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Practices Fuelling Positive Emotions Fosters Cognitive Strength and Well-Being: A Study Conducted In Education Sector, Kumoun Region, Uttarakhand

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Abstract: The inspiration of mental well-being refers to favourable emotional functioning and understanding. The potential for this state of mind creating constructive emotions is revealed in the positive psychology representing that practicing certain virtues, such as mindfulness, gratitude as well as through intended activity, such as physical exercise and application of character strengths at workplace enhances cognitive strength and well-being.

Positive Emotions foster psychological pliability and activates rising twirls toward improved Emotional Well-Being as depicted in Broaden-and-Build Theory Fredrickson (1998, 2001), referring that optimistic and pessimistic sentiments play diverse roles in individual processing and personal development. This theory estimates that Positive Emotions expands people's thought-action stockpile and allows the effective construction of own possessions. These possessions include corporal, rational, social, and psychosomatic assets. When people are receptive towards fresh ideas and activities, they widen their possibilities to learn, and grow as individuals.

The Present study, based on primary data, has been carried out to measure the perception of the respondents toward the variables contributing to the cognitive strength, well being and happiness. A questionnaire has been designed and administered on the respondents. A factor analysis was performed to extract the possible factors out of the scale developed to measure the perception of the respondents. Total three variables were extracted and further used in a regression model explaining the variability in the dependent variable influences cognitive strength, and well being of the human being. Results of regression analysis revealed significant impact of all three factors on cognitive strength, and well being. Study also examined that the perception of the respondents for all three factors is equal for all the given categories of the demographic variables.

Keywords- 1 Character Strength, 2 Gratitude,3 Physical Exercise, 4Meditation,5 Positive Emotions, 6Well Being.

1. Introduction

The practical answer to the perennial human concern of how we can better balance negative and positive emotions, is through the assistance of behavioural as well as cognitive approach to overcome negative emotions, which promotes the possibility of enhancing the holistic well-being (e.g., Gloaguen, Cottraux, Cucherat, & Blackburn, 1998; Jacobson et al., 1996). In other words, by diminishing the negative state of mind and enhancing the positive states of mind, mental well-being may be sustained. Negative emotions, low self esteem, jealousy, lack of compassion, and inability to have secure interpersonal relations are destructive states of mind. On the contrary, constructive states of mind embrace self-respect, self-esteem, compassion, honesty, kindness, truth, friendship and love.
Several behavioural activities, such as exercising regularly or being compassionate, kind for others are interconnected with well-being (e.g., Keltner & Bonanno, 1997; Magen & Aharoni, 1991), moreover some form of cognitive activity, such as dedicating actions for purposeful cause as well counting one's blessings enhances well-being. (M. Snyder & Omoto, 2001). Exercise/yoga improves flexibility, strength as well as boosts immunity, which reduces focus on waste thoughts overcoming stressful situations. Mediation enhances concentration, elevated connection promoting compassion and self-regulation which restricts stress disorder, anxiety. Practicing gratitude enhances contentment and optimism which increases cheerfulness and finally detaches from noxious, pessimistic emotions. Character strengths allow people to be purposeful and passionate for their work, they also allow people to experience a sense of fulfilment and results in a satisfying life, which assists in overcoming stress.

1.1 Practices Fuelling Positive Emotions

Character strengths are qualities that are positively valued. Character strength application at work is positively associated with work engagement and relative performance; it focuses on contentment derived from one's work. Thus, they assist in retaining peoples' engagement or achievement and positive emotions, which is associated with professional well-being.

Gratitude is a fairly a satisfying and stimulating emotion, which is correlated with positive emotions including satisfaction (Walker & Pitts, 1998), cheerfulness, and hope. It is helpful in escalating well-being as it builds emotional, social along with spiritual resources.

According to Buddhist vision meditation control both emotion and cognition, a route that cannot be disconnected. Each area in the brain that has been recognized with several features of emotion has as well been known with certain characteristic of cognition. Meditation is an essential method for training the mind. It is a remedy to the mind's weakness to toxic emotions. If negative emotions mark one extreme in human proclivities, researchers look for their antipode, the extent to which the brain can be trained to reside in a positive scope: satisfaction instead of craving, tranquil in place of anxiety, compassion rather than hatred.

Physical Exercise is "a sub classification of Physical Activity that is structured, recurring, and has as a purpose for the development and maintenance of one or more factor of physical fitness" (World Health Organization, 2010). It is now well-believed that the relation between biological and emotional mechanisms related to physical exercise improves the wellbeing (Penedo and Dahn, 2005).

1.2 Positive Emotions: A Catalyst to Develop Cognitive Strength and Well-Being

Positive emotions expand people's awareness and opinions, facilitating people to draw on elevated connections along with a wider-than-usual scope of precepts or ideas. Consequently, these widen outlooks assist individuals to realize and build significant personal resources.

These resources can be *cognitive*, similar to the capability to mindfully concentrate to the current moment; *psychological*, such as the skill to sustain a wisdom of mastery over environmental confront; *social*, like the capacity to offer and accept emotional support; or *physical*, such as the ability to overcome the regular cold. Individuals with these resources are more expected to successfully meet life's challenges as well as get benefit of its prospects, becoming victorious, cheerful and well. Therefore, the personal resources grow, through repeated practice of positive emotions, which are posited to be solutions later to enhance well-being.

There are a plethora of advantages of positive emotions. Firstly, they promote liveliness, strength, zest, and absolute consciousness. As well as counteract pessimistic temper and nervousness. In other words, positive emotions activate the nervous system, which lowers down extraction of stress hormones and allied, nasty feelings, and unwinds the body.
Secondly, positive emotions promotes associations; as humans are more tending to bond with others when one's mood is boosted, and most of us get an encouraging response when we are positive not irritable, and buoyant not depressing.

2. Literature Review

To begin with, researcher Meyers et al. (2018) revealed that organizational support for character strength application is positively associated with work engagement and performance. Moreover, Wagner et al. (2018), Baumann et al. (2018), Gander et al. (2018) and Hofmann et al. (2018) deal with the concern how well-being as well as character strengths from a logical point of view are associated with each other. According to (Peterson and Park 2006; Peterson et al. 2007, character strengths is associated with professional well-being which is reflected through improved job contentment, enthusiasm. Furthermore, the purpose of character strengths at job is positively connected to diverse job commitment experiences (Harzer and Ruch 2012, 2013; Littman-Ovadia and Steger 2010; Peterson and Park 2011; Seligman 2011).

(Murphy M. Donovan S. 1999) have revealed cognitive capability, concentration, memory, awareness, imagination and compassion are developed with meditation. According to (Kabat-Zinn, 2003) meditation assists individuals in regulating stress, chronic pain and anxiety. Also, love Kindness Meditation is a procedure used to enhance feelings of caring as well as warmth for self along with others (Salzberg, 1995). In a nutshell, meditation works positively to tackle with all these components that further fuels ones cognitive strength, wellbeing and happiness.

According to (Weinberg and Gould, 2015; Fernandes et al., 2017), Physical exercise is considered as an illustrative variable that affects brain flexibility, which further influences cognition and wellbeing. In addition, physical exercise raises the intensity of serotonin (Young, 2007; Korb et al., 2010) as well as the intensity of beta-endorphins (Fuss et al., 2015). Physical exercise develops wellbeing, (Weinberg and Gould, 2015), self efficacy (Craft, 2005; Rodgers et al., 2014), better self-esteem (Marsh and Sonstroem, 1995; Fox, 2000; Zamani Sani et al., 2016), positive social connections and gratification (Raedeke, 2007; Bartlett et al., 2011). Furthermore, Physical Exercise has many advantages such as getting better psychological wellbeing (Zubala et al., 2017). Physical exercise transforms the personality through self development (Weinberg and Gould, 2015). As well as, physical exercise facilitates an individual to manage with stressful circumstances (Weinberg and Gould, 2015). It is currently accepted that the interface connecting biological and psychological system correlated to physical exercise improves the wellbeing (Penedo and Dahn, 2005).

Researcher, Novotney, 2009, observed that who engage themselves in yoga practice experiences less symptoms of anxiety and depression. According to Ross et al., 2013, Participants who practiced yoga were probable to report elevated energy, improved moods, greater cheerfulness and more satisfying lives. Yoga is helpful in mitigating anxiety, stress and enhancing participants' self-esteem and self-confidence (Bussing, Michalsen, Khalsa, Telles, & Sherman, 2012). Moreover, Yoga increases self-efficacy, self-confidence, strength and flexibility (Bussing et al., 2012). The connection between yoga and positive psychology is strong; it is generally practiced as an endeavour to augment well-being (Ivtzan & Papantoniou, 2014).

According to (Aspinwall, 1998; Folkman & Moskowitz, 2000), gratitude is a positive emotion that widens the cognition as well as facilitates flexible, innovative thinking and assists in managing anxiety. Chesterton (1924) stated that "gratitude created the most purely elated moments that have been recognized to humans". Gratitude is associated with positive emotions, contentment (Walker & Pitts, 1998) and hope (Overwalle, Mervielde, & DeSchuyter, 1995). Furthermore, a number of researchers (Lazarus & Lazarus, 1994; Mayer, Salovey, Gomberg-Kaufman, &Blainey, 1991; Ortony, Clore, & Collins, 1986; Weiner, 1985) illustrated that gratitude has a positive emotional valence.

Analysis by (Diener and Larsen, 1993) revealed that positive emotions contribute to contentment and well-being. Fredrickson (1998, 2001) presented the *broaden-and-build hypothesis* of positive emotions which illustrates how positive emotions expand people's thought-action repertories, including intellectual, physical, psychological and social resources. It summarizes that positive emotions occur in reply to disperse opportunities, therefore they expand people's awareness and thoughts, allowing them to correspond to elevated connections. Study by (Lyubomirsky, King, & Diener, 2005), concluded that positive emotions create success and wellbeing

3. Objectives of the Study

i) To study the factors contributing to positive emotions.
ii) To measure the impact of all factors contributing to positive emotions on cognitive strength and well-being.
iii) To examine the interrelation between demographic variables, intermediating variables and well-being.
iv) To suggest a conceptual model showing a path towards cognitive strength and well-being.

4. Research Methodology

The present study based on primary data carried out to explore the perception of the respondents towards driving forces of cognitive strength and wellbeing. A questionnaire was developed in a Google form and administered online on the respondents. Total 130 responses have been collected out of which 4 was incomplete hence dropped out and finally 126 responses used for further analysis and interpretation.

4.1 Reliability of the Scale

To assure the internal consistency of the scale constructed to measure the perception of the respondents towards driving forces of cognitive strength and wellbeing, reliability test has been performed post data collection. Scale consists total 18 items. Test statistics revealed Cron Batch Alpha 0.96 is significantly higher than 0.70 which is considered adequate for the scale developed to carry a survey (De Vellis, 1991).

5. Data Analysis, Results and Discussion

5.1 Factor Analysis: A factor analysis has been performed to extract the possible factors out of the scale developed to measure the perception of the respondents toward the variables contributing to the well being and happiness. KMO and Bartlett's Test was used to validate the sampling adequacy. Results of the test presented in the table 1 reveals that samples taken are adequate to perform factor analysis as Kaiser-Meyer-Olkin Measure of Sampling Adequacy test value is 0.936. The Varimax Rotation Method is used to extract the factors with their factor loading and Eigen value was set 1 as cut off point and coefficients below 0.5 were suppressed. Output of the analysis extracted three factors i.e. Exercise and Yoga; meditation; and character strength and gratitude (Table 2-3). These factors together explained 79.406 % variability of the scale (Table 2). The study further examined whether the perception of the respondents towards these factors is same across the various categories/level of the independent demographic variables or not.

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.936
Bartlett's Test of Sphericity	Approx. Chi-Square	2485.008
	Df	153
	Sig.	.000

Table 2: Total Variance Explained

	Initial Eigen values			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.936	60.753	60.753	10.936	60.753	60.753	7.171	39.838	39.838
2	2.282	12.676	73.430	2.282	12.676	73.430	3.601	20.006	59.844
3	1.076	5.976	79.406	1.076	5.976	79.406	3.521	19.561	79.406
4	.718	3.990	83.396						
5	.476	2.644	86.040						
6	.408	2.269	88.309						
7	.327	1.819	90.128						
8	.300	1.666	91.794						
9	.245	1.363	93.157						
10	.228	1.268	94.426						
11	.193	1.073	95.498						
12	.177	.986	96.484						
13	.165	.917	97.401						
14	.126	.699	98.100						
15	.101	.560	98.660						
16	.099	.548	99.208						
17	.077	.428	99.636						
18	.066	.364	100.000						
Extraction Method: Principal Component Analysis.									

S. No.	**Statements of the Scale**	**Component**		
		3	2	1
1	I give sufficient time to exercise/ yoga in a day.			.749
2	Practising exercise daily has improved my stamina.			.740
3	Certain yoga positions help me to balance and boost the immune system.			.714
4	Practising Physical Exercise/Yoga has enhanced my physical and mental health.			.719
5	I have experienced enormous benefits of exercise/yoga on both cognitive functioning and wellbeing.			.759
6	I put into practice 'meditation' for adequate time duration in a day.		.787	
7	Cultivating mindfulness is an effective and efficient technique for me to reduce the occurrence of distracting thoughts.		.609	
8	I have transformed to a more empathetic and compassionate person after practising 'love kindness meditation' technique.		.848	
9	Meditation has helped me to regulate stress, anxiety and various illnesses.		.715	

10	Meditation is good remedy for my mind's vulnerability to toxic emotions and improves my well-being		.617	
11	I am optimistic about most of the effects in my life.	.730		
12	I feel pleased the way I am	.766		
13	My attitude of gratitude stimulates positive emotions that broaden cognition ability and enhances creative thinking.	.820		
14	Keeping a gratitude journal—brief reflections on moments for which I'm thankful— significantly improves my happiness and well-being.	.846		
15	I feel motivated to apply character strength virtues at workplace.	.891		
16	My positive personality traits at workplace make me approach life with enthusiasm and encourage people around me.	.921		
17	I kept myself engaged during unsteady circumstances by learning some new skills and topics.	.861		
18	The application of character strengths makes me feel more positive and enhances my well-being.	.909		
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 5 iterations.				

5.2 <u>Impact of Demographic Variables on Extracted Factors</u>: Demographic variables taken in the study may have the impact on the factors extracted by factor analysis. Since the distribution of the dependent demographic variables is not normal for these factors across the categories of the independent variables, a non parametric Independent-Samples Kruskal-Wallis Test (for more than two categories in independent variables) and Mann-Whitney U Test (for two levels only) have been applied. It has been hypothesized that, *"there is no significant difference in mean ranks across the categories of the variables with respect to the factors extracted".*

Or

"The distribution of the factors is same across the different categories of the independent variables".

The above set hypothesis has been tested at 5 percent level of significance. Outcomes of the test are summarized in Table 4 for Kruskal-Wallis Test and Table 5 for Mann-Whitney U Test. The test revealed insignificant differences (sig. value > 0.05) across the categories of independent demographic variables; Age, Occupation and Income, Gender and Marital status. It means there is no significant impact of these variables on the perception of the respondents towards the Exercise and Yoga, Meditation and well being. It is same for all categories of the variables taken in this study. Hence, our null hypothesis could not be rejected.

Table 4: Hypothesis Test Summary of Independent-Samples Kruskal-Wallis Test

S. No.	Null Hypothesis	Sig.	Decision
1	The distribution of V1 is the same across categories of Age.	0.377	Retain the null hypothesis.
2	The distribution of V1 is the same across categories of Occupation.	0.333	Retain the null hypothesis.

3	The distribution of V1 is the same across categories of Annual Income.	0.672	Retain the null hypothesis.
4	The distribution of V2 is the same across categories of Age.	0.314	Retain the null hypothesis.
5	The distribution of V2 is the same across categories of Occupation	0.707	Retain the null hypothesis.
6	The distribution of V2 is the same across categories of Annual Income.	0.332	Retain the null hypothesis.
7	The distribution of V3 is the same across categories of Age.	0.279	Retain the null hypothesis.
8	The distribution of V3 is the same across categories of Occupation.	0.327	Retain the null hypothesis.
9	The distribution of V3 is the same across categories of Annual Income.	0.479	Retain the null hypothesis.

Table 5: Hypothesis Test Summary of Independent-Samples Mann-Whitney U Test

S. No.	Null Hypothesis	Sig.	Decision
1	The distribution of V1 is the same across categories of Marital Status.	0.905	Retain the null hypothesis.
2	The distribution of V2 is the same across categories of Marital Status.	0.233	Retain the null hypothesis.
3	The distribution of V3 is the same across categories of Marital Status.	0.312	Retain the null hypothesis.
4	The distribution of V1 is the same across categories of Gender.	0.371	Retain the null hypothesis.
5	The distribution of V2 is the same across categories of Gender.	0.52	Retain the null hypothesis.
6	The distribution of V3 is the same across categories of Gender.	0.676	Retain the null hypothesis.

Impact of Extracted Factors on Wellbeing and Happiness: A Regression model was run to capture the impact of extracted factors i.e. exercise/yoga; meditation; and gratitude and

character strength on the dependent variable cognitive strength and wellness. The model summary depicted in Table 6 revealed that independent variables together explain 95.3 % variance in the dependent variable (Adjusted R square = 0.953). ANOVA results of the model presented in Table 7 explained that the independent variables in the model reliably predict the dependents variable and there exists a linear relationship between the variables in the model (f = 837.719, p = 0.000). The coefficients of independent variables with their t statistics and p value presented in Table 8 revealed that all factors in the model have significant impact on dependent variable 'cognitive strength and wellness' (p < 0.05). The relation can be expressed in the following equation:

$Y = 2.751 + 0.901 (X_1) + 0.401 (X_2) + .553(X3) + 0.022$ ……eq. 1

Here, Y = 'cognitive strength and wellness' - a dependent variable
X_1 = 'Exercise/yoga' – an independent variable 1
X_2 = 'Meditation' – an independent variable 2
X3= 'Gratitude and character strength'- an independent variable 3

Finally, a histogram depicted in figure 1 showing the distribution of regression standardized residuals of the model as a normal distribution with mean 0 and standard deviation 1 which is desired.

The findings of our study, to the great extend, agreed with the findings of the previous researchers. Exercise and Yoga in our regression model significantly explaining to the dependent variable with beta value 0.901 which shows that one unit change in independent variable leads 0.901 unit change in dependent variable (e.g., Weinberg and Gould, 2015; Fernandes et al., 2017, Zubala et. al. 2017, Penedo and Dahn, 2005, Yoga – Ivtzan & Papantoniou, 2014)

The second explanatory variable 'Meditation' in the model also found significant in explaining the variance of the dependent variable. Observed beta coefficient of this variable 0.401 shows that one unit change in meditation can change 0.401 units in 'cognitive strength and wellbeing'. The finding support to the findings of (Murphy M. Donovan S. 1999), Kabat-Zinn, 2003, Salzberg, 1995.

Gratitude and character strength was found explaining significantly to our dependent variable 'cognitive strength and wellbeing'. Beta coefficient 0.533 shows that every single unit change in Gratitude and character strength will lead to .533 unit change in dependent variable 'cognitive strength and wellbeing'. This finding supports to the finding of Voci A. et. al. (2019). Who concluded gratitude and self-compassion are probably two mechanisms through which mindfulness enhances psychological well-being, or optimal human functioning, regardless of people's experience of meditation.

Table 6: Model Summary of Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.977[a]	.954	.953	.24999	2.041
a. Predictors: (Constant), Gratitude, Character Strength, Meditation, Exercise, Yoga					
b. Dependent Variable: CSWB					

Table 7: Results of ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	157.062	3	52.354	837.719	.000[b]
	Residual	7.625	122	.062		
	Total	164.687	125			

a. Dependent Variable: CSWB
b. Predictors: (Constant), Gratitude & Character Strength, Meditation, Exercise &Yoga

Table 8: Coefficients of the Model

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	2.752	.022		123.568	.000
	Exercise & Yoga	.901	.022	.785	40.310	.000
	Meditation	.401	.022	.349	17.919	.000
	Gratitude & Character Strength	.533	.022	.464	23.815	.000
a. Dependent Variable: CSWB						

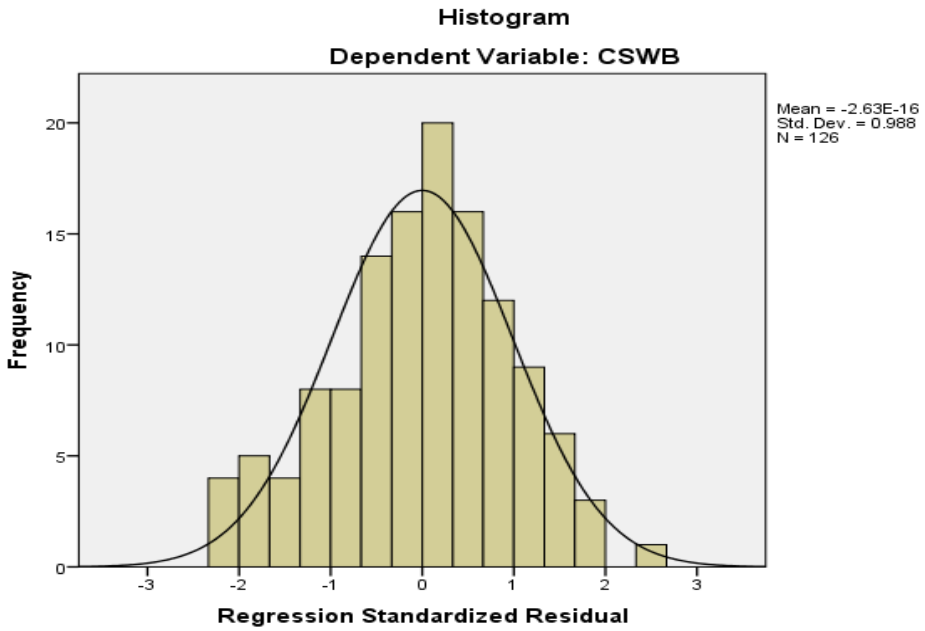

Figure 1: Distribution of Regression Standardised Residuals

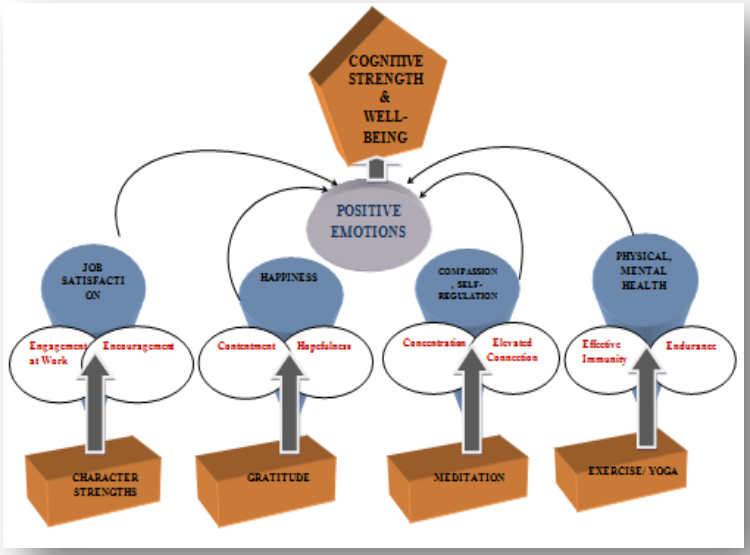

Figure 2: CGME -Positive Emotions-Well-Being Model

Conceptual Model as Scope for Future Study: The conceptual model in figure 2, has been suggested on the basis of the findings of this study which needs to be tested in future study:

6. Conclusion

The present study is focused in the exploration of the factors contributing to the positive emotions that is ultimately fuelling the cognitive strength; and wellbeing and happiness. Respondent's perception on the explored/extracted factors have been recorded and the impact of these extracted factors have been measured using a multiple linear regression model. It is interesting to find and conclude that all extracted factors significantly contributing to the dependent variable wellbeing and happiness.

However, demographic variable taken in the study have no association with all three factors explored from the scale. Perception of the respondents across the levels of different demographic variables is same for all the factors.

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