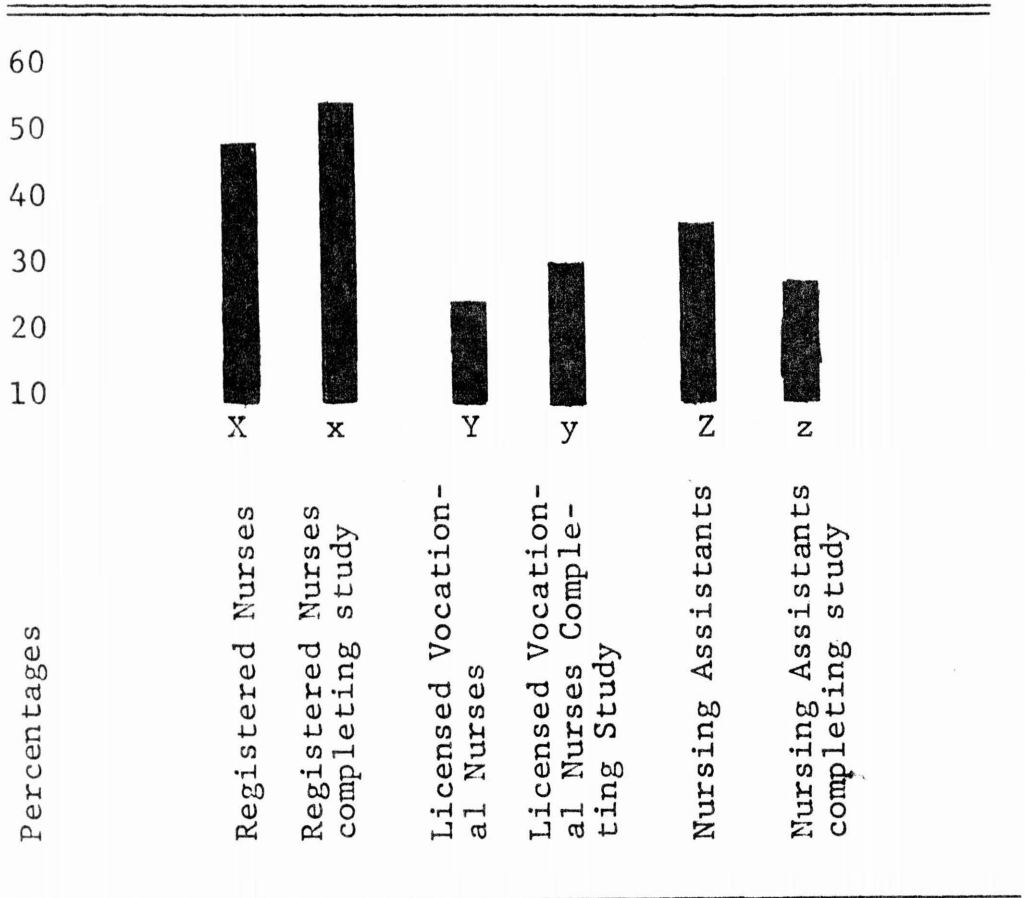
Table 1. Average Staff Levels for September 1, 1978, to March 1, 1979, of Department of Nursing in Federal Hospital in This Study

N (Total)	=	X (RN)	+	Y (LVN)	+	Z (NA)
N (395)	=	X (180)	+	Y (85)	+	Z (130)
N (100%)	=	X (45.5%)	+	Y (21.5%)	+	Z (32.9%)

Table 2. Participants Who Completed Study of Employee SRE Scores and Use of Unscheduled Leave

M (Total)	=	x (RN)	+	y (LVN)	+	z (NA)
M (93)	=	x (49)	+	y (21)	+	z (23)
M (100%)	=	x (52.6%)	+	y (22.5%)	+	z (24.7%)

Table 3. Percentages Relative to Staffing and Group Participation in Federal Hospital in Study



Simple percentages were used to compute the demographic data from the SRE form in Tables 4 through 11. The group consisted of 28 percent males and 42 percent females between the ages of 21 and 65. The ethnic background was 76 percent white, 16 percent Negro, 7 percent Hispanic, and 1 percent Indian. Religious

preference was 67 percent Protestant, 23 percent Catholic, 8 percent identified "other," and 2 percent of the group claimed no preference (Table 4).

Table 4. Age, Sex, Ethnic Backgrounds and Religious Preference of Group Completing SRE by Percentages (N=93)

Demographic	Percentage
<u>Age Range</u>	
21 - 30	26
31 - 45	25
46 - 65	49
Total	100
<u>Sex</u>	
Male	28
Female	72
Total	100
<u>Ethnic Background</u>	
White	76
Negro	16
Hispanic	7
Indian	1
Total	100
<u>Religious Preference</u>	
Protestant	67
Catholic	23
Other	8
None	2
Total	100

Marital status for the group (N=93) showed 67 percent married, 17 percent divorced, 2 percent widowed, 5 percent separated, and 9 percent never married. Stability of marital status was reflected by 70 percent of the group having one marriage, and by 72 percent of the group having no divorce. Five percent of the group had lost a spouse by death (Table 5).

Table 5. Present Marital Status, Number of Marriages, Number of Divorces, and Number of Times Lost Spouse by Death of Group by Percentage (N=93)

Demographic	Percentage
<u>Present Marital Status</u>	
Married	67
Divorced	17
Widowed	2
Never Married	9
Separated	5
Total	100
<u>Number of Marriages</u>	
None	6
One	70
Two	22
Three or more	2
Total	100
<u>Number of Divorces</u>	
None	72
One	22
Two	6
Total	100
<u>Number of Times Lost Spouse by Death</u>	
None	95
One	4
Two	1
Total	100

Education attained by the group was 5 percent grade school, 24 percent high school, 15 percent technical school, 51 percent college, and 5 percent advanced college degrees (Table 6).

Table 6. Education Attained by Group by Percentages
(N=93)

Demographic	Percentage
Education Attained:	
Grade School	5
High School	24
Technical School	15
College	51
Advanced College Degree	5
Total	100

The remainder of demographic data reveal a geographically stable group. Fifty-six percent have lived at the present residence for five years or more, and 69 percent have moved none or one time in the past five years (Table 7).

Table 7. Time at Present Residence and Times Moved in Last Five Years by Group by Percentages (N=93)

Demographic	Percentage
<u>Time at Present Residence</u>	
1 year	20
2 years	25
5 years	14
10 or more years	41
Total	100
<u>Times Moved in Last 5 Years</u>	
0	53
1	16
2	13
5	14
6 or more	4
Total	100

Other common factors in the demographic data include: 97 percent are U.S. American by Birth, 74 percent are from the South and Southwest, 83 percent were born in areas of less than 50,000 population, and 78 percent continue to live in areas of less than 50,000 population (Table 8).

Table 8. Country of Birth, Area Where Most of Life Has Been Spent, Population of Birthplace, and Population of Area Where Most of Life Spent by Group by Percentage (N=93)

Demographic	Percentage
<u>Country of Birth</u>	
United States	97
Europe	1
Central America	2
Total	100
<u>Area of United States Where Most of Life Spent</u>	
South	43
Southwest	31
Midwest	18
East	8
Total	100
<u>Population of Birthplace</u>	
Rural - 5,000	57
5,000 - 49,999	26
50,000 - 499,999	13
500,000 or more	4
Total	100
<u>Population of Area Where Most of Life Spent</u>	
Rural - 5,000	32
5,000 - 49,999	46
50,000 - 499,999	17
500,000 or more	5
Total	100

Parents of this group are over 90 percent U.S. American born, less than 5 percent European born, and 4 percent Hispanic from Mexico (Table 9).

Table 9. Parents' Country of Birth of Group by Percentage (N=93)

Demographic	Percentage	
	Father	Mother
United States	91	94
Europe	5	2
Central America	4	4
Total	100	100

Only 5 percent of the group had no siblings. The rank order of birth was 26 percent oldest, 26 percent middle, 43 percent youngest, and 5 percent only child in the family (Table 10).

Table 10. Number of Brothers, Number of Sisters,
and Birth Order in Family in Group by
Percentages (N=93)

Demographic	Percentage
<u>Number of Brothers</u>	
0	17
1	32
2	19
3	16
4 or more	16
Total	100
<u>Number of Sisters</u>	
0	24
1	27
2	26
3	13
4 or more	10
Total	100
<u>Birth Order in Family</u>	
Oldest	26
Middle	26
Youngest	43
Only	5
Total	100

Over one-half of the group has one or both parents living and over one-third of the group were twenty years old or more when one or both parents died (Table 11).

Table 11. Age When Parents Died by Percentages
(N=93)

Demographic	Percentage	
	Mother	Father
<u>Parent Living</u>	59	48
<u>Age When Parent Died</u>		
0 - 5 years	4	4
6 - 10 years	3	2
11 - 20 years	4	11
20 or more years	20	35
Total	100	100

Analysis of Data

The analysis of data from the SRE answers was done by computing the total LCUs from the SRRS for each participant. Table 12 lists the total number of LCUs for each participant for 0-6 months, 6-12 months, 12-18 months, and 18-24 months, and the number of unscheduled leave hours used by each participant. Data analysis was done of the total number of LCUs and the number of unscheduled leave hours used for 0-6 months for all participants only. This information was analyzed using the Pearson Product-Moment correlation method to compute the "r."

This statistical measure was selected in place of the t-test because it measures more information in the measure. The statistics were computed by J.L. Taylor, Ph.D. using an Apple Computer. The statistical significance of correlation was selected at 0.05. The p at .05 for a sample of N=93 was .0250 for N=90 to .1946 for N=100 according to the appendix of tables for r from Statistics, An Introductory Analysis by Yamane (1964).

Using the formula:

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2 (N \sum Y^2 - (\sum Y)^2)}}$$

$$r = .142$$

Since $r < p$ no significant correlation can be made at 0.05 level and the hypothesis, "There is no significant statistical relationship between health care employee SRE scores and use of unscheduled leave," cannot be rejected.

Table 12. Code Number, LCU Scores for 0-6 Months, 6-12 Months, 1-2 Years, 2-3 Years, and Number of Unscheduled Leave Hours for Group (N=100)

Code No.	Stress LCUs				Unscheduled Leave Hours
	0-6 mo.	6-12 mo.	1-2 yr.	2-3 yr.	
1	20	227	65	76	64
2	101	41	78	0	12
3	62	67	105	230	63
4	347	394	536	507	25
5	256	275	441	1195	30
6	136	77	184	158	24
7	28	68	121	41	24
8	69	193	139	54	38
9	187	314	321	156	39
10	13	0	0	112	18
11	31	15	335	0	24
12	0	0	128	992	94
13	0	0	0	117	15
14	16	69	325	0	7
15	258	31	38	339	11
16	13	24	252	458	52
17	36	32	180	73	62
18	37	0	0	165	56
19	204	245	92	97	31
20	42	83	116	111	72
21	562	0	16	0	52
22	200	158	144	274	12
23	291	13	17	58	54
24	325	384	303	359	27
25	267	500	390	120	42
26	28	56	86	266	19
27	307	241	258	70	161
28	116	427	59	103	24
29	0	58	107	90	42
30	138	255	181	440	16
31	31	48	239	56	24
32	90	0	0	29	16
33	19	19	45	133	8
34	39	124	160	135	56
35	116	80	215	221	33
36	delete				
37	397	676	643	758	74

Table 12. (continued)

Code No.	Stress LCUs				Unscheduled Leave Hours
	0-6 mo.	6-12 mo.	1-2 yr.	2-3 yr.	
38	159	104	167	223	8
39	242	308	614	766	32
40	61	13	0	0	20
41	473	324	223	459	30
42	121	134	232	174	33
43	delete				
44	74	87	107	1040	4
45	321	172	33	118	42
46	102	0	0	0	25
47	195	36	127	265	58
48	296	13	232	0	69
49	256	636	454	433	70
50	52	15	73	0	8
51	92	391	299	1437	3
52	49	53	236	305	64
53	239	102	252	124	12
54	231	89	20	348	12
55	276	300	524	712	10
56	201	403	312	160	39
57	110	83	94	382	0
58	373	271	896	2210	96
59	delete				
60	17	82	355	836	46
61	193	362	199	270	27
62	736	0	0	0	0
63	245	200	239	341	16
64	36	0	0	54	16
65	13	39	135	163	0
66	100	222	443	540	63
67	31	74	273	306	99
68	130	68	13	26	58
69	270	276	232	13	97
70	166	265	296	342	8
71	214	506	719	137	116
72	270	187	207	288	0
73	121	322	438	463	10
74	220	115	260	257	86
75	delete				
76	delete				

Table 12. (continued)

Code No.	Stress LCUs				Unscheduled Leave Hours
	0-6 mo.	6-12 mo.	1-2 yr.	2-3 yr.	
77	135	243	173	0	53
78	224	240	458	781	50
79	79	104	255	199	58
80	715	384	0	0	104
81	103	199	162	343	1
82	444	380	183	138	17
83	367	610	671	617	24
84	133	24	484	135	48
85	delete				
86	142	594	247	341	47
87	392	476	470	554	87
88	199	437	359	192	33
89	86	205	142	114	36
90	152	67	181	187	19
91	0	39	379	516	36
92	delete				
93	61	516	245	0	56
94	97	416	42	189	92
95	148	74	33	67	0
96	70	175	217	551	16
97	321	292	292	519	30
98	219	183	77	216	11
99	305	119	170	290	47
100	309	401	569	944	8

Summary

Analysis of data in this study states that the null hypothesis, there is no statistically significant relationship between the SRE scores and the use of unscheduled leave for health care employees, could not be rejected.

The following chapter presents the summary of the study including implications and recommendations for further study.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

A study was conducted of health care employees at a federal hospital in Central Texas in order to examine the relationship of stress and "flight" through use of unscheduled leave. One nurse-investigator was involved in the collection of data. A statistician was employed to assist with computation and interpretation of collected data. The SRE by Holmes and Rahe, a standardized tool, was used to measure life stress variables.

One hundred health care employees in the Department of Nursing who had been employed at the institution for at least six months participated in the study. Ninety-three completed the entire test. The SRE was administered and SRRS scores were computed, and leave hours were verified by the investigator.

The hypothesis, presented in the null form was: There is no statistically significant relationship between the SRE scores and the use of unscheduled leave for health care employees. The review of literature revealed many

facts about stress and coping behaviors. They are:

(1) stress is inherent to life; (2) perception of stress is individual; (3) Stress will be resolved--right, flight, or adaptation; (4) recent life experiences influence adaptation; (5) stress can be measured; and (6) reactions to stress are predictable.

Analysis of the data revealed no significant statistical difference between SRE scores and use of unscheduled leave.

Conclusions

The results of this study are centralized to the health care employees in a Department of Nursing in a federal hospital in Central Texas. Generalization to a larger population, within Nursing Service, may be done because of the size of the population (25 percent), and because of the ease of obtaining the sample.

The conclusion derived from this study is:

(1) There is no significant relationship between health care employee SRE scores and use of unscheduled leave; and (2) Perception of stress and acceptable response behavior is individual, even in an identified group.

Implications

The implications of this study are directed toward use by Health Care Administrators: (1) to identify the employee with an increased SRE score; (2) to assist this employee in the development of a realistic perception of stress and of coping behaviors. This identification of the health care employee with increased stress would enable the administrator to coach the employee in development of acceptable coping skills, thereby decreasing use of unscheduled leave as a coping mechanism.

Recommendations

Based on this study additional research needs to be done in the relationship of SRE scores and use of unscheduled leave by health care employees in areas other than Nursing Service. The same tools and verification of leave could be used. This comparative study would identify the effect of type of health care service performed, resultant stress score, and correlated leave use.

Additional analysis of the data compiled in this study could be done to determine if a relationship between SRE scores and use of unscheduled leave could be found.

based on sex, age, or functional level, i.e., registered nurse, licensed vocational nurse, and nursing assistant.

Results of this study need to be made known to health care employees so they may become aware of the psycho-physiological effects of stress and can identify resultant behaviors and response.

It is also recommended that health care employees routinely (every six to twelve months) complete the short version of the SRE, learn to interpret the LCUs, and be taught the "de-stressing" techniques when SRE scores become elevated.

Also, administrative personnel can use the information gleaned from SRE scores to identify those employees with elevated stress scores and can provide counseling and guidance for the employee before the coping mechanism of "flight" is utilized.

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Workshops

Administrative Effectiveness Seminar, Houston, Texas, November 1977. Niederbaumer, Lyla, R.N., MNA Nurse Consultant.

Concepts of Stress and Stress Management Seminar, April 6 and 7, 1978, Houston, Texas. Speakers:

1. Holmes, Thomas, "Life Change Events and Disease"
2. Levine, Myra, "Stress and Nursing"
3. Rosenman, Roy, "Type A Behavior and a Stress Response"
4. Roskies, Ethel, "Behavior Modification of Type A Pattern"
5. Selye, Hans, "General Adaptation Syndrome"
6. Williams, Redford, "Arousal, Relaxation, and Biofeedback"

Audio-Tapes

Houston, Jean. "Unstressing for Increased Creativity
and Productivity."

Lewis, Jerry. "Stress and the Family."

APPENDIX A

AGENCY PERMISSION FORM

MEMORANDUM

TO : Research Committee

Date: Mar.5,1979

From: Mary K. Becker

Subject : A Descriptive Study of the Employee SRE (Survey of Recent Experiences) Scores and Their Use of Unscheduled Leave

1. I am enrolled as a student in Texas Woman's University as a student for the Master of Science degree. As part of the requirements for this degree, I propose to carry out the research project, a description of which is attached. This proposal has been reviewed and approved by my graduate committee or instructor. The proposal will require no funding. I understand that any publication of the findings, other than as a dissertation to be submitted to my graduate committee, will require approval of the Publications Committee.

2. My participation in this project has the approval of my Service Chief.

3. This project requires the participation of human subjects who will be selected as follows : A convenience sample of employees of Nursing Service at Olin E Teague Veterans Medical Center in Temple, Texas; the first 100 employees to consent to be surveyed, who have been employed for six months or longer . Participation is voluntary.

The suitability of their participation has been evaluated by the Human Studies Review Committee of the academic institution/and/or of this hospital. If VA employees are involved, their participation has been approved by their service chief.

Mary K Becker

Approved/~~Disapproved~~

Corene D. Tamer
Chief, Nursing Service

Approved / Disapproved

Robert G. Rossing
Associate Chief of Staff/Research

Approved/ ~~Disapproved~~

Tracy J. Wallace, M.D.
Chairman, Human Studies
Subcom.

Approved/~~Disapproved~~

J. J. Cullen
Chief of Staff

APPENDIX B

EMPLOYEE PERMISSION FORM

A Descriptive Study of the Relationship of Employee SRE
(Survey of Recent Experiences) Test Scores and Their Use
of Unscheduled Leave

This project consists of a survey of SRE test scores and their use of unscheduled leave of employees in the department of Nursing Service at the Veterans Administration Medical Center in Temple, Texas.

The tool used is the SRE (Survey of Recent Experiences) developed at the University of Washington by Drs. Holmes and Rahe.

The use of unscheduled leave will be verified by the researcher by checking official leave records on nursing units of the participants.

Participation is voluntary and may be terminated at any time by the participant.

All information in the study is private and employees will not be identified by name in any part of the study.

Researcher Date

I have read the above and understand that I voluntarily will take the SRE test, will have my leave record verified, my privacy assured and that I may terminate my participation at any time.

Participant Date

APPENDIX C

EMPLOYEE CONSENT FORM

**PART I-AGREEMENT TO PARTICIPATE IN RESEARCH
BY OR UNDER THE DIRECTION OF THE VETERAN'S ADMINISTRATION**

DATE _____

I, _____, _____ voluntarily consent to participate as a subject
in the investigation entitled _____
(Type or print subject's name) (Title or study)

2. I have signed one or more information sheets with this title to show that I have read the description including the purpose and nature of the investigation, the procedures to be used, the risks, inconveniences, side effects and benefits to be expected, as well as other courses of action open to me and my right to withdraw from the investigation at any time. Each of these items has been explained to me by the investigator in the presence of a witness. The investigator has answered my questions concerning the investigation and I believe I understand what is intended.

3. I understand that no guarantees or assurances have been given me since the results and risks of an investigation are not always known before hand. I have been told that this investigation has been carefully planned, that the plan has been reviewed by knowledgeable people, and that every reasonable precaution will be taken to protect my well-being.

4. Nevertheless, I wish to limit my participation in the investigation as follows:

VA FACILITY _____

SUBJECT'S SIGNATURE _____

WITNESS'S NAME AND ADDRESS (Print or type) _____

WITNESS'S SIGNATURE _____

INVESTIGATOR'S NAME (Print or type) _____

INVESTIGATOR'S SIGNATURE _____

☐ Signed information
Sheets attached.

☐ Signed information
Sheets available at: _____

SUBJECT'S IDENTIFICATION (I. D. photo or give name - last, first, middle) _____

SUBJECT'S I.D. NO. _____

WARD _____

**AGREEMENT TO PARTICIPATE
IN RESEARCH BY OR UNDER
THE DIRECTION OF THE
VETERAN'S ADMINISTRATION**

VA FORM
JUN 1975 **10-1086**

SUPERSEDES VA FORM 10-1086
MAY 1967, WHICH WILL NOT BE
USED.

APPENDIX D

SCHEDULE OF RECENT EXPERIENCE (SRE)

Booklet for

SCHEDULE OF RECENT EXPERIENCE (SRE)

Thomas H. Holmes, M.D.

Richard H. Rahe, M.D.

This questionnaire consists of two sections, a personal history section (side 1, blue) and a recent experience section (side 2, green). Each item of the questionnaire is to be answered on the answer sheets according to the instructions. Read each item and the choice of answers carefully, judge the answer as it applies to you and mark it on the answer sheet. The mark is made by blacking out with a pencil the proper space on the answer sheet. Make the marks black and heavy. Do not be afraid to make corrections, but erase cleanly. *Do not mark in the booklet.*

© 1967

University of Washington

School of Medicine

Department of Psychiatry

Section 1, Personal History (Side 1, blue)

Please print in your name, address, today's date, birth date and occupation. All other questions are answered by blacking out the box beside the proper response under each of the headings in the blocks. Each question in this section has one answer that is appropriate so *do not leave any unanswered*.

Example:

**RELIGIOUS
PREFERENCE**

PROTESTANT

☒ CATHOLIC

JEWISH

OTHER

NONE

This means that your religious preference is Catholic.

Section 2, Recent Experience (Side 2, green)

Part A (Items 1 through 12)

This section of the questionnaire is different from the first section in 3 ways: first, the questions have to do with whether an event did or did not happen and when; second, the questions to be answered are written only in this instruction booklet; third, the answer sheet (Side 2) has been separated into the following 4 time periods:

0 to 6 mo ago 6 mo to 1 yr ago 1 to 2 yrs ago 2 to 3 yrs ago

For each numbered question in the booklet:

1. Think back on the item event and decide if it happened to you and when it happened.
2. If the event in question did happen in any of the time periods, mark the answer by blacking out the "yes" bracket in the appropriate time period. Y means Yes.
3. If the event in question did not happen in any of the time periods, mark the answer by blacking out the "no" bracket in the appropriate time period. N means No.

When in doubt of the event happening, then mark in the "yes" bracket. If you are not certain of the time period, do not worry; just try to be as close as possible. *There must be a mark in each time period.*

Example:

Item No. (Trouble with boss)

1.

0-6 MO	6 MO- YR	1-2 YR	2-3 YR
<input checked="" type="checkbox"/> N	Y <input checked="" type="checkbox"/>	Y <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> N

This means that you have had trouble with the boss in the last 6 months and between 2 and 3 years ago, but not 6 months to a year ago or 1 to 2 years ago.

Item Number

1. Mark under the appropriate time periods when there has been either a lot more or a lot less trouble with the boss.
2. Mark under the appropriate time periods when there was a major change in sleeping habits (sleeping a lot more or a lot less, or change in part of day when asleep).
3. Mark under the appropriate time periods when there was a major change in eating habits (a lot more or a lot less food intake, or very different meal hours or surroundings).
4. Mark under the appropriate time periods when there was a revision in your personal habits (dress, manner, associations, etc.).
5. Mark under the appropriate time periods when there was a major change in your usual type and/or amount of recreation.
6. Mark under the appropriate time periods when there was a major change in your social activities (e.g., clubs, dancing, movies, visiting, etc.).
7. Mark under the appropriate time periods when there was a major change in church activities (e.g., a lot more or a lot less than usual).

8. Mark under the appropriate time periods when there was a major change in number of family-togethers (e.g., a lot more or a lot less than usual).
9. Mark under the appropriate time periods when you had a major change in financial state (e.g., a lot worse off or a lot better off than usual).
10. Mark under the appropriate time periods when you had in-law troubles.
11. Mark under the appropriate time periods when you had a major change in the number of arguments with spouse (e.g., either a lot more or a lot less than usual regarding child-rearing, personal habits, etc.).
12. Mark under the appropriate time periods when you had sexual difficulties.

Part B (Items 13 through 42)

This part of Section 2 is similar to Part A, *except* that the question now asks you to indicate the *number of times* that an item event happened in each of the appropriate time periods.

Each of the time period columns has brackets numbered 0, 1, 2, 3, 4+. The last, 4+, means 4 or more. These numbers represent the number of times the event happened. If the event did not happen, mark the "0" bracket. *There must be a mark in each time period.*

Example:

Item No. (Change in residence)

19.

0-6 MO	6 MO-1 YR	1-2 YR	2-3 YR
0 <input checked="" type="checkbox"/> 2 3 4+	0 1 <input checked="" type="checkbox"/> 3 4+	<input checked="" type="checkbox"/> 1 2 3 4+	0 1 2 <input checked="" type="checkbox"/> 4+

This means that you changed residence once in the last 6 months, twice 6 months to 1 year ago, three times between 2 and 3 years ago, but did not change residence 1 to 2 years ago.

Item Number

13. Mark the number of times in each appropriate time period that you experienced major personal injury or illness.
14. Mark the number of times in each appropriate time period that you have lost a close family member (other than spouse) by death.
15. Mark the number of times in each appropriate time period that you have experienced the death of spouse.
16. Mark the number of times in each appropriate time period that you have experienced the death of a close friend.
17. Mark the number of times in each appropriate time period that you have gained a new family member (e.g., through birth, adoption, older moving in, etc.).
18. Mark the number of times in each appropriate time period that there has been a major change in the health or behavior of a family member.
19. Mark the number of times in each appropriate time period that you have had a change in residence.
20. Mark the number of times in each appropriate time period that you have experienced detention in jail or other institution.
21. Mark the number of times in each appropriate time period that you have been found guilty of minor violations of the law (e.g., traffic tickets, jay walking, disturbing the peace, etc.).
22. Mark the number of times in each appropriate time period that you have undergone a major business readjustment (e.g., merger, reorganization, bankruptcy, etc.).
23. Mark the number of times in each appropriate time period that you married.
24. Mark the number of times in each appropriate time period that you were divorced.
25. Mark the number of times in each appropriate time period that you had marital separation from your mate.
26. Mark the number of times in each appropriate time period that you had an outstanding personal achievement.
27. Mark the number of times in each appropriate time period that you had a son or daughter leaving home (e.g., marriage, attending college, etc.).
28. Mark the number of times in each appropriate time period that you have experienced retirement from work.
29. Mark the number of times in each appropriate time period that there was a major change in working hours or conditions.
30. Mark the number of times in each appropriate time period that you had a major change in responsibilities at work (e.g., promotion, demotion, lateral transfer).

31. Mark the number of times in each appropriate time period that you have been fired from work.
32. Mark the number of times in each appropriate time period that there was a major change in living conditions (building a new home, remodeling, deterioration of home or neighborhood).
33. Mark the number of times in each appropriate time period that your wife began or ceased working outside the home.
34. Mark the number of times in each appropriate time period that you took on a mortgage greater than \$10,000 (e.g., purchasing a home, business, etc.).
35. Mark the number of times in each appropriate time period that you took on a mortgage or loan less than \$10,000 (e.g., purchasing a car, T.V., freezer, etc.).
36. Mark the number of times in each appropriate time period that you experienced a foreclosure on a mortgage or loan.
37. Mark the number of times in each appropriate time period that you have taken a vacation.
38. Mark the number of times in each appropriate time period that you have changed to a new school.
39. Mark the number of times in each appropriate time period that you have changed to a different line of work.
40. Mark the number of times in each appropriate time period that you have begun or ceased formal schooling.
41. Mark the number of times in each appropriate time period that you had a marital reconciliation with your mate.
42. Mark the number of times in each appropriate time period that you had a pregnancy.

APPENDIX E

ANSWER SHEET

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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OTE:
MARK EACH ANSWER CLEARLY; IF YOU MAKE
ORRECTIONS, BE SURE TO ERASE CLEANLY.

O NOT LEAVE ANY QUESTIONS WITHOUT A MARK
V EACH TIME PERIOD.

SECTION 2 PART A

	0-6 MO	6 MO- YR	1-2 YR	2-3 YR
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	0-6 MO	6 MO- YR	1-2 YR	2-3 YR

63

SECTION 2 PART B

	0-6 MO	6 MO-YR	1-2 YR	2-3 YR
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
	0-6 MO	6 MO-1 YR	1-2 YR	2-3 YR
21.				
22.				
23.				
24.				
25.				
26.				
27.				
	0-6 MO	6 MO-1 YR	1-2 YR	2-3 YR
28.				
29.				
30.				
31.				
32.				
33.				
34.				
35.				
	0-6 MO	6 MO-1 YR	1-2 YR	2-3 YR
36.				
37.				
38.				
39.				
40.				
41.				
42.				

APPENDIX F

VALUES OF QUESTIONS ON SCHEDULE OF RECENT EXPERIENCE (SRE)

VALUES OF QUESTIONS ON SCHEDULE OF RECENT EXPERIENCE (SRE)

No.	SRE Question	Mean Value
1	Trouble with boss	23
2	Change in sleeping habits	16
3	Change in eating habits	15
4	Revision of personal habits	24
5	Change in recreation	19
6	Change in social activities	18
7	Change in church activities	19
8	Change in number of family get-togethers	15
9	Change in financial state	38
10	Trouble with in-laws	29
11	Change in number of arguments with spouse	35
12	Sex difficulties	39
13	Personal injury or illness	53
14	Death of close family member	63
15	Death of spouse	100
16	Death of close friend	37
17	Gain of new family member	39
18	Change in health of family member	44
19	Change in residence	20
20	Jail term	63
21	Minor violations of the law	11
22	Business readjustment	39
23	Marriage	50
24	Divorce	73
25	Marital separation	65
26	Outstanding personal achievement	28
27	Son or daughter leaving home	29
28	Retirement	45
29	Change in work hours or conditions	20
30	Change in responsibilities at work	29
31	Fired at work	47
32	Change in living conditions	25
33	Wife begin or stop work	26
34	Mortgage over \$10,000	31
35	Mortgage or loan less than \$10,000	17
36	Foreclosure of mortgage or loan	30
37	Vacation	13
38	Change in schools	20
39	Change to different line of work	36
40	Begin or end school	26
41	Marital reconciliation	45
42	Pregnancy	40