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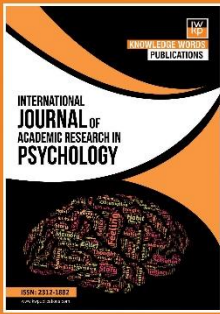
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Personality and Mental Health among Lira University Students during the COVID-19 Pandemic

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Abstract

COVID-19 pandemic is one of the 21st -century major health crises affecting the world. Due to the pandemic, education activities were disrupted and examinations were postponed. This could have far-reaching effects on the students both physically, socially, mentally, and emotionally. In this context, we conducted a cross-sectional study among undergraduate students at Lira University to assess whether there could be any relationship between their personality and mental health. A total of. Non-probability Volunteer and convenience sampling technique was used to select 156 undergraduate students who participated in this study. Data was collected using a well-designed survey questionnaire and posted onto google form. Mental status was screened using the Mental Health Continuum Short Form while personality was screened using the Extraversion vs. Introversion Scale adapted from the Big Five Inventory. Both categorical and numerical data were summarized using descriptive statistics. Chi-square statistic was used to obtain the correlation between the variables. More than half, 55.77% of the participants were males, 42.95% were females while 1.28% did not disclose their gender. The results showed that 83.97% of the respondents had positive mental health, 14.74% had average mental health and 1.28% had poor mental health. The results showed that 88.46% were extroverts. Finally, the results revealed that there was a significant positive correlation between personality and mental health status. There is a need for mental health professionals to keep the mental health balance of students in the University. Counseling should also be planned along with online teaching. Besides, there is a need to understand the personality traits of students to deal with their mental health accordingly.

Keywords: COVID-19, Mental Health, Pandemic, Personality, Undergraduates, University, Uganda

Background

The year, 2020 saw a drastic turnaround of events, caused by the worldwide outbreak of COVID-19. Although the COVID-19 epidemic started in China in 2019, presently there is no nation spared of its toxicity. With the worldwide trajectory of COVID-19, the mental health issues resulting from this pandemic have compounded its public burden (Torales et al., 2020). Evolving research examining the

mental health consequences of the COVID-19 pandemic has highlighted severe stress, depression, and other mental disorders among the general public (Luo & Yin, 2020; Pfefferbaum & North, 2020). People grope into the future with little or no sense of purpose, in the face of unpredictability of when this pandemic will end. However, additional research is needed to understand the psychological cost of COVID-19 on key populations including University students (Grubic et al., 2020). Albeit all individuals are at risk of being affected or infected by COVID-19, University students are more vulnerable (Luo & Yin, 2020).

Studies focusing on the prevalence of mental health issues suggest that under normal circumstances university students experience mental health problems (Editorial Board, 2019; Jini et al., 2017; Pacheco et al., 2017). These studies indicate that the mental health problems among university students are on the increase in severity and number (Hunt & Eisenberg, 2010). Studies in Europe and Asia showed that university students experienced mental health problems (Cuttilan et al., 2016; McIntyre et al., 2018). The upsurge in mental problems is attributed to academic demands, loneliness, and financial difficulties (Lipson & Eisenberg, 2018; McIntyre et al., 2018).

The mental health issues among students are likely to worsen as a result of the COVID-19 pandemic. There have been academic disruptions and academic institutions have shifted to E-learning services. Based on a reviewed literature on academic disruptions, students are likely to experience reduced academic motivation, mental health problems and may result in increased dropout rates (Wickens, 2011). Therefore, with pre-existing mental health problems, the COVID-19 pandemic could have placed an unprecedented mental health burden on university students. This calls for immediate research and psychological interventions to avert the dire consequences.

Studies show that different personality traits are related to different mental health consequences (Goodwin & Gotlib, 2004). According to Feldt (Feldt et al., 2007), mental health is described as a state of mind characterized by psychological wellbeing, free from disabling symptoms, and capacity to cope with stress and establish a positive relationship. The personality type of an individual may be more susceptible to mental disorders than others (Yen & Siegler, 2003). Features of introverts and extroverts potentially impact interpersonal relationships resulting in either mental health or distress (Laney, 2005). Available literature shows that introversion and extroversion personality are related to mental health with introverts more likely to have mental disorders (Goodwin & Friedman, 2006). This may be because Introverts prefer social interactions with smaller groups and are likely to have relatively few relationships that are long-lasting (Prakash et al., 2016). Conversely, extroverts have larger social support and generally pursue several interests (Prakash et al., 2016). Therefore, it is critical for university counselors and other stakeholders to know the relationship between personality type and mental wellbeing for increasing mental health (Wood & Tarrier, 2010).

To date, few studies have examined the effects of COVID-19 on the psychological wellbeing of university students (Cao et al., 2020). A study examining the impact of COVID-19 on students' wellbeing in China showed that close to 25% of the respondents reported having anxiety symptoms (Wenjun et al., 2020). With multiple sectors affected, education in Uganda was no exception. All education institutions were closed on March 20, to avoid the spread of the virus. Social distancing and quarantine have resulted in insufficient peer and social supports for many students as they are separated from their colleagues and loved ones. However, how COVID-19 impacts the mental health of university students in Africa and Uganda, in particular, is not yet clear. There is now a concern that COVID-19 has negative mental health ramifications (Brooks et al., 2020). There is a need to

understand the impact of COVID-19 related activities like disturbances caused by the closure of academic institutions, examination postponement, the introduction of E-learning, and others. Thus in this study, we aimed to:

- Assess the extent to which Lira University students were susceptible to mental health problems during COVID-19,
- Establish the personality traits of the different undergraduate students and
- Examine the relationship between personality and the mental health status of Lira University students.

Methods

This study adopted a cross-sectional research design. Data was collected from the sample at a particular point in time to achieve the aims of the study (Zechmeister & Posavac, 2003). Additionally, the design is appropriate for determining the prevalence of behavior or condition in a population (Delice, 2010).

Participants

The participants were selected from Lira University which is found in the northern part of Uganda. The volunteer and convenience sampling technique which is a non-probability approach was used to select the participants. A non-probability approach was considered appropriate due to lockdown and restricted movement. The participants were selected through emails and social media (WhatsApp). A total of 156 undergraduate students who included 87 females, 67 males, and 2 participants did not identify their gender participated in the study.

Instruments

A survey questionnaire using two instruments of Mental Health Continuum Short Form (MHC.FC) and the Extraversion vs. Introversion Scale (EIS) adapted from the Big Five Inventory was employed to collect data. MHC.FC was used to measure the mental health of students. The instrument has 14 items that prompt the respondents to tell how they feel about the different statements related to mental health. It has six options: never, once or twice, once a week, two to three times a week, almost every day and every day. The levels of mental health were computed as the total of all the mental health scores that can range from 0 to 70 (Keyes, 2005). Once all the items were scored, the mental health status of students was categorized as positive mental health ranging from 46 and above scores, average mental health scores ranging between 25 to 45, and poor mental health represented by less than 25 scores (Keyes, 2005). MHC.FC has been found to be reliable revealing outstanding internal consistency (<0.80) and discriminant validity in University students in and outside Africa (Lamers et al., 2011). Examination of reliability of MHC.FC in the present study was undertaken using a test-retest approach. Using the Pearson's product-moment correlation coefficient, the results showed the reliability coefficient of 0.835.

The EIS was used to measure the personality status of the respondents (Extraversion vs. Introversion). The tool has a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). EIS has 16 items, each with five response options. Statements related to extraversion were coded on a 1-5 scale while those related to introversion were reversed on a 5-1 scale (Rammstedt & John, 2007). A

score between 16 and 47 indicated introversion and a score between 48 and 80 indicated extroversion (Rammstedt & John, 2007). In the present study, EIS had a reliability coefficient of 0.782.

Procedure

We disseminated information about this study to prospective respondents by email and WhatsApp. Later, questionnaires were distributed to different participants. However, only 156 responded to the questionnaire. The participants were provided with a written explanation of the study. At the University level, staff were also contacted and were involved in inviting students to participate in the study.

Ethical Consideration

The research was approved by the AIDS Support Organization Research Review Board (TASOREC/010/2020-UG-REC-009). We sought informed consent from the sampled respondents. If the respondents were willing to take part in the study, they duly declared so. We assured respondents that the information provided during the data collection would be completely confidential and would not be used in any other way except as specified in the study. Participation in this study was strictly voluntary. Participants had the right to withdraw from this study at any time they wanted without any penalty.

Analysis

Data from the questionnaire was cleaned, coded, and entered into the Statistical Package for Social Sciences (SPSS) Version 21.0. Both categorical and numerical data were summarized using descriptive statistics such as frequencies, percentages, means, and standard deviation. Chi-square was used to obtain the correlation between the variables. The information later was presented in frequencies and tables.

Results

Demographics

Results in Table 1 indicate that more than half 55.77% (n=87) of the participants were males, 42.95% (n=67) identified themselves as females while 1.28% (n=2) did not identify their gender. Results in Table 1 further shows that the majority 61.54% (n=96) were aged between 21-24, followed by those aged between 25 and above 21.15% (n=33) and lastly those aged between 17-20 constituting 17.31% (n=27). More than one third 33.97% (n=57) of the respondents were in third year, 30.13% (n=47) were in first year, 23.72% (n=37) were in second year and 12.18% (n=19) were in fourth year.

Table 1: Demographics of the Respondents

Variables		Frequency	Percentage
Gender	Male	87	55.77
	Female	67	42.95
	None response	2	1.28
	Total	156	100
Age	17-20	27	17.31
	21-24	96	61.54
	25 and above	33	21.15
	Total	156	100
Year of study	First-year	47	30.13
	Second-year	37	23.72
	Third-year	57	33.97
	Fourth year	19	12.18
	Total	156	100

Estimating the mental health status of Lira University students during COVID-19 was one of the cardinal aims of our study. The respondents were asked to respond to MHC.SF. Results in Table 2 show that most of the students 83.97% (n=131) had positive mental health status, 14.74% (n=23) had average mental health and 1.28% (n=2) had poor mental health during COVID-19.

Table 2: Mental health status

Mental health status	Frequency	Percentage
Poor Mental Health	2	1.28
Average mental health	23	14.74
Positive mental health	131	83.97
Total	156	100

Findings from the study indicate that majority of the students 88.46% (n=138) demonstrated an extrovert personality during the lockdown with the rest 11.54% (n=18) being very introverted.

Table 3: Personality of respondents

Personality	Frequency	Percentage
Introvert personality	18	11.54
Extrovert personality	138	88.46
Total	156	100

Table 4 shows that of those who had extroverted personality 86.96% (n=120) had positive mental health status, 12.32% (n=17) had average mental health status and 0.72% (n=1) had poor mental health status. The results in Table 4 indicate that of those reported introverted personality 61.11% (n=11) had positive mental health status, 33.33% (n= 6) had average mental health status and 5.56% (n= 1) had poor mental health status.

A positive correlation between personality and mental health status, with a Chi-square value of 8.93 which is statistically significant at $P=0.011$. This implies that the more extroverted a person is, the more positive his/her mental health status is, and the more introverted one is, the poor the mental health status.

Table 4: Association between Personality and Mental Health Status of Respondents

Mental Health Status Personality	N	Poor Mental Status	Average Mental Status	Positive Mental Status	P-value
Introverted personality	18	1(5.56%)	6(33.33%)	11(61.11%)	<i>P</i> =0.011
Extroverted personality	138	1(0.72%)	17(12.32%)	120(86.96%)	
Total	156	2(1.28%)	23(14.74%)	131(83.97%)	

Discussion

Our study examined the relationship between mental health status among Lira University students, northern Uganda, and their personality. The results showed that 83.97% of the university students had positive mental health status 14.74% had average mental health and 1.28% had poor mental health during COVID-19. Despite the numerous research studies, there is still a marked lack of studies about young adults aged between 18 and 24 years (Boxer, 2005). Our results, however, contrast other studies that indicate negative mental status among University students. Studies in the United States of America showed that 11% of university students had mental health distress (Groß, 2020). A study examining the impact of COVID-19 on students' wellbeing in China showed that close to 25% of the respondents reported having mental distress (Wenjun et al., 2020). The difference in results may be attributed to differences in time for data collection. At the start of the pandemic, people faced the unknown threat, received terrifying information leading to mental health issues. However, currently, people seem to be facing the known threat. Admittedly, it is still scary, though not terrifying.

This study revealed positive mental health among university students. It reported that 88.46% of the respondents identified more with extroversion personality while 11.54% of students reported introversion personality. To date few studies have examined the mental health status of students amidst COVID-19. Even the few were mostly done in developed countries. One of such studies differed with our results showing that about 25% of sample had mental health issues (Wenjun et al., 2020). Another study in China among international students established that 50.4 of respondents had depression, and 37.8% reported anxiety (Wang et al., 2020). The differences in results may be attributed to nature of the study population. In these studies the respondents were international students living in a foreign land which could have exacerbated the mental health.

Our results revealed a positive correlation between personality and mental health status implying that the more extroverted a person is, the more positive his/her mental health status is and the more introverted one is, the poor the mental health status. It seems that extroversion personality acts as a protective factor for mental health and thus extroverts are mentally stronger than introverts. Extroverted students are likely to have a strong base of social support (Ryan & Deci, 2001). Extroverted students are likely to have better-coping strategies and have a sense of optimism and thus positive mental health (Keyes, 2002). However, introversion should be seen as the absence of extroversion rather than considering it as opposite or undesirable or abnormal behavior. The relationship between extroversion and positive mental health was congruent with previous studies (Farmer et al., 2002; Irfan, 2016). Similar to the current results, Nordin et al., (2009) study revealed a significant association between extroversion and mental health in undergraduate students in universities in Malaysia.

Conclusion

The majority of the students had positive mental health status and a small percentage had poor mental health during COVID-19. A statistically significant relationship was found between personality and mental health. Therefore, it can be concluded that extroversion was significantly associated with good mental health. There is a need for mental health professionals to keep the mental health balance of students in the university. Counseling should be planned along with online teaching. Besides, there is a need to understand the personality traits of students to deal with mental health accordingly.

This study presents a significant contribution to the theory of the big five personality traits wherein it confirms some of the underlying assumptions that people who are extroverts tend to have positive mental health. In a more contextual sense, this study is significant in that whereas many studies have shown that people's mental health is affected by calamities such as the Covid-19, it is not always the case. In fact, to the contrary, extroverted people tend to be more positive during such circumstances than introverted people.

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