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The Relationship between Basic Psychological Needs, Psychological Capital and Life Satisfaction Among University Students

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Abstract

Psychological capital (hope, optimism, resilience, self-efficacy) refers to the psychological capacity of an individual that can be assessed, enhanced, and effectively utilized to enhance performance. Self-determination theory posits existence of fundamental needs (autonomy, relatedness, competency need) that must be fulfilled to enhance psychological well-being and ensure wholesome development (Ryan and Deci 2000). Maladjustment and even psychopathology are said to occur when these demands are not met i.e., causing psychological needs frustration (Vansteenkiste and Ryan 2013). Life satisfaction can be interpreted as the summit of joy experienced across life domains (Salvatore and Mun˜oz Sastre, 2001). Our purpose of research was to find the relationship between basic psychological need satisfaction/frustration, compound psychological capital and satisfaction with life Satisfaction of university students. We collected data from 353 participants (university students). Basic Psychological need satisfaction and frustration scale (BPNSFS), compound psychological capital (CPC-12) and satisfaction with life scale was used for data collection. We found positively significant correlation between PsyCap (hope, optimism, resilience, self-efficacy) and life satisfaction. Our findings indicate that basic psychological need satisfaction is significantly and positively correlated with psychological capital and life satisfaction. While frustrating these needs is negatively correlated with PsyCap and life satisfaction (except for positive relationship of

autonomy frustration with hope, optimism, resilience, self-efficacy, life satisfaction and positive relationship between relatedness frustration and competence frustration with resilience).

Keywords: *Basic Psychological Needs, Psychological Capital, Life Satisfaction, University Students, Student Well-being*

Introduction:

Psychological Capital:

Luthans and his colleagues delineate PsyCap as the constructive psychological condition of personal growth, encompassing four advantageous psychological resources: self-efficacy, optimism, hope, and resilience. Based on Bandura's social cognitive theory (Bandura, 1997, 2012) the concept of self-efficacy pertains to an individual's belief in their capacity to effectively mobilize their motivation, cognitive abilities, and strategies to attain optimal performance levels (Stajkovic & Luthans, 1998). Individuals with a high level of optimism typically cultivate constructive anticipations that serve as a driving force in their pursuit of objectives and in their approach to challenging circumstances (Seligman, 1998). People who possess elevated levels of hope demonstrate increased motivation towards achieving their goals and are more inclined to demonstrate the ability to create different strategies to reach their objectives (Luthans, Avey, et al., 2008). Resilience pertains to an individual's capacity to recover from challenges, unpredictability, potential harm, or setbacks, and adjust to changing and demanding circumstances in life (Tugade & Fredrickson, 2004).

Life Satisfaction:

The literature on domains-of-life suggests that life can be viewed as a comprehensive construct encompassing various specific domains. Consequently, life satisfaction can be interpreted as the summit of joy experienced across these life domains (Salvatore and Mun˜oz Sastre, 2001). Flanagan (1978) identifies 15 key components, including economic well-being, physical health, relationships with family and friends, community involvement, and personal development.

Basic Psychological Needs:

Self-determination theory posits existence of fundamental needs that must be fulfilled to enhance psychological well-being and ensure wholesome development. These needs encompass competence, relatedness, and autonomy. Need for competence entails perception of efficacy in engaging with the surroundings, encountering opportunities to leverage one's capabilities, and handling challenging tasks (Ryan and Deci 2000). Relatedness pertains to sense of being interconnected with others, encompassing the act of relating to and nurturing others, feeling nurtured by them, and engaging with the broader social environment (Baumeister and Leary 1995). Autonomy need indicates individuals' aspirations to perceive their activities as self-selected and aligned with intrinsic interests, as well as to possess a say or influence in shaping their own behavior (Deci and Ryan 1985).

Literature review:

Psychological Needs and Psychological Capital:

If needs of students for autonomy, relatedness, and competence are fulfilled within educational setting, their levels of hope, efficacy, resilience, and optimism towards learning activities are likely to increase, thereby enhancing their academic performance. This assertion finds support in research highlighting those students tend to exhibit favorable academic results when social environment caters more towards their autonomy, competence, and relatedness requirements. Significant positive correlation between fundamental beliefs, basic psychological needs, and psychological capital of married women. Fulfillment of BPN for autonomy, competence, and relatedness contributes to well-being enhancement and reinforcement of inner resources linked

to resilience, while dissatisfaction in these domains elevates susceptibility to defense mechanisms and psychopathology (Deci & Ryan, 2000). By employing structural equation modeling, researchers computed both direct and indirect impacts. Findings revealed that academic PsyCap serves as a complete mediator in link between fulfillment of basic psychological needs and academic achievement. Consequently, students whose fundamental psychological needs are met at school tend to exhibit elevated levels of hope, efficacy, resilience, and optimism (PsyCap), leading to enhanced academic performance (Marcos, Carmona-Halty, Wilmar, Schaufeli., Susana, Llorens., Marisa, Salanova. 2019).

Psychological Needs and Life Satisfaction:

Regarding life satisfaction estimation, findings indicated that those who were women, had better levels of self-esteem, and satisfied their psychological needs were more satisfied with their lives. Results also indicated that, at different phases of life, psychological need fulfillment and self-esteem are equally significant determinants of life satisfaction. According to these findings, improving one's self-esteem and fundamental psychological requirements may be a first step in making positive adjustments in a person's level of life satisfaction (Butkovic, Tomas, Spanic, Vukasovic Hlupic & Bratko, 2020). A complete mediator between friendship quality and life happiness may also be found in satisfying of the needs for relatedness, competence, and autonomy. This discovery offers a different perspective on the connection between life pleasure and friendship quality (Fanny, Eka, Putri., Darmawan, Muttaqin. 2022).

Psychological Capital and Life Satisfaction:

Hope played a mediating role in connection between teacher-student relationships and life satisfaction in Chinese adolescents (Qian, Nie., Zhaojun, Teng., George, G., Bear., Cheng, Guo., Yanling, Liu., Dajun, Zhang. 2019). Sevari et al. identified a causal link between social support, hope, and life satisfaction, proposing that social support fosters hope and optimism, subsequently leading to increased life satisfaction (Karim, Sevari., Puneh, Pilram, Fatemeh, Farzadi. 2020). Significant and positive correlations have been established between PsyCap and life satisfaction (Sabaitytė, & Diržytė, 2016). Previous studies have connected PsyCap to overall human satisfaction. Notably, Luthans, Avolio, Avey, and Norman (2007) suggested a positive association between PsyCap and life satisfaction, with former being a superior determinant of the latter. Subsequent research by Youssef-Morgan and Luthans (2015) indicated that psychological capital can forecast satisfaction across vital life domains like work, relationships, and health.

Research Gap:

Despite existing literature on BPN satisfaction/frustration, PsyCap, and life satisfaction researches. There is a significant gap in understanding that previously researchers didn't find relationship between these variables altogether in same research. Also, they didn't use such diverse age limit of participants. We have used people age from below 20 to 50 years. Thus, we found satisfying/frustrating basic psychological needs and its effect on PsyCap and getting satisfaction in life.

Research Objectives

1. To find out relationship between BPN satisfaction (autonomy satisfaction, competence satisfaction and relatedness satisfaction) with PsyCap (hope, optimism, resilience, self-efficacy).
2. To find out relationship between basic PsyCap frustration (autonomy frustration, competence frustration and relatedness frustration) with PsyCap (hope, optimism, resilience, self-efficacy).

3. To find out relationship between BPN satisfaction (autonomy satisfaction, competence satisfaction and relatedness satisfaction) with life satisfaction.
4. To find out relationship between BPN frustration (autonomy satisfaction, competence satisfaction and relatedness satisfaction) with life satisfaction.
5. To find out relationship between PsyCap (hope, resilience, optimism and self-efficacy) with life satisfaction.
6. To find out that resilience (subscale of PsyCap) is mediator between autonomy satisfaction (subscale of BPN satisfaction) and life satisfaction.

Research Hypotheses

1. Hypothesis no.1 (There is a positive relationship between BPN (autonomy, relatedness, competency) satisfaction and PsyCap (hope, optimism, resilience, Self-efficacy)).
2. Hypothesis no.2 (There is a negative relationship between BPN (autonomy, relatedness, competency) Frustration and PsyCap (hope, optimism, resilience, Self-efficacy)).
3. Hypothesis no.3 (There is a positive relationship between BPN (autonomy, relatedness, competency) satisfaction and Life Satisfaction).
4. Hypothesis no.4 (There is a negative relationship between BPN (autonomy, relatedness, competency) Frustration and Life satisfaction).
5. Hypothesis no.5 (There is a positive relationship between PsyCap (hope, optimism, resilience, Self-efficacy) and Life satisfaction).
6. Hypothesis no.6 (resilience (subscale of PsyCap) is mediator between autonomy satisfaction (subscale of BPN satisfaction) and life satisfaction).

Research Design

In the present study, we used cross-sectional survey which is quantitative study. It consists of two stages. First, we did pilot study to check the reliability of our scale. Secondly, after checking the reliability of our pilot study through SPSS we continued data gathering.

Study was quantitative and correlational in nature.

Population and Sample

Population of this study was comprised of all enrolled university students in KPK of Pakistan. Convenience sampling method was used for sample recruitment. A total of 174 girls (49.3%) and 171 boys (48.4%) and missing 8 (2.3%) participated in this study. Majority of our sample students were 297 Undergraduate (84.1%) and 47 graduate students were (13.3%) and 9 students (2.5%) didn't mention their Study Program. 83(23.5%) participants were having age less than 20, 257(72.8%) were of age above 20 and 13(3.7%) didn't mention their age.

Instruments:

1. Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS).
2. Compound Psychological Capital (CPC-12)
3. Satisfaction With Life Scale

Data Collection Method

Data was obtained through a set of questionnaires and informed consent was attached in which we explain the purpose of study. Participant's right to decline to participate and to withdraw from the research, confidentiality for any information gathered. We collected data from enrolled students' different universities in KPK. Data were collected from 353 participants. They filled questionnaire through Google form by QR code and we told them to scan this code by Google lens and filled with honesty and told them to kindly share this linked with other students and class fellows. We also filled forms in hard copied forms.

Results:

Descriptive Analysis

Table 1

Study Participants Demographics Characteristics (N = 353)

Characteristics	Frequency	Percentage
Age		
≤ 20	83	23.5
≥ 21	257	72.8
Missing	13	3.7
Gender		
Male	171	48.4
Female	174	49.3
Missing	8	2.3
Marital Status		
Single	297	84.1
Married	42	11.9
Missing	14	4.0
Monthly Income		
< Rs.50,000	123	34.8
≥ Rs.50,000	221	62.6
Missing	9	2.5
Father Education		
≤ 10 Years	121	34.3
≥ 12 Years	223	63.2
Missing	9	2.5
Mother Education		
≤ 10 Years	227	64.3
≥ 12 Years	110	31.2
Missing	16	4.5
Education Program		
Undergraduate	297	84.1
Graduate	47	13.3
Missing	9	2.5

Table 1 shows Participant's Demographics Characteristics. Percentage of participants having age 20 or below was (23.5%) and the participants having age 21 or above was also (72.8%) and (3.7%) participants did not indicate their age. Percentage of Female participant were (49.3%) and male participant were (48.4%) and (2.3%) participant did mention their gender and so on.

Table 2

Frequency Distributions for the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS) (N = 353)

	Not True at All %	Slightly True %	Moderately True %	Very True %	Completely True %
BPNSFS1	3.4%	18.3%	24.6%	41.3%	12.3%
BPNSFS2	4.9%	18.9%	23.2%	41.3%	11.7%
BPNSFS3	4.3%	14.3%	17.5%	41.8%	22.1%
BPNSFS4	6.3%	12.9%	20.6%	43.0%	17.2%
BPNSFS5	5.7%	16.3%	29.2%	35.5%	13.2%
BPNSFS6	26.4%	24.7%	20.4%	18.1%	10.3%
BPNSFS7	33.6%	27.9%	13.5%	16.7%	8.3%
BPNSFS8	24.4%	28.2%	18.7%	18.4%	10.3%
BPNSFS9	12.1%	22.1%	19.0%	32.5%	14.4%
BPNSFS10	5.5%	12.6%	14.1%	43.1%	24.7%
BPNSFS11	4.6%	12.1%	17.5%	38.2%	27.6%
BPNSFS12	4.3%	13.0%	21.9%	40.1%	20.7%
BPNSFS13	40.8%	17.5%	20.7%	12.9%	8.0%
BPNSFS14	36.9%	19.3%	16.7%	20.5%	6.6%
BPNSFS15	56.3%	14.9%	13.2%	10.3%	5.2%
BPNSFS16	28.5%	28.0%	21.0%	13.5%	8.9%
BPNSFS17	4.0%	7.8%	15.0%	46.7%	26.5%
BPNSFS18	4.6%	9.5%	19.8%	43.1%	23.0%
BPNSFS19	2.3%	6.3%	15.6%	46.1%	29.7%
BPNSFS20	3.4%	15.5%	16.4%	38.5%	26.1%
BPNSFS21	25.1%	23.9%	21.3%	21.6%	8.1%
BPNSFS22	35.9%	27.6%	14.1%	16.1%	6.3%
BPNSFS23	51.3%	18.2%	10.4%	10.7%	9.5%
BPNSFS24	40.7%	20.9%	17.2%	12.9%	8.3%

Table 2 shows responses by percentage subscale of Basic Psychological need satisfaction and frustration scale (BPNSFS). Study participant responses on autonomy satisfaction (BPNSFS1 to BPNSFS 4) have mostly endorsed “very true”, “moderately true” and “completely true” because participants were relatively easily understanding all these items and so on.

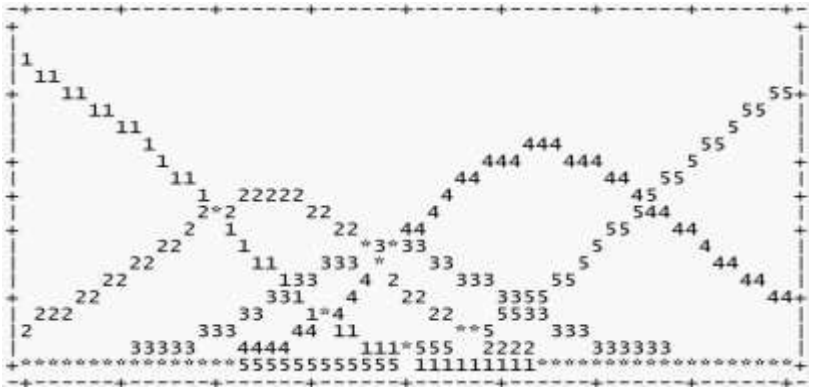

Figure 1 Probability curve for the autonomy satisfaction subscale

Figure 1 shows good curve for category 1, 2, 4, and 5 but 3 is overlapping so we should collapse 3 with category 2. Hence categories should be “Not True at All (1), Moderately True (2), Very True (3) and Completely True (4).

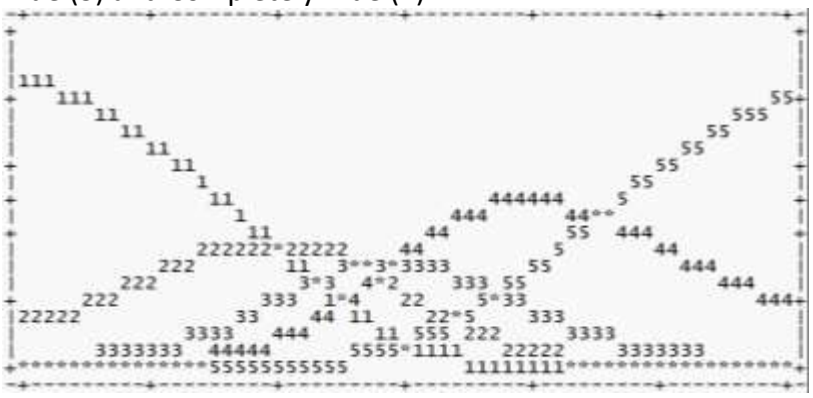

Figure 2 Probability curve for the autonomy frustration subscale

Figure 2 shows good curve for category 1, 2, 4, and 5 but 3 is overlapping so we should collapse 3 with category 2. Hence categories should be “Not True at All (1), Moderately True (2), Very True (3) and Completely True (4).

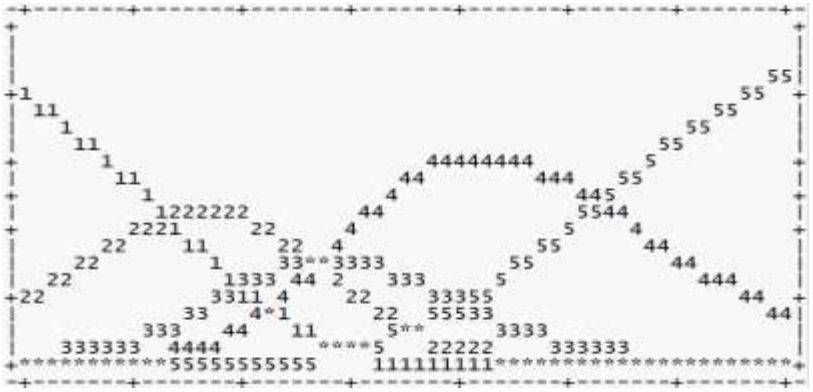

Figure 3 Probability curve for the relatedness satisfaction subscale

Figure 3 shows good curve for category 1, 2, 4, and 5 but 3 is overlapping so we should collapse 3 with category 2. Hence categories should be “Not True at All (1), Moderately True (2), Very True (3) and Completely True (4).

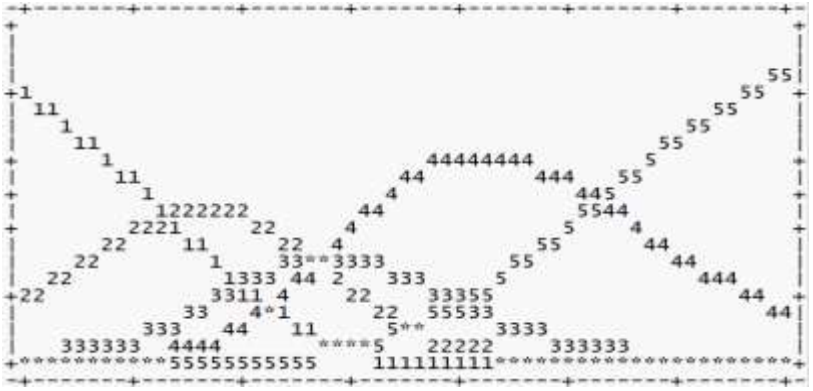

Figure 4 Probability curve for the relatedness frustration subscale

Figure 4 shows good curve for category 1, 2, 4, and 5 but 3 is overlapping so we should collapse 3 with category 2. Hence categories should be “Not True at All (1), Moderately True (2), Very True (3) and Completely True (4).

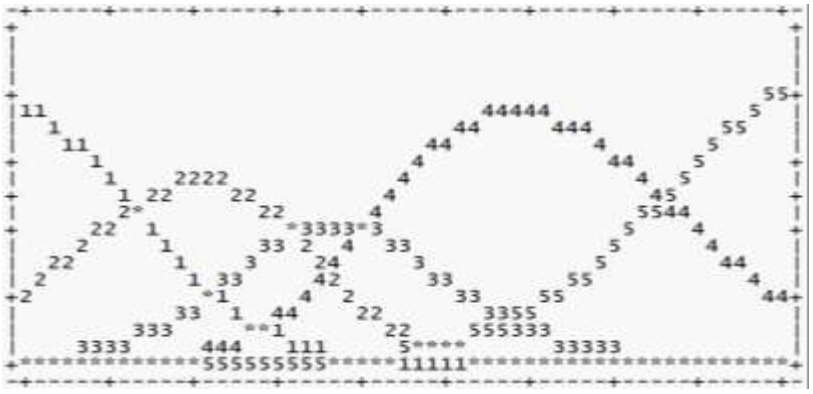

Figure 5 Probability curve for the competence satisfaction subscale

Figure 5 shows all categories having a separate curve so there no need to collapse.

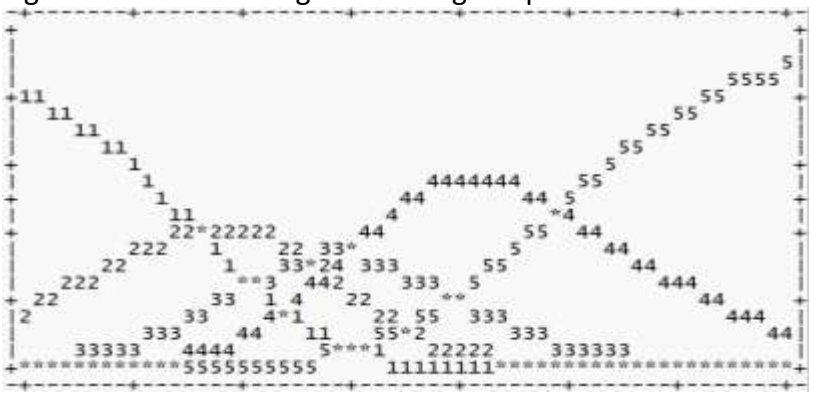

Figure 6 Probability curve for the competence frustration subscale

Figure 6 shows good curve for category 1, 2, 4, and 5 but 3 is overlapping so we should collapse 3 with category 2. Hence categories should be "Not True at All (1), Moderately True (2), Very True (3) and Completely True (4).

Table 3

Frequency Distributions for the Compound PsyCap Scale (CPC-12) (N = 353)

	Strongly Disagree %	Disagree %	Somewhat Disagree %	Somewhat Agree %	Agree %	Strongly Agree %
CPC1	4.6%	11.8%	5.8%	14.1%	47.8%	15.9%
CPC2	4.1%	6.4%	9.3%	33.7%	31.4%	15.1%
CPC3	3.5%	3.8%	7.5%	21.7%	42.0%	21.4%
CPC4	2.9%	4.6%	9.3%	17.7%	39.4%	26.1%
CPC5	3.5%	3.2%	6.7%	23.2%	38.6%	24.9%
CPC6	2.3%	4.4%	7.0%	22.1%	36.0%	28.2%
CPC7	3.2%	8.4%	14.2%	26.4%	33.9%	13.9%
CPC8	3.2%	4.1%	9.9%	23.0%	42.2%	17.7%
CPC9	3.5%	3.8%	11.0%	13.9%	43.9%	24.0%
CPC10	2.9%	4.7%	10.8%	20.6%	39.8%	21.2%
CPC11	4.1%	3.8%	5.5%	13.6%	48.7%	24.3%
CPC12	3.5%	8.4%	7.8%	25.8%	28.7%	25.8%

Table 3 Shows responses by percentage subscale of Compound Psychological Capital (CPC). Study participant responses on Hope (CPC1 to CPC3) have mostly endorsed "somewhat agree", "agree" and "strongly agree because participant relatively easily understanding all these items and so on.

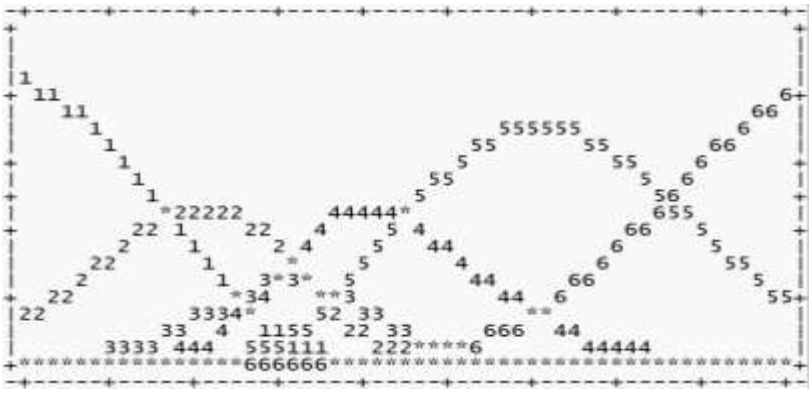

Figure 7 Probability curve for the hope subscale

Figure 7 shows good curve for categories 1, 2, 4, 5, and 6 but category 3 is overlapping mostly with category 4. Hence, we should make categories like “Strongly Disagree (1), Somewhat Disagree (2), Neutral (3), Somewhat agree (4), Strongly Agree (5). We should collapse 3 and 4.

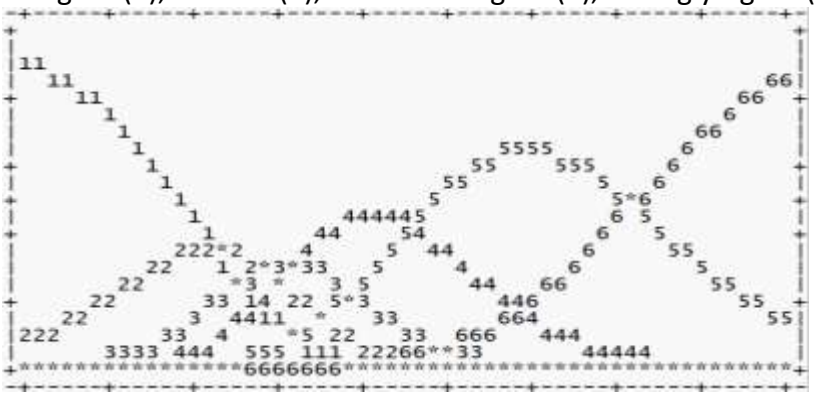

Figure 8 Probability curve for the optimism subscale

Figure 8 shows good curve for categories 1, 2, 5, and 6 but category 3 is overlapping mostly with category 2 and 4. Hence we should make categories like “Strongly Disagree (1), Somewhat Disagree (2), Somewhat agree (3), Strongly Agree (4). We should collapse category 2, 3 and 4.

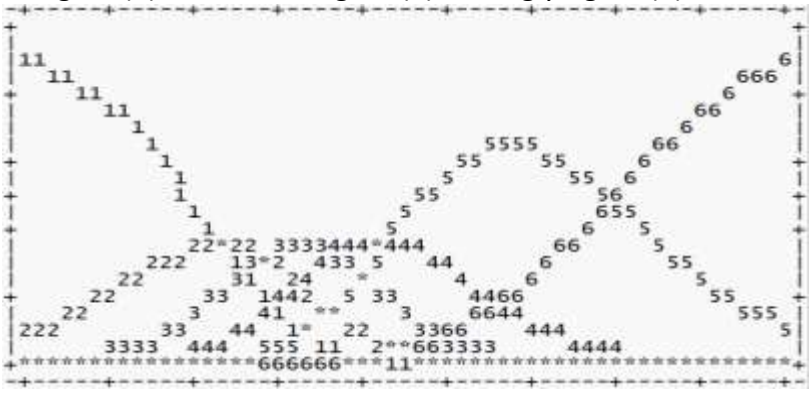

Figure 9 Probability curve for the resilience subscale

Figure 9 shows good curve for categories 1, 2, 5, and 6 but category 3 is overlapping mostly with category 2 and 4. Hence we should make categories like “Strongly Disagree (1), Somewhat Disagree (2), Somewhat agree (3), Strongly Agree (4). We should collapse category 2, 3 and 4.

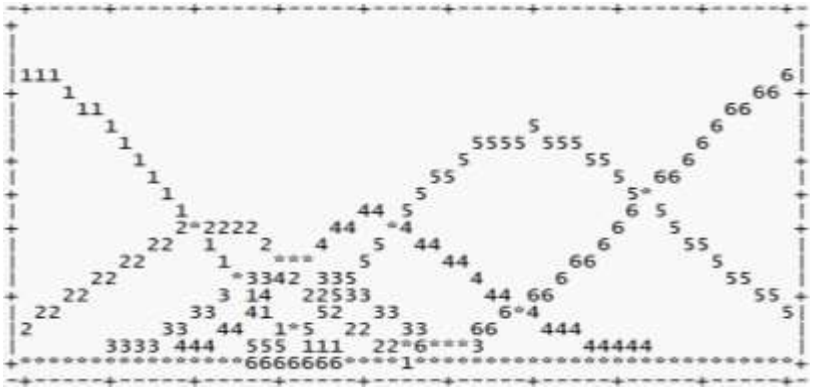

Figure 10 Probability curve for the self-efficacy subscale

Figure 10 shows good curve for categories 1, 2, 4, 5, and 6 but category 3 is overlapping mostly with category 4. Hence, we should make categories like "Strongly Disagree (1), Somewhat Disagree (2), Neutral (3), Somewhat agree (4), Strongly Agree (5). We should collapse 3 and 4.

Table 4

Frequency Distributions for the Satisfaction with Life Scale (SWLS) (N = 353)

	Strongly Disagree %	Disagree %	Slightly Disagree %	Neutral %	Slightly Agree %	Agree %	Strongly Agree %
SWLS1	3.8%	6.7%	8.7%	23.5%	16.5%	33.0%	7.8%
SWLS2	2.0%	3.8%	6.6%	19.7%	23.7%	28.0%	16.2%
SWLS3	1.4%	2.3%	6.4%	9.5%	14.2%	31.8%	34.4%
SWLS4	3.5%	4.9%	4.9%	13.6%	23.4%	31.8%	17.9%
SWLS5	5.5%	14.2%	10.7%	17.3%	19.4%	19.9%	13.0%

Table 4 Shows responses by percentage of Satisfaction with Life Scale (SWLS). Study participant responses on SWLS1and SWLS2 have mostly endorsed "agree" because participants were relatively easily understanding all these items and so on.

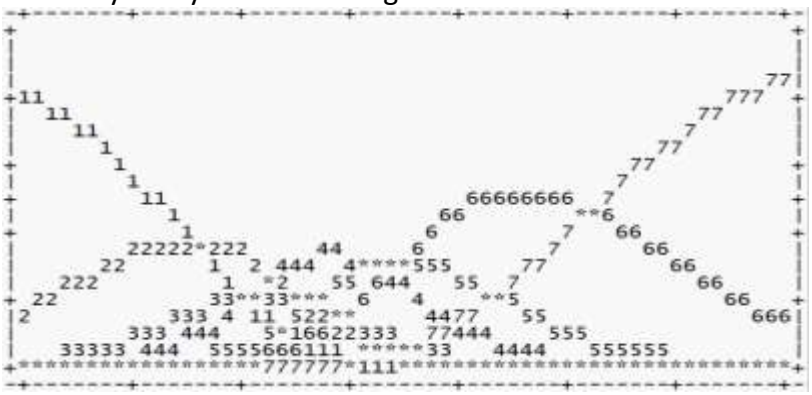

Figure 11 Probability curve for the Satisfaction with Life Scale

Figure 11 shows good curve for categories 1, 2, 6 and 7 have good separate loops but categories 3, 4 and 5 are overlapping. Hence categories should be "strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). We should collapse categories 3 with 4 and 5 with 6.

Table 5

Descriptive Statistics and Reliability Coefficients of Instruments Used in the Study (N = 353)

							Range	
Measure	Items	*M*	*SD*	α	Skewness	Kurtosis	Actual	Potential
BPNSFS	24							
AS	4	13.92	3.003	.64	-.39	-.25	6-20	4-28
AF	4	10.96	3.372	.58	.51	-.24	4-20	4-28
RS	4	14.17	3.369	.71	-.35	-.38	4-20	4-28
RF	4	9.11	3.961	.76	.55	-.45	4-20	4-28
CS	4	15.20	3.407	.83	-.83	.59	4-20	4-28
CF	4	9.30	4.276	.83	.69	-.23	4-20	4-28
CPC-12	12							
HO	3	13.26	3.122	.74	-.99	.88	3-18	3-18
OP	3	13.99	2.988	.74	-1.04	1.27	3-18	3-18
RE	3	13.35	2.853	.65	-.89	.95	4-18	3-18
SE	3	13.71	3.151	.76	-1.01	1.01	3-18	3-18
SWLS	5	25.07	5.605	.77	-.47	-.08	8-35	5-35

Note. BPNSFS = Basic Psychological Need Satisfaction and Frustration Scale; AS = Autonomy Satisfaction; AF = Autonomy Frustration; RS = Relatedness Satisfaction; RF = Relatedness Frustration; CS = Competence Satisfaction; CF = Competence Frustration; CPC-12 = Compound PsyCap Scale; HO = Hope; OP = Optimism; RE = Resilience; SE = Self-Efficacy; SWLS = Satisfaction with Life Scale.

Table 5 shows Descriptive Statistics and Reliability Coefficients of Instruments Used in the Study. In Basic Psychological Need Satisfaction Frustration Scale (BPNSFS) which consist of 6 subscales. Reliability coefficients ranged from .58 to .83. In Compound Psychological Capital (CPC), which consist of 4 subscales. Reliability coefficients ranged from .65 to .77. In Satisfaction with Life Scale (SWLS), Reliability coefficients is .77.

Correlation Analysis

Correlations among Scores on Study Variables (N = 353)

Variable	1	2	3	4	5	6	7	8	9	10	11
1.AS	--										
2.AF	.12*	--									
3.RS	.48**	.19**	--								
4.RF	-.01	.49**	.00	--							
5.CS	.50**	.23**	.53**	.04	--						
6.CF	-.08	.54**	.04	.63**	-.07	--					
7.HO	.42**	.11*	.45**	-.13*	.59**	-.22**	--				
8.OP	.40**	.15**	.46**	-.19**	.52**	-.11*	.64**	--			
9.RE	.27**	.32**	.36**	.12*	.42**	.12*	.47**	.55**	--		
10.SE	.42**	.18**	.44**	-.12*	.61**	-.11*	.66**	.62**	.55**	--	
11.SWLS	.45**	.00	.41**	-.13*	.47**	-.18**	.56**	.48**	.39**	.60**	--

Note. AS = Autonomy Satisfaction; AF = Autonomy Frustration; RS = Relatedness Satisfaction; RF = Relatedness Frustration; CS = Competence Satisfaction; CF = Competence Frustration; HO = Hope; OP = Optimism; RE = Resilience; SE = Self-Efficacy; SWLS = Satisfaction with Life Scale.
*$p < .05$, **$p < .01$.

Above table shows correlations among scores on study variables. Hypothesis no. 1(supported): we found autonomy satisfaction and hope was positively significant (r = .42), autonomy satisfaction and optimism were positively significant (r = .40) and so on. Hypothesis no. 2(not supported except for some variables), we found relationship between autonomy frustration and hope was positively significant (r =.11), autonomy frustration and optimism were positively significant (r =.15) and so on.

Hypothesis no. 3 (supported), we found relationship between life satisfaction with autonomy satisfaction was positively significant (r = .45), life satisfaction with relatedness satisfaction was positively significant (r = .41), life satisfaction with competence satisfaction was positively significant (r = .47).

Hypothesis no.4(supported): life satisfaction with autonomy frustration was positively non-significant (r = .00), life satisfaction with relatedness frustration was negatively significant (r = -.13), life satisfaction with competence frustration was negatively significant (r = -.18).

Hypothesis no. 5(supported): life satisfaction with hope was positively significant (r = .56), life satisfaction with optimism was positively significant (r = .48), life satisfaction with resilience was positively significant (r = .39), life satisfaction with self-efficacy was positively significant (r = .60).

Results revealed that relationship of autonomy satisfaction and hope was positively significant (r = .42), autonomy satisfaction and optimism was positively significant (r = .40) and so on. Thus, our hypothesis no. 1(positive relationship between basic psychological need satisfaction and psychological capital) is supported.

Similarly, we found relationship between autonomy frustration and hope was positively significant (r =.11), and so on. Thus, our hypothesis no. 2(negative relationship between basic psychological need frustration and psychological capital) is not truly supported because 6 out of 11 relationships are positive.

Furthermore, our hypothesis no. 3 (positive relationship between life satisfaction and Basic psychological need satisfaction) is supported. we found relationship between life satisfaction with autonomy satisfaction was positively significant (r = .45), and so on.

Life satisfaction with autonomy frustration was positively non-significant (r = .00), life satisfaction with relatedness frustration was negatively significant (r = -.13), life satisfaction with competence frustration was negatively significant (r = -.18). Thus, our hypothesis no. 4(negative relationship of life satisfaction and basic psychological need frustration) is supported except for positive relationship between life satisfaction and autonomy frustration.

Our hypothesis no. 5(positive relationship of life satisfaction and psychological capital) is supported.Life satisfaction with hope was positively significant (r = .56), life satisfaction with optimism was positively significant (r = .48) and so on.

Mediation Analysis

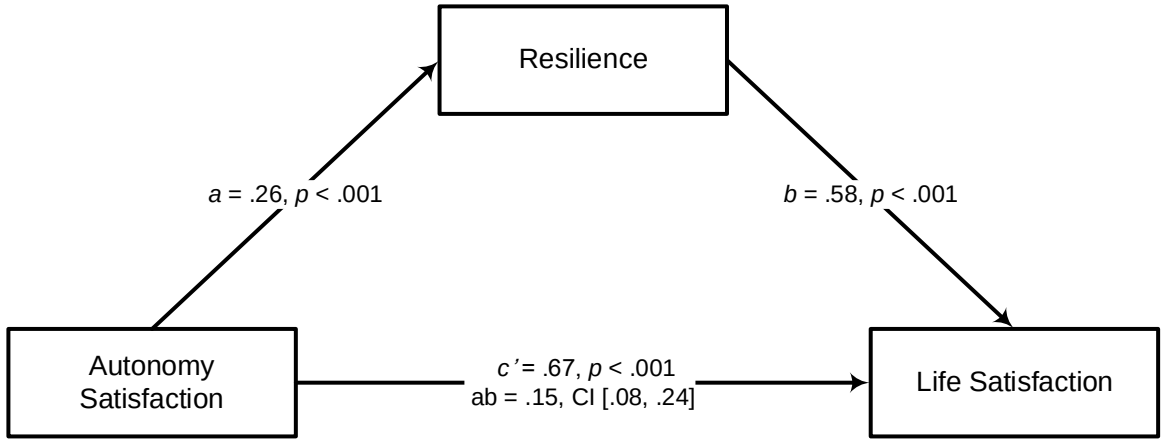

Figure 12 Resilience as mediator between the relation of autonomy satisfaction and life satisfaction.

Figure 12 shows the results of the mediation path analysis. The model shows that autonomy satisfaction indirectly influences life satisfaction through its effect on resilience (ab =.15, CI [.08, .24]). In essence, high level of autonomy satisfaction led to high level of resilience (a = .26, p < .001) and high level of resilience led to high level of life satisfaction (b = .58, p < .001). There is also evidence that autonomy satisfaction influenced life satisfaction independently (c' = .67, p < .001).

Discussion:

This study investigated relationship of basic psychological needs (autonomy, relatedness, competency) satisfaction and frustration, PsyCap (hope, optimism, resilience, self-efficacy) and life satisfaction in university students enrolled in KPK universities. Our findings indicate that basic psychological need satisfaction is significantly and positively correlated with psychological capital and life satisfaction. While frustrating these needs is negatively correlated with PsyCap and life satisfaction (except for positive relationship of autonomy frustration with hope, optimism, resilience, self-efficacy; relatedness frustration and competence frustration with resilience; Life satisfaction with autonomy frustration). These results align with previous researches i.e., PsyCap demonstrated a positive correlation with autonomy, competence, and relatedness. This indicates that an increase in individuals' PsyCap levels was associated with higher levels of satisfaction of BPN, psychological well-being, and performance among actors and stunt performers. (Hite, Brian, 2015). BPN satisfaction mediates increased life satisfaction of voluntary simplifiers (Stacey, Ann, Rich, Sharon, Hanna, Bradley, Wright. 2017). A person's perceived autonomy has a positive correlation with their level of life satisfaction (Steckermeier, 2021). Children's academic self-concepts subjective assessments of one's academic competence variably differ from their life satisfactions (Gilman, & Laughlin, 1999). Significant and positive correlations have been established between PsyCap and life satisfaction (Sabaitytė, & Diržytė 2016).

This study is demonstrated that if students get satisfied with their basic psychological needs and having increased PsyCap (more hope, resilience, optimism and self-efficacy) than they will have high level of life satisfaction thus success in their academics.

However, this study is limited by its small sample sized and not considering cultural influence. But our main area of research was to find relationship between BPN satisfaction/frustration, PsyCap and life satisfaction in university students enrolled in KPK universities. For further study

we recommend to find this relationship among variables across separate cultures and on find other mediators with effects their relationships.

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