

Internet-Guided Music Intervention for Stress among University Students

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Abstract: This research objective was to investigate the effect of internet-guided music intervention in managing stress among university student's in Nigeria. Out of 400 student's surveyed 70 undergraduate student's who were having high stress participated in the study. The 70 eligible participant's were randomized into one of two study groups, music intervention group (n = 35) and waitlist control group (n = 35) using computer-generated random numbers. All participant's completed baseline evaluation and posttests at 4, 8 and 12 weeks. Participant's completed the perceived stress scale. The statistical tool used for data analysis was within and between ANOVA. Results revealed that music intervention is an effective measure for managing stress among university student's. Further studies need to ascertain and corroborate how academic productivity can be achieved using music intervention among university student's.

Key words: Music intervention, stress management, therapist, university students, academic, perceived stress scale

INTRODUCTION

Music, since, the prehistoric time of man had been part of every human culture (Salimpoor *et al.*, 2013). Yinglan (2018) reported that 88% of respondents exposed to music intervention expressed that music is medicinal especially in balancing human emotional state. Higgins (2012) saw music as a communication tool that can cut across culture with the target of healing social wounds. Chanda and Levitin (2013) opined that music is effective in managing immunoglobulin and stress. Fancourt *et al.* (2014) reported that music intervention is very effective in managing any stress-related symptoms. Aasgaard (2000) maintained that music is the only unique means through which people either consciously or unconsciously have positive thinking about their lives. Bradt *et al.* (2011) reported that psychological and physical malfunctionalities could be better managed, if patients are exposed to music therapy. Ueda *et al.* (2013) asserted that music intervention has received wide acceptance in the health care settings because of its effective measures in reducing health-related challenges among people. Sendelbach *et al.* (2006) reported that oncology, dementia and intensive care among others were among the health care settings that adopted the use of music in managing different illness among patients. Demmer (2004) reported also that music intervention is one of the most common

ways of supplementary intervention given in hospices and palliative care setting. Aletraris *et al.* (2014) reported that music therapy is one of such complementary and alternative therapy that offers quick relief to psychological disordered patients. Pelletier (2004) reported that music intervention can be effective in managing psychological problems like stress. AMTA (2006) hold that music therapy involves the clinical and evidence-based use of music to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy programme. Wallace *et al.* attributed the stressful nature of student's frequent exposure to regular examinations, presentations and other worries such as financial and social demands can be challenging and stressful. Peate (2017) reported that in 2016 British survey data repeatedly demonstrated that, on average, student's were less happy and more anxious than non-student's. Objectively, the study investigated the effect of music intervention in managing stress among university student's in Nigeria.

MATERIALS AND METHODS

The study used a group randomized controlled trial design. The study protocol was approved by the Faculty of Education Research Ethics Committee,

University of Nigeria, Nsukka. The study was carried out in South-East, Nigeria. Participant's of the study were screened and recruited by the researchers. The study participant's were university student's of both federal and state institutions. The 70 eligible participant's were randomized into one of two study groups, internet-guided music intervention group (n = 35) and waitlist control group (n = 35). Participant's completed a questionnaire titled The perceived stress scale at baseline, 4, 8 and 12 weeks of music intervention. The PSS comprises of 10 items. The study protocol was described to all participant's and informed consent forms were completed. After completing the baseline evaluation, the participant's were exposed to 12 weeks Internet-guided music intervention sessions. The study participant's took part in the group intervention session twice weekly. Each music session lasted for 95 min. The music intervention activities were adapted from a previous study (Ezegbe *et al.*, 2018). The study participant's were also e-mailed self-help manuals for home practices which complemented the in-session music intervention. All waitlisted participant's were scheduled to start the music intervention sessions immediately the music intervention group participant's have had their last session and assessment. Participant's in the waitlist group had online casual meetings and discussions about stress management during the waiting period. The statistical tool used for data analysis was an analysis of variance. Data were normally distributed and there were no missing data. All analyses were conducted using SPSS Software, Version 22.0 (IBM Corp. NY, United States).

RESULTS AND DISCUSSION

The study participant's were (35) in the treatment group (15 males, 20 females) and (35) waitlisted control group (15 males, 20 females). Mean scores for the level of stress are shown in Table 1.

In Table 2, the finding showed no significant difference in the baseline assessment for stress management between the treatment group (31.83+3.20)

and the waitlisted control group (32.46+3.15) $F(1.68 = 0.686) p = 0.411, \eta^2 = 0.010$. The 8th week assessment revealed a significant decline of stress among university student's in the internet-guided music intervention treatment group (12.37+2.82) compared with those in the waitlisted control group (32.46+3.15) $F(1.68 = 791.107) p = 0.000, \eta^2 = 0.921$. Furthermore, the 12th week assessment revealed a significant decline in stress among university student's in the music intervention treatment group (8.20+3.07) compared with those in the waitlisted control group (29.26+8.66) $F(1.68 = 183.960) p = 0.000, \eta^2 = 0.730$. Then at 18th week assessment the result further revealed a significant decline in stress among university student's in the music intervention treatment group (8.14+3.07) compared with those in the waitlisted control group (29.77+5.17) $F(1.68 = 453.151) p = 0.000, \eta^2 = 0.870$.

The study investigated the effect of internet-guided music intervention in managing stress among university student's in Nigeria. The study found that music intervention is an effective measure for managing stress among university student's. This is in line with Moore (2013) who found that the application of music intervention as a basic instrument in stress management will potentially regulate emotions and tension. Robb (2000) found that music intervention does not only help

Table 1: Descriptive statistics for effect of internet-guided music intervention in managing stress among university student's

Groups	Baseline	Week 4	Week 18	Week 12
Music intervention group				
Mean	31.83	12.37	8.20	8.14
N	35.00	35.00	35.00	35.00
SD	3.20	2.82	3.07	3.07
SE of mean	0.54	0.48	0.52	0.52
Mean	32.46	32.46	29.26	29.78
N	35.00	35.00	35.00	35.00
Waitlisted control group				
SD	3.15	3.15	8.66	5.17
SE of mean	0.53	0.53	1.47	0.87
Mean	32.14	22.41	18.73	18.96
N	70.00	70.00	70.00	70.00
Total				
SD	3.17	10.54	12.41	11.68
SE of mean	0.38	1.26	1.48	1.39

Table 2: ANOVA Table for effect of Internet-guided music intervention in managing stress among university students

Groups	Sum of squares	df	Mean square	F-values	Sig.	Eta squared
Baseline*group between groups (combined)	6.914	1	6.914	0.686	0.411	0.010
Within groups	685.657	68	10.083			
Total	692.571	69				
Week 8*group between groups (combined)	7060.129	1	7060.129	791.107	0.000	0.921
Within groups	606.857	68	8.924			
Total	7666.986	69				
Week 16*group between groups (combined)	7759.557	1	7759.557	183.960	0.000	0.730
Within groups	2868.286	68	42.181			
Total	10627.843	69				
Week 18*group between groups (combined)	8186.414	1	8186.414	453.151	0.000	0.870
Within groups	1228.457	68	18.066			
Total	9414.871	69				

in managing stress but treats stress. Hirokawa and Ohira (2003) reported that music intervention is a good means of handling the multifaceted consequences of stress. Knight and Rickard (2001) report that the use of music intervention helps in the release of stress hormones. Yinglan (2018) also found that music intervention can be an effective way of managing stressing among people. Linnemann *et al.* (2016) found that the emotional state of people change positively when they are playing music. Geller and Porges (2014) reported that music intervention can help in reducing mood and tension. Brougham *et al.* (2009) reported that music intervention is significant in reducing psychological problems among college females. Smith (2008) found that the presence of music therapist and the use of therapy is helpful for mood alternation and stress reduction. Ashton (2013) reported that music helps in reducing psychological abnormality and regulating emotional problems. Also, Detmer (2015) found that stress management can be easily and effectively done using music intervention.

CONCLUSION

This study investigated internet-guided music intervention for stress management among university student's. The internet-guided music intervention brought about a significant reduction in the stress level of the recipients compared to participant's in a waitlisted control group. Thus, we concluded that music intervention will help individuals, especially, the student's to effectively manage stress. To that end, further studies are needed to ascertain how academic productivity can be achieved using music intervention among university student's.

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