

# **The Relationship between Resilience & Mental Health among a Sample of University of Nizwa Students - Sultanate of Oman**

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## **Abstract**

This study employs the descriptive approach to identify the relationship between resilience and mental health in light of some variables in a student sample at the University of Nizwa. The sample consisted of 1,000 students, including 403 men and (597) women. The sample random sampling. Two instruments were used: the resilience scale (Connor & Davidson , 2003) and the Arab Mental Health Scale (Abdel-Khalek, 2011). The psychometric properties of both scales were tested. To answer the study questions, the following statistics were used: Pearson correlation coefficient, t-test, one-way ANOVA Test, LSD test, and regression analysis. The results indicate a positive correlation between mental health and resilience. There was also a significant difference between female and male students in terms of resilience and mental health in favor of female students; It seems that women are more resilient and healthier than men. The study of age differences did not reveal any differences. The study also indicates that resilience has a significant impact on mental health. Finally, the results were tweaked against the limitations of the study.

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**Keywords:** Mental Health, Resilience

## **Introduction:**

Achieving mental health, including its social, psychological, and biological aspects, is considered one of the greatest challenges facing societies and health care establishments today. Increasing conflicts and wars among and inside nations, and the huge economic, social, and political expenses that come with them have provided the impetus for the search for variables that may contribute to supporting, enhancing, and maintaining mental health within unstable and fluctuating environments.

These fluctuations and their consequences challenge the adaptive capabilities of groups and individuals and push them to their limits. Thus, researchers are facing immense challenges finding variables of repair, rebalance, and regeneration in light of current events.

Resilience is an essential component of achieving a suitable level of mental health (Todd & Rottenberg, 2010). Resilience denotes the individual's ability to deal cleverly and skillfully with the different demands of life despite surrounding pressures and crises. It also helps individuals achieve psychosocial adjustment and stress management when life situations become more critical. Therefore, resilience is a key factor in communicating with life and coping with adversity (Grotberg, 2003, p. 1).

Rutter (1987, p. 316) sees the way a person responds to adversity and pressure as the positive pole of a bipolar system of communication; the first pole refers to the inability to adapt, and the second pole is the ability to handle situational stress actively and productively despite the surrounding adversity. Resilience in this sense is a deep process that manifests in the ability to adopt a fruitful model of life while facing great difficulties and painful shocks that contain different social, biological, and psychological risks (Rudwan, 2016).

What differentiates resilience from other concepts and variables related to mental health is that the effectiveness of other concepts is focused on the mechanisms of facing pressure, while resilience goes a step further; it concerns acquired experience and the implicit meanings within painful experiences. Resilience means considering painful experiences tests of steadfastness and opportunities to rise up even if surrounding circumstances are not helping the individual to rise. These experiences could also be considered tests of overcoming difficulties quickly (Ryff, Friedman, Fuller-Rowell, Love, Miyamoto, Morozink & Tsenkova, 2012). This allows the individual to find the basis for his or her own advancement in the areas of cognitions, emotions, behavior, and spirituals (Kumpfer, 1999).

The American Psychological Association has linked psychological resilience and mental health, indicating that there are different aspects, models, and concepts of mental health that are sometimes considered types of resilience that enable individuals to resist adversity (American Psychological Association, 2017; Newman, 2005). Todd and Rottenberg (2010, p. 866) also consider psychological resilience a main complementary component of mental health, as it is a main contributor to lasting well-being and mental health. Additionally, mental health and psychological resilience enhance each other (Kajbafnezhad & Keshi, 2015).

Psychological resilience has a median effect on psychosocial adjustment, which is considered one of the mental health basics, as it helps one find different ways to face adversity and satisfaction and happiness with life. Therefore, psychological resilience is of great importance and value for the

individual because it allows her to adjust herself and her environment, encourages her to cope better with her problems, enhances her steadfastness, and encourages achievement, internal control, and negative reflections avoidance. It is also a factor that fosters meaningful life for teenagers (Brassai , Piko, & Steger, 2011). If all of these aspects are present, together they will be a real indicator of mental health that could predict resilience (Kajbafnezhad & Keshi, 2015). Those who have greater mental health have greater resilience as well, especially when facing life's difficulties, such as poverty (Elliott, 2016).

A comprehensive understanding of resilience requires a broad combination of two theoretical models that have shed more light on the interaction between external and internal protection factors. The first approach is the so-called variable-focused approach. This approach examines the correlation between the degree of risk, the outcome, and the potential positive personality traits of the person or the environment. The second approach is the so-called person-centered approach, which focuses on the risk and protection constellation within a person. Both approaches have disadvantages and advantages. However, if one takes little account of either, it can lead to misunderstanding. The advantage of combining these two approaches is that the following aspects considered:

- 1) Challenges or the stress situation that include changes, demands, and stress;
- 2) Availability and exploitation of internal factors that include self-efficacy as a personal anticipatory resource;
- 3) Exploitation of external resources including objective conditions and social support.

It can be concluded that resilience is an in-house source of mental resources that helps individuals cope with changing conditions and challenging situations, facilitate access to social support, and accept the support they need. This generally means it facilitates the path to mental health (Friedli, 2009).

Many studies have addressed psychological resilience and mental health separately. There are also studies that have included both or some negative or positive aspects of mental health. We can conclude that mental health, in general, is significantly related to resilience (Kajbafnezhad & Keshi, 2015). Further, different aspects of resilience are negative correlation (confidence, optimism, will of challenge, having a meaningful goal, and perseverance) with anxiety and stress events (Bitsika, 2010; Zuhairi, 2012). Resilience also has positive effects on reducing daily stressors and anxiety and depression caused by them (Keller, 2011). There is also a relationship between resilience and high levels of religiosity and spiritual practice (Long, 2011), resilience and life satisfaction (Shakoura, 2012), resilience and self-esteem

and decision-making (Al-Showail & Nasr, 2012), resilience and coping strategies (Ahern, Ark, & Byers , 2008), Ego-resilience and vitality of consciousness (Jaber, 2014).

Mental health correlates with many variables, such as social well-being, the ability to find meaning in life, religiousness (Abdel Khalek & Lester, 2016; Shukri, 2014; Abdel Khalek A. M., 2015; Sufghalem, 2016), the “Big 5” personality traits, extraversion which is a good predictor of mental health, physical health, happiness, and satisfaction (Abdel Khalek A. M., 2015), in addition to its relation to self-efficacy (Abdel Khalek & Lester, 2016). Further education has also been found to have an effect on mental health, well-being, prevention, recovery from mental health related problems, and the ability to deal with potential stresses that may cause and/or exacerbate disabilities and chronic diseases (Hammond, 2004). Moreover, a relation between mental health, resilience, and academic performance amongst university students has also been found (Hartley, 2013). The components of psychological resilience contribute to clarifying the cause of differences in GPA, efficiency, and achievement level amongst students. Researchers have also found that self-resilience can more effectively help students who have psychological problems and difficulty adapting to the complexities of higher education studies and enhance their academic performance (Hartley, 2013). Studies that have investigated gender variables are contradictory; Some studies have found differences between males and females that favor females (Shakoura, 2012; Al-Showail & Nasr, 2012; Keller, 2011; Sneed; Johnson; Cohen; Gilligan, Crawford, N; Kasen, 2006), while others have found differences that favor males (Jaber, 2014), in addition to other studies that had no difference at all (Zuhairi, 2012). With regard to mental health level, there was a study which showed no differences between males and females (Singh & Khandelwal, 2014), while other studies had differences in favor of males (Shukri, 2014; Abdel Khalek & Lester, 2016; Sufghalem, 2016). With regard to age, there were indications that psychological resilience is higher in younger age groups than in older age groups (Netuveli, Wiggins, Montgomery, Hildon, & Blane, 2008; Ahern, Ark, & Byers, 2008). There are studies that indicate that older samples are more resilient with regard emotional organization and problem-solving abilities, despite younger groups being more resilient with regard to social support (Gooding, Hurst, Johnson, & Tarrier, 2012). These studies differ in terms of the age distribution of the samples as well as the recorded psychological variables (such as depression) and socioeconomic situation (divorce, death of the partner, financial distress and so on) (Netuveli, Wiggins , Montgomery, Hildon, & Blane, 2008).

### **Study Issues and Questions**

The concept of mental health is a broad term that covers a wide range of aspects. These aspects range from the balance of the person-environment

relationship to the ability of a person to cope with the internal and external requirements. To achieve balance, the individual must possess different skills for handling conflicting demands and stress, adaption skills, and the ability to draw meaningful conclusions, and to use all of these skills in novel situations.

Resilience is an important defense mechanism and can help in the prevention of psychological disorders and the enhancement of mental health (Davydov, Ritchie, & Chaudi, 2010). Therefore, highlighting the relation between psychological resilience and mental health contributes to better understanding and development of factors that affect mental health.

Further, understanding the relation between mental health and psychological resilience contributes to the development of psychological prevention programs as part of health development programs in general, and especially categories of society such as youth. Therefore, the topic of this study is defined by the following question: “What is the relation between mental health and psychological resilience in a sample of students at the University of Nizwa.”

#### **The following sub-questions were derived from the main question:**

- 1- Is there a relation between mental health and psychological resilience?
- 2- Are there differences between mental health and psychological resilience according to gender or age variables?
- 3- To what extent does psychological resilience contribute to mental health prediction?

#### **Significance of the Study**

The importance of this study stems from the fact that it deals with one of the variables that has become increasingly important in recent years, and which has a wide impact on the individual’s ability to deal with stress and psychological tension. This study contributes an understanding of the relationship between mental health and resilience, which is a means of supporting mental health within the study community.

#### **Study Objectives**

The objectives of the study are as follows:

1. Determine the relationship between psychological resilience and mental health.
2. Detect mental health and resilience in the study sample through the lens of gender and age variables.
3. Determine the extent to which psychological resilience contributes to predicting mental health.

## Terminology

This study includes a definition of the following theoretical and procedural terms:

1. **Psychological resilience:** Psychological resilience in general is the ability to heal or return to a normal state after exposure to a compressor event (Connor & Davidson , 2003).

As for the procedural definition, it means the level achieved by the examinees on the scale of psychological resilience used in the current study.

2. **Mental health:** Abdel-Khalek (2015, p. 30) defines mental health as, "a complex cognitive state, relatively permanent, stemming from the feeling that everything is fine, a sense of happiness with oneself and with others, a sense of satisfaction, tranquility, security, and peace of mind, as well as enthusiasm for life, with a sense of activity, strength, and wellness. In this case a relatively high degree of psychological compatibility and social harmony, with satisfactory and satisfied social relations are achieved."

The procedural definition is the level achieved by the examinees on the mental health scale used for the purposes of the current study, which is an indicator of relative mental health.

## Limitation of the Study

The limitations of the study include the timeframe used for its implementation in 2016, the predictive ability of the tools used, and the effectiveness of the statistical methods used to answer the research questions.

## Methods & Procedures

### Methodology

The methodology used in this study was the correlative descriptive methodology.

### Population

The study population consisted of students at the [University of Nizwa](#). The study included four faculties (Arts and Science, Pharmacy and Nursing, Economics, Administration and Information Systems, and Engineering and Architecture) and all academic degrees (diploma, educational qualification, bachelor's degrees, and master's degrees) in the 2016/2017 academic year. The sample population consisted of 8,115 students, according to the statistics of the Deanship of Admission and Registration at the [University of Nizwa](#).

### Sample

**A) Exploratory Sample:** As a first step, an exploratory accidental sampling method was chosen to check the psychometric features of the scale.

This sample included 60 students (29 female and 21 male) from the original study population. They were students in their sixth semester from the Faculty of Arts and Science at the University of Nizwa.

**(B) Main sample:** The main sample was selected randomly from the original study population. The sample of the final study consisted of (1000) students (403 students and 597 students) from different colleges of University of Nizwa.

### **Tools**

1. Conner & Davidson Resilience Scale (Connor & Davidson , 2003).
2. The Arabic Scale of Mental Health (Abdel-Khalek A. M., 2011; 2016)

**Conner and Davidson resilience scale:** The scale consists of 25 items, all of which are phrased in a positive manner. The scale has acceptable stability coefficients (Alpha: 0.94).

### **Psychometric Properties of the Scale**

To verify the psychometric properties of the scale, the researchers assessed its validity and stability.

### **Validity**

#### **Face validity**

The following steps were taken to ensure the validity of the study:

- The scale was translated and re-translated to verify the correctness of the translation and make necessary modifications.
- The final design was reviewed with a number of specialists to ensure the validity of the concepts included in the scale.

#### **Internal Consistency**

The researchers calculated the internal consistency of the scale by applying it to a survey sample consisting of 60 male and female students to determine the extent to which the items of the scale were consistent with each other. Table 1 illustrates the results.

**Table (1)**  
**Internal consistency and alpha stability coefficients**

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	106.58	250.823	.430	.923	14	106.78	252.613	.464	.922
2	106.27	247.284	.514	.922	15	106.52	244.796	.677	.919
3	105.68	254.729	.413	.923	16	106.77	243.504	.616	.920
4	106.33	244.768	.695	.919	17	106.07	245.114	.747	.918
5	105.90	248.227	.692	.919	18	106.48	247.542	.607	.920
6	106.38	249.834	.543	.921	19	106.73	248.572	.554	.921
7	105.82	258.729	.366	.923	20	106.27	240.911	.745	.918
8	106.12	251.190	.634	.920	21	106.75	257.682	.239	.926
9	105.75	250.089	.644	.920	22	105.95	248.625	.670	.919
10	106.15	250.740	.512	.922	23	105.98	249.678	.638	.920
11	106.07	249.385	.687	.919	24	106.10	257.041	.428	.923
12	106.32	249.237	.549	.921	25	106.28	250.274	.565	.921
13	106.25	249.784	.513	.922					

Table 1 illustrates that the corrected Item-total correlation ranged between (0.747 - 0.239). This means good internal consistency of the scale.

**Stability:** To examine the stability of the scale, the researchers applied the scale to two different periods, separated by two weeks, for a sample of 60 students from outside the study sample, (21 males and 39 females). The calculation of the correlation coefficient between the degrees of application resulted in a correlation of 0.543, which is a function at the level of 0.01. In addition, the coefficient of the stability of alpha was calculated and resulted in 0.92, which is a good stability indicator, and fit the purposes of the study.

### The Arabic Scale of Mental Health

The Arabic Scale of Mental Health (ASMH) (Abdel-Khalek, 2011) is available in both Arabic and English versions. The scale consists of 40 original items and, 10 scattered items, concerning mental illness, such as "I suffer from a severe headache", "I am very tired," and "I am afraid of death." These items are not included in the calculation of the total score of the scale nor at any stage of the standardization of the scale. The scale was applied to samples of adolescents and adults in two different countries, 154 from Kuwait and 154 from America, with an average age of 20.8. A high score indicates a high mental health index, while a low score indicates a low mental health index, ranging between 40-200. The Cronbach's alpha coefficient reached 0.94-0.96, while the internal consistency reached 0.84-0.94, which is an acceptable stability coefficient.



To verify the psychometric specifications of the scale in the current study, the researchers used the following methods of assessing validity, consistency and stability.

**Validity**

The validity of the scale was calculated in two ways: the face validity and the internal consistency were calculated, as was the degree of correlation between the items and their total score.

**Face validity:**

The scale was presented to a group of specialists in psychological counseling, psychological and educational counseling, psychology, social psychology, measurement and evaluation, and special education at the [University of Nizwa](#) and [Sultan Qaboos University](#). The arbitrators were asked to express their opinions and observations concerning the appropriateness of the items and their usefulness with respect to the purpose of the scale. I also asked them for their opinions regarding, the clarity of the language of each item of the scale, to make comments and suggestions, and to add any amendments they deemed appropriate.

**Internal consistency:** The internal consistency of the scale was calculated for a survey sample of 60 students to determine the extent to which the scales were consistent with each other. The correlation of each item of the scale with the total score of the items to which it belonged was calculated.

**Table (2)**

**Shows the analysis of validity by internal consistency and alpha correlation coefficients**

Item	Scale Mean if Deleted	Scale Variance if Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Item	Scale Mean if Deleted	Scale Variance if Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	161.07	594.538	.645	.960	21	161.05	588.692	.702	.960
2	160.75	599.072	.621	.960	22	160.43	608.385	.456	.961
3	160.90	596.092	.657	.960	23	160.82	598.390	.433	.962
4	160.80	593.756	.670	.960	24	160.72	588.783	.700	.960
5	160.78	600.173	.475	.961	25	161.45	599.404	.492	.961
6	160.97	594.372	.650	.960	26	160.87	600.389	.474	.961
7	160.98	591.440	.659	.960	27	161.40	599.939	.418	.962
8	160.63	596.270	.722	.960	28	160.90	597.142	.647	.960
9	160.87	589.507	.752	.960	29	160.70	589.637	.803	.959
10	160.83	585.768	.809	.959	30	160.82	607.847	.347	.962
11	160.95	597.608	.599	.960	31	161.65	604.503	.381	.962
12	161.00	596.712	.548	.961	32	161.58	605.095	.368	.962
13	160.70	595.129	.691	.960	33	161.23	597.843	.536	.961
14	160.52	596.559	.749	.960	34	161.22	605.596	.430	.961
15	160.83	591.836	.617	.960	35	160.98	589.034	.788	.959
16	160.72	597.393	.627	.960	36	160.83	592.582	.718	.960
17	160.55	593.981	.738	.960	37	161.02	584.525	.751	.959
18	161.00	596.305	.596	.960	38	160.83	589.362	.675	.960
19	160.78	592.851	.700	.960	39	160.88	595.088	.582	.960
20	160.62	595.325	.726	.960	40	160.67	595.480	.694	.960

Table 2 illustrates that the Corrected Item-Total Correlation was between 0.809 and 0.347, which indicates good internal consistency.

**Stability:** To demonstrate the stability of the scale, the researchers applied the scale in two different periods, separated by two weeks, to a sample of 60 students from outside the study sample (21 male and 39 female). The calculation of the correlation coefficient between the degrees of application resulted in a correlation coefficient of 0.516, which is a function at the level of 0.01, and an alpha coefficient of 0.96, indicating that the scale has good stability.

## Results

The study aimed to identify the relationship between psychological resilience and mental health in a sample of [University of Nizwa](#) students in Oman, in light of a number of variables. To answer the research questions, was used mathematical means and standard deviations, the Pearson correlation coefficient, a t-test, a one-way ANOVA, and an LSD test.

### Results for the First Question

Is there a statistically significant relationship between the level of psychological resilience and the level of mental health?

To answer this question, I used the Pearson correlation coefficient. The calculation determined that there is a positive correlation between resilience and mental health ( $\alpha < 0.01$ ) of 0.79.

### Second Question

The second question was: Are there significant differences in the level of psychological resilience and mental health index in the study sample with respect to the variables gender and age?

To answer this question, mathematical means, standard deviations, a t-test for the gender variable, and a one-way ANOVA analysis for the age variable were used.

**Gender Differences:** Table 3 illustrates the statistical averages and standard deviations for the level of psychological resilience and mental health according to the gender variable (male, female) and the t-test.

**Table (3)**  
**T-Test for the level of Psychological Resilience and Mental Health based on the variable of sex**

Scale	Sex	N.	Mean	S	D. of freedom	T	Signif.	Signif. Direction
<b>Resilience</b>	M.	403	3.7023	0.78430	998	3.3091	0.002*	<b>In favor of Females</b>
	F.	597	3.8502	0.67507				
<b>Mental Health</b>	M.	403	3.8137	0.82826	998	3.396	0.001*	<b>In favor of Females</b>
	F.	597	3.9881	0.74682				

Table 3 indicates significant differences between males and females in favor of females. Females achieved a higher degree of resilience and mental health.

**Age Differences:** Table 4 indicates the mathematical means and standard deviations for the level of psychological resilience and mental health according to the age variable (18-21, 22-29, 30 years and above).

**Table (4)**

**Mathematical means and standard deviations for the level of psychological resilience and mental health according to the age variable.**

Scale	Age Group	n.	Mean	Standard Deviation
Psychological Resilience	18-21	455	3.7469	0.75273
	22-29	421	3.8101	0.67902
	30 and above	124	3.8849	0.76045
Mental Health	18-21	455	3.9058	0.82510
	22-29	421	3.9017	0.74296
	30 and above	124	4.0167	0.77146

Table 4 shows that there are some differences in the mathematical means of the level of psychological resilience and mental health in the study sample with respect to the age variable. To ensure that these differences were statistically significant, a one-way ANOVA analysis test was used. Table 5 contains the results.

**Table (5)**

**One-Way ANOVA analysis for the level of psychological resilience and mental health according to the variable age**

Scale	Source of Difference	Total of Squares	D. of Freedom	Mean of Squares	F	Signif. Level
Psychological Resilience	Between Groups	2.131	2	1.066	2.035	0.131
	Inside Groups	522.021	977	0.524		
	Grand total	524.152	999			
Mental Health	Between Groups	1.388	2	1.066	1.127	0.324
	Inside Groups	614.121	977	0.524		
	Grand total	615.509	999			

Table 5 illustrates that there are no significant differences in the level of psychological resilience and mental health in the sample with respect to the age variable. This indicates that the levels of psychological resilience and mental health in the sample are similar despite age differences.

### Third Question

Third question was: How much does mental resilience predict mental health?

To answer this question, a linear regression was used. The results are listed in Table 6.

**Table (6)**  
**Regression linear analysis in the contribution of psychological resilience in predicting mental health**

<b>Independent Variable</b>	<b>Dependent Variable</b>	<b>R.</b>	<b>Selection Coefficient of R Square</b>	<b>T Value</b>	<b>Signif. Level</b>
<b>Psychological Resilience</b>	<b>Mental Health</b>	0.446	0.199	15.750	0.000*

\* Significance at  $\alpha < 0.05$

The results in Table 6 indicate that the independent variable, i.e. the psychological resilience index, clarifies a rate of 19% of variation in the dependent variable, i.e. mental health. The many common, interrelated, and correlated aspects of psychological resilience and mental health may explain this. Resilience is a psychological combination that allows a person to respond positively to traumatic events, difficult situations and stressors. In addition, resilience helps individuals not to give up in the face of life crises or natural disasters.

## **Discussion**

This study aimed to examine the relationship between psychological resilience and mental health, and to clarify the extent of gender and age differences, and the effect of resilience on mental health. The results indicate no differences between males and females with respect to mental health and resilience levels. There were also no differences due to age. This result can be explained by the characteristics of the sample itself. The sample consisted of university students close in age. The results are generally not conclusive in this context and will vary according to the sample and its characteristics (random samples from indigenous communities, samples from environments with different environmental, social, and economic risk (Keller, 2011; Al-Showil & Nasr, 2012; Shakoura, 2012; Jaber, 2014; Zuhairi, 2012; Singh & Khandelwal, 2014; Shukri, 2014; Abdel Khalek & Lester, 2016; Sufghalem, 2016; Netuveli, Wiggins, Montgomery, Hildon, & Blane, 2008).

It is likely that the gender differences with respect to resiliency can be traced back to the diverse factors through which gender resilience develops. It is postulated that gender-specific resilience arises in childhood and continues to develop in adolescence. It should be noted that women accept social support more than men. In contrast, men are more dependent on internal resources (Sneed et al., 2006). This means that females rely on a broader variety of support sources than males. However, we should be careful not to overestimate gender differences. More research is needed in this area.

The impact of resilience on mental health was logically expected and has been demonstrated by multiple studies. Researchers should focus on the importance of resilience development programs and further study of the different aspects of resilience. These aspects should be considered when developing health development and primary psychological care programs.

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