



## NATURE CONNECTEDNESS AND RESILIENCE- A CORRELATIONAL STUDY

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**The objective of this research is to study the correlation between nature connectedness and resilience. The sample consisted of 600 adolescents (14-19 years) taken randomly from twenty schools of Saharanpur, UP, India. Connectedness to Nature Scale (CNS) developed by Mayer and Frantz (2004) and Resilience Self-Assessment Questionnaire developed by Mark De Volder (2013) were used to collect the data. Significant positive correlation between nature connectedness and resilience was observed.**

### **KEYWORDS:**

**Connectedness with Nature, Resilience, environmental health, human health.**

### **INTRODUCTION**

For sustainable development connection of human being with nature is important. Modern technological advances have led to significant changes in the life style of an individual and patterns of social conduct resulting in excessive use and exploitation of resources. Because of urbanization and changes in lifestyle patterns individual is slipping away from the natural environment. Psychosomatic disorders are also on rise in modern time. Therefore, it is necessary to address this global problem by studying the extent to which nature connectedness and resilience are related. Connectedness with nature (CN) is seen as a personal disposition relevant for environmental as well as human health. Nature connectedness is the extent that an individual includes nature as part of their identity (Schultz, 2002). It includes an understanding of nature. Schultz (2002) describes three components of nature connectedness construct: first is cognitive component that is care of nature connectedness and refers to how integrated one feels with nature, second is affective component that refers to an individual's sense of care for nature, and third is behavioural component that refers to an individual's commitment to protect the natural environment. These three components make up nature connectedness and are required for a healthy relationship with nature.



Resilience is defined in positive psychology as a positive way of coping with adversity or distress. It is also defined as an ability to recuperate from stress, conflict, change or increase in responsibility. Individuals demonstrate resilience when they can face difficult experiences and rise above them with ease. Resilience is not a rare ability; in reality, it is found in the average individual and it can be learned and developed by virtually anyone. Resilience is considered a process, rather than a trait to be had (Rutter, 2008).

Research studies have been done on the nature connectedness with variables like satisfaction, well-being, physical and psychological health. Howell., Dopko., Passmore., & Buro, (2011) in their research found positive relationship between connectivity with nature and well-being i.e. the construct of trait nature connectedness is associated with well-being. The literature demonstrates the positive relationship between nature exposures, feeling connected to nature and subjective well-being but only few researches have been done to see relationship of nature connectedness with resilience in India, which plays significant role in happiness and positive mental health. Therefore, the following objective is framed in this research.

**OBJECTIVE:** To study the correlation between nature connectedness and resilience among adolescents.

**HYPOTHESIS:** There is positive relationship between nature connectedness and resilience of adolescents.

## METHODOLOGY

**SAMPLE:** The sample of the study consisted of 600 adolescents. The subjects were taken randomly from 20 different schools (10 from rural areas and 10 from urban areas) of Saharanpur, U.P, India. The respondents belonged to the age group of 14 to 19 years and 10<sup>th</sup> to 12<sup>th</sup> classes where 246 were males and 354 were females.

**DESIGN:** Correlation design was used for the study. Where the predictor variable is nature connectedness and the criterion variable is resilience.

**TESTS:** Standardized tests were administered for the study. Connectedness to Nature Scale (CNS) by Mayer and Frantz, (2004) and Resilience Self-Assessment Questionnaire developed by Mark De Volder (2013) were used. CNS measures the extent to which participants generally feel a part of the natural world and emotionally connected to it.



This measure consists of 14 items rated on a 5-point Likert Scale, with rating ranging from 1 (strongly disagree) to 5 (strongly agree). The internal consistency of the CNS was examined using Cronbach's alpha and was found to be .84. Test-retest reliability was  $r=.78, p<.01$ . The validity of the CNS was examined by looking at correlations between measures. The correlation between the CNS and the NEP was high,  $r=.52, p<.01$ . The CNS was also correlated with all three lifestyle scales (*lifestyle A*:  $r=.55, p<.01$ ; *lifestyle B*:  $r=.37, p<.05$ ; and *lifestyle C*:  $r=.43, p<.01$ ). In addition, the correlations between the CNS and Lifestyle indices remained significant when controlling for the NEP (*lifestyle A*:  $r=.46, p<.01$ ; *lifestyle B*:  $r=.30, p<.05$ ; and *lifestyle C*:  $r=.36, p<.05$ ).

Resilience Self Assessment Questionnaire helps to identify strengths, as well as making awareness in areas for improvement. This scale consists of 25 statement rating ranging from 0 (statement is completely false) to 4 (statement is definitely true) and all the self assessment statements were phrased positively. Individual answers of 3 or 4 indicated a high degree of resilience in that area. Number 1, 2 & 3 indicated lower degree of resilience in respective areas.

**PROCEDURE:** The data was collected through standardized questionnaires. After distribution of both Questionnaire instructions were given to the respondents as per the manual of respective tests. Scoring of responses was done according to the manual. Correlation coefficient of Nature Connectedness and Resilience was computed to see the direction and strength of their relation. Simple regression analysis was computed to reveal predictive role of nature connectedness as significant to predict resilience.

## RESULT AND DISCUSSION

From the Result Table 1 it is clear that correlation coefficient (r) of nature connectedness with resilience ( $r=0.75$ ) is endorsed as significantly positive in direction and strength among adolescents of both the areas (rural and urban). Positive and significant correlation coefficient indicates that if nature connectedness among adolescents increases, their resilience will also increase or vice versa. In other words increased integration with nature, care for nature and commitment to protect the natural environment among adolescents will increase adolescents' adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress- such as family and relationship problems, serious health problems or workplace or financial stressors or vice versa.

Frumkin, 2001; Groenewegen et al., 2006; Abraham et al., 2007; Laforteza et al., 2009, also highlighted positive effect of natural environments on human health and well-being.



Mayer et al., (2009) found in their experimental studies significant relation of nature connectedness to positive affect and the ability to cope with life problems.

**Table 4.1: Correlation Coefficient and Regression Analysis for Resilience from Nature Connectedness**

Predictor	Model Summary				Coefficients				
	r	r <sup>2</sup>	F	P	B	SE	B	T	P
Nature connectedness	0.75	0.56	762.56	0.000					
(Constant)					7.741	2.514		3.079	0.00
Nature connectedness					1.249	0.045	0.749	27.61	0.00

Regression analyses (Result table 1) revealed predictive role of nature connectedness as significant to predict resilience ( $r = 0.749$ ,  $r^2 = 0.560$ ,  $F = 762.556$ ,  $p = .000$ ) for adolescents. More precisely the result revealed that nature connectedness contributing 56 % of the variance in resilience of considered sample with 74.9 correlation strength. The significant unstandardized beta coefficient further indicates that resilience score is likely to be increased by 1.24 as a result of a unit increment in score on nature connectedness ( $b= 1.249$ ,  $t=27.614$ ,  $p = .000$ ).

**CONCLUSION:** There is positive significant correlation between connectedness with nature and resilience was found among adolescents. Regression analysis revealed predictive role of nature connectedness as significant to predict resilience for adolescents.

**IMPLICATIONS AND SUGGESTIONS:** The study has been conducted only on adolescents of rural and urban areas of Saharanpur. Before, generalization of the result study should be conducted in other areas and on other population as well. The study indicated significant positive correlation of nature connectedness with resilience. Therefore, nature connectedness should be promoted in educational institutions. Nature visits, experiential nature education may be helpful in it.



Enhancement in nature connectedness can be utilized to improve health, resilience and healing. Green care, gardening, nature walk, nature closeness can be used to contribute well being of different groups in the society.

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