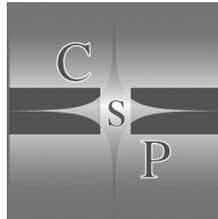


Stress and Anxiety

Stress and Anxiety
Application to Health, Work Place, Community,
and Education

Edited by

Petra Buchwald



CAMBRIDGE SCHOLARS PRESS

Stress and Anxiety: Application to Health, Work Place, Community, and Education,
edited by Petra Buchwald

This book first published 2006 by

Cambridge Scholars Press

15 Angerton Gardens, Newcastle, NE5 2JA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Copyright © 2006 by Petra Buchwald and contributors

All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system,
or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or
otherwise, without the prior permission of the copyright owner.

ISBN 1-84718-071-X

TABLE OF CONTENTS

Part 1: Stress and Anxiety – Application to Health

Stress lowers resistance and makes people more vulnerable. It can cause physical and psychological *health* resulting in a variety of serious problems. In the first part of this volume cutting edge research wants to focus on stress and emotions in the context of severe illnesses.

Part 2: Stress and Anxiety – Application to Work Place

This part of the book sheds some light on the exposure to stressful working conditions that can have a direct influence on health and well being. Various new and most interesting studies show how individual and situational factors can intervene to strengthen or weaken this influence and can lead, for example, to burnout.

Part 3: Stress and Anxiety – Application to Community

Here we focus on stress and coping within the community. This part is concerned with stressful person-environment interactions and the ways society impact upon individual and community functioning. Outstanding research that has systematically examined social issues including terrorism and violence will be part of that section.

Part 4: Stress and Anxiety – Application to Education

Stress keeps learners motivated but excessive pressure can lead to stress which undermines performance in *educational settings*. Many children or adolescents at certain times during their educational career are challenged by stress and anxiety. Sources of stress in educational settings might include school demands and frustrations due to too high expectations, negative thoughts and feelings about themselves, bullying, moving or changing institutions. The book wants to highlight in its fourth part new understandings of stress and emotion in this domain.

Introduction	ix
 Part One: Stress and Anxiety – Application to Health	
Chapter One	2
Coping, Personality and Sexual Behaviour of HIV+ Men who have Sex with Men	
Petra Buchwald and Sarah Perez	
Chapter Two	36
Social Support and Stress in Prostatectomy Patients and their Spouses	
Silke Burkert, Nina Knoll, and Oliver Gralla Charité	
Chapter Three	52
Some Influences on Psychosocial Well-Being after Treatment for Breast Cancer	
Charles S. Carver, Sarah R. Wimberly, Aisha Kazi, and Michael H. Antoni	
Chapter Four	65
Vitality and Vigor: Implications for Healthy Functioning	
Esther R. Greenglass	
Chapter Five	87
Heartbeat Perception, Self-Attention, and Emotional Experience: An Experimental Study	
Volker Hodapp, Augustin Kelava, Sonja Rohrmann, and Stephan Bongard	
Chapter Six	107
The Measurement of State and Trait Anxiety in Surgical Patients	
Heinz Walter Krohne and Stefan C. Schmukle	
Chapter Seven	120
Self-Efficacy, Aggressive Treatment and Quality of Life Among Patients with Cancer or HIV Infections	
Aleksandra Luszczynska, Sonja Bohmer, and Yagnaseni Sarkar	
Chapter Eight	138
On the Interplay of Physical Activity, Depressive Symptoms, and Self- Regulation in Cardiac Patients	
Urte Scholz, Falko F. Sniehotta, Nina Knoll, and Ralf Schwarzer	

Chapter Nine	152
Spousal Support: Three Studies on the Supportive Role of Partners in Times of Stress	
Ralf Schwarzer, Aleksandra Luszczynska, Nina Knoll, Kerstin Schröder, and Benicio Gutiérrez-Doña ⁵	

Part Two: Stress and Anxiety – Application to Work Place

Chapter Ten.....	170
Work Stress and Social Support. Does Personality Matter?	
Roman Cieslak	

Chapter Eleven.....	186
Respite From Work as a Means of Recovery from Occupational Stress and Burnout	
Dalia Etzion	

Chapter Twelve	196
Workaholism, The Work Environment, and Occupational Stress: A Biopsychosocial Perspective	
Brian M. Hughes	

Chapter Thirteen	212
Stressors among Psychiatric Nurses: The Common and the not so Common	
Sandra Ieropoli and Kathleen A Moore	

Part Three: Stress and Anxiety – Application to Community

Chapter Fourteen.....	230
Conservation of Resources Theory and Trauma: An Evaluation of New and Existing Principles	
Brian J. Hall, Susaye Rattigan, Kristen H. Walter, and Stevan E. Hobfoll	

Chapter Fifteen	251
Consequences of Terror Attacks in Madrid After 3/11	
Juan José Miguel Tobal, Antonio Cano Vindel, Héctor González Ordi, and Iciar Iruarrizaga	

Chapter Sixteen	263
Stress, Anxiety, and Coping with Terror: The Israeli Experience	
Moshe Zeidner	
 Part Four: Stress and Anxiety – Application to Education	
Chapter Seventeen	292
Perfectionism in Competitive Sport	
Mark H. Anshel	
Chapter Eighteen	307
Emotion and Coping in Young Victims of Peer-Aggression	
Simon Hunter, James M. E. Boyle, and David Warden	
Chapter Nineteen	325
The School-to-Army Transition: Interventions for High-School Students and Their Families	
Moshe Israelashvili	
Chapter Twenty	347
Verbal Insults: Experiences, Responses, and Factors Associated with Victimization in the School Setting	
Jodie Lodge and Erica Frydenberg	
Chapter Twenty-One	367
Better Take Three Than Two: The Tripartite Model of Self Construal and Exam-Related Coping	
Tobias Ringeisen and Petra Buchwald	
Chapter Twenty-Two	388
The Influence of a Vigilant Coping Style and the Experimental Induction of Vigilance by Self-Monitoring on Psychophysiological Stress Responses	
Sonja Rohrmann and Augustin Kelava	
Chapter Twenty-Three	409
Anxiety and Cognitive Functioning in Primary and High School Students	
Eleni Vassilaki	

INTRODUCTION

**Petra Buchwald,
Heinrich Heine-University of Duesseldorf**

It gives me a great deal of pleasure to present the volume *Stress and Anxiety – Application to Health, Work Place, Community, and Education*. We intended to publish research produced by members of the Stress and Anxiety Research Society (STAR) to communicate, develop and enhance the understandings of the experiences and consequences of stress, coping, and anxiety.

The book reflects the broad range and high quality of the STAR society and consists of more than twenty contributions, covering cutting-edge developments in both experimental and theoretical aspects. The book comprises four major areas in the context of stress that is health, job stress, community, and stress and anxiety in educational settings. The sections serve as selection aids for the reader. Also, organizing the chapters in this way emphasizes the evolving nature of research in this field.

Nine chapters form **part 1** of the volume discuss issues of stress and health. It is a major section of the book as research now indicates that between 70 and 80 percent of all disease is associated with stress. Stress is known to contribute to heart disease, cancer, causes hypertension, and impairs the immune system. Stress has physical and emotional effects and mostly creates negative feelings of anxiety and depression, which in turn can lead to significant health problems. As psychology most recently began to focus on mental wellness rather than illness (Seligman, 2002), many of the chapters in part 1 underscore the importance of positive individual traits, positive resources for improving well-being, happiness and healthy functioning.

Chapter one, “Coping, Personality and Sexual Behavior of HIV+ Men Who Have Sex with Men,” by Buchwald and Perez deepens the understanding of the unique challenges in coping with stress faced by HIV+ men who have sex with men. Employing COR theory (Hobfoll, 1998), the authors examine the impact of loss in multiple domains often faced by members of this community, also highlighting the unique intersections of gender, sexuality, and health status on this coping process. Finally, this chapter summarizes recent empirical research

in the area of stress and coping within this understudied and underserved population.

Two chapters offer a thorough discussion of positive and negative effects of support transactions between spouses. Burkert, Knoll and Gralla's chapter titled "Social Support and Stress in Prostatectomy Patients and their Spouses" (see Chapter 2) emphasize the importance of the *match/mismatch* of mobilized and enacted social support and conclude that received or provided social support in times of stress may not be consistently related to the recipients' well-being. Schwarzer, Luszczynska, Knoll, Schröder, and Gutiérrez-Doña's chapter titled "Spousal Support: Three Studies on the Supportive Role of Partners in Times of Stress" (see Chapter 9) provides further explanation for understanding the transaction of social support as a dyadic rather than an individualistic act and takes gender differences as well as time-lagged effects into account.

Carver, Wimberly, Kazi, and Antoni's "Some Influences on Psychosocial Well-Being After Treatment for Breast Cancer" (Chapter 3 in part 1) reports on findings from their research on quality of life among medical patients. They introduce a conceptual model that accounts for the internal dynamics of life and individual differences, which reflect the nature of human resilience. In this framework Carver and his colleagues developed a cognitive-behavioral stress management training aimed at fostering patients' life-engagement.

Greenglass' "Vitality and Vigor: Implications for Healthy Functioning" follows next (see Chapter 4) and offers the reader an extensive and well-presented synthesis of the literature on positive moods and their precursors. Greenglass developed a theoretical model that links social support, proactive coping, vitality, and positive and negative outcomes. The chapter provides examples of how this model can be applied to different contexts, including the occupational stress field, and the physical rehabilitation field.

The chapters that follows is by Hodapp, Kelava, Rohrmann, and Bongard, titled "Heartbeat Perception, Self-Attention, and Emotional Experience: An Experimental Study" (see Chapter 5). The thrust of this research is to broaden understanding of the relationship between perception of autonomic activity and emotional experience. In an experimental study Hodapp and his colleagues examined the interaction between good and poor heartbeat perceivers and specific stress conditions relating to anxiety. The work connects its findings to interoception as a highly relevant psychophysiological variable which deserves more attention in stress and anxiety research.

Krohne and Schmukle's "The Measurement of State and Trait Anxiety in Surgical Patients" (see Chapter 6) continues discussion of perioperative surgery-related anxiety through offering a comprehensive overview of research pertaining to the resulting inventory State-Trait Operation Anxiety (STOA). The text reports evidence of the psychometric quality of the instrument, which

assesses, different from other anxiety scales, area-specific anxiety, contains only "anxiety-positive" items, and differentiates between a cognitive and an affective-somatic state-anxiety component.

The next chapter is by Luszczynska, Boehmer and Sarkar, titled "Self-Efficacy, Aggressive Treatment and Quality of Life Among Patients with Cancer or HIV Infections" (see Chapter 7). The authors account on findings from their research that is concentrated on identifying psychosocial variables that contributes to the adaptation to cancer or HIV and raise patients' health-related quality of life. As with most of the previous chapters, this work reveals again positive personal resources (self-efficacy) that promote the adaptation to stress and better quality of life among patients with chronic diseases.

Chapter 8, Scholz, Sniehotta, Knoll, and Schwarzer's "On the Interplay of Physical Activity, Depressive Symptoms, and Self-Regulation in Cardiac Patients," focuses on two mostly interrelated risk factors for Coronary Heart Disease: physical inactivity and depressive symptoms. Although depressive symptoms and physical exercise were not related in this study, their research underscores the importance of a self-regulatory intervention including action planning, coping planning, and feedback of plans in fostering maintenance of physical activity levels after cardiac rehabilitation and lowering depressive symptoms.

Part 2 of the book provides a more eclectic review of what is currently known about the costs of occupational stress. Pressure is part and parcel of all work but excessive pressure can lead to stress, which undermines performance and can make people ill. In four chapters, this section of the book covers the role of personality in the occupational context, a biopsychosocial approach to assessment and formulation, and the importance of respite from work as a means of recovery from burnout.

The first chapter in this section is Chapter 10 written by Cieslak, titled "Work Stress and Social Support. Does Personality Matter?" In order to further disentangle the complex relation of social support, work stress, and well-being, Cieslak applied the Demands-Control-Support model. Analyzing the role of personality, the author argues, possesses relevance for evidence-based modifications in this most frequently cited work-related stress model.

Chapter 11, by Etzion titled "Respite from Work as Means of Recovery from Occupational Stress and Burnout," aims to give more insight in the effect of respite from work experienced by people upon returning to work. It is clear from this chapter that the question of how the kind of respite is related to specific characteristics of working people is still unanswered. Still, Etzion offers a more than interesting list of variables relating to respite that emerged from her comprehensive review of empirical studies.

Hughes's "Workaholism, the Work Environment, and Occupational Stress: A Biopsychosocial Perspective" (Chapter 12 in part 2) presents to the reader an extensive and very readable synthesis of the literature on workaholism and work stress. Recommendations are offered in the area of conceptual and methodological refinement. While considering workaholism from a biopsychosocial perspective the author sparks an interesting discussion of the causes, influences, and consequences of workaholism in relation to personality, environmental factors, coping, stress, and well-being.

The last chapter in this section is Chapter 13 by Ieropoli and Moore titled "Stressors among Psychiatric Nurses: The common and the not so common." With their work the authors seek to understand the ways differences in the job-related demands of special mental health nurses result in differences in burnout levels. Their work exposes the implication and value of this research for those involved in making policy and promoting both staff and patient wellbeing.

The **third part** of the volume contains work that focuses on issues of stress, anxiety, and coping in the community and, in particular, of stress related to terror attacks. The threat of terrorist attacks leaves people in an insecure position and feeling anxious about the future. Research presented in this part of the book helps to identify components of resilience to enable people in managing major stressors and to promote positive adaptation. How an individual's adaptation to stressful events occurs in the context of specific community settings can be explained within the framework of the Conservation of Resources theory (COR theory). Hall, Rattigan, Walter and Hobfoll's "Conservation of Resources Theory and Trauma: An Evaluation of New and Existing Principles" is Chapter 14 in the third part and focuses on the principals of COR theory in detail. The authors provide new theoretical explanations for understanding how resource loss impacts both individuals and the larger community. The area of posttraumatic growth and related paradoxical effects are also thoroughly discussed in this chapter by implying that it makes a difference whether resource gains are related or unrelated to traumatic events and that tangible resources, rather than feelings of mastery, may assist individuals' coping efforts in times of crises.

Miguel Tobal, Cano Vindel, González Ordi, and Iruarrizaga's Chapter 15 titled "Consequences of Terror Attacks in Madrid after 3/11" follows and reports on findings from their research that is concentrated on traumatic effects of terrorism. Their research offers unique information of great interest about the vulnerability and resilience gained from a representative sample of Madrid's inhabitants. As with the previous chapter, this work reveals that the traumatic effects are not limited to the direct victims but extend like a shock wave reaching families, emergency, and other personnel, communities, and even regions far from the affected site.

Chapter 16 by Zeidner titled “Stress, Anxiety, and Coping with Terror: The Israeli Experience” extends the topic by looking at political violence in the Israeli population, which is threatened by an unbearably prolonged series of terror attacks constituting a community crisis. Zeidner does not only provide a comprehensive and instructive conceptual overview of terror, its psychological antecedents and consequences, but also reports on findings from his research that investigated the coping process during a period of political violence of the El-Aqsa Intifada. Again, in line with the previous chapters of part 3, terror-related stress, on a community level, lead to negative emotional reactions even among those not directly impacted by terror attack. Moreover, coping during an ongoing disaster situation seems to differ from that reported in reaction to more normal events.

Seven chapters form the **fourth** and last **part** of the book refer to stress and anxiety in educational settings. All seven chapters develop understandings of the sources, experiences, and consequences of stress, anxiety, and coping in education.

Perfectionism as a topic of study in educational settings has only recently received more attention and seems to be associated with coping and affect. Anshel’s Chapter 17 titled “Perfectionism in Competitive Sport” points out that on the one hand extreme perfectionism may create intense stress due to harsh self-criticism, difficulty in feeling gratification from performance improvement, and meeting realistic expectations, and on the other hand include positive forms such as setting and attempting to achieve high personal standards, self-confidence, and success. The author offers an interesting discussion of the dimensions of perfectionism with relevance to competitive sport and also makes clear that perfectionism is a promising area of future inquiry in other educational contexts.

Chapter 18 is by Hunter, Boyle, and Warden titled “Emotion and Coping in Young Victims of Peer-Aggressions.” Hunter and his colleagues, in offering a rationale for teaching young people resilience and practical coping skills to deal with peer-aggression, take the reader through a concise development of the field focusing on understanding how young people experience stress by studying their individual coping, rather than coping scale-based strategies. Further, the authors present their own revealing study and it is clear from their findings that research that seeks to understand stress, coping, and emotions in childhood cannot be abandoned.

Israelashvili’s “The School-to-Army Transition: Intervention for High-School Students and their Families” (Chapter 19) continues discussion of students coping through offering an interesting insight in theoretical models of coping and adjustment to transition. By introducing a Stress Inoculation Training which supports high-school graduates’ transition to the Israeli Defense

Forces the author offers valuable advice not only to counselors and educators, but also to parents.

The following Chapter 20 by Lodge and Frydenberg titled “Verbal Insults: Experiences, Responses, and Factors Associated with Victimization in the School Setting” highlights the cumbering experience of bullying in school-children with their quantitative and qualitative investigation of verbal insults. The authors enliven the discussion of tailored victim-interventions expounding useful strategies for educators and administrators interested in improving the school environment for teachers and students alike.

Ringeisen and Buchwald’s “Better take Three than Two: The Tripartite Model of Self Construal and Exam-Related Coping” is Chapter 21 in part 4. This chapter places a strong emphasis on the role of the self as being separate from or connected with others in stressful situations and discusses the tripartite model of self construal in the context of individual and communal coping. The authors report on interesting findings from their research that confirms differential promotion of coping styles across the three self construals and provide explanations for understanding major motives for social interaction with others in stressful learning situations.

Chapter 22 is written by Rohrmann and Kevala and titled “The Influence of a Vigilant Coping Style and the Experimental Induction of Vigilance by Self-Monitoring on Psychophysiological Stress Responses.” The authors report on findings from an experimental study. By using the public speaking paradigm as stress induction they found that a vigilant coping style increases subjective and physiological stress responses. Their findings support the relevance of self-awareness by showing that an increase in self-monitoring causes discrepancies between real and ideal self-aspects combined with anxiety – a finding that might in part be an explanation for a result in Vassilaki’s study (see Chapter 23) where metacognitive cueing influenced performance negatively by increasing the anxiety level. As public speaking is common in many educational settings, this study offers practical implications for those who work with learners.

The last Chapter 23 by Vassilaki is titled “Anxiety and Cognitive Functioning in Primary and High School Students” offers expanded coverage of the inverse relationship between anxiety and performance as well as how learning can be distracted through worry, emotionality, and interference. Vassilika introduces three projects which all prove the continuing destructive effect of anxiety on cognitive functioning. The author argues that educators who understand the relationship of stress, anxiety, coping, and performance can assist students to effectively deal with cognitive tasks.

Anxiety, stress, and coping are important to understand if we want to have meaningful descriptions of individuals. These variables are discussed as relevant to health, work place, community, and education and all contributions in this

book demonstrate the development of research in this field and how important a continuing investigation and refinement in this complex area is. We wish to encourage academic researchers, students, service providers, policy makers, community members, and anyone else involved in treating stress to join with us in understanding individuals in the context of stress, coping, and emotions and how this effects their well-being, functioning and resilience. Last but not least, we thank the chapter authors of *Stress and Anxiety – Application to Health, Work Place, Community, and Education* for joining with us in this effort.

Part One:
Stress and Anxiety –
Application to Health

CHAPTER ONE

COPING, PERSONALITY AND SEXUAL BEHAVIOUR OF HIV+ MEN WHO HAVE SEX WITH MEN

Petra Buchwald¹ and Sara Perez²

¹Heinrich Heine-University of Duesseldorf, Germany

²Kent State University, USA

Coping with stress for HIV+ men who have sex with men (MSM) can be extraordinarily complex due to the interaction of societal status, sexual orientation, and other issues of social identity, such as culture and socio-economic status. Following the idea that stress is not only individually appraised but also strongly related to the greater social context in which we exist, stress and coping of HIV+ MSM are analyzed in the framework of the Conservation of Resources (COR) theory (Hobfoll, 1988, 1989, 1998). COR theory offers a framework for analyzing stress and coping strategies by focusing on the resources of individuals and communities. COR theory provides a theoretical model in which resource loss, maintaining existing resources, and gaining resources necessary for engaging in healthy behaviors can be examined. This chapter aims at introducing COR theory as a model that responds to the need to incorporate more fully both the objective and perceived environment into the process of coping with stress.

In the application of COR theory to this marginalized group of HIV+ MSM, new insights into the interplay of stress, life conditions, sexual behavior, personality, and the coping processes will be gained. To begin, we will describe the life situation of HIV+ MSM. We will show how this group, socialized and stigmatized by their sexual orientation, as well as by their HIV infection, contributes to the diversity of our society. Thereafter a conceptual model based on COR theory, is developed, incorporating personal and structural resources, as well as stressors of HIV+ MSM. Drawing on our own research, conducted within the framework of COR theory, coping of HIV+ MSM is considered and new contributions to our understanding about stress and coping in this group are discussed. Finally, we point out future directions for enhancing stress prevention

and coping intervention for HIV+ MSM with respect to praxis and research issues.

At first we would like to invite the readers to go on a journey into a multicultural society where social backgrounds are extremely diverse and would like to draw your attention to socially constructed concepts of gender, sexual orientation, and disability, which characterize the diversity of our society. Until recently, most evidence-based psychological research is conducted primarily with samples of young, wealthy, attractive and well educated individuals (Thoits, 1995). This strongly limits our insight into how people from diverse backgrounds cope with stress as well as greatly limiting our ability to intervene with members of these populations. Research in the field of stress and coping must broaden its view in order to gain a better understanding by including the pluralistic nature of our society.

Therefore, we focus on a disadvantaged group, HIV positive men who have sex with men (short, HIV+ MSM). This is a group that is clearly marginalized; they are primarily excluded from the dominant groups of our society. On average, they tend to have lower social status, less power, and less privilege, all of which impact the ways in which they encounter and cope with stress.

HIV+MSM: Experience of stigmatization and marginalization

At present, people living with HIV/AIDS have substantially benefited from advances in medical science which allow them to live more than 20 years with their illness, as is often common for other patients suffering from chronic disease. As a result, AIDS is now widely accepted as a chronic illness (Siegel & Lekas, 2002) due to the successful new antiretroviral therapy (ART). However, up to now, there is no cure and no vaccination to prevent infection and AIDS is the leading cause of death globally for adults aged 15-59 (WHO, 2003). Thus, the knowledge of one's HIV seropositive status often produces chronic and extreme stress and is also associated with strong psychological reactions. These often include anxiety, anger, as well as a sense of being overwhelmed (Elliot, 1998, Lesermann, 2004). This affects not just the individual but those in their social network as well. Therefore, it is of great import to learn more about how HIV+ MSM cope with their illness. How this population copes with stress impacts not only their quality of life, but also how well they are able to manage their illness, as well as their emotional experience (Moskowitz & Wrubel, 2005).

Stigmatization and marginalization are two major aspects of the broader life context in which HIV+ MSM often live their lives. Stigma has been associated with HIV/AIDS since the early 1980s when the public first became aware of this disease afflicting MSM and other risk groups (Gilman, 1998). Feelings of per-

sonal guilt as well as society's prejudice both contribute to this process of stigmatization (Herek, Capitanio & Widaman, 2002).

Following Emlert (2005), the stigma of HIV+ MSM is "enacted," as well as "felt." This stigma is enacted through experiences of discrimination, prejudice, and blame for violating sexual norms. The stigma is experienced emotionally through feelings of shame and guilt. It is not unusual for MSM to blame themselves for their infection and to often believe they are being punished for their sexual orientation and behavior. These feelings of guilt can be intensified by society's prejudice and ignorance regarding HIV/AIDS. Similar to the feelings that HIV+MSM often harbor themselves, society members often believe that HIV+ persons are responsible for their infection and are to be blamed for the spread of AIDS. Fear of being blamed for violating sexual norms (i.e., heterosexual monogamy) is also enhanced by societies' leaders (e.g., from church, politics) who state publicly that HIV+ persons deserve their fate (Fullilove & Fullilove, 1999; Morales & Fullilove, 1992). Therefore, as HIV+ MSM interact with the larger society, their experiences are often characterized by the double stigma of their HIV status as well as their sexual orientation (Fortenberry et al., 2002).

HIV+ MSM may experience stigmatization and marginalization at the workplace, in the gay community, in the family, and even within close friendships. Gay employees may be confronted with HIV-related stigma from their colleagues and supervisors, and sometimes are even fired due to their HIV status (Emlert, 2005). Within the gay community, stigmata are expressed to HIV+ MSM by a resistance to relate sexually, romantically or even in non-romantic friendships. (Berger & O'Brien, 1998; Blackstone, 2005).

Uninfected gays feel that sex with HIV+ MSM is dangerous, saying that they are not willing to have sex with an HIV+ nor have an HIV+ person as a romantic partner. Not surprisingly, many HIV+ individuals report being treated unfairly and believe that they are subject to rumors and gossip and often feel they must hide their status in order to find acceptance and support from their families and friends (e.g., Johnston, Stall, & Smith, 1995). The overwhelming majority of HIV+ MSM report believing that sexual partners will reject them if their HIV status is known.

HIV+ MSM: Efforts to cope

The emergence of "POZ Parties" demonstrates evidence of the growing strength of the sub-culture that provides social niches which help by unburdening HIV+ MSM from feelings of guilt and, in parts, from stigmatization. POZ parties are exclusively for HIV+ MSM to meet other HIV+ men for sex and further demonstrate the extraordinary efforts to cope with HIV-related limita-

tions and stress. POZ parties first emerged during the mid 1990s in New York City, initially as an informal social experience for HIV+ gay men. They are held several times a month; with information provided on websites and emailed to several thousands people (Dickinson, 2005).

This concept has also been spreading to many other major cities across the Western world. Dickinson (2005) surveyed 115 MSM and found that those attending POZ parties in New York City were mainly white, over the age of 30, and had lived with their HIV infection for as little as 2 months to as long as 20 years. The two most popular reasons for attending POZ parties were a desire to have unprotected sex and to be able to cope with stress by avoiding the subject of HIV status with a new partner.

The penchant for unprotected sex as evidence by the concept of “barebacking,” or intentional unsafe sex, is a sometimes common practice of MSM (Halkitis, Parsons, & Wilton, 2003). However, with the threat of HIV/AIDS, the gay community has been further discussing the morality of this practice. One factor in this discussion is ‘gifting’, or the idea that some HIV+ men may want to intentionally infect other men with HIV, and use barebacking as a means. For example, Mansergh et al. (2002) found that HIV-infected MSM are more likely to engage in barebacking than HIV-negative and HIV-untested MSM (Halkitis, Parsons, & Wilton, 2003). Halkitis (2005) provided evidence in a randomized controlled intervention study of 1168 HIV+ MSM from New York City and San Francisco that barebackers had higher rates of unprotected intercourse with all partners, regardless of their partners’ HIV status. Thus, barebacking, with the intention of gifting, could be potentially interpreted as an aggressive or antisocial way of coping with HIV+ status by ‘attacking’ others with the virus. In contrast, however, Elford, Bolding, and Sherr (2003) found that only 0.6% of participants (3 of 481) said they had intentionally sought out unprotected anal intercourse with an HIV *negative* man, suggesting there may be little evidence of gifting. Further, Dickinson (2005) found that one in eight men reported that not infecting someone else was the main reason for joining a POZ Party. Clearly, further research is needed.

Taken together, the broader life conditions of HIV+ MSM are often dominated by the double stigma of their sexual orientation and disease status which interact to strongly impact their sexual life as well as overall behavior. Marginalization, sexual behavior, and lifestyle preferences, along with emotional and social stress can be viewed as dimensions of a sub-cultural script. The gay community, perhaps more than others, may use sex to relieve stress and strain. With the advent of HIV, however, a major resource to cope with stress has been greatly complicated. The relationships between coping and HIV-related sexual risks, however, are not yet clearly understood (Barrett, Bolan, Joy, Counts, & Harrison, 1995; Folkman, Chesney, Pollack, & Phillips, 1992).

Against this background, numerous resources are required to ensure a state of physical and psychological well-being. In order to identify key resources relevant to this population, we employ the conservation of resources theory (COR theory, Hobfoll, 1998). COR theory enables us to broaden our understanding of stress in marginalized groups by examining the fit of personal, social, economic, as well as environmental resources in order to determine the impact of stress and resultant efforts to cope. In this framework, efforts to cope with stress are viewed as reflections of cultural processes and delineated by cultural scripts and formulations. Moreover, stress experiences are primarily situated in social context or involving social consequences (Hobfoll, 1998).

HIV+ MSM and protection of resources: Introduction of COR theory

COR theory (Hobfoll, 1998) was developed in an effort to incorporate both the *objective* and *perceived* environment into the process of understanding what events are experienced as stressful as well as efforts to cope with stress. Transactional models of stress and coping (e.g. Lazarus, 1966) define stress as the perception of imbalance between coping capacity and the environment, highlighting the importance of individual difference factors. In contrast, COR emphasizes the environment in the stress and coping process foremost and person-centered variables secondarily. Hobfoll (1998) proposes that perceptions of most major stressful events are universally held. For example, contraction of HIV is an event that is universally perceived as stressful. This is not to suggest, however, that perceptions are unimportant in coping with stressful events. Indeed, perceptions can determine the strategies that are employed when attempting to offset the losses associated with these events.

COR theory argues, however, that resources are the key components to determining individuals' appraisals of events as stressful and resources define how individuals are able to cope with stressful situations. As a result of the strong association to broader life conditions, COR theory (see Fig. 1-1) can augment our understanding of stress and coping, particularly in a complex society in which members have differential access to resources. In contrast to other stress theories that concentrate on personal perceptions, COR theory does not ignore the importance of broader life conditions that are typically associated with an inequality of resources. Thus, COR theory challenges the assumption that all members of society have an equal access to resources which allow for successful coping with stressful situations. Additionally, this theory underscores the widespread societal inequalities that serve to preserve the limitations that society places on those of disadvantaged status.

COR theory also says that stress and coping are embedded in a societal context specified by socially constructed concepts as gender, age, ethnicity, social class, sexual orientation, and the intersections of these social identities. COR theory proposes that individuals must always be viewed within a multi-layered social context and that humans act to protect and preserve the self and the attachments that establish self in social context relationship (Hobfoll, 1998).

Theoretical concepts of COR theory

COR theory's primary focus is the reaction toward environmental events that impact resources, particularly resource loss. Loss or threat of loss of resources is particularly stressful because individuals are faced with diminished coping capabilities in handling future challenges. Psychological distress is thus defined as a reaction to the environment in which there is a) threat of net loss of resources b) actual net loss of resources, or c) lack of resource gain following the investment of resources. This latter point is deemed as stressful due to the failure to increase coping capabilities following the expenditure of resources. Because individuals have invested resources without an increase in return, this lack of gain, in essence, equates to resource loss. In each case, resources are the single unit necessary for conceptualizing stress and coping.

Resources are defined as objects, personal characteristics, conditions, or energies. Object resources are valued because of some aspect of their physical nature or because of secondary status based on their rarity and expense. A small, economy car has value because it provides transportation; a Porsche has increased value because it also indicates status. Conditions are resources that are valued and sought after. Examples include such states as marriage, employment, and parenthood. It is suggested, however, that conditions may need to be qualified in order to determine their stress resistance value. For example, a bad marriage would not be viewed as an asset for stress resistance but a positive parenthood experience may aid in stress resistance (Hobfoll, 1998).

Personal characteristics are resources that aid in general stress resistance. Personally held skills are an example of this resource, especially as these skills relate to acquiring or protecting valued resources. Mastery and optimism are ways of viewing the world that can impact people's resistance to stress. Personal skills can be potent resources as much as they allow for a feeling of positive sense of self and the idea that stressful situations can be effectively handled (Hobfoll, 1998). Energies, the final resource type, are intrinsically valued in that they aid in the acquisition of other resources. Examples of these include time, money, and knowledge. In addition to resources being broadly defined, COR theory proposes that resources are interrelated and changes in one or more types of resources can affect the availability of other resources. In summary, COR

theory defines resources broadly, that resources are interrelated, and that resources are the key to understanding stress and coping.

It has been argued that change, in general, is stressful. COR theory, however, predicts that positive and negative changes in resources will have markedly differential effects, and this supposition has been empirically supported (see Thoits, 1983, for a review). COR theory proposes that resource losses are psychologically stressful, whereas resource gains buffer against the effects of resource loss. Thus, loss and gain have discrepant outcomes for individuals. It is important to note that COR theory proposes that resource loss will be more salient than resource gain, as loss is associated with psychological stress and gain with eustress, or a state of well-being.

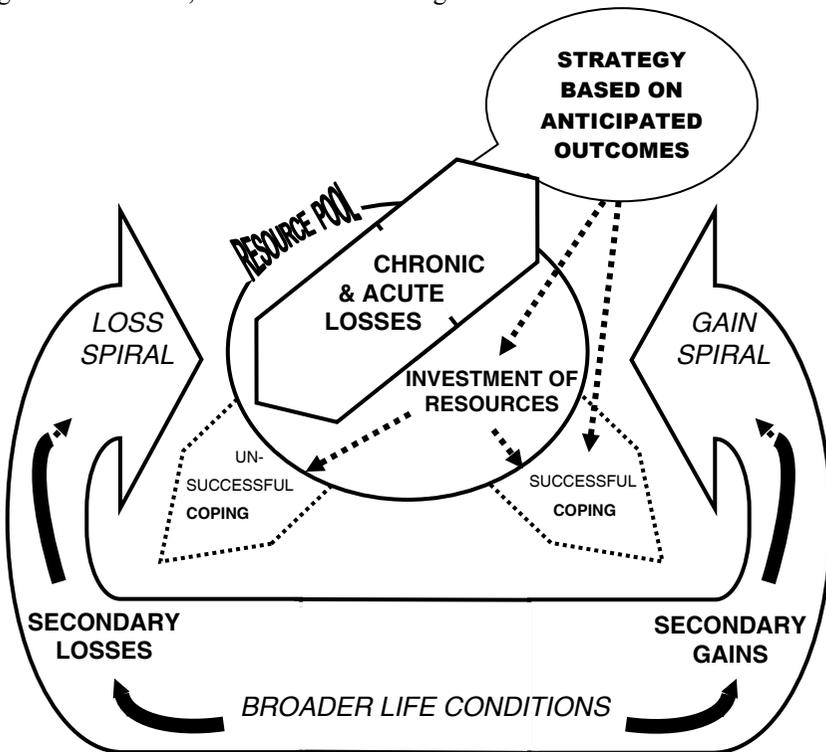


Figure 1-1. Processes of resources conservation (adapted from Hobfoll, 2001)

Note. Action path



Resource path



Further, COR theory proposes that those already lacking in resources will be more vulnerable to the experience of loss spirals and those with ample resources will have more opportunity for resource gain. Loss spirals, as Hobfoll (1998) explains, occur when resources are expended, and are therefore not available to cope with future loss threats, thus potentially leading to further loss. In other words, COR theory suggests that initial loss leaves individuals, groups, and communities more vulnerable to the negative impact of ongoing resource challenges. Those endowed with greater resources will, of course, be more resilient, but ongoing resource loss will challenge even richly resource-endowed individuals or groups. Thus, loss spirals are a powerful force that is evident in individuals and communities already lacking resources.

As can be seen in Fig. 1-1, the processes of resource conservation are a product of both broader life circumstances as well as ongoing as well as current resource loss events. Conditions of resource loss tend to lead to further resource loss, sometimes engendering a cyclical process. When losses occur, individuals apply resource conservation strategies, whereby they utilize resources available to them in order to adapt as successfully as possible. Successful adaptation generates new resources which, in turn, replenish people's resource pools and offset the conditions that produce acute and chronic resource loss. Those with less coping capabilities (i.e. less resources), however, will have to employ riskier resource protection and gain strategies, which are less likely to yield the hoped for results (Hobfoll, 1998). Unsuccessful strategy employment results in both psychological distress as well as material loss, as in the diminishment of the resources invested. Such unsuccessful loss prevention strategies further generates secondary resource loss, resulting in loss spirals.

COR theory: Empirical support

COR theory has received wide empirical support. The studies discussed below cut across several domains and provide broad evidence for the theory's principles as well as for its application to various groups (see Hobfoll and Schumm, 2001, for a review). COR theory proposes that resource loss is more salient than resource gain, which has been demonstrated in a variety of studies. Ito, Larsen, Smith, and Cacioppo (1998) showed that loss-related stimuli have a greater impact on processing efforts in the brain. Further, Gilbert, Pinel, Wilson, Blumberg, and Wheatley (1998) provide evidence with their work on *immune neglect* that the impact of loss occurs on a biological level.

Additionally, psychosocial studies have demonstrated that resource loss is a stronger predictor of negative psychological reactions such as anger, anxiety, and depression, when compared to resource gain (e.g. Hobfoll & Lilly, 1993; Wells, Hobfoll, & Lavin, 1997, 1999). For example, Lane and Hobfoll (1992)

found that resource loss, but not resource gain, was predictive of outwardly expressed anger in a longitudinal study of chronic obstructive-pulmonary disease patients.

Further, COR theory proposes that loss spirals tend to occur among individuals already lacking adequate resources or when initial resource loss renders resource reserves inadequate to meet subsequent and ongoing demands. King, King, Foy, Keane, and Fairbank (1999) provide persuasive evidence for the negative impact of long-term loss spirals in a large sample of Vietnam veterans. In this study, lifelong loss spirals in combination with war-zone stressors exacerbated symptoms of PTSD. Similar findings were obtained with a sample of treatment seeking drug dependent women who experienced both childhood physical and sexual abuse as well as intimate partner violence (Schumm, Hobfoll, & Keogh 2004). In this study, resource loss in adulthood partially mediated the relationship between childhood adversity and current symptoms of PTSD.

COR theory further proposes that resources must be invested in order to gain resources as well as to prevent resource loss. Gain cycles are proposed to impact stress-related responses in that acquired resource reserves can serve to offset resource loss. Self-efficacy is a personal resource that has been shown to offset the impact of resource loss. Self-efficacy (Bandura, 1997), defined as the belief in our ability to meet the demands of in the context of a specific challenge, has been found to offset loss associated with events ranging from minor hassles to major traumatic events. Additionally, dispositional optimism (Carver & Scheier, 1998, see Chapt. 3) has been shown to buffer resource loss as well. Further, social support, the exchange of supportive interactions as well as the perception of the receipt of support (Sarason, Sarason, & Shearin, 1986; Vaux, 1988), has been found to have a positive effect on mental and physical health outcomes (House, Landis, & Umberson, 1988; Schwarzer & Leppin, 1988). Finally, studies by Billings, Folkman, Acree, and Moskowitz (2000) also provide empirical evidence for the importance of resource gain in the context of loss. They found that AIDS caretakers who experienced severe resource loss cycles were found to be more psychologically resilient to the extent that they experienced resource gains with these same loved ones.

COR Theory: Application to HIV+ MSM

Thus far, we have discussed the issues unique to HIV+ MSM as well as the basic concepts underlying COR theory, and reviewed the empirical support it has received. Next, we apply COR theory to HIV+ MSM by conceptualizing HIV+ status as a loss of resources (loss of physical health), how individual members of this group are impacted by resources loss, as well as the community as a whole. Then we will outline some of the resources commonly used to cope

with resources loss in this community. Finally, we will present findings from our own research with this community based upon the theoretical underpinnings of COR theory.

Within the framework of COR theory, illness is conceptualized as a severe stressor. Individuals generally strive to obtain, retain, and protect what they value. Infection with HIV produces extreme stress by attacking the most basic values including life and vitality. The infection often comes with no warning signs and therefore, until HIV status is known, resource deployment strategies have been neither developed nor practiced. When HIV status does become known, this knowledge often leaves a powerful mental image that can be evoked by cues associated with the event (Kelly et al., 1998). Accordingly, Vosvick, Ranucci, Chng, and Stephen (2005) found individuals living with HIV/AIDS often encounter more stressors than the general population because they must cope with the additional stress associated with HIV-related symptoms as well as the stigma of their illness.

Extreme stress associated with HIV infection results in a rapid loss of resources. As reviewed above, COR theory outlines four general categories of resources: objects, conditions, energies and personal resources. Each of these resource categories aid coping efforts. For HIV+ MSM, we begin by considering *object resources* important to this group, such as home, car, and clothing. These resources provide the basis for coping; transportation is needed to access medical treatment; a shared home can foster social joining with a partner.

Condition resources facilitate acquisition or protection of valued resources. Conditions critical for the current sample includes sexual orientation, positive self image (lack of stigmatization), social network, stable employment, and health insurance. For example, it is not uncommon for HIV+ MSM to face employment discrimination despite the illegality of depriving individuals infected with HIV of employment opportunities. Indeed, the extent to which people with HIV infection change their insurance and employment status is tremendous. Data from the AIDS Cost and Services Utilization Survey in 1991 conducted in the U.S. highlights this trend. One thousand nine hundred and forty nine infected adults were followed over an 18-month period. At the beginning of this period, 33% of respondents had private insurance; 40% had public coverage (i.e., Medicaid, Medicare) and 27% had no insurance. Among the subgroup with "full-blown" AIDS, corresponding figures were 32%, 54%, and 14%. Overall, unemployment was high as 65% of the entire sample was unemployed with 82% of the AIDS subgroup reporting unemployment status. Over the 18-month follow-up period, 23% of respondents reported a change in insurance status and 27% reported a change in employment status as well (Fleishman, 1998).

As demonstrated above and in accordance with COR theory, the possession of major resources are typically linked. The same is true for the absence of

given resources (Hobfoll, 1998). As described by Fleishman (1998) the lack of a job is likely to be associated with lack of health insurance. Further, loss of employment leads to loss of a stable income which is then associated with the lack of physical object resources. Hence, the group of HIV+ MSM can be cited as a prominent example for the loss of resource caravans, i.e., aggregated resources in both an immediate and a life-span sense (Hobfoll, 1998).

Further, critical social conditions for HIV+ MSM are positive self-image (lack of stigmatization) and heterosexism which both impact resource loss and gain. The stigmatized individual is invalidated in both terms of the self and the resources associated with the self. Johnston et al. (1995) confirmed this basic tenet of COR theory with a group of gay men ($n = 81$) and intravenous drug users ($n = 88$) diagnosed with AIDS in San Francisco. Both groups were interviewed regarding their use of friends and family to meet their care needs. The data showed that gay men relied on friends for care more so than drug users, although neither group relied primarily on their families for care. One of the primary barriers to care was the social stigma of AIDS as well as the indirect effect that the AIDS epidemic has had on these sub-populations, leaving surviving members of these groups emotionally exhausted and sometimes not capable to provide adequate help. Lastly, some respondents chose to cut themselves off from supportive relationships because they perceive themselves as “destructive” due to their HIV diagnosis.

COR theory and HIV+ MSM: Impact of social support

HIV-related stigmatization is a process that reinforces existing social inequalities based on risk group membership and sexual orientation. Sexual orientation may be associated with limited acquisition of resources due to low power and privilege for homo- and bisexual men and women in our society. However, sexual orientation can also be associated with strong peer groups such as the gay community, which can provide access to needed resources and may constitute a sub-cultural strength as the emergence of POZ parties confirm. Mosack et al. (2005) confirms the relevance of sexual orientation as a social moderator variable. Their randomized controlled trial for HIV-infected persons included 1918 MSM, 827 non-MSM men, and 978 women. For MSM, coping, social support, and depression independently explained symptom reports, for non-MSM men and women, only depression significantly contributed to the number of symptom reports. This again shows how different the social life conditions under which HIV+ MSM cope with stress and how this social environment is a resource that leads to coping and social support, and how these factors moderate health status.

Following the idea of resource caravans, condition resources such as employment, positive self-image (lack of stigmatization) and sexual orientation are clearly linked to social network variables which have an additional effect on adjustment to stressful circumstances. Social networks include family, friends, neighbors and communities that provide social support. HIV+ MSM may be particularly affected by social mediator variables because on the one hand they are in strong need of support from their social network but, on the other hand, stigmatization is often related to social conflicts and isolation. Research has shown that gay men often have conflicted relations with their families and are hesitant to seek social support related to their medical needs from them (Hays, Catania, McKusick, & Coates, 1990; Nott, Vedhara, & Power, 1995). Fleishman et al. (2000) analyzed the interrelationships among coping, conflictual social interactions, and social support in a sample of 140 HIV-infected patients. They found that social conflicts played a dominant role in HIV-infected person's life and were strongly related to coping behaviors, social isolation and anger. Conflictual social interactions were more strongly related to negative mood than was perceived social support.

As long as MSM are more hesitant to disclose their HIV-positive status due to the anticipation of social conflicts, mobilization of social support will be hindered (e.g., Fisher, Goldschmidt, Hays, & Catania, 1993). Indeed, Hays, Catania, McKusick, and Coates (1990) found that gay men are less likely than other populations to seek support from family. Instead, they are more likely to seek support from professionals and peers. However, Serovich, Brucker, and Kimberly (2000) showed the particular importance of receiving support from the family in a sample of 134 HIV-positive men. Those that received greater social support from family were less likely to be depressed. Other research has recently demonstrated that familial social support also impacted risky sexual behaviors, as HIV+MSM with greater familial support were less likely to engage in these behaviors (Serovich, Esbensen, & Mason, 2005).

Other research suggests that social support networks are key to preventing extreme stress associated with HIV status. As a study by Mason, Marks, Simoni, Ruiz and Richardson (1995) revealed, ethnicity is an important variable for the group of HIV+ MSM in their ability to mobilize help. A sample of Latino men revealed that Spanish speakers were less likely to disclose being an HIV+ MSM compared to English-speaking Latino and Whites. This suggests differences depending on the intersectionality of such social identities as sexual orientation, race, and culture. Therefore, caution should be used in generalizing results concerning social network conditions across racial groups.

COR theory and HIV+ MSM: Personal coping variables

Other responses used to respond to health threats are *personal resources* including personal characteristics and skills. Individual characteristics most frequently studied in samples of HIV+ people include self-concept variables such as anxiety, depression, and sense of control. Here, we primarily focus on self-efficacy, sexual skills, and sensation seeking. These variables appear to be of particular relevance to enhance our understanding of stress and coping in HIV+ MSM.

Self-efficacy, the individual's belief in their ability to execute behaviors necessary to achieve a certain goal (Bandura, 1997), can be viewed as a potent resource that aids in combating chronic disease and resultant stress (Luszczynska, Boehmer, & Sarkar, see Chap. 7). It can impact the goal of staying healthy as well as enhancing the internal motivation to manage chronic disease symptoms. In a recent study, Shively (2003) applied the construct of self-efficacy to self-management skills. Shively analyzed HIV patients' self-efficacy for HIV disease management in six areas: managing depression/mood, medication, symptoms, communicating with their healthcare provider, getting support, and managing fatigue. The data revealed a relationship between managing depression and fatigue. High scores of self-efficacy corresponded with high scores in communicating with healthcare providers. Benight et al. (1997) studied the coping self-efficacy of HIV-infected and healthy men following Hurricane Andrew. Coping self-efficacy, or how much confidence people have in their ability to manage and respond to severe stressors, predicted lower levels of psychological distress and PTSD symptoms in both groups.

Self-efficacy has also been frequently assessed in HIV prevention research, although findings regarding the relationship between sexual behavior and self-efficacy have been mixed (Forsyth & Carey, 1998). Findings related to sexual risk behavior in MSM suggests a relationship between sexual risk behavior and negative affect. More specifically, evidence suggests that more depressive symptoms (Kelly et al., 1998), maladaptive coping (Kalichman, Kelly, & Rompa, 1997; Robins, Dew, Davidson, Penkower, et al., 1994), greater loneliness (Martin & Knox, 1997), higher levels of sensation seeking (Gold, Skinner, & Ross, 1994; Kalichman, Heckman, & Kelly, 1996), and impulsivity (Hays, Paul, Ekstrand, Kegeles, Stall, & Coates, 1997) are important psychological predictors of sexual risk behavior among MSM.

In order to enhance our understanding of the relationship between sexual behavior, coping and health of HIV+ MSM, a focus on sexual sensation seeking is required (see Zuckerman, 1971, 1994). Zuckerman (1971) described sensation seeking as a personal disposition characterized by an affinity for novelty, excitement, and high levels of stimulation and arousal. Sensation seeking includes risk-taking, which typically satisfies the need for novel and intense experiences