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Psychological Well-Being and Anxiety among Adolescents Analysis along Wellness: Illness Continuum

Jeny Rapheal

Research Scholar in Psychology, Bharathiar University, Coimbatore, India

Varghese Paul K.

HOD, Department of Psychology, Prajyoti Nikethan College, Pudukkad, Kerala, India

Abstract:

Objective of the study was to analyze the psychological well-being and anxiety among 153 adolescents selected from 5 higher secondary schools of Kerala. Taking into account previous findings, that “negative affect” always co-occur with anxiety while “positive affect” gets reflected in the outcomes of psychological well-being measurements and the “bipolar” and “bi-variate” views about the relationship between two, pattern of interaction between anxiety and psychological well-being was studied in detail. Psychological well-being scale by Devendra Sing Sisodia and IPAT-Anxiety scale by Samuel King were used for data collection. Statistical tests Pearson-correlation, t-test, single factor ANOVA and linear-regression were executed with the help of SPSS version-20. 88.8% of adolescents were moderate and 10.4% were high in their psychological well-being. Mean anxiety of the sample was 36.3 which indicated moderate level of anxiety. Adolescents in urban & rural areas, aided & private schools, and males & females hadn’t any significant difference in their mean psychological well-being or anxiety as per t-test. Age of participants hadn’t any significant correlation with psychological well-being but that with covert anxiety ($r=.3, p<.00$) was highly significant. Extremely significant difference in the mean psychological well-being of group of students categorized according to their levels of anxiety was observed in ANOVA results ($F(2,152)=9.4333, P=.0001$). Significant negative correlations between the sub-variables of psychological well-being and anxiety, ranging from ($r= -.37$) to ($r=-.20$) was observed except for “sociability”. Anxiety which is usually characterized by physiological hyper-arousal could incur significant variation in “satisfaction” ($R^2=.13, F=23.18, P<.00$), “efficiency” ($R^2=.08, F=14.08, P<.00$), “sociability” ($R^2=.003, F=.517, not-sig.$), “mental health” ($R^2=.14, F=24.50, P<.00$) and “interpersonal relations” ($R^2=.04, F=6.60, P<.01$) of psychological well-being variables as per regression analysis. Major implications are in adolescent counselling & psychotherapy and future investigations focusing on illness-wellness continuum.

Key words: Psychological well-being, Anxiety, Adolescents, positive/negative effect

1. Introduction

Exploration of various aspects of mental health simultaneously from two different poles of a continuum constituting positive-negative affects is gathering momentum in psychological research. It is mainly because investigations along the etiological routes to mental health keep on affirming that the concept of mental health should be equated with “presence of wellness and absence of illness”. Health as defined by world health organization is a state of complete physical, mental health and social wellbeing and not merely the absence of disease or infirmity (WHO, 1948). Having a good physical or mental state should not only consist in not only having an illness or disorder, but also in enjoying a series of resources or abilities that allow for coping with adversities (Almedom & Glandon, 2007). From a broad perspective, the measurement and promotion of adolescent well-being is a desirable social and political objective. (Diener, Lucas, Schimmack & Helliwell, 2009; Vazquez, 2009). According to Jessica & Savage (2011) psychological well-being of adolescents means being satisfied with life and experiencing a plenitude of positive emotions, when coupled with the absence of psychopathology, is associated with maximum academic function, social competency and support and physical health. Being a stage that lays strong foundation for future personality, and a critical period during human development in which life goals, values, direction and purpose in life are created (Berman, Weems & Stickle, 2006), ensuring psychological well-being of adolescents is a socio psychological necessity. A growing number of longitudinal studies confirm the power of well-being scales to predict outcomes, for example, longevity, physical health, quality of life, criminality, drug and alcohol use, employment, earnings and pro-social behaviour (e.g. volunteering) (WHO, 2009). Despite the consensus over the conceptualization of well-being especially from

eudaimonic perspective as living fully or allowing for the richest human potential possible (Ryan, Huta & Deci, 2008) in the field of psychology, positive psychological states has only started to be studied over the last two decades (Taylor, Kemeny, Reed, Bower & Gruenewald, 2000). Moreover, given the ever evading nature of complexities typical to their phase of development, researches into factors contributing to adolescent psychological well-being was always a daunting task for scientific community

For any authentic approach for ensuring psychological well-being of a group, exploration into demographic correlates and predictors of psychological well-being by tracing the environmental, physiological or neurological underpinnings is not sufficient. In his paper titled “Psychological well-being and psychological distress: is it necessary to measure both?” Helen R Winefield (2012) discusses about bi-polar and bi-variate nature of psychological well-being and psychological distress (or dysfunction) like anxiety, depression, sadness, irritability, emotional vulnerability etc. The potentiality of psychological distress present in any form or degree in an individual to hamper the benefits of psychological well-being cannot be ruled out. Psychological distress is something strongly correlated with physical morbidity, reduced quality and duration of life and increased use of health service (eg. Lahey 2009). At the same time, there is no guarantee that both psychological well-being and psychological distress will not occur together in a personality. According to Helene, et. al (2012) positive psychological factors may have such a strong relationship with health as negative ones and extend to which these psychological states are independent of each other may vary according to the external and internal environmental challenges people face and researches will need to make choices about the value of measuring both.

In the present study, measurement of anxiety--- one of the many indicators for measuring the level of psychological distress—in adolescents might provide a new way of interpreting the outcomes of their psychological well-being measurements. Upon comparing the constructs of psychological well-being and anxiety, one can see that important drivers of psychological well-being are intentional activities----activities over which we have control—like habits (e.g: taking regular exercise), cognitions (e.g. interpretation of events in a positive light), motivation (e.g: striving towards goals that reflect deeply held values) (Lyubomirsky, King, & Diner,2005; Sheldon &Lyubomirsky, 2006). Meanwhile,elevated sympathetic activity marked by heightened physiological arousal is the characteristic of anxiety. Anxiety is a coherent cognitive-affective structure and at the heart of this structure is a sense of uncontrollability focused on future threats, danger, or other potentially negative events (Barlow, 2000). Slegman(1976) observe that uncontrollable events in the environment act by unleashing some sort of motivational, cognitive and emotional imbalance. An immediate sense of diminished control is commonly associated with immediate expression of anxiety (Barlow, 1988, 1991; Beck & Emery, 1985; Lazarus,1966, 1968; Lazarus, Averill, & Opton,1970; Mandler, 1972;Sanderson, Rapee, & Barlow,1989). Triggers of anxiety very often function beyond the volitional realm of mental faculties. So the question is, can the therapeutic interventions be intended to enhance well-being which is implemented from a more controllable realm of mind, help in reducing the psychological distress? Fredrickson’s (2009) observation that role of eudaimonic well-being in biology and health function as a buffer or protector in the face of adversity or negative experience seems very much promising in this context of discussion. Investigations in this line if proved affirmatively will be a milestone in the preventive and curative measures adopted for adolescent anxiety which is one of the most common psychological disorders in adolescents worldwide (Costello, 2003). The cardinal principle behind such an approach is, positive emotions ensured by higher levels of well-being can lead to positive cognitions which in turn contribute to positive emotions (Ryan & Deci, 2001)

Previous findings warrant the fact that anxiety leads to surplus “negative affect” in the emotional state of an individual. Negative affect is defined as “a stable heritable trait tendency to experience a broad range of negative feelings such as worry, anxiety, self-criticism and a negative self-view (Keogh & Reidy, 2000; p.108). Highly influential Tripartite model by Clark &Watson (1991) sees negative effectiveness a common underlying factor contributing to both anxiety and mood disorders. Studies in the following samples corroborated it ---students (Watson et al., 1995; Joiner, 1996), patients with addictions (Watson et al., 1995), depressive and anxiety patients (Clark et al., 1994), adolescent psychiatric patients, (Joiner et al., 1996; Jolly & Dyckman, 1994),as well as adults without disorders (Watson et al., 1995). In these studies, three common factors have emerged: physiological hyper arousal, anhedonia (low PA) and general distress (NA) .Coming to psychological well-being, it is usually conceptualized as some combination of positive affective states such as happiness (the hedonic perspective) and functioning with optimal effectiveness in individual and social life (the eudaimonic perspective) (Desi & Ryan, 2008). Psychological well-being is a key aspect of happiness(Diener & Biswas, 2008) and is also central to the construct of affect. People with high psychological well-being report feeling happy, capable, well supported, satisfied with life, and so on (Huppert’s, 2009).

Hence an analysis of psychological well-being and anxiety in the same population is an (indirect) analysis of positive and negative affect respectively behind these constructs. Though the fundamental psychometric principle (Watson & Clark, 1997) claims that oppositely valenced affects tend to be only weakly correlated, Costa and McCrae (1980) call it a “paradox that has never been fully explained”. In the present study the rationale behind the analysis in terms of the interaction between psychological well-being and anxiety comply with the previous findings on “bipolar” and “bivariate” views about positive and negative effects. According to Dynamic Model of affect by Joseph R. Royce, & John R. McDermott(1997), given the specific conditions, both bipolar and bivariate models are valid. More comprehensible in this line of investigation is that of Evaluative Space Model (ESM) of (Cacioppo & Bernston, 1994) which says though positivity and negativity may also be characterized by reciprocal activation they may also be characterized by uncoupled activation, co-activation or co-inhibition. Co-activation and co-inhibition occur when changes in one system are associated with, parallel or opposite changes in the other system. Though there are evidences that underlying neural correlates of positive and negative effects are distinct recent studies keep on proving that they are only “partially” distinct For example in contrast to past findings regarding the role of the amygdale only in negative effect, the mesolimbic dopaminergic pathway

projecting from the ventral tegmental area of the midbrain to the nucleus accumbens has been implicated in positive affect (Hoebel, Rada, Mark, & Pothos, 1999) which ratifies the claim that these positive and negative systems can be co-activated.

In the backdrop of these findings, we were interested in the following queries

- What are the major demographic correlates of psychological well-being and anxiety among the selected sample of adolescents?
- Is there any significant difference in the psychological well-being of adolescents belonging to groups categorized according to their levels of anxiety?
- Is there any significant inverse correlation between psychological well-being and its components on one side and anxiety, covert anxiety and overt anxiety on the other?
- Can Anxiety, a state marked by individual's "diminished control" and "negative effect" cause any significant variation in the five areas of psychological well-being namely, satisfaction, efficiency, sociability, mental health and interpersonal relations of the selected sample.

2. Method

Sample consisting of 153 adolescents selected from two private (N=51), two aided (N=64), one government (N=38) schools of Thrissur district in Kerala state. Psychological well-being scale by Devendra sing Sisodia and IPAT-anxiety scale by Samuel E king were administered to the students after getting informed consent from parents and school authorities. Two scales were administered successively, in the same frame of time to ensure that no external events intervened while answering two scales. Data analysis was carried out with the help of SPSS version-20. Pearson correlation helped to realize the nature of linear relationship between the variables. T-test revealed the significance of difference between the means of psychological well-being and anxiety of students belonging to various groups categorized along gender, type of school, place of residence etc. Single factor ANOVA was done to examine whether there is any difference in the psychological well-being of students belonging to various levels of anxiety. To estimate the predictive power of anxiety in terms of variation it can incur in life satisfaction, sociability, mental health, efficiency, and interpersonal relations of psychological well-being measurement indicators, linear regression analysis was performed taking anxiety as independent variable.

3. Measures

IPAT anxiety scale by Samuel E King was used to assess the anxiety level of participants. It consists of 40 items of which, first 20 items measure overt anxiety and next 20 measure covert anxieties. The scale which is often administered in clinical practice has test re-test reliability score .80 and its split half reliability is .78. It claims remarkable cultural and content validity.

Psychological Well-Being Scale prepared by Devendra Sing Sisodia was used to estimate Psychological well-being of students. It is a 5 point Likert scale which estimates psychological well-being along five dimensions namely, Satisfaction, Efficiency, Sociability, Mental Health and Interpersonal relationship. Its test-retest reliability is .87 and internal consistency is .90. Besides face validity scale claims high content validity. Validity coefficient against external criteria is .94.

4. Results

88% of the total number of adolescents was moderate in their psychological well-being (PW). Similarly, more than 50% of the sample exhibited moderate values in each sub-scale namely, satisfaction, efficiency, sociability and mental health of psychological well-being measurement. But in the interpersonal relations, 53.6% was high and only 46.4% was moderate. (Figure: 1). Mean anxiety of the sample was (36.42) which was average according to the norms provided in the scale. Correlation analysis (Table: 1) revealed significant negative correlation of PW and its components with anxiety, except that correlation between "sociability" and anxiety was not at all significant. T-test for groups classified along gender, type of school, place of residence (table: 2) showed no significant differences in the mean PW and anxiety. At the same time, government and private students differed in their mean covert anxiety significantly. Students in the government institution were higher in their covert anxiety. Single factor ANOVA showed extremely significant difference in the means of psychological well-being of students belonging to groups of various levels of anxiety. Execution of simple linear regression analysis taking anxiety as independent variable (Table:3), revealed that anxiety can cause 13% variation in total PW and 12.5%, 8%, 12.9% and 4% variation in satisfaction, efficiency, mental health and interpersonal relations respectively. While it doesn't show any role in the "sociability" level of adolescents.

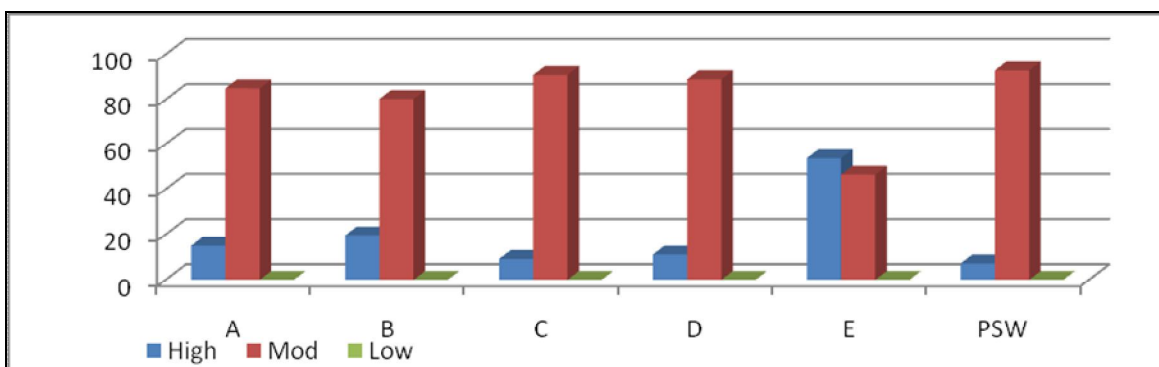


Figure 1: Distribution of Psychological Well-Being in the Sample in Percentage
A-satisfaction, B-efficiency, C-sociability, D-mental health, E-interpersonal relations

	Satisfaction	Efficiency	Sociability	M Health	Interpersonal Relation	PSW	Age
Covert Anxiety	-0.35*	-0.24**	-0.06	-0.23***	-0.18***	-0.31*	-.04
Overt Anxiety	-0.29*	-0.27*	-0.04	-0.42*	-0.19***	-0.35*	.29*
Total Anxiety	-0.36*	-0.29*	-0.06	-0.37*	-0.21***	-0.37*	.15

*P<.000, **P<.001, ***P<.01

Table 1: Correlation between PW and Anxiety

	Boys		Girls		t	Govt.		Private		t
	M	SD	M	SD		M	SD	M	SD	
PSW	188.8	18.1	190.7	18.4	.65	190	18.6	190	18.5	.04
Anxiety	36.3	8.52	36.6	7.77	.24	36.7	8.11	35.2	9.3	.79
Cover	18.5	4.28	17.6	4.3	1.3	18	4.67	18.4	4.87	.40
Overt	18.11	4.8	18.38	5.13	.33	18.7	4.37	16.4	5.52	2.09*

Table 2: t-test results for gender and type of school

*P<.05

	Urban		Rural		t
	M	SD	M	SD	
PW	189	20.0	190	16.7	0.11
Anxiety	35.6	8.32	37.1	7.86	1.19
Cover	17.9	4.57	18.2	4.10	.47
Overt	17.5	5.17	18.8	4.65	1.55

Table 3: t-test results for place of residence (Urban & Rural)

Anxiety	Mean	SD	Df	F-value	P-value
Group 1	219	16.39	2, 152	9.433	.00013
Group 2	191.60	16.86			
Group 3	183.77	18.10			

Table 4: Single factor ANOVA for difference in the mean for overall PW
Anxiety level: Group1 (0-20), Group2 (20-40), Group3 (40-60)

Dependent Variables	Mean	SD	β	R ²	F-value	P-value
PSW	180.61	18.22	-0.365	.133	23.25	.000
Satisfaction	36.86	5.64	-0.354	.125	21.596	.000
Efficiency	38.47	5.25	-0.294	.084	13.915	.000
Sociability	37.35	4.37	-0.059	.003	.526	.469
Mental Health	34.73	5.39	-0.359	.129	22.34	.000
Interpersonal Rela.	42.19	4.44	-0.212	.045	7.083	.009

Table 5: Linear Regression Analysis Summary for the Independent Variable Anxiety

5. Discussion

Moderate levels of overall psychological well-being (PW) and anxiety as the outcomes of measurements carried out within the identical frame of time in order to avoid fluctuations in the emotional or affective state of students indicate, that the elements of well-being and distress (here anxiety) can co-occur in an individual or a group. This supports the observation of Diener and Iran-Nejad (1986) that positive and negative emotions or affects can often co-occur at "moderate" levels. What stands out from the observations regarding the distribution of various aspects of PW in the selected group is, 53.6% was high in their interpersonal relations which is very much different when compared to the percentage of high level in other areas of psychological well-being dimensions (figure:1). This is consistent with previous observations that adolescence is a period marked by increasing interest and ability to form meaningful and enduring relationships with fellow beings especially peers.

Presence of anxiety can decrease the overall PW. The significant negative correlation ($r = -.37$, $P < .000$) and 13% inverse variation ($R^2 = .13$, $F = 23.25$, $P < .000$) it can incur on PW indicate this which somewhat supports the conclusion of Keyes' (2005) and Lamers et al. (2011) that there are separate but correlated axes of mental health and mental illness. The single factor ANOVA (Table: 4) too reiterates this by showing that difference in the means of psychological well-being of participants belonging to groups categorized along their levels of anxiety is extremely significant ($F(2,152) = 9.433$, $P = .0001$)

In the analysis along the demographic variables selected for the study, one can see that socially determined variables like type of school, or place of residents and the individually determined variables like age and gender hadn't any direct effect on the PSW or anxiety of adolescents. T-test results (Table: 2&3), reveals it. One exception is, government students have significant higher overt anxiety than their counterparts in private school. This may be because; private students have that school climate where they are taught to be more prudent in their expression of emotions.

Coming to the component "satisfaction" of psychological well-being, we can see that anxiety can cause 13% variation in it ($R^2 = .13$, $F = 23.18$, $P < .00$). and there is significant negative correlation between two ($r = -.36$, $P < .000$) which is very much consistent with the observation of Gilman & Huebner, (2003) that in child and adolescent populations, research has found that self-reports of life satisfaction are negatively related to symptoms of depression and anxiety. At the same time, observation by Gilman & Huebner, (2006) regarding the importance of "satisfaction" in the life of adolescents is worth noticing in this context. According to them teenagers who were highly satisfied with their lives scored higher points in all academic, personal and interpersonal functionality scales than those with low level of life satisfaction. This heralds the importance of life satisfaction in the development of adolescents. Presence of anxiety may decrease the efficiency of adolescents in various facets of life. Highly significant negative correlation ($r = -.29$, $P < .000$) and significant regression results ($R^2 = .08$, $F = 14.08$, $P < .00$) related to it warrants it. According to Sisodia (2005) "efficiency" is a comparison of what is actually produced or performed with what can be achieved with the same consumption of resources. It is a quality of being efficient or producing an effect. Presence of anxiety can cause biases in information processing (Mineka & Sutton, 1992) and thus affect productivity of individuals. Meanwhile, positive mood states promises, broader focus of attention (Fredrickson & Branigan, 2005; Gasper & Clore, (2000) helps to generate more ideas (Fredrickson & Branigan, 2005), enable more creativity and flexibility in thinking (Ashby, Isen, & Turken, 1999; Bless, Mackie, & Schwarz, 1992; Murray, Sujan, Hirt, & Sujan, 1990). Combined with these observations, theories put forward to account for negative effects of emotional states such as anxiety on performance (Humphreys & Revelle, 1984) especially the processing efficiency theory by Eysenk and Calvo (1992) explains well the negative correlation between anxiety and efficiency

90.8% of the sample was moderate in "sociability" aspect of psychological well-being. But, "sociability" seems to be not at all affected by anxiety level of adolescents. Both correlation and regression results reveal it. This result between "anxiety" and "sociability" is in tandem with the observation that the dimension of extraversion (sociability) is not causally linked to psychological ill-being (e.g. Clarke, Watson, & Mineka, 1994; Neeleman, Ormel, & Bijl, 2001; van Os et al., 2001). This is also a sample dominated by high interpersonal relationship quality (figure: 1). Hence, the effect of anxiety on sociability might have buffered by interpersonal relations. A large sample may reveal the clear picture of facts.

Anxiety is one of the major indicators for evaluation of mental health. Level of anxiety, if it increases, mental health will suffer. This is ratified in the correlation result between mental health and anxiety. And here in the selected sample anxiety could incur 13% of inverse variation in the mental health. As per regression results.

Exhibiting salient feature of adolescent phase of development for making meaningful enduring relationship with peers and others, 53.6% were high in their interpersonal relations. This area of PW is interpreted as the degree of harmony and enduring level of association between two or more people has moderate correlation with anxiety ($r = -.21$, $P < .05$). Anxiety can cause 4% variation in its level ($R^2 = .04$, $F = 6.60$, $P < .01$). How anxiety--a state marked by a feeling of insecurity and a sense of diminished control and

restlessness--- affects interpersonal relations is best explained by Kennedy-Moore & Watson (2001) . According to them, the frequent expression of intense negative emotions and thoughts can exhaust social supports such that excessive needs for reassurance and care-taking eventually elicit rejection. Usually, interpersonal relations thrive upon the congruence between the general traits and moods of individuals involved in it. Presence of negative mood states can hinder it.

Thus, one cannot rule out the fact that positive state of mind can be adversely affected by negative emotional and affective states like anxiety. Hence, to ensure overall well-being, assessment and diagnostic procedures in the mental health should incorporate indicators of illness as well as wellness. A growing body of literature supports that positive mental state in addition to being an integral part of health can actually influence the onset of illness, physical problems and recovery process. So, studying illness only can never tell researchers how to enhance wellness and studying wellness in isolation cannot say how to prevent ill-being. Moreover, recognition of positive in human experience suggests another etiological route based on the fact that absence of goods in people's lives may also affect why they become despondent. On the backdrop of these observations, researches into the causation of various psychological malaises should undergo a reorientation in terms of "how the presence of negative as well as the absence of positive work together to influence mental health". As alleviating the negative is not the end of recovery or curing.

In the area of adolescent counselling and psychotherapy for mental disorders, evaluation and diagnostic procedures should adapt the principle "absence of illness does not guarantee the wellness" into the system and all processes should be complemented with the assessment of quality of life. As, recovery will be complete only when there is engendering of an enduring positive quality life. The ultimate aim of all therapeutic efforts is restoration of quality of life marked by mastery, self-regard, purpose and quality relations.

6. Limitation of the Study

The selected sample for the study consisted normal students only. Inclusion of subjects from the pathological group would have enhanced the validity of observed result more.

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