UCSF
UC San Francisco Electronic Theses and Dissertations

Title
Burned adolescents' descriptions of their coping strategies

Permalink
https://escholarship.org/uc/item/6cz4s8qp

Author
Sutherland, Suzanne,

Publication Date
1985

Peer reviewed|Thesis/dissertation

eScholarship.org Powered by the California Digital Library
University of California

BURNED ADOLESCENTS' DESCRIPTIONS OF THEIR COPING STRATEGIES

by

Suzanne Sutherland

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF SCIENCE

in

Nursing

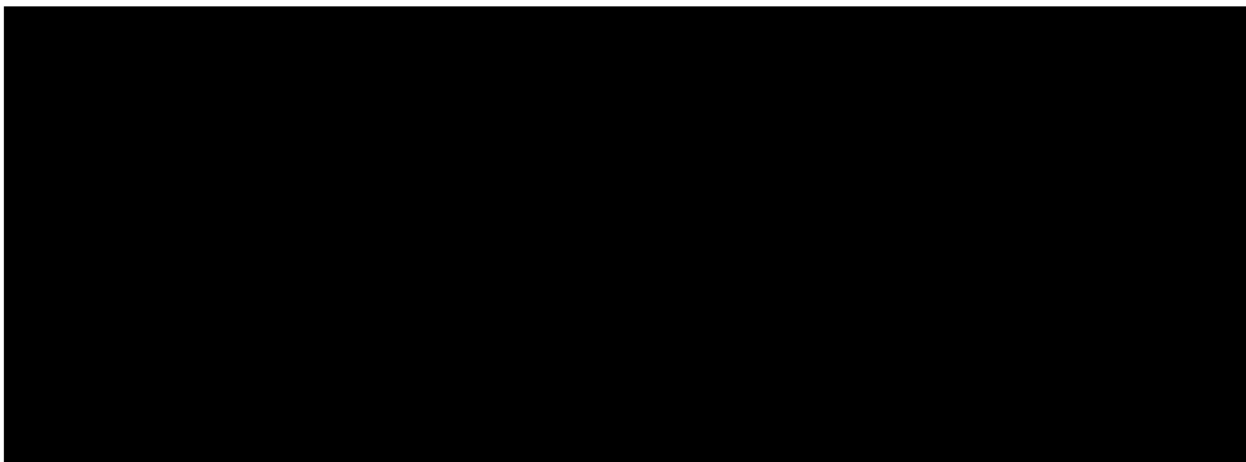
in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA

San Francisco



Date University Librarian

Degree Conferred: . . . . SEP 8 1985 . . . .

BURNED ADOLESCENTS' DESCRIPTIONS OF THEIR COPING STRATEGIES

Suzanne Sutherland

September 5, 1985

Abstract

Adolescents' coping strategies and behaviors after burns were investigated. Eight previously burned adolescents were interviewed. Their physical changes are delineated. Their self-described behaviors and responses to changes in appearance, function and potential are detailed. Comparison is made with coping mechanisms previously identified in adults, with differences noted. Mechanisms described by subjects are classified as problem-focused or emotion-focused, in keeping with Lazarus's coping theory. Behaviors reported by subjects included testing of key figures in the environment when exposing scars, staring back in response to curiosity, anticipation of ridicule, intellectualization, rationalization and humor.

Acknowledgements

I extend thanks to

my thesis committee

Sandra Ferketich, Ph. D.
Mary Tesler, M.S.N.
Virginia Olesen, Ph. D.

for suggestions and corrections,

to the eight adolescents

for agreeing to be interviewed,

to the nurses and ward secretaries at

U.C. Davis Medical Center's Burn Unit

for excellent record-keeping and ideas

and to Janet Pitcher.

Dedication

This may be my only literary offspring, so it is dedicated to everyone I care and cared about, but most especially to these:

my husband Jerry, with whom I share home, hopes, travel, thoughts, feelings and private jokes,

my children Timothy, Elizabeth, Andrew and Peter, who have given me such immense enjoyment and purpose,

my parents, who did their best with a sometimes annoying and challenging daughter but who were and are loving and consistent,

my grandmother Elizabeth, who loved me especially and vice-versa, and whom I still think of often,

my grandfather, with whom I shared opinions, facility with numbers and the desire to be peaceful,

my grandmother Susie, who was good and kind,

my aunt Thelma, who taught me about many things, from abacus to Yosemite,

my aunt Edith, whom I hope I resemble,

my sister Carla, who is more like me, and whom I am more like, than anyone realizes,

my brother Richard, who accompanied me through a lot of growing-up years and who never tattled,

my friend Susan Mijatovich, who says to me when we are in embarrassing situations in public, "It's all right - we don't know these people,"

and my friend Bob Wichert, who tells me in glum moments, "This, too, shall pass," adding that it also applies to the good times, just to keep things in perspective.

Table of Contents

page

Abstract i

Acknowledgement ii

Dedication iii

List of Tables viii

List of Figures ix

CHAPTER

I. The Study Problem 1

Introduction to the Problem 1
Statement of the Problem 2
Purpose of the Study 2
Significance 2
Research Questions 4
Assumptions 4
Definition of Terms 5
Limitations 5

II. Review of the Relevant Literature . . . 7

Adolescent Development 7
Body Image 11
Coping Theories 14
Burned Children and Adolescents 21
Burned Adults' Coping Mechanisms . . . 37

Conceptual Framework 44

III. Methodology 48

Research Design 48
Research Setting 48

Table of Contents (continued)

page

Sample 48
Human Subjects Assurance 48
Nature and Size of Sample 49
Criteria for Sample Selection 49
Data Collection Techniques 50
Procedures 50
Instrument 50
Validity, reliability 52

IV. Results 54

Description of the Sample 54
Physical Changes 63
Skin changes 63
Generalized short-term physical changes 66
Long-term physical changes 67
Adjustments Reported by Subjects . . . 68
Problem-focused Adjustments 68
Avoiding bumping and friction . . 69
Lubricating skin 69
Physical therapy 69
Wearing pressure garments 70
Refusing to wear pressure garments 71
Rubbing with lotion or ice 71
Flexing or moving extremities . . 71
Dressing with scars covered . . . 72
Gradual resumption of preburn style of dress 72
Responses to questioning 74
Responses to staring 75
Redirection of career goals . . . 75
Adjustments to phobic neurosis . . 76
Emotion-focused Adjustments 77
Anger 77
Accepting limitations 78
Anticipation of ridicule or rejection 78

Table of Contents (continued)

page

Decreased focusing on physical changes 80
Sense of loss 80
Boredom with burns and sequelae . 81
Emotion-focused Adjustments Which Are Like Traditional Defenses 82
Rationalization regarding changed appearance 82
Rationalization regarding changed dating potential 83
Rationalization regarding changed social potential 85
Denial 86
Intellectualization 88
Pride and regarding self as stronger 89
Closeness to parents 90
Spirituality 90
Humor 91
Effects of Strategies on Self 92

V. Discussion

Significance 94
Responses To Skin Changes 94
Responses To Perceived Negative Changes of Appearance 95
Anticipation of ridicule or rejection 97
Decreased focusing on physical changes 98
Boredom with burns and sequelae . 98
Humor 98
Denial 98
Responses To Changes in Physical Abilities or Potential 100
Sense of loss 100
Changed dating potential 101
Changed social potential 102

Table of Contents (continued)

page

Responses To Questions and Staring . . 102
Response To Having Been Hospitalized
With Burns 104
Response To Phobic Neurosis 104
Personal Growth 106
Pride and potency 106
Feeling closer to parents 107
Spirituality 107
Limitations 108
Future Research 108
Implications for Nursing 110
Care while hospitalized 110
Preparation for discharge 111

VI. Appendices

Appendix A: Interview Schedule 113
Appendix B: Consent To Be a
Research Subject 116

VII. References 117

LIST OF TABLES

page

TABLE

1. Literature Reviewed 23

2. Characteristics of Burned Subjects 55

3. Problem-focused and Emotion-focused Adjustments 56

List of Figures

page

FIGURE

1. Lazarus's Coping Process 45

CHAPTER I

THE STUDY PROBLEM

Introduction to the Problem

Adolescence is, at best, a time of tentative steps and occasional uncoordinated leaps toward independence, confidence, maturity and balance. Even if no traumatic events occur, the years between late childhood and frank adulthood contain challenges and demands which keep the adolescent feeling unsure, inadequate, pessimistic and impatient a substantial amount of the time. The burn experience for the adolescent is a superimposition of large and immediate concerns on the preexistent developmental crises of his life. The impact of the resultant complexities is experienced by adolescent, family, friends and professionals providing care. The burned adolescent may undergo pain, separation, limitation of activity, fear and alteration of both appearance and potential functioning. The burn injury and its sequelae are major challenges to the adolescent's ability to continue to grow and develop while adjusting to and surviving the changes so abruptly introduced.

Statement of the Problem

Although burned children and adolescents have been the subjects of various studies and papers examining their experiences during and after hospitalization, the variables studied have been pain, behavior and adjustment. There are no studies which ask adolescents to describe their coping strategies and behaviors from their perspective. Because a formal body of knowledge in this area is lacking, nursing care planning and interventions with adolescents are based on studies of children and adults, neither of which may be applicable to adolescents. Therefore, provision of anticipatory guidance, teaching and support may be quite incongruent with what the adolescent needs.

Purpose of the Study

The purpose of the study is to describe burned adolescents' coping strategies and effects of these strategies upon themselves during and after reentry into preburn lifestyle.

Significance

About ten thousand American adolescents are hospitalized with burns yearly (National Institute for Burn Medicine, personal communication). The burn and its subsequent treatment are significant events in the

adolescent's life, with potential for resultant long-lasting emotional trauma. Emotional or behavioral disturbances months or years after the hospitalization are not uncommon (de Wet, Cywes, Davies & van der Riet, 1978; Martin, 1970; Quinby & Bernstein, 1971; Sawyer, Minde & Zuker, 1983). More complete knowledge of the coping patterns of adolescents may make the behaviors observed less surprising and the posthospitalization period easier for the adolescent to understand. Solomon (1981) states that "the major disturbances in the burned child are psychological rather than physical" (p. 19) and has emphasized the need for the professional to "use an approach that considers how a child thinks and feels" (p. 19). How does the adolescent perceive his experience, and what does he do, say and think to ameliorate the situation?

Beales's (1983) interviews of children and adolescents provide a glimpse of the individual's perception of the pain experience. More information, especially about the adolescent population, is needed. Physical pain is only the beginning of the adolescent's burn experience. Damage caused by the injury may produce longterm emotional and physical changes requiring expenditures of determination and

resilience far exceeding that of the initial hospitalization.

In many hospitals nurses are responsible for rehearsal of coping strategies for posthospitalization (Hamburg, Hamburg & de Goza, 1953) and support during the outpatient period. Acquisition of specific formal knowledge about the adolescent's reactions to the burn and its results will give consistent basis for delivery of nursing care. Teaching and support can then be provided to facilitate the task of adjustment to temporary or permanent loss of function, appearance and potential.

Research Questions

The specific questions that this study addresses are: 1) what are the coping strategies used after hospitalization by the adolescent who has been burned? and 2) what are the effects of these strategies on the adolescent's resumption of preburn lifestyle and response to physical limitations?

Assumptions

This study makes two assumptions: 1) the researcher is able to establish a relationship with the adolescent based on sufficient trust for sharing private issues, and 2) the adolescent has sufficient insight to recognize behaviors and reactions to these

behaviors.

Definition of Terms

Burn is defined as the destruction of at least the epidermal layer of the skin by heat, chemicals, radiation or friction (Feller & Archambeault, 1973).

Full-thickness burn is defined as the destruction or injury of the entire layer of dermis, so that the stratum germinativum's activiy of creation of new cells is impaired (Feller & Archambeault).

The burn experience is defined as the incident of being burned and everything resulting from that burn up to the time of the interview.

Adolescent is defined as a person in "the transition period from dependent childhood to self-sufficient adulthood" (Muuss, 1982, p. 2). It is operationally defined as a person who is between twelve and twenty-one years of age.

Coping strategies are defined as specific "realistic and flexible thoughts and acts that solve problems and thereby reduce stress" (Lazarus & Folkman, 1984, p. 118).

Limitations

The study is limited to the subjective report of the burned adolescent. Although some factual data are verifiable, thought and feeling states are necessarily

the perception of the individual.

The sample is limited to adolescents who have sustained accidental burns, were hospitalized in a burn unit and could be contacted by the researcher following discharge. Because small and less severe burns are sometimes treated by hospitals without burn units, the sample may contain adolescents with more severe burns than would a randomly selected sample. Purposely inflicted burns, such as those caused by child abuse or assault, may comprise a significant number of adolescents burned, so the sample may not be representative of randomly selected burned adolescents. The sample contains fewer subjects from transient and migrant families because of inability to maintain contact after release from the hospital.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this chapter is to provide a literature review of various components of adolescents' coping with burns: a) adolescent development as described by Erikson and Elkind, b) body image, c) coping and defending, classifications of adaptive mechanisms, and Lazarus's theory of the coping process, d) children's and adolescents' emotional and behavioral responses to the burn experience, and e) adults' coping mechanisms after burns.

Adolescent Development as Described by Erikson and Elkind

Examination of the burned adolescent, after convalescence, reveals a youth who has experienced a forced change in body image at a time when formulation of this image is of special concern. Erikson (1963) characterizes adolescence as a time for establishment of a dominant positive identity, with resultant role confusion if that identity cannot be established definitively. Late adolescence and early adulthood merge in the next conflict, that of intimacy versus isolation; but, successful resolution of that conflict is unlikely for the adolescent without the firm base

of self identity, self-appreciation, liking the self and comfort with self-image.

During adolescence "a future within reach becomes part of the conscious life plan" (Erikson, p. 306). The adolescent assesses personal strengths and weaknesses and attempts to formulate goals based on present and potential capacities and capabilities. Adolescents have a heightened awareness of "who and what they are in the eyes of a wider circle of significant people as compared with whom they themselves have come to feel they are" (p. 307). Need to establish an identity is for purposes of self-assurance and establishment of self as an individual in the world view.

The clannishness of young people and their intolerance of those who are different is a defense against identity confusion. Crushes and cliques are less a function of affection than of need for support and reassurance. The adolescent "is eager to be affirmed by his peers" (Erikson, p. 263). Youth can often be "cruel in their exclusion of all those who are 'different'" (p. 262), and fear of exclusion prompts conformity to group norms.

As the adolescent establishes a positive identity, simultaneous intellectual development

occurs. Piaget and Inhelder (1969) describe the emergent ability of the adolescent to hypothesize as the stage of formal operations is reached. The capacity to hypothesize, to recognize what might and could happen, is a double-edged acquisition. The adolescent can examine possibilities about the future, which, due to relative lack of information, may be unrealistically optimistic or pessimistic.

Adolescent self-consciousness centers on appearance, as part of the ego-centrism of this age group (Elkind, 1971). In defining ego-centrism he observes, "it is this belief that others are preoccupied with his appearance and behavior that constitutes the ego-centrism of the adolescent" (1967, p. 1030). This becomes especially acute in social situations with peers. Activities away from the home take on far greater significance. During adolescence, school is not just a place of learning but "a stage on which much of the drama of adolescent friendships, rivalries, and hostilities take place and find their fullest expression" (1971, p. 113). Because of ego-centrism "the young person anticipates the reactions of other people to himself" (1981, p. 91) and assumes that others are as admiring or critical as he is. This is the construction of an "imaginary

audience" (p. 91). The audience is imaginary because other adolescents are just as concerned with their own appearance, clothes and mannerisms, focusing on themselves and their own shortcomings and attributes to a far greater extent than anyone else's.

The adolescent can be painfully self-conscious when interacting with a group of equally self-conscious peers. This self-consciousness "is simply a manifestation of this new capacity for introspection" (1981, p. 102). Adolescents' discomfort is a realization of the "discrepancy between what they are and what they wish to be, between the real and the ideal self" (p. 102). Elkind adds, "it is for this reason, perhaps, that a child with a physical handicap...who has been a happy optimistic child experiences his first real depression in adolescence."

In summary, adolescence is the time for final establishment of a positive identity. Peer acceptance and conformity defend against exclusion on grounds of being different. With the development of the ability to hypothesize, the adolescent can examine possibilities about acceptance or rejection. The conviction that others are as preoccupied with an individual's appearance as is that individual is characteristic of the ego-centrism of adolescence.

Self-consciousness and discomfort are typical of this stage of development.

<u>Body Image</u>

Body image is concerned with subjective perceptions about the body as well as personal organization of experiences. The body image is formed over the lifespan and is actually "an image of his own body which the individual has evolved through experience" (Fisher & Cleveland, 1968, p. x). Development of the concept of self begins during the first year of life. First impressions are visual and tactile, formed as the infant becomes aware of various body parts, their interrelationships and their interactions with people and objects. Throughout childhood, experiences of the sensations, appearances, and functions of body parts further define the body image. Ideas about the esthetic and functional acceptability of the body are formed through comparisons with others in the environment.

Horowitz (1966) describes the layered attribute of body image, in that each subsequent stage in self-perception of the body overlays but does not supplant former stages. Body images from earlier stages are stored and are readopted in times of stress through the process of regression.

Schilder (1950) describes the body schema or image as the picture that is held of the self. The picture constantly changes, as parts of the picture are scrutinized and pass into the unconscious as attention is subsequently focused on other parts of that picture. Focusing on various parts is largely negative for persons with newly acquired somatic losses. This concept applies easily to the burn patient who has parts of the body which have a tendency to hurt, split, tear open, itch, catch on clothing and be conspicuous, drawing attention to that which is painful, annoying or imperfect.

Bernstein's (1976) guidelines for emotional care of the facially burned and disfigured are based on thirteen years clinical practice in the psychiatric care of burn patients. Body image development of the adolescent is described as follows:

> Adolescent growth is powerfully facilitated by a new inner awareness of biological parity, physically and even intellectually, with adults... If he [the adolescent] is able to incorporate perceptions of this [parity] in his body image, there results intrapsychically something like the closing of the epiphyses...The burn patient cannot complete a stable body image. Too much

> physical pain, damage, and scarring persist, and too much medical therapy intrudes (p. 55).

Bernstein observes, "the burn patient is the victim of somatic and social pressures, and he cannot avoid suffering" (1982, p. 344). Pressure is especially acute in adolescence because of the social scrutiny young people believe they are undergoing, while they attempt to create a stable body image under adverse circumstances.

Based on work in the psychiatric care of burned children and adolescents, Stoddard (1982) describes puberty and adolescence as "phases of change and reintegration of body image and identity" (p. 504). During this time bodily awareness intensifies due to narcissistic meanings of certain body parts such as face, breasts, hands and genitals (p. 504). He adds that the usual reactions to disfigurement are anxiety, sadness, anger and guilt.

Body image, then, is formed and reformulated throughout the lifespan. Adolescence is a critical phase of development because of the adolescent's unique combination of cognitive and social development. In conclusion, it seems that burned adolescents are particularly vulnerable to problems in body image development.

Coping and Defending, Classifications of Adaptive Mechanisms, and Lazarus's Theory of the Coping Process

Coping is a response to stress. Stress is described by Lazarus and Cohen as "specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (1984, p. 141). Selye (1956) described stress as a non-specific physiological response to a physical or emotional demand.

Concepts of coping were first described in the writings of Freud (1923). His explorations of ego defenses are the foundation for contemporary coping theories. In contemporary writing coping, defending and adaptation are sometimes synonymous, sometimes different. White (1974) makes a sharp distinction between adaptation, his term for efforts to maintain psychological function or equilibrium in unusual situations, and the subcategory coping. The subcategories of adaptation are defense, mastery and coping. Coping occurs under unusual circumstances and requires more than average responses. Coping involves creative action and reflective behavior. Mastery refers to successful resolution of complex problems of manipulation or cognition. Mastery involves creative

action and is primarily intellectual. Defense is the ego-protective response to perceived danger or attack. Defense involves reflex response and does not involve either reflective behavior or creative action.

Haan (1977) lists twenty-one types of ego-functioning - ten coping mechanisms, ten defending mechanisms and ego-fragmentation. The distinction between coping and defending is that coping is more reality-oriented than defending. Ego-functioning mechanisms of coping are not learned but are constructed by the individual as he organizes experiences. Coping is the method most adults use in day-to-day transactions with people and situations. Various coping mechanisms are seen as more desireable than others, such as anticipation and humor; but, all serve the purpose of protecting the ego from exposure to the stark happenings confronted. Coping does not change the facts of the situation. It changes the impact on the individual's ego. Haan notes substantial differences among individuals' capacities to endure stress. She hypothesizes various causes: a) special meanings a stressful situation holds for some individuals, b) insufficient coping potential of an individual, c) previously stressful conditions that leave the individual taxed so that relatively small

increments of stress cannot be tolerated, and
d) insufficient social supports.

Vaillant (1977) does not distinguish among coping mechanisms, defense mechanisms and adaptive mechanisms. He studied coping in a group of fifty men followed for twenty-five years. Subjects were originally selected because they seemed healthy and appeared to function well. The men were now middle-aged. Data were collected by interview and questionnaire. Study participants used diverse methods of adjusting, which are described in Vaillant's work on adaptation to life. His discussion of adaptive mechanisms includes a schematic table of specific mechanisms divided into four levels, psychotic, immature, neurotic and mature. He notes the normal occurrence of psychotic and immature mechanisms in children and adolescents, and in depression.

The psychotic mechanisms, as described by Vaillant, are denial, distortion and delusional projection. They are common in psychosis, dreams and childhood. Immature mechanisms are fantasy, projection, hypochondriasis, passive-aggressive behavior and acting out. They are common in severe depression, personality disorders and adolescence.

Neurotic mechanisms are intellectualization, repression, reaction formation, displacement and dissociation. They are common in everyone. Mature mechanisms are sublimation, altruism, suppression, anticipation and humor. They are common in healthy adults (p. 80).

In reference to burned patients, however, specific labels of various mechanisms may be less stringent, as observed by Bernstein (1976):

> Some of the mechanisms that might be considered neurotic for physically unremarkable patients came to appear more adaptive for our group, such as extensive use of denial in those who functioned rather well. The use of extensive denial in fastasy, and sometimes by word, saves the energies needed to confront other issues. The whole range of "neurotic" styles and defenses - counterphobia, repression, displacement, reaction formation, and protection - are all frequently useful in the dire circumstances in which these patients find themselves (p. 234).

Moos (1977), describing coping, notes uncertainty in patients dealing with physical illness. Even in the reintegrative phase of return to school or work

following a burn, uncertainty exists. It is due to the need for possible further surgical modification and medical treatment, combined with temporary or permanent physical limitation. Uncertainty is especially present in burned adolescents because of the preexistent tendency toward both physiological and emotional changes characteristic of the adolescent phase of development.

Coping is described by Richard Lazarus (1980) in terms of transactions between person and environment. Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). It is stressed that coping applies to efforts to manage the situation, rather than to outcomes. Anything the person does or thinks in order to try to manage can be defined as coping, whether or not it works.

Lazarus characterizes the coping sequence as having a first component of cognitive appraisal. This primary appraisal, which is assessment of a situation in terms of impact, adjudges that situation as irrelevant, benign-positive or stressful. Those situations judged to be stressful are deemed harm-

loss, threat or challenge. In harm-loss, the individual has already sustained damage. In threat, harm or loss has not yet occurred but is predicted. In challenge, an encounter which is potentially threatening is appraised as having a potential for gain or growth.

Subsequently, and often almost simulteneously, a secondary appraisal is made as to what the person will do in order to modify the stress. Concomitantly the primary appraisal may be modified, in accord with the person's chosen plan of coping.

Reappraisal is ongoing, and coping is flexible and self-adjusting in order to fit new circumstances. Coping stimulates new reappraisals. The cascade of appraisal-coping-reappraisal-coping-reappraisal is continuous, dynamic, and ever-changing. Lazarus and Folkman state that coping measures are "realistic and flexible thoughts and acts that solve problems and thereby reduce stress" (p. 118).

Lazarus and Folkman describe coping as problem-focused or emotion-focused. Problem-focused coping is pragmatic and aimed at changing or managing the stress-producing problem or self. Problem-focused coping can be action, inhibition of action or information seeking. Direct action includes anything

actually done or performed in order to cope. Inhibition of action includes holding back impulses that will do harm. Information-seeking involves examining a situation for knowledge needed to make further coping decisions. Emotion-focused coping changes the meaning of a stressful transaction, with or without reality distortion. Emotion-focused coping is internal and results in a modified emotional response to the situation.

An unusual example of flexible thought is the defensive reappraisal, as described by Lazarus and Folkman. The defensive reappraisal resembles some of the adaptation mechanisms defined by Vaillant more than it does a reappraisal in the usual sense. A defensive reappraisal, according to Lazarus and Folkman, "consists of any effort made to reinterpret the past more positively, or to deal with present harms and threats by viewing them in less damaging and/or threatening ways" (p. 38). In the case of the burned adolescent, defensive reappraisal could be accomplished by the use of neurotic, immature and psychotic defense mechanisms, as described by Vaillant. Defensive reappraisal is utilized by the burned adolescent in order to view the experiences of injury and recovery in a way that maintains adherence

to reality but reduces stress by changing perspective.

Since burned adolescents have an ability to use various emotion-altering mechanisms, their perception of life in general is complex and changing beyond an objective assessment of the burns and their results. As Hamburg, Hamburg and de Goza (1953) observe about burned adults and children, "each one is struggling with his own personal problems, involving not only the injury itself, but his own interpretation of it" (p. 3). For burned adolescents, life is exactly as it is perceived and appraised. In the sense of emotion-focused coping, saying makes it so.

In summary, coping is a response to stress. Some methods of coping are more desireable or mature than others, but all serve to reduce stress. Burn patients may use mechanisms which are considered neurotic in physically normal individuals. This use is frequently effective, promoting reduced stress through changed perspective.

Children's and Adolescents' Emotional and Behavioral Responses to the Burn Experience

Studies of burned children and adolescents focus on emotional and behavioral responses to burn hospitalization and/or to burn sequelae. Although no research examines adolescents' coping mechanisms after

hospitalization, several studies are important because of their description of children's and adolescents' posthospitalization adjustment. Table 1 summarizes studies critiqued in this section.

Woodward (1959) studied burned children and adolescents and their emotional problems before and after hospitalization. Her quasi-experimental design compared a convenience sample of 198 subjects, who had greater than 10% total burn surface area and were under 15 years old at the time of their burns, with their unaffected siblings. Mothers were asked ten questions about their children's emotional state before and after burns and about the mother's emotional state. Postburn emotional disturbances described by mothers included behavior disorders (fears, anxiety, depression, general management difficulties, aggression), psychosomatic disorders (enuresis, sleep disorders, feeding difficulties), delinquent behaviors and physical disorders (spasticity, epilepsy). The most common complaints were fears, anxieties, sleep disorders, bedwetting and feeding difficulties. Comparisons were made between burned subjects and their unburned siblings. Also, comparisons were made between emotionally disturbed and undisturbed burned subjects to investigate

Table 1

Literature Reviewed

Author, Date	Study	Sample	Pertinent Findings
Children's and Adolescents' Emotional and Behavioral Responses to Burns			
Woodward (1959)	quasi-experimental	198 children, aged less than 15 at time of burn; 2-7 years postburn; greater than 10% total burn surface	disturbed behaviors at time of study more common for burned sample than for control group; behaviors described; disturbances in younger children linked with less frequent parental visitation while hospitalized
Long & Cope (1961)	descriptive narrative	19 hospitalized subjects, 9 months through 17 years, mostly boys	behaviors during hospital stay described; high incidence of emotional disturbance cited in families before burn injury
Galdston (1972)	descriptive narrative	100 hospitalized subjects, 10 months to 16 1/2 years; two-thirds boys; two-thirds less than five years of age	behaviors of hospitalized subjects described

Table 1 (cont.)

Literature Reviewed

Author, Date	Study	Sample	Pertinent Findings
Bernstein, Sanger & Fras (1969)	narrative	children and adolescents	behaviors of hospitalized subjects described
Beales (1983)	descriptive narrative	60 randomly selected children and adolescents, 4 weeks to 15 years; half of sample less than 5 years; two-thirds boys	subjects' expectations of pain and response to pain described; involving subjects in their therapy and explaining procedures linked with reduced fear and pain; restraint, the sight of medical instruments and the sight of the injured area linked with increased fear and pain
Kavanagh (1983)	experimental	9 subjects, randomly assigned to control or experimental group; aged 2 to 12 years	subjects' participation in the work of the dressing change, as opposed to having the dressing change performed on the subject, associated with fewer negative behavioral and physiological responses; depression associated with enforced passivity during dressing change

Table 1 (cont.)

Literature Reviewed

Author, Date	Study	Sample	Pertinent Findings
Molinaro (1978)	descriptive narrative, pilot	18 postburn children and adolescents, aged 7-19 years; attending school for at least one full semester since burning	peer relationships a major problem; psychiatric intervention associated with improved adjustment
Sawyer, Minde & Zuker (1982)	quasi-experimental	37 children and adolescents, at least 3 years postburn, aged 8 to 16 years; at least 5% burned surface area	adolescents' behavior checklists, completed by their mothers, showed significantly poorer adjustment than did younger subjects', in many areas; burned children's behavior profiles resembled those of normal children; burned adolescents' profiles resembled those of disturbed adolescents
de Wet, Cywes, Davies & van der Riet (1978)	descriptive	25 children and adolescents, 4-22 years, 2-11 years postburn, burn surface area at least 30%	adjustment classified as poor, reasonable or good, based on working/attending school, depression and aggression; 7 subjects poorly adjusted, 15 reasonably, 3 well-adjusted

Table 1 (cont.)

Literature Reviewed

Author, Date	Study	Sample	Pertinent Findings
Clarke & Martin (1978)	descriptive	50 adolescents, skin-grafted; 13-21 years; 1-16 years postburn	subjects fared better if burns not on face, head, visible extremities or sexual structures, showing better participation in age-appropriate activities; subjects also showed better participation if they were burned with another child or if they resided in a nonurban setting or had stability of domicile; ability to deport selves more like adults than children was noted; some girls planned to defer marriage
Adults' Coping Mechanisms After Burns			
Andreasen & Norris (1972)	descriptive	20 adults, 18-60 years at time of burn; 1-5 years postburn	adaptive mechanisms identified and described; degree of deformity not associated with degree of adjustment; immaturity and narcissism negatively correlated with adjustment; women more likely than men to develop psychological complications

Table 1 (cont.)

Literature Reviewed

Author, Date	Study	Sample	Pertinent Findings
Hamburg Hamburg & de Goza (1953)	descriptive	12 hospitalized subjects with life-threatening burns, 8-30 years; observations made over 2-9 month period	emergency defense mechanisms, seen at the beginning of hospitalization, and recovery mechanisms, observed as homecoming nearer, described
Knudson Cooper (1981)	descriptive; preliminary report	109 subjects, 16-28 years, 4-23 years postburn; had undergone at least two reconstructive surgeries	social integration resembled that of general population; educational goals of 18% of subjects health care oriented; self-esteem lower in younger adolescents than in older groups
Solnit & Priel (1975)	descriptive narrative	50 subjects, soldiers, hospitalized for up to 11 months	behaviors and defenses observed and described; single soldiers concerned about ability to function socially and sexually and to find desireable women to marry

relations between emotional disturbance and parental visitation in children under 5 years of age, and to investigate relationships between disturbance in subjects and upset mothers. The first chi-square value was statistically significant ($p \leq 0.01$) and the second statistically significant ($p \leq 0.15$). The study was performed at a hospital in England and is generalizable only to similar populations, since treatment of burns may differ from country to country. Moreover, treatment of burn injury has become considerably more advanced medically over the thirty years since the subjects in the study were injured, limiting generalizability to today's burned children. This is the earliest study of burned children's emotional problems and has therefore served as a base for studies in the area. Internal validity is hampered by the quasi-experimental design with lack of equivalent controls. Interviews were done 2 to 7 years after the burn. There is a possibility of differing emotional manifestations of the subjects at varying posthospitalization intervals. Recall by mothers of the emotional state before the burn injury is probably not as accurate at 7 years as at 2.

Long and Cope's narrative study of burned children and adolescents describes emotional problems,

noting regression, depression, misinterpretation of procedures, aggressive reactions, guilt and identification with the aggressor. A high incidence of emotional disturbance was noted to have existed in the preburn families of the subjects. A convenience sample of nineteen subjects aged nine months through seventeen years was studied. The younger children were observed, the older children were interviewed and counseled, and all mothers were interviewed by a psychiatric social worker at intervals during the hospital stay. There were only two girls in the sample. Hence, descriptions of behaviors may be more typical of burned boys than of burned children in general. The authors report that in 8 of the families there was gross emotional disturbance before the burn. The case studies presented give a clear illustration of the scope of the children's emotional problems during their hospital stay.

Other authors have written of burned children's and adolescents' behavioral disturbances during or after hospitalization, with descriptive narratives and recommendations for treatment. Galdston (1972) interviewed and observed 100 children and adolescents and their parents in an attempt to 1) describe factors present leading to burn injury, and 2) characterize

the healing process and its behaviors. The children's ages ranged from 10 months to 16 and a half years. 68 of the subjects were boys. Two-thirds of the children were below the age of five. His narrative describes various behaviors of hospitalized burned children and adolescents. He reports reversal of sleep rhythms, recurrent dreams concerning the burn, hallucinations, regression and sudden changes of affect.

Bernstein, Sanger and Fras (1969) describe sleep disturbances and regression as common behaviors in their narrative about the severely burned child.

Beales (1983) observed 60 randomly selected British children and adolescents 4 weeks to 15 years of age, interviewing all children aged 5 or over (30 of the subjects). Forty-one of the children were boys. The study used a descriptive design and generated data regarding children's expectations of pain and responses to pain while hospitalized. The findings indicated that involving children in their therapy and explaining procedures tended to reduce fear and pain. Distraction, if consistently maintained during the entire dressing change procedure, was found to be effective in relieving apprehension. Negative effects of heightened fear and pain were produced by restraint, the sight of medical

instruments and the sight of the injured areas. No statistical data were offered to support the findings and recommendations. Findings have limited generalizability due to the wide age range of the subjects and to the lack of statistical support. Some of the variables of the study were tested by Kavanagh in the United States, and her results supported Beales's findings.

Kavanagh's (1983) study examined the emotional responses of burned children to two different kinds of dressing change. The first was one in which the child was encouraged to participate as much as possible, and the second was one in which the dressing change was performed on the child. These two types of procedures were compared with the occurrence of behavioral and physiological responses found to be associated with depression/withdrawal in children. Behavioral and physiological responses observed were decreased appetite, weight loss, sleep disturbances, lack of protest, absent play, gastric ulceration, stress analgesia and poor wound healing. The participatory type of dressing change was associated with a lower incidence of these behavioral and physiological responses. Data were analyzed using the Mann-Whitney u test, and the occurrence of maladaptive responses

was found to be significant ($p \leq 0.04$). Stress analgesia, analyzed with the Fisher Exact Probability Test, was the only variable with statistical significance. Tests of anxiety, depression and behavior were administered. As indicators of maladaptive behavior, occurrence of significantly high scores on these tests was noted in the experimental group as compared with the control group, at levels of significance varying from 0.24 to 0.04. The $p \leq 0.04$ was noted for the depression score. Overall, Kavanagh's sample size was small, an experimental group of four and a control group of five, and the age range large, 2-12 years of age. Random assignment supported that history, selection and maturation were controlled. Generalizability of this study is limited by sample size and age range but supported by Beales's somewhat similar findings. However, experimental treatment is not well enough defined to permit replicability of the experiment.

Molinaro's (1978) pilot study of 18 postburn children aged 7-19 years consisted of an open-ended interview with each subject. The intent of the interview was to assess social assimilation and adjustment. A convenience sample was chosen, based upon age, attendance at school for one full semester

since their burns and availability for interviews during a given three-week period. Degree of withdrawal, based on negative responses to questions regarding social involvement, was calculated. Preliminary findings indicated that peer relationships tended to be a major problem and that psychiatric intervention seemed to be associated with improved adjustment. Follow-up studies are indicated.

Sawyer et al. (1982) conducted semi-structured interviews of previously burned children, adolescents and the mothers in order to determine degree of psychosocial adjustment. A convenience sample of 37 subjects was selected. Criteria for sample selection were age between 8 and 16 years, body surface area burned at least 5% and burn injury at least 3 years past. The Achenbach Child Behaviour Check List was completed by mothers, and both subjects and mothers were interviewed. Behavior profiles derived from the behavior check list were compared with profiles of disturbed children and of undisturbed children. For purposes of analysis, subjects were grouped into schoolage and adolescent groups, male and female. It was found that there was a "deterioration" (p. 207) in behavior in both male and female adolescent groups, groups, using student's t test ($p \leq 0.05$). Using the

same test, burned adolescents scored significantly worse than children 8-11 years of age in internalizing ($p \leq 0.05$), in activities ($p \leq 0.01$) and in social competence ($p \leq 0.02$). Based on the Rutter Symptom Check List for Teachers, teachers' evaluations of the subjects showed an increased percentage of high scores in the 12-16-year-old group as compared with the 8-11-year-old group. When subjects with face and hand burns (areas of narcissistic importance) were studied, adolescents were found to be functioning significantly worse in many areas, including aggressiveness, externalizing, internalizing, social competence and involvement in activities ($p \leq 0.05$). Overall, burned children's profiles in the 8-11-year-old age group resembled profiles of normal unburned children; burned children's profiles in the 12-16-year-old age group resembled profiles of disturbed unburned children. This implies that the changes of adolescent development have an adverse effect on the adjustment of burned subjects. Generalizability to children and adolescents from areas other than eastern Canada may not be appropriate, due to social expectations and behavioral norms in this location which may differ from those of other cultural groups.

De Wet et al. (1978) investigated post-treatment

adjustment of twenty-five severely burned children, aged 4-22 years, nineteen of whom were 11-22 years of age. The criteria for inclusion in the convenience sample were age at the time of burn between 6 months and 11 years, total burn surface area of at least 30% and 2-11 years postburn at the time of the study. The subjects and their mothers were interviewed at home. Adjustment was classified as poor if the subjects were neither working nor attending school. Adjustment was considered good if the subjects were working or profitably attending school and had no evidence of aggressive or severely depressed behaviors. Subjects were characterized as reasonably adjusted if they had some aggressive or depressed behaviors but were still working or attending school. The tone of the study is not optimistic for severely burned children, adolescents and young adults. Recommendations are made for expanded psychological, educational and community intervention on behalf of this population, of whom only a small percentage were classified well adjusted. Seven subjects were judged to be poorly adjusted, with 15 reasonably adjusted and 3 well adjusted. It is observed by the authors that estimates of disturbance are conservative and that it is expected that as the younger subjects in the study

reach puberty and adulthood that their symptoms will increase. The study serves as a basis for other studies of this population.

Clarke and Martin (1978) interviewed adolescents burned 1 to 16 years previously and their parents. Aims of the interviews were to establish the specific problems faced by the adolescents, to assess the extent to which these subjects were able to engage in age-appropriate activities and to define deficiencies in existing health care programs providing care to this population. The convenience sample included fifty skin-grafted adolescents 13 to 21 years of age who had no preexisting medical or psychiatric problems preburn. The study indicated that adolescents fare better psychologically when their burns are not on the face, head, visible extremities or sexual structures, if they were burned with another child, or if they live in a nonurban setting or at least have stability of domicile in the city. The authors emphasize that "physical recovery may outstrip emotional recovery" (p. 103) and that such everyday school activities as disrobing for physical education were found to be so disturbing that dropping out of school occasionally resulted. The authors note that burned children have "a capacity to reflect, discuss and be aware of

themselves" (p. 103) in a manner more like an adult than a child. It was also observed that the girls with damage to the breasts and genitalia very often "plan an asexual life, deferring marriage as if in despair of their sexual desireability, expressing doubt over their capacity to relate and be related to in an exclusive, close and permanent sexual relationship" (p. 103). Generalizability is limited to similar populations, and some of the findings about girls' concerns about marriage may be culturally based and peculiar to Australia. No statistical support is offered for these indications. The study is unique in that it describes two behaviors of adolescents, namely dropping out of school to avoid having to expose burned parts of their bodies and planning not to marry. Clarke and Martin are the only authors to investigate adolescents' adjustment and desribe specific coping behaviors, even though these decriptions were not the focus of the study.

Adults' Coping Mechanisms After Burns

Specific coping mechanisms after burns are described in detail by two authors. These studies are critiqued, and two other studies which discuss some responses of burned adults are described as well. The detailed descriptions of coping mechanisms in the

first study are those of adults. Those in the second study appear to apply to adults, although the study was performed on subjects aged 8 through 30. Findings of these studies may be applicable to adolescents, especially those as old as 16 or 17 years of age.

Andreasen and Norris (1972) described adjustment and adaptation mechanisms in severely burned adults. A convenience sample (N=20) was selected. All subjects were 1-5 years postburn and had been 18-60 years of age at the time of the burn. Preference was given to those who were between 20 and 40 years of age at the time of the interview and had a burn greater than 20% of body surface. Subjects with greater burn surface area or facial burns and in good mental and physical health prior to the burns were selected as often as possible. Findings are generalizable to similar populations, with limited applicability because of the manner of sample selection. Subjects were interviewed according to a standard format, which included information about the burn and its hospitalization, adaptation since discharge and psychological history and status. The Minnesota Multiphasic Personality Inventory (MMPI) and a subjective assessment of both deformity and of general adjustment were completed. The interviewer also made

independent estimates of subjects' adjustment and deformity, based on photographs.

Subjects described various psychological reactions following discharge from the hospital: separation anxiety while regaining independence, phobic neurosis regarding the circumstances which reminded them of their burn, and traumatic neurosis. Examples of traumatic neurosis were crying spells, insomnia, excessive sensitivity, emotional lability, marked anxiety, nightmares and reworking the details of the burn in their minds.

Adaptive mechanisms were identified, such as progressive desensitization to social interactions. This mechanism involves venturing forth into the family, then into one's circle of work and social contacts, and lastly out into public, gaining social support and reassurance in progressively unfamiliar areas. Rationalizations and religiosity emerged as explanations for the reason of the burn's occurrence. Mastery and control were displayed as rehabilitation efforts were begun. Dissociation and reworking occurred, in which parts of the circumstances of the burn and the hospitalization were either forgotten or stripped of their emotional impact. Maladaptive mechanisms described were withdrawal, regression and

depression.

Factors influencing adaptation were investigated. Amount of deformity was not correlated with degree of adjustment. No statistical support for findings is prsented. Immaturity and narcissism seemed to be negatively correlated with adjustment. This negative trend was hypothesized to be age-dependent and possibly transient over time. Gender seemed to affect adjustment. Women were more likely than men to develop psychological complications. Society probably places a higher premium on attractiveness in women than it does in men. This may predispose women to more of an identity loss than men as a result of scarring and deformity. Refusal to permit desensitization was indicative of markedly handicapped personal relationships. Hiding scars with clothing or bandages exemplifies refusal to permit desensitization. Andreasen, Norris and Hartford (1971) noted that "adjustment tends to improve with time" (p. 789).

Andreasen and Norris compared the identity crisis of adult burn patients to the adolescent's developmental crisis. "Like the adolescent approaching the demands of adulthood, he [the adult burn patient] is at a turning point in his life and

must confront new demands which may seem quite overwhelming. Like the adolescent, he must confront them with a self- and body image that are changed and changing" (pp. 154-155). An interpretation of this study would be that the burned adolescent is engaged in a double crisis, that of adjusting to the normal changes and difficulties of that developmental stage and to the changing body image and transiently limited physical strength that are the result of the injury.

Hamburg et al. (1953) describe adaptive problems and adaptive mechanisms in a convenience sample (N=12) aged 8 to 30 years. Only patients with life-threatening burns were included. Data were collected throughout each patient's hospitalization of 2 to 9 months. The authors classify adaptive mechanisms as either emergency defense mechanisms, observed at the beginning of the hospitalization, or recovery mechanisms, emerging as homecoming neared. Some emergency mechanisms described were religiosity and rationalization.

Recovery mechanisms included restoration of interpersonal relationships, such as humor, and of self-esteem. Examples of restoration of self-esteem are testing of key figures in the personal environment and mobilization of pride. "In some

cases, patients interpreted their injuries as a threat to the capacity to be loved by others" (p. 4). Generalizability is limited due to the small sample size, large age range and special characteristic of life-threatening illness of this particular sample.

Knudson-Cooper (1981) interviewed a convenience sample (N=109) aged 16 through 28 in an attempt to assess burned subjects' adjustment to scars. Subjects were 4-23 years postburn and had undergone at least two reconstructive surgeries. Percentage of burn ranged from 2% to 89%. Of the 109 subjects originally contacted, 89 returned questionnaires for the preliminary report. The subjects were evaluated for degree of social integration, emotional adjustment and self-esteem. Between age groups there were differences in marital status (social integration) and self esteem. There were no differences in emotional adjustment. Self esteem, analyzed by the Coopersmith Self Esteem Inventory, was correlated with age, $r=0.03$ ($p \leq 0.02$). The educational goals of 18% of the subjects were health care oriented. The reason given for career choice was the desire to help others, based on experiences of medical treatment and rehabilitation.

Solnit & Priel (1975) decribed psychological

reactions to facial and hand burns in young Israeli soldiers, many in late adolescence, injured during the 1973 Yom Kippur War. A convenience sample of more than 50 subjects was observed, interviewed and counseled over an eleven-month period. The authors describe emergence of narcissistic behavior in the young men, as they directed attentions and energies inward toward physical and mental pain. Regression was accepted as "a transient, necessary, limited aspect of preparing for the work of healing and recovery" (p. 554). Individual concerns ranged from appearance and sexuality to communication problems with staff members. Single soldiers were especially concerned about inability to function socially, have satisfactory sexual relations and find desireable women to marry. Generalizability of the study is limited to similar populations, because findings may have been influenced by the status of these young men as wounded heroes, making their adjustment more or less difficult and their adaptation mechanisms different because of the patriotic nature of their injuries.

In summary, no literature was found which specifically describes burned adolescents' coping behaviors after hospitalization. Some studies of

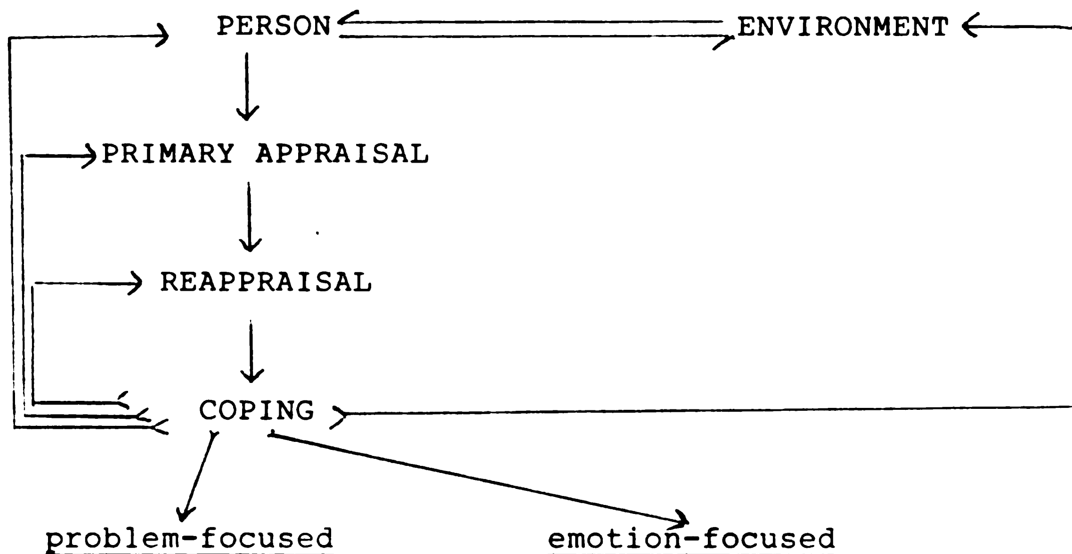
adults have a study sample which includes adolescents, and in fact adolescents may demonstrate coping behaviors similar to those of adults. Literature about burned children describes emotional and behavioral reactions but does not discuss coping per se.

CONCEPTUAL FRAMEWORK

As explicated in Lazarus's (1980) stress and coping paradigm, coping is a thought or an action initiated by a person in order to reduce stress. Coping refers to efforts rather than to outcomes. Hence, both successful and unsuccessful attempts to ameliorate a situation can be called coping. Viewed from a systems approach (see Figure 1), transactions between the person and the environment produce psychological stress, as well as positive experiences. Psychological stress is appraised, reappraised and mediated, in an ongoing fashion, by the coping sequence. Coping then feeds back into the system, modifying the person, the environment, the primary appraisal and the secondary appraisal (reappraisal). This process is continuous, and since coping does not imply solutions, only thoughts and actions, there is no final resolution.

Figure 1

Lazarus's Coping Process



information seeking

direct action

inhibition of action

[based on Lazarus & Folkman (1984)]

Coping may be problem-focused or emotion-focused. Problem-focused coping can be information seeking, direct action or inhibition of action. The result of problem-focused coping is the alteration of the person or the environment. Emotion-focused coping, referred to as intrapsychic modes of coping, does not change

the person or the environment but changes the perception of the person-environment transaction.

Neither type of coping is preferable or intrinsically superior. Certain individuals may select methods of coping that are predominantly emotion-focused or problem-focused, in accordance with their personality traits and types. The goal of coping is stress-reduction, and reduction of stress is the reward and reinforcement of the coping process per se. Patterns of coping are established in accordance with effectiveness of certain methods of coping in stress reduction. Hence, patterns of coping tend to be reselected by individuals.

When applied to posthospitalization burned adolescents, coping focuses primarily on attempts to reduce stress related to the results of the burn injury. Stress for these individuals is based on both physical changes and psychological difficulties related to these changes. Coping is based on ongoing appraisal and reappraisal of physical and emotional factors. Due to the tangible nature of the stressors, much of the coping for these young people is of a problem-focused nature. This coping is associated with their physical treatment regimen of pressure garments, physical therapy, skin care and cosmetic

surgery. The coping strategies selected may either complement the treatment regimen or oppose it.

It is expected that emotion-focused coping strategies would be employed by burned adolescent subjects in addition to problem-focused strategies. Emotion-focused strategies for the burned adolescent may be reality-based and retain their emotional component, such as anticipation or humor, or they may serve to blunt the impact of changed appearance and diminished function, such as denial or suppression. Again, the goal of coping is stress-reduction, and the means of coping which effectively reduce stress will be reselected by these individuals.

CHAPTER III

METHODOLOGY

Research Design

This research used an exploratory design. A semi-structured interview (Appendix A) was used to obtain the subjects' descriptions of their coping strategies and the effects of these strategies in relation to reentry into society.

Analysis of the data is descriptive. Comparison of strategies used by older versus younger adolescents, female as opposed to male, is presented.

Research Setting

The adolescents were interviewed in their homes. Interviews were conducted with only subject and interviewer present in a room to encourage frankness.

Sample

Subjects were selected from the population of burned children and adolescents who had been patients in the burn unit of a west coast 400-bed university hospital. Eight adolescents were asked to participate, all of whom agreed to be interviewed and tape recorded.

Human Subjects Assurance

The Human Subjects Committees of the University of California, San Francisco, and of the hospital in

which the subjects had been inpatients reviewed proposals for the study and gave their approval (Appendix B). To protect subjects' anonymity, pseudonyms were assigned. Subjects and their families were told that they could refuse to participate, that the interview could be stopped at any time, and that refusal to participate would have no effect on their status as patients at the hospital. Subjects were assured that tape recordings of the interviews would be destroyed as soon as the study was completed.

Nature and Size of Sample, Criteria for Selection

Eight adolescents participated in the study. Of these, three were 13-15 years of age, five were 19-21 years of age. Burned areas ranged from 10% total body surface area to 85% total body surface area. Subjects had undergone between one and fifteen surgeries for skin grafting of burned areas during initial hospitalizations. Length of first hospitalization varied from 22 to 60 days. Four young women and four young men participated. The elapsed time since burn injury varied from 14 months to 47 months.

Subjects were selected from the population of former inpatients at the above-described facility. Criteria for inclusion were: a) skin-grafted at least once, b) hospitalized at least three weeks, c) total

burn surface area of at least 10%, d) developmental age on a par with chronological age, e) burns acquired accidentally, rather than as a result of assault or child abuse, f) burns acquired by heat, radiation or chemicals, g) residing within a 100-mile radius of the hospital in which they were inpatients, h) between 12 and 21 years at the time of the interview, and i) between 12 and 48 months postburn.

Data Collection Techniques

Procedures. Subjects were interviewed in their homes in a private and quiet area, with tape-recording and/or process recording during the interview.

Instrument. The study used a semi-structured interview developed by the investigator. The intent of the interview was to allow subjects to describe their own coping strategies. The interview schedule was used as a guide. As subjects were interviewed, themes were generated, and in subsequent interviews if these themes were not spontaneously discussed by the subjects, inquiries were made into these areas.

The constant comparative method of qualitative analysis, as describd by Glaser and Strauss (1967), was employed for the study. In this method, data are coded and verified as they are collected, with analysis of data made throughout the collection

process.

Grounded theory (Glaser & Strauss) is theory newly generated from data. The researcher approaches the area of investigation without hypotheses, constructing theoretical ideas inductively.

The grounded theory approach, although most widely used in areas of little previous research, can also be employed to study new subpopulations of larger areas about which hypotheses and theories have already been generated. Thus, despite existing research in the areas of adult coping strategies following burns and of children's behavioral reactions after burns, the grounded theory approach was utilized effectively to generate theoretical ideas about postburn adolescents and their responses.

The interview method of collecting data was chosen because of the ability of adolescents to describe and comprehend behaviors and emotional and intellectual responses, and to relate the effects of these behaviors and responses. Interviewing was the most feasible method, due to the necessity of obtaining information about the subjects' thoughts and emotional responses. Using the constant comparative method of ongoing data coding and analysis, themes were identified and verified throughout the series of

interviews and refined therefrom as adolescents continued to define those themes.

Validity, reliability. Content validity of the areas of response to burn scars and personal changes is supported by research on posthospitalization adjustment of burned adolescents.

Themes were generated from interviews with subjects. Categories into which these themes could be classified were chosen, based upon Lazarus's classifications of coping mechanisms into problem-focused and emotion-focused. An additional category of physical changes was added to describe specific physiological alterations described by subjects. These three categories are physical changes, problem-focused adjustments and emotion-focused adjustments. Physical changes were defined as alterations in the actual body of the subject. Problem-focused adjustments were defined as deliberate actions directed at changing the self or the environment. Emotion-focused adjustments were defined as alterations in feeling states or attempts to alter the emotional impact of a situation.

The purpose of interrater reliability in this study was to support the method of categorization of themes. Interrater reliability was established by a

pediatric clinical nurse specialist in the following manner. Thirty random statements made by subjects during interviews were sorted into the three chosen categories by the researcher, then independently sorted into the same categories by the second rater. Interrater reliability was initially computed at 90%. Areas of disagreement involved statements which contained components of more than one category. These statements were then discussed and consensus was reached as to which category the statements most properly could be assigned. Final interrater concensus was 100%.

CHAPTER IV

RESULTS

The purpose of the study is to describe burned adolescents' coping strategies and effects of the strategies upon themselves during and after reentry into preburn lifestyle. This section describes the subject population and the nature of their burn injuries (see Table 2). Subjects are adolescents 13 to 21 years of age, hospitalized 14 to 47 months previously for major burn injury.

Data were collected using an interview and demographic data obtained from patient records. Subjects, and parents if subjects were minors, gave consent for participation in the study and were interviewed and tape-recorded in their homes. Major categories of stressors and coping behaviors identified by subjects are described (see Table 3).

Description of Sample

The subjects interviewed had all been inpatients in a west coast university hospital burn unit. The mean elapsed time since the burn injury was 28 months (S.D.= 13.45). Subjects' ages at the time of the interviews ranged from 13 to 21 ($\bar{x}$ = 18, S.D.= 3.27). Days of hospitalization for the initial burn treatment ranged from 22 to 60 days ($\bar{x}$ = 38, S.D.= 16.06).

Table 2

Characteristics of Burned Subjects

Pseudonym	Age	Months Since Burn	Days in Hospital	Estimated Percent Total Burn	Estimated Percent Full-thickness Burn	Initial Number of Graftings	Type of Burn
Amanda	20	17	22	10	10	1	gasoline
Betty	14	14	26	15	3	1	grease
Cathy	20	24	56	55	38	6	gasoline
Denise	20	46	55	18	11	4	gasoline
Eddie	21	17	24	55	35	3	gasoline
Frank	13	20	30	40	25	5	gasoline
Greg	15	47	60	85	50	15	gas explosion
Hank	20	36	31	62	17	1	model airplane fuel explosion

Table 3

Problem-focused and Emotion-focused Adjustments

Stress	Behavioral Adjustment	Behaviors	Purpose	
destruction and changes of/skin tissue	special care or treatment - prevention	avoiding bumping and friction	prevention of skin injury	PROBLEM-FOCUSED
		lubricating	prevention of cracking	
		participation in physical therapy	increased range of motion, minimization of contractures	
		wearing pressure garments	decrease in scar prominence and discoloration	
	special care or treatment - comfort	refusing to wear pressure garments	immediate comfort	ADJUSTMENTS
		rubbing with lotion or ice	relief of itching	
		flexing/moving extremities	relief of itching/tingling	

Table 3 (cont.)

Stress	Behavioral Adjustment	Behaviors	Purpose	
		dressing with scars covered	concealment of scars	
perceived negative changes in appearance	adoption of mode of dress	gradual resumption of preburn style of dress: testing of key figures in environment	return to normalcy	PROBLEM-FOCUSED
	verbalization	answering questions	giving information	
	inhibition of verbalization	not answering questions	withholding information	
others' responses of staring/questioning	withdrawal	walking away from/ ignoring staring	reestablishment of privacy	ADJUSTMENTS
	confrontation	staring back	reestablishment of privacy	
	aggression	verbally accosting starer	reestablishment of privacy, expression of anger	
experience of having been hospitalized with burns	redirection or direction of career goals	enrollment in pre-nursing classes	accomplishment of something positive based on special knowledge of burns	

Table 3 (cont.)

Stress	Behavioral Adjustment	Behaviors	Purpose	
phobic neurosis	avoidance	avoidance of situations augmenting phobic reactions	decrease in feelings of fear	PROBLEM - FOCUSED ADJUSTMENTS
	self-desensitization	forcing self to re-experience phobic situations	mastery of phobic situations	
	increased caution	increasing safety measures in phobic situations	prevention of repeated injury	

Table 3 (cont.)

Stress	Behavioral Adjustment	Behaviors	Purpose
changes in physical abilities/ potential	realization of changes	anger	postponement of acceptance of physical abilities
	acceptance of changes	accepting limitations of decreased range of motion and scarring	acceptance of limited physical abilities
perceived negative changes in physical appearance	antici- pation of ridicule/ rejection	covering scars	normal appearance enhanced
		heightened awareness of scars in public	increased readiness for questions, scrutiny
	decreased focusing on physical changes	elimination of conscious awareness of scars when with family or friends	resumption of preburn lifestyle
		eventual temporary abatement of self-conscious- ness in public	resumption of preburn lifestyle

EMOTION - FOCUSED ADJUSTMENTS

Table 3 (cont.)

Stress	Behavioral Adjustment	Behaviors	Purpose	
	realization of permanency of changes	sense of loss	establishment of new body image	E M O T I O N - F O C U S E D A D J U S T M E N T S
		boredom with burns and sequelae	integration of scars into new body image	
perceived negative changes in physical appearance	rationalization	attributing staring to curiosity	acceptance of changed appearance	
		attributing staring to others' noticing what is objectively different from the norm	acceptance of changed appearance	
		maintaining that the inside person is more important than the outside	acceptance of changed dating potential	
		resigning self to never marrying, to dating only preburn acquaintances	acceptance of changed dating potential	

Table 3 (cont.)

Stress	Behavioral Adjustment	Behaviors	Purpose	
perceived negative changes in physical appearance	rationalization	defining rejectors as less worthy of friendship	acceptance of changed ability to make new friends	EMOTION-FOCUSED ADJUSTMENTS
		realizing the increased time expenditure necessary to make new friends		
	denial	denial of magnitude of injury	postponement of establishment of new body image	
		denial of permanency of scars		
		denial of limitations of reconstructive surgery		
		denial that skin is an important part of self		
	intellectualization	pride in what was endured, regarding self as stronger person	integration of scars into new body image	
		feeling closer to parents		

Table 3 (cont.)

Stress	Behavioral Adjustment	Behaviors	Purpose	
perceived negative changes in physical appearance	intellectualization	feeling closer to God; perceiving burns as warning from God; enhancement of moral sense	integration of scars into new body image	EMOTION-FOCUSED ADJUSTMENTS
	humor	joking about burns; joking about cause of burns; joking about appearance of skin	acceptance of new body image	

Estimated total percentage of body burned varied from 10 to 85% ($\bar{x}$ = 42, S.D.= 26.51). Estimated percentage of full-thickness burn ranged from 3 to 50% ($\bar{x}$ = 24, S.D.= 16.25). Number of graftings performed during the initial hospitalization varied from 1 to 15 ($\bar{x}$ = 4, S.D.= 4.69). All burns were high-temperature burns, one by natural gas explosion, five by gasoline, onne by burning cooking grease and one by explosion of model airplane fuel. Half of the subjects have had subsequent hospitalizations for contracture releases or cosmetic surgery. All subjects have resumed full activities, and seven are fully engaged in preburn activities. One has not yet returned to full-time student status because she is married and engaged in activities of a full-time homemaker.

Physical Changes

Physical changes are defined as physiologic alterations observed or noted by the subjects. Subjects reported three types of physical changes that stimulated behavioral adjustments. These changes can be regarded as stressors, since they are examples of forced change. Forced change is alteration imposed on an individual without his consent and against his will, over which he has no control.

Skin changes. Four changes specifically related

to injured skin were described. The most immediately annoying change noted was itching of grafts, reported by seven subjects. The itching described was severe and persistent. It was most pronounced in grafts of the lower extremities when the legs were in a dependent position. Itching resolved about two years after the burn injury, becoming less acute after the first six to twelve months. Eddie related, "The itching sometimes gets really bad when I stand up a long time. I have to sit down and get the pressure off my skin." Amanda was hesitant about resuming her job, which required long periods of sustained standing. She confided, "I wasn't quite sure, you know. I had my doubts if I could stand that long without my grafts itching."

All subjects noted dryness of newly-grafted skin, either temporarily or permanently, and some mentioned temporary dryness of donor areas as well. Dryness of grafted areas is due to disruption of the normal lubricating function of the skin, secondary to damage or destruction of sebaceous glands. Dryness of donor areas is due to a temporarily increased need for lubrication required because of rapid replacement of new cells as healing takes place. Cathy says that she still has to use "lots of cream" on her grafted areas,

explaining, "My skin isn't the same. I have to take special care of it now."

Friability of grafts was experienced by all subjects, and the new skin tended to split when under tension as well as to tear easily when bumped or rubbed. Because donor skin is often very thin in comparison to the burned skin it replaces, newly-grafted areas have only a veneer of covering. Over time, most grafts become stronger and more stable, as new cells replicate and thicken the grafted sites. However, the distal thirds of both upper and lower extremities are regions in which graft stability is sometimes permanently impaired. Other locations of permanent skin friability are those areas in which contracted tissue is routinely stretched - i.e., insides of elbows, backs of knees. Subjects reported that friability of grafted areas improved over time, with a relatively stable skin surface established within approximately a year postburn for most areas. However, three of the four subjects with largest areas of full-thickness burns, Greg, Cathy and Eddie, continue to experience skin breakdown well over a year postburn. Greg still has areas of occasional breakdown almost four years after burning.

Subjects' scars were of varying severity, with

extent roughly proportional to percentage of full-thickness burn. At the time of the interviews, subjects' scars had faded from purple to tan, cream or white, except for one whose chest scars were violet-red in color. Many scars had irregular surfaces, due to expanded mesh grafting techniques, in which donor skin is slit at regular intervals, so that it can be expanded over a larger surface area. The resultant grafts have a geometric regularity of peaks and valleys, darker and lighter pigmentation, not unlike a checkerboard. During the interviews, while discussing their scars, all four young men spontaneously exposed scars covered by clothing in order to demonstrate extent and severity. The young women, on the other hand, described scars on their torsos and legs by tracing the perimeters of the scars on the outside of their clothing. Scars visible during the interviews were readily identifiable as abnormal-appearing skin and would be so identified by the casual observer.

Generalized short-term physical changes. Several generalized physical changes were reported. Three were short-term. Temporary weight loss, occurring during the first six months after hospitalization, was experienced by two subjects, two of the older women. Amount of loss was 10-20 pounds below normal weight,

regained within a year of burning. Weight loss and regain occurred spontaneously and were not attributed to any definitive cause; however, subjects both reported loss of appetite dating from hospitalization.

Transient tiredness during the first weeks and months postburn was reported by five subjects. Desire for rest and sleep was increased and stamina required for completion of previously routine tasks was lacking. Strength, energy and endurance gradually improved as activities of daily living were resumed. "It was tiring just to walk across the room," Cathy admitted. Temporarily decreased activities, a third change, were reported by all during the weeks or months subjects were home awaiting medical release to return to school or work.

Long-term physical changes. Two long-term physical changes were described. Stiffness was mentioned by Amanda, Cathy, Denise, Eddie and Greg. Stiffness occurred after periods of sitting or lying down and was especially pronounced first thing in the morning. Stiffness improved as activities of daily living were resumed. Two years after her burn, Cathy still experiences morning stiffness.

Limitations in range of motion were reported by two subjects. Range of motion, or the number of

degrees through which a joint can move, can be limited in burned subjects by skin contraction with resultant joint contracture. Eddie has limited range in one shoulder, and Greg has slightly limited range in both elbows. Cathy, Frank and Greg have had surgeries for contracture releases.

Adjustments Reported by Subjects

Lazarus and Folkman (1984) describe coping behaviors as problem-focused or emotion-focused. Problem-focused behaviors are directed at changing the person or the environment. Emotion-focused behaviors, or intrapsychic modes of coping (Lazarus, 1980), are directed at altering the emotional impact of a situation. For this study, problem-focused coping corresponds to problem-focused adjustments, and emotion-focused coping corresponds to emotion-focused adjustments.

Coping is a response to stress. The four major stressors identified are physical changes, others' responses to the changes, their own responses to the changes, and strong emotional response to situations reminiscent of the burn accident itself (phobic neurosis).

Problem-focused Adjustments

Specific problem-focused adjustments made by

subjects in attempts to change themselves or the environment are described. Responses to destruction and changes of skin and tissue, perceived negative changes in appearance, staring and questioning, the experience of having been hospitalized and phobic neurosis are described.

Avoiding bumping and friction. To protect the friability of grafted skin, all described avoiding bumping the grafts and minimizing friction on grafted areas. In some cases avoiding striking the grafts necessitated limitation of sports activities or wearing protective garments while engaged in recreational pursuits. Amanda reported padding her ankles and lower legs when she went horseback riding. Minimizing friction necessitated covering grafts before activities. "I'm careful to protect them," said Betty. "I have to be careful of my grafts, because they might tear."

Lubricating skin. Temporary or permanent need to lubricate the skin to prevent dryness and cracking was reported by all. Lotions or creams containing lanolin or vitamin E were preferred. "I put lotion on almost every day," reported Eddie.

Physical therapy. A special treatment regimen was participation in physical therapy. Due to

tightening of scarred skin, range of motion can be limited and permanent contractures result. Regular stretching of scarred skin through active range of motion minimizes tightening and contractures. Participation in physical therapy was pursued for periods from one to four months after injury. Participation in events of daily living, including attendance in school and participation in athletics, was seen as being more helpful than therapy per se. Frank reported an increase in his school sports participation. Cathy enrolled in a physical education course in order to increase her flexibility and stamina.

Wearing pressure garments. Pressure garments (Jobst) are prescribed by physicians to be worn for approximately a year after severe burns. These garments are tight-fitting shirts, sleeves, stockings and masks made from heavy elasticized synthetic material. They are medium brown in color and look like the reinforced torso portion of panty-hose. Pressure garments prevent scar hypertrophy by exerting continuous pressure on newly healed areas. Badly hypertrophied scars tend to be reddish-purple in color in some individuals, making them additionally conspicuous. Wearing pressure garments as instructed

was demonstrated by seven of the eight subjects. They reported compliance year-round, despite summer temperatures in excess of 100 degrees.

Refusing to wear pressure garments. The eighth subject, Eddie, reported that the pressure garment for his torso fit poorly, "so I just threw it away after about three days." The garment cut into his axillae, causing discomfort. His chest scars are now thick, prominent and discolored. Wearing and refusing to wear pressure garments appear to be examples of action and inhibition of action as described by Lazarus. From the standpoint of discomfort, however, the subject who discarded his pressure garment used a specific action to decrease his physical discomfort. The other seven inhibited the desired action of discarding their uncomfortably hot and constricting pressure garments because of the danger of scar hypertrophy.

Rubbing with lotion or ice. Four reported that, during times of pronounced itching, rubbing with lotion diminished the discomfort. Due to friability, scratching and rubbing the grafts without lubricant were destructive of tissue. One used ice to numb the area and diminish itching.

Flexing or moving extremities. When in public,

three subjects reported alleviating itching of the legs by pacing or flexing. Tingling and itching were relieved by improving circulation to dependent areas. "When I'm working," said Eddie, "as long as I'm moving around, it [the itching] doesn't bother me, but if I stand around barely three minutes or more then the itching's there."

Dressing with scars covered. Adoption of a mode of dress in response to scarring was related to gender, location of scars and time since burn injury. All women and two of the men covered most or all of their scars at first. At the time of the interviews none of the men covered their scars any longer, but three of the women still covered some of their scars in public places or when socializing with all but their closest friends.

Gradual resumption of preburn style of dress: testing key figures in the environment. Resumption of preburn style of dress was accomplished in stages, with certain parts of the body exposed before others. Greg and Hank stated that they had been able to expose scars on their legs first. As Hank said, "My legs, I didn't care, because they were legs, you know?" Now Greg wears anything he chooses, boasting, "I refuse to be pushed around by some stupid scars." Of the women,

Betty, the youngest, was still wearing a pressure glove on her hand at the time of the interview. She had exposed the hand at school, however, when the glove had become soiled, without discomfort. She reported covering her leg scars when in public places, wearing shorts only around the house and yard. The other three had covered their leg scars regardless of ambient temperature and had either eschewed trips to the beach or had worn clothing which covered the scars during swimming and sunbathing. This behavior had been abandoned after two years by Denise, who reported that finally, "I just decided, 'The heck with this! I want to get a tan!' so I just wore a bikini like I normally had." Amanda, who is a little more than a year postburn, went to the beach once in swimwear, at the urging of another burned subject, Eddie, and she reports, "People on the beach stared. When they stared I thought they thought I was some kind of a freak." Cathy wears long pants to cover her legs whenever she leaves the house. However, she is considering wearing sleeveless blouses in public this summer, for the first time, two years after her burn.

Gradual resumption of preburn style of dress is consistent with Hamburg et al.'s (1953) report of patients' testing of key figures in their environment.

This testing proceeds from the familiar to the less familiar. For Amanda, Betty, Cathy, Eddie and Hank, dressing with burns exposed was first tested on family members, then on friends, before public exposure was risked.

Some also related showing their burns to family or close friends soon after returning from the hospital. Cathy donned a two-piece swim suit to show her parents her scars, and later she used this technique to introduce her future fiancé to her scars. She admitted feeling afraid of the reaction of her fiancé, but she needed to know his reaction, which, fortunately, was sensitive and accepting.

Responses to questioning. Subjects reported being asked about their burns both by friends and by strangers. Questioning by friends was perceived as caring, and subjects answered with as much detail as friends wanted. Questions and comments by strangers ranged from kindly to thoughtless. One stranger said to a facially scarred subject, "I thought Halloween was over." When questioned all answered, keeping responses brief and concise. Greg, regarding questions, said, "If people are decent, I'll answer their questions," but if he thinks that people are being rude, he purposely misunderstands their

questions, such as responding to, "What happened to you?" with, "I just tripped over that stupid curb back there." Thus, he withholds information deliberately. The responses are further examples of action and inhibition of action.

Responses to staring. Being stared at was experienced by all when they were with strangers. They adjusted to the staring by using behaviors ranging from passive to active - withdrawal, confrontation and aggression. All walked away from or ignored the starer at least some of the time. However, behavioral response to scrutiny from strangers varied even within individuals. As Denise put it, the response "depends on what kind of mood I'm in." Cathy, Denise, Eddie and Frank reported staring back sometimes, and Frank has even verbally accosted starers with, "What's your problem?" No one reported spontaneously volunteering explanations to people who stared. Again, confrontation and aggression are examples of action, a type of problem-focused coping strategy, and withdrawal an example of inhibition of action, another problem-focused coping strategy.

Redirection or direction of career goals. As a result of the experiences of hospitalization and rehabilitation following burning, the three older

women in the study, Amanda, Cathy and Denise, have redirected their life goals and are pursuing studies to become nurses. Cathy and Denise are also pursuing their more immediate plans for marriage, which may postpone achievement of career goals. Amanda believes that because of her personal experiences she can be a better and more understanding nurse.

Adjustments to phobic neurosis. Strong fear responses in situations reminiscent of the circumstances of the burn (phobic neurosis) were reported by all subjects. Their reactions to phobic neurosis were avoidance, self-desensitization and increased caution, all problem-focused adjustments. Avoidance was reported by seven. Amanda avoids small, enclosed rooms with single exits; she was burned in a gasoline explosion in the small bathroom of a bungalow with a single exit.

Self-desensitization was reported by one. Denise was burned by gasoline while motorcycle racing. After a period of avoidance of motocross racing, she resumed the activity. "It's like getting back on a horse again," she relates. She admits that she still uses avoidance, closing her eyes when she watches other riders do nosedives on their cycles, the accident which caused her burn.

Increased caution in the circumstances of the burn was reported by four. Hank, who was injured lighting a barbeque using model airplane fuel, is especially careful lighting the barbeque.

Emotion-focused Adjustments.

Emotion-focused coping (Lazarus & Folkman, 1984) is directed at altering the emotional impact of the situation. It is intrapsychic, existing in, emanating from and focusing on the mind. Emotion-focused coping changes neither the person nor the environment, but it changes the person's response to or appraisal of specific stressors.

Various behavioral adjustments which are emotion-focused were reported by subjects. Changes in physical abilities or potential prompted emotion-focused adjustments.

Anger. One subject reported having feelings of anger soon after his return home from the hospital. Frank fully realized his changed abilities but was not ready to accept these temporary limitations. His burns had not yet healed enough to permit him to participate in athletics, and he confided, "I'd go outside and watch my brother and my friends play football and baseball. It kind of made me mad, especially when they'd play baseball," his favorite

sport. His anger allowed him to postpone the acceptance of his new physical limitations while retaining the knowledge that he would not be able to participate in sports until his skin healed.

Accepting limitations. Another adjustment to limited physical abilities is acceptance of limitations. One expressed resignation to permanent changes of scarring and limited range of motion. Seventeen months after burning, Eddie expressed acceptance of his new physical limitations and changes, saying, "It changed; it's not going to change back." This acceptance implies incorporation of new limitations into the body image.

Anticipation of ridicule or rejection. Another emotion-focused response to perceived negative changes in physical appearance was the anticipation of ridicule or rejection. Anticipation of ridicule or rejection is the conscious realization of others' potential reactions to appearance. Anticipation of ridicule or rejection was demonstrated by covering scars and heightened awareness of scars in public.

Covering scars enabled subjects to appear in public without having to endure staring and questioning. Their normal appearance was restored. Amanda explained, "I'm not like other girls. I can't

run around in summer in shorts. Women are supposed to be beautiful and have perfect skin. I feel like if a guy sees these they'll say 'Eeeooh!'" Betty also said, "The burns are kind of a small disadvantage, because if I showed my leg, they'd go, 'Eeoooh!'" Cathy echoed Amanda's belief, "Women are supposed to be soft and smooth and have beautiful skin."

Need to cover scars varies from person to person. Amanda and Cathy both expressed feeling uncomfortable with the idea of exposing their scars before they are ready. Amanda's trip to the beach with her boyfriend Eddie, who was burned in the same accident, and exposure of her leg scars before she was wholeheartedly comfortable with the notion was extremely painful for her. At eight months postburn, she still had needed to cover her scars, while Eddie had been thoroughly comfortable exposing his.

Heightened awareness of scars occurs in public. Subjects reported bracing themselves when they went out in public, expecting stares and questions. One of the younger girls reported expecting to be teased "in a mean way" at school. When asked if she ever had been teased in this way, she denied that it had ever happened. It is the anticipation of the event which prompts the adjustment.

Decreased focusing on physical changes. Closely related to heightened awareness of scars in public is the elimination of conscious awareness of scars when with family or friends. Ridicule is not expected. Family and friends accept the entire person, whereas strangers regard the exterior first.

Despite the psychological preparation made when in public, engrossment in activities can produce temporary abatement of self-consciousness. Both Cathy and Denise gave accounts of being busy shopping or visiting with friends and then becoming aware that someone was looking at them. At first they wondered, "What are they staring at?" As Denise said, "You know, I forget, and then go, 'OK,' as I remember the scars."

Sense of loss. There are stages in the establishment of a new body image. First the change must be recognized, then accepted, and finally incorporated into the body image as part of the person's general picture of his body. It is not in the forefront any longer. Realization of physical changes and resultant changes of appearance first prompt a sense of loss. Betty confided, "I got used to the fact that I was burned, and really I'm a disabled person in a way." Denise, whose burns are on

her neck and legs, said of her preburn appearance, "I thought my neck was nice - my brother even told me my neck was nice...But that kind of bothered me afterwards, because I didn't feel as attractive as I did before. I've always liked my skin; I tried to keep it clean and scarfree. That was one of my prides...but you've got to kind of focus on something else." Amanda, who has leg scars, revealed, "Before the accident I had thought of being a model because people said I had great legs. I feel like I lost any chance of being a real knockout."

Boredom with burns and sequelae. As the new body image becomes complete, the whole issue of burns and changes becomes tedious. Subjects expressed this desire to decrease their focusing on the burn experience in various ways. Eddie related, "You can only talk about something so much." Greg, speaking of the pressure garments which covered his entire body, said, "I was so tired from explaining." Amanda reported that she is becoming more relaxed about showing some scars, "You know, it's kind of like, well, if people want to stare, they can...I kind of got bored with it." Hank reached a point after two years when he began to expose his scars routinely. "I just don't care no more," he reported. Cathy

admitted, "It gets old. You just want to forget it."

<u>Emotion-focused Adjustments Which Are Like Traditional Defenses</u>

Other emotion-focused adjustments are more intellectual. They are directed at altering the emotional impact of the situation and are defenses in the traditional sense in that they protect the ego from injury. These adjustments, rationalization, denial, intellectualization and humor, allow the person to maintain intellectual awareness of a situation without the full emotional content which it otherwise carries, or occlude intellectual awareness while keeping emotional content intact.

<u>Rationalization regarding changed appearance</u>. Rationalization imparts new meaning to preexistant information; it makes it possible for a person to accept facts and situations, imparting new subtle causes and explanations to them. Two kinds of rationalization are directed at accepting changed appearance. One behavior is attributing staring to curiosity, placing the motivation for staring on the starer. As Hank says, "Sure, they're going to wonder. They check it out." Denise explains, "That's just common curiosity." Attributing staring to others' noticing what is objectively different from the norm

is a very similar way of rationalizing. Greg explained, "You kind of glance around when you're walking down a road, and you see normal faces, but when you see something different, you notice it because it's something your brain isn't accustomed to. It's accustomed to seeing normal-looking people. It just catches your eye."

Rationalization regarding changed dating potential. Maintenance of philosophical rationales which help explain actual and potential reactions of others in dating relationships and friendship relationships can also be termed rationalization. In explaining his thoughts about dating, Frank, 13 years of age and a nondater, said, "People date you, not your skin, I think. If you like the person, it's not what they have on the outside, it's what they feel like on the inside." Betty, 14 and still a nondater, revealed, "I've always thought, 'If they're going to ask you out, they ought to like you for what you are, not what you look like.'" Greg at 15 has dated casually a few times. He reported that some girls "were real fascinated by me, and they weren't intimidated with me, by my ugliness." He matter-of-factly plans to marry and have a family.

Another rationalization reported was changing

life plans to exclude marriage - rejecting the institution before being rejected. Cathy confided that after her burn, her feelings of attractiveness vanished. "I thought my body was gone - you know, the whole desire for the body's gone. It was really terrible, and I didn't think I'd ever get married. I didn't think anybody could love me."

Closely related to changing life plans to exclude marriage was the behavior of dating only preburn acquaintances. Amanda attributed her lack of dating new people to her doubt that they would be able to tolerate her scars. Eddie, who dates Amanda, has not gone out with anyone else since the accident, but he did not express doubt of his attractiveness. After her accident Denise began dating a young man whom she had met beforehand and who was aware of her burn. They have plans to marry soon, after four years of courtship.

Contrary to her fears, Cathy indeed did marry. Her husband had been burned in the same accident in which she was injured. His burns were smaller and his scars are minimal. She described herself as "surprised" at first that she could be loved. It is interesting to note that all three of the women who are in relationships knew the men they dated prior to

their burns. Concern over marriageability was voiced only by these three women. The three younger adolescents did not express such concerns, even though Frank and Greg are the only facially scarred

All five older adolescents are involved in intimate relationships. Hank had a steady girlfriend at the time of his burn and has subsequently been involved in dating relationships with other women. He denies difficulty with being uncovered in intimate situations, explaining that his scars are on chest, back, side and extremities, which are exposed almost year-round in the sunny climate in which he lives. He confessed, "It's not difficult - they know already."

Rationalization regarding changed social potential. Philosophical rationales explaining actual and potential reactions of others in social relationships are another example of rationalization. These explanations make rejection by others a function of something other than appearance. Defining rejectors as less worthy of friendship than others was acknowledged by two subjects. Eddie takes the attitude about his scars, "If people like me, that's fine. If they don't, they're not worth hanging around." Greg, who has extensive facial scarring, stated about his peers, "If they want to look at me as

some kind of creature, well then it's up to them," and implied that it didn't much matter to him because if they rejected him they weren't worth knowing. The other six denied any difficulty making new friends because of scarring.

Realizing the increased time expenditure necessary to make new friends made it easier for one subject to explain rejection in social situations. Greg related his experiences in winning over rejectors with his persistence. He believed that it took his peers awhile to get used to his appearance. An effective approach, this enabled him to attribute initial rejection to lack of time on his part to charm and convince.

Denial. Denial is a behavioral adjustment which enabled some to cope intellectually with parts of their scarring while abolishing other portions from conscious awareness. It made their experiences more tolerable. Three kinds of denial were described by subjects - denial of the magnitude of the injury, denial of the permanency of scars and denial of the limitations of reconstructive surgery. Such denial postpones the establishment of a new body image or postpones the acceptance of the new body image as permanent.

Denial of the magnitude of the injury helped Hank to resume all his preburn activities before his skin was strong enough to withstand the demands of active adolescent life, and over the objections of his parents. Despite 62% burned surface area, Hank "was back in school two weeks after I was out of the hospital, playing football. I went to make a tackle, and this guy's cleat came right over and hit me in the side, so I was pretty messed up." Shortly thereafter he withdrew from football so that his grafts could heal again. Denial enabled Hank to postpone accepting a new body image, but he became reassimilated into his peer group within six weeks of his burn.

Denial of the permanency of burn scars also postpones establishing new body images. Cathy admitted, "In the hospital the nurses told me I was going to have a lot of scars, but I didn't realize what a burn was, that it was going to stay like this, and when I got home I think a lot of it hit me." Denise said, "At first I think I did feel that the scars would go away...About the midpoint of my hospitalization...I was able to get up and look in the mirror, and it was really a shock to see what I looked like and to see my neck."

Denial of the limitations of reconstructive

surgery was employed by one to keep from establishing the body image of a permanently scarred individual. The victim of severe facial burns, Greg plans one further cosmetic surgery, scheduled for this year. He spoke of the time following his upcoming surgery as "after my burns are gone," and maintained, "I'll be a normal person. I won't have to be so defensive," despite the fact that surgery will not restore his preburn appearance.

Denial that the skin is an important component of the self is another aspect of Greg's denial. It makes scarring less important to his life. He maintains, "I don't see the scars as a single handicap. Looks. It's only looks. It doesn't keep me from doing anything." He declared, "I am my soul and my spirit. I'm not my skin."

In contrast with mentally disturbed individuals who have little insight, Greg hints that he knows about his patterns of denial. He admitted, "Sometimes my philosophy isn't true, but I believe it is, and that's what helps me deal with people, because what's in this brain is keeping me in line. And if my philosophy's wrong, then it's wrong, but it's helping me."

Intellectualization. Intellectualization allows

the individual to maintain full awareness of reality but separates him from the its emotional impact. The kinds of intellectualization observed in burned adolescents impart special meaning to the burn experience, crediting the experience for serendipitous happenings and outcomes.

Pride and regarding self as stronger. With the completion of a new body image, the individual realizes what has been endured and what has been accomplished. All subjects reported feeling proud of what had been endured and accomplished. The weeks and years of suffering and rehabilitation are viewed as a successful mastery of a difficult experience.

All subjects reported that their burn experience has made them stronger. Some reported increased resilience to the vicissitudes of life. Hank claimed that he now has an increased tolerance to physical pain. All agreed that burning and its results were the worst experience of their lives. Some said that they can't imagine anything worse. Amanda related, "In being burned my worst dream came true. I thought it never would happen to me - it only happens to other people." Cathy stated, "It's not the worst thing that could happen. Somebody dying is worse." All subjects reported feeling more mature than their chronological

ages. Hank admitted, "I've experienced too much, too quick."

Closeness to parents. All subjects lived with their parents at least for a period of months following release from the hospital. All of the women and none of the men reported feeling closer to parents or families as a result of their burn experience. Women saw this closeness as a positive outcome.

Spirituality. Spirituality encompasses both religious and philosophical conviction of the existence of a meaning of life over and above that which can be perceived rationally. Increased spirituality was reported by four subjects.

Cathy feels closer to God since her accident. "I could have died so easily," she realizes, "so God must have wanted me alive for something."

Another subject has become intensely religious as a result of his burn experience. Greg spoke of the next life in glorious terms. He focused especially on the discarding of bodies in the afterlife.

Denise reports, "That close encounter made me realize that, hey, I don't want to go now. I want to live." She perceived the burns as a warning from God, observing, "You know, Somebody's telling me, 'Hey, watch yourself down there,' you know, 'I'm here to

look out for you, and I don't like what you're doing,' so it kind of slowed me down." She reported that now she values life more.

One noted an enhancement of his sense of morality. Hank noted a sobering effect on his life. He admitted that, "It makes me think about what I do a lot more. It makes me think about right and wrong."

Humor. Another emotion-focused adjustment is humor. Humor preserves intellectual awareness and and modifies emotional content. Four subjects reported joking concerning the burns themselves, the cause of the burns or the appearance of the skin. Betty reported that being teased and kidded in a friendly way by a boy whose brother had also been burned "was OK." At the beach one of Eddie's friends said something about his scars being caused by an atomic bomb, and Eddie readily agreed, kidding around and joking. Denise reported using humor to make people feel more at ease around her, occasionally making burn jokes. She also had a playful and light-hearted manner during the interview, as did Eddie and Betty. In his social dealings, Greg depends on humor. He said that some of his conversations with friends "are just one crispy joke after another." He explained that people sometimes misunderstand his

humor before they get to know him, but he made the point, "My soul can make fun of what it owns." When Greg wore his pressure garments over his extremities, trunk and face, he referred to them as body panty hose. He explained, "I'm not making fun of myself. I'm making fun of my skin. I'm making fun of my flesh." All these behaviors using humor allow the individual to accept his new body image with an overview of goodnaturedness, making his own perception and others' perceptions of the scars less serious and overwhelming.

Effects of Strategies on Self

Subjects uniformly reported feeling comfortable about their life decisions, resumption of activities and self-image. Although Cathy and Denise reported feeling unready to resume their activities as soon as they did, and Greg reported ambivalence at the time he returned to school, they felt that in retrospect resuming activities when they did had been a good decision.

All reported feeling comfortable with family and friends shortly after release from the hospital. Denise, Cathy and Frank related feeling uncomfortable with strangers but reported that they had felt this way even before the burn. Greg indicated that he was

uncomfortable with strangers because of his scars, as did Amanda. Betty and Eddie feel comfortable with strangers and have felt so almost since their return from the hospital. Hank said that he felt comfortable with strangers but that it had taken about two years to achieve this state.

CHAPTER V

DISCUSSION

Significance

The purpose of this study was to explore how post-burn adolescents coped with the task of reentry into their pre-burn lives and the impact it had on them. The study questions were: 1) what are the coping strategies used after hospitalization by the adolescent who has been burned, and 2) what are the effects of these strategies on the adolescent's resumption of preburn lifestyle and response to physical limitations?

Many behaviors were described, both problem- and emotion-focused adjustments to six identified stressors - skin changes, perceived negative changes in appearance, changes in physical abilities or potential, questioning and staring, hospitalization and phobic neurosis.

Responses To Skin Changes

The adolescents experienced injury, healing and the need for continued skin care and treatment. The skin care vigilance this group described influenced activities and required time.

Fitting postburn patients with pressure garments is standard practice for extensive scars. The impact

of this treatment on the adolescent once he resumed normal activities has not been described. Subjects were of an age especially concerned with appearance and normalcy (Elkind, 1981; Erikson, 1963). Hence, they were more likely than children or older adults to adhere to a regimen which prevents unsightly scars. However, pressure garments tend to bind and to be uncomfortable in hot weather, and they also look peculiar and very unlike normal skin. It is remarkable that all but one of the subjects persevered in wearing pressure garments for the recommended interval.

Responses To Perceived Negative Changes of Appearance

Perceived negative appearance elicited both problem- and emotion-focused behaviors. The reason for this dual response is that scarring is the single most important long-term stressor faced by burned adolescents. Initially scars were covered and gradual uncovering took place, with subjects adopting their preburn style of dress first at home, then with friends and finally in public. Testing of key figures in the environment when exposing burn scars is a behavior previously described by Hamburg et al. (1953) and referred to as progressive desensitization by Andreasen and Norris (1972). Adolescents displayed

a previously undescribed temporal interval between burning and public display of scars. Time elapsed between injury and display was one year for one subject and two years for three others. Presumeably, the superimposition of a new body image as described by Horowitz (1966) and the adoption of that new image as permanent and acceptable takes about two years for most burned adolescents.

As expected, gender influenced this response. At the time of the interviews all of the young men had adopted styles of clothing worn by their peers; only one of the women had done so, despite similarities in time since burn, smaller percentage of burns and no facial scarring. Two men have facial scars. The women reported that they felt that society expected women to be beautiful and have perfect skin, making it difficult to expose scars. This is especially true at adolescence when the body image is strongly influenced by perceived or actual scrutiny by others.

It is significant that although men found it easy to expose their leg scars soon after hospitalization, the three women who continue to cover their burns specifically cover their legs. This is consistent with the Western cultural view that women's legs are attractive, whereas men's legs are functional.

Negative changes in appearance at adolescence interrupt the natural progression of assessment of capabilities and formation of life plans (Erikson, 1963). Self-consciousness, which Elkind (1981) describes as a manifestation of the adolescent's new capacity for introspection, magnifies severity of scars. Thus, all coping strategies available are used to diminish the stress of perceived negative changes of appearance. This adjustment demonstrated an identified trajectory: anticipation of ridicule, decreased focusing and, finally, boredom.

Anticipation of ridicule or rejection. Anticipation of ridicule or rejection resulted in covering of scars or in heightened awareness of scars in public. The acuity of this anticipation in adolescents is due to the normal ego-centric feeling of being under constant scrutiny and to the focusing on new somatic changes that occurs with body image alterations which are at the forefront of consciousness (Elkind, 1967; Schilder, 1950). A condition that sets an individual apart from the group, even if benign or transient, can be a major problem. Existence of a permanent disfigurement heightens the normal response of feeling stared at and disapproved of.

Decreased focusing on physical changes. After changes become incorporated into the body image and key people have shown acceptance of changes, decreased focusing on physical changes is seen. Adolescents are able to relax with friends and family and interact as whole persons. At times they forget about scars when in public and wonder why people are staring before remembering.

Boredom with burns and sequelae. With integration of the new body image, becoming bored with dwelling on the burns and burn results is experienced.

Humor. The use of humor was noted by Hamburg et al. (1953) in all of the subjects they studied. In this study of burned adolescents, humor was reported by only four subjects. The others did not seem to be unduly solemn individuals, but it appeared as if the burn was of sufficient gravity that joking was out of the question. Those who did or did not use humor to cope did not differ in mean age, gender distribution, location of scars or mean percentage burned. It is possible that adolescents differ from adults in their use of humor because of their greater concern with their bodies and body images and the effect that their appearance produces in themselves and others.

Denial. Denial was encountered in two stages:

initial denial, in the early period following burning, and late denial. Denial during and immediately following hospitalization postponed establishment of a new body image. Full realization of the permanency of burn scars and of the magnitude of the injury was soon established. However, denial gave subjects time to gather their inner resources and establish their support structure before they allowed themselves to admit that their injuries were permanent and major.

Denial of the limitations of reconstructive surgery was exhibited by one subject four years after burning. This late manifestation may be an example of the unrealistic expectation which some patients attach to their plastic surgeons, viewing them as miracle workers. This subject's body image had become well established but was not quite accepted as irreversible. He was steeped in fantasy, reading only science fiction and fantasy-escape literature. He maintained the conviction that his real self was inside and that the outer self was just covering. He believed that his skin would be perfect after his next surgery. He was intensely religious and spoke with elation of the next life and its glory. The subject's scars covered 85% of his body. His face was badly scarred. In describing the facially burned and

disfigured, Bernstein (1976) notes the extensive use of denial in patients who function well socially. It may be that in order to continue to function and to maintain equilibrium this system of denial-fantasy-religiosity was mobilized and gave the subject what he most needed to survive: hope.

Responses To Changes in Physical Abilities or Potential

Adolescent development includes a realistic assessment of capabilities (Erikson, 1963). Changes in physical ability or potential, whether temporary or permanent, affect the adolescent's self-image. An initial anger response to changes folowed by acceptance was described by two. Emotion-focused responses were a sense of loss, and rationalizations related to changed dating and social potential.

Sense of loss. All women but none of the men reported a sense of loss of attractiveness after their burns. Andreasen and Norris (1972) state that our society places a higher value on physical attractiveness in women than it does in men. Male screen idols are considered more masculine because of their asymmetrical features, sneers, facial scars and age creases (i.e., Eastwood, Bronson and Ford), whereas youth, smiles, symmetry and smooth facial skin

are requisite qualities for feminine screen personalities. Subjects' sense of loss accompanied their establishment of a new body image and faded as their focus on new changes receded from emphasis (Schilder, 1950).

Changed dating potential. Erikson speaks of adolescent assessment of personal strengths and weaknesses. The burned adolescent assesses scarred skin as a potential weakness in attracting dating partners and, by comparison, inner qualities appear more attractive. The rationalization that results from this assessment is that the inside person is more important than the outside person. This rationalization allows the adolescent to accept a changed dating potential, to accept a changed body image and to retain hope.

Limitation of dating potential was acknowledged by several women in this study. The men interviewed did not admit of such limitation. Resigning herself to never marrying was reported by one woman. By removing concerns about marriage from her consciousness, she could focus on recovery, family and friendships and not be threatened by potential rejection by young men. Two women dated only preburn acquaintances. One expressed doubts that other men

could accept her, despite occasional offers of dates, which she always declined. By limiting themselves to their already-established circle of accepting friends, they avoided having to explain about and expose their burns and risk rejection by potential suitors. This strategy, although it limits dating possibilities, places the ego in a protected situation. Doubting of one's marketability as a spouse is documented by Clarke and Martin (1978), Bernstein (1976), Solnit and Priel (1975) and Andreasen and Norris (1972).

Changed social potential. Limitation of the ability to make new friends was reported only by two. The rationalizations which made this change more palatable placed the reasons for the change not on scars but on other entities. Both identified persons who rejected them on the basis of scars less worthy of friendship. This value judgement enabled them to maintain their confidence and accept their changed appearance. One defined the problem in terms of time expenditure required to make new friends. He realized that his appearance was startling but found that with persistence he could initiate friendships. Armed with this rationalization, either he could attribute rejection to insufficient time spent in trying to get to know the person or if he spent more time trying to

get to know the new acquaintance and then was rejected, he could find the person unworthy of friendship.

<u>Responses To Questions and Staring</u>

Responses by postburn adolescents to questions and stares have not been described. The responses of this group to questions by strangers were uniformly short and concise. One subject avoided giving information by purposely misinterpreting questions when he thought them unnecessarily prying or inopportune. He based his decision of whether or not to respond upon his estimate of the personal worth of the questioner. True to the ego-centrism of his age, he felt fully qualified to decide whether questioners were "decent people." If he sensed hostility or rudeness, his answers became evasive. It may be significant that he was the most severely burned, had extensive facial scarring and had reported cruel comments by strangers. This raises the question of the impact of the extensiveness of the burn on adjustment.

Responses of subjects to staring varied from passive to active, from withdrawal to confrontation and aggression. Staring, although perceived by subjects as being understandable, was a reinforcement

of their deviation from the norm, accentuating feelings of being different and strange. The passive tactic of walking away or ignoring staring was a universal behavior some of the time. However, half of the subjects resorted to staring back or verbally aggressive behavior in response to feelings of anger. During adolescence the feeling of being under scrutiny may lead young people to feel that they are being stared at when they are only being casually regarded (Elkind, 1981). It is the inner discomfort at being singled out that leads to confrontation and aggression.

Response To Having Been Hospitalized With Burns

During adolescence identification with adults in positions of authority, importance or perceived glamour occurs. This process may explain why three of the women had begun studies for nursing school. It remains to be seen if these intended plans are carried out, but at the time of the interviews the percentage of subjects who had begun studies in this area substantially exceeds Knudson-Cooper's (1981) findings in the same area; 18% of her sample planned to pursue careers in health-related fields, as opposed to 38% of this sample.

Responses To Phobic Neurosis

Phobic neurosis has been described by Andreasen and Norris (1972) in burned adults. They reported that it was most pronounced during the first year after discharge and cleared spontaneously without treatment. All subjects reported active phobic neurosis. It appears that phobic neurosis remains active for at least four years in burned adolescents, even though it may diminish with time. A possible explanation for this discrepancy between findings in adults and adolescents may be that the impact of a major accident during adolescence is greater, due to dependent social and emotional status. Adolescents, despite growing independence, still depend on parents for support, guidance and rescue during crises. Many believe themselves indestructible. The occurrence of a major injury during this time underscores the parents' lack of ability to ameliorate unpleasant occurrences and introduces the adolescent to the reality of his own vulnerability. Thus, the phobic neurosis resulting from the burn is more pronounced than it would be in an adult and has a longer-lasting impact, more like the sequelae of burn injury in childhood (Woodward, 1959; Martin, 1970).

Avoidance of situations augmenting phobic

reactions, forcing oneself to reexperience phobic situations in an effort at desensitization, and increasing safety measures were reported actions to minimize phobic neurosis. None sought professional help to minimize phobic responses. Their coping strategies were concrete and resembled those of younger subjects in situations of fear rather than those of adults. This incidence of apparent regression supports the concept that phobic neurosis in adolescents more closely resembles children's reactions than adults'.

Personal Growth

As in all crises the potential for human growth was evidenced. This was reported as increased personal pride or power, feeling closer to parents and increased spirituality.

Pride and potency. Subjects reported feelings of increased pride and potency as a result of their burn experience. Hamburg et al. (1953) noted mobilization of pride associated with active participation in recovery in hospitalized patients. Pride was related to feelings of having worked hard at rehabilitative efforts and to having achieved mastery of various difficulties. Subjects considered themselves stronger because of their experiences. They reported feeling

older than their chronological ages, a finding supported by Clarke and Martin's (1978) assessment of burned children deporting themselves more like adults than children. Increased feelings of pride and potency may also be considered a defensive reappraisal in which past experiences of burning and hospitalization are interpreted in more favorable terms retrospectively (Lazarus & Folkman, 1984).

Feeling closer to parents. Feeling closer to parents in a positive way was reported by all of the women and none of the men studied. All had been increasingly dependent upon their parents for physical care after release from the hospital. Feeling closer to parents may have been regarded as a temporary necessity by the men but as a special privilege by the women. Enforced dependence on parents was incorporated as part of the body image in women, leaving a residual feeling of closeness after that dependency was no longer necessary. It may be that our culture, which places such importance on independence and strength in men, does not allow them to feel comfortable with the role of weakened and dependent convalescent, whereas it deems receipt of nurturance acceptable for women.

Spirituality. Increased spirituality, bordering

on religiosity in one subject, was reported by four. The subjects all regarded their spiritual changes as having emanated from the burn experience. Although religiosity was described by Hamburg et al. (1953) in burn patients, increased spirituality has not yet been described in the literature. The religiosity described by Hamburg et al. appeared during hospitalization and was seen as transient, whereas increased spirituality reported by the four subjects in this study began after release from the hospital and appears to be long-lasting.

Limitations

The small sample size and its heterogeneity, as well as wide variances in percentage burn, severity of burn and time elapsed since burn injury make generalizability to other burned adolescents limited.

The lack of studies of the same population makes age-appropriate comparison impossible. Comparisons have been made to studies of adults or to studies of combined samples of adults and children.

Subjects were interviewed at a point in their recovery at which coping styles had been reappraised and established. Therefore, ineffective mechanisms were not well-described because of the time elapsed since the active process of selecting strategies.

Future Research

In order to expand and test the findings of this study, the following recommendations are made.

1) Replicate the study with a larger population or with populations from several settings.
2) Expand the study to the younger adolescent population, with a larger sample, in order to discover if optimism about dating, body image, exposing scars and acceptance is truly a characteristic of this subpopulation. Findings indicate that adolescents with little or no experience dating view the process in more positive terms than do older adolescents who have already undergone the personal scrutiny that accompanies courtship.
3) Study newly-burned adolescents and describe their coping strategies. The significance of the hospitalization experience in the post-discharge adjustments reported by this sample needs to be explored. Strategies employed during the first few weeks and months following burning, whether useful or ineffective and short-lived, need to be examined.
4) Explore the role of the nurse/family during

and immediately following hospitalization in fostering positive adaptation through teaching, support and anticipatory guidance.

Implications for Nursing

Though the sample was small and heterogeneous, the findings can provide the nurse with guidelines to examine in-hospital nursing practice and to foster post-discharge coping.

Care while hospitalized. Adolescents need to compare the self with the average or normal person of the same age and, since burns in adolescents are infrequent, often there are no peers available in the hospital with whom burned adolescents can compare the experience and the reaction to it. Staff members must be informed about the natural progression of denial, gradual desensitization, philosophical searching, impact on the adolescent's social life and common behavioral responses. They in turn can teach the adolescent that what he is experiencing or is about to experience is normal and necessary.

Adolescents said that the burn experience was the worst happening of their lives. Nurses need to address this and modify those aspects of the hospitalization they can to reduce the stress of the experience. Dressing changes, isolation, concerns

about appearance, and distress due to surgeries and procedures may remain immutable and negative. However, nurses can attend to pain management, provision of choices, meeting comfort and social needs, allowing expressions of anger, encouraging independence and questioning, and assuring the adolescent of continued personal acceptability.

Preparation for discharge. When planning discharge, nurses can prepare adolescents to expect physical changes in their skin - itching, friability and dryness of grafts - and teach methods for appropriate skin care. Nurses can tell burned adolescents that despite hardships most other adolescents do persevere in wearing pressure garments, with positive results.

Adolescents can be prepared for expected patterns of exposure of burn scars and reassured that differing behaviors over time are normal. Responses to staring and questioning and strategies for coping can be explored prior to discharge. Adolescents can be prepared for prolonged experience with phobic responses and reassured that this phenomenon is expected.

Concepts of body image and the incorporation of changes into the body image can be explained to the

burned adolescent. Preparation can be given for changed dating potential and changed potential for establishing friendships. Women can be prepared for the eventual sense of loss they may experience. They can be encouraged to seek help if the sense of loss progresses to depression.

Feelings of pride, feeling closer to parents and spirituality can be supported and encouraged. Humor as a coping mechanism can be encouraged if it exists; lack of humor need not be a concern.

APPENDIX A

INTERVIEW SCHEDULE

What do you do and what have you done to manage your burns and their results?

- Are your activities about the same as they were before the burn?
- How long did it take you to resume your activities as they are today?
- Do you have to take special care of your grafted areas or donors? What do you have to do?
- What made you decide to resume your daily activities? Did you think you were ready at the time? Did you have to force yourself or talk yourself into these activities, or were you wholeheartedly ready?

How are you doing? Have the decisions you have made about your life and your changes been comfortable ones for you?

- Do you feel OK about your life at present?
- Do you feel good about your life decisions?
- Do you like the way your decisions affect your way of looking at yourself?
- Do you think you made good decisions about resuming activities?

How about other people? How do you deal with other people regarding your scars/pressure garments?

- Family?
- Friends you have known since before the burn?
- Friends you have acquired since the burn?
- Strangers?

Do you bring up the burns or not?

Did you purposely show family and friends the scars at some point?

What do you say in response to questions?

What do you do when people stare?

Do you dress differently for strangers than for people you know?

How do these ways of presenting yourself to others work for you?

- When you are with others do you feel comfortable? Family? Old friends? New friends? Strangers?
- How long did it take you to feel comfortable with the above?
- What do you think helped you feel more comfortable?
- Are you conscious of your scars when you are with other people, or is it not on your mind?

What was difficult for you at first in your interactions with people? Is it still difficult? If it isn't, why do you think it changed?

How do other people respond to your way of handling your burns?

Is/was your family uncomfortable about your scars, do you think?

How about friends?

How about strangers?

Do people seem accepting of how you dress, how you discuss your burn experience? How can you tell?

APPENDIX B

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

PERMISSION TO INCLUDE MY CHILD IN A RESEARCH STUDY

Suzanne Sutherland, R.N., is doing a study to learn more about how adolescents who have been hospitalized with burns think and feel about the experience of recovering from this injury.

If my son/daughter and I agree, Mrs. Sutherland will listen to him/her describing what it is like to be a patient in a burn unit and what it is like returning to school or work and to family life and old friendships. The interview will last an hour at most and will be conducted in whatever location is mutually convenient - my home, the UCD Medical Center in Sacramento, my son/daughter's teen club, et cetera.

The only risk to participation is that my son/daughter might find it upsetting to talk about some parts of the hospitalization. If he/she does not want to talk about these things, he/she does not have to. Any conversation can be stopped at any time.

The information will be kept confidential to the full extent of the law. Any reports or publications resulting from the study will contain fictitious names.

Probably the only direct benefit to my son/daughter from participating is in the conversations themselves. Often it helps to be able to talk to someone whose function is just to listen.

It is hoped that more will be learned about how adolescents with burns perceive the experiences of hospitalization and recovery. This new knowledge may be helpful to other adolescents with burns, making it easier for their nurses and doctors to understand what they are thinking about and feeling while they are in the hospital and what they are likely to experience after they go home.

If I have any questions about this study, I may call Suzanne Sutherland at 489-9329 (home), or at 453-3636 (work, 7 PM - 7 AM).

PARTICIPATION IN RESEARCH IS VOLUNTARY. My adolescent son/daughter or I have the right to refuse or to withdraw at any point in this study without jeopardy to our medical care. If we wish to participate, we should sign this form.

__________ ___________________________________
Date Adolescent's Signature

__________ ___________________________________
Date Parent's signature if adolescent is under 18 years of age

References

Andreasen, N.J.C., & Norris, A.S. (1972). Long-term adjustment and adaptation mechanisms in severely burned adults. Journal of Nervous and Mental Disease, 154, 352-362.

Andreasen, N.J.C., Norris, A.S., & Hartford, C.E. (1971). Incidence of long-term psychiatric complications in severely burned adults. Annals of Surgery, 174, 785-793.

Beales, J.G. (1983). Factors influencing the expectation of pain among patients in a children's burns unit. Burns Including Thermal Injury, 9(3), 187-192.

Bernstein, N.R. (1976). Emotional care of the facially burned and disfigured. Boston: Little, Brown.

Bernstein, N.R. (1982). Psychosocial results of burns: The damaged self-image. Clinics in Plastic Surgery, 9, 337-346.

Bernstein, N.R., Sanger, S., & Fras, I. (1969). The functions of the child psychiatrist in the management of severely burned children. Journal of the American Academy of Child Psychiatry, 8, 621-636.

Clarke, A., & Martin, H.L. (1978). The effects of previous thermal injury on adolescents. Burns Including Thermal Injury, 5, 101-104.

de Wet, B., Cywes, S., Davies, M.R.Q., & van der Riet, R.L.S. (1978). Some aspects of post-treatment adjustment in severely burned children. Burns Including Thermal Injury, 5, 321-325.

Elkind, D. (1967). Egocentrism in adolescence. Child Development, 38, 1025-1034.

Elkind, D. (1971). A sympathetic understanding of the child six to sixteen. Boston: Allyn & Bacon.

Elkind, D. (1981). Children and adolescents Interpretive essays on Jean Piaget (3rd ed.). New York: Oxford University Press.

Erikson, E.H. (1963). Childhood and society (2nd ed.). New York: W.W. Norton.

Feller, I., & Archambeault, C. (1973). Nursing the burned patient. Ann Arbor: The Institute for Burn Medicine.

Fisher, S., & Cleveland, S.E. (1968). Body image and personality (rev. ed.). New York: Dover Publications.

Freud, S. (1923). The ego and the id. Standard Edition, 1961, 19, 3-66.

Galdston, R. (1972). The burning and healing of children. _Psychiatry_, _35_, 57-66.

Glaser, B.G., & Strauss, A.L. (1967). _The discovery of grounded theory_. Chicago: Aldine.

Haan, N. (1977). _Coping and defending_. New York: Academic Press.

Hamburg, D.A., Hamburg, B., and de Goza, S. (1953). Adaptive problems and mechanisms in severely burned patients. _Psychiatry_, _16_, 1-20.

Horowitz, M.J. (1966). Body-Image. _Archives of General Psychiatry_, _14_, 456-460.

Kavanagh, C. (1983). Psychological intervention with the severely burned child: Report of an experimental comparison of two approaches and their effects on psychological sequelae. _Journal of the American Academy of Child Psychiatry_. 22(2), 145-156.

Knudson-Cooper, M.S. (1981). Adjustment to visible stigma: The case of the severely burned. _Social Science and Medicine_, _15_, 31-44.

Lazarus, R.S. (1980). The stress and coping paradigm. In C. Eisdorfer, C. Cohen, A. Kleinman & P. Maxim (Eds.), _Conceptual Models for Psychopathology_ (pp. 173-209). New York: Spectrum.

Lazarus, R.S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.

Long, R.T., & Cope, O. (1961). Emotional problems of burned children. The New England Journal of Medicine, 264(22), 1121-1127.

Martin, H.L. (1970). Parents' and children's reactions to burns and scalds in children. British Journal of Medical Psychology, 43, 183-191.

Molinaro, J.R. (1978). The social fate of children disfigured by burns. American Journal of Psychiatry, 135, 979-980.

Moos. R.H. (1977). Coping with physical illness. New York: Plenum.

Muuss, R.E. (1982). Theories of adolescence (4th ed.). New York: Random House.

Piaget, J., & Inhelder, B. (1969). The psychology of the child. New York: Basic Books.

Quinby, S.V.C., & Bernstein, N.R. (1971). How children live after disfiguring burns. Psychiatry in Medicine, 2, 146-159.

Sawyer, M.G., Minde, K., & Zuker, R. (1982). The burned child - scarred for life? Burns Including Thermal Injury, 9, 205-213.

Schilder, P. (1950). _Image and appearance of the human body_. New York: International Universities Press.

Selye, H. (1956). _The stress of life_ (rev. ed.). New York: McGraw-Hill.

Solnit, A.J., & Priel, B. (1975). Psychological reactions -- Facial and hand burns in young men. _Psychoanalytic Study of the Child_, _30_, 549-566.

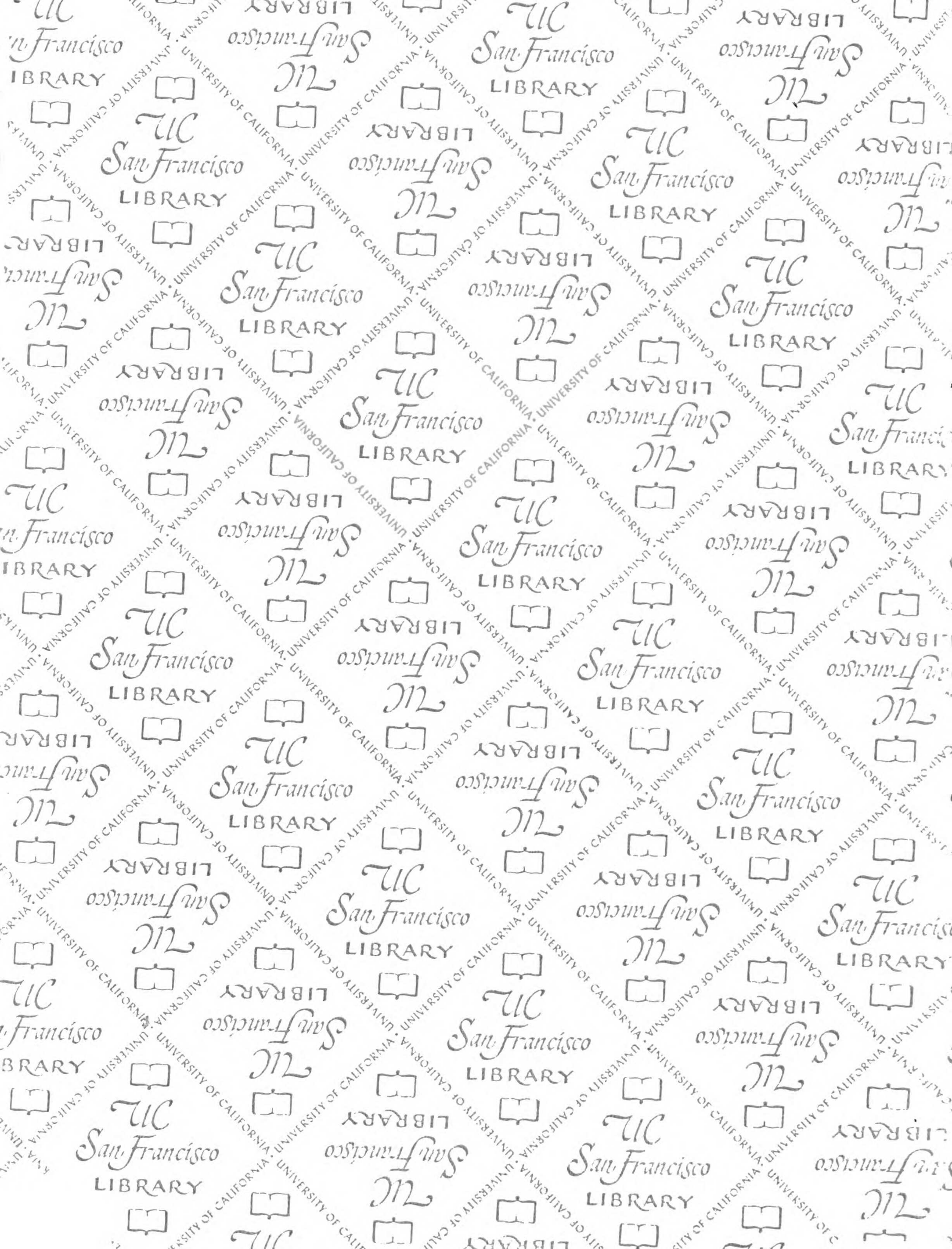
Solomon, J.R. (1981). Care and needs in a children's burn unit. _Progress in Pediatric Surgery_, _14_, 19-32.

Stoddard, F.J. (1982). Coping with pain: A developmental approach to treatment of burned children. _American Journal of Psychiatry_, _139_, 736-740.

Vaillant, G.E. (1977). _Adaptation to life_. Boston: Little, Brown.

White, R.W. (1974). Strategies of adaptation: an attempt at systematic description. In G.V. Coelho, D.A. Hamburg & J.E. Adams (Eds.), _Coping and adaptation_. New York: Basic Books.

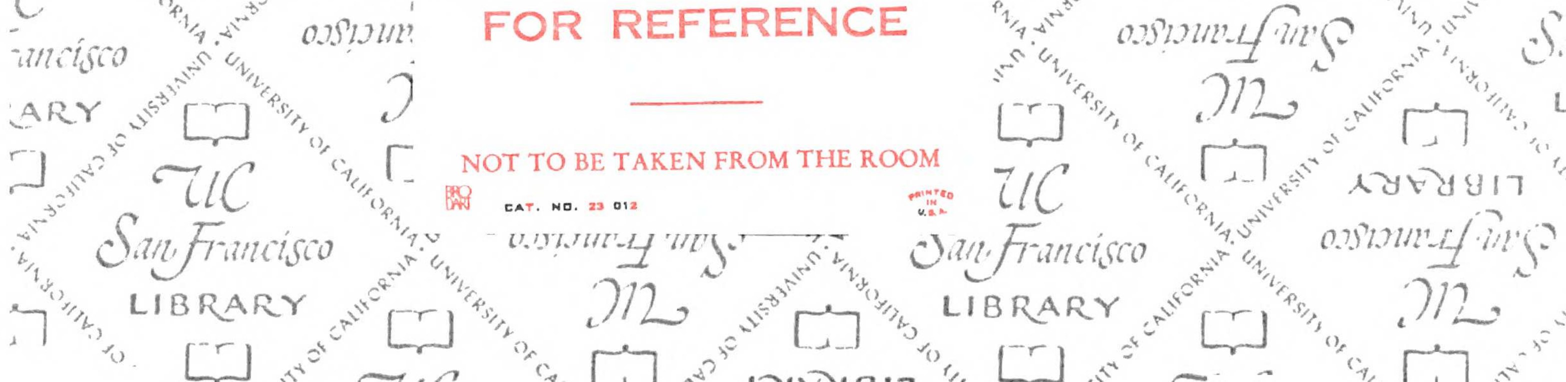
Woodward, J.M. (1959). Emotional disturbances of burned children. _British Medical Journal_, _5128_, 1009-1013.


UC
San Francisco
LIBRARY
UNIVERSITY OF CALIFORNIA

UC San Francisco LIBRARY
UNIVERSITY OF CALIFORNIA

FOR REFERENCE

NOT TO BE TAKEN FROM THE ROOM



CAT. NO. 23 012

PRINTED IN U.S.A.