

Psychological resilience and well-being among a sample of Saudi

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ABSTRACT

Objectives: To investigate the correlation between psychological resilience and well-being, considering various demographic factors within a Saudi society.

Methods: This study was carried out in King Saud University, Riyadh, Saudi Arabia from January to March 2023. A total of 746 male and female participants aged 18 and above were surveyed. We used a comparative, descriptive, correlational research method to achieve the study objectives, utilizing Conner and Davidson's resilience measure and Ryff's well-being scale for data collection. The statistical methods employed included Spearman's correlation coefficient, t-test, one-way analysis of variance (ANOVA), Mann-Whitney U, and Kruskal-Wallis tests.

Results: The study revealed a positive link between psychological resilience and well-being, emphasizing their significance in mental health concepts and quality of life. Furthermore, there were notable differences among males and females and various economic- and education-level groups concerning psychological resilience and well-being.

Conclusion: Psychological resilience and well-being are essential variables that warrant consideration in future mental health research.

Keywords: psychological resilience, well-being, Saudi society

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Recent research has focused on studying individuals' strengths instead of their weaknesses. In positive psychology, there has been a growing interest in psychological resilience and well-being to reduce pain and suffering and improve mental health and overall quality of life.¹

Psychological resilience refers to an individual's capacity to adapt to stress and recuperate from adversity or trauma.² Richardson's³ model for psychological resilience outlines an individual's journey through

stages, including finding equilibrium, managing difficulties, preparing for normalcy, and achieving balance or experiencing loss. Research indicates a strong correlation between psychological resilience, mental health, quality of life, and satisfaction.⁴ Concerning gender differences, it has been reported that men display higher psychological resilience than women, though a study by Aldhahi⁴ found no gender differences in resilience levels.⁵

Well-being is an individual's evaluation of their current and past life experiences, including their emotions, mood, life satisfaction and achievements, and satisfaction in specific areas like marriage and work. Ryff's⁶ 6-dimensional well-being model assesses an individual's purpose, autonomy, personal growth, environmental mastery, positive relationships, and self-acceptance. Stepanyan & Asriyan's⁷ study found a positive correlation between well-being and job satisfaction, trust, and health self-assessment.

Several studies have indicated a correlation between psychological resilience and well-being.⁸ A study by Grundy et al⁹ found a correlation between well-being and academic burden tolerance in a Saudi environment, with no significant differences in scores based on gender or age, indicating a positive relationship between resilience and well-being. Al-Zain & Abdulsalam¹⁰ found no relationship between age, resilience, and well-being among 1,057 bachelor's and postgraduate students, while Mariam & Al-Sumail¹¹ found no disparities between males and females in psychological resilience and emotional well-being.

The study explores the relationship between psychological resilience and well-being in Saudi society, addressing demographic factors and a comprehensive sample selection approach, aiming to provide a comparative analysis. Was there a relationship between psychological resilience and well-being in a sample of Saudi society? Were there significant differences in the psychological resilience of a sample of Saudi society based on gender, economic level, and educational level? Were there significant differences in the well-being of a sample of Saudi society based on gender, economic level, and educational level?

Methods. This comparative, correlative descriptive study was carried out in King Saud University (KSU) Riyadh, Saudi Arabia from January to March 2023. The inclusion criteria were participants over 18 years of age from various educational, economic, and social backgrounds, ensuring a comprehensive representation of Saudi society. We included both males and females with literacy skills. The exclusion criteria included

participants under 18 years of age who were not able to read. The sample size was calculated using the Raosoft program, accounting for a 5% error margin and a 95% confidence level. For a balanced 50/50 sample distribution, the total sample size was 377 individuals. Participants were recruited from the employee population of KSU and the wider community via conventional sampling methods, further enhancing the diversity and representativeness of the sample.

A literature search was conducted in 3 databases web of Science, ScienceDirect, PubMed, and Almandumah. Also, the Authors conducted further searches in Google Scholar. The search terms used included 'Psychological resilience', and 'well-being'. The research is limited to articles published in English and Arabic.

The research took place between January and March 2023 and sought to ascertain the link between psychological resilience and well-being within a Saudi society. Two measurement tools were employed to gauge these aims: the Connor-Davidson Resilience Scale (CD-RISC-25, 2003) and Ryff's Psychological Well-Being Scales (RPWB; Ryff, 1989). A total of 73 employees from KSU were surveyed in person, while an online version was posted on social media for the broader Saudi public, drawing a response from 673 individuals. The study received approval from the Scientific Research Ethics Committee.

The Connor-Davidson Resilience Scale (CD-RISC-25, 2003) measures psychological resilience, an individual's ability to recover from stressful situations.² It comprises 25 items across five dimensions: competition, trust, positive acceptance of change, tuning, and spiritual elements. Responses range from 0 to 100. The Arabic version of the scale used samples from Palestinian, Syrian, and Lebanese samples and showed good validity and reliability. In the current study, the scale's reliability was high, resulting in a Cronbach's alpha of 0.90.¹²

The study employed Ryff's Psychological Well-Being Scale (RPWB; Ryff, 1989) to measure well-being. This self-report scale, developed by Carol Reeve, consists of 42 items divided among 6 subscales: self-acceptance, environmental mastery, personal growth, autonomy, positive relations with others, and purpose in life.¹³ Positive items receive direct scores, whereas negative items are scored inversely (specifically items 3, 4, 6, 9, 10, 21, 23, 24, 27, 29, 31, 32, 38, 40, 41). Thus, total

scores can range from a minimum of 42 to a maximum of 252. The Arabic version of RPWB was found to possess adequate psychometrics.¹⁴ Furthermore, the Cronbach alpha coefficient for the current study was 0.89, indicating high reliability.

The King Saud University Research Ethics Committee approved this study on January 3, 2023, with the approval number KSU-HE-22-906. The authors ensure that all procedures performed in this study were by the ethical standards of the relevant national and institutional committees on human research and with the Helsinki Declaration of 1964 and its later amendments. We also obtained the participants' written consent to partake in this study.

Statistical analysis. This study used IBM SPSS Statistics for Windows, version 29 (IBM Corp., Armonk, N.Y., USA) to analyze data on psychological resilience and well-being measurements. The Shapiro-Wilk test revealed Davidson's Resilience Scale data was not normally distributed, while Ryff's well-being scale generally was. Spearman's correlations were used to detect any correlation between psychological resilience and well-being. The study used a t-test and ANOVA to analyze differences in the Well-being scale between males and females, as well as variations based on economic status and education level. To determine which group means were different from each other, the study conducted pairwise comparisons using Tukey's Honest Significant Difference. The Mann-Whitney U test measured differences between males and females in the psychological resilience scale. The Kruskal-Wallis test observed differences in the average study sample's scores in the psychological resilience scale according to economic status and education level.

Results. Table 1 shows the characteristics of the study sample. The majority of the sample was female, and the most represented age group in the study fell within the middle range. In terms of education level, bachelor's students represented the majority. The data also indicates that the middle-income group is most prevalent.

The relationships between psychological resilience and well-being. Spearman's correlation coefficient indicates a significant correlation between overall psychological resilience and well-being. Additionally, notable correlations exist between overall psychological resilience and various well-being measure subscales, including autonomy (0.64), environmental mastery (0.36), personal growth (0.55), positive relations with others (0.40), purpose in life (0.45), and self-acceptance (0.45).

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Table 1 - The characteristics of the study sample (N=746).

Variables	n	%
<i>Age</i>		
18-22	191	25.6
23-30	308	41.3
31-40	154	20.6
41-50	64	8.6
51-60	24	3.2
61-70	5	7
71 +	0	0
<i>Gender</i>		
Female	527	70.6
Male	219	29.4
<i>Economic level</i>		
Low	84	11.3
Middle	608	81.5
High	54	7.2
<i>Education level</i>		
Elementary school	1	1
Middle school	3	4
High school	115	15.4
Diploma	39	5.2
Bachelor's	475	63.7
Master's	83	11.1
Doctoral +	30	4.0

Psychological resilience and gender, economic status, and educational level. Table 2 reveals significant disparities in the psychological resilience levels of males and females. The Mann-Whitney U test reflected this disparity, with the males' mean rank demonstrating higher resilience than the females' mean rank.

The results reveal significant differences ($p < 0.001$) between economic-level groups on the psychological resilience scale. The Kruskal-Wallis test was used, providing a statistical representation (H-value) for the overall degree of psychological resilience (H [2] = -23.99, $p < 0.001$).

Regarding the variable of educational level, the result presents statistically significant differences among groups with various educational levels in terms of psychological resilience. This observation was established using the Kruskal-Wallis test. A noteworthy statistical result was discovered in the total degree value of the psychological resilience scale, with an H-value of -19.6 and a p -value of 0.003.

Well-being and gender, economic status, and educational level. The results in Table 3 show statistically significant differences between males and females in the well-being measure, with the mean of males being higher than that of females.

The results reveal significant differences ($p < 0.001$) between economic-level groups on the well-being scale. The one-way ANOVA test provided a statistical

Table 2 - The Mann-Whitney U test of the difference between females and Males in the psychological resilience measure.

Gender	N	Mean rank	Sum of ranks	U	Z	P
Female	527	354	186907.50	47779.500	-3.705	<0.001
Male	219	418	91723.50			

Table 3 - Results of t-test for well-being measure in females and males .

Gender	N	Mean	SD	t	P
Female	527	172.9	27.1	-2.11	0.04
Male	219	177.5	27.8		

representation (F-value) for the overall degree of well-being (F=14.6, $p < 0.001$). Regarding the variable of educational level, the results present statistically significant differences ($p < 0.001$) among groups with various educational levels in terms of well-being. This observation was established using the one-way ANOVA test, which revealed a noteworthy statistical result in the total degree value of the well-being scale, with an F-value of 4.87 and a p -value of .001.

The Tukey's post hoc test was insignificant, with a p -value of 0.148. Consequently, we do not have enough evidence to refute the null hypothesis. This indicates an absence of any statistically noticeable disparity in mean scores across varying education levels, considering $\alpha = 0.05$ as the significance level.

Tukey's post hoc analysis revealed non-significant differences between low and middle economic levels ($p < 1.000$) and middle and high economic levels ($p = 0.127$). Consequently, there is inadequate evidence to dismiss these comparisons' null hypothesis. These results suggest no notable disparities in mean scores across different economic strata at the $\alpha = 0.05$ significance level. However, the comparison between the middle and high economic levels hints at a potentially significant trend.

Discussion. This study aimed to determine the correlation between psychological resilience and well-being within a sample of Saudi society. It sought to highlight discrepancies in psychological resilience and well-being based on gender, economic status, and education level.

The first objective, investigating the relationship between psychological resilience and well-being, revealed a statistically significant correlation. This finding corroborates several other studies. Not only does a link exist between psychological resilience and well-being, but there's also a connection to various aspects of well-

being.⁹⁻¹¹ As per earlier research, this relationship can be viewed as a mediating factor between well-being and psychological stress. This association can be attributed to the elements of psychological resilience, such as efficient planning, effective problem-solving, and an individual's self-confidence in their abilities. Upon reflection, these results align well with previous studies, potentially due to societal and religious traits influencing the ability to cope positively with difficulties.

In addressing our second aim, we found gender-based differences in psychological resilience levels. Our results showed higher resilience in males versus females, which contradicts the study and is similar to the study.^{4,5} This discrepancy might stem from factors such as cultural and gender differences within Saudi society and participant age variations.

In terms of the economic status variable, our results exhibited statistical differences in psychological resilience across economic classes. These findings align with research highlighting how challenging economic conditions and low incomes can adversely affect individual resilience levels. Yet, due to a lack of updated statistics, we did not use Saudi per capita income averages to determine economic status; instead, we relied on participants' self-reported estimates. Notably, most participants in this study fell into the middle-income level. We also discovered statistically significant differences in psychological resilience across educational levels. This variation could be attributed to increasing educational challenges; as individuals progress through their education, they encounter new hardships and complex issues. Concurrently, they gain experiences and skills that may bolster their resilience. However, we drew minimally from lower educational levels (primary to average) compared to higher educational levels for this study.

The third objective's results revealed significant gender differences in well-being, with males scoring higher than females on average. This contrasts with prior studies.¹⁵ It is suggested that such differences in well-being dimensions like autonomy, environmental, and communal empowerment in Saudi society could be attributed to the characteristics and smaller size of our male participant sample compared to the female sample.

In terms of economic status, we observed notable differences in well-being, aligning with other research findings. This could be due to the -critical role of financial standing in influencing overall well-being. Additionally, we found significant discrepancies in well-being among different educational level groups, and this could highlight the crucial role of education in enhancing an individual's well-being.

The study addresses demographic factors not previously examined, allowing for a comparative analysis of their impact on an individual's psychological resilience and well-being in Saudi society. The findings have implications for future research, including the launch of psychological therapies aimed at developing psychological resilience in Saudi culture as a buffer against stress and mental health conditions. Therapies that, by boosting psychological resilience and empowerment, assist people in maintaining their psychological well-being even in the face of psychological stressors and challenges. The study demonstrates the effects of psychological resilience and well-being on various age groups and contributes to the initiation of research in this area in Saudi society.

Study limitations. The study examines resilience and well-being in Saudi society, using a diverse sample. However, there are many limitations in this study. First, its non-random selection method and non-normal distribution of data make generalization difficult. Second, the study relies on self-reported measures, potentially indicating bias. Third, the authenticity of responses might be influenced by social desirability or discrepancies in self-perception. Fourth, a considerable quantity of data is reliant on online assessments. With these considerations, future research should explore the correlation between resilience and well-being using more objective and representative samples. This sample should cover a wide range of age groups and social and economic statuses throughout various regions of the Kingdom. Utilizing validated tools tailored to the Saudi context can also help achieve more precise and trustworthy outcomes.

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