

## Development and Validation of Adjustment Problem Scale for College/University Students

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The present study aims to identify the phenomenology of adjustment problems in college/university students. To achieve this objective, the study comprised three phases. In phase I, phenomenology of adjustment problems was explored through semi structured interviews with campus counsellors and students (N= 8). Three focus groups (N=16) were conducted to generate comprehensive pool of item. Reported problems were compiled in the form of list. Content validity of Adjustment Problem Scale (APS) was established through experts' (campus counsellors and senior educationists) ratings (N=10). Pilot study was conducted on student sample (N=50) to check the ease of understanding. In phase II, construct validity was established through factor analysis (N=362). Four factors emerged and were named as Interactional Problems, Educational Problems, Fear of being Ridiculed and Psychological/Personal Problems with alpha coefficients of .86, .78, .80 and .70 respectively. In Phase III, psychometric properties of APS were established (N=200). Convergent validity of APS was determined with College Adjustment Test (Hasan & Kazmi, 2014) ( $r=.46, p<.01$ ). Discriminant validity of APS was established with Psychological Resilience Scale (Jawahir & Kazmi, 2013) ( $r=-.21, p<.01$ ). Test retest reliability (N=100) was significant ( $r=.91, p<.01$ ) with two weeks interval. APS is a reliable and valid tool for assessing adjustment problems of college/university students in Pakistan.

*Key words:* phenomenology, adjustment and resilience.

The transition from school to college is a major event in the lives of students. School settings provide students familiar learning environment in which they have a grip over academic work. Whereas in college/university environment, students have to face academic/personal growth challenges on daily basis. These include choosing field of study/ selection of subjects from wide variety while personal growth challenges include meeting new people, making new friendship, time management skills, presentation skills etc. (Calaguas, 2011). As the demands of college/university increases and students face difficulty in meeting or adjusting to these demands. Eventually this condition leads to many adjustment problems. In many countries, if maladjustment persists this will ultimately lead to college/university drop out from university program (Toews & Yazedjian, 2007).

Ayele (2012) identified many dimensions of adjustment problems e.g., personal, academic, emotional, environmental and instructor related dimensions. In college/university, academic demands increase and new relations are established. Students who cope with academic stress and have high academic achievement, they have less adjustment problems as compared to those students who have low academic achievement (Sangeeta & Chirag, 2012). Zimmermann (2008) noted that college adjustment is critical for success in academics and there is a positive correlation between poor college adjustment and poor grades in academic area. Another research examined the role of academic stress on the mental health of students. It was revealed that if a student is unable to cope with academic stress, this condition will eventually leads to serious psychological and emotional issues. It was revealed that there is

negative correlation among academic stress, depression and support from family and friends (MacGeorge, Samter & Gillikan, 2005).

In personal dimension, isolation can also be another significant issue that some college freshmen face. According to Liu (2009) isolation can be a part of the difficult transitional adjustment process. If a student does not make a connection to the university campus and make friends, he/she will most likely drop out of school due to lack of involvement and lack of friends. This isolation may lead to many negative emotions e.g., stress, anxiety and depression. The more the individual is well adjusted in different dimensions of adjustment, the less the ratio of negative emotions (Nyamayaro & Saravanan, 2013). It is also proved through research that there is a strong relationship between adjustment problems and negative emotions (Kaur, 2012; Landow, 2006).

The skills that are required to cope with these psychological problems are called resilience. And it is defined as the cognitive ability of an individual to keep him/herself away from psychopathology (Tugade, Fredrickson & Barrett, 2004). It is a perception of inner strength that allows an individual to recover from any trauma and return to previous level of functioning (Steinhardt & Dolbier, 2008). It is proved through research that mature/senior students are more resilient and have better coping (McLafferty, Mallett, & McCauley, 2012). Those students who are resilient have more adaptive skills. They have the ability to convert stressors into better learning prospects. Campbell-Sills, Cohan and Stein (2006) suggested that resilience has a positive correlation with task oriented coping. Wilks (2008) identified academic stress has a negative relationship with resilience and social support. The more resilient an individual is and has more social support, there is lower academic stress.

It is concluded that the assessment of adjustment is a vital problem. But unluckily, there is no indigenous scale available with having sound psychometric properties. There are some western scales commonly used in previous researches for the assessment of adjustment problems e.g., the Student Adaptation to College Questionnaire (Baker & Stryk, 1989) and College Adjustment Test

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(Pennebaker, 2013). But both of these scales do not capture the exact picture of our society as we follow certain customs and traditions which are different from west. Secondly in our culture, women have limited liberty to express their emotions in front of men. So there is imperative need to develop culturally relevant tool with adequate psychometric properties.

### Significance of the study

This research will help campus counselors/university administrators to assess the frequency and intensity of adjustment problems among newly enrolled students. This will ultimately help to devise management plans for students having adjustment problems.

### Method

The present study aimed to identify the nature of adjustment problems and sort out the prevalence of psychosocial factors of adjustment problems in university students. The study comprised three phases. In phase I, steps of development of Adjustment Problem Scale (APS) are discussed. Phase II is based on the establishment of construct validity through factor analysis while phase III is based on the development of psychometric properties of APS. Phase I included the following steps:

#### Phase I: Identification of the Phenomenology of Adjustment Problems

Phenomenology of adjustment problems was identified through semi structured interviews and focus groups with the students. The explanation of these sources is as follows:

*Step I: semi structured interview.* Semi structured interviews were conducted to elicit the nature of adjustment problems. For this purpose, prior permission was taken from the concerned authorities. Convenient random sampling strategy was used for sample selection. The sample was selected from two different public and private sector colleges/universities (N=4) with equal number of both genders. Among four (4) participants, two (2) were experienced campus counselors with the age range of 30-40 years ( $M=35.1$ ,  $SD=1.58$ ) and two students were with the age range between 15-25 years ( $M = 18.99$ ,  $SD = 2.96$ ). Focus of the semi structured interviews was on identifying the nature of adjustment problems. Each participant was individually interviewed and interview was audio taped for transcribing and analyzing of data.

*Focus groups.* Three separate focus groups were conducted with men, women and mixed group of college/university students. The purpose of conducting separate focus groups is to generate comprehensive pool of items. Written consent was taken from the participants for their participation and for audio recording. Convenient random sampling strategy was used for the selection of participants from two public and private sector colleges/universities. Newly registered students from 1<sup>st</sup> year to M.Phil/MS level were taken with the age range of 15-25 years ( $M = 20.4$ ,  $SD = 1.30$ ). Participants were allowed and encouraged to share their experiences regarding transition from school to college. Focus was given on the nature of adjustment problems. Initially two separate lists were developed for both genders but it was observed by looking critically to both lists that there is no significant difference between the reported adjustment problems of both genders. Afterwards, final list

of 65 adjustment problems were assembled in list form and overlapping issues, dubious and vague items were excluded from the list.

*Step II: empirical validation.* In this step, Adjustment Problems list was sent to 10 campus counselors/clinical psychologists/administrators of student affairs with having at least 5 years of experience. These experts were asked to rate each item on the basis of its construct, clarity of the statement and readability. For this purpose, 3 point rating scale (0-2 point) was used (0=not at all relevant and 2=completely relevant) for each domain separately. Frequency table was made according to experts rating. The items having above 50% frequency were retained in the list and remaining less frequency items were excluded. Some of the items (3) were rephrased on the recommendation of experts for the better conceptual understanding of students. Finally 62 items were retained in the list and transformed into a self-report measure with 5point rating scale for each item.

*Step III: pilot study.* The items of Adjustment problems list was compiled in the form of 5 point likert type rating scale (0= not at all and 4=completely agree). Face validity was established through pilot study (N=50). Purposive sampling was used for selection of participants and their age range was 15-25 years ( $M = 18.54$ ,  $SD = 2.01$ ). Students of 1<sup>st</sup> year, BS (semester I & II) and MS were selected with equal representation of both genders. Students did not report any ambiguity in items and 62 items were retained in the final version of APS.

#### Phase II: Establishing Construct Validity through Factor Analysis

Construct validity of APS was established on a sample (N= 362).

Purposive sampling strategy was used. Newly enrolled students from 1<sup>st</sup> year, BS (Hons) and MS/M.Phil were taken (N=362) from public and private sector colleges/universities. Their age range was 15-25 years ( $M = 18.51$ ,  $SD = 2.56$ ). Male students were 45% while female students were 55%. Majority of students were from private sector college/universities 61.2% and 38.8% were from government sector college/universities. Intermediate part I students were 55.1%, BS (Hons) students were 24% and MS/M.Phil students were 20.9%. Majority of students were from natural sciences group 62.3%, from commerce group 20% and 14.6 were from social sciences.

#### Procedure

Permission from the higher authorities of the colleges/universities was taken and then students were selected by purposive sampling strategy (N=362). Adequate information regarding the purpose and aim of the study was given to participants. Written informed consent was taken, indigenously developed Adjustment Problem Scale (APS) was administered on the sample (N=362) of public and private sector colleges/universities. Instructions of the scale were clearly written and also verbally explained to participants as they have to rate each item that best describes their problem on a five point rating scale. Afterwards, researcher thanked the respondents.

#### Phase III: Establishing Psychometric Properties

Psychometric properties such as convergent validity, discriminant validity (N=200) and test retest reliability (N=100) were explored in this section with a new set of sample.

For convergent and discriminant validity, two hundred students (F.A, BS and MS) were selected by using purposive sampling strategy from four different public and private sector colleges and universities. Their age range was between 15-25 years ( $M=18.62$ ,  $SD=3.4$ ). Female students were 57.1% while male students were 42.9%. Intermediate part I students were 30.5%, BS (Hons) students were 42.1% while MS students were 27.4%. Natural sciences students were 28.2%, social sciences students were 44.4% while commerce group students were 27.4%. For test retest reliability, same sample ( $N=100$ ) was again approached ( $M=18.50$ ,  $SD= 2.94$ ) after 2 week interval.

## Variables and Measures

The variables and measures of this study are as follows.

### Adjustment Problem Scale (APS).

An indigenously developed scale in first II phases of this study was administered on college/university students. It's a 56 items 5 point rating scale ranging from 0 (strongly disagree) to 4 (strongly agree). It includes four subscale e.g., interactional problems, educational problems, fear of being ridiculed and psychological/personal problems.

### Psychological Resilience Scale (PRS).

Urdu translated version of Psychological Resilience Scale (Jawahir & Kazmi, 2013) was used. It was developed by Windle, Markland and Woods (2008). This scale comprised three subscales which are self esteem, interpersonal control and personal competence/efficacy. These subscales were derived from Rosenberg Self Esteem scale, Paulhaus Spheres of Control and Wagnild and Young Resilience Scale respectively. It consists of 19 items using a 5 point Likert rating from 1 (Strongly disagree) to 5 (Strongly agree). The reliability of final scale is .83. The alpha coefficient of Urdu translated scale was .89 respectively (Jawahir & Kazmi, 2014)

### College Adjustment Test (CAT).

Urdu translated version of CAT (Hasan and Kazmi, 2014) was used. It was developed by Pennebaker (1990) that assesses inhibition-confrontation models that are required for coping in relation to college adjustment. It is based on 19 items that measures the students' experiences and feelings about coming to college during the last week. Its internal consistency is .79; test-retest is .65. 1 item of this scale was excluded with the permission of original author due to its no relevance with present research. Three stable factors have emerged that tap general negative affect, positive affect or optimism, and home sickness.

## Procedure

Permission from the higher authorities of the colleges/universities was taken and students were selected by purposive sampling strategy. Information about the aim and purpose of study was briefed to participants. Written informed consent was taken, Adjustment Problem Scale along with Psychological Resilience Scale and College Adjustment Test was administered on the sample

( $N=200$ ) of public and private sector colleges/universities. Test retest reliability ( $N=100$ ) was found out after 2week interval by approaching the same sample. Afterwards, researcher thanked the respondents.

## Statistical Analysis

SPSS version 21 was used for the analysis of data. Factor analysis was done to find out the emerging factors of APS along with alpha coefficient of APS. Psychometric properties (convergent, discriminant and test retest) were established.

## Results

**Phase II: Factor analysis.** The construct validity was explored through factor analysis by using principal component analysis with varimax rotation. The main assumption to use varimax rotation is to enhance the interpretability and variance of factors (Kahn, 2006).

Kaiser, 1974; Kim and Mueller, 1978; Kline, 1994 criteria was followed to determine the number of factors. The best picture emerged in four factor solution. Table 1 shows that 56 items emerged in four factors with having minimum .30 loading. While remaining six items were excluded. These factors were named as Interactional Problems, Educational Problems, Fear of being Ridiculed and Psychological/Personal Problems.

Table 2 shows that APS along with its subscales has significant Cronbach's alpha. This shows significant internal consistency of the scale and its subscales.

Table 3 depicts APS has significant positive correlation with its subscales e.g., .91, .76, .66 and .61 which shows the homogeneity of the construct.

Table 4 represents the item total correlation of APS. It shows that all the items of APS are significantly correlated with total score which shows the internal consistency of APS.

**Phase III: Psychometric properties.** Table 5 shows that the scores of APS and College adjustment test (CAT) are positively correlated ( $r=.46$ ,  $p<0.1$ ) which shows that both scales measure the same construct. While scores of APS and Psychological resilience scale (PR) shows inverse correlation ( $r=-.21$ ,  $p<.01$ ) which shows that both scales measure two different constructs.

Test retest reliability of APS was established with 2 weeks interval and was significant which reflects significant internal consistency of APS ( $r=.91$ ,  $p>0.1$ ).

Table 1  
*Factor Loadings of Adjustment Problems Scale on Four Factors Solution (N = 362)*

Factor Loadings		I	II	III	IV
S.N	No.of Items	Interactional Problems	Educational Problems	Fear of being ridiculed	Psychological/Personal Problems
1	1	.14	<b>.53</b>	.04	.15
2	2	<b>.37</b>	.25	-.20	.07
3	3	<b>.43</b>	.24	-.06	.05
4	4	.15	<b>.49</b>	.12	.02
5	5	<b>.31</b>	<b>.33</b>	.04	-.06
6	6	<b>.38</b>	<b>.41</b>	.01	.15
7	8	<b>.35</b>	<b>.30</b>	.15	-.10
8	9	.18	<b>.48</b>	.04	-.27
9	10	<b>.47</b>	.15	.21	-.14
10	11	<b>.34</b>	<b>.37</b>	.04	.03
11	12	.26	.11	<b>.37</b>	.07
12	13	<b>.55</b>	.20	.16	.02
13	14	<b>.59</b>	.20	.23	.11
14	15	<b>.37</b>	<b>.33</b>	.06	.01
15	16	<b>.36</b>	.12	.06	.12
16	17	.07	.00	.16	<b>.42</b>
17	19	<b>.55</b>	.12	.08	.11
18	20	<b>.44</b>	.23	-.05	.16
19	21	.11	<b>.42</b>	-.00	-.04
20	23	<b>.30</b>	<b>.32</b>	.00	-.04
21	24	<b>.55</b>	.14	<b>.32</b>	.00
22	25	<b>.32</b>	.27	.12	.07
23	26	<b>.41</b>	.24	.16	.03
24	27	<b>.45</b>	.14	<b>.39</b>	.13
25	28	<b>.36</b>	.10	.26	<b>.37</b>
26	29	<b>.58</b>	-.05	.09	.09
27	30	<b>.51</b>	.09	.15	<b>.31</b>
28	31	<b>.63</b>	.07	.10	.14
29	32	<b>.59</b>	-.06	.03	.21
30	33	<b>.39</b>	.05	.13	.20
31	34	<b>.54</b>	.10	.04	.08
32	35	<b>.32</b>	<b>.32</b>	.01	.22
33	36	<b>.32</b>	.02	-.06	.08
34	37	.20	-.03	.03	<b>.53</b>
35	38	.16	-.01	.09	<b>.47</b>
36	39	.29	.12	.16	<b>.44</b>
37	40	.00	.09	-.05	<b>.67</b>
38	41	.07	.09	-.05	<b>.67</b>
39	42	.20	<b>.31</b>	.28	.12
40	43	.03	<b>.46</b>	-.23	.05
41	45	<b>.47</b>	.10	.22	.03
42	46	<b>.44</b>	.11	.32	-.00
43	47	.20	<b>.54</b>	.23	-.03
44	48	.07	<b>.61</b>	-.00	.09
45	49	.04	<b>.43</b>	.34	.06
46	50	-.07	<b>.44</b>	.19	.20
47	51	-.14	<b>.44</b>	-.04	.31
48	52	-.03	<b>.34</b>	.21	.18
49	53	-.03	.25	<b>.58</b>	.07
50	54	.18	.13	<b>.61</b>	.20
51	55	.36	.04	<b>.65</b>	.20
52	56	.37	.06	<b>.60</b>	.21
53	57	.36	.10	<b>.45</b>	.21
54	58	<b>.36</b>	.16	.23	.22
55	61	.09	.03	.15	<b>.35</b>
56	62	.03	-.00	.14	<b>.41</b>
Eigen Values		11.24	2.74	2.36	2.01
Variance		18.14	4.42	3.81	3.25
Cumulative Percentage		18.14	22.56	26.37	29.63

Note. The items having factor loadings of .30 and greater are given in boldface.

Table 2

*Alpha Coefficients of Adjustment Problem Scale (APS) along with Subscales (N = 362)*

S. No.	Scales	K	$\alpha$	Range	
				Potential min-max	Actual min-max
I	APQ	56	.91	0-224	28-224
II	Interactional Problems	25	.86	0-100	4-100
III	Educational Problems	16	.78	0-64	8-64
IV	Fear of being Ridiculed	6	.80	0-24	3-24
V	Psychological/Personal Problems	9	.70	0-36	2-36

Note. K=no of items,  $\alpha$ =Cronbach's alpha

Table 3

*Correlations among APS and its subscales (N = 362)*

Subscales	1	2	3	4	5	M	SD
1.APQ	—	.91**	.76**	.66**	.61**	138.56	28.90
2. Interactional problems		—	.57**	.54**	.43**	54.14	15.36
3. Educational problems			—	.40**	.21**	40.63	8.22
4. Fear of being ridicule				—	.36**	12.35	4.64
5.Psychological/personal problems					—	17.97	6.05

Note. \*\*  $p < .01$ .

Table 4

*Item total correlation of APS*

No. of Items	r	No. of Items	r
1	.50		
2	.52	29	.49
3	.51	30	.56
4	.55	31	.55
5	.50	32	.50
6	.52	33	.61
7	.56	34	.53
8	.66	35	.57
9	.61	36	.63
10	.50	37	.52
11	.53	38	.60
12	.55	39	.53
13	.54	40	.54
14	.62	41	.48
15	.51	42	.53
16	.55	43	.55
17	.60	44	.63
18	.58	45	.57
19	.51	46	.50
20	.57	47	.54
21	.66	48	.50
22	.55	49	.61
23	.51	50	.48
24	.56	51	.27
25	.60	52	.33
26	.56	53	.50
27	.56	54	.51
28	.51	55	.53
		56	.58

Table 5  
Convergent and discriminant validity of APS (N=200)

Scales	1	2	3
1.Adjustment Problem Scale	-	.46	-.21
2.College Adjustment Test		-	-
3.Psychological Resilience Scale			-

### Discussion

The study was conducted to develop a reliable and valid tool for the assessment of psychosocial problems faced by newly enrolled students in colleges/universities. This scale (APS) helps to assess the nature, prevalence and severity of adjustment problems that are frequently encountered by students. This study was conducted in three phases. First phase is based on exploring phenomenology of adjustment problems through semi structured interviews and focus groups.

In second phase, Principal Component Analysis with Varimax Rotation was employed on the responses of students (N=362) to find the initial structure of APS. Total of 56 items emerged on four factors which were named as Interactional, Educational, Fear of being ridiculed and Psychological/Personal Problems. Interactional problems include items, e.g., “*Doston k saath talukaat istawar karnay aur barkarar rakhny mein mushkil paish ana, Doston k saath khul k baat kaarnay mein mushkil paish ana, Naey dost banany mein mushkil paish ana.*”

Educational problems include “*Kuch subjects ka zada mushkil lagna, College/University sy milnay waly kaam ko mukamal karnay mein mushkil paish ana, Parhai k lye mutasir kun salahiyaten (impressive skills) ihtyayar na ker paana.*”

Fear of being ridiculed include “*Apni zahiri waza qaata (appearance) k baaray mein fiqar mand (concerned) hoona, Class fellows ki taraf sy mazaq ka nishana banaey jany ka khoof hona, mazhabi aqaed ki bina per mazaq ka nishana banna.*”

Psychological/Personal problems include “*Zyada taleemi kaam honay k baies neend ka urh jana, Zaada taleemi kam honay k baies sonay k okaat ka kam ho jana, class fellows ki taraf sy sexually harass honay ka khof hona.*”

A number of researches support the current findings in terms of the dimensions/factors of adjustment problems (Ayele, 2012; MacGeorge, Samter and Gillikan, 2005; Nyamayaro & Saravanan, 2013; Sangeeta & Chirag, 2012).

The internal consistency (Cronbach alpha) of APS (56 items) is 0.91 which is highly significant. The subscales of APS also exhibit significant internal consistency e.g., Interactional Problems 0.86, Educational Problems 0.78, Fear of being ridicule 0.80 and Psychological/Personal Problems 0.70 respectively. The correlation of APS with its four subscales and item total correlation is also significant which shows homogeneity of the construct.

Psychometric properties of APS were established in the phase III of study. Validity of APS was established through two subtypes of construct validity e.g., convergent and discriminant validity. Convergent validity was established through obtaining positive correlation ( $r=.46$ ,  $p<.01$ ) between APS and College Adjustment Test (CAT). This finding reflects that both scales measure the same construct but the expression of problems in both cultures is different and it shows the significance of developing a culturally relevant tool for the assessment of adjustment problems. While discriminant validity was found by obtaining negative correlation ( $r=-.21$ ,  $p<.01$ ) between APS and Psychological Resilience Scale. Test retest

reliability was found significant ( $r=.91$ ,  $p<.01$ ) with two weeks interval which shows the internal consistency of APS.

### Conclusion

The newly developed Adjustment Problem Scale (APS) is a reliable measure with well established psychometric properties. Transition from school to college is a difficult time period in the lives of students (Calaguas, 2011). While adjusting to new environment, adjustment problems are commonly faced by students. This tool will help campus counsellors for the assessment of students having adjustment issues. And ultimately assessment of problem will help to design management for these above mentioned issues.

### Limitations and Suggestions

The topic was sensitive in nature as it explores the adjustment problems of students related to interactional, educational, fear of being ridiculed and psychological/personal matters. So the administration of some departments was reluctant to give permission for data collection. The results of the present study cannot be generalized to whole Pakistani population as the data was small and only taken from Lahore city. In future, comparative research can be done on hostel and local students.

### References

- Ayele, K. (2012). Adjustment problems, help seeking behaviours and dysfunctional coping strategies of first year college students: The Ethiopian experience. *Centerpoint Journal (Humanities Edition)*, 14(2), 185-207.
- Baker, R. W., & Siryk, B. (1989). The Student Adaptation To College Questionnaire (SACQ). Retrieved from [https://www.wpspublish.com/store/Images/Downloads/Product/SACQ\\_Sample-Test-Report.pdf](https://www.wpspublish.com/store/Images/Downloads/Product/SACQ_Sample-Test-Report.pdf).
- Calaguas, G. H. (2011). Academic achievement and academic adjustment difficulties among college freshmen. *Journal of Arts, Science and Commerce*, 11(3), 72-76.
- Campbell-Sills, L., Cohan, S. L., & Stein, M. B. (2006). Relationship of resilience to personality, coping and psychiatric symptoms in young adults. *Behaviour Research and Therapy*, 44, 585-599.
- Hasan, D., & Kazmi, U. R. (2014). *Adjustment issues, quality of life and psychological resilience in hostel students* (Unpublished master's thesis). Lahore College for Women University, Lahore, Pakistan.
- Jawahir, K., & Kazmi, U. R. (2013). *Psychological resilience and depression among institutionalized and community residing elders* (Unpublished master's thesis).Lahore College for Women University, Lahore, Pakistan.
- Kahn, J. H. (2006). Factor analysis in counseling psychology research, training, and practice: Principles, advances, and applications. *The Counseling Psychologist*, 34, 684-718.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31-36.
- Kaur, J. (2012). Adjustment of college students in relation to their wellbeing. *International Journal of Research in Education Methodology*, 1(2), 37-38.
- Kim, J., & Mueller, C. W. (1978). *Factor analysis statistical methods and practical issues*. London: Sage University Paper.

- Kline, P. (1994). *An easy guide to factor analysis*. London: Routledge.
- Landow, M. V. (2006). *Stress and mental health of college students*. New York: Nova Publishers.
- Liu, M. (2009). Addressing the mental health problems of Chinese international college students in the United States. *Advances in Social Work, 10*(1), 69-86.
- MacGeorge, E. L., Samter, W., & Gillihan, S. J. (2005). Academic stress, supportive communication, and health. *Communication Education, 54*, 365-372.
- McLafferty, M., Mallett, J., & McCauley, V. (2012). Coping at university: The role of resilience, emotional intelligence, age and gender. *Journal of Quantitative Psychological Research, 1*, 1-6.
- Nyamayaro, P. C., & Saravanan, C. (2013). The relationship between adjustment and negative emotional states among first year medical students. *Asian Journal of Social Sciences & Humanities, 2*(3).
- Pennebaker, J. W., Gosling, S. D., & Ferrell, J. D. (2013). Daily online testing in large classes: Boosting college performance while reducing achievement gaps. *PloS one, 8*(11), e79774.
- Sangeeta., & Chirag. (2012). A study of adjustment problems of college students in relation to gender, socio economic status and academic achievement. *International Journal of Behavioral Social and Movement Sciences, 1*(2), 90-98.
- Sharma, B. (2012). Adjustment and emotional maturity among first year college students. *Pakistan Journal of Social and Clinical Psychology, 9*(3), 32-37.
- Steinhardt, M., & Dolbier, C. (2008). Evaluation of a resilience intervention to enhance coping strategies and protective factors and decrease symptomatology. *Journal of American College Health, 56*, 445-453.
- Toews, M. L., & Yazedjian, A. (2007). College adjustment among freshmen: Predictors for white and Hispanic males and females. *College Student Journal, 41*(4), 891-900.
- Tugade, M., Fredrickson, B., & Barrett, L. (2004). Psychological resilience and positive emotional granularity. *Journal of Personality, 72*, 1161-1190.
- Wilks, S.E. (2008). Resilience and academic stress: The moderating impact of social support among social work students. *Journal of Advances in Social Work, 9*(2), 106-125.

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