

Trait resilience among Nigerian adults: the role of psychological distress, social support and mindfulness

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Abstract

Background: Resilience is a personal strength that reduces harm from adversity and mediated wellbeing by promoting positive and personal psychosocial ability. Such promotive activity termed 'saliostasis' had been fostered through psychotropic medications, positive social support and mindfulness practices. The present study aimed to add to the few study on resilience in Nigerian adults by examining the role of psychological distress, social support and mindfulness in fostering resilience.

Methods: A total of 192 adults in Kaduna participated in the study. All of them filled the researchers' self-developed 4-item socio-demographic questionnaire, 25-item resilience scale (RS), 14-item hospital anxiety depression scale (HADS), the 3-item Oslo social support scale and the 14-item Freiburg mindfulness inventory. Ethical approval was received from the ethical board of Federal Neuropsychiatric Hospital, Barnawa-Kaduna.

Results: The screened prevalence of psychological distress as measured by hospital anxiety depression scale was 63.00% and 54.70% respectively for depression and anxiety. Half of the participants (50.50%) had low resilience scores and another 46.40% had low social support score. Resilience was negatively correlated with psychological distress and positively associated with social support and mindfulness. The correlations were significant for psychological distress and mindfulness. Participants high on resilience reported significantly low depression score and high mindfulness practices. Anxiety and social support did not significantly contribute to the resilience characteristics of the study participants.

Conclusion: This study adds to existing study on resilience among adult Nigerian and identified low depression score and high mindfulness practice as two variables that can foster high resilience among them. These variables can be manipulated among adult Nigerians to boost their resilience and consequently wellbeing.

Keywords: Trait resilience; Adult Nigerians; Psychological distress; Social support; Mindfulness

Introduction

Trait resilience is a personal strength that helps individuals buffer and get by with life

adversity and bring about good adjustment and development thereafter.^[1] A meta-analysis of 60 studies on resilience had

demonstrated that a pooled moderate reverse relationship existed with negative (i.e. depression, anxiety and negative affect) indicators of mental health and a direct medium association with positive (i.e. life satisfaction and positive affect) determinants of wellbeing.^[1]

A model through which resilience do impact mental health were by reducing harm from adversity, offering protection from negative life events and promoting personal ability that help one to overcome potential threats.^[2]

The first two part of this model contributed to the relations between resilience and mental health indicators as by the meta-analysis above. However, studies on the variables that boost resilience to carry out its health enabling and promotional roles were few. Specific studies on the variables fostering resilience reported on the role of psychotropic medications, positive social support and mindfulness practices.^[3-5] The process of fostering resilience through the activities intended to promote wellbeing had been described as ‘saliostasis’.^[3]

The focus on ‘saliostasis’ in recent time had been boosted by positive psychology and psychiatry that identified resilience as the framework towards adaptive coping, positive transformation and flourishing.^[6,7] The present study aimed to add to the few study

on resilience in Nigerian adults by examining the role of psychological distress, social support and mindfulness in fostering resilience.

Methodology

A total of 192 adults in Kaduna participated in the study. All of them filled the researchers’ self-developed 4-item socio-demographic questionnaire, 25-item resilience scale (RS), 14-item hospital anxiety depression scale (HADS), the 3-item Oslo social support scale and the 14-item Freiburg mindfulness inventory. Ethical approval was received from the ethical board of Federal Neuropsychiatric Hospital, Barnawa-Kaduna.

Resilience Scale (RS)

Resilience Scale (RS) is a 25-item measure of psychological resilience and have good validity and reliability (Cronbach’s α range of 0.72 – 0.94) from several studies^[8-10]. It is scored on a likert scale of 1 to 7 grouping respondents into: low, moderate and high resilience scores. In this study, the RS was used to report the trait resilience of the participants, by categorizing them into high or low resilience characteristics as designated by the originator of this measuring scale.

Hospital Anxiety Depression Scale (HADS)

The Hospital anxiety and depression scale (HADS) is 14-item measure of anxiety and

depressive state and had been used in both clinical and non-clinical population. It consists of seven depression items and seven anxiety items and has been validated for use in Nigeria.^[11,12] A score of 8 and above on either of the two components is regarded as case. Both the depressive and anxiety subscales are used in this study.

The Oslo 3-items Social Support Scale (OSS-3)

The brief OSS-3 measures social functioning as a good predictor of mental health.^[13] It measures both the structural and functional aspects of social support by reporting the number of people the respondent feels close to, the interest and concern shown by others, and the ease of obtaining practical help from others.^[14] Its brevity and normative data are strength of this measure over its less documented reliability (Cronbach's alpha of 0.58 to 0.60).^[15-17]

The Freiburg Mindfulness Inventory (FMI)

The FMI is a short 14-item measure of experience of mindfulness practice.^[18] It is a uni-dimensional measure of several aspects of mindfulness state-and trait-like components with each question scored on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

Data Analysis

Descriptive statistics was used to show the frequency distributions of participants' socio-demographic and psychological variables. Pearson's moment correlation coefficients were used to demonstrate the relationship between the mental wellbeing variables. A MANOVA was carried out to determine the difference between the high and low resilience scores of participants based on their pooled mental health variables. All statistical analysis was two-tailed at alpha level of less than 0.05 except for the violations of Levene's Test of Equality evaluated at level of less than 0.01.

Results

As shown in table 1, participants mean age was 25.79 years (SD = 6.09) with age range of 18-48 years. Females constituted 39.60% of the participants, majority had more than 12 years of formal education (95.30%) and 73.40% were unmarried as at the time of data collection. Table 2 showed that psychological distress as measured by hospital anxiety depression scale screened 63.00% and 54.70% of the participants as having depression and anxiety respectively. Table 2 further showed that half of the participants (50.50%) had low resilience scores and another 46.40% had low social support score. Table 3 showed that resilience was negatively correlated with psychological

distress and positively associated with social support and mindfulness. The correlations were significant for psychological distress and mindfulness.

MANOVA analysis showed a significant difference between the resilience characteristics (low vs. high) of the participants when considered jointly on their psychosocial variables (depression, anxiety, social support and mindfulness), Wilk's $\Lambda = 0.805$, $F(4,187) = 11.336$, $p < 0.01$ and partial $\eta^2 = 0.20$. A separate ANOVA was conducted for each dependent variable with each ANOVA evaluated at an alpha level of 0.01 (i.e. 0.05/4). There was a significant difference between high and low resilience characteristics of participants on two of the four components of participants' psychosocial characteristics: depression $F(1,190) = 18.26$, $p < 0.001$ and partial $\eta^2 = 0.09$ and mindfulness $F(1,190) = 36.89$, $p < 0.001$ and partial $\eta^2 = 0.16$. There was not a significant difference between the high and low resilience characteristics of the participants on the remaining variables measured in this study: anxiety $F(1,190) = 0.80$, $p = 0.37$ and partial $\eta^2 = 0.00$; and social support $F(1,190) = 0.01$, $p = 0.92$ and partial $\eta^2 = 0.00$.

Table 4 displayed the means and standard deviations for the dependent psychological

variables between high and low levels of resilience. The low resilience group reported high psychological distress while the high resilience group reported higher mindfulness practices. There was no difference in the mean social support distribution between the high and low resilience groups.

Table 1 – Socio-demographic distributions of participants (N=192)

Variables	Frequency	Percentage
Age in years		
<30	144	75.00
≥ 30	48	25.00
Mean (SD) = 25.79 (6.09)		Range = 18-48
Gender		
Male	116	60.40
Female	76	39.60
Education level in years		
≤ 12	9	4.70
>12 years	183	95.30
Marital status		
Single	141	73.40
Married	51	26.60

Table 2 – Psychological characteristics of participants

Variables	Frequency	Percentage
Depression subscale of HADS		
Case	121	63.00
Non-case	71	37.00
Anxiety subscale of HADS		
Case	105	54.70
Non-case	87	45.30
Resilience		
Low	97	50.50
High	95	49.50
Social support		
Low	89	46.40
Moderate	103	53.60

HADS = Hospital Anxiety Depression Scale

Table 3 – Correlations of participants' psychological variables

Variables	1	2	3	4	5	Mean	SD
1. Resilience	1					129.13	20.68
2. HADS depression subscale	-.247**	1				8.92	3.51
3. HADS anxiety subscale	-.157*	.253**	1			8.23	3.99
4. Social support	.064	.026	.068	1		8.59	1.36
5. Mindfulness	.399**	-.321**	-.146*	.049	1	41.03	5.98

HADS = Hospital Anxiety Depression Scale

MANOVA analysis showed a significant difference between the resilience characteristics (low vs. high) of the participants when considered jointly on their psychosocial variables (depression, anxiety, social support and mindfulness), Wilk's $\Lambda = 0.805$, $F(4,187) = 11.336$, $p < 0.01$ and partial $\eta^2 = 0.20$. A separate ANOVA was conducted for each dependent variable with each ANOVA evaluated at an alpha level of 0.01 (i.e. 0.05/4). There was a significant difference between high and low resilience characteristics of participants on two of the four components of participants' psychosocial characteristics: depression $F(1,190) = 18.26$, $p < 0.001$ and partial $\eta^2 = 0.09$ and mindfulness $F(1,190) = 36.89$, $p < 0.001$ and partial $\eta^2 = 0.16$. There was not a significant difference between the high and low resilience characteristics of the participants on the remaining variables measured in this study: anxiety $F(1,190) = 0.80$, $p = 0.37$ and partial $\eta^2 = 0.00$; and

social support $F(1,190) = 0.01$, $p = 0.92$ and partial $\eta^2 = 0.00$.

Table 4 – Means of psychosocial characteristics based on their resilience scores (low vs. high)

Variables	Resilience	
	Low	High
HADS depression subscale	9.95 (0.34)	7.87 (0.35)
HADS anxiety subscale	8.49 (0.41)	7.96 (0.41)
Social support	8.60 (0.14)	8.56 (0.14)
Mindfulness	38.65 (0.56)	43.46 (0.56)

HADS = Hospital Anxiety Depression Scale

Discussion

The primary aim of this study was to analyse some mental health attributes (depression, anxiety, social support and mindfulness) among predominant young adult Nigerians that fostered high resilience. The results reported high resilience adults to significantly had low depression score and high experience of mindfulness practices.

These findings are consistent with previous studies results that associated low psychological distress and high experience of mindfulness with high resilience.^[1,3,5,10,17]

These purported that resilience was fostered by the richness of the experience of mindfulness and/or efforts that lowered depressive symptoms. While the former offered protection against depressive mood condition in the participants by boosting their resilience, the latter confer resilience-building by lowering mental distress. A mechanism for these observations had been explained by Bajaj and colleague as mindfulness fostering resilience and both advancing well-being.^[5]

There was no significant difference in the anxiety symptoms level and social support characteristics of participants with high resilience scores compared to their counterpart. These observations agreed with results from other studies that identified resilience not to be significant in relation to anxiety^[18] and social support.^[13,19] Anxiety was registered as a non-predictor of resilience because of cultural and geographical region that is associated with low levels of socioeconomic wellbeing and happiness. The finding in term of anxiety seemed to be contrary to earlier study in similar region.^[10] This may be because of

statistical analysis done which was only correlational and not at level of predictors analysis as carried out in the current study.

That social support was also not significantly related to resilience may not be surprising because resilience as measured in this study was a personal trait which appeared to be related more to internal locus than the externals.^[13,19] In other words, social support will buffer psychological distress when the individual concerned had high external locus of control which ran contrary to what resilience, an intra-personal trait should promote. Such supported the two factor structure of resilience scale as personal competence and the acceptance of self and life.^[9]

Two major limitations of this study were the study measures being affected by self-report bias and the cross-sectional nature of the study preventing a cause-effect determination. For the former, participants' familiarity with study measures can be reduced by employing multiple assessments and using multiple-dimensional measures. These should limit the subjectivity of participants. On the latter limitation, the findings interpretations must be with caution due to the cross-sectional nature of the data. Hence generalisation of results from the study sample to the multi-ethnic Nigerian

population cannot be said to be acceptable. Future study should take these limitations into consideration by making the sample more representative of Nigerian ethnic diversity and longitudinal in nature to reduce participants' bias and to allow generalisation of result findings.

Conclusion

This study adds to existing studies on resilience among adult Nigerian and identified low depression score and high mindfulness practice as two variables that can foster high resilience among them. It also reported that social support and anxiety may have no relationship with resilience. Hence, the study provided some variables that can be manipulated and succinctly crafted among adult Nigerians to boost their resilience and consequently wellbeing.

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Resilience and its relatedness to mental distress among nursing students in a Nigerian tertiary educational institution

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Abstract

Background: The process of nursing education has been described to be very stressful with associated mental distress and unwellness. The cost of these are exorbitant on the individuals, significant others and the society at large. Resilience has been identified as one of the elements that can reverse this trend. It is based on this premise that the present study is contributing to the field of positive education by investigating the distinguishing features of high and low resilient nursing students to mental health distress and its related relatedness.

Methodology: Data were cross-sectionally collected from 66 nursing students from 2nd to 5th year of study. The data were on participants' sociodemography, their resilience characteristics, presence of symptoms of mental distress, anxiety and depression, level of social support and mindfulness practices.

Results: Participants' mean age was 21.75 years (SD = 3.20) and predominantly females (89.60%). Majority of them had mental unwellness (i.e. cases on GHQ-12, HADS-depression subscale and HADS-anxiety subscale were respectively 78.8%, 87.9% and 92.4%) with good resilience characteristics (53.0%), moderate social support (57.6%) and good mindfulness practices (51.5%). Resilience was moderately and significantly related to depressive symptoms and mindfulness practices.

Conclusion: Mental distress is common among undergraduate nursing students. And that the distress was more among high resilient student despite their noted good mindfulness practices. Their poor social support characteristics suggested inadequately ability to buffer the noted distress. A way to reverse this to boost the participants' resilience with benefit of improving academic performances and limiting future professional burnouts.

Key Words: Nursing students, Mental distress, Resilience, Mindfulness practices

Introduction

Mental health distress is the absence of mental wellbeing. This is basically described as the lack of emotional and social wellness and often characterized with features of depression and anxiety.¹ The process of nursing education has been described to be very stressful with associated mental distress and unwellness.² A

study indicates that nursing students experienced more distressed during clinical education than during classroom or laboratory learning.³ Such psychological disturbance in tertiary education students do hinder academic growth and make them meaningless, promote maladaptive coping with substance abuse and possible drop out of school.^{2,4-6} The cost of

these are exorbitant on the individuals, significant others and the society at large.

Recent research on psychological distress and resilience among Nigerian university students shows the mental health benefits of resilience.⁶ This study shows that high resilience is indicative of low psychological distress. A finding illustrating the definition of resilience as: the psychological capacity to overcome intense life adversities as well as that which facilitate healthy adaptation and functioning in the environment.⁸ It is based on this premise that the present study is contributing to the field of positive education by investigating the distinguishing features of high and low resilient nursing students to mental health distress and its related relatedness.

Methodology

Participants and procedures

Sixty-six of the undergraduate nursing students of College of Health Science, University of Ilorin, Ilorin, Kwara-State, Nigeria with completely filled questionnaires were the participants for the study. All were in the 2nd to 5th year of study (i.e. 25, 31, 5 and 5 for years 2, 3, 4 and 5 respectively). Their mean age was 21.75 years (SD = 3.20 and age range of 16 to 31 years). Majority were females (89.60%), not married (92.50%) and below 25 years of age (68.70%). All the participants gave informed

consent after first obtaining ethical clearance to carry out this study from the University of Ilorin Ethical Review Committee.

Measures

The study utilized questionnaire that comprised of two parts. The first part collected information on academic level, age and gender of the participants. The second portion contains measuring scales for resilience, psychological distress, anxiety, depression, social support and mindfulness. Resilience was measured by Resilience Scale; psychological distress by 12-item General Health Questionnaire (GHQ-12); anxiety and depression by the Hospital Anxiety Depression Scale (HADS); social support by Oslo 3-item Social Support Scale; and mindfulness by Freiburg Mindfulness Inventory (FMI).

Resilience Scale (RS)

The Resilience Scale (RS) is a measure of psychological resilience and consists of 25-item.^[8] The RS and its short form (RS-14) have good validity and reliability (Cronbach's α range of 0.72 – 0.94) from several western studies^[9,10]. Both instruments had also been validated for use in Nigeria by Abiola and Udofia^[11] (Cronbach's α for RS and RS-14 were 0.87 and 0.81 respectively). Both instruments (RS and RS-14) are scored on a likert scale of 1 to 7 yielding scores that group

respondents into: low, moderate and high resilience scores. In this study, the 25-item original scale will be utilized to report the resilient characteristics of the participants.

The 12-item General Health Questionnaire (GHQ-12)

The GHQ-12 is the shortest version of the original 60-item GHQ developed by David Goldberg^[12] for use in general medical practice. It can distinguish between psychological ill-health and well-being. It has been validated and used in this environment in both academic and field studies.^[13,14] The validity of GHQ-12 as determined by Gureje and colleague^[13] at the 0/1 cut-off are sensitivity of 67%, specificity of 74%, positive predictive value 59%, negative predictive value 80% and overall misclassification rate of 29%. The GHQ-12 in this study was scored on a bimodal scale (0,0,1,1) with cut-off point of 3 as the norm. Any score less than 3 will be regarded as having no psychological morbidity while those that scored above this will be considered as having mental distress.

Hospital Anxiety Depression Scale (HADS)

The Hospital anxiety and depression scale (HADS) is a portable easy to administer measure of anxiety or depressive state in both clinical and non-clinical population. It consists of seven depression items and seven anxiety

items and has been validated for use in Nigeria.^[15] A score of 8 and above on either of the two components is regarded as case. Both the depressive and anxiety subscales are used in this study.

The Oslo 3-items Social Support Scale (OSS-3)

The OSS-3 provides a brief measure of social functioning and it is considered to be one of the best predictors of mental health.^[16] It covers different fields of social support by measuring the number of people the respondent feels close to, the interest and concern shown by others, and the ease of obtaining practical help from others. Its structure and reliability (Cronbach's alpha of 0.60)^[17] have not been well-documented despite widespread use in several European countries. Nonetheless, its brevity and the availability of normative data are strong considerations. It has been validated for use in Nigeria.^[18]

The Freiburg Mindfulness Inventory(FMI)

The FMI is a 14-item measure of experience of mindfulness.^[19] It constitutes a consistent and reliable scale evaluating several important aspects of mindfulness, which is considered as one-dimensional for practical purposes. Each self-descriptive statement was evaluated using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Depending on the suggested time frame, state- and trait-like components could be assessed.^[19]

In the present study, the short form was used for

measuring mindfulness-trait of the participants. Because, this is the first time of using FMI in Nigeria, its internal reliability and concurrent validity was also provided in this study.

Data analysis

All data were analysed using IBM-SPSS version 21. Frequency tables were used to show the distribution of the sociodemographics of the participants. Student t-test was used to determine the participants' mean scores based on their psychological distress, anxiety/depressive symptoms, social support characteristics and mindfulness practices. Cronbach's alpha (α) was used to determine the internal reliability of the measuring scales. Kendall's tau_b correlation was used to assess the relationship between resilience and other measures. All results were determined as significant if the $P < 0.05$, two tailed.

Results

Table 1 shows that majority of the participants were with mental unwellness (i.e. cases on GHQ-12, HADS-depression subscale and HADS-anxiety subscale were respectively 78.8%, 87.9% and 92.4%) as at the time of assessment. Also, more than half of the participant had high resilience characteristics

(53.0%), moderate social support (57.6%) and good mindfulness practices (51.5%).

In Table 2, participants with high resilience scores had significantly higher depressive symptoms and more mindfulness practices. There is no significant difference noticed between the high and low resilience participants in terms of their general mental distress and anxiety symptoms.

Table 1 – Mental health characteristics of the participants

Resilience	Frequency (n=66)	%
Low	31	47.0
High	35	53.0
Mean = 130.01 (SD=21.19)		
GHI-12		
Non-case	14	21.2
Case	52	78.8
Mean = 4.39 (SD=2.49)		
HADS-depression subscale		
Non-case	8	12.1
Case	58	87.9
Mean = 14.99 (SD=4.33)		
HADS-anxiety subscale		
Non-case	5	7.6
Case	61	92.4
Mean = 13.49 (SD=4.59)		
OSS-3		
Low	28	42.4
Moderate	38	57.6
Mean = 8.62 (1.57)		
FMI		
Low	32	48.5
High	34	51.5
Mean = 42.08 (SD=7.77)		

Note: GHQ-12 =12-item General Health Questionnaire; HADS = Hospital Anxiety Depression Scale; OSS-3 = Oslo Social Support Scale; FMI = Freiburg Mindfulness Inventory

Table 2 – Mean distribution of mental health variables according to their resilience categorization

Variables	Resilience categorization		t-test value	p-value
	Low	High		
GHQ-12	4.68 (2.79)	4.14 (2.22)	0.866	0.39
HADS-depression	13.45 (4.63)	16.34 (3.60)	2.849	0.006
HADS-anxiety	12.84 (4.81)	14.06 (4.37)	1.079	0.29
OSS-3	8.51 (1.34)	8.66 (1.76)	0.197	0.85
FMI	39.45 (8.08)	44.40 (6.77)	2.706	0.009

Note: GHQ-12 =12-item General Health Questionnaire; HADS = Hospital Anxiety Depression Scale; OSS-3 = Oslo Social Support Scale; FMI = Freiburg Mindfulness Inventory

Table 3 – Correlation of resilience with other measures of mental health

	1	2	3	4	5	6	α
1. Resilience Scale	1.000	0.116	0.075	-0.043	0.007	0.302*	0.905
2. HADS-depression subscale		1.000	0.245*	-0.079	0.008	0.104	0.817
3. HADS-anxiety subscale			1.000	-0.008	-0.009	0.181	0.813
4. 12-item General Health Questionnaire				1.000	0.086	0.016	0.428
5. Oslo Social Support Scale					1.000	0.161	0.431
6. Freiburg Mindfulness Inventory						1.000	0.840

The internal consistencies of most of the measuring scales were high and within the acceptable range except for GHQ-12 and Oslo social support scale (Table 3). Also, shown in Table 3 is the correlation coefficients of the measuring scales showing moderate and significant positive relationship between resilience and mindfulness as well as between the two subscales of HADS.

Discussion

This study reported high rates of mental unwellness as measured by the GHQ-12 and the two subscales of HADS among the study participants. This seemed to echo previous findings that undergraduates in health

disciplines experienced more mental distress than students in non-health professions.^[2,6,7]

However, the means scores of mental distress as reported by the two subscales of HADS in this study (HADS-depression=14.99 and HADS-anxiety=13.49) were quite higher than that from a former Nigerian study (HADS-depression=5.56 and HADS-anxiety=5.91) among students in clinical disciplines.^[6] This might be related to the lower social support (8.62) and resilience (130.01) reported in this study related to the comparison study (social support = 11.42; resilience = 131.31). A probable explanation for this might not be unconnected to the different geopolitical zones

of the countries (i.e. present study in north-central Nigeria and former study in north-west Nigeria). Another explanation for the difference in the two study might be because the former study was only among clinical health students unlike in the current study with both preclinical and clinical students.

Depressive symptoms and mindfulness practices were also observed in this study to be significantly more among high resilient students. The occurrence of the two make the researchers to speculate that the protective effective of mindfulness might explain why these students had not clinically broken down as at the time of data collection. In other words, mindfulness might be playing a buffering role to the high distress. And in order for mindfulness to achieve this, it will need to boost the students' resilience first as suggested by the model of Bajaj and colleague.^[20]

Although, not asked for in this study, we suspect that the mindfulness practices of the participants are not organized and systematic to bring about the expected benefit. This coupled with the overall poor stress buffering parameters of the participants (i.e. low social support scores) suggested inadequate coping resources. Hence, these students appeared to be on the edge of mental breakdown that may impede their current academic achievement. Also, the future impacts most likely as

burnouts might expectedly bring about poor psychosocial functioning.^[3,6,16,17]

Some limitations of this study like the small sample size, the skewed predominantly female population, use of screening instruments to measure mental health parameters and the cross-sectional nature of this study brought to the fore the non-generalization of the study findings. Future studies that took these limitations into consideration, and recruited a more representative multi-ethnic sample will help in the generalization of the study outcome. Despite these limitations, the study has explored further the resilience of nursing students and variables that may be related to it.

Conclusion

The researchers concluded that there is high rate of mental distress among undergraduate nursing students. That the distress was more among high resilient student despite their noted good mindfulness practices. Also, that they may not be able to adequately buffer their distress due to their low social support characteristics. The researchers suggested the enhancement of students' stress buffering and related practices to boost resilience onto mental wellness. Success in this will improve good academic performances and limit future burnout that will ensure great and enjoyable professionalism.

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