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## ACADEMIC RESILIENCE AS PREDICTOR OF ACADEMIC ADJUSTMENT AMONG FRESHMEN IN DISTANCE LEARNING PROGRAMME AT ONE PUBLIC UNIVERSITY

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### Abstract

Adjusting to new learning environments remain a challenge to freshmen at universities worldwide. This research investigated academic resilience as predictor of academic adjustment among first year students enrolled in distance learning programme at one public university in South Africa. This study adopted a cross-sectional survey design in the data collection. The study participants comprised 86 students enrolled in Bachelor of Education degree programme in distance learning at one public university in South Africa. The Resilience theory guided this study. Two questionnaires the Academic Resilience scale and the Academic adjustment scale were adopted to aid data collection. The results indicate that academic resilience significantly predicts academic adjustment, with high-level student academic resilience associated to rise in academic adjustment. Further, the model summary shows that student academic resilience accounted for 10.0% (Adjusted  $R^2=.100$ ) of the variation in student academic adjustments. The study recommends that management of universities should develop assessment of freshmen to identify with academic adjustment challenges, so that earlier interventions could be adopted to assist them.

**Keywords:** *Academic Resilience, Academic Adjustment, Students, Distance Learning Programme, Public University.*

### Introduction

Transitioning to university remains a main challenge to freshmen worldwide. Moreover, entry to higher education institutions brings the urgent need to adapt to change and it a period associated with stressful experiences for new students (Raphael, 1993). Moreover, there are significant psychological, academic and social challenges that come with transition to university from secondary school (Kagan & Neuman, 1998). In addition, the new life of freshmen at universities is challenging because of new learning styles that are more learner centered, independent lifestyle, social pressure, and high parental expectations on students' academic performance (Larose, et al., 2005). In this regard, the success in adjusting to the new university environment is very crucial for freshmen, this they take self-management initiatives, strive to attain self-discipline and make own decisions regarding their lives. However, Osoro, et al., (2020), in Aloka (2022), indicated that despite the expectations that freshmen are adjusting positively to the university environments, research indicates that most of them struggle to adjust. Moreover, the poor adjustment among freshmen is evident in their increased suicidal cases, low academic achievement, increased suicidal cases, drug and alcohol abuse, and unplanned pregnancies, all of which at times lead to untimely demise if not timely managed. Moreover, Aloka, (2022) study reiterate that both male and female students at universities struggle to adjust in the academic domain. In addition, other research indicates that poor adjustment among first year students at universities in South Africa is attributed to the lack of preparation, coping mechanisms among students and poor orientation services available (Sommer & Dumont, 2011).

In South Africa, studies indicate that freshmen at universities continue to experience poor adjustment to the new learning environment in higher education institutions. For example, Nel, et al., (2016) study in South Africa

reported that poor adjustment among first year students is attributed to high academic workload, non-supportive lecturers, lack of accommodation within campuses, and teacher centered methods used to deliver lectures. Similarly, Olasupo et al., (2018) study in South Africa reported that poor adjustment among freshmen at universities later results to poor mental health, failure in academics and drop out if the situation is not managed in time. Moreover, Mostafa (2018) study argues that academic overload, poor self-efficacy and lack of social support, are critical indicators of an environment that promotes poor academic and social adjustment among first year students at universities. In another study, van Rooij, et al., (2018) study in South Africa indicated that the individual preparation, and fitting with the academic courses in which they are enrolled at universities would determine extent of adjustment and completion rates among first year students. Moreover, Arends and Petersen (2018) study in South Africa revealed that there are numerous adjustment challenges that face freshmen at universities, because they struggle to cope with independence in self-management, new teaching styles, accommodation issues, and social relationships among others. In a recent study, Molokwane and Luther-King Junior (2021) study in South Africa reported that from the COVID-19 pandemic, the freshmen in South African universities from disadvantaged backgrounds were negatively affected by lack access to laptops, computers and reliable internet connection at their homes.

Previous studies indicate that resilience plays a major role in enabling freshmen to cope with difficult circumstances at university. Allan et al., (2014) define resilience as the students' ability to overcome challenges, develop perseverance in the face of difficulties, strive to establish bonds, and positive self-efficacy to solve problems that they encounter. Moreover, McClure, et al., (2008) also reiterate that resilience is the ability of students to engage in environment mastery and engage in positive relationships with others. According to Ungar (2013), resilience manifests in the manner in which individuals' process their psychological and social aspects in response to challenges at new environments. Moreover, it also manifests in the extent of adaptation to internal of external stressors in order to maintain quality life during challenges (Ghanei, et al., 2016). In addition, resilience can be shown during times of normal day-to-day stressors or during extreme difficulties that is experienced by an individual (Joseph & Linley, 2008). According to O'Leary (1998), there are resilience models that include, challenge model, compensatory model, and protective factor immunity versus vulnerability model. In the challenge model, individuals develop the ability to cope with future stressors because they have previous experience in handling the same at some point in their lives. In the second model, an individual develops more capacity from varied intrinsic factors to be able to cope with stressful events (Garmezy, et al., 1984; Zimmerman & Arunkumar, 1994). In the immunity versus vulnerability model, the individual has protective factors that buffer them from exposure to risk and this reduces the likelihood of negative outcome. Thus, protective factors help to foster the personality of an individual in the event that they are exposed to stressful environments and circumstances (Ungar, 2004).

### **Resilience Theory**

The Resilience theory guided this study. Resilience theory has grown into a dynamic and extensive field of study after having begun from the early childhood research. Roisman (2005) argues that better adaptation to adversity indicates that an individual is resilient. Resilience theory changes our focus to positive psychological and social development that is associated with social processes and individual characteristics (Ungar, 2008). According to Richardson (2002), the process that leads to residence, starts from comfort zone (state of bio-psycho-spiritual homeostasis) in which an individual attains state of balance spiritually, mentally and physically as well. Thereafter, when an individual lacks adequate protective factors to guard them against stressors, unfavorable life events and adversaries, then, there occurs disruption from the homeostatic state. However, individuals would at this point begin reintegration process after this disruption. In this process of reintegration, there are four possible outcomes namely, dysfunctional reintegration, homeostatic reintegration, reintegration with loss and finally resilient reintegration. In this theory, individuals who recover after a significant trauma, have a positive outcome, and continue to be positive in their functioning despite the adverse circumstances, they are resilient in nature (Schoon, 2006). The resilience theory has developed extensively and as at now, it addresses children, adolescents, youths, communities, families and work place environments (VanBreda, 2001). This theory suggests that protective factors are very crucial in helping individuals to positively cope and respond to adversities that they encounter in their environments. The protective mechanisms are very important because it makes individuals to cope well with unforeseen challenges in instances where others would easily give up or respond negatively (Rutter, 1987; Eisenberg, et al., 2014). Linkov, et al., (2013) summarizes that a resilient system is one that when disturbed or disrupted, prepares, absorbs, recover and adapt positively. The Resilience theory is relevant in this paper because it argues that resilient freshmen with best protective factors to adversaries are in the best position to adjust adequately to the new university environments as compared to the less resilient ones.

### Literature Review

Previous research on resilience and adjustment exists in different contexts, but the findings are varied. In South Africa, van Wyk, M., et al., (2022) indicated that resilience in individuals play an important role in making the body to have optimum functions leading to adjustment to life challenges in new environments. Moreover, Choi, et al., (2023) argues that resilience as an intrinsic variable mediates the relationship between academic stress and adjustment to challenging environments. In addition, Lee and Park (2002) reiterate that students who demonstrate strong resilience develop positive adjustment to threatening and new academic environments such as higher education institutions. Moreover, Tran, et al., (2023) argue that resilience is an important factor in managing burn out symptoms among international students at foreign universities. Uzoma et al., (2022) study indicated that academic resilience is positively correlated with academic performance, thus, students who are more resilient have best coping mechanisms in new learning environments. Lytle and Shin (2022) reiterate that resilience is important because it makes students gain protection from challenging issues that they encounter at universities and that those that demonstrate strong resilience are able to have best adjustment mechanisms at new environments. In another research, Talebi, et al., (2022) also agreed that resilience contributes to social adequacy and academic adjustment among students at universities. Bittmann, (2021) demonstrated that that students with stronger academic performances and high life satisfaction are those with strong resilience in them. Moreover, Kapikiran and Acun-Kapikiran (2016) argues that students with stable mental health at universities are those that demonstrate high resilience and this makes them develop inbuilt abilities to adjust to new learning environments.

Moreover, Tamannaefaand Shahmirzaei (2019) argues that students with better problem focused coping styles to challenges are those that have positive resilience. Moreover, the resilient students tend to avoid using emotion focused coping strategies when they face difficult challenges in new environments. In addition, Dong, et al., (2021) showed that adjustment and mindfulness among first year students at universities is strongly dependent on the academic resilience. In another study, Maqsood, et al., (2023) reiterate that resilient students are able to engage in positive activities, which eventually promote their adjustment to challenging circumstances at universities. In addition, Ershadi (2020) argue that adjustment to school work is determined by the level of academic engagement and resilience among students. Moreover, Rodríguez-Fernández, et al., (2018) study argue that resilience and well-being provides the internal drive, which makes students to attain engagement and performance at universities. In a related study, Hezarian, et al., (2021) indicated that the social adjustment of students is dependent on their resilience and attitudes irrespective of their gender. Moreover, Sevilla-Dominguez and Sumbilla (2021) *argues that positive coping mechanisms make students to have best adjustment at universities. In addition,* Kazmi and Muazzam (2020) argues that resilience mediates between depression and poor mental health of students at universities. Moreover, Romano, et al., (2021) reiterate that resilience contributes to better academic engagement and emotional stability among students at new academic environments especially the universities. Moreover, Fullerton, et al., (2021) study reported that the mental well-being of students is dependent on the level of academic resilience and other intrinsic factors.

### Research Hypothesis

The following null hypothesis was tested:

**H<sub>01</sub>:** *The academic resilience is not a significant predictor of academic adjustment among first year students enrolled in distance learning programme at one public university in South Africa*

## Methodology

### Research Design

In this study, the cross-sectional survey design was adopted. In this design, data is collected from a big sample size of a population to make conclusion at a particular time (Hall, 2008). This design is useful when the research participants are many and that there is need to perform one administration of research tools mostly quantitative ones to collect data. In this design, the participants are selected using probability sampling techniques because; this would ensure use of parametric tests to analyze data (Hall, 2008). In this study, the research tools comprised questionnaires and it involved many research participants, thus the cross-sectional survey design was the most appropriate to guide data collection.

### Study Participants

The study participants comprised 86 students enrolled in Bachelor of Education degree programme in distance learning at one public university in South Africa. Table 1 presents respondents' age distribution.

Table 1: Respondents' Age (n=86)

Age group	Frequency	Percent
Below 35 years	10	11.6
36 – 50 years	44	52.2
Above 50 years	32	37.2
<b>Total</b>	<b>86</b>	<b>100.0</b>

**Source: Survey data (2022)**

On their ages, the results of the study established that the modal (52.2%) age was in the range of 36-50 years, suggesting that majority of the surveyed students who were pursuing distance education were within this age bracket. This was followed by the age range of above 50 years at 37.2% and only 11.6% of them were below 35 years of age. From this finding, it can be established that close to nine out of every ten (89.4%) of the students who are in distance education are within an outstretched age range of 35 years and above. Nonetheless, the fact that respondents with varied ages implies that the research participants who involved students in all age categories were enrolled and involved in distance education.

**Research Tools**

In this study, two questionnaires were adopted in data collection. For example, *Academic Resilience scale* which had 30 items and the *Academic adjustment scale* that had 10 items. Both scales had their response format on 5point Likert scale, *Strongly Agree* (5); *Agree* (4); *Neutral* (3); *Disagree* (2) and *Strongly Disagree* (1). The *Academic Resilience Scale* (ARS-30) sought to measure the level of academic resilience among freshmen on the bases of specific cognitive, affective and behavioural aspects in the items. Some items in *Academic Resilience Scale* include, "I would use the situation to motivate myself", "I would change my career plans", and "I would probably get annoyed". The academic adjustment scale was adapted, and it sought data on freshmen ability and feelings to adjust to the higher education institutions in the first few weeks of transitioning to the new environment (Pennebaker, et al., 1990). Some items in the adjustment scale include, "I feel confident and relaxed while in class", "While taking final examinations I have an uneasy upset feeling" and "Thinking about the grade I may get in a course interferes with my classwork". The reliability results of *academic resilience scale* was Cronbach's alpha co-efficient of 0.701, while that of *Academic Adjustment scale* is 0.777. Thus, the Cronbach's alpha for both the subscales were greater than 0.60 implying that the instrument had acceptable inter-item consistency reliability standard.

**Procedure**

Ethical clearance was first obtained from the selected public university. Thereafter, on the day of data collection, the undergraduate students enrolled in distance learning programme were assembled in a hall at the university. The participants were assured of anonymity, confidentiality and voluntary participation. Then, the participants signed consent forms after which they were issued with questionnaires to complete. Questionnaires were issued to 90 students who completed them and returned to the researcher after 45 minutes.

**Data analysis**

Data analysis of quantitative data from questionnaires involved the use of parametric tests namely, correlation, regression and Analysis of Variance (ANOVA) all of which aided to make inferences. The Statistical Package for Social Sciences (SPSS) version 26.0 was used to analyze the data. The hypothesis was tested at the 5% level of significance.

**Findings****Factor Analysis Results for Academic Resilience Analysis**

Factor analysis was performed on student academic resilience indicators using principal components as the main factor extraction technique. Having done suitability test of data for factor analysis, which established that the data was suitability for factor analysis, the principal component analysis was conducted using eigenvalue rule and screeplot to determine the number of components to retain for rotation. The retained

components were rotated to obtain the pattern of loadings that could be easily interpreted. All measures of student academic resilience were subjected to factor analysis and the results are presented in Tables 1.

Table 1: Students Academic Resilience's Total variance explained

Comp.	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %	Total
1	7.867	26.224	26.224	7.867	26.224	26.224	6.578
2	4.669	15.565	41.789	4.669	15.565	41.789	3.802
3	2.025	6.750	48.539	2.025	6.750	48.539	2.603
4	1.821	6.070	54.609	1.821	6.070	54.609	2.205
5	1.502	5.007	59.616	1.502	5.007	59.616	2.005
6	1.288	4.292	63.908	1.288	4.292	63.908	1.675
7	1.144	3.813	67.721	1.144	3.813	67.721	1.447
8	.996	3.319	71.040				
9	.894	2.980	74.020				
10	.854	2.846	76.866				
11	.800	2.667	79.533				
12	.751	2.504	82.037				
13	.586	1.953	83.990				
14	.573	1.909	85.899				
15	.497	1.658	87.557				
16	.441	1.471	89.027				
17	.428	1.428	90.456				
18	.409	1.362	91.818				
19	.346	1.154	92.971				
20	.314	1.045	94.017				
21	.294	.980	94.997				
22	.224	.748	95.745				
23	.220	.734	96.478				
24	.197	.657	97.135				
25	.188	.628	97.764				
26	.172	.574	98.337				
27	.165	.552	98.889				
28	.142	.474	99.363				
29	.103	.344	99.706				
30	.088	.294	100.000				

The results of both principal component analysis in Table 1 revealed that only the first seven out of thirty components had initial eigenvalues greater than one. The seven components cumulatively explained 67.7% of the variance and had the greatest influence on students' academic resilience. Factor one (1) explained 26.2% while factor two (2) explained 15.6% percent of the variance respectively and other four components each explained between 3.8% and 6.8%. All the seven components were retained for rotation based on Kaiser's criterion.

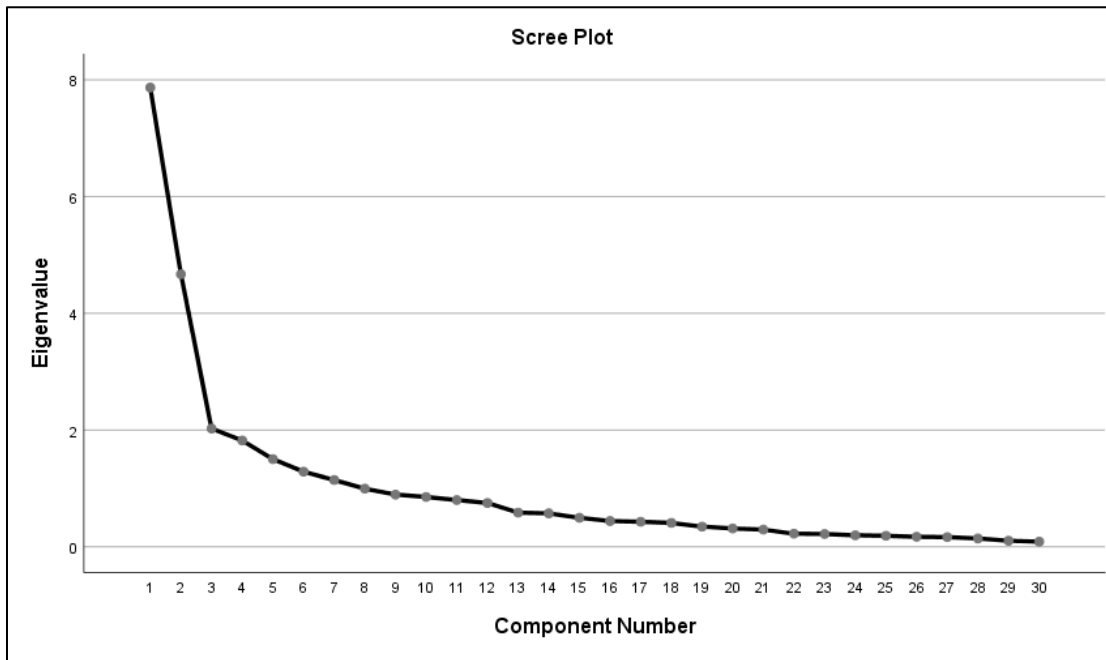


Figure 1: Scree plot on student academic resilience

In the scree plot above, seven components were retained in describing the subscale of students’ academic resilience. It is therefore evident that the seven principal components have eigenvalues greater than 1. Thus, this method has also confirmed to keep seven components. Further, a direct oblimin rotation was performed and the rotated solution revealed strong loadings on the seven components with most variables loading substantially on only two components, that is first and second components. The pattern matrix (Table 2) shows the factor loadings of each of the retained variables under student academic resilience.

Table 2: Pattern matrix for principal component analysis solution with oblimin rotation of seven factor solution of student academic resilience items

	Component						
	1	2	3	4	5	6	7
E24	.852						
E21	.796						
E18	.773						
E25	.710						
E13	.701						
E26	.694						
E16	.692						
E30	.688						
E23	.682						
E20	.634						
E27	.618						
E22	.613						
E12		.754					
E15		.656					
E14		.628					
E1		.610					
E3		.608					
E28		.606					
E19		.601					
E7		.562					
E29		.537					
E6		.468					
E9			.645				

E10			.601				
E8			.496				
E5			.426				
E17				.408			
E11					.615		
E2					.450		
E4						.636	
Extraction Method: Principal Component Analysis.							
a. 7 components extracted.							

The main loadings in component 1 were all items. Component one (1) was therefore named, followed by other components.

**Regression Analysis Results of Student Academic Resilience on Academic Adjustment**

Regression analysis was performed to ascertain the actual level of influence of student academic resilience on academic adjustment. The data on student academic resilience was computed from frequency of responses in the student academic resilience questionnaire. Table 3 shows the model summary results in SPSS output.

Table 3: Model summary on student academic resilience on academic adjustment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.333 <sup>a</sup>	.111	.100	.72714	1.786
a. Predictors: (Constant), Students' Academic Resilience					
b. Dependent Variable: Students' Academic Adjustment					

The results in Table 3 revealed that, academic resilience is strongly positively correlated with adjustment among freshmen at university (n= 86; r=.333; p<.05) with increased academic resilience associated to rise in academic adjustment. Further, the model summary shows that student academic resilience accounted for 10.0% (Adjusted R<sup>2</sup>=.100) of the student academic adjustments. This finding implies that academic resilience accounts for 10% in explaining academic adjustment among distance learning students, and that the remaining 90% could be attributed to other factors, which were not studied. To ascertain if students' academic resilience is a significant predictor of adjustment, regression was performed and the results are presented in Table 4.

Table 4: Coefficients-influence of student academic resilience on academic adjustment

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.905	.796		1.137	.259	-.678	2.489
	Students' Academic Resilience	.900	.279	.333	3.221	.002	.344	1.455
a. Dependent Variable: Students' Academic Adjustment								

$$Y = \alpha + \beta x + \epsilon$$

$$\text{Student Academic Adjustment} = .905 + .900x + \text{error term.}$$

The results in Table 4 indicate that there is an average rise in student academic adjustment rating somewhere between of .344 and 1.455 units, with increase in academic resilience. It is shown that student academic resilience significantly predicts student academic adjustment ( $\beta = .900, p = .002$ ). The fitted regression model was: Approximated Student Academic Adjustment = .905 + .900\*(student academic resilience). This suggests that when the level of students' academic resilience is improved by one unit there would be an ensuing rise in student academic adjustment by .900 units. Equally, when student academic resilience is improved by one standard deviation, there would be an improvement in the level of student academic adjustment by .333 (Beta value=.333). However, the results, which indicate whether the academic resilience is a significant predictor of adjustment among students, is presented in Table 5.

Table 5: ANOVA- Influence of student academic resilience on academic adjustment

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.484	1	5.484	10.372	.002 <sup>b</sup>
	Residual	43.885	83	.529		
	Total	49.369	84			
a. Dependent Variable: Students' Academic Adjustment						
b. Predictors: (Constant), Students' Academic Resilience						

The results in the table above indicate that student academic resilience is a significant predictor of student academic adjustment [ $F(1, 83) = 10.372, p = .000 < .05; Adjusted R^2 = .245$ ]. This implies that students who have high student academic resilience, tend to academically adjust faster than their counterparts with who record lower student academic resilience.

## Discussion

The results of this study reported that academic resilience positively predicts academic adjustment, with stronger level student academic resilience associated to rise in academic adjustment and lower resilience leads to decrease in academic adjustment. Further, the model summary shows that student academic resilience accounted for 10.0% of academic adjustments among freshmen at the university. In agreement, Bittmann, (2021) argues that resilience makes students to have increased satisfaction with their achievement, attain good grades and finally they report increased intention to finish their education on time. In addition, Dong, et al., (2021) showed that mindfulness and resilience is positively correlated with the well-being and adjustment among freshmen at universities. In a related study, Hezarian, et al., (2021) revealed that social adjustment of first year students at universities is dependent on their resilience. Similarly, Sevilla-Dominguez and Sumbilla (2021) study confirms that the resilience and buoyancy determines the academic success, adjustment and completion of studies among students at universities. Romano, et al., (2021) study reported that when students develop stronger resilience to difficult situations, then they are able to adequately engage with academic work and adjust positively to the challenging university environment.

In another research, Talebi, et al., (2022) argues that academic resilience makes students at universities to demonstrate adequate adjustment at the new learning environment. In addition, van Wyk, M., et al., (2022) revealed that there is stronger academic resilience is significant in developing buoyant students that would make them adjust in best ways to the challenges in universities and other higher education institutions. Moreover, Uzoma et al., (2022) reported that there is a significant positive relationship between academic resilience and performance, adjustment and overall well-being of students in higher education institutions. Lytle and Shin (2022) showed that increased resilience among students lead to improved adjustment leading to increased completion rate of the studies at university. Moreover, resilience improves the way students manage their career goals, aspirations and work life. In another study, Maqsood, et al., (2023) argues that academic resilience is a strong determinant of adjustment among students at colleges and it further helps them to manage their social lives adequately. Moreover, Choi, et al., (2023) study showed that the relationship between academic resilience and adjustment is mediated by the academic resilience on both genders of students at universities. Finally, Tran, et al., (2023) study reiterate that resilience of students provide them with stronger internal mechanisms to overcome adjustment challenges that they encounter at universities.

## Conclusion, Implications & Recommendation

This study concludes that the academic resilience of students is a critical predictor of adjustment among freshmen at universities. This implies that students, who have high student academic resilience, tend to academically adjust faster than their counterparts with who record lower student academic resilience. The results have implications for freshmen at universities, dean of students and management of universities. The study recommends that Dean of students should develop holistic cognitive behavioural therapy programmes for students who experience academic maladjustment at universities. Moreover, the study recommends that management of universities should develop assessment among freshmen to identify those with adjustment challenges, so that earlier interventions could be adopted to assist them.



## Future research

On the bases of the findings and recommendations, the study suggests that future research should focus on institutional based factors influencing adjustment among first year students at university. Moreover, studies should focus on home based factors influencing adjustment among students at university.

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