



ISSN NO. 2320-5407

Journal homepage: <http://www.journalijar.com>

INTERNATIONAL JOURNAL
OF ADVANCED RESEARCH

RESEARCH ARTICLE

Personality, musicality and mental health in South Asian classical musicians

Katherine M. Naselli Adamski¹ & *Shobhna Joshi²

1. Fulbright-Nehru Researcher, US –India Educational Foundation at Department of Psychology, Banaras Hindu University, Varanasi-221005, India

2. Associate Professor, Dept. of Psychology, Banaras Hindu University, Varanasi-221005, India

Manuscript Info

Manuscript History:

Received: 11 December 2013

Final Accepted: 22 January 2014

Published Online: February 2014

Key words:

*Corresponding Author

Shobhna Joshi

Abstract

Music listening is a permanent source of enjoyment and entertainment for adolescents. The increase in music listening coincides with adolescents' normative passage from childhood to adulthood- a transition characterized by specific developmental tasks and psychosocial challenges (Lerner & Stenberg, 2004). Schwartz & Fouts (2003) summarize three processes by which adolescents can regulate their emotions with music listening. These include (1) distraction from unwanted moods (2) solace and validation of their personal issues, and (3) catharsis in relation to negative emotions. Generally people who use music to cope are engaging in avoidance coping. People listen music as a framework to cope with their existing circumstances and also to build up a mental framework, which could be beneficial for their future. This study was conducted with four different groups of 285 total people of Varanasi and Almora District of India. The tools used in the study were Coping by Music listening questionnaire, the Brief COPE, and the Neuroticism subscale of the NEO-FFI. It was found that Neuroticism was significantly correlated with engaging in coping more often, adolescents were no more likely to use one type of coping, and none of the coping subscales from Brief COPE correlated significantly with musicianship.

Copy Right, IJAR, 2013., All rights reserved.

Introduction

In mental health settings, music can be used to increase participation as well as communication among group counseling members (Kim et al., 2006). Music has been shown to help decrease post-traumatic stress symptoms (Simon et al. 2012), as well as strengthen social relationships. People who struggle with low self-esteem, depression, and feelings of isolation have also benefited from playing a role in a musical piece with others (Baker, Gleadhill, & Dingle, 2007). In these ways, using music to cope with problems has been beneficial. Carver's work on coping has established that different types of coping can be more effective for handling stress in a healthy way (Scheier & Carver, 1992). Furthermore, as summarized in Connor-Smith & Flachsbart's (2007) meta-analysis, different personality types are associated with different coping strategies. For example, Neuroticism involves intense emotional and physical responses to stress, and it is linked to attempts to minimize unpleasant arousal through disengagement coping strategies.

There are different ways to use music to cope with problems, and these different methods are associated with different levels of Neuroticism. The ways people use music to cope can be separated into three distinct groups- avoidance-oriented coping, emotion-oriented coping, and problem-oriented coping. Of these three dimensions, avoidance-oriented coping has even been shown to represent a risk factor of increasing Neuroticism in adolescence (Miranda, Gaudreau, & Morizot, 2010). It is known that Neuroticism is a risk factor for anxiety and mood disorders (Zinbarg, 2010). In this way, using music to avoid one's problems may present a risk to emotional health. On the other hand, Carver et al. (1989) found that people who engage in problem-oriented coping, as well as some types of emotion-oriented coping, are more likely to be optimistic and have lower levels of anxiety. More research is needed in this area to understand how the different types of musical coping described by Miranda et al. relate to Carver's

established coping model, and to determine if the subscales of musical coping measures correlate with Neuroticism in other cultures.

The association between different ways of coping and the personality trait that is the biggest risk factor for emotional disorders will be examined by administering both the Brief COPE and the Coping by Music Listening questionnaire, along with a Neuroticism questionnaire. Specifically, the relationships between questionnaires will determine if higher levels of Neuroticism significantly correlate with any of the Coping by Music Listening questionnaire subscales. This study sampled professional musicians, student musicians, and non-musicians to further elucidate the relationship between musicality, coping styles, and Neuroticism.

Methods

Participants

An attempt was made to recruit equally from 4 groups of people in Varanasi (U.P.) and Almora (Uttarakhand), India. The first group was comprised of student musicians, defined as students over the age of 18 majoring in an instrument or vocal program. The second group was comprised of professional musicians, defined as people over the age of 18 who earn most of their income by playing an instrument, singing, or teaching others to play. The third group was comprised of non-musician university students, defined as students over the age of 18 who do not play an instrument and are not enrolled in a musical study program. The fourth group included non-musician professionals, defined as people over the age of 18 who were not students and earned most of their income from some profession other than music. Participants were recruited on a volunteer basis.

Participants were between 18 and 64 years old. The 263 participants that reported their age had a mean age of 28.17. There were 117 males and 149 females in the sample, with 14 participants who declined to state their gender. Musicians made up 43.9 percent of the sample. In other words, there were 123 musicians and 157 non-musicians in the 280 person sample. Professionals made up 24.6 percent of the sample, so there were 69 participants that identified themselves as professionals, and 211 participants that identified themselves as non-professionals or students. Of the 69 professional participants, 34 were musicians and 35 were not musicians. Of the 211 non-professionals, 89 were musicians and 122 were not musicians. The totals of these groups are summarized in table form in Appendix 1.

Only 57.9 percent of the sample, 162 participants, reported their highest level of education completed. Of those participants, 22.5 percent (63 people) had completed the Indian equivalent of High School or Upper School, 8.6 percent (24 people) had a Bachelor's degree, 5 percent (14 people) had a Master's degree, and 6 percent (17 people) had completed more than a Master's degree. For the 94 participants that reported their monthly income, the mean was 22,012 rupees a month, roughly 370 dollars per month in 2013.

Of the 123 musicians who participated in the study, 38 were vocalists and 83 played an instrument, while two reported singing and playing in equal amounts. The musicians who played an instrument had played for between one and fifty years, with a mean of 12.8 years. Participants reported practicing music between one and fifty hours per week, with a mean practice time of 15.4 hours per week.

Measures

Participants were asked to complete a demographics questionnaire and a musician's questionnaire (instrument of choice, practice hours per week, years playing) developed by the researchers specifically for this experiment. Next, they completed the Coping by Music Listening questionnaire (Miranda & Claes, 2009), the Brief COPE (Carver, 1997), and the Neuroticism subscale of the NEO-FFI (Costa & McCrae, 1992).

These measures, along with the verbal consent, instructions, and demographics were translated from English into Hindi. They were then back-translated into English by a second translator who never saw the original questionnaires. Investigators addressed and corrected any discrepancies by re-translating items to ensure clarity and accuracy of the translation.

The 12-item Neuroticism subscale of the NEO-FFI assessed the personality trait of Neuroticism, which represents an individual's tendency to experience psychological distress (Costa & McCrae, 1992). For each item, participants selected the response that best characterizes them on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*). Unfortunately, the Neuroticism scale did not display very good internal consistency ($\alpha = 0.66$). Items that were expected to correlate, for example, "I rarely feel lonely or blue" and "I am seldom sad or depressed" did correlate significantly ($r = 0.326$, $n = 276$).

The 28-item Brief Cope was designed to assess both problem-focused coping responses and responses directed to aspects of the situations other than the stressor, while addressing the need to minimize time demands on participants

(Carver, 1997). As suggested by Carver, items were converted to a dispositional “coping style” format by changing verb forms from the original scale (Carver, et al., 1989). Participants were asked to rate how often they use each coping method on a scale of 0 (*I don't do this at all*) to 3 (*I do this a lot*).

Overall, the 28-item scale did have acceptable internal consistency ($\alpha = 0.75$). The scale assesses 14 ways of coping, using 14 two-item subscales. The subscales are as follows: active coping (e.g. “I take action to try to make the situation better”), planning (e.g. “I think hard about what steps to take”), positive reframing (e.g. “I look for something good in what is happening”), acceptance (e.g. “I learn to live with it”), humor (e.g. “I make jokes about it”), religion (e.g. “I pray or meditate”), using emotional support (e.g. “I seek emotional support from others”), using instrumental support (e.g. “I get help and advice from other people”), self-distraction (e.g. “I turn to work or other activities to take my mind off things”), denial (e.g. “I refuse to believe that it has happened”), venting (e.g. “I express my negative feelings”), substance use (e.g. “I use alcohol or drugs to make myself feel better”), behavioral disengagement (e.g. “I give up trying to deal with it”), and self-blame (e.g. “I criticize myself”).

Some of the subscales in this experiment, like active coping ($\alpha = 0.45$), planning ($\alpha = 0.50$), positive reframing ($\alpha = 0.45$), acceptance ($\alpha = 0.57$), self-distraction ($\alpha = 0.48$), venting ($\alpha = 0.52$), substance use ($\alpha = 0.57$), and behavioral disengagement ($\alpha = 0.45$), had poor internal consistency according to the Cronbach's alpha calculations. Some of the subscales, such as religion ($\alpha = 0.66$), using emotional support ($\alpha = 0.66$), and self-blame ($\alpha = 0.67$), had internal consistencies that were not good. Other subscales, such as using instrumental support ($\alpha = 0.78$), denial ($\alpha = 0.72$), and humor ($\alpha = 0.76$), did have acceptable internal consistency. Analyses focused on the three subscales with internal consistencies above 0.7. It should be noted that alpha is often criticized for working as a function of the number of items in a scale (Cortina, 1993). Cortina (1993) reports that number of items has a profound effect on alpha, particularly at low levels of average item inter-correlation, and it must be interpreted with the number of items in mind. Considering this, the authors chose to report item inter-correlations for the subscales of this measure and to accept subscales with at least modest item inter-correlations of 0.3.

The 10-item “Coping by Music Listening” scale assessed three styles of coping: emotion oriented (five items; e.g., “help myself gain more positive emotions”), problem oriented (three items; e.g., “help myself reflect better”), and avoidance/disengagement (two items; e.g., “avoid thinking about my problems”) (Miranda & Claes, 2009). Participants rated their frequency of coping in each way on a 5-point Likert scale, ranging from 1 (*never*) to 5 (*always*). All together, the 10-item scale presented acceptable internal consistency ($\alpha = 0.76$). The emotion-oriented ($\alpha = 0.690$) and avoidance/disengagement ($\alpha = 0.49$) subscales did not present satisfying internal consistency on their own. The problem oriented subscale's internal consistency ($\alpha = 0.71$) was acceptable.

Procedure

To recruit musician and non-musician student sample groups, researchers networked with musicians in Varanasi and Almora. They asked for a few minutes at the end of a music or performing arts event or class in which to offer people the chance to participate in the study. They briefly described the study and handed out a small contact information sheet to everyone, regardless of whether or not they wanted to participate. If they wished to participate, they were asked to contact the study. The study was verbally explained, and participants were allowed to ask questions. If the participant did not respond or did not complete the survey within one month, they were considered “withdrawn”. Non-musician controls were recruited from non-music university classes or events in the same way.

To recruit an adequate number of professional musicians, a snowball technique was employed. Study participants were asked if they knew anyone else who might be interested in the study. Interested parties were required to contact the study on their own.

Participants were verbally consented to the study and offered a copy of the verbal consent form. Participants were consented in a psychology department office/room at BHU when they met the investigator on campus to pick up their questionnaire. The researcher applied for waiver of documentation of informed consent because the only risk to participants was someone finding out that they participated in the study. If participants wished to take the questionnaire packet home, they were provided a mailing envelope in order to return the materials to the study.

Analysis

Data was entered and cleaned in Microsoft Excel. SPSS was used for reverse scoring and analyses. It was confirmed that the data was normally distributed and researchers addressed any abnormalities. Multi-variable correlational analyses were used to indicate whether or not key variables significantly correlated with one another and to elucidate the direction and strength of the associations. Two-tailed independent T-tests on means of musician vs. non-musician group scores determined whether or not the experimental and control groups scores on key variables

differed significantly. Multi-variate linear regression modeling was used to determine which variables accounted for the most variance in scores on the Neuroticism measure.

Results

Professionals, with a mean age of 42.33 years ($SD=42.33$), were significantly older than non-professionals, whose mean age was 23.34 years ($SD=3.45$), $t(261)=-20.31, p<.001$.

Neuroticism

276 participants answered at least 10 items of Costa & McCrae's 12-item Neuroticism scale. Their scores on this 5-point Likert scale had a mean of 2.89 ($SD = 0.55$).

Professionals had significantly lower scores on the measure of Neuroticism ($M=2.71, SD=0.47$) than non-professionals ($M=2.95, SD=0.56$), $t(274)=3.22, p<.001$. Men ($M=2.71, SD=0.45$) were less likely to endorse items on the Neuroticism scale than women ($M=3.04, SD=0.58$), $t(260)=-4.935, p<.001$.

Coping

266 participants completed at least 21 items of the 28-item Brief COPE. (Carver, 1997) Their scores on this 4-point scale had a mean of 1.46 points ($SD = 0.34$). In other words, participants were most likely to endorse items at a 1 (*I seldom do this*) or a 2 (*I sometimes do this*).

261 participants completed at least 8 items of the 10-item Coping by Music Listening questionnaire. (Miranda & Claes, 2009) Their scores on this 5-point Likert scale had a mean of 3.17 points ($SD = 0.65$). Participants endorsed using music to cope with problems between "sometimes" and "often".

The two questionnaires were related as expected. Higher number of coping skills endorsed overall correlated with using music to cope more often as well, $r(255)=.190, p<.01$.

It was hypothesized that men would use avoidance/disengagement coping strategies more often than women, and that women would seek emotional support more often than men. In our study, the seeking emotional support subscale did not correlate significantly with gender, and most of the avoidance/disengagement subscales did not correlate with gender either, $p's>.05$. However, one subscale from Carver's coping measure - substance use - did correlate positively with male gender. Men were more likely to use alcohol or drugs to cope ($M=0.2, SD=0.58$) than women ($M=0.06, SD=0.30$), $t(252)=2.62, p<.01$. Women were more likely to use religion to cope ($M=2.18, SD=0.87$) than men ($M=1.94, SD=0.95$), $t(224)=-2.16, p<.05$. Women were also more likely to use self-distraction to cope ($M=2.14, SD=0.69$) than men ($M=1.61, SD=0.82$), $t(209)=-5.48, p<.01$.

Other

Higher scores on the Neuroticism questionnaire correlated with higher scores overall on the coping questionnaire, $r(264) = .20, p<.001$. This was not the case for coping by music listening and neuroticism, $p>.05$. In all groups of participants, it was hypothesized that scores on measures of avoidance/disengagement-oriented non-musical coping as measured by the Brief COPE would positively correlate with scores on Neuroticism as measured by the NEO-FFI. Neuroticism scores were significantly correlated in the positive direction with scores on the Brief COPE subscales measuring use of Denial, $r(264)=.150, p<.05$, and Self-Distraction, $r(265)=.165, p<.01$. The behavioral disengagement subscale did not correlate significantly with Neuroticism, $p>.05$.

Musicianship

For musicians, number of years spent playing an instrument was significantly correlated in the negative direction with mean item scores on the entire Brief COPE. In other words, as musicians played their instrument for a longer number of years, they were less likely to endorse using any coping strategy at all. However, musicians were more likely to rate themselves as using music to cope than non-musicians, $r(259)=.235, p<.001$.

It was hypothesized that musicians, having had more chances to engage with music in productive, problem-oriented ways, would report lower levels of Neuroticism than the non-musician control group. This was not the case. Neuroticism mean item scores were not significantly greater for non-musicians ($M=2.86, SD=0.55$) than for musicians ($M=2.94, SD=0.54$), $t(274)=-1.17, p>.05$. In fact, the musicians' mean item scores on the measure of Neuroticism were slightly, although not significantly, higher than those of non-musicians. It was hypothesized that more time spent with music would negatively correlate with Neuroticism. The number of years spent playing an instrument did in fact significantly correlate with Neuroticism in the negative direction, $r(79) = -0.234, p<.05$. However, the number of hours per week that a musician played was not significantly correlated with Neuroticism levels in either direction, $p>.05$.

It was hypothesized that musicians would endorse using less avoidance-oriented coping strategies than non-musicians. No significant differences in use of musical or non-musical avoidance-oriented coping strategies ($p's>.05$) were found.

It was also hypothesized that more time spent with music would positively correlate with active coping strategies. None of the active coping subscales from the Brief COPE correlated significantly with musicianship ($p's>.05$). In

fact, there was a slight negative correlation between planning and musicianship, $r(260) = -0.14$, $p < .05$. Musicians ($M=1.75$, $SD=0.93$) were less likely to use planning to cope with problems than non-musicians ($M=1.99$, $SD=0.81$), $t(219)=2.19$, $p < .05$.

In further contradiction to the predictions, time spent playing an instrument per week was significantly negatively correlated with the active coping subscale of the Brief COPE, $r(104) = -0.315$, $p < .01$. There were no other significant associations between active coping strategies and time spent playing an instrument. The number of years spent as a musician correlated significantly in the negative direction with the seeking instrumental support subscale of the Brief COPE, $r(74) = -0.29$, $p < .05$. There were no other associations between active coping strategies and number of years spent playing an instrument or singing.

Discussion

The main purpose of the study was to investigate and explore whether Indian musicians' self-reported Neuroticism and coping styles would differ significantly from that of non-musicians. Overall, there were not many significant differences. Neither coping strategies of choice nor variables from the musicianship questionnaire were able to create a statistically significant model to explain the variance in Neuroticism scores. Though, significant correlations between gender and some of the coping subscales, as well as an inverse correlation between Neuroticism and number of years playing an instrument were observed. Consistent with previous findings and expected outcomes, at least in the United States (Hyde, 2014), self-reported Neuroticism was significantly different by gender. Professionals were significantly older than the non-professional group, which may have impacted the results.

These findings illustrate the effects of musicianship on the use of coping strategies. Musicians reported less coping overall, yet they still reported using music to cope with problems more often than non-musicians. These findings have implications for understanding the relationship musicians may have to stress. It may be that musicians do not view as many events as problems; therefore they are not using coping skills. However, if they do have a problem, they will already spend time with music, their coping skill of choice, so perhaps they do not need to actively cope as much as non-musicians.

Limitations and Future Directions

This study was limited in that there were only 285 participants. There may have been some selection bias in the study, where some individuals would have been more likely to volunteer for the research project than others (i.e. more extroverted individuals). To try and avoid these selection biases, three different groups were sampled including a control group. A truly random sample was not possible to achieve in this volunteer self-report survey study.

Although India provided an excellent opportunity to study a different cultural context, challenges were faced related to collecting data there. First, many of the participants had never participated in a self-report survey before and found the experiment quite taxing. Due to this, it was imperative to keep the questionnaire as short as possible, so only the Neuroticism scale of the NEO-FFI could be administered. More research is needed to determine the relationship between all five facets of personality in an Indian sample.

Appendix 1

Table 1. Summary of four participant groups with totals

	Professional	Non-Professional (Student)	Total
Musician	34	89	123
Non-Musician	35	122	157
Total	69	211	280

Table 2. Summary of participant gender by musician/non-musician group

	Musician	Non-Musician	Total
Male	45	72	117
Female	72	77	149
Unspecified	6	8	14
Total	123	157	280

Table 3. Summary of participant gender by professional/non-professional group

	Professional	Non-Professional	Total
Male	39	78	117
Female	30	119	149
Unspecified	0	14	14
Total	69	211	280

Table 4. Summary of participant gender

	Total
Male	117
Female	149
Unspecified	14

References

- Carver, C.S. (1997). You want to measure coping but your protocol's too long: Consider the brief cope. *International Journal of Behavioral Medicine*, 4(1), 92-100.
- Connor-Smith, J.K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology*, 93(6), 1080-1107.
- Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Foa, E.B., & Rothbaum, O. (1992). Uncontrollability and unpredictability in post-traumatic stress disorder, an animal model. *Psychological bulletin*, 9, .
- Hyde, J. S. (2014). Gender similarities and differences. *Annual review of psychology*, 65, 373-398.
- Kim,H.,Chang, H.K., Leet, T.H., Lee, H. H., & Shin, M.C. (2006). Influence of prenatal noise and music on the spatial memory and neurogenesis in the hippocampus of developing rats. *Brain Development*, 28, 109-114.
- Lerner, R. M., & Steinberg, L. (Eds.). (2009). *Handbook of Adolescent Psychology, Individual Bases of Adolescent Development* (Vol. 1). John Wiley & Sons.
- McCrae, R.R., & Costa, P.T. (1997). Personality trait structure as a human universal. *American Psychologist*, 52(5), 509-516.
- Miranda, D., & Claes, M. (2007). Musical preferences and depression in adolescence. *International Journal of Adolescence and Youth*, 13, 285-309.
- Miranda, D., Gaudreau, P., & Morizot, J. (2010). Coping by music listening predicts neuroticism changes in adolescence, *Psychology of Aesthetics, Creativity, and the Arts*, 4(4), 247-253.
- Baker, F.A., Gleadhill, L.M., & Dingle, G.A. (2007). Music therapy and emotional exploration: Exposing substance abuse clients to the experiences of non-drug-induced emotions. *The Arts in Psychotherapy*, 34(4), 321-330.
- Scheier, M.F., & Carver, C.S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update, 16(2), 201-228.
- Schwartz, K.D., & Fouts, G.T. (2003). Music preferences, personality style, and developmental issues of adolescents, *Journal of youth and adolescence*, 32, 205-213.

Acknowledgments

This research was funded by a Fulbright Research Grant to Katherine M Adamski, for the period of September 2012 to May 2013. KMA would like to thank Sangita Pandey, Rabindranath Goswami, Ramu Pandit, Gaurav Majumdar, and Nawab Khan, for their support to this research project and dedication to the music. KMA particularly thanks the Faculty of Performing Arts and Anuj Kumar Shukla.