

Relationship between Resilience and Life Satisfaction among Adolescents: The Mediating Role of Optimism

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The well-being of adolescents and the psychological processes underlying its enhancement have received much focus after the emergence of Positive Psychology. Research evidences suggest that optimism and resilience play a significant role in improving well-being. Studies have articulated the association between resilience and life satisfaction as well as optimism and life satisfaction. But a few studies have investigated the causal pathways produced by these associations. Understanding the triadic reciprocity among these three psychological constructs is important in the evaluation of strategies for promoting positive psychological adjustment in children and adolescents. With reference to this, the objectives of the study were to explore the relationship between resilience and life satisfaction among adolescents and to investigate the mediating role of optimism in this relationship. Utilizing a correlational research design, 421 adolescents (223 boys and 198 girls) were asked to fill up the Brief Resilience Scale, Life Orientation Test, and Life Satisfaction Scale. Pearson product moment correlation coefficient, hierarchical linear regression analysis, and Sobel Z test were performed to explore the mediating role of optimism. Findings revealed that optimism played a partial mediating role in the association between resilience and life satisfaction.

Keywords: Adolescents, Life satisfaction, Optimism, Resilience

Qualitatively different from childhood and adulthood, adolescence is considered as a unique developmental period (Holmbeck, 2002) characterized by remarkable physical, emotional, cognitive, and social changes. Despite the changes, majority of adolescents cope effectively with the demands (Cicchetti & Rogosch, 2002) and pass through the period without hurdles (DiClemente, Santelli, & Crosby, 2009). Adolescence is viewed as a period for 'resources to be developed' (Roth & Brooks-Gunn, 2003), a period during which flexibility, adaptive developmental regulations and flourishing converge (Lerner, von Eye, Lerner, Lewin-Bizan, & Bowers, 2010). Adolescence is considered as a healthiest period of the entire life span and the promotion of well-being during this stage is the major focus of research worldwide.

Life satisfaction (LS) is considered as a 'cognitive' conceptualization of subjective well-being, a process in which individuals plan to achieve their goals (Aysan & Bozkurt, 2004).

High LS is considered as a protective factor in a healthy child and in adolescent development (Suldo & Huebner, 2004). Therefore, enhancing one's life satisfaction is the need of the hour. According to Lyubomirsky (2007), there are 12 activities to boost one's happiness, out of which cultivating optimism is one.

Optimism refers to the generalized favourable expectancies people hold for their future. Optimism contributes to problem-focused coping, humour, planning, accepting the veracity of the situation (Boniwell, 2012). Higher the levels of optimism, better will be the subjective well-being in times of adversity or difficulty (Carver, Scheier, & Segerstrom, 2010). Optimism is considered as the most influential factor in minimizing the effects of stressors (Tusaie-Mumford, 2001) and works along with resilience in stressful situations (Carver et al., 2010) among adolescents. According to Snyder and Lopez (2002), optimists show more resilience while

confronting a challenge though the progress is difficult and slow.

The American Psychological Association (2014) defines resilience as “the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress.” According to Masten (2014), “resilience encompasses the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development”. Resilience acts as a buffer against stress (Ryff & Singer, 2003; Seaton, Seaton, Yarwood & Ryan, 2012) and resilient individuals exhibit the overall capacity to recover, remain healthy, and flourish in face of adversity (Hardy, Concato, & Gill, 2004). In the synergy model of resilience, Hariharan and Rana (2017) explain that resilience is a function of adversity, operating factors, and resistance across a time continuum that leads one to achieve and flourish in life.

Life satisfaction is predicted directly by optimism, indirectly through self-esteem and harmonious relationship (Leung, Moneta, & McBride, 2005). A study indicated a positive correlation between students’ optimism and life satisfaction (Ünüvar, Avşaroğlu, & Uslu, 2012). The research evidence strongly suggests that dispositional optimism has advantages over pessimism for coping with stress and promoting subjective and physical well-being (Carver, Scheier, Miller, & Fulford, 2009). People who are optimistic and hopeful enjoy greater life satisfaction (Rand & Chevans, 2009; Seligman, 2011). While life satisfaction was influenced by coping strategies and optimism; age and gender played significant role in shaping these psychological aspects of the individual (Cabras & Mondo, 2017). Optimism correlates positively with life satisfaction, happiness, and well-being and negatively with depression and anxiety. Different studies have revealed a strong positive relationship between LS and optimism (Extremera, Duran, & Rey, 2007; Bailey, Eng, Frisch, & Snyder, 2007; Wong & Lim 2009; Ho, Cheung, & Cheung, 2010). Optimism is theorized as an indirect causal dimension, influencing health through different variables (Freres & Gillham 2006).

It was suggested that people with disabilities who are resilient may also experience growth indicated by reduced anxiety and depression, enhanced well-being, and an enhancement of daily life satisfaction (Dunn, Uswatte, & Elliot, 2009). Studies have shown a positive relationship between life satisfaction and resilience (Kjeldstadli et al., 2006; Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Rani & Midha, 2014). Resilience was seen to be the best predictor for life satisfaction among students (Abolghasemi & Varaniyab, 2010). A study conducted by Shi, Wang, Bian, and Wang (2015) found that resilience mediated the relationship between perceived stress and life satisfaction. The results of a study conducted on optimism in relation to well-being, resilience, and perceived stress revealed that well-being was predicted by resilience (Panchal, Mukherjee, & Kumar, 2016).

An interactive relationship between optimism and resilience was noted in different studies (Carver, et al., 2010; Tusaie-Mumford, 2001; Bonanno, 2005). The study by Sabouripour and Roslan (2015) revealed a positive association between resilience and optimism. The study also indicated that resilience was predicted by optimism among students. Studies also found the mediating role optimism played in the relationship between resilience and psychological well-being (Souri & Hasanirad, 2011; Hossein, Elaheh, & Mohsen, 2014).

Rationale

Although extensive research on resilience and optimism have been done (Rutter, 2006; Carver & Connor-Smith, 2010), but their possible relationship with life satisfaction have not received much focus, especially among adolescent population in India. Previous studies have articulated the association between resilience and life satisfaction as well as optimism and life satisfaction. But a few studies have investigated the causal pathways produced by these associations. Understanding the triadic reciprocity among these three psychological constructs is important in the evaluation of strategies for promoting positive psychological adjustment in children and adolescents. Taking all the above points into account, the objectives of this study were to examine the relationship

between resilience and life satisfaction among adolescents and to investigate the mediating role of optimism in this relationship. It was hypothesized that people who are resilient would have positive expectations about their future. Hence they would have greater positive evaluation of life. The following hypotheses were formulated based on the objectives of this study:

Hypothesis1: Resilience, optimism, and life satisfaction would be related to each other

Hypothesis2: Optimism would mediate the relationship between resilience and life satisfaction

Method

Participants and Procedure

This cross-sectional correlation research study included 421 adolescents (223 boys and 198 girls) with age range from 12 to 19 years ($M=16.05$, $SD=2.64$). Participation was voluntary and anonymous. The convenient sampling method was used to include the participants in the study. The choice of the institutions was based on proximity and easy accessibility to the researchers. At first, permission to administer the scales to the participants was obtained from the respective academic institutions. These institutions were informed of the purpose of the study. Willing participants signed a consent form and the scales were administered to the students in groups in the classrooms.

Measures

The Brief Resilience Scale (BRS) (Smith, et al., 2008) assesses the ability to bounce back. It contains 6 items responded to on a 5-point scale. Cronbach's alpha ranges from 0.80–0.91. In this study the Cronbach's alpha of the scale was 0.69.

Life orientation test–Revised (LOT-R) (Scheier, Carver, & Bridges, 1994) assesses the individual differences in generalized optimism versus pessimism. It contains 10 items responded to on a 5-point scale. Cronbach's alpha ranges from 0.70–0.80. In this study the Cronbach's alpha of the scale was 0.63.

Satisfaction with life Scale-(Diener, Emmons, Larsen, & Griffin, 1985) measures the global cognitive judgments of one's life. It contains 5 items which are responded on a 7-point scale. Its internal consistency is above 0.80. In this study the Cronbach's alpha of the scale was 0.76.

Results

The obtained quantitative data were analysed in terms of descriptive statistics, Pearson's product-moment correlation coefficient (Pearson's r), hierarchical linear regression analysis, and Sobel Z test using IBM SPSS Statistics 20. In the analysis, the predictors were resilience, optimism, and demographic variables (age, gender) and the criterion was life satisfaction. Hierarchical regression analysis and Sobel Z test were done to explore the significant mediated path from resilience to life satisfaction via optimism and to identify the best predictor of the criterion.

Relationship among study variables

The values of Pearson's r along with descriptive statistics (M and SD) are presented in table 1. Results revealed a significant correlation between the psychological variables. It was found from table 1 that resilience related positively to optimism ($r=.26$) and to life satisfaction ($r=.22$). Optimism was also found to be positively ($r=.27$) related to life satisfaction. Age showed a significant correlation with life satisfaction ($r=-.16$, $p<0.01$).

Table1: Descriptive statistics and inter-correlations of resilience, optimism, and life satisfaction

Variables	M	SD	1	2	3	4	5
1. Resilience	19.20	3.552	-	.26**	.22**	-.06	-.10*
2. Optimism	34.72	4.469		-	.27**	-.02	-.12*
3. Life Satisfaction	22.79	5.809			-	-.16**	.10*
4. Age						-	.14**
5. Gender							-

Note: Male= 1, Female= 2, * = $p<0.05$ **= $p<0.01$

The mediating role of optimism in the relationship between resilience and life satisfaction

Following the mediation procedure proposed by Baron and Kenny (1986), several regression analyses were conducted, and significance of the coefficients was examined at each step. At first, it was verified that resilience and life satisfaction were positively related ($\beta = .22$; $t = 4.57$; $p < .001$). The results are shown in table 2.

Table 2: Regression results of the relationship between resilience and life satisfaction

Variable	B	SEB	B	t	P
Resilience	.356	.078	.22	4.57	.000

Dependent variable: life satisfaction, $R^2 = .047$, adjusted $R^2 = .045$ ($p < .001$).

In the second step it was verified that resilience and optimism were positively related ($\beta = .26$; $t = 5.44$; $p < .001$). The results are shown in table 3.

In the last step, hierarchical regression analysis was done. The summary of the results is reported in table 4. After adjustment for age

Table 3: Regression results of the relationship between resilience and optimism

Variable	B	SEB	B	t	P
Resilience	.323	.059	.26	5.44	.000

Dependent variable: optimism, $R^2 = .066$, adjusted $R^2 = .064$ ($p < .001$).

and gender in step 1, resilience and optimism as predictor variables were entered in step 2 and step 3 of the model respectively. The results revealed a positive association of resilience with life satisfaction, explaining 5% of the variance ($\beta = 0.22$; $t = 4.76$; $p < 0.001$). Optimism was also positively associated with life satisfaction, adding 5% of the variance ($\beta = 0.24$; $t = 5.00$; $p < 0.001$). In addition, optimism played a partial mediating role in the relationship between resilience and life satisfaction, as absolute value of its standardized regression coefficient (β) reduced from 0.22 to 0.16 though it was significant (Sobel test, $z = 3.80$, $p < 0.0001$). Tolerance (range: 0.93–0.98) and variance inflation factor (range: 1.01–1.08) did not indicate a multicollinearity problem. In the final adjusted model all the predictor variables were statistically significant,

Table 4: Summary table of hierarchical regression analysis for demographic variables (age and gender), resilience, and optimism predicting life satisfaction (N=421)

Model	B	SE	B	T	Adjusted R ²	R ²	ΔR ²
Model 1 (C = 26.84, F = 8.71***)					.04	.04	
Age	-.38	.11	-.18***	-3.61***			
Gender	1.44	.56	.12*	2.56*			
Model 2 (C = 19.10, F = 13.66***)					.08	.09	.05***
Age	-.36	.10	-.17**	3.50***			
Gender	1.70	.55	.15**	3.08**			
Resilience	.37	.08	.22***	4.76***			
Model 3 (C = 9.6, F = 17.56***)					.14	.14	.05***
Age	-.37	.10	-.17***	3.62***			
Gender	1.97	.54	.17***	3.66***			
Resilience	.27	.08	.16**	3.49**			
Optimism	.32	.06	.24***	5.00***			

Dependent variable: life satisfaction

C = Constant, B = Unstandardized beta coefficient, SE = Standard error, β = Standardized beta coefficient, $\Delta R^2 = R^2$ change ** $p < 0.01$, *** $p < 0.001$ (two-tailed).

with optimism recording a higher Beta value ($\beta = .24$, $p < .001$) than the demographic variable ($\beta = .17$, $p < .001$) and resilience ($\beta = .16$, $p < .01$). This study showed that age and gender were significantly associated with the levels of life satisfaction among adolescents. After adjustment for these two demographic factors, resilience accounted for 5% of the variance in life satisfaction. Optimism played a mediating role in the relationship between resilience and life satisfaction.

Discussion

The aim of the research was to investigate the mediating role of optimism in association with resilience and life satisfaction. In order to see the mediating effect, first correlation among different variables were computed. The findings showed the significant relationship among these variables. The negative association of age with life satisfaction among the psychological variables could be attributed to the fact that in late adolescence considerable changes in identity, attitude, and interest occur and adolescents enter the world of work or further education. This is supported by different studies that showed a weak, negative association with life satisfaction (Moksnes & Espnes, 2013); pre-adolescents (12-15 years) scored significantly higher than adolescents (16-18 years) on well-being (Rathi & Rastogi, 2007). The study showed that gender had a significant and positive relationship with life satisfaction and negative relationship with resilience and optimism. This indicates that girls were more satisfied with their lives whereas boys were more resilient and optimist. This might be the case that in Indian culture boys are asked to take more responsibility than girls. Higher attachments with parents and peers which influence life satisfaction (Ma & Huebner, 2008) are found to be more among girls than boys. This is in accordance with the study conducted by Shi et al. (2015) which shows that life satisfaction score of female students was significantly higher than that of male counterparts. The study by Tuzgöl-Dost (2007) also indicates the same finding.

The significant positive relationship between resilience and life satisfaction found in this study is also supported by the previous studies

(Kjeldstadli et al., 2006; Cohn et al., 2009). After adjustment for the demographic factors, resilience accounted for 5% of the variance in life satisfaction. Resilient people were more satisfied with their life. The reason may be that resilient people possess positive self-view, optimism, self-efficacy, sense of meaning, impulse control, and a sense of humour (Flynn, Ghazal, Legault, Vandermeulen, & Petrick, 2004). These resources help the resilient individuals to get more satisfaction with their life.

The results of the study showed that optimism is positively related to life satisfaction and resilience. This result corresponds with the view of Carver et al. (2010) that in times of adversity optimism is related to better subjective well-being. As hypothesized, results demonstrated that optimism partially mediated the relationship between resilience and life satisfaction. In other words, as resilience increases in this model, life satisfaction also increases, and optimism plays a mediating role in that 'increase'. Souriet et al., (2011) in their study on students' resilience and well-being revealed that a minor mediation role of optimism was noted in the relation between these two variables.

Some limitations of the present study should be acknowledged. Firstly, as the study used correlational design, definitive statements cannot be made about causality. Secondly, the study did not use qualitative measure and restricted to self-reported data.

Conclusion

In conclusion, the current study revealed that resilience affects life satisfaction both directly and indirectly via optimism. Adolescents who have higher level of resilience are more likely to be high in optimism and life satisfaction. The findings show that resilience and optimism play a key role in enhancing life satisfaction. Hence, providing psycho-educational programs toward promoting optimism, resilience may enhance the life satisfaction. The findings of the study may help in facilitating community-led action to increased well-being. Health-focused interventions may also be tailored specifically for the adolescents. Therefore, educational institutions and government may undertake programs to help students to be more resilient

and optimistic which in turn will enhance life satisfaction. However, more research needs to be done to explore the moderator effect of other psychological variables on the association between resilience and life satisfaction.

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