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**The relationship between Resiliency and Trauma, Conduct Disorder, and
Neuroticism among Palestinian children in Gaza Strip".**

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**A thesis Submitted in partial fulfillment of the requirements for the degree of
master in the education / psychology specialist.**

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اللهم علمني ما ينفعني و
انفعني بما علمتني و زدني
علما

Dedication

I dedicate this thesis to every body contributed and supported me to get it. I specify my parents, siblings and my fiancée as well as my direct supervisor Dr. Samir Quota.

I would also to thank Dr. Abed Hamid Afana and Dr. Abed Aziz Thabet who provided me with all the information I needed. Finally I would like to thank in particular Dr. Mahmud Al Ostaz and Dr. Fadel Abu Hien who supported me all the time.

Declaration

I certify that this thesis submitted for the degree of Master is the result of my own research, except where otherwise acknowledged, and this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Acknowledgment

Really I would like to acknowledge all the doctors in the Islamic university who provided me any type of the cooperation to ease the process of research, to all my friends, and to all my colleagues. This thesis would not have been a success without the help and support of many people. I would especially like to thank and appreciate Dr. Samir Qouta the academic supervisor for his guidance and patience through the whole time of thesis from choosing a topic to its total completion. Also, I would like to thank Dr. Abdel-Aziz Thabet, Dr. Fadel abu Hein and Dr. Abed Al Hamid Afana for helping me whenever I asked them. A thank to people who prepared the statistic of the study, and helped me in the computer work. A special thank to my fiancée who as long as considered as a motivation for my success. Finally, I would like to thank my family who has been very understanding and supportive while I was constantly rambling about this thesis. Thanks again to everyone who listened, advised and help out in deferent ways.

Abstract

The study aims to investigate the relationship between psychological resiliency and trauma, conduct disorder, PTSD, and neurosis. As well as knowing the level of resiliency among the high school students and to explore the effect of socioeconomic and demographic variables, the type of study, and the religiousness on the level of resiliency.

It is analytical descriptive study for 500 children at 6 six different schools in Gaza city and north of Gaza strip. The researcher used five questionnaires to see the relation between resiliency and other factors like trauma, PTSD, conduct disorder and neurosis.

The results showed that there is a relation between resiliency and conduct disorder, and no relation between resiliency and PTSD, trauma and neurosis. The rate of psychological resiliency was 64.5% which can be considered satisfactory.

The results showed also that there is relation between gender and resiliency in favor of females. There is also relation between resiliency and place of residence in favor of the citizens of camps. There is also relation between resiliency and the income rate of the high school students where as the resiliency was in favor of the students whose families' income more than 2000 NIS. In the contrast there is no relationship between resiliency and the religiousness and the type of the study.

The researcher finally recommends increasing the awareness raising regarding the resiliency and to establish a scientific center specialized in resiliency to be a reference to the people and meant sides that interested in this field.

ملخص عن الدراسة باللغة العربية

العلاقة بين الاستشفاء و الصدمة و الاضطراب السلوكي و العصابية بين الاطفال الفلسطينيين في قطاع غزة.

تهدف الدراسة الى فحص العلاقة بين الإستشفاء والصدمة والاضطراب السلوكي والعصابية بين الاطفال الفلسطينيين في قطاع غزة وتسعى ايضا لمعرفة مستوى الإستشفاء بين طلبة المرحلة الثانوية . ولمعرفة ايضا تأثير العوامل الاقتصادية والاجتماعية والديموغرافية ونوع الدراسة و التدخين على مستوى الاستشفاء.

استخدم الباحث المنهج الوصفي التحليلي لخمسة مائة طالب وطالبة في ستة مدارس مختلفة في مدينة غزة والشمال. استخدم الباحث 5 استبانات لبحث العلاقة بين الاستشفاء والصدمة واضطراب مابعد الصدمة والاضطراب السلوكي والعصابية.

النتائج اوضحت بأنه لا توجد علاقة بين الإستشفاء والصدمة والعصابية واضطراب مابعد الصدمة ولكن أثبتت بأن هناك علاقة بين الاستشفاء والاضطراب السلوكي وبأن هناك علاقة عكسية بين الاضطراب السلوكي و الاستشفاء. بمعنى أنه كلما قل تعرض الطفل للاضطراب السلوكي كلما زاد مستوى الاستشفاء

أثبتت الدراسة أن مستوى الاستشفاء عند طلبة المرحلة الثانوية مرضي ووصلت النسبة الى 64.5 %.

أشارت النتائج أن هناك علاقة بين الجنس و الاستشفاء لصالح الاناث وأن ذلك يعود الى الطبيعة الفسيولوجية للاناث وتعدد أدوار المرأة الفلسطينية وأن الاناث تمارس التفريغ الانفعالي أولا بأول مما يساهم في زيادة الاستشفاء عندهم أكثر من الذكور.

أثبتت الدراسة أيضا أن هناك علاقة بين الاستشفاء ومكان الإقامة حيث كانت النتيجة لصالح الطلبة الذين يسكنون في المخيمات على حساب الطلبة الذين يسكنون في المدن . ويرى الباحث أن ذلك يعود أن طبيعة المخيمات تسودها حياة النقش والمصابرة والألم مما يجعل حياة الناس فيها قوية وقادرة على مواجهة الصعاب . ويقول عالم النفس الكبير بيتشا تالم فإن الألم يصنع العطاء.

توجد أيضا علاقة بين الاستشفاء وبين مستوى دخل أسر طلبة المرحلة الثانوية حيث كانت لصالح الطلبة الذين دخل أسرهم أكثر من 2000 شيكل ويرى الباحث أن الاستقرار المادي هو أساس الاستقرار بشكل عام مما يشكل له دافع للبحث على الانتماء والذات وذلك استنادا على عالم النفس ابراهام ماسلو.

في حين أنه لم تكن هناك علاقة بين الاستشفاء ونوع تخصص الدراسة والتدين . يرى الباحث أن التخصص الدراسي لايلعب دورا في بروز الشخصية والتأثير عليها لان طبيعة منهج الثانوية العامة لا توجد به مادة علمية انسانية تعلم فيه مهارات التكيف والقدرة على مواجهة الامور الضاغطة في الحياة اليومية.

كما يرى الباحث أن تفسير عدم وجود علاقة بين الاستشفاء والتدين أن الناس الذين لايعتقدون دينا وعندهم قدرة على التكيف أن لديهم سمات أخرى غير التدين ساعدتهم على أن يكون لديهم مستوى استشفاء عالي.

يوصي الباحث في النهاية بزيادة التوعية بخصوص الاستشفاء وإنشاء مركز متخصص في هذا المجال ليكون مرجعا للناس والجهات المعنية في هذا المجال.

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Chapter 1

Chapter one

Introduction

No body can doubt that the Palestinian people live the worst circumstances in the region around him on the different multiple levels. There are many forms of the suffering that the Palestinian people experience such as home demolishing, assassination, bombardment, poverty, violence with its forms especially violence, and killing. All of these factors when combine together may exhaust the man and affect the life style. Despite all of these negative factors but you can see people have the ability to adapt properly with these factors and practice their life normally without dysfunction. In addition to that he/ she get experience from any experience he/she lives even if it is very strong or bad. So the question here that has been arisen what is the factors that contribute mainly in strengthening those people to face and cope with these negative strong life events? What does make those people resilient and stronger? This agree with Gill Straker when thought that going over difficult circumstances considered as sense of power (Staker, p 19, 1992)

It is worth mentioning that this topic deserves study and research to go deeply in the details that make us more involved in the characters of the resilient people that make them as they are. Additionally, knowing all these issues will contribute in forming the right personal characters that qualify him or her to deal and cope with the life stressful events in the proper way.

In other words, absence of such this research mean remaining the situation as it is. Leaving the advantage of the research aside, leaving also the people suffering more and more with raising their awareness concerning this issue. I observed this matter during my work as mental health professional when I conducted visits to the families who lost their children and homes to give them the psychological support but I found what I did not expect that they deal with the situation in very healthy way whereas they affected by the event to the level that doesn't affect their normal life styles.

Psychological resilience refers to an individual's capacity to withstand stressors and not manifest psychology dysfunction, such as mental illness or persistent negative mood. This is the mainstream psychological view of resilience, that is, resilience is defined in terms a person's capacity to avoid psychopathology despite difficult circumstances. Psychological stressors or "risk factors" are often considered to be experiences of major acute or chronic stress such as death of someone else, chronic illness, sexual, physical or emotional abuse, fear, and unemployment and community violence.

The central process involved in building resilience is the training and development of adaptive coping skills. The basic flow model (called the transactional model) of stress and coping is: A stressor (i.e. a potential source of stress) occurs and cognitive appraisal takes place (deciding whether or not the stressor represents something that can be readily dealt with or is a source of stress because it may be beyond one's coping resources). If a

stressor is considered to be a danger, coping responses are triggered. Coping strategies are generally either be outwardly focused on the problem (problem-solving), inwardly focused on emotions (emotion-focused) or socially focused, such as emotional support from others.

In humanistic psychology, resilience refers to an individual's capacity to thrive and fulfill potential despite or perhaps even because of such stressors. Resilient individuals and communities are more inclined to see problems as opportunities for growth. In other words, resilient individuals seem not only to cope well with unusual strains and stressors but actually to experience such challenges as learning and development opportunities.

Whilst some individuals may seem to prove themselves to be more resilient than others, it should be recognized that resilience is a **dynamic quality, not a permanent capacity**. In other words, resilient individuals demonstrate dynamic self-renewal, whereas less resilient individuals find themselves worn down and negatively impacted by life stressors.

Some individuals not only survive trauma, negative events and seemingly insurmountable obstacles, they also grow and develop from these experiences. They possess what some mental-health professionals call psychological resiliency or psychological hardiness.

Studies indicate that psychologically resilient/psychologically hardy adults deal more effectively with stress than do non resilient adults. Many authorities on aging feel that coping and dealing with stress in a positive manner plays a major role in slowing down the process of aging.

These resilient, hardy adults feel that their efforts will influence the outcome of objectives they are pursuing. They're committed to the important things in their lives such as jobs, families and health. **A spiritual connectedness is observed in the majority of these individuals.** Rather than feeling threatened, psychologically resilient adults are challenged by change and are generally free from pervasive distrust, cynicism and hostility. These same individuals are optimistic, flexible and have the ability to deflect unwarranted criticism.

Stress associated with loss in later life can also come from the change in family situations and/or changes in social and career roles.

Older "copers" are often able to decrease the number of things that concerned them in their younger years. They have adopted an attitude which includes the concept of "I've been there, done that and I'll let somebody else worry about those things now." Due to this shift in priorities, older "copers" don't feel the need to exert control over the myriad of details, activities and events that drove them earlier in life.

Hardy older adults have developed and applied specific problem-solving skills. They are able to define the "important" things and deal effectively with these issues. These same people are often seen as being more tolerant in accepting others.

They tend to manage their moods well, are even tempered and strive for self-reliance when possible. They are willing to accept help but resist being overly dependent on others.

Psychological resiliency/hardiness seems to inoculate the individual to some degree from the effects of aging and should be added to the other list of health preservatives, like a healthy diet and exercise, and the absence of substance abuse.

Psychological hardiness is the resistance we have to stress, anxiety, and depression. It includes the ability to withstand grief and accept the loss of one's loved ones which is critical for survival. When a person climbs the top of the age pyramid, he or she stands alone at the peak. This is true for almost all who reach the age of eighty or ninety years. Their spouses, friends, relatives, even some of the nephews and nieces of the younger generation will fade away right in front of the eyes of these lonely climbers. To appreciate their forbearance of loss, let us bear in mind that among the elderly, the death rate in the first year following the loss of partner is extremely high, perhaps as high as fifty percent for certain groups. A person has to be mentally tough and highly self-sufficient to adapt to that kind of loss.

The problem of the study

The problem is identified and specified in the major questions as the following:

- Ø What is the level of resiliency among the high school students?
- Ø What is the relationship between psychological Resiliency and Trauma, Conduct Disorder, and Neuroticism among Palestinian children in Gaza Strip?

Justifications of the research

No body can deny the bad and difficult events that the Palestinian people live especially the last few years, additionally the unemployment, poverty, security instability, and internal clashes. In spite of all these strong and difficult circumstances but you can find some individuals that they are able to deal with these circumstances in proper way that qualify them as resilient people. That is why reason I would recognize the basic elements of the psychological resiliency.

This study will add much to the meant sides with resiliency and gain them with new results that help them in identifying the resiliency exactly. Additionally due to that no one research this issue before in Gaza.

The main question of the study

What is the relationship between psychological Resiliency and Trauma, Conduct Disorder, and Neuroticism among high school students?

The branched questions as the following:

- What is the level of resiliency among the high school students?
- Is there a difference in the level of resiliency between the males and the females?
- Is there a difference in the level of resiliency among the high school students according to the type of study weather literary or scientific?

- Is there a difference in the level of resiliency among the high school students according to the religiousness?
- Is there a difference in the level of resiliency among the high school students according to the place of residence?
- Is there a difference in the level of resiliency among the high school students according to their families' income level?
- Is there a relationship between resiliency and trauma, PTSD, conduct disorder, and Neurosis?

Study Hypothesis

1. There is no statistically significant differences at (alpha less than or equal 0.05) in level of psychological resiliency among the high school students attribute to the gender.
2. There is no statistically significant differences at (alpha less than or equal 0.05) in level of psychological resiliency among the high school students due to the type of study weather literary or scientific.
3. There is no statistically significant differences at (alpha less than or equal 0.05) in level of psychological resiliency among the high school students due to the religiousness.
4. There is no statistically significant differences at (alpha less than or equal 0.05) in level of psychological resiliency among the high school students children due to the place of residence.
5. There is no statistically significant differences at (alpha less than or equal 0.05) in level of psychological resiliency among the high school students children due to their families' income level.
6. There is no statistically significant relationship at (alpha less than or equal 0.05) between resiliency and trauma, PTSD, conduct disorder, and Neurosis.

Aims of the study:

- Knowing the relationship between resiliency and trauma, PTSD, conduct disorder, and Neurosis.
- Knowing the level of resiliency among the high school students.
- Trying investing the research results in the practical field.

Significance of the study:

The importance of the study stem from the significance of the topic itself especially knowing the main factors that enhance the psychological resiliency which will enrich the professionals who are working in related fields with enough information about the topic. Another point concerning the significance of the study is providing comprehensive acquaintance of the topic.

There haven't been enough studies and researches studied this topic which make it deserve researching and focusing.

Limitations of the study

The time limit: the study will be started from the 1 / 5 / 2007 until 1 / 5 / 2008.

The geographical limit: the study will aim the Palestinian high school students in Gaza city, jabalyia, beit hanon and beit lahia.

The methodology of the study:

The researcher will follow the analytical descriptive methodology in the study because it suits the title of the study. The analytical descriptive methodology can be defined as (it is a way that discuss and analyze the events and the phenomena that subject to studying without intervention from the researcher but the researcher should interact with the phenomena only by description and analysis(Agha, 1994. 41).

Operational definitions:

Resiliency: Resiliency implies an ability not only to cope with traumatic difficulties but also to respond with flexibility under the pressure of every day life. People who are resilient have the ability to move beyond being survivors to being thrivers.

Coping skills: Coping is defined as, "The ability to experience a less than optimal situation, face it, accept it, and proceed forward with an adaptive response "(Kendall, 1992).

Vulnerability: Vulnerability is the susceptibility to physical or emotional injury or attack. It also means to have one's guard down, open to censure or criticism; assailable. Vulnerability refers to a person's state of being liable to succumb, as to persuasion or temptation.

Risk: Risk implies that harm may com to a person or family because of particular stressors.

Variables: A variable is any entity that can take on different values

Conduct Disorder: repetitive and persistent patterns of behavior in which either the basic rights of others or major age appropriate societal norms or riles are violated (Wenar and Kerig, 2000, P 189).

Neuroticism: Is chronic or non psychotic disorder characterized by mainly by anxiety, which experienced or expressed directly or is altered through defense mechanism; it appears as a symptom, such as an obsession, a compulsion, a phobia, or a sexual dysfunction (Kaplan & Sadock, 2003, P 275).

Chapter 2

Chapter 2: The theoretical framework

Resiliency: Resiliency implies an ability not only to cope with traumatic difficulties but also to respond with flexibility under the pressure of every day life. People who are resilient have the ability to move beyond being survivors to being thrivers.

What is Resiliency?

Resiliency is the ability to spring back from and successfully adapt to adversity. An increasing body of research from the fields of psychology, psychiatry, and sociology is showing that most people—including young people—can bounce back from risks, stress, crises, and trauma and experience life success.

Our favorite definition of resiliency, in fact, was given by a 15-year-old high school student who, after a semester of resiliency training, described resiliency as:

"Bouncing back from problems and stuff with more power and more smarts."

Researchers are concluding that each person has an innate capacity for resiliency, "a self-righting tendency" that operates best when people have resiliency-building conditions in their lives.

Resilience (noun) or Resiliency (noun)

Able to recover quickly from misfortune; able to return to original form after being bent, compressed, or stretched out of shape. A human ability to recover quickly from disruptive change, illness, or misfortune without being overwhelmed or acting in dysfunctional ways. As in "Our team showed great resilience," or "Our team had good resiliency."

The Five Levels of Resiliency

Resilience is essential in today's world. In today's workplace everyone feels pressured to get more work done, of higher quality, with fewer people, in less time, with less budget. In our personal lives things are changing so rapidly everyone must learn how to be change proficient, cope with unexpected setbacks, and overcome unwanted adversities. Highly resilient people know how to bounce back and find a way to have things turn out well. They thrive in constant change because they are flexible, agile, and creative, adapt quickly, synergistic, and learn from experience. They handle major difficulties better than most people because they know how to gain strength from adversity. When hit by major setbacks they don't complain about life being unfair. Like cats, they manage to land on their feet and often end up stronger and better than before. Everyone is born with the potential to develop these abilities.

The five levels of resiliency are:

1. Maintaining Your Emotional Stability, Health, and Well-Being
2. Focus Outward: Good Problem Solving Skills
3. Focus Inward: Strong Inner "Self"
4. Well-Developed Resiliency Skills
5. The Talent for Serendipity

- Ø The **first** level is essential to sustaining your health and your energy.
- Ø The **second** level focuses outward on the challenges that must be handled, it is based on research findings that problem-focused coping leads to resiliency better than emotion-focused coping.
- Ø The **third** level focuses inward on the roots of resiliency--strong self-esteem, self-confidence, and a positive self-concept.
- Ø The **fourth** level covers the attributes and skills found in highly resilient people.
- Ø The **fifth** level describes what is possible at the highest level of resiliency. It is the talent for serendipity--the ability to convert misfortune into good fortune.

When faced with adversity it is useful to remember that:

- Ø Your mind and habits will create either barriers or bridges to a better future.
- Ø Resiliency can't be taught, but it can be learned. It comes from working to develop your unique combination of inborn abilities.
- Ø The struggle to bounce back and recover from setbacks can lead to developing strengths and abilities that you didn't know were possible.

How to Develop Survivor Resiliency

Years of research into the inner nature of highly resilient survivors has created a solid understanding of human resiliency and how it develops. To develop your resiliency, here are key qualities to strengthen:

Playful, childlike curiosity. Ask lots of questions; want to know how things work. Play with new developments. Enjoy themselves as children do. Have a good time almost anywhere. Wonder about things, experiment, make mistakes, get hurt, and laugh. Ask: "What is different now? What if I did this? Who can answer my questions? What is funny about this?"

Constantly learn from experience. Rapidly assimilate new or unexpected experiences and facilitate being changed by them. Ask "What is the lesson here? What early clues did I ignore? The next time that happens I will...."

Adapt quickly. Very mentally and emotionally flexible. Comfortable with contradictory personality qualities. Can be strong and gentle, sensitive and tough, logical and intuitive, calm and emotional, serious and playful, and so forth. The more the

better. Can think in negative ways to reach positive outcomes. "What could go wrong, so it can be avoided?"

Have solid self-esteem and self-confidence. Self-esteem is how you feel about yourself. It determines how much you learn after something goes wrong. It allows you to receive praise and compliments. It acts as a buffer against hurtful statements while being receptive to constructive criticism. (I like, appreciate, and love myself)

Self-confidence is your reputation with yourself. It allows you to take risks without waiting for approval or reassurance from others. You expect to handle new situations well because on your past successes. (These are my reliable strengths)

Have good friendships, loving relationships. Research shows that people in toxic working conditions are more stress resistant and are less likely to get sick when they have a loving family and good friendships. Loners are more vulnerable to distressing conditions. Talking with friends and family diminishes the impact of difficulties and increases feelings of self-worth and self-confidence.

Express feelings honestly. Experience and can express anger, love, dislike, appreciation, grief--the entire range of human emotions honestly and openly. Can also choose to suppress their feelings when they believe it would be best to do so

Expect things to work out well. Deep optimism guided by internal values and standards. High tolerance for ambiguity and uncertainty. Can work without a job description, is a good role model of professionalism. Has a synergistic effect, brings stability to crises and chaos. Ask "How can I interact with this so that things turn out well for all of us?"

Read others with empathy. See things through the perspectives of others, even antagonists. Win/win/win attitude in conflicts. Ask "What do others think and feel? What is it like to be them? How do they experience me? What is legitimate about what they feel, say, and do?"

Use intuition, creative hunches. Accept subliminal perception and intuition as valid, useful sources of information. Ask "What is my body telling me? Did that daydream mean anything? Why don't I believe what I'm being told? What if I did this?"

Defend yourself well. Avoid and block attacks, fight back. See through and side-step cons, "games," and manipulations that others attempt. Find allies, resources, and support.

Have a talent for serendipity. Learning lessons in the school of life is the antidote to feeling victimized. They can convert a situation that is emotionally toxic for others into something emotionally nutritious for them. They thrive in situations distressing to others because they learn good lessons from bad experiences. They convert misfortune into good luck and gain strength from adversity.

A good indicator of exceptional mental health is when a person talking about a rough experience says "I would never willingly go through anything like that again, but it was

the one of best things that ever happened to me." Ask "How can I turn this around? Why is it good that this happened? What is the gift?"

Get better and better every decade. Become increasingly life competent, resilient, durable, playful, and free. Spend less time surviving than others and survive major adversities better. Enjoy life more and more (Al Siebert, 2005).

Resiliency and Longevity

Some people handle life's setbacks better than others. Life's best survivors are resilient, hardy, cope well with difficulties, and gain strength from adversity.

Resilient older adults are accustomed to having things work out well. They feel optimistic and self-confident when coping with rough situations. They read new realities rapidly, adapt quickly, are psychologically flexible, tolerate ambiguity, use creative problem solving, understand others accurately, trust their intuition, and handle pressure with humor. The stronger their self-esteem and "life smarts," the less vulnerable they are to cons, threats, criticism, manipulators, and quackery.

Research into the psychology of aging shows that psychologically resilient adults cope well with an aging body. When they lose friends or loved ones they express their feelings in an open, healthy way.

Learning is the key to handling change. Resilient individuals get better and better every decade because they have a child-like curiosity, ask questions, explore, want to know how things work, and learn valuable lessons in the school of life. Resilient adults are happy rather than hostile. They forgive instead of holding grudges, and are more playful than serious.

Work is very important to resilient adults. They are less likely to "retire" because they appreciate the benefits of doing important work. The life sequence for people who die after five or six decades is: schooling, then work, then leisure. People who live longer blend life-long learning with working and leisure.

Events experienced as stressful suppress immune system functions, thereby increasing vulnerability to diseases and illnesses. Resilient older adults are more stress resistant than their less resilient counterparts; they are less likely to experience frequent anger (either expressed or inhibited.) Their stress resistance comes in part from seeking and cultivating pleasant experiences. They enjoy many friendships and have good relationships with people of all ages.

Longevity research is showing that adults with psychological resiliency age more slowly, live longer, and enjoy better health. A strong inner spirit can carry an aging body a long ways.

Resiliency can be developed and increased at any age, but it can't be taught. A longevity program for developing psychological resiliency must avoid standard "training" methods. The program must be based on a developmental model that facilitates self-

managed learning, individuation, and the actualization of inborn abilities (Seaside, Oregon, October, 2000).

Promoting Resiliency in Families and Children

Did you ever wonder why some of the families and children we work with overcome their hardships, despite crisis, pain, and difficult life experiences?

When this occurs, we say that the family or child involved has the power to bounce back--that they are resilient.

As social workers, our job is to promote resiliency in families and children, to help them recover from whatever challenges they face, be it abuse, neglect, or separation. In order to succeed in this task, we need to be able to do two things. First, we need to know how to assess families and children for the traits that promote or inhibit resiliency. This allows us understand the strengths a particular family can build on to solve the problems that confront it. Second—and more importantly—we need to know how to help families obtain or maintain their ability to "bounce back."

Recognizing Resiliency

To assess a family's resiliency, social workers must be able to identify two kinds of characteristics: protective traits and risk traits.

Protective (or resiliency) traits are strengths that help a person or family cope with stress or life difficulties, increasing the likelihood of rebound from difficult situations. Resiliency traits include: a sense of humor, being first- born, having insight into situations, and independence. These traits are tools people can use in times of crisis; they give them the edge and help them make it through the situation. These traits don't prevent problems, but they do help solve them.

Risk traits are influences that may interfere with a person's or family's ability to cope during times of stress. Risk traits include: living in a home with domestic violence or substance abuse, low birth weight, and low self-esteem (Fraser & Galinsky, 1997). These traits can negatively influence the way people react to crisis. For example, when a problem occurs, an individual may not know how to solve it, what the options are, or even how to ask for help.

Assessment Is Key

Some believe there is a window of opportunity during crisis when social workers can help families find and build on the traits that will help them recover (Saleebey, 1996). Others believe that, if a family is working in partnership with someone they trust, the window of opportunity never closes, and they can learn and develop new skills that increase their resiliency for an indefinite period.

To intervene appropriately, however, a social worker must first thoroughly assess a family's resilience. To do this, he or she must assess protective and risk traits on three levels: individual; family, school, and community; and environmental (Kirby & Fraser, 1997). Once this is done, the family and the worker can then create an intervention plan that builds on the family's strengths.

Individual Factors

To assess resiliency at the individual level, it is important to look at both birth and psychological traits. Building a social history of the individual is a good place to start this portion of the assessment. You can do this by drawing a genogram with the individual or family, or by just talking to them. If family members are not available or do not know the whole story, key data can usually be obtained from a child's medical birth record. This birth information is important, since risk traits such as genetic problems, low IQ, low birth weight, and mental disorders affect not just the child's but the whole family's ability to respond to adversity.

Gender plays an important role--research shows that girls adapt more easily than boys to things such as divorce and out-of-home care, although there are no long-term studies regarding the children of today (Kirby & Fraser, 1997). (See "Are Girls Really More Resilient?")

Culture and ethnicity, too, play a role in assessment. More African Americans, Hispanics, and Native Americans live in poverty, which put them at risk due to limited resources and limited access to healthcare (Fraser & Galinsky, 1997).

Psychological traits also affect resiliency. Children born with "easy" temperaments are more easily nurtured by parents, making a "good" disposition a resilient trait at birth (Charity, 1997). While talking with a family, observe the level of nurturing parents show their child. Based on your observations, you can ask questions that will tell you more about a family's degree of bonding, communication and problem-solving skills, and general resourcefulness.

Social workers should evaluate individuals' independence, comfort with their roles (caretaker, parent, role model, friend, etc.), and sense of purpose in life—important resiliency traits (Giordano, 1997). Although they may not see these traits immediately, social workers can help families find and develop them. For example, since a nurturing caregiver in a child's life can mediate many risk traits, social workers should focus on helping parents develop their abilities in this area.

Family, School, and Community Factors

To assess a child's or a family's resilience, it is important to look at the role extended family, school, and the community play in their lives. Strong, positive peer bonds, involvement in positive peer social groups (such as athletics), and informal community networks (such as faith community and after school programs) are resilient traits for children. Extended family support and adequate access to needed services (such as health care) also contribute to a child's or a family's ability to deal with hard times.

Usually, if a child has a resiliency trait, the same strength will be found in the child's family. These strengths can give social the worker and family a foundation for their work together. For example, a child who adapts to different circumstances may come from a flexible family. If a social worker makes this connection, he or she can build an intervention plan that will help families remedy their situation by maximizing this strength.

School and community should also be considered when assessing a family's resiliency. If a child is doing well in school and participating in sports or positive peer groups, you should count these things as strengths that can help the child "bounce back" in other parts of her life. If children are in trouble in school, make poor grades, and have few friends, take notice. Community atmosphere and support in their community should be taken into consideration. If the community is involved and supportive, they can help the family in times of trouble, adding to a family's resilient traits.

Environmental Factors

Environmental conditions should be included in any assessment of resiliency. Environmental traits are those of culture, ethnicity, and socioeconomic status, education, and employment status/opportunities. Other portions of your assessment will naturally bring environmental traits to light--take the opportunity to discuss these with families.

So, a comprehensive, family-inclusive assessment is needed in order to identify the resilient traits to concentrate on in your work with an individual or family. For example, a child could be considered resilient biologically, with a caring adult caregiver, and still have difficulties due to environmental issues such as homelessness, racial injustice, and poverty. Social workers who recognize these gaps can work with the family to come up with new ways to lower or eliminate risk.

Implications for Social Workers

After assessing resilient and risk traits in families and children, social workers can use these strengths to create a plan with the family to enhance their resilient traits. The plan should be strengths-based and focus on issues the family would like to address, as well as those areas workers feel the family needs to work on. By increasing resiliency in families and children, workers can help them to be more self-sufficient and empowered (for tips on promoting resilience, see "Intervention Points: Increasing Resiliency in Families and Children" and "Protective Traits").

At times a social worker is a key person in a child's life and has the opportunity to assist a child in acknowledging, enhancing, and developing protective factors and strengths. Children have the capability to learn new skills in order to become resilient, and when social workers assist with the assessment and direction of that learning, children can grow to become productive, healthy individuals.

There is an old saying which states that some people look at a partially filled glass of water and say "It's half empty", while others say "It's half full." Often with students who do not seem to have all the advantages of other students, we are inclined to focus on

their "risk factors". A growing number of educators are taking the "half full" approach and are looking at the factors that relate to teen's successes. For example, Kimberly Gordon, Ph.D., is interested in finding out why some African-American students flourish, despite living in a low socio-economic environment. The factors that relate to their success are called "resiliency factors."

In a recent interview with *Teacher Talk*, Gordon defined resiliency as "...the ability to thrive, mature, and increase competence in the face of adverse circumstances or obstacles." Students who are resilient must draw upon all resources: biological, psychological, and environmental. Schools are a valuable environmental resource which can also affect the psychological resource.

How, then, can schools foster resiliency? Let us first look at the four methods for promoting resiliency:

- Increase the student's self-esteem
- Stop the negative chain of events
- Provide an alternate route to success
- Remove the stressor

The implementation of these methods can come from school administrators as well as teachers.

Teachers can also help students increase their self-esteem and develop a positive self-concept. Teachers can create opportunities for the student to become successful by:

- helping the student set realistic and manageable goals
- allowing enough time for the student to complete the task
- furnishing the necessary resources
- helping the student problem-solve difficult situations
- starting classes on time
- interacting with all the students - not just a select few
- recognizing and understanding cultural differences among the students
- using visual aids
- offering "hands-on" experiences
- offering ample praise
- creating a trusting atmosphere in the classroom

How can a teacher recognize resilient qualities in a student? A resilient student may have the following characteristics:

- good social skills
- an internal locus of control
- intelligent
- androgynous behavior
- independent

The presence of these qualities does not necessarily make one resilient. Also, the absence of these qualities does not prevent one from being resilient. Rather, it is the manifestation of competency that helps foster resiliency. In other words, teens need to experience success before they begin to realize that they can be successful. "Teachers are key to finding ways for all students to experience success!", says Dr. Gordon.

Both teachers and administrators can foster resiliency by creating a conflict-free environment, developing programs that support family involvement, allowing teachers to participate in the decision-making processes, supporting consistent disciplinary policies, and providing a well-maintained and nicely decorated building (www.yahoo.com).

During 1985-88 Ricky was in fact arrested five times. He states that he was tortured twice during this period, an experience he describes as follows:

I was arrested again in June 1986. I was in solitary for four months. They came every now and then to interrogate me, but nothing serious happened. Then they early mourning they came and fetched me and started asking questions about the people who had left in 1985 for training (as guerillas). They shocked me and put a bag over my head which stopped my breathing and they shocked me near my kidneys. I needed a doctor but they just left me in solitary. The next day they did the same thing. I said they should kill me. They took me outside and give me a box of matches and put a tyre with petrol in it around my neck. They said "just light it" they put a bag on my head. They hit me. I could smell the petrol. Then they just put me back in solitary. I thought I was going mad. I used to worry that I would forget what I was thinking of. I thought I was mad. Ricky claims in retrospect that his arrest and experience of torture strengthened rather than broke his spirit. In prison he had the opportunity of meeting others and of sharing experience with them, which he found to be very supportive (Gillian Straker, 1992, p25).

Who copes? Why?

When we look at research done in an effort to understand why some children overcome difficult circumstances, several important themes emerge. Factors that lead to pro social behavior and healthy adaptability in the face of stressful early experience include a series of ameliorating factors (**Losel and Bliesener 1990**).

Actively Trying to Cope With Stress (rather than just reacting) and temperamental characteristics that favor active coping attempts and positive relationships with others rather than passive withdrawal. Even in a war situation there is something to be done. Those who become demoralized and give up increase their psychosocial vulnerability. Those who continue to struggle to make sense of the world, whether children or the adults who care for the children, are more resilient. We recognize that some children are born more active and outgoing than others. These temperamental differences matter. Indeed, many studies have found that "attractive" children who succeed in difficult circumstances often seem to have an uncanny knack for finding and drawing to themselves and social and personal resources they need. But children can learn this active coping style.

Cognitive Competence (at least an average level of intelligence). Being smart helps. Intelligence means the ability to figure things out, to read situations and people, to create alternatives. For a child faced with living in a war zone, every ounce of intelligence increases the odds of survival. What is more, this same intelligence helps shield the child from simplistic interpretations of experience that are self-defeating and socially destructive in the long run.

Experience of Self-Efficacy and corresponding self confidence and positive self esteem. War zones carry with them a pervasive corrosion of self. The child needs all the reservoirs of self esteem possible. Building this positive sense of self is an investment in resilience.

A Stable Emotional Relationship with at least one parent or other reference person. Research on children growing up in war zone tells us that children who have experience a warm, positive relationship with parents can develop a working model of what it means to be a person that can serve to sustain them through hard times. Parents and the quality of their relationships with their children is a key to understanding the psychological health of children who live in war zones.

An Open, Supportive Educational Climate and parental model of behavior that encourage constructive coping with problems. Particularly as the child grows into later childhood and adolescence, it is crucial that the child be exposed to a social environment that sponsors and encourage a process of interpretation. A child growing up in difficult circumstances needs help in “processing” those experiences. The child needs an education that helps to show the path to a moral universe in which the child himself or herself can participate.

Social Support from Persons outside the Family. The child is not just part of a family. The child is part of a community. We forget this vital truth at our peril. Even the most basic of developmental phenomena have a community component. Whether it be intelligence or moral judgment, the tone set by the community, and the concrete ways in which it offers the child (and the child’s parents) nurturance and guidance, can play a critical role in how the child develops, in who or he or she becomes. In the simplest sense, the community is crucial in offering orphaned and abandoned children a second chance through adoption and foster care, particularly if those new relationships provide children with a chance to “process” their loss of parents (Garbarino, Kostelny and Dubrow, 1991, P 18-20).

Has research shown any difference between the level of resiliency or resiliency traits between urban and rural people?

- Not necessarily urban and rural issues, but one must consider the context of each child's life; one must look at individual, family, and community characteristics.
- Studies show a greater demand for resiliency in urban settings due to family circumstances; each area calls for different types of resiliency.
- This is an area that could use more research (www.google.com).

Are the resiliency factors the same for teenage boys and girls?

There has been some indication of gender differences, especially in adolescents; again, it is important to consider age, gender, culture, racial/ethnic background, etc. when dealing with an issue.

Does gender of the custodial parent play a role in the resiliency of the child?

Children in hi-risk families have different needs and react differently; gender of both child and parent will interact in each individual instance.

Examples of individual resiliency factors

- ego strength
- problem-solving skills
- social skills
- social competence
- internal locus of control
- positive responses to others

Examples of family resiliency factors

- communication
- cohesion/emotional connection
- adaptability
- presence of a caring adult
- spiritual wellness
- mutual respect/appreciation
- commitment
- problem solving skills
- family time and routines
- family heartiness

Examples of community resiliency factors

- social support
- connection to other models

- connection to aspects of & quot community"
- cultural relevance/respect

People who fail are identifiable -- how do you locate people who overcome their backgrounds and have been resilient or successful?

It often is easier to identify problems and failures, but indicators of healthy/successful relationships are used along with some of the same measures; this is one reason resiliency research is such a challenge.

Are resiliency characteristics stable for families or individuals?

Both, certain traits of both are likely to be stable, but may fluctuate within the lifecycle. Some of the things that need to be enforced include

- 1.) Routines,
- 2.) Temperament,
- 3.) Problem solving.

Resilient children are able to manipulate and shape their environment, to deal with its pressure successfully, and to comply with its demands. They are able to adapt quickly to new situations, perceive clearly what is occurring, communicate freely, act flexibly, and view themselves in a positive way. Compared to vulnerable children, they are able to tolerate frustration, handle anxiety, and ask for help when they need it (Anthony and Cohler, 1987). James and Nancy, Kathleen, and Carole, 1992, p103)

Solnit (1983) has found that an optimal parent child relationship with positive early experiences promotes ego resilience and gives children a sense of self worth and hope for a favorable future. Ego resilience enables child to recover from and cope with risks resulting in stress and trauma.

Parents as Models of resilience

Researchers conducting studies of children under extreme conditions during World War 2 emphasized that the emotional state and behavior of mothers are the main mediators between children's psychological functioning and traumatic experience (Freud and Burlingham, 1943: Janis, 1951). Parental resilience tends to predict child resilience. While 25-50 percent of the children, who were evacuated from cities in England during the World War 2 while their parents remained, manifested neurotic symptoms, very few children who remained behind with their families displayed neurotic symptoms. The security provided by parents apparently compensated for the traumatic effect of the war (Freud and Burlingham, 1943). For the few children who had remained with their parents and displayed psychological symptoms, the symptoms lasted only a short time. Because they do not fully comprehend inherent danger, younger children often exhibit only minor symptoms of anxiety when they are able to remain physically close to at least one parent and when parents are able to remain calm themselves. Children who remained with parents, even in concentration camps, revealed less psychological disturbances than did children who had been separated from their families. Separation from parents was more

traumatic for children than the actual exposure to bombing and witnessing of destruction, injury, and death from air raids.

Resilience, Meaning, and Well-Being

Brooks (2005) apparently defined resilience both as “the capacity of a child to deal effectively with stress and pressure, to cope with everyday challenges, to rebound from disappointments, mistakes, trauma, and adversity, to develop clear and realistic goals, to solve problems, to interact comfortably with others, and to treat oneself and others with respect and dignity” (p. 297) and as the “ability to meet life’s challenges with thoughtfulness, confidence, purpose, responsibility, empathy, and hope” (p. 298). Masten, Best, and Garmezy (cited in Alvord & Grados, 2005), on the other hand, defined it as “the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (p. 426). Like most authors, Smith (2006) seems to struggle with the definition, defining it variously as “a process of strength development” (p. 31); “the process of struggling with hardship, characterized by the individual’s accumulation of small successes that occur with intermittent failures, setbacks, and disappointments” (p. 32); and “the process of an individual’s persisting in the face of adversity . . . an individual’s manner of struggling with the hardship rather than the end goal or state” (p. 53) but also apparently as the outcome of “Successful maneuvering or negotiation of risk factors” (p. 31). These definitions do not demarcate resilience from other ideas such as coping and are too broad and vague to aid science or practice.

The author maintains that people “have an innate need to recognize their strengths” (Smith, 2006, p. 32). Although one may disagree with the idea of innate needs, the postulate that recognizing one’s strengths is adaptive is also consistent with Bandura’s theory, in which self-efficacy is a key determinant of human action: Believing in our ability to perform tasks powerfully affects most, if not all, aspects of our day-to-day lives, including communication and relationships with others, career choice, and daily activities.

Loss, Trauma, and Human Resilience

Have We Underestimated the Human Capacity to Thrive After Extremely Aversive Events? Most people are exposed to at least one violent or life-threatening situation during the course of their lives (Ozer, Best, Lipsey, & Weiss, 2003). As people progress through the life cycle, they are also increasingly confronted with the deaths of close friends and relatives. Not everyone copes with these potentially disturbing events in the same way. Some people experience acute distress from which they are unable to recover. Others suffer less intensely and for a much shorter period of time. Some people seem to recover quickly but then begin to experience unexpected health problems or difficulties concentrating or enjoying life the way they used to. However, large numbers of people manage to endure the temporary upheaval of loss or potentially traumatic events remarkably well, with no apparent disruption in their ability to function at work or in close relationships, and seem to move on to new challenges with apparent ease. This article is devoted to the latter group and to the question of resilience in the face of loss or potentially traumatic events. The importance of protective psychological factors in the

prevention of illness is now well established (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000). Moreover, developmental psychologists have shown that resilience is common among children growing up in disadvantaged conditions (e.g., Masten, 2001). Unfortunately, because most of the psychological knowledge base regarding the ways adults cope with loss or potential trauma has been derived from individuals who have experienced significant psychological problems or sought treatment, theorists working in this area have often underestimated and misunderstood resilience, viewing it either as a pathological state or as something seen only in rare and exceptionally healthy individuals. In this article, I challenge this view by reviewing evidence that resilience in the face of loss or potential trauma represents a distinct trajectory from that of recovery, that resilience is more common than often believed, and that there are multiple and sometimes unexpected pathways to resilience:

Point 1: Resilience Is Different From Recovery

A key feature of the concept of adult resilience to loss and trauma, to be discussed in the next two sections, is its distinction from the process of recovery. The term *recovery* connotes a trajectory in which normal functioning temporarily gives way to threshold or sub threshold psychopathology (e.g., symptoms of depression or posttraumatic stress disorder [PTSD]), usually for a period of at least several months, and then gradually returns to pre-event levels. Full recovery may be relatively rapid or may take as long as one or two years. By contrast, *resilience* reflects the ability to maintain a stable equilibrium. In the developmental literature, resilience is typically discussed in terms of protective factors that foster the development of positive outcomes and healthy personality characteristics among children exposed to unfavorable or aversive life circumstances (e.g., Garmezy, 1991; Luthar, Cicchetti, & Becker, 2000; Masten, 2001; Rutter, 1999; Werner, 1995). Resilience to loss and trauma, as conceived in this article, pertains to the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event, such as the death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning. A further distinction is that resilience is more than the simple absence of psychopathology. Recovering individuals often experience sub threshold symptom levels. Resilient individuals, by contrast, may experience transient perturbations in normal functioning (e.g., several weeks of sporadic preoccupation or restless sleep) but generally exhibit a stable trajectory of healthy functioning across time, as well as the capacity for generative experiences and positive emotions (Bonanno, Papa, & O’Neill, 2001).

In the loss and trauma literatures, researchers have tended to assume a unidimensional response with little variability in possible outcome trajectory among adults exposed to potentially traumatic events. Bereavement theorists have tended to assume that coping with the death of a close friend or relative is necessarily an active process that can and in most cases should be facilitated by clinical intervention. Trauma theorists have focused their attentions primarily on interventions for PTSD. Nonetheless, trauma theorists and practitioners have at times assumed that virtually all individuals exposed to violent or life-threatening events could benefit from active coping and professional intervention.

Trauma Interventions and Critical Incident Debriefing

Although for centuries practitioners have linked violent or life-threatening events with psychological and physiological dysfunction, historically there also has been confusion and controversy over the nature of traumatic events and over whether to consider psychological reactions as malingering, weakness, or genuine dysfunction (Lamprecht & Sack, 2002). The inclusion of the PTSD category in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed. [DSM-III]; American Psychiatric Association, 1980) resulted in a surge of research and theory about clinically significant trauma reactions. There is now considerable support for the usefulness of interventions with individuals meeting PTSD criteria. Cognitive-behavioral treatments that aim to help traumatized individuals understand and manage the anxiety and fear associated with trauma-related stimuli have proved the most effective (Resick, 2001). Although outcome studies generally show few differences between treatments, there is some evidence for superior results with prolonged exposure therapy (e.g., Foa et al., 1999). The essential components of exposure treatment usually involve repeated confrontations with memories of the traumatic stressor (imaginal exposure) and with situations that evoke unrealistic fears (in vivo exposure; Zoellner, Fitzgibbons, & Foa, 2001).

Ironically, the effectiveness of reliving traumatic experiences for individuals with PTSD may have helped blur the distinction between recovery and resilience. Researchers have made remarkably few attempts to distinguish subgroups within the broad category of individuals not showing PTSD. Resilient and recovering individuals are often lumped into a single category (e.g., King, King, Foy, Keane, & Fairbank, 1999; McFarlane & Yehuda, 1996). As with bereavement, however, when researchers do not address this distinction, they risk making the faulty assumption that resilient people must engage in the same coping processes as do exposed individuals who struggle with but eventually recover from more intense trauma symptoms.

Resilience to Loss

Bereavement theorists have typically viewed the absence of prolonged distress or depression following the death of an important friend or relative, often termed *absent grief*, as a rare and pathological response that results from denial or avoidance of the emotional realities of the loss. Bowlby (1980), for example, described the “prolonged absence of conscious grieving” (p. 138) as a type of disordered mourning and viewed the experience or expression of positive emotions during the early stages of bereavement as a form of defensive denial. Summarizing the first wave of bereavement research, Osterweis, Solomon, and Green (1984) concluded “that the absence of grieving phenomena following bereavement represents some form of personality pathology” (p. 18). More recently, in a survey of self-identified bereavement experts, the majority (65%) endorsed beliefs that absent grief exists, that it usually stems from denial or inhibition, and that it is generally maladaptive in the long run (Middleton, Moylan, Raphael, Burnett, & Martinek, 1993). These same bereavement experts (76%) also endorsed the compatible assumption that absent grief eventually surfaces in the form of delayed grief reactions. The available empirical literature, however, suggests a very different story: Resilience to the unsettling effects of interpersonal loss is not rare but relatively common,

does not appear to indicate pathology but rather healthy adjustment, and does not lead to delayed grief reactions. Over a decade ago, Wortman and Silver (1989) first drew attention to the somewhat startling fact that there was no empirical basis for either the assumption that the absence of distress during bereavement is pathological or that it is always followed by delayed manifestations of grief.

However, a recent prospective study provided a rare opportunity to address this issue using data gathered on average three years prior to the death of a spouse (Bonanno, Wortman, et al., 2002). This study provided strong evidence in support of the idea that many bereaved individuals will exhibit little or no grief and that these individuals are not cold and unfeeling or lacking in attachment but, rather, are capable of genuine resilience in the face of loss. Almost half of the participants in this study (46% of the sample) had low levels of depression, both prior to the loss and through 18 months of bereavement, and had relatively few grief symptoms (e.g., intense yearning for the spouse) during bereavement. The difference between the resilient individuals and the other participants, however, was that these experiences were transient rather than enduring and did not interfere with their ability to continue to function in other areas of their lives, including the capacity for positive affect.

Resilience to Violent and Life-Threatening Events

Epidemiological studies estimate that the majority of the U.S. population has been exposed to at least one traumatic event, defined using the *DSM-III* criteria of an event outside the range of normal human experience, during the course of their lives. Although grief and trauma symptoms are qualitatively different, the basic outcome trajectories following trauma tend to form patterns similar to those observed following bereavement. Summarizing this research, Ozer et al. (2003) recently noted that “roughly 50%–60% of the U.S. population is exposed to traumatic stress but only 5%–10% develop PTSD” (p. 54).

However, because there is greater variability in the types and levels of exposure to stressor events, there also tends to be greater variability in PTSD rates over time. Estimates of chronic PTSD have ranged, for example, from 6.6% and 9.9% for individuals experiencing personally threatening and violent events, respectively, during the 1992 Los Angeles riots (Hanson, Kilpatrick, Freedy, & Saunders, 1995), to 12.5% for Gulf War veterans (Sutker, Davis, Uddo, & Ditta, 1995), to 16.5% for hospitalized survivors of motor vehicle accidents (Ehlers, Mayou, & Bryant, 1998), to 17.8% for victims of physical assault (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993).

What about exposed individuals who exhibit relatively little distress? Trauma theorists are sometimes surprised when exposed individuals do not show more than a few PTSD symptoms. For example, body handlers in the aftermath of the Oklahoma City bombing have been described as showing “unexpected resilience” (Tucker et al., 2002). Indeed, whereas those who cope well with bereavement are sometimes viewed as cold and unfeeling, those who cope well with violent or life-threatening events are often viewed in terms of extreme heroism. However justified, this practice tends to reinforce the misperception that only rare individuals with “exceptional emotional strength” (e.g., Casella & Motta, 1990) are capable of resilience.

How many exposed individuals eventually show delayed trauma reactions? In contrast to the absence of evidence for delayed grief during bereavement, delayed PTSD does appear to be a genuine, empirically verifiable phenomenon. Nonetheless, delayed PTSD is still relatively infrequent, occurring in approximately 5% to 10% of exposed individuals (Buckley, Blanchard, & Hickling, 1996), and thus applies at best only to a subset of the many individuals who do not show initial PTSD reactions. It is noteworthy, however, that exposed individuals who eventually manifest delayed PTSD tend to have had relatively high levels of symptoms in the immediate aftermath of the stressor event (e.g., Buckley et al., 1996). Thus, these individuals appear to be immediately distinguishable from more truly resilient individuals. Perhaps trauma reactions might manifest indirectly through behavioral or health problems? Although PTSD is frequently comorbid with health and behavior problems, individuals exposed to putative traumatic events sometimes do evidence these problems in the absence of PTSD. As was the case with delayed PTSD, however, even when health and behavior problems are accounted for, many survivors do not show such problems. This was evidenced, for example, in a longitudinal study of survivors of the North Sea oil rig disaster—by all accounts a horrific and disturbing event (Holen, 1990). In the first year following the disaster, 13.7% of the survivors were assigned psychiatric diagnoses (at the time of the study, PTSD was not a well-established diagnosis), compared with only 1.1% of a matched comparison sample. In contrast, medical diagnoses were assigned to 31% of the survivors. Although these rates were markedly higher than those found in the comparison sample (4.5%), they nonetheless underscore the fact that most if not the majority of survivors exhibited neither extreme distress nor unusual health problems.

Point 2: There Are Multiple and Sometimes Unexpected Pathways to Resilience

If resilience and recovery represent distinct trajectories that are informed by different coping habits, then what factors promote resilience? Meta-analytic studies have consistently revealed several clear predictors of PTSD reactions, including lack of social support, low intelligence and lack of education, family background, prior psychiatric history, and aspects of the trauma response itself, such as dissociative reactions (Brewin, Andrews, & Valentine, 2000; Ozer et al., 2003). It seems likely that at least some of these factors, if inverted, would predict resilient functioning.

However, relatively little research has attempted to address this question. What's more, because so little attention has been devoted to resilience, when loss and trauma theorists have looked for resilience, they have tended to look in the wrong places. Indeed, the assumption that all adults exposed to loss or to potentially traumatic events experience prolonged distress and disruptions in functioning goes hand in hand with the belief that resilience must be rare and found only in exceptionally healthy people (e.g., Casella & Motta, 1990). In this section, a number of distinct dimensions suggestive of different types or pathways of resilience to loss and trauma are considered.

Hardiness

A growing body of evidence suggests that the personality trait of hardiness (Kobasa, Maddi, & Kahn, 1982) helps to buffer exposure to extreme stress. Hardiness consists of three dimensions: being committed to finding meaningful purpose in life, the belief that one can influence one's surroundings and the outcome of events, and the belief that one can learn and grow from both positive and negative life experiences. Armed with this set of beliefs, hardy individuals have been found to appraise potentially stressful situations as less threatening, thus minimizing the experience of distress. Hardy individuals are also more confident and better able to use active coping and social support, thus helping them deal with the distress they do experience (e.g., Florian, Mikulincer, & Taubman, 1995).

Self-Enhancement

Another dimension linked to resilience is self-enhancement. Somewhat ironically, around the time PTSD was formalized as a diagnostic category, social psychologists had begun to challenge the traditional assumption that mental health requires realistic acceptance of personal limitations and negative characteristics (Greenwald, 1980; Taylor & Brown, 1988). These scholars argued instead that unrealistic or overly positive biases in favor of the self, such as self-enhancement, can be adaptive and promote well-being. Although most people engage in self-enhancing biases at least some of the time, measurable individual differences are also found. Trait self-enhancement has been associated with benefits, such as high self-esteem, but also with costs: Self-enhancers score high on measures of narcissism and tend to evoke negative impressions in others (Paulhus, 1998). This trade-off may be less problematic, however, in the context of highly aversive events, when threats to the self are most salient (Taylor & Brown, 1988). Support for this idea comes from a recent study of individual differences in self-enhancing biases among bereaved individuals in the United States and among Bosnian civilians living in Sarajevo in the immediate aftermath of the Balkan civil war (Bonanno, Field, Kovacevic, & Kaltman, 2002). In both samples, self-enhancers were rated by mental health professionals as better adjusted. What's more, self-enhancement proved to be particularly adaptive for bereaved individuals suffering from more severe losses. In a similar study of individuals who were in or near the World Trade Center towers at the time of the September 11th attacks (Bonanno, Rennie, Dekel, & Rosen, 2003), self-enhancers reported better adjustment and more active social networks and were rated more positively and as better adjusted by their close friends. Further, selfenhancers salivary cortisol levels exhibited a profile suggestive of minimal stress responding.

Repressive Coping

Resilience to loss and trauma has also been found among another perhaps less likely group: repressive copers (Weinberger, Schwartz, & Davidson, 1979). A considerable body of literature documents that individuals identified by either questionnaire or behavioral measures as repressors tend to avoid unpleasant thoughts, emotions, and memories (Weinberger, 1990). In contrast to hardiness and selfenhancement, which appear to operate primarily on the level of cognitive processes, repressive coping appears to operate primarily through emotion-focused mechanisms, such as emotional dissociation. For instance, repressors typically report relatively little distress in stressful situations but exhibit elevated distress on indirect measures, such as autonomic arousal

(Weinberger et al., 1979). Emotional dissociation is generally viewed as maladaptive and may be associated with long-term health costs (Bonanno & Singer, 1990). However, these same tendencies also appear to foster adaptation to extreme adversity. For example, repressors have been found to show relatively little grief or distress at any point across five years of bereavement (Bonanno & Field, 2001; Bonanno, Keltner, Holen, & Horowitz, 1995). Further, although they initially reported increased somatic complaints, over time repressors did not show greater somatic or health problems than other participants. Recently, among a sample of young women with documented histories of childhood sexual abuse, repressors were less likely to voluntarily disclose their abuse when provided the opportunity to do so, but they also showed better adjustment than other survivors (Bonanno, Noll, Putnam, O'Neill, & Trickett, 2003).

Positive Emotion and Laughter

One of the ways repressors and others showing resilience appear to cope well with adversity is through the use of positive emotion and laughter (Bonanno, Noll, et al., 2003; Keltner & Bonanno, 1997). Historically, the possible usefulness of positive emotion in the context of extremely aversive events was either ignored or dismissed as a form of unhealthy denial (e.g., Bowlby, 1980). Recently, however, research has shown that positive emotions can help reduce levels of distress following aversive events both by quieting or undoing negative emotion (Fredrickson & Levenson, 1998; Keltner & Bonanno, 1997) and by “increasing continued contact with and support from important people in the person’s social environment” (Bonanno & Keltner, 1997, p. 134).

TRAUMA, PTSD, AND RESILIENCE

Based on the available literature, this review article investigates the issue of resilience in relation to trauma and posttraumatic stress disorder. Resilient coping to extreme stress and trauma is a multifaceted phenomena characterized as a complex repertoire of behavioral tendencies. An integrative Person Situation model is developed based on the literature that specifies the nature of interactions among five classes of variables: (a) personality, (b) affect regulation, (c) coping, (d) ego defenses, and (e) the utilization and mobilization of protective factors and resources to aid coping.

The models of traumatic stress (Wilson, 1989, 2004a; Wilson et al., 2001; Wilson & Thomas, 2004) and adaptive coping processes (Folkman, 1997) are useful paradigms by which to examine the question of resiliency: How is it that persons recover and “spring back” from psychological trauma? What are the psychological factors that are associated with resiliency and effective coping? What are its internal mechanisms in the psyche and as manifest in adaptation to environmental demands?

In this article, we explore the question of trauma and resiliency. We present a conceptual model of trauma and resilience based on a review of the literature. What is resilience and what constitutes resilient behavior? This seemingly simple question turns out to be very complex as a psychological and behavioral process.

The definition of Resiliency

In this article, we explore the question of trauma and resiliency. We present a conceptual model of trauma and resilience based on a review of the literature. To undertake such an analysis requires definitional clarity on the meaning of resilience. Understanding the nature of resilience requires conceptual and definitional clarity. What is resilience and what constitutes resilient behavior? This seemingly simple question turns out to be very complex as a psychological and behavioral process. There are at least five distinct ways to define human resilience. First, what is the lexical definition of resilience? Second, what constitutes resilience as a psychological phenomenon in its purest form devoid of contextual parameters? In terms of basic processes of perception, cognition, affect regulation, and information processing, what characterizes resilience? Third, what defines resilient behavior under adverse environmental conditions? This question spurred the early research on resilient children who grew up in poverty, in malfunctioned families, or in conditions of cultural deprivation. The focus on resilient behavior is a way of evaluating resilience by outcome: How is good performance maintained in the face of adversity, overwhelming disadvantage, or impediments to highly effective adaptation and performance as defined by a range of dependent variables (e.g., mental health, school performance, absence of illness or psychopathology, etc.)? Fourth, the question of psychological trauma and resilience is a variation on conceptualizations of effective coping and adaptation under adverse environmental circumstances. Trauma, however, is generally defined by stress events that present extraordinary challenges to coping and adaptation. Indeed, the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000)* definition of traumatic stressors includes “experiencing, witnessing, or confronting events that involve actual or threatened death or serious injury, or a threat to the physical integrity of self or others” (p. 467). Thus, the issue of resilience to traumatic situations raises questions as to the nature of peritraumatic (during) and posttraumatic forms of resilient behavior. Stated differently, what set of psychological factors are associated with resilient coping in the “face” and “wake” of trauma?

Fifth, the issue of PTSD and resilience similarly raises questions regarding the dimensions of effective coping. For example, what factors are protective against the onset or later development of PTSD? What factors (e.g., personal, social, support resources, etc.) are associated with resilient recovery from PTSD versus chronic forms of the disorder? Resilient posttraumatic coping behavior poses the question as to continuities and discontinuities in resiliency across the life span. Is posttraumatic resiliency a characteristic of the person or highly influenced by normative life crises of aging and unique situational contexts that challenge coping repertoires?

The *Oxford English Dictionary* defines *resilience* as “the activity of rebounding or springing back; to rebound; to recoil.” It further defines resilience as “elasticity; the power of resuming the original shape or position after compression, bending, etc.” It is the ability “to return to the original position.” The lexical analysis also includes the adjectives “cheerful, buoyant, and exuberant.” The linguistic use of the term *resilience* refers to a property: an ability of an object to restore its original structural form, despite being temporarily altered by external forces that would “bend” or “compress” its shape. The property of resilience, then, would apply to behavioral phenomena in engineering,

physiology, the natural environment, and human behavior in a variety of environmental contexts. Moreover, resilience is generally viewed as a quality of character, personality, and coping ability. Resiliency connotes strength, flexibility, a capacity for mastery, and resumption of normal functioning after excessive stress that challenges individual coping skills (Lazarus & Folkman, 1984; Richardson, 2002).

In some definitions, resilience refers to an ability to overcome high loads of stressful events (e.g., trauma, death, economic loss, disaster, political upheaval and cultural changes) and maintain psychological vitality and mental health (Bonnano, 2004; Harel, Kahana, & Kahana, 1993; Harel, Kahana, & Wilson, 1993; Wilson, 2004a; Wilson & Drozdek, 2004; Yehuda, 1998).

What are the characteristics of resilient persons that distinguish them from less resilient persons? What constitutes resilient behavior in different types of traumatic situations with varying degrees of stress demands, adversity, or the complexity of problems to be solved?

In a meta theory of resilience, (Richardson, 2002) proposed that the history of research on resilience can be classified in three ways: (a) identifying the unique characteristics of persons who cope well in the face of adversity, (b) identifying the processes by which resiliency is attained through developmental and life experiences, and (c) identifying the cognitive mechanisms that govern resilient adaptations.

Previous research on the phenomena of resilience has examined a substantial domain of critical factors thought to be associated with resilience and include genetics, neurobiological factors, childhood development, type of trauma or stressful life event, personality characteristics, cognitive style, prior history of exposure to stressful events, gender, age, capacity for affect regulation, social support, and ego defenses (Agaibi, 2003; Fredrickson, 2002; Schore, 2003; Southwick, Morgan, Vythilingham, Krystal, & Charney, 2004; Wilson, 1995; Zeidner & Endler, 1996; Zuckerman, 1999).

To facilitate a review of the relevant literature, we will organize this article into sections and attempt to draw conclusions from an analysis of the findings. To be clear about the importance of resiliency, the concept must be operationally defined. Wilson and Agaibi (in press) suggest that it is conceptually advantageous to define resilience as a “complex repertoire of behavioral tendencies.” They state that resilience characterizes a style of behavior with identifiable patterns of thinking, perceiving, and decision making across different types of situations. Current definitions of resilience vary from absence of psychopathology in a child of a severely mentally ill parent, to the recovery of a brain-injured patient, to the resumption of healthy functioning in survivors of extreme trauma (Folkman, 1997; Garmezy, 1996; Harel, Kahana, & Wilson, 1993; Wilson & Drozdek, 2004; Wilson & Raphael, 1993). In this regard, it is helpful to study longitudinally the process of resilience, examining positive versus negative adaptation, coping, and the operation of personality variables in different situational contexts. For example, is resilience a stable characteristic of personality or a variable dimension of behavioral adaptation under situational pressures? Is the study of resilience in relation to trauma a

universal paradigm by which to understand all forms of resilient behavior? Are resilient trauma survivors the “gold standard” examples of successful coping and adaptation?

In the most basic sense, resiliency has been defined as the ability to adapt and cope successfully despite threatening or challenging situations. Resilience is a good outcome regardless of high demands, costs, stress, or risk. Resilience is sustained competence in response to demands that tax coping resources. Resilience is healthy recovery from extreme stress and trauma (Wilson & Drozdek, 2004). Resilience has been conceptually linked with curiosity and intellectual mastery as well as the ability to detach and conceptualize problems (J. H. Block & Kremen, 1996). Resilience has also been postulated to include strong extroverted personality characteristics (e.g., hardiness, ego resilience, self-esteem, assertiveness, locus of control) and the capacity to mobilize resources.

As summarized by Caffo and Belaise (2003), psychological resilience is a consequence of positive human development and the capacity to cope with stressors. Protective and growth promoting factors are necessary to the development of competence and resilience, especially in disadvantaged urban youth (Parsons, 1994). Children, as well as adolescents, cope more effectively with adversity if they receive nurturing and stable care from others. Research evidence suggests that resilience is not gender specific and does not increase or decrease with age (Zeidler & Endler, 1996). It is, however, related to psychological development and changes in emotional and cognitive competency (Folkman, 1997; Fredrickson, 2001; Fredrickson & Tudade, 2003). Resiliency is a multidimensional construct that is defined by performance outcome, the adequacy of responses to normal and severe stressors, including traumatic ones, and how cognitive processes and the ability to modulate emotions influence the ability to utilize personal and social resources.

Stress Appraisal Processes

The perception and appraisal of stressors can be conceptualized as moderating factors to PTSD and comorbidity (Folkman, 1997; Lazarus & Folkman, 1984; Wilson, 2004b). Lazarus and Folkman (1984) suggested that an event will be perceived as stressful if the person believes that the stress exceeds coping capacity. The perception of overwhelming stressor demands may lead to self-attributions of inadequate competence to effect positive outcomes. In this regard, Garmezy (1987) found that children with poor self-esteem are vulnerable to interpersonal and academic stressors and tend to perceive events as more stressful. Compas and Phares (1991) found that using problem solving to cope with interpersonal stressors is correlated with lower levels of maladjustment in children. Compas and Phares predicted that the level of parents' and children's stress level would be correlated and found that fathers' symptoms were significant predictors of behavior problems and of children's self-reports of internalizing the stress. Research findings suggest that effective parenting can increase self-efficacy by modeling solutions to stress. Self-esteem and self-confidence function as personality moderators of traumatic experiences and serve as protective factors. Self-efficacy increases with previous mastery of stressful situations (White, 1959).

Longitudinal Research and the Identification of Resilient Factors

In this regard, Rutter (1990) defined three broad variables as protective factors: (a) personality coherence, (b) family cohesion, and (c) social support. Personality factors include level of autonomy, self-esteem and self-efficacy, good temperament, and positive social outlook. Family cohesion, warmth, and lack of discord or tension have been identified as protective factors (Garmezy & Masten, 1991). External support systems, whether perceived or used, promote good coping.

The Core Factors of Posttraumatic Vulnerability to PTSD

Wilson (1995) found that there were similar constellations of predictors of current wellbeing, positive mental health, and manifestations of resilience in these survivor populations that included: (a) locus of control (i.e., a sense of efficacy and determination, (b) self-disclosure of the trauma experience to significant others, (c) a sense of group identity and sense of self as a positive survivor, (d) the perception of personal and social resources to aid in coping in the post trauma recovery environment, (e) altruistic or prosocial behaviors, (f) the capacity to find meaning in the traumatic experience and life afterward, and (g) connection, bonding, and social interaction within a significant community of friends and fellow survivors. Viewed from the perspective of resilience, these seven factors appear to be identifying important classes of variables that interact together in generating resilience.

Hendin and Haas (1984), who found that Vietnam combat veterans with high resilience were characterized by six factors: (a) calmness under pressure, (b) acceptance of fear in self and others, (c) low levels of excessive violence in the war zone, (d) the importance of understanding and good judgment, (e) absence of guilt, and (f) humor.

The effects of hardiness as a personality trait have been studied in direct relation to coping, daily hassles, and life stresses. These studies have direct relevance to traumatic exposure and resilience in persons characterized as hardy. Maddi (1999a; Maddi & Hightower, 1999) examined the difference between high- and low-hardiness students on several measures of coping and attitudinal outlook. In the first study, Maddi and Hightower (1999) found that hardiness predicted actual transformational coping better than measured optimism. Undergraduate students with hardiness used more active coping and planning. Hardiness was negatively correlated with behavioral disengagement, denial, mental disengagement, and proneness to use alcohol to cope with stress. Hardiness was positively correlated with emotional and instrumental forms of social support. The authors conclude that hardiness reflects a propensity for active problem solving and capacity to mobilize resources as needed to achieve desired outcomes.

A GENERIC MODEL OF RESILIENCE IN RESPONSE TO PSYCHOLOGICAL TRAUMA

The model identifies key variables that interact dynamically in the determination of resilient behavior evoked by traumatic life experiences. The figure is a simplification of the various pathways by which resilience results from exposure to different types of traumatic events (see Wilson & Lindy, 1994, for a discussion). The model is a person-environment paradigm of resiliency in relation to the perception, processing, and

adaptation to traumatic stress. As such, it incorporates the earlier models presented by Green, Wilson, and Lindy (1985), Maddi (1999b), Richardson (2002), Wilson (1989), and Wilson et al. (2001). The integrative nature of the model helps to identify the complex levels of interaction among many classes of variables that can work together to produce a continuum of adaptive behavior and different degrees of resilient behavior in the wake of psychological trauma. Furthermore, as our review of the literature suggests, the model of resiliency in response to trauma serves to clarify which aspects of the resilience puzzle have been investigated empirically and which ones have not been studied at all or within the context of an interactional model that attempts to specify how traumatic events impact internal psychological processes at multiple levels of psychological functioning. To understand the plasticity of behavior in response to traumatic life events, it is necessary to recognize the multidimensional nature of traumatic experiences. Traumas are not equal in their impact to the psyche and vary greatly in their stressor dimensions (Wilson, 1989, 2004a; Wilson & Lindy, 1994). Second, there are individual subjective responses evoked by trauma that set in motion a cascade of internal psychological processes (Wilson, 2004b). Third, there are different types of stressor events (e.g., single, multiple, single vs. complex) that vary in their severity of impact and resultant states of allostatic load (McEwen, 1998, 2002; Wilson et al., 2001).

As an intricate part of allostatic load phenomena, there are degrees of affect dysregulation that are directly related to the cognitive processing of traumatic experiences (Schoe, 2002). There are at least five distinct patterns of allostatic load caused by trauma that result in different baseline levels of organismic functioning following trauma (McEwen, 2002). In other words, there is a new “set point” of stress response patterns (Wilson et al., 2001; Wilson & Thomas, 2004).

RESILIENCE: RESEARCH EVIDENCE AND CONCEPTUAL CONSIDERATIONS FOR POSTTRAUMATIC STRESS DISORDER

In writing about this research and reviews of the literature on resilience, Garmezy stated that three types of factors in children at risk promote resilience, or success later in life: (1) temperamental or dispositional factors of the individual, (2) family ties and cohesion, and (3) external support systems [Garmezy 1993; Garmezy et al., 1984]. “Internal locus of control” is defined as the belief that forces shaping one’s life are largely within one’s control [Luthar, 1991]. This belief may influence a person to make more active attempts to overcome difficult situations. The opposite of this concept is found in the theory of “learned helplessness,” in which people who believe themselves to be powerless becomes more passive and restricted in their coping abilities [Abramson et al., 1978].

Kobasa [1979b] introduced the concept of “hardiness,” which has been defined as a stable personality resource that consists of three psychological attitudes and cognitions: commitment, challenge, and control. “Commitment” refers to an ability to turn events into something meaningful and important; “control” refers to the belief that, with effort, individuals can influence the course of events around them, and “challenge” refers to a

belief that fulfillment in life results from the growth and wisdom gained from difficult or challenging experiences [Maddi and Khoshaba, 1994].

More recently, the term “resilience” has been used in the context of acute trauma, such as combat, assault, accidents, or natural disasters. In this context, resilient individuals are those who experience a trauma but do not develop PTSD. About 50–60% of Americans are exposed to significant traumatic events over the course of their lifetime; of those exposed, 8–20% develop PTSD [Kessler et al., 1995]. We now review some of the factors already discussed as contributing to resilience that are also relevant in this context.

RISK FACTORS FOR PTSD

A number of risk factors for PTSD have been identified and include pretrauma, peritrauma, and posttrauma variables. Pretrauma variables exist before the trauma occurs. Examples include lower educational level [Kessler et al., 1999]; lower intelligence [Orr et al., 1998]; neurodevelopmental delays, such as delayed onset of walking and speech, as well as learning disabilities [Orr et al., 1998]; previous history of mental disorders [Kessler et al., 1999]; and female gender [Brewin et al., 2000]. Relevant peritraumatic variables include the magnitude of the stressor [Carlier et al., 1997] and immediate reactions to the stressor, such as fear of threats to one’s safety [Basoglu et al., 2005] or dissociation [Marmar et al., 1994]. Pertinent posttraumatic variables include perceived social support [King et al., 1998; Koenen et al., 2003], subsequent life stress [Green and Berlin, 1987], and ongoing threat to safety [Basoglu et al., 2005]. Brewin et al. [2000] performed a meta-analysis of PTSD risk factors identified in 85 different studies. Effect sizes were combined to provide scores representing the strength of each predictive effect. They found the strongest combined effect sizes for (in order) (1) lack of perceived social support, (2) subsequent life stress, (3) trauma severity, (4) adverse childhood, and (5) low intelligence.

RISK FACTORS VERSUS RESILIENCE FACTORS

The question of whether a factor associated with resilience can be considered the converse of a risk factor has been raised. Intuitively, some risk factors seem to tap similar domains as resilience factors, whereas others do not. For example, “social support” could represent a person’s ability to gather social resources, a possible “resiliency” characteristic. However, since neurodevelopmental delays in childhood appear to represent a risk factor for the development of PTSD, it does not seem useful to think of a lack of neurodevelopmental delays as conferring particular resilience. Similarly, though being female is a risk factor for developing PTSD after a trauma, it does not seem particularly informative to think that being male represents a resiliency factor. Rutter [1987] has argued that resilience is more than just the “flip-side” of risk factors, but rather represents qualities encompassing process and mechanisms that confer protection. Risk factors “lead directly to disorder,” whereas resiliency factors “operate indirectly, with their effects apparent only by virtue of their interactions” with other variables. For example, a positive coping strategy that confers resilience may not be apparent except when a stressful event causes it to be revealed. Another way to conceptualize whether a variable associated with PTSD is a resiliency or risk factor is to examine whether it

influences the positive pole (i.e., creating protective changes), or whether it affects the individual in a negative way, adding harmful influences or removing protective ones. However, even this conceptualization is not without difficulties, because an individual's characteristics can be viewed from multiple perspectives. For example, social support (measured as perceived social support) may be seen either as a potential risk factor for PTSD or as a manifestation of resilience, representing the presence or absence of an individual's ability to garner a critical resource to buffer the impact of traumatic stress. If we define a resiliency characteristic as a factor that is intrinsic to the individual and that might be modifiable (e.g., unlike gender or neurodevelopmental delays), then we can describe a set of psychological and biological factors that may be interrelated and that confer protection against psychopathology in the face of stress—in this case, PTSD. Using this definition, we can examine the previously described psychological variables, as well as biological variables associated with resilience. Although some variables seem to indicate environmental factors, such as social support and family cohesion, it is individuals' contribution to these factors that confers their status as characteristics of resilience. For example, a resilient person may have the ability to seek and extract support from others, and enhance his or her social support; similarly, the person contributes to the cohesion in his or her family. The examination of group behavior that may confer protection, or “community resilience,” is beyond the scope of this review. “Protective factors” in PTSD might include environmental factors outside of the individual's control, such as socioeconomic status and lower levels of subsequent life stress; however, it is difficult to determine the relative contribution that an individual makes to these factors (Rutter,1987).

PSYCHOLOGICAL RESILIENCE TO PTSD

Psychological resiliency variables with regard to PTSD would ideally be measured before the onset of trauma, and correlated with the subsequent development of PTSD. However, this is almost never the case in empirical studies. Most of the data describe attributes of the segment of the group exposed to the trauma that did not end up developing PTSD, or that developed comparatively fewer symptoms. However, in some cases, the presence or absence of resiliency characteristics may be expressed only after a trauma occurs; thus, these characteristics may not be detectable in the unstressed state. Alternatively, it is possible that a protective psychological factor, such as an internal locus of control, may be learnable or improvable after a trauma and before the onset of PTSD a month or more later. Further research is needed in this area. Coping styles have been examined in traumatized populations, with better outcomes associated with positive or action-oriented styles. For example, Johnsen et al. [2002] measured three dimensions of coping styles in soldiers caught in an avalanche. They found that “task-focused coping” (e.g., “I make a plan of action”) or “emotion-focused coping” (e.g., “I let my feelings out”), as opposed to an “avoidant coping style” (e.g., “I refuse to believe that it happened”), was associated with lower PTSD symptom scores. Similarly, research examining coping strategies in fire service personnel found that an avoidant coping style was associated with a higher level of PTSD symptoms following trauma exposure [Beaton et al., 1999]; however, retrospective assessment of avoidance as a coping strategy may be confounded by the fact that avoidance is a common symptom in PTSD and may thus represent a result

of PTSD rather than a predictor. Other coping strategies were nonsignificantly associated with protection from PTSD symptoms, such as “cognitive positive self-talk” (i.e. “I remind myself that I am providing help” and “I remind myself that things could be worse”). In a study of women who had been assaulted, Valentiner et al. [1996] correlated PTSD symptoms with higher scores on a factor construct that they called “wishful thinking” (i.e., “You wished that you could change the way you felt”) and negatively correlated with “positive distancing” (i.e., “You accepted the next best thing to what you wanted”). Hope, optimism, and religious behavior (i.e., prayer and faith), were also associated with fewer symptoms of anxiety and depression after the September 11, 2001, events, although PTSD symptoms were not specifically assessed [Ai et al., 2005b]. Another variable also associated with resilience in the child development and adult life stress literature reviewed earlier is the belief in an internal locus of control, which is one of the three concepts measured in the Hardiness Scale [Kobasa, 1979b]. An internal locus of control (feeling that one can generally influence one’s life circumstances) has been associated with lower levels of PTSD symptoms in several studies.

For example, locus of control was measured prior to trauma in a study of women going through childbirth [Soet et al., 2003]. Out of 103 subjects, 14 women reported PTSD symptoms from the experience 1 month later. Greater premorbid internal locus of control significantly predicted the lack of PTSD symptoms [Soet et al., 2003]. Similarly, in another study, children with higher levels of internal locus of control who were exposed to war-related events such as violence or loss of home had lower rates of PTSD symptoms at a 3-year follow-up [Kuterovac-Jagodic, 2003]. Similarly, the concept of “hardiness” we discussed earlier includes the measurement of perceived control as a critical cognitive variable. An examination of hardiness in a group of Vietnam veterans after war-related trauma was associated with a lower likelihood of developing PTSD symptoms [King et al., 1998]. Consistent with the concept of locus of control, a “sense of control” over the specific traumatic situation may also protect against PTSD. Although this has not been prospectively tested, it has been examined in individuals undergoing treatment for PTSD and is associated with improved maintenance of treatment gains [Livanou et al., 2002]. Psychological preparedness may promote a sense of control over the trauma: In a study examining psychopathology in individuals who were tortured, those who were political activists appeared to have more resilience. These individuals were thought to be protected by their commitment to a cause, training in stoicism, and prior knowledge about torture techniques [Basoglu et al., 1997]. Other researchers have also found that prior training in emergency work appears to enhance resilience [Alvarez and Hunt, 2005; Hagh-Shenas et al., 2005].

King et al. [1998], who examined resilience variables in a group of 1,632 Vietnam veterans, found that several factors, including higher levels of both perceived (“functional”) and structural (i.e., membership in organizations) social support were associated with a lower likelihood of PTSD. In a study of Kosovan Albanian refugees living in England [Turner et al., 2003], family cohesion was associated with lower risk for PTSD symptoms. Although these factors may appear to be protective factors rather than resiliency factors, outside of the control of the individual, there is evidence that the individual’s active engagement in relationships, rather than just the increased availability

of support, helps mediate the protection from PTSD. Previous exposure to trauma or stress has a complicated relationship to resilience. A history of prior exposure to trauma, such as child abuse, is generally associated with the development of more severe PTSD symptoms after a new trauma [Chang et al., 2005; Fullerton et al., 2004]. However, it appears that certain types of exposure to stress may have a protective effect for individuals later exposed to new trauma. Rutter [1987] writes that the impact of the stress depends on how the individual experiences it. He states that “protection [from adverse sequelae] in this case resides not in the evasion of the risk, but in successful engagement with it.” Interestingly, in one of the studies of firefighters cited earlier, Regehr et al. [2000] found that a higher number of traumatic exposures actually increased subjects’ sense of internal locus of control and self-efficacy. Thus, trauma exposure may represent a protective rather than vulnerability factor for adverse posttraumatic sequelae, if it is associated with an increased sense of mastery or growth.

BIOLOGICAL MEASURES OF RESILIENCE

A growing body of research has focused on determining physiological or biological differences in individuals who experienced a trauma and either developed or did not develop PTSD. Similar to the studies of psychological variables, studies of biological variables have relied mostly on assessments of groups of people only after a traumatic event has occurred. However, determination of true biological resilience factors would involve assessing these variables before the onset of a trauma. Unfortunately, very few prospectively derived data exist. Most studies have examined differences in individuals with PTSD compared to a normal population; few data exist examining the relative differences in a trauma-exposed population that did not develop PTSD. However, examination of the neurobiology of PTSD may inform our understanding of the critical factors underlying resilience and shape future lines of inquiry. Hypothalamic–pituitary–adrenal (HPA) axis. Much of the research on the pathophysiology of PTSD has focused on dysregulation of the HPA axis. Evidence suggesting a role for HPA axis dysregulation in the development of PTSD is supported by clinical studies demonstrating decreased 24-hour urinary cortisol levels in subjects with PTSD. For example, Yehuda et al. [1995] examined 22 Holocaust survivors with PTSD and 25 without PTSD. Subjects with PTSD had an average of 32.6 mg of cortisol in their 24-hour urine sample, compared to 62.7 mg of cortisol in those without PTSD. This finding replicates data from a number of studies [Mason et al., 1986; Yehuda et al., 1990, 1993], although other studies have reported higher than normal cortisol levels in individuals with PTSD [De Bellis et al., 1999; Lemieux and Coe, 1995; Maes et al., 1998; Pitman and Orr, 1990; Rasmusson et al., 2001]; in all, nine of the 12 studies examining 24-hour urinary cortisol have found abnormal cortisol levels, either high or low, in patients with PTSD. The discrepancies in findings reported in different studies may be attributable, in part, to differences in illness severity among the patient populations studied: with lower cortisol levels associated with more severely ill patients (i.e., hospitalized) and higher cortisol levels associated with less ill patients (i.e., outpatients; Rasmusson et al., 2003]. Other factors contributing to these discrepancies include differences in the timing of measurements relative to the acuity of the disorder (acute vs. chronic), and differences in measurement techniques, with some researchers measuring plasma or saliva cortisol at fixed times during the day,

whereas others measured it after waking or after performance of a dexamethasone suppression test. However, even studies employing similar methodology have yielded discrepant results, suggesting the potential importance of broadening the area of inquiry to include alternative measurements of neuroendocrine function. In addition to cortisol, dehydroepiandrosterone (DHEA) and its metabolite dehydroepiandrosterone sulfate (DHEAS) are also adrenal gland products that are secreted in response to ACTH. Animal studies have indicated that DHEAS is released under stressful conditions and exhibits memory-enhancing, antidepressant, anxiolytic, and antiaggression properties [Morgan et al., 2004]. In cell culture experiments, DHEA and DHEAS enhanced neuronal survival in the face of N-methyl-D-aspartate (NMDA) receptor-induced toxicity, leading the authors to conclude that DHEA and DHEAS are important protectors of cells undergoing damage or stress [Kimonides et al., 1998]. These studies suggest that DHEA and DHEAS are involved in modulating an organism's vulnerability to stress. Studies examining levels of DHEA and DHEAS in PTSD have also generated mixed results; some researchers have found higher than normal levels in subjects with PTSD, whereas others found lower than normal levels in subjects with PTSD and depression [Sondergaard et al., 2002; Spivak et al., 2000]. DHEA appears to have an antagonistic relationship with cortisol. Whereas cortisol is a glucocorticoid, DHEA has antiglucocorticoid properties that appear to protect neurons [Blauer et al., 1991; Browne et al., 1992]. For example, research on metabolites of DHEA in the brain suggests that they interfere with uptake of activated glucocorticoid receptors [Morfin and Starka, 2001]. In addition, administration of DHEA in humans resulted in a decrease of plasma cortisol [Kroboth et al., 2003]. Given this antagonistic relationship of DHEA(S) with cortisol, and because cortisol is associated with improved emotional memory encoding [Buchanan and Lovallo, 2001; Cordero et al., 2002], DHEA(S) may antagonize these enhanced memory effects, resulting in decreased PTSD symptoms of reexperiencing, such as nightmares or flashbacks. Because of the antagonistic relationship, levels of DHEA(S) may be more meaningful when examined in relationship with cortisol—indeed, preclinical and clinical data have found the DHEAS:cortisol ratio associated with improved functioning [Morgan et al., 2004].

Catecholamines. The stress response involves both the sympathetic nervous system and the HPA axis; consequently, there has also been an interest in norepinephrine and epinephrine in patients with PTSD. For example, Kosten et al. [1987] measured urinary norepinephrine and epinephrine levels in hospitalized patients with PTSD, and found higher levels of norepinephrine than in other hospitalized psychiatric control groups with depression, bipolar disorder, and schizophrenia. Other groups reported an increased release of catecholamines in PTSD subjects after exposure to combat-related stimuli, such as films or evocative sounds [Blanchard et al., 1991; Liberzon et al., 1999; McFall et al., 1990]. A few studies have examined norepinephrine or epinephrine levels at the time of trauma, to investigate their potential relationship with later development of PTSD. Delahanty et al. [2005] examined urinary epinephrine levels in children admitted to the hospital after an acute trauma and found that elevated epinephrine levels were associated with higher levels of PTSD symptoms 6 weeks later. Schelling [2002] reported that patients who received epinephrine as part of their intensive care unit (ICU) medical care had more types of trauma memories 6 months later compared to similarly severely ill

patients in the ICU who had not received epinephrine. Adrenergic stimulation has been shown to enhance memory consolidation in animals and humans. For example, administering amphetamine to human subjects before learning of word lists enhances memory of those words [Soetens et al., 1995]. A significant part of the memory consolidation process appears to continue after exposure to the memory task, which is also enhanced by noradrenergic stimulation.

Neuropeptide Y (NPY). NPY, a 36-amino acid peptide that is colocalized with neurons containing norepinephrine, may be a natural resiliency factor for stress. NPY is anxiolytic when administered intraventricularly in animals [Heilig et al., 1989]. NPY administration promotes sleep, as well as decreases cortisol and ACTH production in humans [Antonijevic et al., 2000]. Widdowson et al. [1992] reported lower NPY levels in the brains of individuals who had committed suicide. Individuals trained to remain unperturbed under stress manifest increased levels of NPY after a stressful event: Morgan et al. [2004] measured NPY 24 hours after Special Forces soldiers and non-Special Forces soldiers underwent a simulated prisoner-of-war experience. The Special Forces soldiers regained their normal NPY levels 24 hours later, whereas levels in the non-Special Forces were significantly lower. This finding was hypothesized to suggest that Special Forces soldiers had physiologically adjusted to handle stress better, either as a result of their native endowment or by dint of their training, and the normalized NPY levels served as a marker of this resilience. Supporting this hypothesis, individuals with PTSD have been found to have lower NPY levels at baseline and a blunted yohimbine-induced NPY increase [Rasmusson et al., 2000]. NPY may exert its stress-buffering effect by way of its counterregulatory effects on the locus coeruleus–norepinephrine system (NPY appears to inhibit norepinephrine release) and on corticotropin-releasing hormone [CRH; NPY blocks CRH's anxiogenic effects; Britton et al., 2000]. In addition, NPY may disrupt fearful memory consolidation; injection of NPY in the amygdala of mice impaired memory in a foot shock task [Flood et al., 1989].

Allopregnanolone, another product of the adrenal gland associated with the stress response, may be a potential resiliency factor relevant to the development of PTSD. Stress lowers γ -aminobutyric acid A (GABA-A) transmission, causing neuronal overexcitation; allopregnanolone modulates the GABA-A receptor, counteracting this effect of stress [Higashi et al., 2005]. For example, Bitran et al. [1995] showed that administration of the allopregnanolone precursor progesterone in rats produces a decrease in anxiety similar to that observed after the administration of benzodiazepine compounds, and that allopregnanolone's effects on the GABA-A receptor mediate this effect. Similarly, Higashi et al. [2005] found that allopregnanolone increased in rats exposed to recorded distress cries of other rats, as a putative homeostatic mechanism to counteract stress. Allopregnanolone increased in students undergoing test-taking stress [Droogleever Fortuyn et al., 2004]. Perhaps resilience corresponds, in part, to an ability to increase allopregnanolone levels during stress. Interestingly, allopregnanolone levels decrease when mice are socially isolated and placed in individual living quarters. Because social contact and support in humans promotes resilience and protects against anxiety and

depression, this effect may be mediated in part by changes in levels of allopregnanolone and other neuroactive steroids (Dong et al., 2001).

MEASUREMENT OF RESILIENCE

Numerous scales for measuring resilience and hardiness have been developed over the years; however, there has been little consensus on which scales most effectively describes and quantitatively evaluates resiliency characteristics. Some early studies examining resilience in children and adolescents used combinations of scales examining specific resilient characteristics and risk factors, such as locus of control [Luthar, 1991]. Some scales that have been commonly used to measure the locus-of-control component of resilience include the Locus of Control Scale [Nowicki and Strickland, 1973] and the Internal– External Locus of Control Scale [Rotter, 1966]. Other scales have been used collectively to assess competence or coping skills, two qualities that may be related to resilience. Developed to measure hardiness—a concept related to resilience—based on Kobasa’s [1979b] original description of the core elements of commitment, control, and challenge. The relationship of hardiness to resilience has not been clearly defined, but the hardiness characteristics of commitment, control, and challenge appear to be considered features of resilience, and resilience scales have used the construct of hardiness as a key point of quantitative evaluation.

One of the earliest scales to include the term “resilience” in its title was the Resilience Scale [RS; Wagnild and Young, 1993], which includes 25 items and evaluates qualities of personal competence and acceptance of self and life. This scale was used in a study that examined resilience in sheltered, battered women [Humphreys, 2003]. The Resilience Scale for Adults (RSA), independently developed by Friborg et al., contains items related to five components of resilience: personal competence, social competence, family coherence, social support and personal structure [Friborg et al., 2003; Hjemdal et al., 2001]. Each of the five components corresponded to one of the three key categories of resilience described by Werner [1989, 1993], Rutter [1990], and Garmezy [1993]: dispositional attributes, family cohesion, and external support systems, respectively.

Trauma

The rapid technological discoveries and advances in neuroscience that began in the 90's have changed our perceptions about the origins of health, emotional and psychological stress, chronic physical illnesses and their healing. We now know that brain development is an experience-dependent social process that can override genetics. Knowledge of the brain's plasticity, immaturity at birth and capacity for life-long change, emphasizes the central role of early life experience in triggering stress disorders.

These stress disorders include PTSD (Post Traumatic Stress Syndrome), depressive disorders, anxiety disorders, learning disabilities and chronic physical health problems. The new brain technology helps us understand the difference between normal stress responses that return to a state of regulation and traumatic stress responses that do not normalize. It also gives us reason to believe that neurological change from illness and disability to wellbeing is possible throughout life.

How does experience shape the brain and both cause and repair stress disorders?

At birth, the brain, which is command central for the body, is its most undifferentiated organ with a plasticity that enables the brain to create new neural circuitry throughout life. New brain imaging resources including electroencephalogram (EEG), quantitative EEG studies (QEEG), positron emission tomography (PET), single photon emission computed tomography (SPECT) and functional MRI (fMRI) show us that throughout life, the brain remains capable of renewing its structure and function and does so as a result of experience—especially social experience. The traumatic neural dysregulation caused by early life trauma mirrors that of traumatic dysregulations caused by overwhelming events experienced later in life. Stress symptoms range from those of PTSD, to depression, anxiety, learning problems, social disorders and chronic physical health problems.

A child's brain is so socially attuned that unspoken communication shapes its development to a remarkable degree. The brain's amazing plasticity at this stage of development sets a lifelong template for thoughts, feelings, behavior –and a variety of stress related disorders. Moreover, because the brain *remains flexible throughout life*, nonverbal communication retains the capacity to change. Studies in people over age ninety show us images of mature brains that continue to produce new neural pathways at a time when older pathways are dying. The same experiential and social factors that profoundly shape the brain initially can also be instrumental in repairing the causes and symptoms of stress related disorders (www.yahoo.com).

How does early-life trauma impact development?

Attachment, the emotional bond formed between an infant and its primary caretaker, profoundly influences both the structure and function of the developing infant's brain. Failed attachment, whether caused by abuse, neglect or emotional unavailability on the part of the caretaker, can negatively impact brain structure and function, causing developmental or relational trauma. Early-life trauma affects future self-esteem, social awareness, ability to learn and physical health. When the attachment bond goes well, neurological integration develops normally, and relationship brings the expectation of safety, appreciation, joy and pleasure. If the attachment bond was unsuccessful and traumatizing, neural dysregulation and memories of a failed relationship become the basis for adult expectations of intimacy. Fortunately, relationships with secure adult partners can bring about emotional healing in insecure partners. To learn more about how early attachment bonding influences adult relationships see article [Relationship Advice: How Understanding Adult Attachment Can Help](#).

Attachment isn't the only thing that creates early-life trauma. Neurological dysregulation, brought about by neurologically disabling experiences in the womb and at birth, is also traumatizing and interferes with the attachment bond. If the dysregulation isn't severe, a good attachment can help bring about neurological regulation in a dysregulated baby. To learn more about infantile attachment read the article [Parenting: Attachment, Bonding and Reactive Attachment Disorder](#).

There is a correlation between early trauma and resiliency or vulnerability to highly stressful experiences later in life. People who have been traumatized as infants and young children are more at risk for traumatic experiences later in life. In helping people who have become traumatized, we don't need to be neuroscientists but we do need to use interventions that change the brain.

How does traumatic response differ from a normal stress reaction?

Stress is an essentially normal response to feeling overwhelmed or threatened. Fight, flight and freeze are survival responses that developed to protect us from danger. In moments of stress, hormones release and, as our heart beat speeds up and blood pressure increases, we breath quicker, move faster, hit harder, see better, hear more accurately, and jump higher than we could only seconds earlier. If we're nervously driving at high speed on the freeway at night, we can respond more effectively to unexpected hazards because we are exceptionally alert. These neurological and physiological changes enable us to better protect ourselves in the moment. But once the danger has passed, our nervous systems calm down and we return to a state of equilibrium or neurological balance. Positive stress can produce feelings of exhilaration and opportunity. Not all people experience stress in the same way. One person's exhilarating challenge may be another's terrifying experience.

Much has been written about the disadvantages of stressful life styles that keep us running on overwhelm and create constant physiological stimulation so that our bodies are kept from returning to a quieter calmer state of balance. But social and life style changes can usually restore physiological and psychological balance. This is not the case when someone becomes traumatized. Traumatization is stress frozen in place –locked into a pattern of neurological distress that doesn't go away by returning to a state of equilibrium. Traumatization promotes ongoing disability that can take many mental, social, emotional and physical forms. Like normal stress, trauma is also experienced differently by different individuals.

What are the common links between both high and low impact experiences that trigger traumatic responses?

Trauma and loss are parts of life. It is not what happens to us but how we react to it that determines whether or not a life-threatening experience or a series of less intense experiences will, in fact, be traumatizing. The more vulnerable the organism, the more it is at risk for the neural dysregulation that can follow traumatic experiences. Whether dysregulation follows an intense event described with symptoms of PTSD or a seemingly benign event or series of events with symptoms like depression, anxiety or relationship disorders, emotionally traumatizing events contain three common elements:

- It was unexpected;
- The person was unprepared; and
- There was nothing the person could do to prevent it from happening.

What kinds of experience can be traumatic?

The ability to recognize emotional trauma has changed radically over the course of history. Until recently psychological trauma was noted only in men after catastrophic wars. The women's movement in the sixties broadened the definition of emotional trauma to include physical and sexual abuse of women and children. Now, the impact of psychological trauma has extended to experiences that include

- Natural disasters, such as earthquakes, fires, floods, hurricanes, etc.
- Physical assault, including rape, incest, molestation, domestic abuse and serious bodily harm
- Serious accidents, such as automobile or other high-impact scenarios
- Experiencing or witnessing horrific injury, carnage or fatalities

Other often overlooked potential sources of psychological trauma include

- Falls or sports injuries
- Surgery, particularly emergency, and especially in first 3 years of life
- Serious illness, especially when accompanied by very high fever
- Birth trauma
- Hearing about violence to or sudden death of someone close

Traumatic stress in childhood can be caused by a poor or inadequate relationship with a primary caretaker. Sources of this developmental or relational trauma result from

- Forced separation very early in life from the primary caregiver
- Chronic mis-attunement of a caregiver to a child's attachment signals ("mal-attachment")
- Reasons such as neurological physical or mental illness, depression, grief or unresolved trauma
- Neurological disruption caused by experiences in the womb or during birth

Research also shows that emotional trauma can result from such common occurrences as

- An auto accident
- The breakup of a significant relationship
- A humiliating or deeply disappointing experience
- The discovery of a life-threatening illness or disabling condition, or other similar situations

Traumatizing events can take a serious emotional toll on those involved, *even if the event did not cause physical damage.*

What are signs and symptoms of developmental or relational trauma?

Insecure attachments influence the developing brain, which in turn affects future interactions with others, self-esteem, self-control, and the ability to learn and to achieve optimum mental and physical health. Symptoms can include the following:

- Low self esteem
- Needy, clingy or pseudo-independent behavior
- Inability to deal with stress and adversity
- Lack of self-control
- Inability to develop and maintain friendships
- Alienation from and opposition to parents, caregivers, and other authority figures
- Antisocial attitudes and behaviors
- Aggression and violence
- Difficulty with genuine trust, intimacy, and affection
- Negative, hopeless, pessimistic view of self, family and society
- Lack of empathy, compassion and remorse
- Behavioral and academic problems at school
- Speech and language problems
- Incessant chatter and questions
- Difficulty learning
- Anxiety
- Depression
- Apathy
- Susceptibility to chronic illness

- Obsession with food: hordes, gorges, refuses to eat, eats strange things, hides food
- Repetition of the cycle of maltreatment and attachment disorder in their own children when they reach adulthood.

What overarching principles aid professionals with attachment and trauma issues?

Principles of thought:

- In personal and social health, emotional/psychological trauma stands out as a primary predictor of future mental, emotional, learning and physical problems.
- While some degree of stress may be beneficial to the organism, trauma creates an ongoing threat that has profound influence on the developing brain and development in general
- Emotional trauma is often linked to attachment issues
- Emotional trauma is more likely to be caused by neglect (depression, grief, trauma) rather than abuse
- The separation between mental and physical health is no longer creditable.
- Social and life-style factors profoundly influence both cause and cure of mental and emotional disability, and there is an abundance of solid sociological research to support this conclusion.

Principles of practice:

- Young children depend on primary caretakers for brain regulation and development. Therefore, treating the parent is the most efficient way to treat the child.
- Brain change is a social process triggered by physical and emotional experience.
- Physical and emotional experiences are engaged by nonverbal forms of communication, including eye contact, facial expression, tone of voice, posture, touch, intensity and timing or pace.
- The nonverbal right-brain-to-right-brain process that creates reparatory change requires us as professionals to follow, moment by moment, our physical and emotional experiences in addition to our conscious reflections.

What do professionals need to know when working with relational trauma?

Why traditional talking therapy training usually isn't complete for working with relational trauma

Traditional psychotherapy can, but often does not, work with the intention of changing the brain –and brain change from dysregulation to regulation is the goal of therapeutic intervention for traumatized individuals. In order to accomplish this change, the following need to occur:

- Physical sensing in the body
- Affective emotions are felt and communicated
- Communication is nonverbal
- Advice, interpretation, and problem solving are kept to a minimum
- Playfulness is encouraged
- Disconnection is valued as an opportunity for repair

How somatic psychotherapy (with trauma) differs from traditional body work.

The senses are a gateway to regulation, finding equilibrium and creating safety in the body. Traditional body work is usually done by a trained practitioner whose primary concern is the physical body. Most often, the client lies on a table and the practitioner touches the body. Somatic psychotherapy engages the body but doesn't necessarily have to include touch. Somatic psychotherapy may or may not involve touch. Somatic psychotherapy

- Begins with awareness
- Focuses on sensation
- Names the affective experience
- May or may not include touch

Pynoos et al. (1996) discusses the effects of traumatic stress upon children's long term development. They point out recent psychological studies that indicate interference in narrative coherence (*ability to organize material into beginning, middle, and end), emotional regulation (including differentiating affective states, expressing those states, and understanding the origin and consequence of negative states), developmental transitions, and transitions in peer relationships. These four areas are each affected differently according to developmental level, and subsequent development of each is itself affected. These abstract psychological factors seem at first far removed from the classroom. Yet the school personnel wrestle every day with the consequences of trauma (Jonson, 1998, P 79).

Why nonverbal cues play such an important role in therapy

Non-verbal cues are estimated to be responsible for 80 percent of what helps the client feel safe in therapy. Subtle cues are picked up from the clients' body language, tone of voice, etc., and transmitted back as nonverbal understanding that the therapist knows of the client's deepest experiences.

What the importance of reciprocal play is

Reciprocal play is a natural spontaneous way to connect nonverbally and create an experience of safety. In addition to creating neurological safety, playful interaction breaks down differences including age, sex and role. Reciprocal play is an equalizing dance that soothes, calms, and creates the context for mutuality and connection. Interactive play:

- Releases endorphins,
- Stimulates interactive brain to brain resonance
- Facilitates pendulation between dysregulation / 3 and regulation
- And it's fun!

Why disconnect or conflict offers an opportunity for repair and growth

Disconnect (conflict/disagreement) is an opportunity for deep repair – for learning to regain trust in others. There is little growth without chaos, so we need the disruption that leads to repair. Parenting is about disruption and repair, over and over again. And later life relationships are tested and strengthened by their ability to absorb differences.

Tips for therapists who have been trained in more traditional therapies:

- Incorporate a more body-oriented approach
- Practice neurological self-regulation and teach it
- Appreciate the value of conflict in therapy –use it , don't avoid it
- Base your communication process on nonverbal cues
- Focus on the relational element for brain change
- Take cues from the client: client leads, not therapist
- Introduce playfulness into the therapeutic process

Conduct Disorder

What is Conduct Disorder?

Conduct disorder is a repetitive and persistent pattern of behavior in children and adolescents in which the rights of others or basic social rules are violated. The child or adolescent usually exhibits these behavior patterns in a variety of settings—at home, at school, and in social situations—and they cause significant impairment in his or her social, academic, and family functioning.

What are the signs and symptoms of Conduct Disorder?

Behaviors characteristic of conduct disorder include:

- Ø Aggressive behavior that causes or threatens harm to other people or animals, such as bullying or intimidating others, often initiating physical fights, or being physically cruel to animals.
- Ø Non-aggressive conduct that causes property loss or damage, such as fire-setting or the deliberate destruction of others' property.
- Ø Deceitfulness or theft, such as breaking into someone's house or car, or lying or "conning" others.
- Ø Serious rule violations, such as staying out at night when prohibited, running away from home overnight, or often being truant from school.

Many youth with conduct disorder may have trouble feeling and expressing empathy or remorse and reading social cues. These youth often misinterpret the actions of others as being hostile or aggressive and respond by escalating the situation into conflict. Conduct disorder may also be associated with other difficulties such as substance use, risk-taking behavior, school problems, and physical injury from accidents or fights.

How common is Conduct Disorder?

Conduct disorder is more common among boys than girls, with studies indicating that the rate among boys in the general population ranges from 6% to 16% while the rate among girls ranges from 2% to 9%. Conduct disorder can have its onset early, before age 10, or in adolescence. Children who display early-onset conduct disorder are at greater risk for persistent difficulties, however, and they are also more likely to have troubled peer

relationships and academic problems. Among both boys and girls, conduct disorder is one of the disorders most frequently diagnosed in mental health settings.

What does the research say about Conduct Disorder?

Recent research on Conduct Disorder has been very promising. For example, research has shown that most children and adolescents with conduct disorder do not grow up to have behavioral problems or problems with the law as adults; most of these youth do well as adults, both socially and occupationally. Researchers are also gaining a better understanding of the causes of conduct disorder, as well as aggressive behavior more generally. Conduct disorder has both genetic and environmental components. That is, although the disorder is more common among the children of adults who themselves exhibited conduct problems when they were young, there are many other factors which researchers believe contribute to the development of the disorder. For example, youth with conduct disorder appear to have deficits in processing social information or social cues, and some may have been rejected by peers as young children.

Despite early reports that treatment for this disorder is ineffective, several recent reviews of the literature have identified promising approaches treating children and adolescents with conduct disorder. The most successful approaches intervene as early as possible, are structured and intensive, and address the multiple contexts in which children exhibit problem behavior, including the family, school, and community. Examples of effective treatment approaches include functional family therapy, multi-systemic therapy, and cognitive behavioral approaches which focus on building skills such as anger management. Pharmacological intervention alone is not sufficient for the treatment of conduct disorder.

Conduct disorder tends to co-occur with a number of other emotional and behavioral disorders of childhood, particularly Attention Deficit Hyperactivity Disorder (ADHD) and Mood Disorders (such as depression). Co-occurring conduct disorder and substance abuse problems must be treated in an integrated, holistic fashion.

Why are assessment and treatment important?

Assessment and diagnosis of conduct disorder—or any emotional or behavioral disorder of childhood—should be done by a mental health professional, preferably one who is

trained in children's mental health. Any diagnosis must be made in consultation with the child's family. The assessment process should include observation of the child, discussion with the child and family, the use of standardized instruments or structured diagnostic interviews, and history-taking, including a complete medical and family / social history. When assessing and diagnosing any childhood emotional or behavioral disorder, the mental health professional should consider the social and economic context in which a child's behavior occurs.

Accurate assessment and appropriate, individualized treatment will assure that all children are equipped to navigate the developmental milestones of childhood and adolescence and make a successful adaptation to adulthood. Treatment must be provided in the least restrictive setting possible.

Neurosis

Since their mid-eighties beginnings, and despite a catalog that boasts some of the most moving sounds in visceral heavy music, NEUROSIS have always strived to incorporate light and balance as well as aggression and venom. Over the course of NEUROSIS' audio and visual evolution, their unique sound has placed greater demands and offered increased rewards to all who've embraced it. NEUROSIS (Steve Von Till (vocals / guitar), Dave Edwardson (bass / vocals), Jason Roeder (drums), Noah Landis (keyboards) and Scott Kelly (guitar / vocals)) have continuously evolved, growing stronger and more complete, to become the formidable collective that they are today.

After the release of 1987's Pain of Mind, NEUROSIS began to experiment with music of varied textures, and in 1990 released The Word As Law. San Francisco's legendary Alternative Tentacles label worked with the band during the formation and release of their next two albums, 1992's critically-acclaimed Souls At Zero, and 1993's tribal-laden Enemy Of The Sun, which showed the band incorporating rhythmic / percussive enhancement to their already established arsenal. Integrating visual psychedelia via the use of film and slide projections, NEUROSIS allowed the audience glimpses into their collective artistic psyche, providing a strobing collage of confusion, symbols and archetypes designed to leave the audience emotionally attached and mentally drained.

1996 brought the immensely vast recording Through Silver In Blood. Furthering their expansive scope, NEUROSIS joined forces with Relapse Records / Release Entertainment for the release of the album. Release Entertainment had previously released Silver Blood Transmission, the soundscape-laden, experimental debut from NEUROSIS' expansion project Tribes of Neurot. The band followed the release of Through Silver In Blood by lending their talents to the inaugural OZZFEST tour, canvassing the U.S. with the legendary BLACK SABBATH.

The 1999 release of the emotionally dark and rhythmically diverse Times of Grace marked the band's initial foray towards blending musical tranquillity into their trademark intensity. Immediately following Times of Grace's release, NEUROSIS / Tribes of Neurot, issued Grace, a full album's worth of experimentation and soundscapes that acted as the perfect compliment to Times Of Grace. As the two albums were played congruently, they were aligned in dynamics and instrumentation, enhancing the listening experience and each other simultaneously. The Times of Grace / Grace pairing was an ambitious experiment more aligned with THE FLAMING LIPS' Zaireeka than the efforts of most heavy music / metal acts. Following the end of touring for Times of Grace the band returned home to construct new material, and developed their label - Neurot Recordings. In 2000, they self-released Sovereign an EP featuring multi-media content and material from the Times of Grace sessions.

In summer, 2001 the band unveiled A Sun That Never Sets, a record that encapsulated every dynamic inherent in NEUROSIS. While no less intense than earlier albums A Sun That Never Sets offers moments of more contemplative melancholy clean(er) vocals, showing the maturation of a band providing much-needed relevance and progression to modern music. The album was heralded immediately upon its release;

Boston's Weekly Dig and noted out-rock tome Outburn called the record a "masterpiece", while noted rock periodical Alternative Press referred to it as "brilliant". Plans were immediately set in motion to comprise a DVD version of the album, something that would unite both the visual and audio facets of the band's art as one congruent whole.

As the A Sun... DVD entered production, NEUROSIS delved into their next artistic advancement; the formation and presentation of "Beyond The Pale", a four day music festival dedicated to the spirit of sound. The first installment of this annual gathering took place August 16th-19th, 2001 in San Francisco's Great American Music Hall. "Beyond The Pale" brought together a diverse group of original, innovative and independent musicians and bands hand-picked by the members of NEUROSIS (including Michael Gira (Angels of Light/Swans), Amber Asylum, Shellac, Isis, Thrones, Zeni Geva, Shellac, Tarentel, Zoviet France, TRIBES OF NEUROT, solo performances from Steve Von Till and Scott Kelly and NEUROSIS themselves), with the band delivering emotionally-charged versions of material from A Sun That Never Sets.

After fifteen years of undeniably accomplished fusion between sonically divergent music and methodically hypnotic visuals, A Sun That Never Sets - the DVD unites the energy of the band's music with their focused lyrical concepts, bringing the entire NEUROSIS experience to life in a way that has not been seen before now. With six pieces directed and produced by NEUROSIS' visual artist Josh Graham, A Sun That Never Sets also features directorial contributions from other renowned filmmakers and video artists including Chad Rullman. The A Sun That Never Sets DVD is a groundbreaking advancement in the world of independent music, including world-class videos for every song from the widely acclaimed album of the same name.

In 2004, Neurosis unleashed The Eye of Every Storm, their most mature and assured effort to date, as well as issuing a series of "official" bootlegs through their Neurot imprint and a startling collaboration with Swans diva Jarboe Kaplan & Sadock , 2003)

Chapter 3

Chapter 3 / Review of literature

After reading and looking for the studies and researches that have been conducted about the resiliency the researcher have found that all the researches have studied the relationship between trauma and coping, trauma with developing PTSD, trauma and resilient factors, but there is no researches about the resiliency and it's relation with the neurosis and conduct disorder. That is why the researcher is one of the areas that will study the relationship between the trauma and neurosis and conduct disorder.

1. Coping with Trauma and Hardship among Unaccompanied Refugee Youths From Sudan

Janice H. Goodman

Keywords: *narrative method; refugees; unaccompanied refugees; trauma; coping; resilience; culture; Sudan*

PURPOSE

Unfortunately, the number of refugees in the world shows no signs of decreasing, and current world politics portend the continued traumatization of children around the globe. Further research is needed to understand how children cope with such extreme trauma and hardship and to develop ways of promoting healing and optimal functioning of child survivors. Given the enormity of the trauma and loss that the unaccompanied refugee youths from Sudan have experienced, and the remarkable lack of evident psychopathology or dysfunction, the purpose of this study was to explore how unaccompanied minor refugee youths, who grew up amidst violence and loss, coped with trauma and hardships in their lives. Specific aims were to identify strategies the refugee youth used to cope and to examine the effectiveness of those strategies.

METHOD

Design

I used a case-centered, comparative, narrative approach to data collection and analysis of interview data.

Sample

Fourteen unaccompanied refugee youths from Sudan who had been living in the United States for 6 to 12 months were recruited through a Boston area refugee resettlement agency. All participants were males, aged 16 to 18, from the Dinka tribe of southern Sudan. Sudanese refugee girls were not included, because they represent only a small portion of this population of refugees (Radda Barnen, 1994) and likely had very different experiences because of cultural and gender issues. At the time of the study, all participants were living either in private homes with foster families or in a small group home. Although English was the second or third language for all participants, they all spoke English fluently.

Data Collection

I obtained Human Subjects approval prior to initiation of the study. I first obtained permission to recruit participants from the resettlement agency that had legal guardianship of the participants. A male Sudanese research assistant introduced the purpose and procedures of the study to interested potential participants and explained the concept of informed consent. The interviewer repeated information about the study and informed consent procedures prior to the interview and obtained signed consent.

Study participants were interviewed between May and August 2001. Participants were given a choice for the interview site, and all chose to be interviewed in their homes. Interviews were conducted in English using an unstructured interview guide consisting of broad, open-ended questions designed to elicit each adolescent's story. The option to have a translator present during the interviews was offered, but none of the participants chose to do so. I began each interview with the following statement: I'd like to start by asking you to tell me in your own words the story of your life. And I want you to tell me about your life as if it's a story with a beginning, and middle, and then how things will look in the future for you. There's no right or wrong way to tell the story. Just tell me in a way that's most comfortable for you. Each boy participated in one interview, lasting approximately 1 to 1½ hours, and received \$10 as an appreciation gift for participating in the study. Interviews were tape-recorded. I offered each participant the opportunity to debrief after the interview, and all participants expressed positive feelings about the interview experience. In addition to interviews with the participants, I held informal discussions with caseworkers, refugee camp workers, resettlement staff, foster parents, teachers, and others working with this population. I also conducted participant observation of the unaccompanied refugee youths previous to and over the course of this study, during both formal and informal gatherings, to inform contextual understanding of the findings. Participant observation included volunteer work with resettling Sudanese refugees and facilitating a support group for Sudanese refugee youths. Several of the study participants knew of my involvement with refugee resettlement efforts, and this seemed to contribute to their trust in me and to their enthusiasm for participating in the study.

FINDINGS

The participants' narratives were replete with tales of the horrors and sufferings of young children caught in a struggle for life in the midst of a brutal civil war. The participants told of danger, violence, and constant hardship, and the coping strategies that enabled them to survive. The participants' narratives were remarkably similar, sharing a common plot based in their shared sociocultural and historical context. The narratives were temporally sequenced, telling of a journey from place to place through time, with key moments in the plot common across the stories. Where the stories differed was in what the participants attended to in their narratives and how they told their stories. In these individual stories, the unique way each participant interpreted his experiences came into view. Much of the content of the narratives centered on the difficult and traumatic experiences, such as violence, death, hunger, and thirst, that the boys endured from the time they fled their villages at a very early age until their resettlement in the United States years later. Each of the participants began the story of his life at the time when his life

was disrupted by an attack on his village and his flight from home. Mayan recounted the attack on his village as a string of events as follows: “So these Arab people, they just invaded our village. They set all the houses on fire.

Then they shot people. Then they took all the animals. Then I ran out.” The dangers and hardship of traveling in hostile territory were recalled vividly by many of the participants. The journey through Sudan to Kenya was replete with dangers from wild animals and hostile enemies, disease, hunger, and thirst. One episode in Mayan’s long account of the journey gives evidence of this. Then they [Sudan People’s Liberation Army (SPLA) soldiers] came and they said, “We better move the children.” Then we began the journey again, the journey across Sudan at the south. It was really hard. It was during summer so thirst was really a problem. A very big number of people began the journey. We went through the forests to hide from the local people. The locals are black like us, but people in Sudan are not in a mode of being united. Even though they are black and they are southerners, they don’t have the spirit of being united. So even they are our enemy. We passed through all this even though they [the Sudanese locals] were hiding with guns and shooting people. They shot people. They shot many people among us.

We still proceeded. We proceeded until we reached another place where we stayed about three days. We heard that Arab soldiers had captured Pochalla, the place we had just left. But they said they were advancing and they wanted to come to this area, so we moved again. In the midst of constant danger, survival was the paramount preoccupation. John stated, It was actually a choice between death and life. You will die or you will live. So I had to walk to live. And if I didn’t walk, I would die. I had to run to live. And if I didn’t run, I would die. I had to run to get away from [the enemies], otherwise they would catch me and they would kill me. I ran from the wild animals. If I didn’t run, they could kill and eat me. So this is the way I survived. Hunger was another dominant theme in the participants’ stories. One participant stated, “People lived and died of starvation.” Benedict used repetition for emphasis to describe the lack of food during the flight from Sudan. When we came to Pochalla there was very, very, very little food that people could eat. People were really struck by starvation. The exception was when the Red Cross people used to bring us some corn and beans. They served people by just giving a little—only one cup of beans for three people, something like that. Some people ate some grass. And there was really, really, really starvation. Another participant described the hunger that the refugees endured living in Kakuma refugee camp in Kenya. Shortage of food was the great thing which affected people in Kenya as refugees. We were given a very small amount of food—a very small quantity of raw wheat or some kind of corn. They just gave us one bowl, maybe two bowls, for fifteen days. And that would not last for fifteen days, or even ten days. So life was really, really hard in Kakuma. Even if you didn’t have breakfast or lunch, just supper, that supper was not something that could satisfy you. Disease was another problem the refugees faced. Mayan recalled, “The diseases were killing people. If you are unlucky then you get a disease and then you die.

There is no medicine.” Peter told about the refugee children’s ongoing experience of fear of violence and the related helplessness they experienced, even in the refugee camps. At night they [local Turkana tribesmen] would come and shoot people. And you didn’t know who was shooting at you and where they came from. You never knew. We were innocent, and we didn’t know where to go. Despite their experiences, none of the participants displayed a sense of victimhood at the time of the interviews. They expressed that they

were innocent children victimized by enemy aggressors, and they conveyed a sense of powerlessness in the past. Their present interpretation of themselves, however, was as survivors and agents of their own future. Each participant positioned himself in his narrative as a member of a group that survived, and each looked forward to a future that he could shape. The tone of the narratives was not bitter. Instead, feelings of brotherliness, kindness, and hope prevailed.

In addition to revealing the enormity of trauma and suffering that the participants experienced, the narratives also revealed what enabled their survival. The content and structure of the narratives revealed the ways in which the participants coped with the trauma and hardships of their lives. Four themes were identified in the narratives that reflect coping strategies used by the participants: (a) collectivity and the communal self, (b) suppression and distraction, (c) making meaning, and (d) emerging from hopelessness to hope. Each of these themes is discussed in further detail below.

CONCLUSION

A case-centered comparative approach to the analysis of narratives of unaccompanied refugee youths from Sudan identified some of the ways in which this particular group of refugee children coped with the traumas and hardships in their lives. The study demonstrates the usefulness of a narrative approach for enhancing understanding of the experiences and responses of a certain population. The findings underscore the importance of understanding the cultural aspects of trauma, symptoms, and coping, and the need to consider culturally based strengths, rather than focusing on pathology, when working with refugees. The narratives revealed the refugees' culturally embedded and contextualized understanding of experiences, and portrayed a shared group narrative. Questions were raised about the long-term effectiveness of the coping strategies used, and the concept of resilience was examined in relation to the findings. Although the experiences of the Sudanese unaccompanied refugee youths are unique, their situation has implications for the mental health of children worldwide that have experienced war, violence, loss, and extreme hardship. This study provides information with implications for refugee and immigrant groups in general, as well as contributing to the body of literature on stress, coping and resilience. Future research should focus on describing further how refugee children and others who have experienced extreme trauma and hardship cope, the effectiveness of their coping strategies, and the implications of the coping strategies on individuals' future psychological well-being.

2) When Trauma Doesn't End. . .

Schuster, Stein, and Jaycox (2001) reported that 90% of all Americans experienced stress after the terrorist attacks of 9/11. Psychological risk "rippled out from Ground Zero." Those at highest risk for psychiatric disorders, acute stress disorders, depression, anxiety, and substance-related disorders were those with the highest level of exposure to the traumatic event. The next ripple included those who lost family members, friends, or coworkers, and the rescue and recovery workers. Those exposed less directly often had an altered sense of personal safety, and many experienced trauma-response symptoms. Those with existing mental disorders, past and present, were at risk for recurrent or

worsening symptoms. The 9/11 attacks triggered relapses of posttraumatic stress disorder (PTSD) in Vietnam veterans and Oklahoma City survivors, as well as survivors of other kinds of trauma such as rape and child or spouse abuse (Stephenson, 2001).

Most trauma experts agree that although the majority recover from grief and shock after a few months, 25% to 30% of people directly affected by disaster may develop PTSD or another major psychiatric disorder.

Kessler, Sonnega, Bromet, Hughes, and Nelson (1995), in the National Comorbidity Survey, found gender related traumatic experiences. For men, witnessing harm (36%) was most traumatic, whereas experiencing a fire (15%) was most traumatic for women. The 1996 Detroit Area Survey of Trauma found that 66.5% of the subjects identified re-experiencing intrusive and distressing recollections as stressful, whereas 44.5% felt psychiatric distress at exposure to cues that symbolized the trauma (Breslau, Peterson, Kessler, & Schultz, 1999).

3) The Development and Maintenance of Post Traumatic Stress Disorder (PTSD) in civilian adult survivors of war trauma and torture: A review

Risk factors in the development of PTSD in civilian survivors of war trauma and torture

Dose-response relationship

Few studies have investigated the risk factors for developing PTSD following torture as a distinct variable. Three studies have documented a dose-effect relationship between cumulative torture experience and PTSD. Mollica et al. (1998) found this relationship in their sample of Vietnamese ex-political detainees. However, their measure of cumulative torture did not take into account qualitative differences in the kinds of torture or quantitative differences in the frequency or duration of each torture event. The instrument used by Shrestha et al. (1998), in their study of Bhutanese refugees, measured these variables. However, there were some difficulties in the reliability of a PTSD diagnosis since an alternative explanation for torture survivor's affective symptoms were that they were the result of infectious diseases caught whilst in prison. ElSarraj, Punamaki, Salmi, and Summerfield (1996) in a large scale study (N=550) using qualitative and quantitative measurements of trauma, investigated experiences of torture amongst Palestinian political prisoners. They found that increased exposure to physical, chemical and electric torture, psychological ill-treatment, and sensory deprivation and bombardment resulted in increased Intrusive experiencing, withdrawal, numbness, and hyper arousal.

Gender

Most of the studies examining gender differences in civilian responses to war trauma suggest that females are more likely to develop PTSD than males (Ai et al., 2002; Scholte et al., 2004; Reppesgaard, 1997; Mollica et al., 1987; Ekblad et al., 2002; Eytan et al., 2004; Gavrilovic et al., 2002; Potts, 1994). Mollica et al. (1987) and Ekblad et al. (2002) suggest that the females in their samples may have been at higher risk because of the

psychological consequences of rape, the violent loss of spouse and children and of becoming a single parent or widow. The majority of these studies used self-report instruments rather than diagnostic clinical interviews (Ai et al., 2002; Scholte et al., 2004; Reepesgaard, 1997; Ekblad et al., 2002). Eytan et al. (2004) however, looked at determinants of postconflict symptoms in Albanian Kosovars using a large sample (N=996) and psychiatric interviews. They found that female gender was significantly associated with higher frequency of PTSD. Two studies found no gender differences (Abu-Saba, 1999; Ramsay et al., 1993). However, both of these studies were prone to potential response bias caused by the use of self report measures (Abu-Saba, 1999) and the diagnosis of PTSD from case notes in which PTSD symptoms may have been incompletely recorded (Ramsay et al., 1993). None of the above studies controlled for trauma type when investigating gender differences.

Age

Cardozo et al. (2000) found that those over the age of 65 were at increased risk of developing PTSD following the war in Kosovo. Although the reliability of this finding may have been limited by the use of self-report measures, it was supported in a study by Eytan et al. (2004) who investigated determinants of post conflict symptoms in Albanian Kosovars. The finding was also supported by Cheung (1994) who investigated PTSD among Cambodian refugees in New Zealand. Dahl et al. (1998) on the other hand found that being over 25 years of age predicted PTSD in their sample of displaced Bosnian women in a war zone. As with gender studies, these studies did not control for trauma type when investigating age as a risk factor.

4) Culture and Traumatic Events

Sociocultural

Trauma affects more than the individual. Most people live within social communes and families that attempt to make sense of overwhelming experiences by Japanese-Americans are an example of how culture influences adjustment and adaptation. Researchers link the resilience of the Japanese-American community over time to the culture's flexibility and reinforced relativism that encourage its members to adapt to diverse social settings (Fugita & O'Brien, 1991; Nagata & Takeshita, 1998).

Despite the homeostatic and healing qualities of cultural norms and values, traumatic or stressful events are likely to have a profound impact on individuals as well as support systems. The response to a given trauma is individualized, although individuals within a culture share varied responses when exposed to the same trauma. The nature of the stressor or trauma determines the individual's response, despite the person's level of tolerance to the event (Baker & Shalhoub-Kevorkian, 1999). Traumatic events often threaten personal integrity, one's sense of safety, a sense of belonging and security, and they alter and disrupt a seemingly homeostatic system. When a culture fails to maintain its protective and supportive climate or effectively manage emotions, individuals must seek avenues to achieve their own emotional and behavioral controls (deVries, 1995).

In a study conducted by Jose and colleagues (1998), the research team attempted to capture the influence of major sociological forces associated with the new Russian culture during the last decade. Cultural changes have resulted in capitalistic and democratic influences that placed tremendous stress on Russian youth. Data from this study suggested that Russian adolescents were less likely to use external coping mechanisms, cultural support, and problem solving than American adolescents. However, the outcome of their coping abilities was similar. In addition, family support from both groups was equal in their ability to buffer and protect the adolescents from stress. Again, these data suggest that cultural responses to sociological changes (e.g., chaotic, political, and depressed economical conditions) affect appraisal of stressors and subsequent coping responses. Rather than taking notes, the nurse might consider being creative and using other methods to document during data collection. Likewise, story telling is a common form of communication among some cultures. Obviously, story telling can be a lengthy process, and the nurse must be willing to take the time to listen for themes and capture the meaning of the client's story in terms of its relationship to a traumatic event. Hurried responses and a lack of attention are likely to interfere with the nurse-client relationship and result in ineffective communication, distrust of the nurse, misinterpretation *that the psychiatric nurse must be aware of the reluctance of some clients to express their emotional distress and note that the primary manifestations are often physical rather than psychological.*

5) The impact of home demolition on the mental health and psychological hardiness of the Palestinian children in Gaza strip.

The researcher is Dr. Abed Aziz Thabet

The goal is to know the types and intensity of the traumatic experience on the children whom homes demolished, and knowing the spreading of the PTSD and psychological resiliency in the children.

The sample is 45 children and youth

The method is the analytical descriptive method

The result: the average of exposing to traumatic experiences is 9.4, and regarding the mean of the psychological hardiness was 8 – or + 99.5 where as the mean of commitment was 4.3, the mean of control 3.4, and there is contrast relationship between the psychological hardiness and PTSD

Conclusion: the ability of adapting and having the psychological resiliency and hardiness enable the children having little chance to get PTSD and upon this the researcher advice focusing more on enhancing intervention programs to strengthen the social skills and contributing in not methodological activities.

6) Resiliency factors predicting psychological adjustment after political violence among Palestinian children.

The Researchers: Raija-Leena Punamaki, Samir Qouta and Eyad El-Sarraj

The sample: 86, 44 girls and 42 boys, Palestinian children of 14 age

The method: experimental methodology

The results:

1) PTSD was high among the children who had been exposed to a high level of traumatic events and had responded passively not actively to Intifada violence. Discrepant perceived parenting was also decisive for adjustment: children who perceived their mothers as highly loving and caring but their fathers as not so showed a high level of PTSD. High intelligence but low creative performance was also characteristics of the children suffering from emotional disorders.

2) The hypothesis that cognitive capacity and activity serve resiliency function if children feel loved and not rejected at home was confirmed.

3) Neuroticism decreased significantly over the three years, especially among the children who had been exposed to a high number of traumatic events.

7) Mental flexibility as resiliency factor among children exposed to political violence

The researchers: Samir Qouta, Eyad El Sarraj and Raija-Leena Punamaki

The Sample: 86 Palestinian children

The method: experimental methodology

The Results

The results revealed a moderating role of mental flexibility by showing that children were protected from negative long term consequences of traumatic events if their perception indicated mental flexibility. However, in the midst of violence mental flexibility was not associated with good psychological adjustment. Mental flexibility was, in turn, determined by environmental and cognitive factors: the more intelligent and the less exposed to traumatic events children were, the higher mental flexibility they showed.

8) Prison experience and coping styles among Palestinian men.

The researchers: Samir Qouta, Eyad El Sarraj and Raija-Leena Punamaki

The Sample: 79 male Palestinian ex-prisoners

The method: analytical descriptive methodology

The goal: to describe different types of prison experience and to analyze their relations with background and psychological variables.

The Results

The results of qualitative analysis revealed 7 different types of prison experience. Only one of these reflected exclusively negative feelings, characterized by suffering and disillusionment. The others also include relatively rewarding perception characterized as a struggle between strength and weakness, heroic fulfillment, developmental tasks, a normative stage in a man's life, growth in personnel insight, and return to religion. Results showed that older men, town residents, and those exposed to a high level torture perceived the imprisonment more as suffering and disillusionment than other men. Ex-prisoners, who perceived their experience as suffering and disillusionment, typically coped by using wishful thinking, avoidance, escaping, and distraction. Torture and ill-treatment increase wishful thinking and self-controlling as coping styles.

9) Resiliency-Recovery factors in PTSD among female and male Vietnam veterans: Hardiness, Power social support, and additional stressful life events.

The researchers: Lynda A. King and Daniel W. King
John A. Fairbank, Terence M. Keane, and Gary A. Adams

The Sample: 1632 Vietnam veterans

The method: analytical descriptive methodology

The goal: to examine relationships among several war zone stressor dimensions, resilience-recovery factors, and PTSD symptoms.

The results

A 9 factor measurement model was specified on a mixed gender subsequent of the data and then replicated on separate mediation effects for the interpersonal resources characteristics of hardiness, postwar structural and functional social support, and additional negative life events in the postwar period. Support for moderator effects or buffering in terms of interaction between war zone stressor level and resiliency-recovery factors was minimal.

10) Trauma exposure, resilience, social support, and PTSD construct validity among former prisoners of war.

The researchers: P.B. Gold á B.E. Engdahl á R.E. Eberly á R.J. Blake
W.F. Page á B.C. Frueh

The goal: The aim of this study was to investigate predictors of persistent symptoms of post-traumatic stress disorder (PTSD) and to examine the construct validity of PTSD

The sample: 270 World War II and Korean Conflict prisoners of war

Subjects and methods

Instruments several hundred variables have been assessed in this cohort over the last 40 years. Variable selection was guided by a review of the captivity maltreatment literature and by preliminary data analyses.

Captivity trauma

The 1965 survey included a self-report of diseases suffered during captivity, including malaria, dysentery, pneumonia, tuberculosis, intestinal worms, scabies and other skin diseases, pellagra, beriberi and other vitamin deficiency diseases, and diphtheria. A POW camp disease score was calculated by adding the number of "yes" responses for each of these 11 disease categories.

Resilience

Several survey variables were examined as potential indicators of individual resilience to traumatic stress. Preliminary analyses of this data set showed that some theoretically relevant variables were uncorrelated with trauma response variables, possibly because distribution along these variables was skewed. For example, less than 2% of subjects admitted to having been treated for mental illness or to a family history of mental illness; marital status was almost always endorsed as "single;" and military rank at capture was overwhelmingly "enlisted." Thus, these variables were not included in the analyses.

Social Support

The 1965 survey contained four questions that represented social support and reintegration into civilian life: "was it hard for you to pick up old friendships in the first year or two after the war?", "Did you and return to civilian life difficult in any respect?", "In your social and recreation activities (during the first year or two after the war) were you: always alone/often alone /sometimes alone/seldom alone?"

Trauma response (1965) assessed via the CMI

The Cornell Medical Index is a 195-item inventory that covers a wide variety of medical problems, such as cardiac, respiratory, neurological, and skin infirmities, and some psychological difficulties, such as depression, anxiety, low self-esteem, social isolation and conflict, and anger. Individuals respond to questions with either "yes" or "no." From the item set representing psychological problems, 20 items thought to represent DSM-III-R PTSD criteria were selected for further analysis.

Trauma response (1990) assessed via the PTSD module of SCID

The SCID PTSD module is a structured interview frequently used to evaluate the presence or absence of PTSD (Spitzer and Williams 1987). It has a reported high

interrater agreement (kappa of 0.93; Kulka et al. 1991). It first directs the examiner to begin the interview with specific comments about trauma and its possible effects. Specific questions are then asked about possible past exposure to any trauma. The next section contains questions about military experiences and possible military trauma exposure, and the final and largest section contains questions about each of the 17 DSM-III-R PTSD symptoms, current and past. Although no special training in the SCID PTSD module was provided to the VA psychiatrist or psychologist examiners, instructions concerning its administration were included in the directives sent to all the VA- MCs.

Results

Means and standard deviations on the variables of resilience, trauma, social support, trauma response in 1965. These data show that the average age of the sample at the time of captivity was just short of 23 years, with an average of only about 9 years of education. Underlying structure of the CMI was investigated by submitting responses to items on the Cornell Medical Index to a principal components analysis, with factors rotated obliquely. A three-factor solution was called for in the effort to approximate the three diagnostic criterion groups comprising the DSM-III-R PTSD disorder. The three factors accounted for approximately 4 % of the variance in the rotated matrix. Factor 1 (Irritability) tapped negative reaction to minor interpersonal and situational conflicts, and accounted for 31% of the variance. Factor 2 (Fearfulness/ Anxiousness) tapped a general distress reaction to internal and external stimuli, and accounted for 9% of the variance. Factor 3 (Social Withdrawal) tapped alienation from the social world, and accounted for 7% of the variance. Only the factor Interco relation between Irritability and Fearfulness/Anxiousness exceeded 0.20. Summed scores on the variables comprising these factors were entered as predictors of current PTSD symptomatology in regression analyses described below.

Structure of the SCID PTSD module elements (criterion groups) was examined via multidimensional scaling analysis (MDS). MDS refers to a family of geometric models that provide a spatial representation of the similarity structure of data elements. Using similarity data (correlations), the internal relationships (i.e., proximity) among data elements may be displayed geometrically in dimensional space. Although factor analysis and MDS provide much the same information, MDS removes any large general factor that may be present from the solution, such as general psychological distress. This permits more direct examination of dimensions that serve to differentiate among a set of elements. The adequacy of the resulting spatial configuration generated for the similarity matrix is assessed by calculated stress values (Kruskal and Wish 1978) and interpretability of the dimensional solution. A near-zero stress value indicates that the number of dimensions defining the solution space adequately accommodates the observed relations among the variables. In contrast, a high value indicates more dimensions are required to represent adequately the relations among elements. For these data, a two-dimension solution produced a stress value of 0.304, rejecting its adequacy in accounting element interrelationships. A three-dimensional solution produced a slightly lower stress value of 0.296, but the geometric arrangement of elements was more difficult to interpret. Visual inspection of the geometric display suggested three interpretable clusters of variables. The first cluster included the four criterion B (intrusion) variables

and the first two criterion C (avoidance) variables that represent direct efforts to avoid any cues associated with the traumatic event. The second cluster included four of remaining five criterion C variables (excepting C3), rejecting general disengagement from life and its people and activities. The third cluster included all criterion D (arousal) variables, except for D1, indicating increased arousal. Summed scores on variables comprising these three clusters were entered as indicators of current PTSD symptomatology in the following regression analyses.

Finally, a series of regression analyses were undertaken to determine whether resilience, war trauma, social support, 1965 symptomatology, and interactions between war trauma and resilience and social support predicted current PTSD. Current PTSD, the criterion, was operationalized in three ways:

1. As a global measure consisting of a summation of the 17 DSM-III-R criteria
2. As a construct differentiated into the three a priori criterion clusters set forth by the DSM-III-R: intrusion (criterion B), avoidance (criterion C), and arousal (criterion D),
3. As a construct differentiated into three a posteriori clusters as generated by the above MDS analysis

Predictors were entered as blocks hierarchically into the series of analyses in a sequence representing relative time of occurrence. That is, resilience factors (education and age at time of trauma) and war trauma were causally earliest and therefore entered first. Next, social support experienced in the years just following return to civilian life was entered. Third, 1965 symptomatology, represented by the three CMI factors, was entered. Finally, interactions between war trauma and the three variables potentially mitigating trauma response, education and age at time of trauma, and social support, were entered last.

11) Spirituality, Resilience, and Anger in Survivors of Violent Trauma: A Community Survey

The researcher: Kathryn M. Connor,^{1,3} Jonathan R. T. Davidson,¹ and Li-Ching Lee²

The Goal: This study evaluates the relationship between spirituality, resilience, anger and health status, and posttraumatic symptom severity in trauma survivors.

Method:

Participants and Procedure

A total of 1,670 participants were selected by random digit dialing (RDD) sampling from the Knowledge networks online panelist pool to participate in this study. Panelists were informed via e-mail that a survey was available for their completion online. A follow-up e-mail was sent to those who did not respond to the survey; if a panelist did not respond to the e-mail reminder, a follow up phone reminder would be initiated. Data were extracted on October 22, 2001. A total of 1,200 panelists completed the entire survey, rendering an overall response rate of 72%. Though the sampling design used equal probability to select the panelists, poststratification weights were implemented to reduce

sampling variation. Specifically, age, gender, ethnicity, region, and education were used to calculate weights so that the weighted sample would have a distribution of demographic characteristics. To reduce bias that is associated with non response, an adjustment is implemented using demographic data of those initially selected but who did not complete the surveys ($n = 470$).

Measurement

Health Assessment

The initial series of questions inquired about current physical and mental (emotional) health status, whereby respondents rated each as excellent, moderately good, fair, or poor.

Resilience

Resilience was assessed using 11 items taken from the 25-item Connor-Davidson Resilience Scale

(CD-RISC; Connor & Davidson, in press). The CD-RISC is a fully validated and reliable scale, which was developed in over 1,000 participants. Normative general population scores and scores for different psychiatric populations exist. The scale embraces concepts of control, commitment, challenge (“hardiness”), goal-orientation, self-esteem, adaptability, social skills, humor, strengthening through stress, and endurance of pain. Respondents rated how true each statement has been for the past month, with each item being rated on a 5-point scale from *not at all true* (0) to *true nearly all the time* (4). Higher scores correspond to greater resilience.

Spirituality

A series of 13 questions assessed beliefs in specific aspects of spirituality. Six questions concern general spiritual beliefs (spirituality, general) and seven questions refer to specific beliefs about repeated lives or reincarnation (spirituality, reincarnation). In this regard, our scale differs from others, for example, the 18-item Royal Free Interview (King, Speck, & Thomas, 2001), the 20-item Spiritual Wellbeing Scale (Paloutzian & Ellison, 1982), the 2-item Spiritual Change Scale (Tedeschi & Calhoun, 1996). The general spiritual belief items assessed agreement with beliefs in the following: (1) the existence of a spiritual being or God; (2) the importance of spiritual forces influencing earthly events; (3) the existence of a spiritual part of the self after death; (4) life having a purpose; (5) life having a destiny; and (6) the helpfulness of prayer. Reincarnation-related questions concerned (1) belief in the influence of past lives, (2) belief in reincarnation as affecting personal decisions or actions, or (3) influencing what happens in this life, (4) having out of body experiences, (5) remembering past lives, (6) the impact of beneficent or harmful deeds in this life or a future life, and (7) reincarnation of the essential self in another body in the future. Respondents rated their level of agreement with each of the items, indicating whether they agreed completely (1), mostly (2), somewhat (3), or disagreed somewhat (4), mostly (5), or completely (6). Higher scores are consistent with rejection of the spiritual beliefs as articulated, whereas lower scores correspond

to greater acceptance of spiritual beliefs. The items in this spirituality assessment were developed for this study and while they have not undergone rigorous psychometric testing, they demonstrated good internal consistency in the study population.

Data Analysis

Although 1,200 respondents provided usable data, only 648 (54%) reported having ever experienced violent trauma, and it is this population which is the subject of the report. Outcomes of interest were physical health, mental health, subjective distress related to the trauma, and severity of PTSD symptoms. Of note, as only completed cases were included in the analysis, the sample used to assess the first three outcomes included 605 participants, while 572 participants were used to assess outcome based on the DTS score. Weighted data were used for all analyses. The univariate distribution of each of the four outcome variables was examined to determine variable type (dichotomous vs. continuous). A distinctive dichotomous distribution was found for physical health status and mental health status, with responses divided into two categories of good (responses of *excellent* or *moderately good*) and poor (responses of *fair* or *poor*). As a result, dichotomous physical health status (good/poor) and dichotomous mental health status (good/poor) outcome measures were determined for the subsequent analysis. The frequencies for these outcomes were as follows: physical health, good ($n = 480$; 79%) versus poor ($n = 124$; 21%); and mental health, good ($n = 492$; 81%) versus poor ($n = 113$; 19%). For the continuous measures, mean (SD) scores were as follows: trauma-related distress, 2.76 (1.38); and DTS severity score, 11.5 (13.20).

Spirituality, Resilience, and Trauma

Results

Demographic characteristics of the full sample ($N = 1,200$), traumatized sample ($n = 648$) and of the traumatized sample with complete data ($n = 605$). Additionally, the mean number of traumatic events, population means for the CDRISC, and spirituality measure are presented. In some cases, complete data on a particular scale was missing; therefore that participant was dropped from the analysis of that particular scale. Using backward selection logistic regression, resilience, general spiritual belief, and anger were all associated with physical health status, with greater resilience associated with better health, and stronger spiritual belief and greater anger associated with poorer health. Hatred, forgiveness, and belief in reincarnation were not significantly associated with physical health. Backward selection logistic regression again showed the same three variables to be significantly associated with mental health status, in a manner identical to the relationship found with physical health (Table 2). With respect to level of distress from the traumatic event, backward selection multivariate linear regression revealed that two of the six measures were significantly associated with outcome. A significant association was noted between general spiritual beliefs and anger, with the model accounting for 36% of the variance. General spiritual belief was unexpectedly associated with a poorer outcome in this regard, that is, having a greater level of spiritual belief was associated with greater degree of distress. Greater levels of anger were also associated with greater trauma-related distress. When severity of PTSD symptoms was modeled

with the six variables, resilience, general spiritual beliefs, and anger emerged as being significantly associated with PTSD severity. The overall contribution of this model was meaningful (adjusted $R^2 = .29$), and the nature of relationships was such that greater levels of resilience were associated with lower degrees of PTSD symptom severity. General spiritual beliefs acted in the opposite manner, whereby greater acceptance of spiritual beliefs was associated with greater severity of PTSD symptoms. Anger was also associated with increasing levels of PTSD symptoms.

Discussion

Our results show that, among individuals in the population who have been exposed to violent trauma, general spiritual belief and anger were associated with each of the four outcomes: physical health, mental health, trauma related distress, and severity of PTSD symptoms. Resilience was associated with three outcomes, notably physical health, mental health, and PTSD symptom severity. Resilience, as expected, showed a positive relationship, in that greater levels of personal resilience were associated with a more favorable outcome. On the other hand, the direction of the relationship with general spiritual beliefs was unexpected, with greater acceptance of spiritual beliefs in those who have the poorest outcome. While contrary to our hypothesis, this finding is consistent with some other reports (King et al., 1994, 1998). Spirituality may not so much serve as a protector against developing PTSD or poor health, but may emerge as a way of coping in those with high distress or poor health (Calhoun, Cann, Tedeschi, & McMillan, 2000; King et al., 1999; Lau & Grossman, 1997; Park et al., 1996; Tedeschi & Calhoun, 1996; Waysmann et al., 2001). The nature of the relationship between religious faith and negative life events can be complex: for some individuals, religious faith may enhance the ability to cope with negative life events; while for others, negative life events may result in greater religious faith. It is also possible that negative life events which cause a decrease in well-being (i.e., increased distress) may result in a strengthening of spiritual beliefs, which in turn may help to restore well-being and reduce distress to pre-event levels (Baumeister, 1991). This compensating reciprocal causation would lead to an underestimate of correlations between variables in cross-sectional studies such as this (Kennedy, Davis, & Taylor, 1998) and may help to explain the result we observed. Higher levels of anger were strongly associated with health status, emotional distress, and PTSD symptom severity. Of interest was the failure of feelings of hatred or forgiveness to demonstrate significant relationships to the outcomes in the multivariate models. Quite possibly feelings of hatred are subsumed by those of anger, but it certainly offers no independent contribution to well-being or health status in this sample. Forgiveness, which has been identified as a treatment goal among incest survivors (Friedman & Enright, 1996), failed to contribute significantly, as did belief in reincarnation. Recognizing the potential influence of demographic characteristics, the relationships of age, gender, and ethnicity to outcome were examined, adding these variables to the multivariate models in a post hoc assessment. All of the relationships noted earlier continued to hold true. Of note was the emergence of an association of reincarnation with posttraumatic stress symptom severity, which was in the same direction as that for general spiritual beliefs. Additional associations which were observed and which have been reported previously included female gender with higher levels of distress and posttraumatic symptom severity (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Stein, Walker, Hazen, & Forde,

1997); younger age with poor mental health (Narrow, Rae, Robins,&Regier, 2002) and greater posttraumatic stress symptoms, which may be related to higher rates of trauma observed in younger age groups (Breslau et al., 1998); and non-white ethnicity and poor mental health, an inconsistent finding across studies (Schulz et al., 2000).

We have found that successful treatment of PTSD can bring about greater degrees of resilience in two separate cohorts of PTSD patients (Connor et al., 1999; Connor & Davidson, in press). We take our finding in this survey to signal that resilience should indeed be an important focus of attention during treatment of trauma survivors in general, and PTSD in particular, as it can respond to drug therapy. Khouzan and Kissmeyer (1977) have also noted spiritual strengthening to take place following antidepressant treatment. The possibility that psychotherapy could help to build greater resilience also needs to be considered.

Potential limitations of our survey need to be acknowledged. Firstly, it provided cross-sectional and not longitudinal data and does not inform as to the directionality of relationship between the variables and outcomes of interest. In other words, were individuals with low resilience before trauma less likely to do well, or is the low level of resilience an outcome of trauma? Similarly, for spirituality the same considerations hold true. In regard to anger, we have already acknowledged that it may confound outcome (i.e., those with PTSD are likely to be angry or irritable by definition), but its inclusion in the model serves to help identify if resilience and spirituality continue to be associated with outcome in the face of negative affect. An additional limitation might be considered to be the nature of the sample, which only included survivors of violent trauma. These findings may not generalize to other trauma populations. However, it was our intention to limit this survey to those who had been injured by a deliberate violent act or a destructive act caused by negligence or disregard of the law. Lastly, our respondents were surveyed by means of online technology, and the validity of our instruments has not been tested in an online format. Direct interview would also have been desirable, but constraints of cost made a more substantive study impractical. We thus view this project more as a pilot study. It is possible that some one-item constructs (e.g., forgiveness, hatred) are psychometrically weak. Although their psychometrics was not tested, a 1-item measure of depression has been shown to perform as well as a longer scale (McKenzie & Marks, 1999) and this in itself is not automatically a major flaw. A variety of spirituality scales exist, some of which are extremely brief, with content varying according to purpose of the scale and, to our knowledge, no single scale has established primacy. Our scale was constructed with specific purposes in mind, but it has not received psychometric testing and its content/structure may certainly have a bearing on the unexpected relationships we observed. Other scales might have yielded different findings. Nonetheless, we view these results as being of interest in a field of emerging importance to the effects of trauma.

12) Trauma, resilience and saliostasis: effects of treatment in post-traumatic stress disorder

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The goal: It is the purpose of this report to describe our findings on the effect of treatment in PTSD using the Connor-Davidson Resilience Scale (CD-RISC) (Connor and Davidson, 2003 which 25- item self rated resilience instrument,

Materials and methods

Ninety-two individuals with chronic PTSD (American Psychiatric Association, 1994) received the following treatments in the three clinical trials, all of which included an open-label phase of 3 or 6 months duration followed by randomized assignment as follows: (i) 3 months of open-label treatment with tiagabine, a selective GABA reuptake inhibitor (SGRI) (n=13) followed by a double-blind extension on drug or placebo for an additional 12 weeks; (ii) 6 months of open-label treatment with fluoxetine (n=25) followed by 6 months of drug or placebo; or (iii) 10 weeks of open-label treatment with sertraline (n=54), followed by randomized assignment to continued sertraline alone (n=25), or sertraline with cognitive behavioural therapy (CBT), for another 5 weeks (n=29). Each study had received approval by the Duke University Medical Center Institutional Review Board. Studies were performed in accordance with principles stated in the Declaration of Helsinki and all subjects provided their written informed consent. To date, none of these studies have yet been published, but all will eventually be reported. The tiagabine and fluoxetine studies were both double-blind relapse prevention studies, whereas the sertraline study examined the effects of augmentation with CBT. Data from the open-label pre-randomization phases are reported here. In each study, resiliency data were obtained as a secondary outcome measure. However, substantial clinical improvement was noted for all treatments using validated measures of PTSD. Mean doses of each treatment at final visit were: tiagabine, 13.6 mg; fluoxetine, 51.1 mg; and sertraline, 154.1mg.

Results

Demographic characteristics of treatment groups were present in 74 (80%) of subjects, including major depressive disorder (n=55), social phobia (n=23), generalized anxiety disorder (n=15), specific phobia (n=12), agoraphobia (n=10) and panic disorder (n=9). All differences were significant at $P < 0.01$ or greater. An overall effect size of 0.72 was noted, with the highest ES being 1.06 for tiagabine. All comparisons were based on change from pre-treatment to posttreatment (i.e. week 10 for sertraline, week 12 for tiagabine, week 24 for fluoxetine). Based on assessment of week 15 data in the sertraline/CBT study, both sertraline alone (0.81) and sertraline with CBT (0.55) yielded moderate effect sizes. Individual CD-RISC items, and mean change scores for each group are shown in Table 3. Nineteen out of 25 items improved significantly.

13) Adjustment to College Among Trauma Survivors: An Exploratory Study of Resilience

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The goal: The current researchers sought to examine the role of intra- and interpersonal variables in predicting variance in positive adjustment to college among survivors of traumatic stress.

METHOD

Participants

A convenience sample of students in their first semester of college who were taking a course in introductory psychology participated in this study. Three hundred sixty seven students completed questionnaires about their adjustment to college and their exposure to traumatic events in return for partial course credit (292 or 80.4% were female, mean age = 18.20, $SD = .65$). Of this number, 197 (53.7%) reported exposure to at least one trauma and thus completed additional questions related to their trauma exposure and adjustment afterward and were included in the sample for the current study (79.5% female, mean age = 18.33, $SD = .80$). Ninety-four percent identified themselves as White. Whereas these demographics set some important limits on the generalizability of the current findings, as will be discussed in more detail later, the current analyses were meant to be exploratory and to suggest important directions for future research.

Measures

Stressful Life Events Screening Questionnaire

(Goodman, Corcoran, Turner, Yuan, & Green, 1998). This questionnaire asks about exposure to a variety of stressful events often categorized as traumatic. The number of traumas reported ranged from one to seven ($M = 1.90$, $SD = 1.15$). Twelve percent ($n = 24$) reported a life-threatening illness; 18% ($n = 36$) a life-threatening accident; 1% ($n = 2$) being robbed or mugged with physical force; 41% ($n = 81$) traumatic loss through accident, homicide, or suicide; 6.6% ($n = 13$) reported child sexual abuse with penetration and 7% ($n = 14$) reported attempted child sexual abuse, whereas 16% ($n = 32$) reported unwanted sexual touching. Twenty five percent ($n = 50$) reported any type of sexual abuse, with 8% ($n = 16$) reporting child sexual abuse. Fourteen percent ($n = 28$) reported child physical abuse, and 21% ($n = 41$) reported other physical assault. Thirteen percent ($n = 25$) reported having been threatened with a weapon, and 18% ($n = 36$) reported witnessing violence. This questionnaire also asks about general details of traumatic events reports, which further permitted creation of additional variables for dating violence (11%, $n = 21$), any form of child abuse (20%, $n = 39$), and any form of interpersonal violence (29%, $n = 56$).

RESULTS

Impact of Trauma on Adjustment in the Full Sample

To set the context for the main focus of the study, the sub sample of trauma survivors, an initial MANOVA was performed using General Linear Model (GLM) in SPSS 11.5 to examine differences between the group of students who reported having experienced any trauma in the past and the participants who did not. Outcome variables were the four subscales of the SACQ. Overall, there was not a significant difference between the two groups, $F(4, 324) = .92$, nor for the interaction of sex and victimization, $F(4, 324) = 1.14$. However, there was a significant main effect for sex, $F(4, 324) = 8.76$, $p < .001$; with females scoring higher than males on academic adjustment, $F(1, 327) = 11.19$, $p < .001$; and institutional attachment, $F(1, 327) = 4.66$, $p < .05$. This may not be surprising, however, given the varied nature of the traumas students' reported. Based on Turner and Lloyd's (1995) research on the importance of cumulative trauma, we next correlated the number of different types of traumas (range = 0 to 4, with outliers recoded to within 3

SDs of the mean) with the four college adjustment subscales. For academic adjustment there was a trend toward significance ($r = -.09, p = .10$) and a significant correlation with personal-emotional adjustment ($r = -.17, p = .002$) such that greater trauma exposure in the sample overall was related to more negative academic and personal-emotional adjustment. These results set the context for viewing trauma survivors, particularly survivors of multiple traumas, as a somewhat at-risk group in their transition to college.

Within-Group Analyses: Understanding Differences Among Trauma Survivors
Subsequent analyses examined the relationship between protective correlates (meaning making, locus of control, attachment, and social support) and the resilience index for the full sample. The results show these bivariate correlations. Of the types of trauma, only physical abuse was significantly correlated with resilience, with higher resilience among those who did not experience physical abuse in childhood. Greater resilience was related to higher levels of reported meaning making, higher maternal and peer attachment, lower external locus of control, and higher satisfaction with social support.

14) STRESS AND BURNOUT AMONG PRISON PERSONNEL

Sources, Outcomes, and Intervention Strategies

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The goal: The ultimate goal of the present study was to map the typical stressors affecting individuals working in the prison system, assess the outcomes resulting from these stressors, and suggest ways to reduce stress and burnout.

METHOD

PARTICIPANTS

Four-hundred and ninety-six prison employees participated in the study, 85% of whom were men. Their mean age was 34.83 years ($SD = 7.33$). The mean seniority in the Israel Prison Service (IPS) was 12.32 years ($SD = 7.66$), and the mean seniority in their present position was 6.91 years ($SD = 5.81$). Seventy-six percent of the entire sample were COs, 13% were CTS (most of them social workers), and the remaining 11% were administrative staff. Approximately 20% of all participants were commanding officers, whereas the remaining 80% were lower ranking employees.

MEASURES

The measures used in this study were a questionnaire and an interview. These measures were either developed or selected based on a pilot study, which included interviews with 20 prison employees in various levels and positions (from the head of the IPS and its CEO all the way to some of the lowest level prison employees) as well as observations done in different types of prisons around the country.

Stressors Questionnaire. This questionnaire was developed on the basis of the literature review and pilot study. It included 38 items, each representing potential stressors (e.g., the possibility of being attacked by inmates, shift work, slow promotion, unfair attitude on the part of superiors). Each respondent was asked to rate the level of stress caused by each item on a scale ranging from 1 (*not stressful at all*) to 5 (*extremely stressful*). In addition, the respondents were asked to mark which items were irrelevant to their work. An orthogonal rotated factor analysis was performed on the 38 items, with a restriction to four factors. This restriction to four factors was based on taxonomy of stressors commonly used in the law enforcement literature, which also includes four categories (see detailed description in the introduction). Table 1 presents the factor loading of each item on its factor. The first factor stressful contact with others (nominates)—had the highest loadings with unfair treatment by superiors, confrontations with coworkers, and negative public image of COs. This factor had an eigenvalue of 11.54; it explained 14.5% of the variance, and its internal consistency coefficient (Cronbach's alpha) was found to be .90. The second factor stressful contact with inmates—had the highest loadings with contact with drug abusers, contact with people who committed serious crimes, and conflict between guarding the inmates and their rehabilitation. This factor had an eigenvalue of 2.52, it explained 13.3% of the variance, and its Cronbach's alpha was found to be .86. The third factor organizational stressors had the highest loadings with shift work, overload, and heavy responsibility. This factor had an eigenvalue of 1.89, it explained 11.3% of the variance, and its Cronbach's alpha was found to be .77. The fourth factor—inconsiderate practices by management—had the highest loadings with performing extra shifts without financial compensation, overtime, and superiors' preferential attitudes toward the inmate versus CO. This factor had an eigenvalue of 1.81, it explained 7.6% of the variance, and its Cronbach's alpha was found to be .69.

The four factors explained 46.7% of the variance.

Overall level of stress. After rating the level of stress caused by the 38 potential stressors, respondents were asked to rate their overall level of job stresses ranging from 1 (*very low*) to 9 (*very high*). The evaluation of overall stress in this fashion—using a single-item index following a detailed list of stressors—has been used in other studies (e.g., Cohen, Kessler, & Underwood Gordon, 1995; Keinan, 1994).

The Burnout Measure Short Version (BMS). The Burnout Measure (Pines & Aronson, 1988) is a frequently used measure of burnout (Enzmann, Schaufeli, Janssen, & Rozenman, 1998; Schaufeli & Enzmann, 1998). The BMS, the short version of the BM, includes 10 items that measure levels of physical, emotional, and mental exhaustion of the individual. Respondents are asked to rate the frequency with which they experience each of the items appearing in the questionnaire (e.g., being tired or helpless) on a scale ranging from 1 (*never*) to 7 (*always*). The BMS has been shown to be a reliable and valid research instrument, with internal consistency coefficients around .85 (Pines, 2005). The BMS was chosen for this study because of its brevity, its appropriateness for all IPS sectors, and the availability of existing data on the burnout levels of both general and border police (as well as the general population), which enabled comparisons to the IPS data. **Stress related symptoms.** In this measure, respondents were asked to specify to what extent they suffer from 11 psychological and physical symptoms, such as headaches,

hypertension, or anger outbursts. The level of suffering is rated on a scale ranging from 1 (*not at all*) to 5 (*very much*).

Work satisfaction. Two questions dealt with the level of satisfaction respondents receive from their work. In the first question, respondents were asked to rate their job satisfaction on a scale ranging from 1 (*not at all*) to 5 (*very much*). In the second question, they were asked to rate the frequency with which they have thoughts about leaving their work on a scale ranging from 1 (*very infrequently*) to 5 (*very often*). *Suggestions for reducing job stress.* Respondents were asked to suggest, in an open question, the best ways for reducing their work-related stress.

Biographical information. In this questionnaire, respondents were asked to provide the following data: age, gender, years of education, marital status, country of birth, seniority in the IPS and in their current position, rank, unit, and sector (administration, security, or treatment).

In-depth interview. The interview included a series of open and closed questions relating to the following issues: reasons for deciding to join the IPS, the quality of training given to the staff regarding coping with stress and handling prison inmates, the most burnout-inducing factors at work, to what extent the interviewees felt that their work was meaningful and contributed to society, and the extent to which they received social support from different sources. The interviewees were also asked to describe the most difficult event they experienced during work and to specify the extent to which they have experienced various symptoms characteristic of PTSD as a result of this experience.

PROCEDURE

The study was conducted at the IPS facilities between the years 2000 and 2001, during the second Palestinian “Intifada” (uprising). The sample was designed with the help of the IPS Human Resource team to be truly representative in terms of the gender, age, rank, and sector of participants as well as the type (e.g., security level) and region (north, center, south) of the prison. The sampling frame consisted of all IPS personnel. Specifically, we used stratified sampling with the following strata: (a) type of facility (prisons, headquarters), (b) sector (security, treatment, and administration), (c) region (north, center, and south), and (d) rank (commanding officer, rank and file). Random sampling was done from all strata with the exception of the security sector, where cluster sampling was used with shifts defining clusters. One shift was sampled at random in each facility. Each facility was informed of the number and type of respondents required for the study.

At an appointed time (usually during a shift change), these people were invited to a communal hall and told about the study. They were told the study (a) was being conducted by researchers from Tel-Aviv University, (b) dealt with stress and burnout, and (c) was aimed at bringing their stressors to the attention of the authorities. Furthermore, it was emphasized that the privacy of participants would be protected and that the data would be used for research purposes only. Following this explanation, no one refused to participate. The questionnaires were administered in groups of 20 participants. After the questionnaires were completed, two members of each group were randomly selected by means of a table of random numbers to participate in the interview.

Only three COs refused to participate. Psychology students from Tel-Aviv University, who were trained for this purpose, administered the questionnaires and conducted the interviews.

RESULTS

RATING THE SOURCES OF STRESS AND FACTOR ANALYSIS

The four stressors found to be most stress inducing were as follows: performing extra shifts without financial compensation ($M = 4.69, SD = 0.83$); low salary, which does not provide for one's needs ($M = 4.13, SD = 1.09$); high work load ($M = 4.09, SD = 1.13$); and slow promotion ($M = 4.00, SD = 1.02$). The four items rated at the bottom of the stressors list were as follows: encountering drug abusers ($M = 2.57, SD = 1.42$), ethnic tensions ($M = 2.50, SD = 1.26$), being close to people who committed serious crimes ($M = 2.43, SD = 1.38$), and encountering attempts by inmates to tempt them ($M = 2.16, SD = 1.35$). In addition, the four factors that emerged from factor analysis of the Stressors Questionnaire were found to be significantly correlated with stress reactions. They were more highly correlated with the general level of work stress, the level of burnout, and the intensity of physical and emotional symptoms and less correlated with job satisfaction.

15) Cross-cultural comparison of workplace stressors, ways of Coping and demographic characteristics as predictors of physical and mental health among hospital nurses in Japan, Thailand, South Korea and the USA (Hawaii)

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The goal: the purpose of this study was to compare cross-culturally, in hospital-based nurses, workplace stressors, ways of coping and demographic characteristics as predictors of physical and mental health among nurses from Japan, South Korea, Thailand and the USA (Hawaii).

Method

Sample

The sample consisted of a total of 1554 hospital-based nurses, employed in 35 hospitals, located through out the countries of Japan, South Korea, Thailand and the USA (Hawaii). The hospitals used for data gathering were categorized as governmental, private or teaching, and located in a variety of cities within each country. Data were gathered from March 2002 to January 2003. The subjects, who predominately were female (93.2–98.7%), had an average age range of 30.2–40.1 years. With the exception of the USA (Hawaii), subjects were more likely to not be married than to be married. The average number of children across countries was slightly under one. The basic nursing education varied among countries from diploma to baccalaureate degree preparation. Subjects from Thailand and the USA (Hawaii) had the highest level of education, followed by subjects from South Korea and Japan. It is not surprising that Japan ranked lowest in educational preparation. It has been only within the past decade that Japan markedly increased the number of baccalaureate programs in nursing (Lambert et al., in press). South Korean

subjects had the least number of years worked as a nurse, while Japanese participants had the lowest number of years worked on the current hospital unit. These findings are consistent with the facts that the South Korean nurses were the youngest subjects compared to subjects from the other countries, and that Japanese nurses tend to rotate to a new hospital unit every 2 years.

Procedure

With the exception of the USA (Hawaii), to obtain appropriate subjects for the study, researchers in each country approached the appropriate administrator within selected hospitals to obtain consent to gather data. In order to provide a reasonably representative sample of the country's nursing population, the hospitals selected, and consenting to take part in the study, were located in a variety of geographic areas and were of different institutional types (based upon size, financial support and mission).

Results

A detailed report of the findings, from each country, has been published elsewhere (Lambert et al., 2004; Sitthimongkol et al., in review) or will be published in the near future. The results reported here are cross cultural comparisons of the findings. The findings suggest that nurses in all four countries ranked two workplace stressors (workload and dealing with death/dying) the highest of all workplace stressors. The findings also suggested that four ways of coping (self-control, seeking social support, painful problem solving and positive reappraisal) were ranked the highest among all of the coping modalities. For physical and mental health, across groups, the nurses had comparable scores for physical and mental health, with the exception of the Thai nurses. The mental health score of the Thai nurses was much lower than the mental health scores of the nurses from Japan, South Korea or the USA (Hawaii).

Stepwise multiple-regression was conducted, on the data set from each country, to identify the combination of independent variables (workplace stressors, ways of coping and demographic characteristics) predicting physical health. For Japan, the workplace stressor, workload, entered in step one of the analysis and accounted for only 1.7% ($p = 0.02$) of the variance in the physical health score. The demographic characteristic, number of people in the household, entered in step two and increased the explained variance to only 3.3% ($p = 0.01$). All other variables failed to enter into the equation. For South Korea, the ways of coping modality, seeking social support, entered on the first step of the regression analysis and accounted for 8.1% ($p = 0.01$) of the variance in the physical health score. At step two of the analysis, the demographic characteristic, likelihood to leave the current nursing position, entered the equation and increased the explained variance to 15% ($p = 0.013$). All other variables failed to enter into the equation. Three variables entered the regression equation on the data from Thailand. At step one, the demographic characteristic, number of people living in the household, entered and accounted for only 3.2% ($p = 0.002$) of the variance in the physical health score. At step two, the demographic characteristic, number of years worked as a nurse, entered the equation and increased the explained variance to only 5.5% ($p = 0.008$). The demographic characteristic, level of household income, entered at step three, increasing the variance to only 6.8% ($p = 0.028$). No other variables entered into the regression equation. For the USA (Hawaii), the workplace stressor, workload, entered at step one of

the regression analysis and accounted for 6.2% ($p \leq 0.000$) of the variance in physical health. At step two, the demographic characteristic, likelihood to leave the current nursing position, entered the equation and increased the explained variance to 7.8% ($p \leq 0.006$). The explained variance increased to 9.1% ($p \leq 0.013$) at step three when the demographic characteristic, highest educational level, entered the equation. At step four, the ways of coping modality, escape-avoidance, entered the analysis and increased the variance to 10.2% ($p \leq 0.017$). No other variables entered the regression equation. Stepwise multiple-regression also was conducted, on the data set from each country, to identify the combination of independent variables (workplace stressors, ways of coping and demographic characteristics) predicting mental health. See Table 7 for a cross-cultural comparison. Three variables entered the regression equation for the Japanese data. At step one, the demographic characteristic, likelihood to leave the current nursing position, entered the analysis and accounted for 8.6% ($p \leq 0.000$) of the variance. The explained variance increased to 12.8% ($p \leq 0.000$), at step two, when the workplace stressor, lack of support, entered the equation. At the third step, the ways of coping modality, escape-avoidance, increased the explained variance to 16% ($p \leq 0.000$). No other variables entered the regression equation. For South Korea, the demographic characteristic, age, entered at step one and accounted for 21% ($p \leq 0.000$) of the variance in the mental health score. At step two, the explained variance increased to 27.2% ($p \leq 0.012$) when the ways of coping modality, distancing, entered the analysis. At step three, the workplace stressor, workload, increased the variance to 32.5% ($p \leq 0.015$) and, at step four, the demographic characteristic, likelihood to leave the current nursing position, increased the explained variance to 36.6% ($p \leq 0.030$). The ways of coping modality, problem solving, entered the equation at step five and increased the explained variance to 39.9% ($p \leq 0.042$). No other variables entered the regression equation.

16) Adolescent Exposure to Recurrent Terrorism in Israel: Posttraumatic Distress and Functional Impairment

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The goal: This study examines the impact of exposure to ongoing terrorism on 695 Israeli high school students. Exposure was measured using a questionnaire developed for the security situation in Israel.

Method

Participants

The screening process included 695 junior high and high school students, 315 boys and 380 girls from Grades 7 to 12, aged 12 to 18 years ($M = 14.77$, $SD = 1.92$). All students present in school on the day of the survey were screened. However, several 10th grade classes ($n = 161$) were out of school on a field trip on the day of the survey and for logistical reasons could not be screened on another day. This group did not differ significantly from respondents with respect to gender (49.7% girls among non participants, compared with 54.6% of the participants). All the students resided in the

neighborhood served by the school. Therefore, there was no reason to assume differences in the level of exposure to terrorism between participants and non participants or to assume differences in their socio economic background. In reporting demographic information, participants gave their age, gender, and grade level.

Results

Exposure to Terrorism, Probable PTSD, and Functional Impairment

Exposure to recurrent terrorism. Twenty-six of the 695 adolescents (3.7%) reported personal exposure with no injury to a terrorist attack, 2 (0.3%) reported injury, 119 (17.1%) reported knowing someone who had been injured, and 126 (18.1%) reported knowing someone who had been killed in a terrorist attack. One hundred five (15.1%) students reported having planned to be at the site of an attack, 119 (17.1%) had been at the site of an attack just before or after it occurred, and 97 (14.0%) reported having been near the site of an attack. Fewer than half (44.9%) of the adolescents stated that they had not been personally involved in a terrorist attack. Note that some participants experienced more than one terrorist attack and indicated several categories of exposure; the cumulative exposure therefore exceeds 100%. A little more than 32% (32.8%) of the adolescents reported PE experiences, 22.3% reported NM experiences, and 44.9% reported NE experiences. Significant gender differences were found in the reported level of exposure to terrorism. More girls than boys reported PE experiences (36.1% vs. 22.9%), whereas more boys than girls reported NM (23.2% vs. 21.6%) and NE experiences (49.2% vs. 41.3%), $\chi^2(2) = 7.310, p = .026$. ***Probable PTSD and symptom clusters.*** Using *DSM-IV* criteria, 53 adolescents (7.6%) reported probable PTSD. About 70% of these students reported symptoms meeting Criterion A2 (subjective fear), 66.3% reported symptoms sufficient for Criterion B (reexperiencing), 17.1% reported symptoms meeting Criterion C (avoidance), and 45.5% met Criterion D (hyperarousal); see Table 1. ***Functional impairment.*** Functional impairment in at least one domain was reported by 20.3% of the sample. Ninety-one of the students (13.1%) reported impairment in one domain; 27 students (3.9%) reported impairment in two domains; 14 (2.0%), in three domains; and 9 (1.3%), in four domains. The number of impaired domains reported was significantly correlated with the frequency of posttraumatic symptoms ($r = .46, p = .001$). The largest number of students (56.6%) who met the criteria for full probable PTSD reported functional impairment in only one domain; 22.6%, in two domains; 13.2%, in three domains; and 7.5%, in four domains.

The Effect of Exposure level, probable PTSD, and symptom clusters.

A stepwise logistical regression did not reveal any significant interaction between gender and exposure for the diagnosis of probable PTSD and for each of the symptom clusters. Therefore, we conducted logistic regression analyses, with each cluster as the dependent variable and exposure level as the independent variable and with NE as the baseline category, to examine differences between the three exposure levels. A statistically significant difference was found in “helplessness and horror” between the exposure levels, $p = .002$. PE experiences significantly differed from NE experiences (odds ratio [OR] = 1.875; 95% confidence interval [CI] = 1.287, 2.733) and NM experiences significantly differed from NE experiences (OR = 1.628; 95% CI = 1.071, 2.475). A statistically significant difference was found in “cluster of experiencing,” between the

exposure levels, $p = .001$. PE significantly differed from NE (OR = 2.159; 95% CI = 1.479, 3.152). No significant difference was found between NM and NE. A statistically significant difference was found in “avoidance” between the exposure levels, $p = .037$. PE significantly differed from NE (OR = 1.806; 95% CI = 1.149, 2.837). No significant difference was found between NM and NE. A statistically significant difference was found in “hyperarousal” between the exposure levels, $p = .004$. PE significantly differed from NE (OR = 1.785; 95% CI = 1.263, 2.522). No significant difference was found between NM and NE.

Exposure level and the severity of posttraumatic symptoms. A two-way multivariate analysis of variance examined the effect of exposure and gender on the linear combination of posttraumatic symptoms and related distress (Criterion A2, posttraumatic symptoms, functional impairment, depressive symptoms, and somatic complaints). A significant exposure effect (Wilks’s $\lambda = 3.231$, $p = .001$) and a gender effect (Wilks’s $\lambda = 4.875$, $p = .001$) were found. No significant interactions were revealed (Wilks’s $\lambda = 1.062$, $p = .389$). A significant difference was found between exposure groups for the total posttraumatic symptom severity score, $F(2, 687) = 11.297$, $p = .001$, $d = .034$. Post hoc Scheffe’ comparisons showed that adolescents in the PE and the NM groups reported significantly more severe symptoms in the total posttraumatic symptom severity score than those in the NE group, whereas no differences were found between the PE and the NM groups. No group differences were found for Cluster A2. For the means and standard deviations of posttraumatic symptoms by exposure levels.

Exposure level and functional impairment.

We conducted a chi-square analysis on functional impairment criteria. There was a significant difference in the frequency of functional impairment among the three exposure levels, $\chi^2(2) = 21.954$, $p = .001$. Post hoc tests showed that more adolescents in the PE and NM groups than the NE group met the criteria for functional impairment: PE–NE, $\chi^2(1) = 20.690$, $p = .001$; IE–NE, $\chi^2(1) = 10.859$, $p = .001$. A stepwise logistical regression did not reveal any significant interaction between gender and exposure, for the specific domains of functional impairment. Therefore, we conducted logistic regression analyses, with “domains of functional impairment” as the dependent variable, exposure level as the independent variable, and NE as the baseline category, in order to examine differences among the three exposure levels. A statistically significant difference was found in “social domain” between the exposure levels, $p = .015$. PE significantly differed from NE (OR = 3.064; 95% CI = 1.414, 6.640). No significant difference was found between NM and NE. No significant difference was found in “family” among the exposure levels, $p = .430$. A statistically significant difference was found in “school functioning” among the exposure levels, $p = .001$. PE significantly differed from NE (OR = 3.497; 95% CI = 2.114, 5.784), and NM significantly differed from NE (OR = 2.015; 95% CI = 1.115, 3.643). No significant difference was found in “after school activities” between the exposure levels, $p = .500$. For the frequencies and percentages of functional impairment domains by exposure levels.

Exposure level, depressive symptoms, and somatic complaints.

Kruskal–Wallis tests revealed significant differences among exposure levels in depressive symptoms, $\chi^2(2) = 27.8$, $p = .001$; and somatic complaints, $\chi^2(2) = 21.4$, $p =$

.001. Post hoc comparisons showed that adolescents in both the PE and NM groups expressed more depressive symptoms than those in the NE group. No such difference was found between the PE and the NM groups. Adolescents in the PE and NM groups also showed higher levels of somatic complaints than those in the NE group.

Effect of Gender on Posttraumatic Distress

Gender, probable PTSD, and symptom clusters. A stepwise logistical regression did not reveal any significant interaction between gender and exposure for the diagnosis of probable PTSD and for each of the symptom clusters. Therefore, we conducted separate chi-square analyses to examine gender differences. Girls met the *DSM-IV* probable PTSD criteria more frequently than boys, $\chi^2(1) = 4.064, p = .044$. Similarly, more girls than boys met the criteria for Cluster A2 (subjective fear), $\chi^2(1) = 27.978, p = .001$; and for Cluster B (re-experiencing), $\chi^2(1) = 18.872, p = .001$.

Gender and the severity of posttraumatic symptoms.

Girls reported significantly more severe posttraumatic symptoms than boys, as reflected by the total posttraumatic severity score, $F(1, 646) = 8.254, p = .004, d = .013$. They also reported more of Cluster A2 (subjective fear), $F(1, 646) = 11.764, p = .001, d = .018$; and Cluster B (re-experiencing), $F(1, 687) = 28.679, p = .001, d = .040$. No gender differences were found regarding Cluster C (avoidance) and Cluster D (hyperarousal).

Gender and functional impairment

No significant differences were found in the frequency of functional impairment between boys and girls. A stepwise logistical regression did not reveal any significant interaction between gender and exposure for the specific domains of functional impairment. Therefore, we conducted separate chi-square analyses to examine gender differences. Boys reported significantly greater functional impairment than girls in the social domain, $\chi^2(1) = 4.384, p = .036$; and family domain, $\chi^2(1) = 4.572, p = .032$. More boys than girls also reported multidomain functional impairment, $\chi^2(1) = 4.683, p = .030$. No differences were found in reported impairment in school functioning or after school activities.

Gender, depressive symptoms, and somatic complaints.

The Mann-Whitney test was used to compare boys and girls on depressive symptoms and somatic complaints. Girls tended to report higher severity of depressive symptoms ($z = -2.887, p = .001$) and somatic complaints ($z = -2.887, p = .001$) than boys.

17) ADVOCATING MULTI-DISCIPLINARITY IN STUDYING COMPLEX EMERGENCIES: THE LIMITATIONS OF A PSYCHOLOGICAL APPROACH TO UNDERSTANDING HOW YOUNG PEOPLE COPE WITH PROLONGED CONFLICT IN GAZA

GILLIAN LEWANDO HUNDT, DAWN CHATTY, ABDEL AZIZ THABET, HALA ABUATEYA§

The goal

This paper examines to what extent psychological scales of mental well-being are generalizable in different non-Western social and cultural settings.

Methods

The study population comprised Palestinian refugee families living in the Gaza Strip. The regional study was co-ordinated by researchers from the UK (Chatty & Lewando Hundt, 2002) but carried out by five research teams based in Jordan, Syria, Lebanon, the West Bank and Gaza. Ethical permission was obtained from an Ethics Committee at the University of Oxford and informed consent was requested from every household in the study. The Gaza team worked in three refugee camps (El Bureij, Khan Yunis and Beach camps) and two urban areas (Elzaytoun and El Sheikh Radwan area in Gaza City). The criteria for selection of these areas were ease of access in terms of being close to the homes or workplaces of the researchers and areas both within and outside of camps where refugee families lived. A purposive sample of 20 households was selected according to two criteria: firstly, children ranging in age from pre-school to 20 years old; and secondly, grandparents who were more than 11 years old when they left their homes in 1948. Fifteen of these families were living inside the camps and five families were living outside the camps. Two social workers, one male and one female, conducted the household interviews and a female nurse took notes on some occasions. Semi structured interviews based on a topic list were held with members of different generations within the household. On the whole three visits took place to each household. On the first visit, the experiences of the grandparents were elicited, and on subsequent visits, those of the parents and children. The women and girls in the household were interviewed separately from male family members. Detailed notes were written of the interviews within twenty-four hours of the interview. Six focus group interviews took place with the children and young people aged 8–18 from these households. There were separate group interviews for boys and girls, three of each type consisting of 6–10 children. The same researchers conducted the focus groups. Boys were interviewed by the male social worker, while girls were interviewed by the female social worker with the female nurse. In addition, 154 children from these households ranging from 8 to 18 years of age filled in the A-Cope questionnaire: 73 girls (53%) and 81 boys (47%). SPSS for windows version 8 was used to analyze the quantitative data (A-Cope questionnaire). The Adolescents Coping Orientation for Problem Experiences (A-Cope questionnaire; Patterson & McCubbin, 1987) is a self-report questionnaire consisting of 54 specific coping behaviors that adolescents may use to manage and adapt to stressful situations. Subjects reported on a 5-point scale (1=never; 5=most of the time) to indicate how often they use each coping strategy when feeling tense or facing a problem or difficulty. Patterson & McCubbin (1987) used factor analyses for the A-cope questionnaire and reported twelve subscales, and reported that coefficients for these scales ranged from 0.50 to 0.76, with a median of 0.72. In another study (Randall & Jerome, 1990) the α coefficients ranged from 0.45 to 0.92, with a median of 0.76. In this research, the split half-reliability technique of the scale was high ($r=0.78$). Internal consistency of the scale, calculated using Chronbach's alpha, was also high ($\alpha=0.81$).

Results

The demographic characteristics of the 154 children and young people and their families who were included in the research sample. The mean age of children was 14.5 years. Seventy-one per cent were 15 years or less and 28.6% were over 15 years. The sample was distributed nearly equally between the three locations. Large families are the norm,

so the vast majority of the sample (75%) had more than four children. Household income was low as more than half of the sample said that their monthly income was less than US\$350. It is important to mention that they might have additional sources of income from other family members that they did not declare. Since the time of data collection unemployment and hardship in Gaza has increased owing to the continuing conflict. Illiteracy levels were similar for mothers and fathers. However, fathers had higher educational levels than mothers in terms of completing secondary and tertiary level education. The vast majority of women (80%) worked as housewives, whereas more than two-thirds (42%) of the men were laborers and one-third were employees.

The A-Cope questionnaire

There were a range of coping strategies that emerged from the use of the A-Cope Questionnaire (Patterson & McCubbin, 1987). For the purpose of this discussion on gender variation, individual percentages are grouped within the subscale headings. As there is some overlap within these twelve subscales, a few of them have been combined so that there are six groupings and the headings clearly show this. The discussion focuses on a review of the gender variation and no statistical analysis on the subscales is used. and refer to strategies used always or often.

Engaging in demanding activity and developing self-reliance and optimism.

Girls were more studious than boys, and more focused on improving themselves and thinking about the good things in their lives. The boys had a sense of self-reliance and more of them felt that they could cope by figuring out problems on their own and trying to organize their lives.

Developing social support and investing in close friendships.

Both boys and girls helped other people but boys were more reliant on peer support and girls got more involved with school activities. *Advocating multidisciplinary research* 421

Solving problems within the family. No gender differences were observed in terms of talking with mothers and fathers or siblings, other than boys having a preference to talk with their mothers and girls reporting that they obeyed parental rules more than boys did.

Seeking diversions and relaxing. Boys had more relaxation outside the home, being more likely to frequently go shopping, ride in a car or take exercise. The only two activities that were reportedly undertaken to a similar extent were watching TV and listening to music. Girls reported eating and sleeping more, playing video games and having fewer hobbies.

Using drugs. The issue of drug use is confusing since it is not clear if the use of non-prescribed drugs refers to illegal drugs or those obtained over the counter. The use of prescribed drugs is high in Gaza and many drugs are available over the counter and are purchased by boys or young men for other members of the family.

Venting feelings and being humorous. In terms of expressive behavior, both boys and girls complained to their friends, cried and said mean and nice things equally. They both

reported using humor. However, boys were more likely to get angry, yell, swear or complain to their families and girls tended to apologize more as a coping mechanism.

Avoiding problems. There was little smoking or drinking of alcohol, as one would expect in this culture. Girls could not use staying away from home as a coping mechanism whilst boys could, and both used daydreaming or denying the importance of a problem, but the boys did to a greater extent.

Seeking spiritual and professional support. Boys and girls prayed and talked to religious persons but boys attended the mosque more frequently and girls reported praying as a frequent coping mechanism in higher numbers than boys. The boys also reported talking with teachers and using professional counseling more than the girls do.

Focus group interviews

Although quantitative questionnaires enable standardized data to be collected and compared between different settings and societies, they nevertheless represent a data set of self-reported individual responses that are not contextualized within the household or wider society. In addition, a standardized instrument does not allow for the recording of local knowledge and mechanisms for coping with situations of political conflict. These shortcomings can be addressed to a certain extent if they are combined with qualitative data either in the form of semi-structured interviews, narratives or participant observation so that local unheard voices can be heard. For example, the understanding of PTSD is better understood when placed within the experience of family members of different generations. Repeated intergenerational trauma was one of the recurrent aspects of the narratives collected in this study on the experiences of forced migration of each generation. Children heard stories describing the traumatic experiences of their grandparents (the first generation). They also had witnessed or suffered a wide range of traumatic experiences, especially during the years of the first and current *Intifada*, such as the killing of a friend or a close relative. Many witnessed members of their families being killed or injured and their houses being raided by soldiers and their neighborhoods being under military curfews. As one said: Israeli soldiers beat my friend and placed him in a dustbin. A few weeks ago, I went to buy medicine from a nearby pharmacy, the army caught me, they beat me and put me in a dustbin. I was terrified, and now I avoid the army. (Teenage boy)

18) Child Mental Health Problems in the Gaza Strip

Abdel Aziz Mousa Thabet, and Panos Vostanis.

The goal

The aims of this study were (1) to identify the mental health characteristics of children referred to three types of health care services in the Gaza Strip, and (2) to compare the type of mental health problems among referrals to these services.

The sample

The population is a young= population, with 50.4% under 15 years, indicating a high dependency ratio. Gaza Strip has one of the highest birth rates in the world. The Palestinian Bureau of Statistics estimates in its reports a visible decline in the crude birth rate in the last five years. The crude birth rate of the population in Gaza Strip was 40 per 1,000 and 34.5 per 1,000 in 1996 and 1998, and 38 per 1,000 in 2002 respectively

There are three types of residential localities in Gaza Strip: rural (villages), camps, and towns. In total, there are 8 refugee camps, 14 villages, and 4 towns; 9% of the general population lives in rural areas (villages), 3% live in semi urban areas, 53% live in urban areas (towns), and 35% live in refugee camps, where Palestinian families immigrated after the 1948 catastrophe. The refugee camps are very crowded urban settlements (7). In 1995, the annual infant birth rate was 49.4 per 1000 population, the infant mortality rate was between 26-50 per 1,000 infants, and the general population death rate was 8 per 1000. The annual increase of population growth in the Gaza strip is 4.5%. Referrals were selected from the following health care settings:

a) *A community child mental health service* in Gaza.

The mental health center was established in 1994, together with a community mental health center in the Khan Younis area. Referrals are made by other clinicians, schools and parents. There are two community clinics for both children and adults, as well as an outpatient clinic at the Gaza psychiatric hospital. These services are managed and clinically supervised by the first author.

b) *Five Primary Health Centers* in Gaza and Rafah city.

These primary health care settings are usually drop-in centers, without a referral procedure. In total, there are 31 primary health care centers distributed in the five districts of the Gaza Strip, 10 of which operate a 24-hour service. The United Nations run similar clinics in the refugee camps in the Gaza Strip. The majority of cases are seen by general practitioners, and there are weekly specialist clinics.

c) *A Pediatric Hospital* (Gaza ElNaser—outpatient and inpatient departments).

This is the only paediatric hospital in the Gaza strip, although there is one pediatric department at the Khan Younis General Hospital. The hospital has 240 beds, and accepts emergencies and routine out-patient referrals from the primary health centers. Fifty consecutively referred children of 6-13 years were selected from each health care setting, excluding established cases of moderate to severe learning disability. Data were collected on family and socioeconomic status, and primary reason for referral. In addition, parents completed the Rutter Scales for their child (form A2, Arabic version). The Rutter Scales (8) have been standardized and widely used as a measure of behavioral and emotional problems in epidemiological research. The scales consist of 31 items rating behavioral and emotional problems on a 0-2 scale. Children with a total score of 13 or more have been found to be potential “cases,” i.e., presenting with a possible mental health disorder. Scores are also provided for the hyperactivity, conduct and neurotic subscales.

Results:

Out of the 150 children, 88 were male (59%) and 62 female (41%). The mean age was 8.9 years (range 6-13). The majority of families (N=121, or 80.7%) had at least four children. Large families (with at least four children) were more likely to be referred to the mental health service ($\chi^2=7.8$, $DF=2$, $p=0.02$), which is consistent with previous findings that family overcrowding is a risk factor for child psychopathology. Forty-two fathers (28%) were unemployed or unskilled workers, and four fathers (2.7%) had a criminal record. Eleven mothers (7.3%) had established psychiatric illness, these were evenly distributed among the three groups ($\chi^2=4.2$, $DF=2$, $p=0.12$). The psychiatric diagnoses as made by the clinician according to ICD-10 criteria (9). Only two children seen at the pediatric hospital received a psychiatric diagnosis (conversion/ hysteria) and none of those referred to a primary health center. However, when presence of possible disorder was established by scores on the Rutter Scales, prevalence rates were high among all groups. The rates of children whose total mental health care score indicated a disorder were: 70% of referrals to the mental health center, 30% of referrals to the pediatric hospital, and 18% of children seen in primary health care.

19) CHILD MENTAL HEALTH PROBLEMS IN ARAB CHILDREN: APPLICATION OF THE STRENGTHS AND DIFFICULTIES QUESTIONNAIRE

A.A. THABET, D. STRETCH & P. VOSTANIS

Aim

This study aimed at establishing the mental health profile among 322 Arab children living in the Gaza strip.

Method and Sample

Children were selected in four age bands, i.e. 3, 6, 11 and 16 years of age. The relevant forms of the Strengths and Difficulties Questionnaire (SDQ) were completed by parents, teachers and 16-year-olds.

Results

Factor analyses of the parent-related questionnaires identified similar general factors as in the UK-based studies of validating the SDQ. Certain items did not load as highly on the general factors, i.e. distractibility, feeling scared, feeling unhappy, stealing, and being picked or bullied. Emotional problems items were rated differently in the pre-school group (aches, nervousness clinging, worries) than in previous studies. Using previous optimal cut-off scores, parent SDQs revealed higher rates of children with emotional and conduct problems falling above the 90th centile established in the UK sample, but lower rates according to self-report SDQs by 16-year olds.

Conclusions

Western categories of mental health problems did not clearly emerge from the factor analysis. The main difference from western epidemiological studies appeared to operate

in parents' perceptions of emotional problems in preschool children. The SDQ is very promising as a screening measure or rating scale in different cultural populations. However, future research should identify and establish indigenously meaningful constructs within this population and culture, and subsequently revise measures of child mental health problems.

20) Co-morbidity of PTSD and depression among refugee children during war conflict

Abdel Aziz Mousa Thabet, Yehia Abed, and Panos Vostanis

Background

We examined the prevalence and nature of comorbid post-traumatic stress reactions and depressive symptoms, and the impact of exposure to traumatic events on both types of psychopathology, among Palestinian children during war conflict in the region.

Methods and Sample

The 403 children aged 9–15 years, who lived in four refugee camps, were assessed by completing the Gaza Traumatic Events Checklist, the Child Post Traumatic Stress Reaction Index (CPTSD-RI), and the Short Mood and Feelings Questionnaire (MFQ).

Results

Children reported experiencing a wide range of traumatic events, both direct experience of violence and through the media. CPTSD-RI and MFQ scores were significantly correlated. Both CPTSD-RI and MFQ scores were independently predicted by the number of experienced traumatic events, and this association remained after adjusting for socioeconomic variables. Exposure to traumatic events strongly predicted MFQ scores while controlling for CPTSD-RI scores. In contrast, the association between traumatic events and CPTSD-RI scores, while controlling for MFQ scores, was weak. The CPTSD-RI items whose frequency was significantly associated with total MFQ scores were: sleep disturbance, somatic complaints, constricted affect, impulse control, and difficulties in concentration. However, not all remaining CPTSD-RI items were significantly associated with exposure to traumatic events, thus raising the possibility that the association between depression and PTSD was due in part to symptom overlap.

Conclusions

Children living in war zones are at high risk of suffering from PTSD and depressive disorders. Exposure to trauma was not found to have a unique association with PTSD. The relationship between PTSD and depressive symptomatology requires further investigation.

21) Maltreatment and coping strategies among male adolescents living in the Gaza Strip

Abdel Aziz Mousa Thabet, Victoria Tischler, Panos Vostanis

Objective

To establish the nature and extent of maltreatment experiences, coping strategies, and behavioral emotional problems, and their relationships, in a sample of Palestinian adolescents.

Method

A study of 97 male adolescents aged 15-19 years, and attending a vocational training centre based in the Gaza Strip. Adolescents completed the Child Maltreatment Schedule and the Ways of Coping Scale (WAYS). The Strengths and Difficulties Questionnaire (SDQ) was completed by adolescents and by their teachers.

Results

Findings revealed high rates of emotional and physical maltreatment. Reliance on emotion-focused or avoidant coping strategies was associated with exposure to maltreatment. Use of maladaptive coping also predicted emotional difficulties in the respondents.

Conclusions

Coping strategies are an important indicator of psychosocial functioning in adolescents who have experienced maltreatment. Identification of coping styles can augment the assessment of at-risk adolescents. Emotion-focused strategies, in particular, appear to be widely used by young people from non-western cultural backgrounds.

22) Current Measures of PTSD for Children and Adolescents

Summer Sherburne Hawkins, and Jerilynn Radcliffe,

Objective

To review measures of posttraumatic stress disorder (PTSD) and posttraumatic stress symptoms (PSS) for children and adolescents.

Methods We reviewed broad-based child mental health journals within the disciplines of pediatrics, child psychology, and trauma, from 1995 to 2004, to identify measures of PTSD and PSS for children and adolescents. The review includes a summary of the psychometric properties and associated features of the measures and the clinical domains and types of studies using each measure.

Results Seven measures of PTSD and PSS were identified, including clinician-administered interviews and self-report questionnaires. Sixty-five articles containing the measures were categorized into eight trauma domains. We found there is little consensus over measures used within each trauma domain.

Conclusions Few measures of PTSD and PSS have been designed specifically for young people. Further directions for measurement of PTSD in this age group are discussed to prevent under-diagnosis and under-treatment for youth. Key words adolescent; assessment; children; posttraumatic stress disorder; trauma.

23) Emotional problems in Palestinian children living in a war zone: a cross-sectional study

Abdel Aziz Mousa Thabet, Yehia Abed, Panos Vostanis

The goal

To investigate the nature of post-traumatic reactions, anxiety, and fears in children exposed to bombardment during the conflict, by comparison with a group of children not directly exposed to such traumatic events.

Methods

Setting and patients

Since the start of the Al Aqsa Intifada, children have been exposed to various traumatic events, often reported by media across the world. Particular events have been bombardment and home demolition. During the 2-month period of data collection (January and February, 2001), 333 homes were demolished and families were evacuated into tents or flats. 15 Highly exposed regions included the borders of the Gaza strip, Rafah border (Salah El Dine gate), Khan Younis (El Toufah area), and Dear El Balah (Kefar Daroum settlements region). We selected 100 children aged 9–18 years from families who lived in exposed regions, whose house had been bombarded and demolished. These families constituted the target population. Consecutive family names were obtained from the Rafah Municipality. We could not contact nine families living in exposed regions because of difficulty in accessing sections of the Rafah and Khan Younis regions because they were isolated from other regions by blockades, and because of the risks involved for the research team (eg, shooting). Both these regions are refugee camps and thus, refugee children may have been under-represented in the sample, although other refugee camps were included such as El Nusirate and Maghazi camps in the Gaza region, and most refugee camps in Rafah and Khan Younis that could be accessed by the researchers. All remaining 91 families agreed to participate. The local research ethics committee approved the study. We selected a control group of 91 families, matched for age (9–18 years), from families living in regions of the Gaza Strip that had not been directly bombarded but who may have been exposed to other traumatic events such as witnessing bombardment by helicopters, seeing mutilated bodies on television, and hearing about the conflict in the media. Controls were also chosen as consecutive names from the Municipality register. Two non-exposed families refused to participate, leaving a control group of 89 families. One child from each family was selected. We grouped families according to the number of children, and selected a target child from every family group by stratification of their birth order. Thus, consecutive families with three children from the register were selected as follows: in the first family the youngest child was selected,

in the next family the middle child was selected, in the third family the oldest child, in the fourth family the youngest child again, and so on. Written informed consent was obtained from families. All children (exposed and non exposed) were interviewed at home or in the homes of relatives or neighbors in whose homes they were living because their own houses had been demolished.

Measures and procedures

We obtained information from parents about their employment and educational status. All children were assessed with the child post-traumatic stress reaction index (CPTSD-RI),¹⁶ the revised children's manifest anxiety scale (RCMAS),¹⁷ and the children fears checklist.¹⁸ The CPTSD-RI is a 20-item self-report scale designed to score symptoms of post traumatic stress reactions of children aged 6–16 years. The index includes three subscales, intrusion (seven items), avoidance (five items), and arousal (five items), plus three additional items. Inter-rater reliability for this instrument when administered by a clinician has been reported to be high, with a Cohen κ of 0.87 for agreement between items.¹⁹ Items are rated on a 0–4 scale: mild (total score of 12–24), moderate (25–39), severe (40–59), and very severe (>60), which refer to the likelihood of post-traumatic stress disorders.²⁰ The CPTSD-RI has been translated into Arabic and validated for this culture.^{10,14} In this study, the split half reliability of the scale was high ($r=0.79$). Chronbach's α was also high (0.71) for the intrusion subscale, but low for the other two subscales (arousal 0.56 and avoidance 0.36). The RCMAS¹⁷ is a standard 37-item self-report questionnaire for children aged 6–19 years. The questionnaire (yes or no answers) measures symptoms of anxiety in 28 anxiety items and nine lie items. A score of 18 or more has been found to indicate presence of anxiety disorder.²¹ This questionnaire has been used in a total population study in the Gaza strip, in which 22% of children scored above the cut-off score for anxiety disorders.²² The internal consistency of the scale, calculated using Chronbach's α was also high (0.86). The children fears checklist¹⁸ was developed by El Taib. The child rates 20 items on different fears as yes or no. The total score is 20 in all items. This checklist was tested in Egypt for 2000 children aged 9–12 years. Test-retest reliability was high ($r=0.91$), with internal consistency 0.78. The validity of the checklist was externally assessed by a panel of experts, who agreed on 90% of the items. In this checklist, fears range from specific fears (eg, of the dark), to more complicated fears and reactions (eg, seeing people on the walls). The split half-reliability of the scale was $r=0.61$, and the internal consistency, calculated with Chronbach's α , was 0.66 (lower than that in our original study). This difference may be related to different populations—a stable general population in the original study, and a high-risk population in this study, who may have rated differently checklist items that ranged from ordinary fears to fears related to war (eg, fear of soldiers).

Statistical analysis

We used descriptive statistics to present the characteristics of the sample. To analyze differences between the groups, we used the χ^2 test for categorical variables and the Mann-Whitney U test for continuous variables that were not normally distributed. We did multivariate logistic regression analyses to investigate the association between

independent (exposure to bombardment and socio demographic variables) and dependent variables (post-traumatic stress disorders or anxiety).

Results

180 children participated in the study: 91 (51%) who had been exposed to bombardment and home demolition, and 89 (49%) controls who had not. The non-exposed group was much younger than the exposed group ($p=0.033$; table 1). We also recorded significant differences in paternal and maternal education status (higher education in parents of the non-exposed group than in the exposed group: fathers $p=0.0008$; mothers $p=0.021$); and more unemployed fathers and skilled workers in the exposed group than in controls ($p=0.040$). However, most fathers were effectively unemployed during the conflict. We recorded severe to very severe post-traumatic stress disorder reactions (score >40) in more children who had lost their homes due to bombardment than in controls. Children exposed to bombardment and home demolition also had significantly higher post-traumatic stress disorder scores, and higher CPTSD-RI subscales of intrusion, avoidance, and arousal symptoms. The most frequently reported items of the CPTSD-RI (post-traumatic stress symptoms occurring much or most of the time) in exposed children were: identifies event as extremely stressful (60 of 91, 66%), difficulty in concentrating (53, 58%), sleep disturbance (52, 57%), and avoidance of reminders (47, 52%). In logistic regression analysis, we entered presence of post-traumatic stress disorder as the dependent variable (present or not), with socio demographic variables and likelihood of anxiety disorders, 35 (39%) non-exposed children and 20 (22%) exposed children were within the likely clinical range ($p=0.015$). We then compared the continuous RCMAS scores, children who had been directly exposed had significantly lower total anxiety scores than controls. No independent variable was associated with presence of anxiety (RCMAS score within the clinical range) in logistic regression analysis (odds ratio of belonging to the non-exposed group was 1.98 [95% CI 0.94–4.18], $p=0.075$). The most frequently reported symptoms of anxiety in non-exposed children were: I feel alone even when there are people with me (65 of 89, 73%), I worry a lot of the time (63, 71%), and I worry when I go to bed at night (57, 64%). Children exposed to bombardment and home demolition scored significantly higher on total fear scores than did controls. The most frequently reported fears of children exposed to home bombardment were: being at a high place, you feel that it will collapse (69 of 91, 76%), feeling scared in a dark place (65, 71%), fears of being in a closed space (63, 69%), fears of height and high buildings (63, 69%), fears of things and people the child knows will not hurt him (61, 67%), and fears of having an untreatable disease (58, 64%).

24) Exposure to Chronic Community Violence: Resilience in African American Children

Janine M. Jones

The goal

This study explored the relationship between exposure to chronic community violence and the development of complex post-traumatic stress disorder (C-PTSD), a constellation of symptoms that occur as a result of repeated exposure to traumas, in the context of

specific African American cultural beliefs and values that are used as coping mechanisms.

METHOD

PARTICIPANTS

The participants were selected from three “neighborhood schools” in the midst of a high-crime, high poverty community in Houston, Texas. Crime statistics were obtained from the local police department to determine which areas in the community were most affected by CCV and poverty. These statistics indicated that the Third Ward and Fifth Ward of Houston were among the most violent and crime-ridden areas of the city. The South Central School District overlapped both of these wards, so it was selected for the sampling frame. All participants in the study were enrolled in the school’s free or reduced-price lunch program, a government feeding program for children living in poverty. Seventy-one African American students aged 9 to 11 years participated in the study. The sample consisted of 56% girls. As a gift for their participation, all children were given Beanie Baby toys, along with cards for free Happy Meals from the McDonald’s Corporation. Parents were entered into a lottery to win one of four money orders for \$50.

PROCEDURE

Research Assistants. A team of three female African American research assistants, along with the author as principal investigator, completed the interviews for the study. By using African American graduate and undergraduate students as research assistants, an ethnic match between the interviewees and the interviewers was provided. The ethnic-match methodology was selected because research has shown that using this method often increases the likelihood of candid responses and comfort with interviewers, particularly when working with disenfranchised communities (Russell, Fujino, Sue, Cheung, & Snowden, 1996). All research assistants had backgrounds in psychology. As a result, training for this project included developing a clinical protocol for assessing children’s levels of distress. The consent form and assent form included detail about how the team would handle distress in children (e.g., ending the interviews, consulting the principal investigator immediately, and making referrals for treatment). No adverse events occurred, and no referrals were necessary.

Interviews

Individual interviews took between 60 and 75 minutes to complete. They were conducted in the participants’ homes and within the community rather than at the school. The home environments included substandard singlefamily homes, “projects,” and apartments. Community locations included public libraries, churches, and community centers. Occasionally, there were nearby dwellings with boards on the windows. These homes were frequently falling apart, and homeless people were living outside on vacant lots. The participants referred to these dwellings as “crack houses.” For safety reasons, the research assistants were instructed to conduct the interviews during daylight hours. If this was not possible, they conducted the interviews in pairs. Each child was interviewed by a research assistant who was well trained in the use of each of the instruments in the study.

The interview protocol began with the interviewer introducing the child to the response cards. To provide consistency, each instrument within the interview protocol had a corresponding response card. The response card depicted either four or five thermometers with increasing degrees of mercury. These cards guided the child's responses with a visual representation for each level of response to the item. The interviewer then administered the instruments in the order that they are presented in the following section.

RESULTS

WHAT WAS THE PREVALENCE OF EXPOSURE TO VIOLENCE IN THIS SAMPLE?

Many of the children participating in the study had experienced the most serious forms of direct exposure to violence. For example, 19% of the 71 children had witnessed people they knew being shot or stabbed, and 10% of the children had witnessed people they knew being killed. The children had also witnessed this extreme form of community violence with strangers as the victims. Twenty percent had seen strangers being shot or stabbed, and 13% had witnessed strangers being killed. Some of the children had also been victims of violence. Forty percent had been chased or threatened, 27% had been beaten, and 1% had been shot or stabbed. The types of experiences the children within the sample had been exposed to were consistent with those that Herman (1992b) described as related to symptoms of C-PTSD.

25) Group crisis intervention for children during ongoing war conflict

Abdel Aziz Thabet, Panos Vostanis, Khalid Karim

The goal

The aim was to evaluate the short-term impact of a group crisis intervention for children living in a zone of ongoing war conflict.

Method

Participants

Children for this intervention study were selected from an earlier epidemiological study on the prevalence of PTSD and depression among refugee children living in the Gaza Strip, who comprised the target population [34]. One province (Mid Zone) was selected, with six refugee camps. These were considered representative, as they have the same socioeconomic characteristics with all other refugee camps in the Gaza Strip, all children attend UNRWA schools specifically set up for refugees, and the inhabitants of the selected camps constitute about one-third of the total refugee population.

Results

The large family size and low socioeconomic status were striking across the sample. The three groups did not differ significantly on parental employment status, family size, or family income. As stated earlier, there were only female pupils in the education group. The mean age significantly differed between the three groups: ANOVA $F(2, N=111) = 7.3, p < 0.001$ (mean age 12.9, 12.3 and 11.7, respectively). The pre- and post-

intervention mean and SD scores are presented in Table 2. The three groups did not differ significantly on any CPTSD-RI or CDI scores at the time of the first assessment (Kruskal-Wallis non parametric test). Changes of CPTSD-RI or CDI scores were investigated by Wilcoxon test within each group. No significant changes were established (Table 2), with the exception of the decrease in intrusion scores in the intervention group: $z(47)=1.87$, $p=0.06$, although this did not reach a level of statistical significance. The three groups were not found to differ significantly on the change of scores on each measure (ANOVA): total PTSD score $F(2, N=111)=0.54$, ns; intrusion $F=0.43$, ns; avoidance $F(2, N=111)=0.11$, ns; arousal $F(2, N=111)=0.12$, ns; depression $F(2, N=111)=1.45$, ns. We then estimated the frequencies of ‘caseness’, i. e. the likelihood of PTSD or depressive disorders, using previously established cut-off scores, whilst acknowledging potential limitations in the absence of diagnostic psychiatric interviews. When moderate and severe PTSD reactions were grouped together as ‘cases likely to require assessment and treatment’, the rates of children fulfilling these criteria were high, ranging from 57 % to 86% at the first assessment (which was expected, as these were selection criteria from an earlier epidemiological study [34]. There were significantly more probable PTSD cases in the education group at the first assessment: chi-square=6.03 (2, N=111), $p<0.05$.

26) Narratives from caregivers of children surviving the terrorist attack in Beslan: Issues of health, culture, and resilience

Ughetta Moscardino, Giovanna Axia, Sara Scrimin, Fabia Capello

The goal

This qualitative study aims to:

- (a) Examine caregiver reactions to the terrorist attack in Beslan as reported 3 months after the traumatic event;
- (b) Determine the extent to which indigenous cultural values and religious belief systems play a role in Beslan’s caregivers’ reactions to such event; and
- (c) Identify variables that may function as sources of resilience to caregivers.

Methods

Participants

A convenience sample of 19 families from Beslan was recruited during their 40-day stay in the city of Trento (northern Italy) 3 months after the terrorist attack. Primary caregivers were asked to participate in semi structured interviews as part of a larger study on posttraumatic stress disorder and its neuropsychological correlates. Two families refused to volunteer for the study, because they felt it was too stressful to report on the traumatic event. The final sample consisted of 17 primary caregivers. Of these, 12 were mothers, two fathers, and three other relatives (e.g., aunt, grandmother). Children’s age ranged from 6 to 14 years ($M \frac{1}{4} 9.36$ yrs, $SD \frac{1}{4} 3.17$ yrs). All children (13 boys, 9 girls) were held as hostages in School Number 1 and had undergone repeated surgeries for their physical injuries. Caregivers’ mean age was 41.29 years ($SD \frac{1}{4} 8.07$, range $\frac{1}{4} 31-62$); 10 caregivers were married, four divorced or separated, and three widowed. Forty-seven percent of our participants were high school graduates, and 35% had a college degree.

Fourteen caregivers were Orthodox- Christians (82%), two Muslims (12%), and one atheist (6%). Of 17 caregivers, six had lost at least one relative in the siege. Most caregivers (16 of 17) met full diagnostic criteria for PTSD, and one met criteria for sub-clinical disorder as assessed via the UCLA Post traumatic Stress Disorder Index for DSM-IV-TR (Steinberg, Brymer, Decker, & Pynoos, 2004).

Procedure

In November 2004, we were contacted by the president of the Italian NGO ‘Help us save the children’ to provide psychological assistance to a group of highly traumatized families from Beslan who were hosted in a private residential structure in the city of Trento, Italy for 40 days. In addition, we planned a more structured data collection to assess caregivers’ levels of post-traumatic symptoms, depression, anxiety, and children’s PTSD and neuropsychological functioning. Assessments were conducted in two different phases. In the first phase (approx. 2 weeks), a participant observation method was used to observe and record more fully the caregivers’ beliefs and behaviors in their everyday life. We approached families through participation in informal conversations (with the help of a professional translator), daily routines and activities (e.g., meals, playing with children), and organized excursions. The purpose was to explore their subjective experiences, descriptions, and interpretations related to the traumatic event in a more structured setting. All interviews were conducted by two trained clinical psychologists in a separate room inside the residential structure; a professional interpreter simultaneously translated all interviews from Italian to Russian and back.

Findings

Thematic content analysis of primary caregivers’ responses resulted in nine general themes that may be grouped into two broad areas: (1) parenting issues; (2) family and community life. The next section presents a descriptive illustration of emergent themes, along with the percentages representing the rate of each theme out of the total number of primary caregivers.

Parenting issues

Concerns about child physical health Concerns about their children’s physical health were stressed by 41% caregivers (7 of 17). These concerns were related in all cases to the multiple injuries suffered during the school siege. In general, caregivers reported that after the attack their children were more prone to get sick because of their increased vulnerability. One mother said, “Before this age he never got sick, not even a coldy but now he has very serious injuries: he had five fragments in his head and neck, one of them in the frontal part of the brain. And his ears: the ear drums are severely damaged because of the contusionyI get scared when his nose is blocked, or he sneezes, or he has a sore throaty because as the doctors said, anything like that may produce complications”.

Headaches, stomachache, and ear pain were the most frequent physical symptoms described by caregivers. Some caregivers expressed their concerns about the implications of their children’s physical injuries for later development. A mother explained, “He is certainly happy about being alive and surviving the attack. However, he is very anxious about his health conditions, he is afraid of being ‘insufficient’, that’s how he feels. I really hope he will recover the functionality of his arm and his hearing, because the

dream of his life is to join the military academy”. Child psychological responses to the event All caregivers talked about their children’s psychological reactions after the traumatic event. Common issues were behavioral problems, including increased irritability, aggression, sleep disorders, lack of appetite, separation anxiety, and regressive behaviors (88%). A mother complained, “His character has changed. He generally reacts more strongly now with much aggression. He thinks that someone wants to hurt him, he feels very offended if you tell him what to do”. Other caregivers expressed their concerns about children’s “precocious aging”, excessive awareness of the tragedy, and attempts to protect adults from grief (65%). Statements included: “Before they were two very happy boys, but now they have changed radically: S. has become more adult, while A. looks much older. Something inside him has broken.”; “It seems to me that after the event his character changed before he was more light-hearted, a happy boy, but now he’s not anymore”. Caregivers also described the ways children reacted in the few weeks after the terror act. Two major types of response were identified: the first included avoidance of people, places, and discussions related to the event, often associated with signs of emotional numbing, whereas the second defined those children who openly expressed their feelings, emotions, and thoughts about the event from the first moment and with people from both inside and outside the family (e.g., journalists). Caregivers of children who displayed the latter type of response (12 of 22) reported having fewer difficulties with their children. According to most caregivers, the willingness to talk about the event gradually decreased over time, with the majority of children currently preferring to avoid topics related to the terror act in an effort to forget what happened. A recurrent issue in caregivers’ narratives was children’s fear of going back to school: “He’s afraid of going back to school. He doesn’t want to go because he says that it might happen again”.

Rethinking the parental role

Fifteen caregivers expressed concerns, doubts, and difficulties with regard to their role as parents. Of these, four reported a sense of guilt and failure in protecting their children from what had happened: “For 10 years I have been working as a security guard at the airport to protect other people but I have not been able to protect my son”, “I blamed myself for letting my son go to school that morning I felt guilty because I was standing outside and he was in there If I had known that something like that would happen, I would never have brought my child to school”. Eleven caregivers explained their difficulties in imposing normal rules and a discipline due to children’s increased psychological vulnerability; although they recognized the necessity to behave with their children “normally”, many were uncertain about the effects of their discipline strategies in light of their children’s psychological conditions and often reported to give in to their requests.

Coping with the loss of significant others

A recurrent theme in caregivers’ narratives was the loss of significant others, including friends and relatives. Some caregivers expressed a sense of gratitude for surviving the attack, but also a feeling of guilt or compassion for those who were not able to escape (11 of 17). One mother said, “my children consider themselves happy because they have

survived. But they can't enjoy things. A. is very offended if someone shows joy or happiness. He thinks that it's something to be ashamed of we don't have the right to be happy now''.

27) Psychological distress and resources among siblings and parents exposed to traumatic events

Raija-Leena Punamäki, Samir Qouta, Eyad El Sarraj, and Edith Montgomery

The goal

To know psychological distress and resources within family members' in general and when exposed to traumatic events in particular.

Method

Participants

The sample consists of 65 Palestinian families in which three adolescents and both parents participated. They were from the Gaza Strip and all families were Sunni Muslims. One child in each family (index child) belonged to the basic sample of 108 Palestinian children, who were first studied during the First Intifada in 1993 when they were 10–11 years old. The families were visited again just before the Al Aqsa Intifada started in 2000, and in addition to the index child both parents and one younger and one older sibling also participated. The original sample of index children was recruited from a random community sample using low and high levels of family military trauma as a criterion (Qouta, Punamäki, & El Sarraj, 1995). In the present sample the number of boys (48%) and girls (52%) was almost equal among the index children, as well as among the younger (42.4%/57.6%) and the older (56.3%/43.8%) siblings. In this study, the participating siblings are called the 15-year-olds, the 17-year-olds and the 19-year-olds.

Procedure

A female psychologist approached the families and asked each index child and one of his/her younger and older siblings and both parents to participate. The preference was given to siblings that belonged to the same age group as the index child. There was a standard introduction to the study that informed family members about the purpose and the procedure for the study ("We have followed up the development and wellbeing of x (index child) and would like to include also other family members . . ."). All children and fathers and most of the mothers filled in the questionnaires themselves. The psychologist interviewed mothers who so wished, mainly those without formal education ($n = 11$). She advised the family members to answer the questionnaires independently without conferring and reserved privacy for those interviewed. The visits to the families lasted about 2–3 hours. After filling in the questionnaires, the participants discussed family life, problems and possible needs for mental health services. The parents were not rewarded for their participation, but children received a moderate present (a calendar).

Results

Descriptive statistics

The results show the ranges, means and standard deviations and the percentage distributions of demographic variables reported by mothers and fathers. The results show that mothers were younger than fathers ($t(65) = 5.09, p < .0001$). Fathers were better educated than mothers ($\chi^2 = 37.85, p < .0001, N = 64$), and a majority (84%) of mothers worked at home. Twenty per cent of fathers were unemployed, that is, they worked at home. The participating families were large: There were 8–9 children on average. The differences (non significant) in number of children between spouses' reports are due to fathers (18%) having had more than one wife. The percentage of multiple marriages had been 26–29% in the earlier generation, as is indicated by parents' reports of the number of their fathers' wives (Table 2). The spouses' concept of extended family differed from each other; fathers reported more members in their extended families. More than half of the families lived in refugee camps, and thus the children's grandparents were refugees from Palestine from the 1948 war. Family military trauma was normally distributed in the sample; 54% had been exposed to 5–8 traumatic events and 66% to four or less. Of the mothers almost all (95%) reported a recent personal trauma, while 75% of fathers, 74% of 19-year-olds, 67.2% of the 17-year-olds and 59.4% of 15-year-olds reported recent personal trauma.

Symmetries and asymmetries in within-family distress and resources

The within-family MANOVA main effects and simple contrasts for family members' psychological distress are presented in Table 3. The results show significant main effects on within-family PTSD ($p < .02$) and depressive ($p < .0001$) symptoms, indicating general asymmetries between family members in symptom expression. Simple contrasts specify that mothers and 19-year-olds reported higher levels of PTSD than 15- and 17-year-olds. Mothers reported a higher level of PTSD than fathers. Concerning depressiveness, the 17- and 19-year-olds reported higher levels of symptoms than both parents and 15-year-old siblings. Fathers reported a higher level of depressive symptoms than mothers. The significant within-subject main effects indicate general asymmetries in family members' resilient attitudes ($p < .0001$) and satisfaction with quality of life ($p < .002$). Simple contrasts specify that mothers and fathers showed higher levels of resilient attitudes than their children, and that mothers showed a higher level of resilient attitudes than fathers. Concerning the quality of life, the 15-year-old siblings were more satisfied than older siblings and the mother.

Identifying family types according to distress and resources

Results for cluster analyses showed that a four-cluster solution provided the best fit to the data (see criteria in the statistical analyses). A discriminate function analysis using 20 clustering variables to predict group membership demonstrated a 96.7% correct classification rate. The cluster solution with ANOVA results are presented in Table 5. The results show that of the family type clusters the ordeal families and resilient families provide examples of symmetric family responses, that is, all members show similar levels of either psychological distress or resources. Parental strength families and children's strength families in turn illustrate asymmetric family dynamics, that is, parental and

children's subgroups show different levels of distress and resources. In cluster 1, all family members reported high levels of PTSD and depressive symptoms and low levels of resilient attitudes and satisfaction with quality of life. Cluster 1 was named 'ordeal families', and their number was 15 (24.6%) in our sample.

Complementary dynamics between family members

The results shows partial correlations among family members' psychological distress and resources, controlling for the family average. Results revealed complementary dynamics between children and their parents and between two older siblings. Spousal complementary dynamics were found in psychological resources, but not in psychological distress. Concerning psychological distress, if the mother showed a high level of PTSD, their 15- and 17-year-olds showed low levels, or vice versa. If fathers showed a high level of PTSD, their 17- and 19-year-olds showed low levels, or vice versa. If both mothers and fathers reported high levels of depressive symptoms, their 15- and 19-year-olds reported low, or vice versa. The complementary depressiveness was also found between 17-year-olds and fathers and between the two older siblings. Concerning psychosocial resources, if fathers showed a low level of resilient attitudes, their 17- and 19-year-old children showed high levels, or vice versa, and if mothers showed low resiliency, the 15-year-olds showed high, or vice versa. Complementary resiliency was also found between the two older siblings. Spousal complementary dynamics indicate that if mother showed highly resilient attitudes, the father showed low, or vice versa. Complementary dynamics in satisfaction with quality of life were found between mothers and their 17- and 19-year-old children, and between fathers and the 15-year-olds. Spousal complementary dynamics indicate that if mothers showed a high satisfaction with quality of life, fathers showed low, or vice versa.

Traumatic events and within-family distress and resources

The interaction effects between within-family dependent variables (psychological distress and resources) and traumatic events covariants (MANCOVAs) and between-family effects are summarized in Table 7. The hypothesis that exposure to a high level of traumatic events is differently associated with family members' responses (i.e., high asymmetry) was substantiated in PTSD (marginally) and depressive symptoms and satisfaction with quality of life, but not in resilient attitudes.

28) Retrospective Reports of Childhood Trauma in Adults With ADHD

Julia J. Rucklidge, Deborah L. Brown, Susan Crawford, Bonnie J. Kaplan

Objective: Although studies have documented higher prevalence of abuse in children with ADHD, no studies have investigated childhood reports of abuse in individuals identified with ADHD in adulthood.

Method:

Forty ADHD women, 17ADHD males, 17 female controls, and 40 male controls complete the Childhood Trauma Questionnaire and other measures of psychosocial functioning.

Results:

Emotional abuse and neglect are more common among men and women with ADHD as compared to controls. Sexual abuse and physical neglect are more commonly reported by females with ADHD. Although childhood abuse is significantly correlated with depression and anxiety in adulthood, having ADHD is a better predictor of poorer psychosocial functioning in adulthood.

Conclusion:

Clinicians are alerted that patients with ADHD symptoms have a high probability of childhood abuse.

29) Exposure to war trauma and PTSD among parents and children in the Gaza strip

A. A. Thabet, A. Abu Tawahina, Eyad El Sarraj, Panos Vostanis

Objective

Exposure to war trauma has been independently associated with posttraumatic stress (PTSD) and other emotional disorders in children and adults. The aim of this study was to establish the relationship between ongoing war traumatic experiences, PTSD and anxiety symptoms in children, accounting for their parents' equivalent mental health responses.

Methods

The study was conducted in the Gaza Strip, in areas under ongoing shelling and other acts of military violence. The sample included 100 families, with 200 parents and 197 children aged 9–18 years. Parents and children completed measures of experience of traumatic events (Gaza Traumatic Checklist), PTSD (Children's Revised Impact of Events Scale, PTSD Checklist for parents), and anxiety (Revised Children's Manifest Anxiety Scale, and Taylor Manifest Anxiety Scale for parents).

Results

Both children and parents reported a high number of experienced traumatic events, and high rates of PTSD and anxiety scores above previously established cut-offs. Among children, trauma exposure was significantly associated with total and subscales PTSD scores, and with anxiety scores. In contrast, trauma exposure was significantly associated with PTSD intrusion symptoms in parents. Both war trauma and parents' emotional responses were significantly associated with children's PTSD and anxiety symptoms. Conclusions Exposure to war trauma impacts on both parents' and children's mental health, whose emotional responses are inter-related. Both universal and targeted interventions should preferably involve families. These could be provided by non-governmental organizations in the first instance.

30) Social adversities and anxiety disorders in the Gaza Strip

A A M Thabet and P Vostanis

Aim

To investigate the rate and nature of anxiety symptoms and disorders in children, and their relation to social adversities in a cultural sample not previously researched.

Methods

237 children aged 9 to 13 years living in the Gaza Strip were selected randomly from 112 schools. Children completed the revised manifest anxiety scale (a questionnaire with yes/no answers for 28 anxiety items and nine lie items), and teachers completed the Rutter scale (a questionnaire of 26 items of child mental health problems rated on a scale of 0–2: “certainly applies”, “applies somewhat”, “doesn’t apply”).

Results

Children reported high rates of significant anxiety problems (21.5%) and teachers reported high rates of mental health problems in the children (43.4%) that would justify clinical assessment. Anxiety problems, particularly negative cognitions, increased with age and were significantly higher among girls. Low socioeconomic status (father unemployed or unskilled worker) was the strongest predictor of general mental health problems. Living in inner city areas or camps, both common among refugees, was strongly associated with anxiety problems.

31) The Influence of Prayer Coping on Mental Health among Cardiac Surgery Patients

The Role of Optimism and Acute Distress

AMY L. AI, CHRISTOPHER PETERSON, TERRENCE N. TICE, BU HUANG, WILLARD RODGERS, STEVEN F. BOLLING

The goal

This study tested a parallel mediation model that may underlie the association of using prayer for coping with cardiac surgery outcomes.

Method

The sample

The subject eligibility criteria were presented in the earlier report (Ai et al., 2002). Four hundred and eighty-one patients (64% of patients approached) completed the first face-to-face interview. Of these, 426 completed the second telephone interview (89%) and 335 completed the third, postoperative follow-up (70% of the wave-1 respondents). The majority of the sample was male (58%), Caucasian (90%), Judeo-Christian (87%) and married with spouse present (72%). The average age was 62 (range, 35–89). The average level of education was 14 years (range, 0–28). The average annual family income was \$56,727.51 (range, \$0–\$400,000).

Procedure

The study took place in the cardiac clinic at the University of Michigan Medical Center (Ann Arbor). Nurses and trained interviewers recruited subjects for three sequential interviews between 1999 and 2002. Trained interviewers conducted these interviews. Surgical procedures included coronary artery bypass graft, aneurysm repairs and valve repair or replacement; all required the use of a heart–lung machine that enables the bypass of blood through synthetic material circuits and a mechanical heart-bloodless field to facilitate vessel or valve repair. The first interview took place about two weeks prior to the cardiac surgery at the peak of stress (Eriksson, 1988). The initial interviewer asked about (a) demographic and socioeconomic background, (b) religious affiliation, (c) the use of personal prayer for coping and (d) non cardiac chronic conditions. The second interview was conducted by telephone about two days preoperatively, when acute PTSD symptoms and optimism were assessed. The third interview was conducted approximately 36 days after surgery, when mental health was assessed.

Results

Mental health and prayer coping

Given the average age and cardiac conditions of the sample, a conservative number, 20, was used as the cutoff CES-D score to identify depression disorder, instead of the standard cutoff point, 16 (Beekman et al., 1997). Postoperatively, 24 percent of the sample met this criterion. Two weeks prior to surgery, 87.7 percent of them expressed belief in the importance of prayer; 74.7 percent had faith in the efficacy of prayer coping from past experiences; and 88.1 percent intended to use personal prayer to cope with surgery-associated difficulties. The most popular types of prayer used were ‘conversation with God’ (74.2% of the sample), followed by ‘accomplishment of needs’ (51.4%), ‘experiencing the divine’ (40.1%) and ‘memorized prayer’ (39.7%). Only 74 patients (15.4%) checked the ‘other types’ option. Some provided their prayer contents: thanksgiving prayer; praying for others; seeking wisdom or God’s will; asking for help or healing; seeking help for spouse, children and family; visualizing positive outcomes; speaking to deceased father; visiting close persons’ graves; praying with others (family members, relatives, ministers, group); reading the Bible; appreciating nature; and writing. One patient indicated: ‘asked Dr X (cardiac surgeon) to pray before he does surgery’.

32) Trauma exposure in pre-school children in a war zone

ABEL AZIZ MOUSA THABET, KHALID KARIM and PANOS VOSTANIS

Background

There has been little reported research into the effect of war on the behavior and emotional well-being of pre-school children.

Aims

To investigate the relationship between exposure to war trauma and behavioral and emotional problems among pre-school children.

Method

A total of 309 children aged 3 children aged 6 years were selected from kindergartens in the Gaza Strip, and were assessed by parental reports in regard to their exposure to war trauma, using the Gaza Traumatic Checklist, and their behavioral and emotional problems, using the Behavior Checklist (BCL) and the Strengths and Difficulties Questionnaire (SDQ).

Results

Pre-school children were exposed to a wide range of traumatic events. The total number of traumatic events independently predicted total BCL and SDQ scores. Exposure to day raids day raids and shelling of the children's houses by tanks were significantly associated with associated with total behavioral and emotional problems total behavioral emotional problems scores.

Conclusions

Direct and non-direct exposure to war trauma increases the risk of behavioral and emotional problems among pre-school children, which may present as non-specific psychopathology.

Comments on the review of literature

There are many researches agree with my study and others disagree, one of these studies agree with my study about the importance of understanding the cultural aspects of trauma, symptoms, and coping, and the need to consider culturally based strengths, rather than focusing on pathology, when working with refugees. Where as my study showed that the citizens of the camps have more resilient than town citizens. A case-centered comparative approach to the analysis of narratives of unaccompanied refugee youths from Sudan identified some of the ways in which this particular group of refugee children coped with the traumas and hardships in their lives.

As well as the study emphasized about the age where as it agree with my study that the youth has strong resiliency. (Cardozo et al, 2000) found that those over the age of 65 were at increased risk of developing PTSD following the war in Kosovo. Researchers link the resilience of the Japanese-American community over time to the culture's flexibility and reinforced relativism that encourage its members to adapt to diverse social settings (Fugita & O'Brien, 1991; Nagata & Takeshita, 1998). Results showed that older men, town residents, and those exposed to a high level torture perceived the imprisonment more as suffering and disillusionment than other men.

Where as this study disagree with my study whereas it showed females has less resilience than boys. Most of the studies examining gender differences in civilian responses to war trauma suggest that females are more likely to develop PTSD than males

This study disagree with my study whereas my study showed there is no relation between resilience and religion but this study showed there is a relation between adaptation and praying. Two weeks prior to surgery, 87.7 percent of them expressed belief in the importance of prayer; 74.7 percent had faith in the efficacy of prayer coping from past experiences; and 88.1 percent intended to use personal prayer to cope with surgery-associated difficulties.

I have benefited from these studies that some of them explored to me new ideas to include in my thesis such as the affect of place of residence on resiliency level.

Finally the researcher has faced troubles in finding the literature review because very few researchers had touched this topic before. That is why I have faced difficulties in finding the literature review. I had to contact my colleagues abroad to send me articles as well as studies.

Chapter 4

Chapter 4 / Methodology

The method and steps

The researcher explain in this chapter the steps that have been conducted in the field which include identifying the study design, methodology, the population, the sample, and including the tools as well. As well as explaining process of implementing the questionnaire and identifying the statistical method that used in the research, all of these were as the following:

Study design

The researcher used the analytical descriptive methodology to answer the specified questions because it is considered a way to search the present due to describe and illustrate the phenomena which is being studied as it present in the reality in a specific way either in identifying the torture experience among the ex prisoners in their ethical thinking and its relation with some variables such as the duration of prison, date of liberation, cause of injury, religiousness, academic level.

The researcher in this method study events, phenomena and present reliable to research and measurement as it is, and that to prove hypothesis to answer specific questions concerning some actual phenomena with the researcher intervention, as well as the researcher could interact, describe, analyze the phenomena in objective and scientific way (Agha,1997, 41+73).

The population of the study

The community of the study is composed of Palestinian high school students who are living in Gaza strip.

The size of the sample

The sample is composed of 500 high school children, 250 males and 250 females. The sample was chosen randomly. The sample is simple random sample

The study settings

The chosen schools which selected randomly were as the following:

1. Al Karmel secondary school for males – west of Gaza
2. Al Zahra' secondary school for females – east of Gaza
3. Othman Ben Affan secondary school for males – North of Gaza
4. Hayel abed Al Hamid secondary school for males – Beit Hanon
5. Shadia Abu Gkazala secondary school for females - Jabayia
6. Tal Al Za'ter secondary school for females – Biet Lahia

Study place

The place of the study was in Gaza city, and north of Gaza strip where as the researcher applied the questionnaires in 6 schools which were chosen randomly in the areas that mentioned above.

Sampling process

The researcher chosen a randomly classes and applied the questionnaires with the students after the researcher have get the consent from them where as the researcher had chosen 82 students per school 41 from the literary stream and 41 from the scientific stream.

Data collection

The data collected by the researcher, all questionnaires arranged, organized and numbered serially. The researcher got the consent from the students first and told them that the questionnaires will take around 30 minutes. The researcher collected 500 questionnaires and checked it before data entry in the computer.

Data entry and analysis

Data analysis process was accomplished through the statistical package for social and psychological science (SPSS) through making the appropriate statistical tests for demographic data and the research questions and hypothesis.

The sample description

1) The sex of the sample

50 % of the sample is male and 50 % is female and this could be clearer in the schedule

(1)

The schedule 1 explaining the sex of the sample

sex	Frequency	Percentage
Male	250	50 %
Female	250	50 %
Sum	500	100 %

2) The type of the study of the sample

50 % of the sample is scientific and 50 % is literary and this could be more clear in the schedule (2):

Schedule 2 illustrate the type of the study of the sample

Type of study	Frequency	Percentage %
Scientific	250	50 %
Literary	250	50 %
Sum	500	100 %

3. Place of residence of the sample

The results show that 61.2 % of the sample lives in cities, 32.8 % live in camps, and 6 % live in villages. This is could be clearer in the schedule 3

Schedule 3 illustrate the place of residence of the sample

Place of residence	Frequency	Percentage
City	306	61.2 %
Camps	164	32.8 %
Village	30	6 %
Sum	500	100 %

4. Religiousness of the sample

The results show that most of the sample is religious by 88.4 % while 11,6 % of the sample is not religious and this could be more clear in the schedule 4.

Schedule 4 illustrate the religiousness of the sample

Religiousness	Frequency	Percentage
Religious	442	88.4 %
Not religious	58	11.6 %
Sum	500	100 %

5. The income level of the families of the sample

The results show that 45.4 % of the families of the sample's economic level is less than 1000 NIS, 33.2 % ranging from 1000 to 2000 NIS, 21.4 % more than 2000 NIS and this could be more clear in the schedule 5

The schedule 5 illustrate the income level of the students' families

Income level	Frequency	Percentage
Less than 1000 NIS	227	45.4 %
From 1000 to 2000 NIS	166	33.2 %
More than 2000 NIS	107	21.4 %
Sum	500	100 %

Validity and reliability of the tools of the study

1) **OCHS** consist of 34 items (Boyle & Pickles, 1997; Byles, Byrne, & Oxford, 1988). The children completed the disorder checklist separately. The children were asked to describe their moods and behavior during the previous six months using a 3 points rating (1) never or not true (2) sometimes or somewhat true (3) often or very true.

The OCHS scale was developed to measure different types of disorders and behavioural problems including DSM III dysphoric mood, anxiety, and obsessive compulsiveness criteria, and CBCL symptoms as defined by Achenback and Edelbrock (1981). The psychometric properties of the OCHS instrument have been found satisfactory in a canadian multicultural sample which include children from the middle east (Boyle et al.,1993; Boyles et al, 1998). The scale was translated into Arabic and further validated by a canadian research team (Miller, 1990). Construction variables were formed for summing up all items in the child. The reliability (Cronbach Alpha) was 0.83 (Punamaki, Qouta, and El Sarraj, 2001).

2) **PTSD** symptoms were measured on scale devised by Frederic, Pynoos, and Nader (1992) consisting from 17 items. The severity of each symptom estimated by 1-5 scale of (1) never (2) little (3) sometimes (4) much of the time (5) most of the time.

PTSD characteristically involves dimensions of intrusion, avoidance, and miscellaneous symptoms, and accordingly three construction variables, as defined by Nader et al. (1990), were formed. The Cronbach alpha reliabilities were sufficient for intrusion (0.75) and miscellaneous (0.72) symptoms but not for avoidance (0.52). subsequently, only a total score summing all the PTSD items was used reliability 0.85 (Punamaki, Qouta, and El Sarraj, 2001).

3) **Neurosis** scale, the JEPQ, was used to indicate the psychological symptoms. The children were asked to describe their moods, feelings and behavior using a 2 points rating (1) yes (2) No. The Arabic version translated by El Khalek (1978), consisting of 19 items and reliability was found to range from 0.78 to 0.83 (Punamaki, Qouta, and El Sarraj, 2001).

4) **Resiliency** scale consisting from 67 items. The children completed the disorder checklist separately. The children were asked to describe behavior using a 5 points rating (1) totally disagree (2) disagree (3) Do not know (4) agree (5) totally agree. The reliability was found 0.72 (Quota, 2003).

5) **Trauma** scale consisting from 29 items. The children completed the disorder checklist separately. The children were asked to describe their exposing to traumatic events or heard about it using a 2 points rating (1) yes (2) no. The reliability was found 0.78 (Qouta, 2005).

Chapter 5

The chapter 5 Results and explanation

The first question: what is the resiliency level among the high school students?

To show the resiliency level among the high school students, the researcher was working to find the medians, standard deviation, and the relative weigh for each dimension of resiliency and whole degree of resiliency among the students in the high school. This could be clearer in the schedule 6

Schedule 6 illustrate the median, standard deviation, and relative weigh for resiliency tool dimension and the whole degree for the test among the high school students (n = 500)

Dimensions	The whole degree		No of items	Mean	Standard deviation	The relative wiegh
	Minimu m	Maximum				
The insight and understanding the problems	6	30	6	22.4	3.4	74.5
Independency	12	60	12	37.1	4.3	61.9
The nature of the relations with others	9	45	9	32.2	4.6	71.5
The initiation	8	40	8	24.9	3.2	62.2
The innovation	10	50	10	31.4	3.9	62.9
Ethical sense	9	45	9	27.3	3.4	60.6
Depending on self in improving the achievement and changing the reality	11	55	11	34.1	3.9	62.0
The resiliency	65	325	65	209.3	11.9	64.4

The relative weigh computed by divide the median for each dimension on the whole degree for each dimension then multiply by 100.

Schedule 6 show that mean of resiliency degrees among the high school students is 209.3 with standard deviation 11.9 and with relative weigh 64.5% which indicate that the resiliency level among the high school students is high which is 64.5%, since resiliency tool has seven dimensions, the first dimension degrees' mean is 22.4 with standard deviation 3.4 and relative weigh 74.5% where as the second dimension degrees' mean is 37.1with standard deviation 4.3 and with relative weigh 61.9 % , where as the third dimension degrees' mean is 32.2 with standard deviation 4.6 and with relative weigh 71.5% , whereas the forth dimension degrees' mean is 24.9 with standard deviation 3.2 and relative weigh 62.2%, where as the fifth dimension degrees' mean is 31.4 with standard deviation 3.9 and with relative weigh 62.9%, whereas the sixth dimension degrees' mean 27.3 with standard deviation 3.4 and with relative weigh 60.6%, whereas the seventh dimension degrees' mean which is 34.1 with standard deviation 3.9 and with relative weigh 62.9%.

Study hypotheses

The first hypothesis: there is a relationship between resiliency and gender?

The researcher used T test to compare between the females' scores mean and males' scores mean regarding the resiliency and this could be clearer in the schedule 7

The schedule 7 illustrate T test results to compare between females' scores mean and males' scores mean among the high school students.

Sex	Number	Mean	Standard deviation	T value	Indication level
Males	250	207.5	12.5	- 3.4	0.001 indicative
Females	250	211.1	11.0		

T value at degree of freedom 498 and indication level (0.01) equal 1.96

From schedule 7, the researcher could conclude the accounted T value of resiliency among the high school students (- 3.4) bigger than scheduled T value (1.96) at indication level (0.01),, that is mean there is a difference in the resiliency depending on the gender in favor of females. This indicate that females have resiliency ability more than males whereas males' scores mean reached 207.5 with standard deviation 12.5 while females' scores mean reached 211.1 with standard deviation 11.0

The second hypothesis: is there a relationship between resiliency and type of study either scientific stream or literary stream?

The researcher used T test for two independent samples from both scientific stream and literary stream students and this could be clearer in the schedule 8

The schedule 8 illustrate the T test results between the scientific stream students' scores mean and literary stream students' scores mean among the high school students.

Type of study	Number	Mean	Standard deviation	T value	Indication level
Scientific stream	250	209.0	11.5	- 0.54	0.58 Not indicative
Literary stream	250	209.6	12.4		

T value at degree of freedom 498 and indication level (0.01) equal 1.96

From the schedule 8 the researcher could conclude and explain that accounted T value for resiliency degrees among the high school students is (-0.54) which less than scheduled T value (1.96) at indication level (0.01). That means that there is no relationship between resiliency and type of study either scientific stream or literary stream. The researcher could explain that both of types of students have the same level of resiliency ability.

The third hypothesis: is there a relationship between resiliency and religiousness among the high school students?

The researcher used T test for two independent samples from both religiousness and not religiousness to compare between the resiliency and religiousness and this could be clearer in the schedule 9

The schedule 9 illustrates the results of T test for comparison between religious scores mean and not religious scores mean among the high school students.

Religiousness	Numbers	Mean	Standard deviation	T value	Indication level
Religious	442	209.2	12.1	- 0.69	0.48 not indicative
Not religious					

T value at degrees of freedom 498 and indication level (0.01) equal 1.96

From the schedule 9 the researcher concluded that accounted T value of resiliency among the secondary school students (- 0.96) which less than scheduled T value (1.96) at indication level (0.01), by that the researcher could say that there is no relationship between resiliency and the religiousness. That's indicating that the religious and not religious students have the same level of resiliency.

The forth hypothesis: is there a relationship between resiliency and place of residence?

The researcher used one way anova to study the difference among the places of residence (town, camp, and city) according to the degrees of resiliency and this could be more clear in the schedule 10

The schedule 10 illustrate the results of one way anova of resiliency degrees according to the places of residence

Difference source	Sum of squares	Free scores	Squares mean	Accounted F value	Indication level
among the groups	1275.6	2	637.82	4.56	0.01 indicative
Inside the groups	69539.9	497	139.92		
Sum	70815.5	499			

F value at indication level (0.05) at degree of freedom (497.2) = scheduled value (2,60).

From the scheduled 10 the researcher could illustrate that accounted F value of resiliency (4,56) more than scheduled F value (2.60) at indication level (0.05), by that the researcher can say that there is a relationship between resiliency and place of residence. To the difference among the groups the researcher used Chieve test, was illustrated that the students who live in camps have resiliency more that the students who live in the towns, while there have not been observed any difference regarding villages and this could be more clear in the schedule 11

The schedule 11 illustrates the results of shefaih test for dimensional comparison to place of residence of the high school students.

Place of residence	Mean	Town	Camp	Village
Town	208.1		0.02	0.34
Camp	211.3			0.99
Village	211.4			

Indicative at 0.05

The fifth hypothesis: is there a relationship between resiliency and income level of the high school students' families?

The researcher used one way ANOVA to study the difference of income level of the high school students' families (less than 1000 NIS – ranging from 1000 to 2000 NIS – more than 2000 NIS) regarding the resiliency degrees. This could be clearer in the schedule 12.

The schedule 12 illustrates the results one way ANOVA of resiliency degrees according the income level of high school students' families.

Difference source	Sum of squares	Free degrees	Mean of squares	Accounted F value	Indication level
Among the groups	898.45	2	449.23	3.19	0.04 Not indicative
Inside the groups	69917.06	497	140.68		
Sum	70815.51	499			

Scheduled F value at (0.05) with free degrees (497.2) = scheduled value(2.60)

From the schedule the researcher could conclude that accounted F value of resiliency equal 3.19 that mean it is more than scheduled F value which equal 2.60 at indication level 0.05 and by this it could be saying that there is a relationship between the resiliency and income level of the high school students' families. To know the difference among the groups the researcher used Chieve test, the results show that the students whose families income level less than 1000 NIS have less resiliency ability than the students whose families income level more than 2000 NIS, while there has not been observed any difference concerning the third group whose families income ranging from 1000 to 2000 NIS. This could be clearer in the schedule 13.

The schedule 13 illustrates the results of chieve test of dimensional comparison for income level of high school students' families

Income level	Mean	Less than 1000 NIS	From 1000 to 2000 NIS	More than 2000 NIS
Less 1000 NIS	207.9		0.09	0.02
1000 to 2000	210.0			0.41
More 2000 NIS				

Indicative at 0.05

The sixth hypothesis: is there a relationship between between resiliency and conduct disorder, Neurosis, Trauma, and PTSD among the high school students?

The researcher used person correlation coefficient to study the relationship between resiliency and conduct disorder, neurosis, trauma, and PTSD. The results could be clearer in the schedule 14

The schedule 14 illustrates person correlation coefficient between resiliency and the independent variables

Variables	Person correlation coefficient	Indication level
Conduct disorder	- 0.12	0.01
Neurosis	- 0.06	0.16
Trauma	- 0.003	0.93
PTSD	- 0.05	0.3

Indicative at 0.001

From the schedule 14 the researcher has found the following:

- There has been contrary relationship between resiliency and conduct disorder among the high school students whereas person correlation coefficient (- 0.12) and indication level (0.01), that means when there is a little possibility of conduct disorder, this will increase the level of the resiliency and vice versa.
- It is worth mentioning that there is no relationship between resiliency and (PTSD, Trauma, and neurosis).

To know the effect of the variable that has a relation with resiliency, the researcher used regression to study the effect of the independent variable (conduct disorder) on the dependent variable (resiliency) and the results can be illustrated through the schedule 15

The schedule 15 illustrates the results of regression to study the effect of independent variable on the resiliency.

P value 0.01	T 105.41	Standardized coefficients		Standardized coefficients	
		Beta	Std Err	B	
			1.96	206.77	Constant
0.01	-2.52	-0.11	0.06	-0.15	Conduct disorder

F= 8.4, P-value = 0.001, R2 = 0.13

From the schedule 15 the researcher found that accounted F value is indicative statistically (F = 8.4, P < 0.001) and that indicate that the effect of the independent variables (conduct disorder) on resiliency is indicative statistically, and the independent variable is the best predicting factors among the high school students. The results explained that the independent variable represent 13% of the overall variation of resiliency. That indicates that 13% of resiliency changing due to conduct disorder, while 87% due to other factors.

That is illustrated also from the schedule 15 regression and the researcher could form regression that helps the prediction the degrees of resiliency as it shown in the following equation:

Resiliency = 206.7 0.15 (conduct disorder)

The above mentioned organizing to the variable in the equation (conduct disorder) reflects the importance of percentage of the variable effect on the dependent variable (resiliency) among the high school students.

Chapter 6

Chapter 6

Discussion and Recommendation

The main question: what is the level of resiliency among the high school students?

The result: the level of resiliency among the high school students is high which 64.5%.

The researcher thinks that the resiliency level is high among the high school students because they have the ability to expect the traumas that might occur which alleviate its impact on them. Additionally during adolescence stage the youth searching autonomy, drawing their personality and their ambitiousness. As well as the ongoing resemble traumas that they have been facing acquiring them the basics of strong personality that capable of dealing with the life stressors. The researcher thinks also the high school students do not carry the burdens of the family needs which make them more ready to learn how to be resilient. Finally the biological development in this stage characterized by strong, tolerance and hardiness which motivate them to be strong enough to face the life stressors. As well as the ego strength, problem solving skills and social skills are high in this age stage, and all of these factors promote the individual resiliency.

Some authors said that there has been some indication of gender differences, especially in adolescents; again, it is important to consider age, gender, culture, racial/ethnic background, etc. when dealing with an issue.

Research evidence suggests that resilience is not gender specific and does not increase or decrease with age (Zeidler & Endler, 1996).

The first hypothesis: there is a relationship between resiliency and gender?

The result: there is a difference in the resiliency depending on the gender in favor of females. This indicate that females have resiliency ability more than males

The researcher thinks that the females release their emotions in a continuous way in the Palestinian culture which enables them more able to endure the stressors; in addition to that the females in this stage tend to show their selves to be distinguished and unique. As well as the researcher thinks that different roles of the females in general acquire them more skills to deal positively with the life stressors.

Gender plays an important role--research shows that girls adapt more easily than boys to things such as divorce and out-of-home care, although there are no long-term studies regarding the children of today (Kirby & Fraser, 1997).

Research evidence suggests that resilience is not gender specific and does not increase or decrease with age (Zeidler & Endler, 1996).

Most of the studies examining gender differences in civilian responses to war trauma suggest that females are more likely to develop PTSD than males (Ai et al., 2002; Scholte et al., 2004; Reppesgaard, 1997; Mollica et al., 1987; Ekblad et al., 2002; Eytan et al., 2004; Gavrilovic et al., 2002; Potts, 1994).

Victoria L. Banyard Elise N. Cantor in his research stated that females scoring higher than males on academic adjustment.

The second hypothesis: is there a relationship between resiliency and type of study either scientific stream or literary stream?

The result: there is no relationship between resiliency and type of study either scientific stream or literary stream.

The researcher thinks that there is no difference in the level of resiliency among the high school students according to the type of the study because the both of them live under the same circumstances. The difference of the curriculum does not focus mainly on the pathway of adaptation to the stressors, so that there is no impact to the type of the study on the students. Additionally the researcher thinks that the tendency to religiousness in age stage in week which makes the criteria of resiliency not depend on the religiousness.

The third hypothesis: is there a relationship between resiliency and religiousness among the high school students?

The result: there is no relationship between resiliency and the religiousness. That's indicating that the religious and not religious students have the same level of resiliency. The researcher thinks that the resiliency refer to personality traits and characters rather than religiousness. Because the people who do not adopt any religion how they are able to deal and adapt positively to the psychological stressors and adversity. That means the resiliency refer to the individual, family, and community related factors.

AMY L. AI, CHRISTOPHER PETERSON, TERRENCE N. TICE, BU HUANG, WILLARD RODGERS, STEVEN F. BOLLING differ with my study where as their results were as the following:

Given the average age and cardiac conditions of the sample, a conservative number, 20, was used as the cutoff CES-D score to identify depression disorder, instead of the standard cutoff point, 16 (Beekman et al., 1997). Postoperatively, 24 percent of the sample met this criterion. Two weeks prior to surgery, 87.7 percent of them expressed belief in the importance of prayer; 74.7 percent had faith in the efficacy of prayer coping from past experiences; and 88.1 percent intended to use personal prayer to cope with surgery-associated difficulties.

The forth hypothesis: is there a relationship between resiliency and place of residence?

The result: there is a relationship between resiliency and place of residence where as the students who live in camps have resiliency more that the students who live in the towns, while there have not been observed any difference regarding villages.

The researcher thinks that the living in the camps means patience, abstinence, and tolerance. Additionally the living in the camps creates the challenging and makes the people how to build him by himself (self made) in addition to the hard living which acquire them the ability to struggle to survive. As well as the people in the camps live in extended families which enhance the strong relationship and family cohesion which in turn promotes the individual resiliency. The researcher thinks that people in the camps are refugees that make it more challengeable and more clinging to their lands which in turn form the factor of resistance and endurance. The coherence among the citizens in the camps in case of the grieved and happy occasions make them more close to each other and provide support to them.

(Masten, 2001) stated that developmental psychologists have shown that resilience is common among children growing up in disadvantaged conditions which agree with the researcher opinion.

Protective and growth promoting factors are necessary to the development of competence and resilience, especially in disadvantaged urban youth (Parsons, 1994).

(Fraser & Galinsky, 1997) stated that Culture and ethnicity, too, play a role in assessment. More African Americans, Hispanics, and Native Americans live in poverty, which put them at risk due to limited resources and limited access to healthcare.

Trauma affects more than the individual. Most people live within social communes and families that attempt to make sense of overwhelming experiences by Japanese-Americans are an example of how culture influences adjustment and adaptation. Researchers link the resilience of the Japanese-American community over time to the culture's flexibility and reinforced relativism that encourage its members to adapt to diverse social settings (Fugita & O'Brien, 1991; Nagata & Takeshita, 1998).

Janice H. Goodman finds in his study that The participants told of danger, violence, and constant hardship, and the coping strategies that enabled them to survive.

Finally the scientist Betcha says pain, because the pain who creates the giants.

The fifth hypothesis: is there a relationship between resiliency and income level of the high school students' families?

The result: the results show that the students whose families income level less than 1000 NIS have less resiliency ability than the students whose families income level more than 2000 NIS, while there has not been observed any difference concerning the third group whose families income ranging from 1000 to 2000 NIS.

The economic stability contribute mainly in the emotionally stability which make the children looking forward to achieve their dreams and ambitions and more able to face the troubles of the life and the stressful life events as well as positive emotions can help reduce levels of distress following aversive events. Additionally the economic stability meets the biological needs which considered the basis for achieving the next class of needs according to Abraham Maslow. Kimberly Gordon, Ph.D., is interested in finding out why some African-American students flourish, despite living in a low socio-economic environment. The factors that relate to their success are called "resiliency factors."

The sixth hypothesis: is there a relationship between resiliency and conduct disorder, Neurosis, Trauma, and PTSD among the high school students?

The result show as the following:

- There has been contrary relationship between resiliency and conduct disorder among the high school students whereas person correlation coefficient (- 0.12) and indication level (0.01), that means when there is a little possibility of conduct disorder, this will increase the level of the resiliency and vice versa.
- It is worth mentioning that there is no relationship between resiliency and (PTSD, trauma, and neurosis).

To know the effect of each variable of the three variables that has a relation with resiliency, the researcher used regression to study the effect of the independent variables (conduct disorder) on the dependent variable (resiliency)

The researcher thinks that the resilient the child is the more skills he or she will has to deal positively with the life stressors which in turn will reflect positively on his avoidance to have conduct disorder.

The researcher thinks that there is no relationship between resiliency and PTSD, trauma and neurosis because they have not any effect on the resiliency of the child. The researcher think the family, school, community considered the main affecting factors on the resiliency. The researcher thinks that all of these three variables do not affect the resiliency because many people in Palestine have strong and resilient personalities despite their living in stressed environment.

Recommendations

1. Encourage further more studies and research which will help in determining the main elements of resiliency.
2. Establish scientific center for resiliency that work on resiliency in general and details.
3. Increasing the awareness raising concerning the resiliency.
4. Involving the ministry of education in supporting the children resiliency because the school is one of the most main components of resiliency.
5. Making workshops regarding the resiliency containing the community members and community representatives to hear from them about their opinions regarding resiliency.

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Annexes

بسم الله الرحمن الرحيم

عزيزي الطالب – الطالبة تحية طيبة و بعد

يقوم الباحث باجراء دراسة بعنوان العلاقة بين الصدمة , الاستشفاء و بين العصائية و الاضطراب السلوكي ببي الأطفال الفلسطينيين في شمال قطاع غزة.

The relationship between Trauma, Resiliency, and Conduct Disorder, Neuroticism among Palestinian children in Gaza Strip

و ذلك للحصول علي درجة الماجستير في علم النفس تخصص صحة نفسية مجتمعية في كلية التربية بالجامعة الاسلامية. و يتطلب ذلك تطبيق بعض الادوات البحثية علي طلبة المرحلة الثانوية.

يؤمل منكم الاطلاع علي تعليمات و فقرات هذه الادوات و الاستجابة اليها بدقة و امانة و حرص. مع العلم أن نتائج هذه الادوات لا تستخدم إلا لأغراض البحث العلمي, لذا لا داعي لكتابة الاسم.

مع خالص الشكر

الباحث / نور الدين صالح صلاح

برجاء استكمال البيانات التالية:

1. الجنس ذكر أنثي
2. نوع الدراسة علمي أدبي
3. محل الإقامة مدينة قرية مخيم
4. الاتجاه الديني متدين غير متدين
5. المستوي الاقتصادي أقل من ألف شيكل من ألف الي ألفين أكثر من ألفين

A.R.A.S الاستشفاء

نحن مهتمين هنا لمعرفة كيف تصف نفسك ، لا يوجد إجابات صحيحة وأخرى خاطئة ، أمامك خمس خيارات تصف شعورك ، في الجدول المخصص لذلك ضع الرقم الذي يصف شعورك بالضبط، نرجو منك أن تقرأ العبارات بتركيز وأن تضع الرقم الذي يصف شعورك بالضبط.

أوافق بشدة 5	أوافق 4	لا أعرف 3	أعارض 2	أعارض بشدة 1	البند
					1- في أغلب الأحيان لست متأكد كيف سيتصرف والدي أو الذين يعتنون بي تجاهي.
					2- أتجنب تحمل مسئولية مشاكل الآخرين.
					3- عندما يكون رأي الآخرين في سلبياً من الأرجح أن يكون هنالك مبرراً جيداً لذلك.
					4- أحاول استنتاج مسيبي المشاكل.
					5- ليس من المفيد محاولة فهم أسباب الأمور.
					6- غالباً ما أجد نفسي أتحمّل مسئولية مشاكل الآخرين.
					7- لم أتعلم بعد كيفية الابتعاد عن الكبار عندما يقولون أو يفعلون أشياء تخيفني.
					8- من الصعب علي التركيز في المدرسة إذا كانت أسرتي تتشاجر طوال الليل.
					9- يمكن أن أبتعد عن أفراد العائلة المضطربين وأن أكون راضياً عن نفسي.
					10- إذا أحببت شخصاً فعليك أن تحاول أن تفعل ما يريده ذلك الشخص حتى وإذا كان ذلك غير منطقي.
					11- لا أستطيع سوى أن أكون مثل الطفل أمام والدي.
					12- أجد أماكن أخرى للذهاب إليها عندما ينتشجر أفراد عائلتي.
					13- يمكن أن أكون هادئاً عند الأناص المضطربين لأنني أتفهم كيف يتصرفون.
					14- إذا أحببت شخصاً يمكن أن أتحمّل إيذائه لي.
					15- افهم أنني لا أستطيع تغيير الآخرين عليهم

				أن يعيروا أنفسهم.
				16- من الصعب المحافظة على الهدوء عندما يتصرف شخص أحبه بطريقة غير معقولة.
				17- يمكنني أن أستنتج لماذا يتصرف الناس بهذه الطريقة.
				18- هناك القليل من الناس الذين يمكن الاعتماد عليهم.
				19- أحاول أن أستنتج لماذا لا ينفعني بعض أصحابي وأحاول إيجاد أصدقاء آخرين.
				20- من الصعب التصديق أنني سأجد صديقاً جيداً.
				21- من السهل أن أصاحب أناس جدد.
				22- لا أستطيع أن أفعل شيء بخصوص إذا ما كان الناس يحبونني أو لا.
				23- أستطيع إبقاء الصداقات مستمرة.
				24- أنا خجول عندما أكون بين أشخاص لا أعرفهم.
				25- يمكن أن أحب الآخرين وأن يحبونني.
				26- أستطيع أن أجعل الكبار يقضون وقتهم معي.
				27- لا أفهم كيف تسير معظم الأمور.
				28- لدي هوايات ونشاطات أخرى مهمة بالنسبة لي.
				29- لا أكرر أخطائي.
				30- أتعلم من أخطاء الماضي والاستفادة في ذلك لتحسين المستقبل.
				31- أنجح في الاعتناء بنفسى وسداد احتياجاتي.
				32- أغضب عند التعامل مع المشاكل وعدم معرفة ما يجب عمله.
				33- هناك القليل من الأشياء التي أجيد القيام بها.
				34- لا أحب أن أعرف كيف تسير الأمور.
				35- أعمل ما هو مطلوب مني ولا أكثر من ذلك.
				36- أنا جيد في إنهاء الأشياء..
				37- لا أظن أنني مبدع.
				38- أنسى المشاكل مع الفن أو الموسيقى أو

				الغناء أو الرقص .
				39- بالكاد أشعر بالملل .
				40- أحد طرق التعبير عن مشاعري الفن أو الرقص ، الموسيقى أو الكتابة .
				41- استخدام الخيال لا يحل المشاكل .
				42- عند المشاركة في الفن ، الموسيقى ، أو الرقص أنسى حزني أو غضبي .
				43- أغلب المشاكل لها حل واحد فقط .
				44- من الصعب الضحك عندما لا تكون الأمور على ما يرام .
				45- آخذ كل شيء في الحياة على محمل الجد .
				46- أجيد استخدام المزاح لتحسين مشاعري ومشاعر الآخرين في المواقف السيئة .
				47- من السهل الاختيار بين الصواب والخطأ .
				48- أحب مساعدة الآخرين .
				49- لا يمكن أن أؤثر في حياة شخص آخر .
				50- قانون الغاب سائد وعلي أن أفعل شيء للبقاء .
				51- أحياناً لا أكون نزيهاً تجاه أصدقائي .
				52- أحب مساعدة أصدقائي حتى إذا لم يساعدوا أنفسهم .
				53- لا أقوم بعمل الصواب دائماً .
				54- أقوم بأشياء لتحسين أوضاع الآخرين .
				55- أواجه الناس عندما أراهم يغشون .
				56- أعمل الصواب حتى إذا أدى ذلك لفشلي .
				57- أحياناً أحس بعدم وجود هدف في حياتي .
				58- أساند زملائي في الصف حتى ذا سخر منهم الآخرين .
				59- بغض النظر عما يجرى سأنجح إذا داومت على المحاولة .
				60- هناك أشياء يمكن القيام بها لتحسين حياتي .
				61- لا أدع الأشياء تحبطني وان كان ذلك صعباً أحياناً .
				62- حتى وان حدثت أشياء سيئة يمكن التعامل معها .
				63- لا أستطيع تصحيح الأمور مهما حاولت .

					64- عندما أرسب في امتحان أريد معرفة أخطائي.
					65- أحياناً أكرر أخطائي.
					66- أتعامل بطريقة جيدة مع المشاكل في البيت والمدرسة.
					67- من الصعب استعادة التوازن بعد المشاكل.

OCHS SCALE

اختبار الاضطراب السلوكي

تجدد/ تجددين أدناه قائمة تبين شعورك وسلوكك بشكل عام. الرجاء وضع دائرة حول كل واحدة من هذه الصفات في الخانة التي تكون هي أفضل وصف لشعورك أو سلوكك في الوقت الحاضر أو في أي وقت خلال الأشهر الستة الماضية (الرجاء وضع دائرة في خانة واحدة فقط من الخانات الثلاث الموجودة أمام كل صفة).

الرقم	نوع الشعور أو السلوك	ليس صحيحا (1)	صحيح نوعا ما (2)	صحيح تماما (3)
-1	تظهر قسوة ، متسلط على الآخرين.			
-2	لا تركز، لا تنتبه لشيء مدة طويلة.			
-3	تقفز من عمل الى عمل ، لا تصمد على شيء فترة طويلة.			
-4	تسرق من البيت (تأخذ من أغراض البيت دون علم الآخرين)			
-5	تظهر حزين، كئيب، زعلان.			
-6	لا تظهر أنك سعيد كغيرك من الأطفال.			
-7	قاسي على الحيوانات (تعذب الحيوانات).			
-8	تتململ أكثر من المعتاد (تنتفضر) في جلسته.			
-9	تبكي كثيرا.			
-10	تكرر بعض أفعالك أو حركاتك أكثر من اللازم.			
-11	تؤذي نفسك عن قصد، تحاول (حاولت) أن تقتل نفسك.			
-12	تخرب أشياء البيت ، أو أشياء الآخرين بقصد.			
-13	تقول أكثر من مرة أنك ستقتل نفسك.			
-14	لا تتمتع من أعمالك العادية.			
-15	تظهر اهتماما بالنظام والنظافة أكثر من اللازم.			
-16	لا تجلس في مكان واحد، تتحرك أكثر من اللازم.			
-17	لا تتصاع لأوامر المسؤولين في المدرسة.			
-18	هناك أفكار تراودك باستمرار ولا تستطيع التخلص منها (وساوس).			
-19	تشعر أن عليك أن تكون كاملا مئة بالمئة.			
-20	تخرب (تتلف، تكسر) حاجاتك (أغراضك) بقصد.			
-21	مندفع، تتصرف بدون تفكير.			

			خواف (خويف)، قلبك ضعيف ، (نجمك خفيف).	-22
			تعدي على الآخرين (تضرب، تؤذي).	-23
			كثيرا ما تتورط في عراكات (مشاكل).	-24
			تهرب من البيت.	-25
			تشعل حرائق.	-26
			تأخذ أغراض الآخرين دون علمهم. (تسرق من الجيران، الدكان).	-27
			تهدد الآخرين، (تتحلف للآخرين).	-28
			تتغيب عن المدرسة ، تهرب من المدرسة.	-29
			تتنشغل بسهولة، تقلق (بالك مشغول).	-30
			تكذب ، تغش ، (لا تقول الصحيح).	-31
			لا تنتظر دورك في اللعب أو المجموعة.	-32
			عصبي، سريع الانفعال، تنرفز.	-33
			تسرق من اخوتك أو انهم يشكون أنك تسرق منهم.	-34

اختبار العصاب للأطفال

نرجو أن تجيب عن كل سؤال من الأسئلة التالية بوضع دائرة حول كلمة (نعم) أو كلمة (لا) التي تلي السؤال، ليست هناك إجابات صحيحة وأخرى خاطئة، وليست هناك أسئلة خادعة، أجب بسرعة ولا تفكر كثيراً حول المعنى الدقيق للأسئلة.

لا	نعم	البند
		1- هل أنت متقلب المزاج (يعني تكون أحياناً مبسوط وأحياناً متضايق بدون سبب واضح)؟
		2- هل من السهل جداً أن تشعر بالملل والضيق (الزهق)؟
		3- هل تمتلئ رأسك بالأفكار لدرجة أنك لا تستطيع النوم؟
		4- هل هناك أشياء كثيرة تضايقك؟
		5- هل تشعر أحياناً بأنك إنسان تعيس بدون سبب معقول؟
		6- هل تشعر غالباً أن الحياة مملة جداً (مقرفة).
		7- هل كثيراً ما تشعر بالتعب دون سبب حقيقي؟
		8- هل تصيبك حالات دوخة؟
		9- هل تشعر في كثير من الأحوال بأنك متضايق وزهقان؟
		10- هل تصبح أحياناً قلقاً جداً لدرجة أنك لا تستطيع أن تظل على كرسي لفترة طويلة؟
		11- هل تحلم أحلاماً مزعجة كثيرة؟
		12- هل بابا وماما يدققون معك بشكل غير معقول؟
		13- هل تحب التجول في الشوارع بمفردك وبدون أن تخبر أحداً؟
		14- هل تتضايق لمدة طويلة إذا أحسست أنك فعلت شيئاً جعل الأطفال الآخرين يسخروا أو يهزءوا منك؟
		15- هل تشعر أحياناً أن الحياة لا قيمة لها ولا تستحق أن يعيشها الإنسان؟
		16- هل يسرح تفكيرك غالباً عندما تقوم بعمل ما؟
		17- هل تواجه دائماً مشاكل في البيت؟
		18- هل تشعر بالوحدة؟
		19- هل تشعر أحياناً بالفرح وفي أوقات أخرى بالحزن دون سبب واضح؟

TRUMA اختبار الخبرة الصادمة
صدمة عن طريق تجارب شخصية مباشرة خلال انتفاضة الأقصى

فيما يلي عدد من الأسئلة تتعلق بأحداث صعبة قد تعرضت إليها، ولا علاقة لها بمرض أو عائق أو حدث طبيعي.

الرقم	البند	نعم	لا
1.	هل أصبت بعيار ناري		
2.	هل حرمت من تلقي العناية الطبية في وقت كنت بحاجة ماسة لها		
3.	هل تعرضت للضرب على حاجز عسكري		
4.	هل تعرضت للإهانة على حاجز عسكري		
5.	هل تعرضت للاعتقال		
6.	هل تعرض بيتك للقصف بالدبابات		
7.	هل تعرض بيتك للقصف بالطائرات أو بطائرة استطلاع		
8.	هل تعرض بيتك للهدم من قبل الاحتلال وأنت خارج البيت		
9.	هل تعرض بيتك للهدم من قبل الاحتلال وأنت محتجز داخله		
10.	هل تعرضت للاحتجاز مع عائلتك داخل البيت من قبل الاحتلال		
11.	هل تعرضت أرضك للتجريف من قبل الاحتلال		
12.	هل تعرضت لمنطقتك للاجتياح		

الأسئلة التالية تتعلق بأحداث ربما شاهدتها أو سمعت عنها خلال انتفاضة الأقصى.
الآن أرجو منك أن تجيب على هذه الأسئلة.

الرقم	البند	نعم	لا
13.	هل تعرض أحد أفراد أسرته للاستشهاد		
14.	هل جرح أحد أفراد أسرته		
15.	هل تعرض أحد أفراد أسرته للاعتقال		
16.	هل رأيت أحد أفراد أسرته يتعرض للضرب على حاجز عسكري		
17.	هل رأيت أحد أفراد أسرته يتعرض للإهانة على حاجز عسكري		
18.	هل شاهدت صديقاً أو أصدقاء استشهادوا		
19.	هل شاهدت صديقاً أو أصدقاء جرحوا		
20.	هل شاهدت غرباء استشهادوا		
21.	هل شاهدت غرباء جرحوا		
22.	هل شاهدت إطلاق نار		

		هل شاهدت آثار لقصف طائرة لسيارة	.23
		هل شاهدت آثار لقصف دبابات	.24
		هل شاهدت جنازات	.25
		هل تعرض أجدادك للهجرة أو الاستئصال من فلسطين عام 1948	.26
		هل روى الأجداد لك قصة الهجرة أو الاستئصال	.27
		هل ترغب في العودة والعيش في المنطقة التي هاجر منها الأجداد	.28
		هل تحتفظ الأسرة ببعض الأوراق الثبوتية لأملاكها في فلسطين أو مفتاح البيت	.29

PTSD Checklist
مقياس PTSD (SHALEV)

كل واحد منا وفي أوقات مختلفة من حياته يتعرض لتجارب مجهدة والتي تجعله يشعر بالخوف والرغبة أو عدم الفائدة. هل يمكنك اخباري عن وقت مثل هذا مر بك في حياتك؟
إذا المريض أعطاك مثلاً ملاماً أكمل معه وإذا لم يكن مناسباً، أعطه مثلاً: أحياناً شخص ما يحترق منزله ويفقد كل محتوياته أو مثلاً شخص يرى شخصاً عزيزاً عليك يقتل. هل يمكنك توضيح تجربة مجهدة مثل هذه؟
الأسئلة التالية تتعلق بردود الفعل الشائعة لدى الناس الذين تعرضوا لخبرات مجهدة (مثل الخوف الشديد، الشعور بالعجز الكامل، رعب).

الرقم	البند	مطلقاً لا	قليلاً	متوسط	ليس شيئاً	شيئاً تماماً
1	- هل لديك ذكريات مشوشة، أفكار، أو خيالات عن تجربة مجهدة من الماضي؟					
2	- هل ظلت تتعرض لأحلام مزعجة عن تجربة مجهدة من الماضي؟					
3	- هل تصرفت أو شعرت فجأة بتجربة مجهدة في الماضي وكأنها تحدث الآن؟					
4	- هل تشعر بضيق شديد عندما يذكرك أحد بتجربة مجهدة من الماضي؟					
5	- هل لديك ردود أفعال جسدية (تتصب عرقاً أو تسرع دقات قلبك أو ترتجف) عندما يذكرك أحد بتجربة مجهدة من الماضي؟					
6	- هل تتجنب التفكير أو الحديث عن تجربة مجهدة من الماضي أو تتجنب الشعور بها؟					
7	- هل تتجنب نشاطات أو أوضاع لأنها تفكرك بتجربة مجهدة من الماضي؟					

					8 - هل تواجه مشاكل في تذكر أجزاء هامة من تجربة مجهدة من الماضي؟.
					9 - هل فقدت الاهتمام بعمل أشياء كانت من قبل مهمة أو ممتعة بالنسبة لك؟.
					10 - هل تشعر بالعزلة والبعد عن الآخرين؟.
					11 - هل تشعر بخدر المشاعر المعتادة أو غير قادر على مواصلة حب المقربين لك؟.
					12 - هل تشعر أن مستقبلك سيفنى قريباً بشكل ما؟.
					13 - هل لديك مشاكل في الخلود للنوم أو الاستمرار فيه؟.
					14 - هل تشعر بالاضطراب أو بنوبات من الغضب؟.
					15 - هل تواجه صعوبة في التركيز؟.
					16 - الشعور باليقظة الشديدة و التحفز
					17 - هل تشعر بالنقزة أو تجفل بسهولة؟.