# Perceived Stress and Psychological Wellbeing: The Moderating Role of Proactive Coping

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The increasing stress among the Indian emerging adults and its debilitating effects on their health are major concerns of the present time. In today's world, stress is an omnipresent factor of life and individuals mainly in their early 20s are mostly affected by it. Many scholars have identified the college going age as the most stress prone time of life. The major sources of stress in early adulthood can be grossly classified as intrapersonal stress (38%), environmental stress (28%), interpersonal stress (19%), and academic stress (15%)(Ross, Niebling& Heckert, 1999). Moreover, financial problems, ambiguity about future plans, academic grade anxiety and relations with opposite sex have also been found as the risk factors for inducing stress.

Keywords: Stress, Well-being, Coping

The increasing stress among the Indian emerging adults are now seriously challenging their physical/mental health and deteriorating the overall wellbeing. A plethora of studies have already demonstrated the adverse effects of stress on human health/wellbeing. Particularly the experience of stress were reported to induce mental health problems in college students by increasing anxiety, depression and suicidal ideation (Eisenbarth, 2012; Otrar et al., 2002; Pengilly& Dowd, 2000; Wilburn& Smith, 2005). Moreover, stress and mental health issues were also found to be associated with many psychosocial concerns such as family conflicts, problems in sexuality, harassment or bullying, violence, suicidal thoughts, self-harm, and alcohol or drug abuse (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Patel, Flisher, Hetrick, &McGorry; 2007; Lager, Berlin, Heimerson, &Danielsson, 2012). Hitherto, it is clear that experience of stress posits a serious threat to the physical and psychosocial functioning of the human beings. Furthermore, the psychological wellbeing of the individuals also gets seriously compromised due to stress (Terry, Nielsen &Perchard, 1993; Chang 1998). However, there is still lack of studies that directly investigated the relationship between experience of stress and psychological wellbeing in Indian emerging

adult population.

Here psychological wellbeing requires further elaboration as it embodies the essence of adaptive psychological functioning and positive psychological resources. The concept of psychological wellbeing was propagated by Carol Ryff (1989) as a six dimensional construct. It includes one's positive attitude towards self (self-acceptance), openness to experiences and behavioral improvement over time (personal growth), meaningful goal orientation and value based living (purpose in life), positive relations with others, having control over situational affairs (environmental mastery) and the quality of being self-determining as well as independent (autonomy) (Ryff, 1989). Review of the earlier literature unfolds that most of the studies on "stress-health" relationship either focused on physical distress/symptoms or on various mental illnesses. However, very few attempts have been made so far to assess the effects of stress on positive human qualities and psychological wellbeing. The present study would be an attempt in the said direction.

The dynamics of stress and health relationship is grossly affected by the coping behaviors of the individuals (Connor-Smith &Compas, 2004). Coping reflects cognitive,

affective and behavioral reactions to control and tolerate stressful situations(Folkman and Lazarus, 1985). Coping strategies are very important and effective for maintaining health in stressful situations (Kraag, Zeegers, Kok, Hosman& Abu-Saad, 2006). It was found to induce positive affect and life satisfaction (Sheldon &Lyubomirsky, 2006) and increase various aspects of psychological well-being in adverse situations (e.g., Loukzadeh&Bafrooi, 2013; Portocarrero&Bernardes, 2013).

Schwarzer (2000) identified four different types of coping- reactive, anticipatory, preventive and proactive coping. Reactive coping refers to efforts that deal with the stressful situation which has already occurred whereas anticipatory coping reflects individual's readiness to deal with an imminent threat (Greenglass, 2002). Preventive coping aims to increase resistance against a critical situation that is likely to happen in distant future (Greenglass, 2002). Unlike the mentioned coping strategies proactive coping aims at developing psychological resources by promoting personal growth (Greenglass, 2002) and it prepares human beings for upcoming threats (Jean Sohl& Moyer, 2009). Proactive coping involves appropriate future planning and forward-looking strategy that leads to adequate goal management (Greenglass, Schwarzer, Jakubiec, Fiksenbaum&Taubert, 1999).A growing body of researches proved that proactive coping induces optimism, life satisfaction, and reduces depression (Uskul&Greenglass, 2005). Proactive coping is also associated with lesser burnout symptoms (Schwarzer& Knoll, 2003) and it effectively boosts up well-being in stressful situations (Miller Smedema, Catalano, & Ebener, 2010).

Hitherto, it is clear that stress and coping strategies are differentially related to human health/wellbeing. Stress diminishes health and wellbeing whereas coping strategies are individuals' resistance to stress in adverse situations. However, very few studies have explored the relationship of perceived stress with the indicators of psychological wellbeing. Literature also indicates that coping strategies may substantially alter the stress-health relationship.

Present study aims to explore the relationship between perceived stress and psychological wellbeing on Indian emerging adults. The overarching goal of the present study is to examine the moderating role of proactive coping in perceived stress-psychological wellbeing relationship.

Based on the earlier secondary evidences we assumed that the perceived stress would be negatively associated with the dimensions of psychological wellbeing. Moreover, the proactive coping strategies would be positively associated with psychological wellbeing and would significantly moderate perceived stress-psychological wellbeing relationship.

#### Method

### Sample

The present study was conducted on a sample of 359 (male=203, female=156) emerging adults belonging to 8 different Indian states (Uttar Pradesh, Bihar, Jharkhand, West Bengal, Uttrakhand, Odisha, Kerala &Hariyana). Their age ranged from 18 to 27 years (mean age 23.42 years & S.D 2.092 years), and all of them belonged to middle-classsocioeconomic status. It was an incidental sampling and participants having any history of the organic mental disorder, head injury and other neurological disorders were excluded from the study.

### Tools

Perceived Stress Scale (Cohen, Kamarck&Mermelstein, 1983): It is a 10-items self-report instrument designed to assess individual stress levels. All items are rated on a five point scale (1-5): Never to Very Often. It measures the degree of one's subject assessment of the life situations as stressful. People, who score high on this scale, have a greater perception of stress as compared to those who score low on it. The adequate internal consistency of the scale was reflected in the Cronbach"s alpha coefficient which was found to be .81.

Proactive Coping Inventory (Greenglass, Schwarzer, Jakubiec, Fiksenbaum&Taubert, 1999): Proactive coping inventory assesses individual's preparedness to cope with upcoming

challenge effectively. It consists of 7 subscales with 55 items which are to be rated on four point liker type scale. The subscales of Proactive Coping Inventory are proactive coping, reflective coping, preventive coping, avoidance coping, instrumental support seeking, emotional support seeking and strategic planning. Six out of the seven dimensions (except avoidance coping), focus on positive facets of coping such as taking initiative, envisioning success, planning for future eventualities, and accumulating resources. The subscales of the proactive coping inventory have high internal consistencies that range from .77 to .85cronbach"s alpha coefficient.

Psychological Well-Being Scale (Ryff, 1989): Psychological wellbeing scale is a 42 items and multidimensional instrument that assesse positive psychological functioning across six dimensions. The six dimensions are autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. The response format comprises seven ordered categories labelled from 'strongly agree' to 'strongly disagree'. The range of cronbach"s alpha coefficients of the dimensions was found to be from 0.83 to 0.88.

### **Procedure**

The participants were communicated either individually or in small groups comprising 3 to 4 persons and explained the purpose of the study. After getting their informed consent, the aforementioned questionnaireswere administered as per their standard instructions. All participants were requested to ensure that they have responded to each item of every questionnaire/scale.

# Results

To examine how and to what extent the perceived stress is associated with psychological

wellbeing dimensions, bivariate correlations were computed, and the results have been displayed in table 1.

Result (table 1) shows that perceived stress was significantly and negatively associated with all the dimensions of psychological wellbeing (except environmental mastery).

A regression analysis (table 2) revealed that perceived stress significantly predicted all the dimensions of psychological wellbeing (Except environmental mastery).

To examine the relationships between the dimensions of proactive coping and the dimensions of psychological wellbeing, bivariate correlation was computed and the findings have been presented in Table 3.

Results (table 3) revealed that various proactive coping strategies viz. proactive coping, reflective coping, strategic planning, preventive coping, instrumental coping, emotional support seeking correlated positively and significantly with most of the dimensions of psychological wellbeing. However, avoidance coping was found to be negatively associated with most of the dimensions of psychological wellbeing.

To compute the relative significance of the dimensions of proactive coping in predicting the dimensions of psychological wellbeing, a series of stepwise multiple regression analyses were conducted. The obtained results have been presented in table 4.

It is evident from the result Table4 that the dimensions of psychological wellbeing were predicted by various dimensions of proactive coping. The dimension proactive coping acted as the best predictor in predicting most of the dimensions of psychological wellbeing (except environmental mastery & positive relation with

Table.1. Correlation of perceived stress with the dimensions of psychological wellbeing

	Dimension of psychological wellbeing									
	Autonomy	Environmental mastery	Personal growth	Positive relation	Purpose in life	Self- acceptance	Psychological wellbeing Total			
Perceived stress	-0.195**	-0.084	-0.241**	-0.266**	-0.245**	-0.275**	-0.328**			

<sup>\*\*</sup> p< 0.01

Table - 2. Results of linear regression analysis using perceived stress as predictor variables and dimensions of psychological wellbeing as criterion variable

Predictors	R	R Square	R Square change	F Change	Sig. of F change	Beta	Т	Sig.		
Criterion Variable: Autonomy										
Perceived Stress	0.195	0.038	0.038	14.107	0.001	-0.195	-3.756	0.001		
	Criterion Variable: Environmental Mastery									
Perceived Stress	0.084	0.007	0.007	2.513	0.114	-0.084	-1.585	0.114		
		Crite	erion Variable:	Personal Gr	owth					
Perceived Stress	0.241	0.058	0.058	22.102	0.001	-0.241	-4.701	0.001		
		Crit	erion Variable:	Positive rela	ation					
Perceived Stress	0.266	0.071	0.071	27.107	0.001	-0.266	-5.206	0.001		
		Cri	terion Variable	: Purpose in	life					
Perceived Stress	0.245	0.060	0.060	22.849	0.001	-0.245	-4.780	0.001		
	Criterion Variable: Self acceptance									
Perceived stress	0.275	0.076	0.076	29.270	0.001	-0.275	-5.410	0.001		
		Criterion V	/ariable: Psych	ological Wel	lbeing total					
Perceived stress	0.328	0.108	0.108	43.126	0.001	-0.328	-6.567	0.001		

 ${\bf Table~3.~Correlation~of~the~dimensions~of~proactive~coping~with~various~dimensions~of~psychological~well being}$ 

Dimension		Dayobological					
of proactive coping	Autonomy	Environmental mastery	Personal growth	Positive relation	Purpose in life	Self acceptance	Psychological wellbeing
Proactive Coping	0.363**	0.185**	0.302**	0.309**	0.407**	0.263**	0.467**
Reflective Coping	0.267**	0.122*	0.161**	0.247**	0.282**	0.104*	0.307**
Strategic planning	0.275**	0.221**	0.211**	0.282**	0.358**	0.140**	0.367**
Preventive coping	0.323**	0.130*	0.160**	0.303**	0.369**	0.162**	0.355**
Instrumental coping	0.129*	0.115*	0.058	0.270**	0.228**	-0.032	0.214**
Emotional support seeking	0.233**	0.154**	0.201**	0.403**	0.247**	0.087	0.357**
Avoidance coping	-0.029	-0.065	-0.168*	-0.049	149**	-0.165**	-0.143**

<sup>\*\*</sup> p<0.01; \* p < 0.05

Table 4. Results of step wise regression analysis using dimensions of proactive coping as predictor variables and dimensions of psychological wellbeing as criterion variable

Predictors	R	R Square	R Square change	F Change	Sig. of F change	Beta	Т	Sig.		
			Criterio	on Variable	: Autonomy					
Proactive coping	0.363	0.132	0.132	54.110	0.001	0.363	7.356	0.001		
Preventive Coping	0.411	0.169	0.038	16.156	0.001	0.212	4.020	0.001		
Criterion Variable: Environmental Mastery										
Strategic Planning	0.221	0.049	0.049	18.250	0.001	0.221	4.272	0.001		
		Criterio	n Variable: I	Personal G	rowth					
Proactive coping	0.302	0.102	0.091	35.791	0.001	0.302	5.983	0.001		
Avoidance coping	0.337	0.114	0.023	9.133	0.003	-0.151	-3.022	0.003		
Emotional support seeking	0.374	0.140	0.026	10. 733	0.001	0.176	3.276	0.001		
Criterion Variable: Positive relation with others										
Emotional support seeking	0.403	0.162	0.162	69.267	0.001	0.403	8.323	0.001		
Proactive coping	0.447	0.200	0.037	16.588	0.001	0.203	4.073	0.001		
Avoidance coping	0.464	0.216	0.016	7.134	0.008	-0.131	-2.671	0.008		
		Criter	ion Variable:	Purpose ir	n life					
Proactive coping	0.407	0.166	0.166	70.997	0.001	0.407	8.426	0.001		
Preventive coping	0.465	0.216	0.050	22.849	0.001	0.245	4.780	0.001		
Avoidance coping	0.500	0.250	0.033	15.82	0.001	-0.188	-3.978	0.001		
		Criterio	on Variable:	Self accept	tance					
Proactive coping	0.263	0.069	0.069	26.435	0.000	0.263	5.141	0.001		
Avoidance coping	0.303	0.092	0.023	8.870	0.003	-0.151	-2.978	0.003		
Preventive coping	0.319	0.102	0.010	3.983	0.047	0.113	1.996	0.047		
		Criterion V	ariable: Psy	chological v	wellbeing					
Proactive coping	0.0467	0.219	0.219	99.836	0.000	0.467	9.992	0.001		
Emotional support seeking	0.518	0.268	0.050	24.308	0.001	0.235	4.930	0.001		
Avoidance coping	0.550	0.303	0.034	17.487	0.001	-0.193	-4.182	0.001		

others). Moreover, preventive coping, avoidance coping as well as emotional support seeking also came up as the significant predictors of the dimensions of psychological wellbeing. The environmental mastery was only single handedly predicted by strategic planning dimension.

Moderating roles of the proactive coping strategies in stress-psychological wellbeing

### relationship

Observing the dimensional similarities and complexities of proactive coping inventory, a requirement was felt to simplify the factor structure and to findout the common factors among the said proactive coping strategies. Therefore an attempt was made to reduce the complexity and the number of proactive coping

strategies into fewer explanatory factors through principal component analyses with varimax rotation.

Before factor analyzing the data, the determinant of the correlation matrix, Bartlett's test of sphericity and Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) were computed to examine the adequacy of the sampled data for factor analysis. The Bartlett's test of sphericity was found significant [Chi Square (78) = 3337.224, p< .000] which suggests that it is unlikely that the correlation matrix is composed of uncorrelated variables. The problem of multicolinearity was also not detected in the present data as the determinant of the correlation matrix (0.0001) was higher than .00001. The KMO measure of sampling adequacy (KMO= 0.949) was found to be higher than .8 which suggests that the correlation matrix is compact and is likely to yield distinct and reliable factors.

Table 5. Rotated component matrix of seven dimensional proactive coping strategies

	Emerged Factors			
	Approach coping	Avoidance coping		
Proactive Coping	0.778			
ReflectiveCoping	0.756			
Strategic Planning	0.801			
Preventive Coping	0.727			
Instrumental Support Seeking	0.573			
Emotional Support Seeking	0.587			
Avoidance Coping	·	0.866		

To explore common explanatory factors all the dimensions of proactive coping were subjected to principal component analysis that extracted two components with Eigen values greater than one. The first two factors explained 77.1% of the total variance. Findings also suggest that six dimensions (except avoidance coping) were loaded on first factor (renamed as approach coping) and only avoidance coping dimension could be singled out as it loaded on second factor (the same name retained).

So, principal component analysis yielded two factors i.e., approach coping and avoidance coping. Thereafter, to test our moderating hypothesis, hierarchical regression analyses were conducted in which psychological wellbeing total was predicted by main effect terms (perceived stress as well as approach & avoidance coping) and then the interaction terms (product scores of both the variables). Following Aiken and West (1991), the perceived stress score and approach coping scores were centered (subtracting the mean from each score) and the interaction term was obtained based on the centered scores.

The centered scores of perceived stress, approach coping were entered in to SPSS as predictors followed by the interaction term. The total sore of psychological wellbeing was used as the criterion.

Result revealed that psychological wellbeing was significantly predicted by both perceived stress and approach coping. Furthermore, the interaction between perceived stress and approach coping was significant. Simple slopes analysis (Figure 1) also indicates that negative association between perceived stress and psychological wellbeing significantly declines when individuals are high on approach coping.

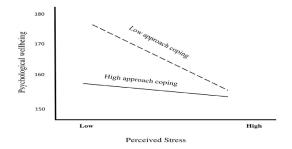


Fig. 1. The relationship between perceived stress and psychological wellbeing as function of approach coping

However, a similar hierarchical regression analysis using centralized scores of perceived stress, and avoidance coping revealed that avoidance coping did not moderate perceived stress-psychological wellbeing relationship (table 7).

Table 6. Results of hierarchical regression analysis using centralized scores of perceived stress, approach coping and the product of the same as predictors as well as psychological wellbeing as outcome

Predictors	R	R Square	R Square change	F Change	Sig. of F change	Beta	t	Sig.
		Crite	rion Variable	: Psycholo	ogical Wellb	peing		
Perceived Stress (centered)	0.328	0.108	0.108	43.126	0.001	-0.328	-6.567	0.001
Approach Coping (centered)	0.556	0.309	0.201	103.450	0.001	0.466	10.171	0.001
Interaction term	0.564	0.319	0.010	5.178	0.023	-0.101	-2.276	0.023

Table 7. Hierarchical regression analysis using centralized scores of perceived stress, avoidance coping and the product of the same as predictors as well as psychological wellbeing as outcome

Predictors	R	R Square	R Square change	F Change	Sig. of F change	Beta	Т	Sig.
		Crite	erion Variabl	e: Psychol	ogical Welll	peing		
Perceived Stress (Centered)	0.328	0.108	0.108	43.126	0.001	-0.328	-6.567	0.001
Avoidance Coping (Centered)	0.339	0.115	0.115	2.760	0.098	-0.083	-1.661	0.098
Interaction term	0.339	0.115	0.000	0.191	0.663	-0.023	-0.437	0.663

It is evident from table avoidance coping neither significantly predicted psychological wellbeing nor moderated perceived stresspsychological wellbeing relationship.

### **Discussion**

The present study explored the relationship of perceived stress and different proactive coping strategies with various indicators of psychological wellbeing on Indian emerging adults. The overarching goal of this study was to examine moderating role of proactive coping in the relationship between perceived stress and psychological wellbeing. We assumed that perceived stress would be inversely related to the dimensions of psychological wellbeing whereas proactive coping strategies would be positive related with the same. We also assumed that proactive coping strategies would significantly moderate perceived stress and psychological wellbeing relationship.

Our initials assumptions were substantiated by the results that perceived stress indeed correlated significantly and negatively with almost all the dimension of psychological wellbeing (Except environmental mastery). Findings also suggest that perceived stress emerged as the significant predictor of psychological wellbeing (i.e., autonomy, personal growth, positive relation, purpose in life and selfacceptance). The findings are consistent with earlier studies that showed that stress produces adverse effects on wellbeing, self-control and general health as well as increases mental illness symptoms like anxiety and depression (Suneesh, Hridya& Menon, 2014). Our study also lent support to the proposition that high stress enhances depressive symptoms among college students that significantly compromises their wellbeing (Robbins, &Tanck, 1992; Mazure 1998). Similarly, college students who are high on happiness and wellbeing tend to experience low stress even in adverse situations (Omidi, Akbari & Mahdian, 2011). Hence, it is clear that perceived stress acts as an indicator of negative mental health which needs to be identified and checked early among youth to make them fully functioning.

Findings further revealed that proactive coping strategies (except avoidance coping) correlated significantly and positively with the almost all the dimensions of psychological wellbeing. On the contrary, avoidance coping correlated negatively and significantly with personal growth, purpose in life and self-acceptance dimensions. It correlated negatively (though not significant) with rest of the dimensions of psychological wellbeing.

All the proactive coping strategies (except avoidance coping) involve forward looking planning and organization of resources in order to successfully encounter the anticipated stressful situations. Greenglass and Fiksenbaum (2009) argued that proactive coping strategies incorporate positive beliefs in human beings that in turn promotes and health and wellbeing. Kumar and Kadhiravan (2014) also showed that proactive coping strategies are really effective in preventing many stress related problems and enhancing wellbeing as they involve a future oriented problem-solving approach. Bode, De Ridder, Kuijer, &Bensing, (2007) believed that proactive coping entails a set of competencies that involves future oriented self-regulation which protects health. Hitherto, the mentioned studies clearly justify our findings and support the observed association between proactive coping and wellbeing. However, unlike other proactive coping strategies, avoidance coping involves escaping the problem by delaying confrontation. This strategy is helpful only in short term but it may incur larger loss in long term. It may be appropriate for delaying temporary distress when resources are limited (Roth & Cohen, 1986) but it never increases wellbeing. Avoidance coping embodies a defensive regulation that promotes ignoring, denying and evading the problem (Weinstein, Brown & Ryan, 2009). It is ineffective and may often be counterproductive in maintaining long term well-being (Davies & Clarke, 1998). This deviating nature of avoidance coping justifies and rationalizes the observed negative association between avoidance coping and psychological wellbeing

Prior to moderation analysis, a principal component analysis with varimax rotation was

done to reduce the proactive coping strategies into fewer explanatory criteria. Result yielded a two factor solution- the first six strategies loaded on first factor and only avoidance coping loaded on the second. The first six strategies involve proactive planning and a direct forward looking approach to encounter the stress. Hence the first factor was renamed as approach coping. On the contrary the sole strategy that loaded on the second factor was avoidance coping that involves escaping and delaying the confrontation with stressful situation. Therefore, the second factor retained the same name as avoidance coping.

Results of moderation analysis revealed that approach coping significantly moderated the relationship between perceived stress and psychological wellbeing. However, no such significant moderating role of avoidance coping could be found in the said relationship. The negative association between perceived stress and psychological wellbeing significantly declines when people use approach coping. In others words, people who use approach coping are more successful in protecting their psychological wellbeing in adverse situations as compared to those who don't to use it. Present study therefore underscores the role of approach coping i.e. proactive planning and organizing of resources in effectively protecting wellbeing in stressful situations. Therefore, the successful interactive role of approach coping presents the relationship between perceived stress and healthas a function of approach coping.

# **Implications**

This paper is helpful in understanding the relationship between perceived stress, proactive coping and psychological wellbeing among youth in India. The finding highlighting the inter-relationship between three variables may help government to come up with policies and short term training program that may enhance psychological wellbeing.

Early identification of youth with perceived stress and poor psychological wellbeing may be help in giving timely counseling and psychological aid to enhance their psychological wellbeing. Proactive coping being identified as powerful

predictor of psychological wellbeing may be included in stress management training to make it more relevant and effective.

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