

## Relationship of resilience and subjective well-being as mediated by big five personality factors in the elderly of Assam

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### Abstract

The present study aimed to investigate the relationship of Resilience and Subjective Well – Being of the Elderly in Assam in terms of gender. The sample comprised of 120 elderly residing in two major urban centers of Assam, that is, Jorhat and Dibrugarh. Connor Davidson Resilience scale, Subjective Well-Being scale and personal information data sheet were administered for collection of data. Mean, Standard Deviation, Correlation and Mediation analysis were calculated to analyze the data. Results demonstrated that Resilience showed a significant relationship with Subjective Well-Being among the elderly sample. And the relationship between Resilience and Subjective Well-Being is mediated by the Extraversion and Openness traits of the Big Five personality factors.

**Keywords:** Elderly, Assam, resilience, subjective well-being, big five personality factors

### Introduction

In today's era India is developing rapidly and along with that the social structure is changing as well. Industrial development is leading to increased mobility and changing family structures, and demographic changes, which in turn is raising the numbers of the elderly population of the world. "The afternoon of life is just as full of meaning as the morning; only, its meaning and purpose are different" - Carl Jung. The Swiss psychiatrist Carl Jung has compared old age with an afternoon. He compared the last phase of life to the time of the day when the sun sets, and darkness begins. According to the World Health Organization, ageing is a development of biological reality which starts at the formation and finishes with death. Rowe and Kahn define successful ageing as high physical, psychological, and social functioning in old age without major diseases.

According to Diener (2000), "Subjective Well-Being is people's cognitive and affective evaluations of their lives." It has two components, that is, cognitive appraisal which describes how a person considers his/her overall life satisfaction, and the second component is affective appraisal which is an individual's emotional experiences.

Resilience is the ability of individuals to cope with negative situations and then bounce back in the face of adversities. According to American Psychological Association (2014), Resilience is the process of adapting well to significant sources of adversity, trauma, tragedy, threats, or strain. Resilience becomes a response to life challenges in ageing (Ryff and Singer, 2003).

According to American Psychological Association, 2017 Personality is defined as, "individual differences in characteristic patterns of thinking, feeling and behaving." The five factors (Costa and McCrae, 1992) identified as primary factors of personality are: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience.

**a. Openness to experience:** It is described as the depth and complexity of an intellect or imagination. It concerns the ability to think outside the box.

**b. Conscientiousness:** It is a tendency to control impulses and act in socially acceptable ways, behaviors that facilitate goal-directed behavior.

**c. Extroversion:** It concerns where an individual draws their energy and how they interact with others.

**d. Agreeableness:** It concerns how well people get along with others.

**e. Neuroticism:** It refers to a person's emotional stability.

### Rationale of the study

Due to industrial advancement, the world is progressing in science and medical care which is significantly improving health and longevity globally. With the increase in longevity, the global elderly population (60 years and above) is increasing compared to the general population. This increase in the global elderly population has made government and international organizations focus on policy change that would create better opportunities for them.

The overall well-being and happiness of the elderly population is a major concern as they progress in age because old age is marked with numerous challenges, which are negative life events and adversities in their path to happiness. These adversities could be physical, psychological, emotional, social, mental and others. These adversities can be managed when the elderly carry the ability to bounce back after any negative consequences (Southwick, S & Watson, 2015). Studies suggest that the relationship of Subjective Well-Being with Resilience is influenced by personality traits, especially the Big Five personality factor (Oshio, 2018; Zhang and Wang, 2014; Jimenez and Gonzalaz, 2005; Saeed and Hirano, 2018) [15].

The review of literature reveals that research has been conducted to know the pattern of subjective well-being and resilience in old age, but the review of literature does not reveal studies to know the mediating role of Big Five Personality traits in the elderly population. Hence, the present study was planned to explore the relationship among these important variables of psychology with reference to elderly people.

## Objectives

1. To examine the relationship of Resilience with Subjective Well-Being among the elderly.
2. To examine the relationship of Resilience to Subjective Well-Being among the elderly as mediated by the Big Five personality traits.

## Hypotheses

1. **H0:** There will be no significant difference of Resilience among male and female elderly.
2. **H0:** There will be no significant difference of Subjective Well-Being among male and female elderly.
3. **H0:** There will be no significant relationship of Resilience with Subjective Well-Being among male and female elderly.
4. **H0:** The relationship of Resilience with Subjective Well-Being is not mediated by Neuroticism among male and female elderly.
5. **H0:** The relationship of Resilience with Subjective Well-Being is not mediated by Extraversion among male and female elderly.
6. **H0:** The relationship of Resilience with Subjective Well-Being is not mediated by Openness to Experience among male and female elderly.
7. **H0:** The relationship of Resilience with Subjective Well-Being is not mediated by Conscientiousness among male and female elderly.
8. **H0:** The relationship of Resilience with Subjective Well-Being is not mediated by Agreeableness among male and female elderly.

## Method

**Sample:** The sample was selected purposively, matched in age, gender, and educational level by selecting two urban agglomerations from Assam, i.e., Jorhat and Dibrugarh. 60 respondents from each urban area were selected which was divided equally into 30 males and 30 females. The sampling technique used here is snowball technique. Therefore, total sample size was 2 urban areas  $\times$  60 = 120 (Male =60; Female = 60). Therefore, data was collected from the two district of Jorhat and Dibrugarh with a total sample of 120 participants, consisting of 60 males and 60 females.

## Inclusion Criteria

- a. Persons in the age range of 60-75 years.
- b. Persons born and brought up in the state of Assam.
- c. Both genders.
- d. Education up to the Higher Secondary level at least.
- e. Those who can understand, comprehend and consent.

## Exclusion Criteria

- a. No reported major physical or mental illness.
- b. No physical disability.
- c. Those who were not willing to participate.

## Tools

**Semi-Structured Questionnaire:** A semi-structured questionnaire was developed by both authors for collecting socio demographic details such as age, gender, education, marital status, religion, community, occupation, family type, etc.

**Resilience Scale:** The Connor- Davidson Resilience Scale (2003) <sup>[6]</sup> comprises of 25 items, each rated on a 5-point scale (personal competence, tolerance of negative effect, positive acceptance of change, control and spiritual influences). Scores are rated from (0-4), with higher scores reflecting greater resilience. It is based on Kobasa's (1979) construct of hardiness. Test-retest reliability demonstrated a high level of agreement in the pre-test and post-test data (0.87). The Cronbach alpha for the full scale was 0.89, indicating internal consistency of the instrument. The scale was translated into Assamese version.

**Subjective Well-Being Scale:** It was developed by Sonja Lyubomirsky and Heidi Leppern (1999) and is the first assessment that offers an overall subjective account of one's happiness. The SHS considers the respondents unique perspective about their own happiness in the format of a brief 4 item questionnaire. The scale was translated into Assamese version. The SHS showed an adequate internal consistency ( $\alpha = .77$ ). Cronbach's alpha for men and women and the item-total correlation ranged from .43 to .70. The scores of the SHS were correlated with scores of the Perceived Stress Scale (M =1.46, SD = .51) in the total sample (N = 849).

**Big Five Personality Trait scale:** The NEO-FFI was developed by Paul Costa and Robert McCrea (1989) and consists of 60 items that assess the five factors of the big five personality theory, that is, Neuroticism, Openness, Extraversion, Agreeableness, Conscientiousness. Responses are on a five-point Likert Scale, varying from strongly disagree to strongly agree. The reliability has been established by evaluating the Cronbach's alpha reliability coefficient. The values of the coefficient are 0.90, 0.78, 0.76, 0.86 and 0.90 for the dimensions of neuroticism, extraversion, openness, agreeableness and conscientiousness, respectively. Convergent, construct and criterion validity have been demonstrated in many studies using the NEO-FFI, with convergent validity correlations ranging from .56 to .62, and no correlation exceeding .20 for divergent validity (Costa and McCrae, 1992). The scale was translated into Assamese version for the participants.

**Statistics:** Descriptive statistics, namely Mean and Standard Deviation, were calculated. Furthermore, correlation and mediation analysis were computed to test the null hypotheses formed for this investigation.

**Procedure:** Data was collected from participants of two districts namely, Jorhat and Dibrugarh based on the pre-determined criteria. The participants were explained about the nature of the study and assured of the confidentiality of data and the results. The three questionnaires were administered individually to the participants. They were first administered the semi-structured questionnaire to get information on their demographic details. After that they were administered the test one by one to gain in-depth

information of the participants in terms of the constructs measured using the Connor Davidson Resilience scale, Subjective Well-Being scale and the NEO-FFI. Adequate breaks were given in between the administrations of the scales. Each of the tools used was scored and the data gathered was entered into the data sheet for further analyses.

**Results**

From table 1, it is clear that in the study the total sample of N=120 (n1= 60 and n2=60) is divided into three age groups of range 60 - below 65, 65 - below 70 and 70 - below 75. In the age range of 60 - below 65, there are 15 male and 28 female. In the age range of 65 - below 70, there are 32 male and 17 female. In the age range of 70 - below 75, there are 13 male and 15 female.

**Table 1:** Age distribution of the sample based on gender

Age	Male	Female
60-65	15	28
65-70	32	17
70-75	13	15

**Table 2:** Mean and standard deviation of the sample on the variables of the sample based on gender.

Variables	Male		Female	
	Mean	SD	Mean	SD
Resilience	25.23	4.74	27.86	5.11
Subjective Well Being	18.52	4.31	19.63	4.73
Neuroticism	36.42	6.47	32.57	5.95
Extraversion	33.29	4.82	34.55	5.04
Openness to Experience	38.65	7.35	37.63	6.93
Conscientiousness	29.75	3.21	28.41	3.43
Agreeableness	28.63	3.11	27.48	3.02

Table 2 shows the mean and standard deviation of the variables in terms of gender. It can be observed that the mean value of Resilience is higher for female (27.86) and for Subjective Well-Being, the mean value is higher for female (19.63) as well. For Neuroticism, the mean value is higher for male (36.42) and for Extraversion, the mean value is higher for female (34.55). Similarly for Openness to Experience, the mean value is higher for male (38.65) and for Conscientiousness the mean value is higher for male

(29.75). The value of mean is higher for male (28.63) for Agreeableness.

However, on testing the distribution of scores for normality, the results of Kolmogorov-Smirnov test showed that the assumptions of normality were not fulfilled. As such, whether the differences between the groups were significant was found in terms of ranks by applying the Mann Whitney U test. The results are given in Table 3 below.

**Table 3:** Mann Whitney U test for Resilience based on gender

Variable	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Resilience	Male	60	72.91	637	2512	.276	.059
	Female	60	76.04	852			

Mann-Whitney U test to analyze Resilience found that the Mean Rank for female (76.04) was higher than that for male (72.91). However, this difference is non-significant, leading to acceptance of the hypothesis stating that there will be no difference in Resilience based on gender. The results

indicate that there is no difference in the way elderly exhibit the ability to stand up to adversity and to bounce back or return to a state of equilibrium following individual adverse circumstances.

**Table 4:** Mann Whitney U test for Subjective well-being based on gender

Variable	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Subjective Well-Being	Female	60	56.55	263	841	.153	.032**
	Male	60	53.43	214			

\*\*Significant at .05 level

The Mean Rank of Subjective Well-Being for female (56.55) was higher than that for male (53.43). This difference is significant at 0.05 level, leading to non-acceptance of the hypothesis stating that there will be no difference in Subjective Well-Being based on gender. The results indicate that there is a difference in the way elderly exhibit their general well-being.

After testing the data for normality using the Kolmogorov-Smirnov test, the data did not conform to the criterion of the normal distribution. As a result, Spearman correlation is used to establish the relationship of Resilience with Subjective well-being.

**Table 6:** Spearman rank correlation between Resilience and subjective well-being based on gender

	Gender	Subjective Well Being	P
Resilience	Male	.332**	0.011
	Female	.428**	

\*\* Correlation is significant at the 0.05 level (2-tailed)

Table 6 reveals that there is a positive and significant correlation at 0.05 level between Resilience and Subjective Well-Being among male (.332) and female (.428). So, hypothesis 3 stating that there will be no significant correlation between Resilience and Subjective Well-Being among male and female elderly is not accepted. It is indicated that the correlation is positive, which means that as one variable (Resilience) increases, the other variable (Subjective Well-Being) also tends to increase. Further, the difference in correlation for Resilience with Subjective Well-Being based on gender is significant as  $p=0.011 > 0.05$

indicating that the female sample has a significantly higher positive correlation than the male sample.

Mediation analysis is used to identify and explain the mechanism or process that underlies an observed relationship between an independent variable and a dependent variable via the inclusion of a third hypothetical variable, known as a mediator variable. In the research study, the relationship of Resilience with Subjective Well-Being is perhaps mediated by the Big Five personality traits. So, mediation analysis is used to explore if the Big Five factors of personality mediate the relationship of the above-mentioned variables with Subjective Well-Being in Elderly.

**Table 7:** Mediation analysis to assess how the relationship of Resilience with Subjective Well-Being is mediated by the Big Five Personality factors.

Mediation variable	Estimate (Total effect)	p-value	Remark
Neuroticism	-0.002531	0.086	Accepted
Extraversion	-0.001521	0.035**	Not accepted
Openness for experience	-0.001362	0.021**	Not accepted
Conscientiousness	-0.002124	0.072	Accepted
Agreeableness	-0.002315	0.076	Accepted

From table 7, it is seen that the value of mediation estimate for Neuroticism is .086 which leads to acceptance of hypothesis 4 which states that the relationship of Resilience with Subjective Well-Being is not mediated by Neuroticism among the male and female elderly. The value of mediation estimate of Extraversion is .035 which leads to non-acceptance of hypothesis 5 which states that the relationship of Resilience with Subjective Well-Being is not mediated by Extraversion among male and female elderly. Similarly, for Openness to Experience the value of mediation estimate is .021 which leads to non-acceptance of hypothesis 6 which states that the relationship of Resilience with Subjective Well-Being is not mediated by Openness to Experience among male and female elderly. But the table indicates that the value of mediation estimate of Conscientiousness is .072 which leads to acceptance of hypothesis 7 which states that the relationship of Resilience with Subjective Well-Being is not mediated by Conscientiousness. Similarly, the mediation estimate for Agreeableness is .076 which leads to acceptance of hypothesis 8 which states that the relationship of Resilience with Subjective Well-Being is not mediated by Agreeableness.

**Discussions**

The aim of the present study is to understand the relationship among the variables, Resilience and Subjective Well-Being, and how the relationship among the variables could be mediated by the Big Five Personality factors. When mean ranks are considered it is observed that females scored higher on Resilience and Subjective Well-Being. For Resilience, there is no significant difference among the elderly based on gender. The results are supported by research conducted by Campbill – sills, Cohen and Stein (2006) on the relationship of Resilience with personality factors, coping and psychiatric symptoms in the young adults. It was found that there is no significant difference

among the males and females in their Resilience score. In fact, females have higher Resilience score than males and this difference in scores is more prominent in the older sample.

Further the results indicated a significant difference of Subjective Well-Being based on gender, where females exhibited higher Subjective Well-Being than males. The results are supported by research conducted by Kumari and Kumar (2023) to study the effect of age and gender on subjective well-being on 105 elderly people of middle-class families in urban areas of Darbhanga. Findings reveal that life satisfaction was found significantly higher in elderly female respondents than male respondents.

The results reveal that there is a positive and significant correlation of Resilience with Subjective Well-Being among male and female elderly. This result is similar to that obtained by Jivraj, Nazroo and Chandola (2014) who examined age related changes in Subjective Well-Being in later life using data from 5 waves of respondents aged 50 years and older from the English longitudinal study of aging. Results revealed that older cohorts show better or equivalent subjective well-being than younger cohorts. Another similar study is by Beutalet. al. (2009) who assessed the relationship between satisfaction with life, mental disorder and aging and individual and social resources under stress. It was conducted on 2540 German women of the age 18-70 years and the results revealed a strong association between satisfaction with life and resilience, having a partner, absence of anxiety and depression, positive self-esteem, religious affiliation and being younger.

Resilience and Subjective Well-Being have a positive correlation and it could be attributed to the reason that elderly have had long experience with life and have learned to handle adverse circumstances and events. Perhaps these experiences have made them stronger and equally resilient,

which in turn contributed to better well-being among them. Resilience has also impacted their Well-being by acting as a buffer for any untoward events and protecting them from mental health conditions which in turn helps the elderly to cope better in life. It appears that the females of Assam have perhaps learned more from their life experiences, as they are more resilient than the males, as per the results of this study, since the difference between males and females was significant with females exhibiting a stronger relationship between the two variables indicating that higher resilience in females leads to higher well-being as well. Additionally, in a patriarchal society such as that of Assam, the womenfolk experience a lot of discrimination and negative events as compared to the men. This perhaps has made them more resilient and harder thereby leading to higher well-being.

Furthermore, the relationship of Resilience with Subjective Well-Being is mediated by Extraversion and Openness to Experience. This result is supported by Kahlbaugh and Huffman (2016) who examined the personality traits of older adults and their emotional experiences associated with engaging in specific leisure activities on a sample of 17 males and 32 females in age range of 65-97 years. It was seen that Extraversion, Agreeableness, Conscientiousness, Openness to experience were related to positive affect, while Neuroticism was related to negative affect. Openness to experience and Agreeableness were related to positive emotions experienced in social and cognitive domains. Another study investigated the relationship between Resilience and the Big Five Personality traits on a sample of 15,609 individuals. It indicated a stronger negative relationship with Neuroticism and stronger positive relationship with Openness to Experience and Agreeableness (Oshio, Tku, Hirno & Saeed, 2018) <sup>[15]</sup>.

Therefore, it is social interaction and a sense of adventure in trying out new things as well as accepting the unexpected which appears to have a role in the well-being of the elderly, in the sample from Assam, studied under the present investigation.

### Limitations

The study is a preliminary attempt to understand the state of Resilience, Subjective Well-Being and Big Five Personality traits of the elderly in Assam. Like any other research, it suffers from certain drawbacks. The results cannot be generalized as it was conducted on a limited sample and covered only two districts in Assam. Many other factors like experience, way of life, belief system have a considerable amount of impact on one's understanding of the world and therefore cannot be ignored. But the study does provide scope for further research into the areas concerned with the elderly.

### Conclusion

Research in the field of elderly in terms of Resilience and Subjective Well-Being and its relation to healthy and successful aging is an ever-growing field. The present study was carried out in special focus with the elderly residing in Assam. Results in the present research have found that there are significant differences in Mean Ranks on Subjective Well-Being, Extraversion and Openness to Experience of the elderly in terms of gender. Furthermore, there is a positive relationship of Resilience with Subjective Well-Being and this relationship is mediated by Extraversion and Openness to Experience.

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