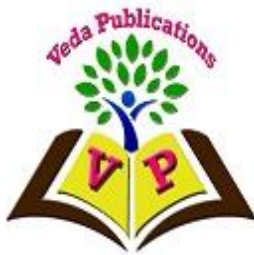


RESILIENCE AND HARDINESS IN MEDICAL PROFESSIONALS

Arfah Ayesha Shahid

*(A-level graduate from Lahore Grammar School, 55-Main Gulberg, Lahore, Pakistan.)***Abstract**

This research was conducted to investigate the difference of resilience and hardiness in doctors and nurses working in casualties and ICU units. It was hypothesized doctors are more resilient and hardier than the nurses. Correlation research design was used to conduct the present study. The sample was drawn from ICU and casualty units of different hospitals' of Lahore District of Pakistan. State-Trait Resilience Checklist (STRC) by Hiew (2000) was used to measure state and trait resilience of doctors and nurses. Dispositional Resiliency Scale (DRS-15-v3) by Bartone (2009) was used to measure the personality hardiness in doctors and nurses. Independent sample t-test was used for inferential analysis while descriptive analysis were also used for demographic descriptive. Analysis revealed that there was no significant difference in doctors and nurses on the level of resilience and hardiness. The doctors and nurses differed only on the subscales of STRC i.e. differences were only noted on intrastate, inter-trait and intra-trait resilience subscales. Furthermore, the most significant difference was found on the intra-trait resilience which exceeded in doctors as compared to the nurses

Keywords: *Resilience, Hardiness, Inter-State, Intra-State, Inter-Trait, Intra-Trait.*

Introduction

The present research aims to study and compare level of resilience and personality hardiness in medical and paramedical staff working in casualties and ICU.

Resilience and hardiness has long been a topic of research and discussion within different paradigms and fields of study, for example, in military psychology, psychiatry, health statistics and measurement, medical anthropology, education, medicine and organizational settings. Resilience means the skills, abilities, acquaintance, and insight that accumulate over time as people struggle to conquer adversity and meet challenges. It is an ongoing and developing fund of energy and skill that can be used in current struggles (Saleebey, 1996; Liebenberg, 2005). Most commonly, the term resilience has come to mean an individual's ability to overcome adversity and continue his or her normal development.

There are many factors associated with resilience. Some of the more common aspects of successful navigation and negotiation for well-being under stress include **as** assertiveness, ability to solve problems, self-efficacy, ability to live with uncertainty, self-awareness, a positive outlook, empathy for others, having goals and aspirations, ability to maintain a balance between independence and dependence on others, appropriate use of or abstinence from substances like alcohol and drugs, a sense of humor and a sense of duty (to others or self, depending on the culture). **Cultural factors include** affiliation with a religious organization, tolerance for different ideologies and beliefs, adequate management of cultural dislocation and a change or shift in values, self-betterment, having a life philosophy, cultural and/or spiritual identification and being culturally grounded by knowing where you come from and being part of a cultural tradition that is expressed through daily activities (Liebenberg, 2005).

Hardiness has been used to characterize qualities of individuals facing stress in a number of populations including, athletes, people working with stressful conditions, college students, caregivers of chronically ill family member and patients with threatening diseases. Hardy persons have a high sense of life and work commitment, a greater feeling of control, and are more open to change and challenges in life. They tend to interpret stressful and painful experiences as a normal aspect of existence, part of life that is overall interesting and worthwhile (Bartone, 1999). Individuals who possessed these characteristics experienced and responded to stressful events in a much healthier and more effective way than those who did not demonstrate these personality characteristics. These characteristics included: Commitment, Control, Challenge (Brook, 1999). Hardiness has also been identified as a moderator of combat exposure stress in Gulf War soldiers (Bartone, 1999). Hardy nurses have the ability to turn stress into a positive stimulus and thus are challenged by job demands (Bryant, 1994).

Nurses have responsible roles within an increasingly complex health care system; maximum accountability with minimal control, and continuous changes of clients, technology, and role expectation. These conditions require nurses to possess exceptional coping skills (Bryant, 1994). Stress can be perceived as a stimulus or a response. Sullivan (1993) identifies stress as a very real experience, but most experiences are not stressful in them and are only perceived as such by the individual. Some nurses may just be "tougher" than others. Hardiness may be the key personality characteristic not just for preventing emotional exhaustion, but for turning stressful events into meaningful challenges (Bryant, 1994).

In general, there has been very little rigorous research conducted regarding the efficacy of staff support and intervention programs in emergency services. Emergency service workers are a vital people who provide an extraordinary service to the community at local, national and global levels. Just like the broader community, emergency service workers experience events that can be perceived as stressful and traumatic and just like the broader population, most are resilient to the difficulties they face. Many also perceive these difficulties as a means by which their lives can become richer, fuller, and more meaningful. It is an organizational responsibility to foster and facilitate these positive perspectives and build on the resilience that is inherent in us all; especially in those who have self-selected for an occupation that they are well aware will be filled with challenges and hence, provide them with a platform which can help them to enhance their positive well being (Shakespeare-Finch, Smith, & Obst, 2006).

The field of medicine is a high risk profession so majority of the studies done in context of doctors and nurses mostly illicit the adverse, stressful and possible risk factors that might hinder the performance of the doctors and nurses. Most health professionals have problems dealing with difficult patients, accidents on the job, and other hazards have shortened the careers of many practitioners. The extent to which they experience stress turns into poor performance in terms of quality of patient care. Personality traits are often thought to affect the stress that a person perceives. Specific types of personalities seem to be more susceptible to the effects of stress than others. Job performance is associated with different levels of stress. The aim of the present study was to investigate that how resiliently and hardily the doctors and nurses respond to the stress they face in the most critical units of the hospital i.e. ICU and casualties where continuous traumatic and distressing situations have to faced by the doctors and nurses.

The present study aimed to investigate resilience and hardiness in medical doctors and nurses working in casualties and ICU. The research is based on the previous theoretical work that was investigated by different researchers on hardiness and resilience. The objective of this study is to measure the level of resilience and hardiness in medical doctors and nurses working in emergencies and intense care units of different hospitals of Lahore district. Due to the relatively high level of exposure to potential stress and trauma in the above mentioned departments, the people working there may face hindrances or problems in their level of

performance. The continuous stress may weaken the strength, boldness, power to control and ability to endure to the stressful circumstances, of the staff working in emergency units. Resilience and hardiness is being measured to see and interpret that whether doctors or the nurses work more resiliently and hardily. In the previous researches resilience had been measured in accordance with personality characteristics like hope, self efficacy, self control, coping and competence.

Hypothesis

Following hypothesis has been proposed for the present research:

1. Doctors are more resilient and hardier than nurses.
2. There will be positive correlation between resilience and hardiness in doctors and nurses.
3. There are differences in interstate and intrastate resilience between doctors and nurses.
4. There are differences in inter-trait and intra-trait resilience between doctors and nurses.
5. Doctors and nurses differ on 3 facets of hardiness i.e. commitment, control and challenge.

Methodology:

The present research investigates hardiness and resilience in medical and paramedical staff working in casualties and Intensive Care Units. Correlational research design was used to study the above mentioned variables.

Sample:

Sample comprised of 80 health professionals i.e. 50 medical doctors and 30 staff nurses with age range between 22-52 years ($M=37$). Sample obtained from 5 public hospitals of Lahore city. The sample comprised of doctors and nurses who were working in the casualties and ICU units for a least period of 6 months.

Table 1: Demographic characteristics of the sample (N = 80)

| Variables | Medical Doctors (n=50) | | Nurses (n=30) | |
|---|------------------------|--------------|----------------|--------------|
| | <i>M (S.D)</i> | <i>f (%)</i> | <i>M (S.D)</i> | <i>f (%)</i> |
| Age | 30.36 (5.99) | | 27.33 (5.38) | |
| Gender | | | | |
| Male | | 32 (64%) | | |
| Female | | 18 (36%) | | 30 (100%) |
| Marital Status | | | | |
| Married | | 23 (46%) | | 4 (13.3%) |
| Unmarried | | 27 (54%) | | 26 (86.7%) |
| Educational Qualification | | | | |
| MBBS | | 31 (62%) | | |
| MBBS+FCPS & Specialization | | 19 (38%) | | |
| BSc. Nursing | | | | 13 (43.3%) |
| BSc. Nursing + Midwifery and Diploma | | | | 17 (56.7%) |
| Occupational Experience | 59.26 (50.05) | | 79 (72.97) | |
| Duration of Work in Emergency/ICU in months | 28.60 (28.04) | | 51.90 (50.24) | |

Note; M = mean value, SD = standard deviation, f = frequencies, % = percentages

Assessment measures

Demographic questionnaire, which included age, gender, income, designation, occupational experience, marital status, duration of work in the current hospital, duration of work in ICU/emergency unit and experience of work in ICU/ emergency units.

Hiew's State-Trait Resilience Checklist (2000) was used to measure resilience. This checklist has two forms:

1. State-Resilience Checklist: it has 15 statements describes the respondents as they are "at the present time", by rating each statement on a 5- point rating scale (from "strongly agree" = 1 to "strongly disagree" = 5). The Cronbach's Alpha reliability for the present study for State-Resilience Checklist is 0.83.
2. The Trait-resilience Checklist consists of 18 items that will describe the respondents as they were "generally in their past". The respondents will rate each statement on a 5-point scale (from "strongly agree" = 1 to "strongly disagree" = 5). The Cronbach's Alpha Reliability for trait-Resilience Checklist is 0.82 for the current study.

Dispositional Resiliency Scale DRS-15v-3 (Bartone, 2009) was used to measure personality hardiness. The 15-itemd Dispositional Resilience Scale includes both positively and negatively keyed items covering three conceptually important hardiness facets of commitment, control and challenge. It shows excellent psychometric properties, including Cronbach's Alpha 0.83 for the total hardiness measure and for the facets, 0.77 (Commitment), 0.71 (Control) and 0.70 (Challenge).

Procedure

Following logistic arrangements were made for understanding the current research; official support letter by the supervisor, with the research topic and permission for data collection were taken to the selected hospitals. After getting permission from the concerned authorities that is the Medical Superintendents of the hospitals selected for the recruitment of the sample the data was collected. The data collection was carried out in the workplace settings. Questionnaires related to variables (Resilience & Hardiness) were filled in/completed by the doctors and the nurses by themselves. The doctors and nurses were accessed by the researcher in the intense care units and casualties of each hospital that was chosen for the recruitment of the health professionals. Each participant completed two questionnaires which assessed his/her resiliency level and hardiness. Each participant took 10 minutes to complete each Performa.

Results; The difference of resilience and hardiness between doctors and nurses was determined by applying Independent Sample t-test. The results of Independent Sample t-test are shown in table 2. Correlation was explored by using Pearson product moment correlation method.

Table 2: Independent sample t-test comparing medical doctors (n=50) and nurses (n=30) on level of resilience and hardiness (N=80)

| | Doctors | | Nurses | | t | p |
|------------------------|---------|-------|--------|-------|--------|---------|
| | N = 50 | | N = 30 | | | |
| | M | S.D | M | S.D | | |
| Interstate Resilience | 39.53 | 6.60 | 41.94 | 7.89 | -1.46 | .146 |
| Intrastate Resilience | 65.54 | 8.26 | 69.97 | 11.03 | -2.04 | 0.04* |
| Inter-trait Resilience | 52.16 | 6.86 | 21.96 | 7.10 | 2.03 | 0.00** |
| Intra-trait Resilience | 31.52 | 9.07 | 24.65 | 3.86 | 2.82 | 0.00* |
| Commitment | 9.26 | 1.89 | 10.06 | 2.34 | -1.68 | 0.09 |
| Control | 7.96 | 2.02 | 7.96 | 1.61 | 0.82 | 0.41 |
| Challenge | 7.28 | 2.35 | 7.86 | 2.72 | -1.01 | 0.31 |
| Resilience | 98.56 | 24.21 | 79.12 | 17.49 | -15.04 | 0.00*** |
| Hardiness | 14.31 | 3.12 | 15.71 | 3.22 | -1.92 | 0.00 |

Note: * P < .05, ** P < .01; *** P < .001

Results indicate that there is no significant difference between the doctors and the nurses on hardiness. But there is a significant difference in the resilience level of doctors and nurses. Intra-trait resilience subscale has the highest significant value, it indicates that this trait runs within the doctors and nurses but it is more in doctors as compared to the nurses, which implies that doctors adhere to stressful situations more resiliently. Intrastate resilience is more in nurses as compared to the doctors. It shows that the nurses develop resiliency with the passage of time i.e. with experience the inter-trait resiliency is enhanced and the ability to cope with stressful situations in a positively and patient manner is amplified. Inter-trait resilience levels differ significantly among doctors and nurses. Intra-trait resilience level has a dramatic difference between the doctors and the nurses; it is more in the doctors as compared to the nurses. From this it can be interpreted that the doctors have a stronger innate base of resiliency as compared to the nurses.

Table 3: *Correlational between subscales of State-Trait Resilience Checklist and subscales of Dispositional Resiliency Scale (N=80)*

| Variables | Commitment | Control | Challenge |
|-----------------------|------------|---------|-----------|
| Interstate Resilience | .35** | .16 | .07 |
| Intrastate Resilience | .35** | .17 | -.08 |
| Intertrait Resilience | -.32** | -.31** | .07 |
| Intratrait Resilience | -.20 | -.18 | .08 |

**p<0.01

The findings reveal that there was a significant relationship between interstate resilience subscale and commitment subscale. Intrastate resilience subscale had a positive and significant relationship with commitment subscale of hardiness. Inter-trait resilience subscale had a significant relationship with commitment and control subscale of Dispositional Resiliency Scale.

Discussion

Measurement of resilience in context of different professions has long been the subject of researchers. Multitudes of foreign studies are available on the topic of resilience but this topic has recently been investigated and probed into, by different researchers of Pakistan. Resilience and personality hardiness are the traits that enable a person to resist life stress and face the adverse situations and meet challenges (Saleebey, 1996). People working in stress provoking situations and professions that deal with emergency related confrontations need to be more resilient and hardy to deal with the stress much healthier and effective ways (Brook, 1999). The present study examined the difference of resilience and hardiness in medical doctors and staff nurses working in casualties and ICU units. The main focus of the study is to figure out that which of the two groups i.e. doctors or nurses are transforming their stressful experiences into opportunities of increased growth. The research under speculation will elucidate that either the doctors or the nurses are more capable of overcoming the hazardous circumstances with the help of their protective factors i.e. resilience. Further this study will focus on the differences of doctors and nurses on work commitment, feeling of control and openness to change and challenges i.e. personality hardiness. Researches done on resilience in context to nurses stated that resilience is not necessarily dependent on personal characteristics, but it is predicted by other attributes (Gillepsie, Chaboyer, & Wallis, 2009). In physicians resilience is a dynamic evolving process of positive attitudes and effective strategies (Jensen, Kumar, Waters & Everson, 2008).

Independent sample t-test results revealed that the doctors possessed inter-trait resilience the most followed by intra-trait resilience as compared to the nurses. Inter-trait resilience refers to the innate capability of a person to face the stressful situations effectively by learning to fight with the perilous circumstances, and this innate ability is enhanced by interaction with one's own environment and people. As the sample of medical doctors comprised of majority male doctors this could be one reason that the results were significant for doctors on inter-trait resilience. Bonanno, Bucciarelli, & Vlahov, (2007) showed women were associated with less likelihood of resilience than men.

The doctors had intra-trait resilience more as compared to the nurses. Intra-trait is an individualistic characteristic and is determined by experience and learned by encountering stressful life events and situations. Significant results showed that the doctors had intra-trait resilience more as compared to the nurses. It reveals that the doctors have a stronger inner strength and innate stability to encounter the adverse situations and deal with them in a positive manner. Bonanno, Bucciarelli, & Vlahov, (2007) showed women were associated with less likelihood of resilience than men. Protective factor is related to moderating the negative effects of environmental hazards or a stressful situation in order to direct vulnerable individuals to optimistic paths, such as external social support. More specifically, Werner (1995) distinguished three contexts for protective factors: (1) personal attributes, including outgoing, bright, and positive self-concepts; (2) the family, such as having close bonds with at least one family member or an emotionally stable parent; and (3) the community, like receiving support or counsel from peers. These important factors elicit some of the important points that might foster the characteristics of a person in becoming a resilient person. If these protective factors are not met or fulfilled by a person then his way of becoming a resilient person is hindered. On part of nurses it can be assumed that because of cultural point of view these protective factors are much difficult to be met and fulfilled. The results are supporting the hypothesis but confounding of gender can be one of the factors that might be a possible cause of the significant results.

Results of t-test also revealed that there was a significant difference between the doctors and nurses on intra-state resilience. It could be argued that those who opt for risk involving jobs have intra-state resilience because intra-state resilience shows inner strength which is stable in nature. The nurses have more intra-state resilience than the doctors. Two regression models were used to develop a model of resilience. An initial model tested the hypothesis that a set of 12 explanatory variables contributed to resilience in OR nurses. Five variables (hope, self-efficacy, coping, control and competence) explained resilience at statistically significant levels. Age, experience, education and years of employment did not contribute to resilience at statistically significant levels. In both models, the strongest explanatory variables were hope, self-efficacy and coping. It was concluded that identification of explanatory variables that contribute to resilience in ORs may assist in implementing strategies that promote these behaviors, and thus retain nurses in this specialty (Gillespie, 2007). It can be concluded from

the stated research that age, experience; years of employment, designation and education do not contribute in building resilience. Other variables are responsible in aiding resilience of an individual. The present study on doctors and nurses limits the variables and factors which contribute in building up resilience. Results on intra-state resilience also point towards certain connotations i.e. there are some stable innate characteristics in the nurses that make them more resilient over the doctors. For further investigation on resilience of nurses the other contributing factors should be speculated.

The results on intra-state resilience were against the stated hypothesis of the present study. The concept of resilience has been of interest to various professional groups for many years; however, it is only recently that the nursing profession has begun to recognize its potential contribution in diverse clinical contexts. From concept analysis procedure, a conceptual model of resilience postulates that the constructs of self-efficacy, hope and coping are defining attributes of resilience. Further it was elaborated that resilience appears to be a process that can be developed at any time during lifespan, and thus is not an inherent characteristic of personality. So it is somewhat evident that the development of resilience is based on the synergy shared between individuals and their environments and experiences. Despite of increasing awareness of resilience in nursing profession resilience is somewhat considered a stable characteristic but it can be developed at any time during the life span (Jennings & Staggers, 1994).

The present scenario of Pakistani health professionals is at the sake of many unwanted dangers and risks. The emergency situations that are caused by uncontrollable terrorist attacks and certain cases of maltreatment by the doctors in Government and Private Hospitals, and deserted attitudes of nurses towards the patients are some of the factors that contribute in the vulnerability of doctors and nurses to face undue on the whole. All the insecurities and uncontrollable factors make a pavement that lead to reduced level of resilience in the health professionals. This might be a reason that the present study could not elicit much significant results.

The analysis on the personality hardiness did not present any valid results and scale reliability on the sample of the present study. The Dispositional Resiliency Scale-v3-15 has recently been developed by Bartone (2009). The scale validity has been tested on a sample of several military groups, and the scale provides a reliable Cronbach's Alpha on the samples who are under high stress conditions. Bartone (1996) stated in a paper that the coefficient of reliability may be lowered as a function of quite different test conditions. The scale did not provide reliable Cronbach's Alpha for the sample of doctors and nurses, so it can be argued that because of socio-cultural differences the scale could not be proved as a reliable measure for personality hardiness of sample drawn from Pakistani population.

Hardiness alters two appraisal components: it reduces the appraisal of threat and increases one's expectations that coping efforts will be successful (Tartasky, 1993). Hardiness has also been made known to be associated with the individual's use of active, problem-focused coping strategies for dealing with stressful events (Gentry & Kobasa, 1984; Kobasa, Maddi, & Kahn, 1982). There are arguments that hardiness may function differently in men and women (Funk, 1992; Jennings & Stagers, 1994; William, Wiebe & Smith 1992). Hardiness, possibly, is a false construct built upon particular personality traits of male executives who were originally studied by Kobasa. Pollack (1989) pointed out that since the components of hardiness are a) control and b) commitment and challenge, both of which have been found to be related to social support, the construct of hardiness may simply be an indicator of a complex relationship between the variables of locus of control and social support. Nursing is a stressful profession. Caring for clients, individuals, families, groups, populations or entire communities, with multiple, complex and distressing problems can be overwhelming for even the most experienced practitioner. Nurses regularly face emotionally charged situations and encounter intense interpersonal and inter-professional situations and conflict in the workplace while trying to make appropriate and safe decisions. The professional stress might be one of the possible reasons for less hardy personality of nurses.

The correlational analysis revealed that there was a significant relationship between inter-state resilience subscale and commitment subscale of hardiness (DRS). This implies that the doctors and nurses who have greater level of inter-state resilience commit to their work related duties more. Similarly individuals with high level of intra-state resilience are more committed to their work as the intra-state resilience subscale had a positive and significant relationship with commitment subscale of hardiness. The correlation analysis revealed that inter-trait resilience subscale had a significant relationship with commitment and control subscale of Dispositional Resiliency Scale. This elucidates that both doctors and nurses who have inter-trait resilience will possess the qualities of commitment and control in their work related environment and daily lives. It has been demonstrated in early researches that resilient people were also characterized by the hardy attitudes of commitment, control, and challenge (Kobasa, 1979).

Implementations

The results can be explained to the doctors and nurses who took part in the present research to make them aware of their own personality traits and suggesting ways to cope with their adverse situations to give their best potentials into their profession.

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