



Does growth mindset moderate relationship between academic adjustment and peer pressure among first year university undergraduates

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Abstract

The study examined moderating role of growth mindset on relationship between peer pressure and academic adjustment among three hundred and fifty (350) first year university students whose ages range from 17 - 23 years with mean age of 19.78 and standard deviation 1.59. Their gender consist of male 170 (48.6 %) and female (51.4 %). Three instruments were used for data collection, namely: school adjustment child-report, yielding to peer pressure and growth mindset scale. Correlation design and moderated multiple regression statistics was adopted for the study. Pearson Product Moment Correlation results showed peer that pressure significantly and negatively correlated with academic adjustment $r = -.30, P < .05$ and growth mindset $r = -.44, P < .05$ respectively. Contrarily, academic adjustment significantly and positively correlated with growth mindset $r = .36, P < .05$. Moderated regression analysis showed that growth mindset moderated relationship between peer pressure and academic adjustment $\beta = -.1, P < .05$ among the first year undergraduate students. Researchers recommended that positive attitude to learning (growth mindset) should be inculcated into students. Given the

negative correlation of peer pressure on academic adjustment, students should be encouraged to be less efficient in peer group relationship.

keywords: Growth mindset, Peer Pressure, Academic Adjustment, Peer Relationship, Academic Performance.

Introduction

First year students in all level of education is faced with adaptation to the transition related challenges. Such challenges cut-across multiple facets ranging from meeting up with academic responsibilities, school environment, new friends, teachers, parental and personal expectations (Haktanir, Watson, Ermis, Karaman, Freeman, Kumaran, & Streeter, 2018). Specifically, adjustment to tertiary education requirement is higher and more cumbersome. This may be due to the fact that tertiary education has higher academic responsibilities with different teaching methods adopted by different teachers. While some teachers at tertiary education for example, university may want students to read and make their personal notes, secondary school teachers adopt in-between the line teaching methodology (Al-Mseidin, Omar-Fauzee, & Kaur, 2017; Rivkin, Hanushek, & Kain, 2005). Such changes in information transmission mechanisms among teachers of different levels of education alone is capable of altering the coping ability of some students. It is pertinent to note that efforts to adapt to the new-normal may occasion coping problems and its effect do cuts across other domains of functioning (Khan & Khan, 2017). It may cause problems in student-teacher relationship, student completion of assigned responsibilities, student affective domain, engagement in class work and poor academic performance.

Developmentally, the chronological age most people gain admitted into tertiary education for first degree programs corresponds to teenage age. Thus, contributes to the

age-bracket related challenges. This period cuts across adolescence and emerging adulthood stage, which Erikson (1968) described as the time of identity versus role confusion, and intimacy versus stagnation respectively. As an individual in search of identity, little things may create confusion for the adolescent and emerging adult. Given the lack of close attention to the individual from parents and guardians, ability to manage the gained freedom from parents pose a herculean task. The stress experience may be higher in some first year students who may be leaving home for the first time to go stay alone on their own (Spinelli, Lionetti, Pastore, & Fasolo, 2020). While many teenagers crave for freedom, attachment pattern experienced along human development trajectory may be a critical factor in functioning and adjustment to school ecology. There are other personal factors (such as cooking, washing clothes, participating in prayer meetings, reading and attending lectures) first year students struggle with. The extent a newly admitted students smoothly and successfully combines all the required responsibilities define his/her adjustment.

According to Ramsay, Barker, and Jones (1999) academic adjustment is a dynamic and interactive process that takes place between the person and the environment, and is directed towards an achievement of fit between the two. Specifically, academic adjustment implies fit a student achieved in school ecology. Also, academic adjustment entails students stable functioning in different gamut such as school engagement, achievement, burnout, and teacher-student conflict (Engels, Parkarinen, Lerkkanen, & Verschueren, 2019). Different authors conceptualize academic adjustment but the common denominator is the general agreement that academic adjustment revolves around achievement of fit in school environment and optimum functioning. The fit a student achieves has implications for physical and mental health and ultimately psychological well-being (Engels, Pakarinen, Lerkkanen, & Verschueren, 2019). Some previous studies hinted on the role of academic adjustment on school drop-out, low

number of enrolment, poor academic achievement and overall self evaluation. The consequences of mal-adjustment to academic responsibilities may have short and long-term consequences on general health of an individual. A student's inability to adjust appropriately to expected academic responsibilities may be perceived as failure and this may affect other areas of life (Johansson, 2019; Simiyu, 2018; Vargas, Leiva, Rojas-Andrade, & Scquicciaini, 2019). The extent to which people adjust academically may have many related factors such as peer pressure and growth mindset.

Peer relationship has bi-directional effects on the newly admitted university students; it can make or mar an individual (Palani & Mani, 2016). Given that chronological age of gaining admission into higher education coincides with the stage of craving for peer group relationship. Peer group consists of people that are of relatively chronological age bracket. The drifting away that is characteristic of adolescents and emerging adults from parents to friends is in full manifestation and takes toll on their behaviour (Xiang, Liu, & Bai, 2017; Chen, 2017;). It is noteworthy to state that peer relationship has been found to impact positive, where the interaction is supportive and academic oriented and viz a viz (Palani & Mani, 2016; Chen, 2017). The influence of peer group has been found to be strongest, when the group norms and values are in tandem with family values. Newly admitted students undergo de-socialization (the changing or discarding of selected values, beliefs and traits one brings to university in response to the university experience) and socialization (the process of being exposed to and taking on some of the new values, attitudes beliefs and perspectives to which one is exposed at university.) (Pascarella & Terenzini, 1991).

Some scholars have argued that peer pressure inhibit academic performance and ultimately leads to engagement in delinquent behaviours (Allen, Porter, & McFarland, 2006; Chain, Albert, O'Brien, Uckert & Steinberg, 2011; Weerman, Wilcox, & Sullivan,

2018). However, Brady, Dolcini, Harper, & Pollack (2009) stated that peer relationship is beneficial because it enhances competition among students. Newly admitted students are strangers in the campus and are often guided by their friends who are mainly of same age cohort. Even when the student is familiar with the university environment, peer relationship is still critical to socio-emotional development. This may be related to the fact that in Nigeria, teenager-parent discussion often revolves around education and career while interaction about sex, friendship, alcohol and drug experimentation, party attendance and fight are held with peers (Akuiyibo, Anyanti, Idogho, Piot, Amoo, Nwankwo, & Anosike, 2021; Pariera, 2018). Although, globalization has influenced many ways things are done in our environment. Isaksen, Musonda & Sandoy (2021) noted that sexual related discussions that parents have with their teenage children have improved significantly due to early commencement of sex-education. It is pertinent to note that the influence of peer on adjustment is known but the mechanism of action is the trust of this article.

The impact of peer pressure on academic adjustment of newly admitted students may be dependent on personality variable of the student. The personality factor is conceptualized in this study as growth mindset. The pathway of action of peer pressure on achievement of fit in academic and social ecology may be moderated by individuals belief that their performance is determined by hard work. Growth mindset is the believe that intelligence is flexible to be changed based on one's motivation, effort and possible to improve through hard work and sustainable sacrifices (Chen, Ding & Liu, 2021). On the other hand, Dweck (2017) averred that growth mindset is virtue people acquire via hardworking, embracing challenges, learning from the adversity or failure, grit and perseverance, holding a positive attitude and adopting skillful approaches to problem solving. Given the importance of growth mindset in academic and skill related domains,

its role in the relationship between the two environmental factors (academic adjustment and peer pressure) was assessed.

Theoretically, the relationship between academic adjustment and peer pressure may be explained by stage-environment fit theory. The theory was propounded by Eccles et al (1993), which explained that for a student to perform well academically; there is need to achieve a balance between his age and environmental demands in school. A situation where students fail to achieve stage-environment fit, tendency for poor school engagement, teacher-students conflict, poor academic performance and academic burnout emanate. The inability to adjust to school requirements and expectation will have short and long-term consequences on mental health, subjective wellbeing, and psychological functioning (Eccles, Lord, & Midgley, 1991; Eccles & Roeser, 2009). The extent students embrace challenges they encounter and persevere may depend on the set of attitude they hold about the amenability of the cognition (Chen, Ding & Liu, 2021; Dweck, 2017; Saia, 2016) This may explain the place of growth mindset on how newly admitted students to university approach peer pressure and academic related loads.

To understand the exact role of growth mindset, the researchers hypothesized as follow:

1. There will be significant relationship between academic adjustment and peer pressure among first year students.
2. There will be significant relationship between academic adjustment and growth mindset among first year students.
3. There will be significant relationship between growth mindset and peer pressure among first year students.
4. There will be significant interaction effect of growth mindset on academic adjustment and peer pressure.

Participants

Three hundred and fifty (350) first year undergraduate students of Nnamdi Azikiwe University, Awka Nigeria were systematically selected from five departments. The ages of the participants ranged from 17 - 23 years with mean age of 19.78 and standard deviation of 1.59 and gender consists of male 170 (48.6%) and female 180 (51.4%).

Instrument

Three instruments were used for data collection

Academic adjustment was assessed with School Adjustment-Child Report: This scale was developed by Bierman, Crowley, Dodge, Greenberg, Lochman, McMahon and Pinderhughes (2016). It has twenty (20) items that is scored in five point likert response pattern 1 = Never True, 2 = Seldom True, 3= Sometimes True, 4 = Usually True, 5 = Always True. It has seven items that are scored in reverse (such as: number 2, 3, 6, 11, 16, 18 and 20). The developers of the scale reported Cronbach alpha coefficient of .88. In the pilot study conducted by this researcher, before the commencement of this study with 80 junior secondary school students found Cronbach alpha coefficient of $\alpha = .80$.

Peer pressure was assessed with Yielding to Peer Pressure scale developed by Palani and Mani (2016). It has eleven (11) items that are scored in five point Likert response format, which range from Strongly Agree = 1, Agree = 2, Undecided = 3, Disagree = 4, and Strongly Disagree = 5. The developers of the scale reported Cronbach Alpha coefficient of $\alpha .94$. However, pilot study conducted with among 80 Nigerian adolescents showed Cronbach Alpha coefficient of $\alpha .90$.

Growth mindset scale was developed by Chen, Ding and Liu (2021). It has eighteen items that are scored in five-point Likert scale (5 = totally agree, 4 = agree, 3 = almost agree, 2 =

disagree, 1 = totally disagree). The original Cronbach alpha coefficient was $\alpha .91$ but pilot study with Nigeria samples yielded Cronbach alpha coefficient of $\alpha = .88$

Procedure/ethical consideration

The researchers obtained approval from the Head, department of psychology, Nnamdi Azikiwe University, Awka. The researchers met first year students in their lecture halls, explained the study and its purpose to them. Those that indicated interest to participate and filled consent forms were issued with a copy of the questionnaire.

Design and statistics: Correlational design and moderated multiple regression technique available in the Conditional process analysis (Hayes, 2013) was used to analyze the data.

Results

Table 1, Descriptive and correlation statistics

S/NO	Varriables	M	S.D	SK	KUR	1	2	3
1	Peer pressure	42.9	7.2	-.97	-.16	1		
2	Academic adjustment	51.2	7.7	-.25	.37	-.30**	1	
3	Growth mindset	36.1	9.7	1.3	1.87	-.44**	.36**	1

The meaning of the abbreviation M = mean, S.D = standard deviation, SK = skewness, KUR = kurtosis.

Mean score, standard deviation, skewness, kurtosis and correlations of peer pressure, academic adjustment and growth mindset. Pearson product moment correlation coefficient in table 1 showed that peer pressure significantly and negatively correlated with academic adjustment $r = -.30$, $P < .05$ and growth mindset $r = -.44$, $P < .05$ respectively. Contrarily, academic adjustment significantly and positively correlated with growth mindset $r = .36$, $P < .05$.

Table 2, moderated regression statistics

<i>Predictors</i>	<i>R²</i>	<i>Df1(Df2)</i>	<i>F</i>	<i>ESTIMATE</i>	<i>SE</i>	<i>T</i>	<i>LLCI</i>	<i>ULCI</i>
Model	.2	3(346)	20.9**					
Peer Pressure (A)				-.2	.1	-2.6	-.3	.0
Growth Mindset (B)				.3**	.1	5.2	.2	.4
A*B				-.1**	.1	-.9	-.2	.1

The table 2 above showed that peer pressure is not significant predictor of academic adjustment

$\beta = -.2$, $P > .05$ such as that experience of peer pressure is not likely to influence academic adjustment. Contrarily, a unit increase in growth mindset increased the tendency of academic adjustment $\beta = .3$, $P < .05$. Further analysis showed that growth mindset moderated relationship between peer pressure and academic adjustment $\beta = -.1$, $P < .05$ among the first year undergraduate students.

Discussion

The study examined the moderating role of growth mindset on the relationship between peer pressure and academic adjustment. The results of the moderated regression showed that peer pressure did not predict academic adjustment and growth mindset significantly and positively predicted academic adjustment. The result of growth mindset on academic adjustment was in agreement with theory of the mind (Dweck, 2000), which proposed that positive attitude towards working to improve intelligence helps in academic achievement, academic adjustment and overall stable mental health. The theory further asserted that people with open attitude towards improving their skills and other areas of life achieve more academically and career than people with fixed mindset (the belief that their intelligence is enough to carry them to their set goal without effort) (Dweck, 2000; Ho, 2016; Teunissen & Bok, 2013).

In addition to the growth mindset theory, stage-environment fit theory (Eccles et al., 1993) confirmed the usefulness of appropriating an individual's chronological age in understanding the tendency to adjust. The theory postulated that each environment has age specific responsibilities; hence one may say that the enthusiasm of gaining admission into tertiary education in Nigeria, where it is perceived as a privilege may ultimately sustain the burning desire to aspire for better grade and harmonious interpersonal relationship between teachers, other students and family members. Also, given the fact that most of the first year students are of similar age cohort, there is tendency for healthy competition towards academic work, which may propel higher order adjustment and psychological wellbeing.

The result of peer pressure is not surprising given the avalanche of literature (Afolabi, 2019; Deepika & Prema, 2017; Ryan, 2011; Moldes, Biton, Gonzaga & Moneva, 2019) that confirmed its likely neutral effect on some individuals. In a situation where a student refuses to dissocialize family moral values, irrespective of the freedom, peer pressure may not have any impact on academic adjustment and achievement. An individual family background and personality factors may be useful tools in understanding peer group relationship. Attempt to conform to group norms and values have been observed to contribute to various negative outcomes that may be related to peer group influence such as joining gang, experimenting with substance, engagement in sexual risk behaviour, street fighting, arm carrying and etcetera. Socialization to the school lifestyle is critical factor in achieving a fit expected of every newly admitted student; accepting smaller/inner group ways of life especially among adolescents may be detrimental to well being (Long, Gardani, McCann, Sweeting, Tranmer, & Moore, 2020; WHO, 2021).

The moderation result revealed that the interaction effect of peer pressure and growth mindset was significant $\beta = -.1$, $llci = -.2$ to $ulci = .1$. This result is in tandem with empirical findings of some previous research (Chain, Albert, O'Brien, Uckert & Steinberg, 2011; Chen, Ding & Liu, 2021; Weerman, Wilcox, & Sullivan, 2018; Teunissen & Bok, 2013).

Implication of the Study

The result of the study showed that while growth mindset was significantly related to academic adjustment, peer pressure was not significant predictor of academic adjustment. The moderation result in table two showed that there was significant interaction effect of peer pressure and growth mindset on academic adjustment.

Theoretically, these findings were supported by some previous empirical studies (Chen, Ding & Liu, 2021; Khan & Khan, 2017; Long, Gardani, McCann, Sweeting, Tranmer, & Moore, 2020; WHO, 2021). With the moderation approach adopted, the study has contributed to broader understanding of related factors to academic adjustment.

Practically, the findings have implications for students' academic adjustment, school dropout, academic performance, physical and mental health and channeling of psychological intervention. Given that growth mindset is positively related to academic adjustment, instilling it on students will enhance their performance, adjustment, wellbeing, and other related factors such as self-efficacy, resilience, motivational persistence, hope for future and overall positive attitude towards academic matters. In table one, correlation result showed that peer pressure was significantly and negatively related to academic adjustment is a pointer to collective stakeholders responsibility to diminish peer group influence among students especially the newly admitted ones. However, moderation result showed that when peer pressure interacts with growth

mindset, the outcome was significant. Thus, gives further impetus for one to assert that growth mindset may be a buffer to peer pressure hence need to inculcate it early in life.

Recommendation

The increasing cases of stress, school drop-out, health break-down, poor academic performance and adjustment among first year students call for urgent psychological intervention.

To cushion the effect of students' poor academic adjustment, parents, secondary school teachers, and guardians should sensitize secondary school students to belief in themselves and hard-work. Once this is imbibed in them from secondary school period, it will have long-term effect at University level.

Also, during orientation exercises for first year undergraduate students, university management should harp on the need for the inculcation of growth mindset.

Peer relationship though negatively related to academic adjustment, first year students should be made to understand that high peer pressure will lead to poor adjustment. Hence, need to be less efficiency in peer group relationship.

Conclusion

Findings of this study supported growth mindset theory and stage-environment fit theory postulations. For instance, growth mindset theory emphasized the importance of positive attitude to work and improve one's mastery and performance. Such positive attitude has shown to be theoretically and practically valid on academic adjustment.

The study further unearthed the importance of growth mindset and pressure on academic adjustment among first year undergraduate students. The outcome of the findings could be extended to other students in different levels.

Authors declare that there is no conflict of interest in this paper.

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