Predictive Role of Personality Characteristics in Positive Emotions and Creativity: A Study of Pakistani Nuns

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The present study aimed at exploring the influence of personality characteristics on positive emotions and creativity in a sample of Pakistani nuns. Personality characteristics were hypothesized to have an influence on positive emotions and creativity. The study sample comprised 94 Roman Catholic nuns associated with churches, schools, and hostels in Lahore. Measures of Ten Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003), Kaufman Domains of Creativity Scale (Kaufman, 2012) and Emotional Needs Scale (Culham, 2008) were used to assess personality characteristics, creativity and positive emotions, respectively. The analysis revealed that extraversion personality was the strongest predictor of creativity and positive emotions in nuns. In conclusion, personality characteristics were inferred to be an important factor for facilitating creativity and positive emotions and may well be able to support individuals during unhealthy or difficult circumstances.

Keywords. Personality characteristics, positive emotions, creativity, nuns

In Pakistan, approximately 1.6% of the total population is Christian and equally distributed between Catholics and Protestants. The registered number of Catholic nuns is unknown in the Pakistani Christian population to date. Nuns are also referred to as sisters in the

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culture of Pakistan. One of the main roles of the nun's life beside everyday prayers in church is teaching children about the world and religious education by the example of their lifestyle (Young & Wilson, 2010). They are perceived to hold a very positive attitude towards mankind and they devote themselves to serving their community.

Nuns live a religious life under solemn vows which separate their lives from the material world. Generally, their activities are limited to school teaching and playing a service role in their religious institutes. Moreover, they remain celibate to support other's lives through their example of piety and impressive personalities (Sigal, Perry, Rossignol, & Oimet, 2003). Therefore, a nuns' lifestyle is different from that of the general community as they limit themselves to their particular religious activities. In addition to this, it is worth examining whether a different lifestyle is related to distinct personality characteristics.

A personality involves a unique presentation of an individual character that draws a picture of how a person thinks, feels, acts, and adopts a distinctive behaviour pattern in a certain situation (Widiger, 2011). Personality can be explained in terms of various aspects. For the present study, personality attributes refer to emotional stability, extraversion, and openness to experience, agreeableness, and conscientiousness. These characteristics are inferred from Ten Item Personality Inventory (TIPI; Gosling et al., 2003), a widely used short inventory developed on the basis of Big-Five major models of personality (Digman, 1990). In the TIPI and others, one important component that has been widely and commonly related to personality traits is the emotions (Andre, Klesen, Gebhard, Allen, & Rist, 2000). This study also explores the nuns' personality characteristics in relation to positive emotions.

Personality Characteristics and Positive Emotions

In context of traits' assessment, the emotions are reported as the common, most prevalent component of personality. This theoretical proposition is supported by empirical evidence, as previously reported, that is personality has a relationship with the emotions (Andre et al., 2000). Personality characteristics are exhibited through emotions, as theorized by Lazarus (2006). The emotions of an individual reveal how a person acts, reacts, copes, and rationally understands meanings. So it is useful to look at personality characteristics as well as in which personality nuns exhibit positive emotions because of their unique population characteristics.

Emotions can be the door to the personality (Lewis, Haviland-Jones, & Barret, 2010). In this vein, Goleman (1995) referred to the emotions as functional, role players as they help people to feel happy, to communicate with others, to predict others' behavior, to make decisions, and also to set boundaries for themselves and others, all of which are part of an individual's survival strategy. In the current study, positive emotions are measured in terms of human needs and emotions. If emotional needs are met, this decreases human stress and individuals feel positive emotions (Culham, 2008).

Kennedy, Mather, and Carstensen (2004) carried out research which assessed the mental, physical health, and the health related practices of 300 nuns aged 47-62 years. They compared older and younger nuns with a control group and non controlled random. The study revealed that older nuns exhibited more positivity relating to positive emotions and feelings in their past recollections compared to the younger nuns. The younger nuns remembered their past with more inclination towards negativity, whereas the older nuns' greater positivity might be an emotional regulation strategy or a way to give themselves a sense of wellbeing at a particular time.

In a Polish study on nuns, Skrzypinska and Chudzik (2012) hypothesized that nuns have a higher level of spirituality and their personality traits are related to their emotions. Neto and Barros (2010) hypothesized that Portuguese nuns are more emotionally stable than nuns in Angola. Their study comprised 105 nuns from Angola and 74 nuns from Portugal. The results show that nuns from Angola scored higher in neuroticism and the Portuguese nuns scored lower on neuroticism. The research concluded that Portuguese nuns are more emotionally stable as compared to Angolan nuns. This suggests the environment also plays a role in personality traits. The evolutionary theories of emotion proclaim that certain emotions persist in an individual's life because they have a significant role; for instance, the emotion of fear is linked to survival. In the same manner, the emotion of happiness that nuns express is linked to their service to the religious community and teaching children about religion and education. They can correctly identify and interpret their emotion and make relative adaptations to their role (Hammond, 2006).

Past studies (e.g., Hammond, 2006; Neto & Barros, 2010; Skrzypinska & Chudzik ,2012) examining relationship of personality characteristics with positive emotions lack to explain that how other characteristics such as extroversion, conscientiousness, openness to experiences and agreeableness relates with positive emotions. Keeping in view that positive emotions are frequently reported an important aspect of personality characteristics, the present study aims to examine

this dimension in the sample of nuns.

Personality Characteristics and Creativity

Personality representation is incomplete without emotions; likewise creativity is an enhancement of the personality (Furnham, Batey, Anand, & Manfield, 2008). Therefore, creative instincts and how certain personality characteristic facilitates creativity and positive emotions in the Roman Catholic nuns was investigated. Creative people produce more positive emotions and also have healthier personalities. They seek to reveal their own choices and exhibit reflection in their openness in experiencing new things, where the trait of openness reveals that they see minor things in new ways (Basadur, 2004). Baas, Dreu, and Nijstad (2008) noted that positive moods and positive emotions help people to think and attempt tasks in a creative manner. Young and Wilson (2010) carried out a study on a sample of nuns who were school teachers. They qualitatively assessed them in terms of their innate creativity values. The researchers also found that nuns exhibit a higher sense of creativity in their performance when they are provided with fewer resources. This research lacks to explain with what particular personality characteristics nuns are more creative. Nuns who have a creative way of living are probably those who can achieve or are near to the state of self-actualization (Runco, Ebersole, & Mraz, 1991).

Creativity in people can help them to be unique and intuitive individuals, skillful in devising new solutions to problems, work better with fewer resources then less creative people, are more energetic and enthusiastic, indulge more in fantasies and daydreaming and seek novelty in different activities through thinking styles and their selection of problem-solving designs (Haller & Courvoisier, 2010). Resnick (2005) observed that creative people seem to be better handlers of difficulties and bring a balance between the two extremes of selfishness and selflessness, work and relaxation, and sweet-natured and bitter. Therefore, it seems quite interesting to look into nuns' creative skills and how far they think innovatively, are able to solve problems, and attempt tasks in a new way. In the present study, creativity is explored in a selected population of Catholic nuns, since creativity considerably enriches the human personality, not in terms of a single facet, but by rounding a person's personality to reveal all its dimensions (Ansburg & Hill, 2003). For the current study, creativity is measured in the context of creative behavior in five domains: Self/everyday, scholarly, performance, mechanical, and artistic skills (Kaufman, 2012).

The empirical research and theoretical paradigms reported above indicate that personality characteristics are related to positive emotions and creativity. Personality characteristic are exhibited through human behavior which is an expression of emotions; hence, certain personality traits that are more positive have a high association with positive emotions. Likewise, personality characteristics also relate to several forms of creativity and certain traits are more related to a person's level of creativity. As nuns have quite distinct social status and prestige than any other common person in a social setup, and have particular routine and services different from the life of a common Pakistani, therefore, its quite interesting to explore that either personality traits are operated differently in this section of society. Keeping in view the empirical context and the research gap, it was important to assess the personality characteristics of the nuns in order to gain information about their positive emotions and creativity. Enquiring into the nuns' creative instincts and how well they responded with positive emotions was important because nuns have important responsibilities in churches and Christian schools because they have a role in building and influencing others' personalities. It is therefore important to examine this Pakistani minority.

Secondly, exploring personality in Pakistani nuns is an under researched phenomenon. In Pakistan, no other research has enquired or explored the personality of Roman Catholic nuns in any way. Similar populations have been well explored in countries where they are found in larger numbers. Thirdly, it is the researcher's strong desire to study the nuns as a group as this has not been empirically studied before in the local context because of being in minority and in their limited social interactions. The fourth reason is to challenge all stereotypical perceptions of nuns as a minority, as part of the Pakistani population. So, the present study welcomes this opportunity and hopes the findings are useful. It is also useful to enquire into the predominant personality characteristics of nuns, how creatively healthy they are, and what positive emotions they experience. Moreover, nuns are a minority group with certain important religious responsibilities, and they have a different life style, so exploring their personality traits in relation to positive emotions and creativity is an interesting and necessary contribution to the current perspectives of research in Pakistan.

Hypotheses

The following hypotheses were formulated:

1. Nuns who are more extrovert, open to new experiences, and demonstrate more agreeableness are more likely to express more positive emotions and creativity.
2. Emotional stability is likely to positively correlate with creativity and positive emotions.
3. Conscientiousness is likely to positively correlate with positive emotions and creativity.

Method

Research Design

The present study used a cross sectional research design as the purpose was to test study variables across nuns in various age groups.

Sample

Study participants were Roman Catholic nuns from Lahore, Pakistan. The sample comprised 94 nuns with age ranging from 23 to 61 years ($M = 34.70$, $SD = 9.22$) selected through convenient ($n = 36$) and snowball ($n = 58$) sampling techniques. The data was collected with the help of the nuns' referrals and some of the researcher's personal referrals. The descriptive are mentioned in Table 1.

Table 1

Descriptive Characteristics of Sample

Characteristics	M	SD	f	%
Age (years)	34.70	9.22		
23-32			56	59.5
33-42			22	23.4
43-52			10	10.6
53-62			6	6.40
Formal Education	12.89	1.90		
Matriculation			14	14.91
Intermediate			40	42.66
Graduation			24	25.52
Master			16	17.00

Measures

Ten-Item Personality Inventory (TIPI) was developed by Gosling et al. (2003). It was a shorter inventory derived from the Big-Five Model of Personality assessment and constructed as a quick self-reporting personality assessment. TIPI constituted 10-items with a 7-point Likert scale ranging from *disagree strongly* (1) to *agree strongly* (7). For the present study, English version of the TIPI was used as the target sample was known to be well educated and familiar with the English language. This scale has a minimum score of 10 and a maximum score of 70. Previous studies have reported on the content validity of this tool and suggested its reliability has been sufficient to be useful for research. For the present study, the alpha reliability of .76 was attained for the total scale.

Kaufman Domains of Creativity Scale (K-DOCS). A 50 item Kaufman Domains of Creativity Scale (Kaufman, 2012) was responded on a 5-point Likert scale ranging from *much less creative* (1) to *much more creative* (5). It has a five factor subscale of self-reported creative behaviour that refer to self/everyday behavior (items, 1-11), scholarly (items, 12-22), performance (items, 23-32), mechanical/scientific (items 33-41), and artistic skills or behavior (items 42-50). The current study included the first five items of each subscale of creative behavior as the complete inventory was quite lengthy and difficult to administer. These two problems were observed during the piloting of the study, which encouraged the researcher to reduce the length of the questionnaire after the approval of the author of the scale. This scale has a minimum score of 25 and maximum score of 175. Previously, for this scale, the coefficient congruence and coefficient alphas obtained were strong. Evidence of convergent validity was also found whereby all five subscales of creativity and the 5 main personality factors correlated. The K-DOCS five scale reliability for self/everyday was = .86, scholarly = .86, performance = .87, mechanical = .86, and artistic = .83. The present study also had sufficient alpha reliabilities of this scale which was found to be .91, and each of the five sub-scale reliability was self/everyday = .88, scholarly = .77, performance = .91, mechanical = .63, and artistic = .82. These values indicate that the short version administered in the present study were similar to the alpha values of original version.

The Emotional Needs Scale (ENS). It was developed by Culham (2008) to be rated on a 5-point Likert scale ranging from

never to *very* (1-5). This scale has 14 items and aimed to assess the emotional needs of adults. The ENS had been claimed to be a reliable and a short measure of the psychological need of adults for positive emotions. Initially, it was prepared with 59 items to assess nine needs for emotions, then later reduced to 14-items. Scoring of the ENS suggest that the higher the scores, the individuals have the higher the level of positive emotions. ENS has a minimum score of 14 and a maximum of 70. It was a general psychological measure of positive emotions which has been validated as a written measure; while in the present study, alpha reliability of .88 achieved for the total scale.

Procedure

The participants were approached at their place of residence either convent schools or hostels. First the permission/consent from the Convent's Bishop was acquired. Next, an appointment to visit was scheduled and then in the final phase, the third meeting was when the nuns actually were contacted to fill in the questionnaires. The sample was conveniently selected from the place of residence using the snowball sampling technique, as approaching nuns was not easy for security reasons, although after checks and confirmation from the UMT institute, it was possible to enter their churches and convents.

Ethical Considerations

The participants were given informed consent forms to complete once they were briefed about the purpose of the present study. The participants were also informed that the information that they provide would be kept secure and confidential, that their answers would only be used for research purposes. The study had some difficulty recruiting participants. Being Christian minority in Pakistan, nuns have been already a small part of the Christian community and where they were not used to being researched and few expressed their concern in trusting the researcher. They felt insecure and uncertain about providing data. Another important reason would be that some nuns were associated with Christian institutions like orphanages, which have its affiliations with foreign countries and not to the Pakistani Government and hence shared their reluctance in taking part in the research. However, the current research followed all the above mentioned ethical considerations and the researcher did their best to attain the trust of the respondents.

Results

The Pearson Product Moment correlation analysis was run to estimate the relationships between the study variables (see Table 2). Further, a series of stepwise regression analyses were also calculated to identify which personality characteristic was a strong predictor of creativity and positive emotions (see Table 3). Overall, the relationship between the study variables range from low ($r = .29$) to strong ($r = .88$).

The results from the correlation analysis suggest that an extravert personality positively correlates with positive emotions and the overall scores of creativity as well as in the subclasses of self/everyday, scholarly and artistic but not for performance or mechanical forms of creativity. The analysis also shows that an agreeable personality also positively correlates with positive emotions and the overall scores on creativity in the sub-areas of self/everyday, scholarly, performance and artistic, except for mechanical. The findings also showed a positive correlation between a conscientious personality and the self/everyday form of creativity. However, there was non significant correlation between a conscientious personality and the overall scores of creativity and subscales of scholarly, performance and mechanical and positive emotions.

Table 2

Correlation Matrix for Personality Characteristics, Creativity, and Positive Emotions (N = 94)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Extraversion	-	.42**	.39*	.50**	.57**	.54**	.64**	.47**	.27*	.26*	.36**	.61**
2. Agreeableness		-	.32**	.31**	.59**	.47**	.59**	.36**	.35**	-.01	.41**	.49**
3. Conscient.			-	-.02	.19	.21*	.35**	.09	.15	-.11	.26*	.27*
4. Emo. Stability				-	.20*	.32**	.42**	.27*	.14	.23*	.14	.42**
5. Open. to Exp.					-	.52**	.60**	.48**	.22*	.23*	.39**	.60**
6. Creativity Tot.						-	.73**	.77**	.80**	.66**	.76**	.69**
7. Self/Everyday							-	.53**	.43**	.28**	.45**	.88**
8. Scholarly								-	.46**	.62**	.30**	.65**
9. Performance									-	.34**	.68**	.37**
10. Mechanical										-	.35**	.36**
11. Artistic											-	.29**
12. Pos. Emotions												-

Note. Conscient. = Conscientiousness; Emo. = Emotional; Open. To Exp. = Openness to Experience; Pos. = Positive; Tot. = Total
*$p < .05$. **$p < .001$.

A series of stepwise Regression Analyses were applied to determine which personality characteristic is the strongest predictor of positive emotions and creativity (see Table 3). In the first regression model, step 1 used extraversion as the predictor of high creativity scores. This model explains that the 29% variance in creativity was accounted for by extraversion. Step 2 consists of extraversion and agreeableness as predictors of creativity. This model's 37% variance in creativity is accounted by extraversion and agreeableness collectively.

Table 3

Stepwise Regression Analysis Predicting Creativity and Positive Emotions from Personality Characteristics in Nuns

			Criterion			
Predictors	Step 1	Step 2	Step 1		Step 2	
	β	β	R^2	ΔR^2	R^2	ΔR^2
Model 1			Creativity Total			
Constant	49.93	36.07	.29	.28	.37	.34
Extraversion	3.14***	2.40**				
Agreeableness		2.04*				
Model 2			Self / Everyday			
Constant	8.26	3.18	.42	.40	.54	.52
Extraversion	1.04***	.77***				
Agreeableness		.74***				
Model 3			Scholarly			
Constant	9.08		.23	.21		
Openness to Experience	.67**					
Model 4			Performance			
Constant	7.33		.12	.10		
Openness to Experience	.67**					
Model 5			Artistic			
Constant	7.64		.17	15		
Agreeableness	.77***					
Model 6			Positive Emotions			
Constant	33.89	28.42	.37	.36	.47	.44
Extraversion	2.06***	1.32***				
Openness to Experience		1.18***				

*$p < .05$. **$p < .01$.

Table 3 further showed that in the second regression model, self/every day in step 1 is predicted by extraversion and this has 42% variance. In step 2, self/everyday is predicted by extraversion and agreeableness with 54% variance. In the third regression model, step 1 contains openness to experience as the predicting variable along with

23% variance, whereas step 2 excludes extraversion and agreeableness. Step 1 of the fourth model has agreeableness as the predictor of the performance form of creativity, explaining 12% variance, whereas step 2 also excludes openness to experience and extraversion from the model. In the fifth regression model, step 1 has agreeableness as the predictor of the creativity-subscale of artistic. This explains the 17% variance in artistic in agreeableness and step 2 excludes the predicting variable for this subscale. In the next regression model, step 1 contains extraversion that shows variance of 37%, whereas step 2 composed of extraversion and openness to experience explains the 47% variance. Conscientiousness had non significant correlation with any of the dependent variables; by applying the stepwise method in the SPSS the software operations also excluded emotional stability in the procedural actions for calculating the regression analysis.

Discussion

The objective of the current study was to identify the relationship between personality characteristics and creativity and the emotions of Catholic nuns in Lahore. In this section, the findings are discussed in relation to the previous empirical research and various theoretical aspects. The results suggest that personality characteristics have a strong impact on creativity and positive emotions.

The first hypothesis of the study was that Roman Catholic nuns who are more extroverted and open to experience are likely to express more creativity and have positive emotions. The findings of the present study support this hypothesis as extraversion linked positively with positive emotions and creativity. This result is in line with the theoretical foundations of Eysenck's personality theory (1992) which explains that individuals who are extravert in their behavior are more sociable, enthusiastic, lively, and also open to change. These elements are a reflection of creativity and positive emotions. From a sample of college graduates from Michigan University, Fredrickson, Tugade, Waugh, and Larkin (2003) found that extravert people are creative explorers and have positive emotions because they use humor in their lives as a coping strategy.

The current study findings show that openness to experience positively correlates to positive emotions and creativity. This finding is in line with the observations of Kaufman et al. (2015). They proposed in their research that openness as a characteristic has a high association with creativity including creative instincts, a sense of art, and emotional richness.

Considering the present research findings in the light of previous research into a sample of nuns, Gaver et al. (2010) suggest that openness to experience plays a vital role in spirituality and facilitates the nuns' convent activities. Madjar, Oldham, and Pratt (2002) have also pointed out that people with openness experiences are more creative because they have the tendency to grow, adapt, develop healthily, think innovatively and also to shift and adjust in response to opportunities.

In continuation of first hypothesis, it was also postulated that nuns who have more agreeable personalities are likely to have more creative and positive emotions. The agreeableness personality trait is positively related to creativity and positive emotions. The findings from this research are similar to comparative research of nuns and lay-women by Skrzypinska and Chudzik (2012), who analyzed the association of agreeableness with positive emotions. Ashton and Lee's (2001) findings showed that people with the agreeable characteristic have more positive emotionality and creativity because they show more awareness of social behavior, exhibit helping behavior, and are more willing to consider others' welfare. The current findings suggest that nuns who are more agreeable have more positive emotions and are also creative in a number of ways.

The second hypothesis of study was that conscientiousness is likely to be positively related to creativity and positive emotions in Catholic nuns. The present study findings do not illustrate a relationship between these two features, which is consistent with previous findings reported by Skrzypinska and Chudzik (2012). In a comparative analysis of nuns and regular women, they did not find any relationship between conscientiousness and positive emotions. There are other findings that contrast with this result. Generally, the literature reports that a higher level of conscientiousness is linked to a higher level of positive emotions and lower level of negative emotions (Javaras et al., 2012). It could be that conscientiousness is linked to the inner quality of emotional regulation, which helps positive emotion building. According to Reiter-Palmon, Illies, and Kobe-Cross (2009) conscientiousness and creativity are not consistently related because conscientiousness is based on two components - achievement and dependability which suggest a need for order and dependability, which do not relate to creativity. Conscientiousness is reported as not related to positive emotions because individuals who face a low locus of control take on situations with less control and this reduces their positive emotions (Miles, Borman, Spector, & Fox, 2002).

The third hypothesis of the study is that Nuns who are more emotionally stable are more creative and positive in their emotions.

The results suggest that emotional stability is related to positive emotions and creativity. This finding supports earlier results such as those of Sanchez, Hernandez, Perez, Batey and Petrides (2011), who observed that emotional stability as a personality-trait has a strong association with creativity and sense of arts. The finding that emotional stability is related to positive emotions concurs with Vitterso's (2001) research which also displayed a strong relationship between emotional stability and the presence of positive emotions and the absence of negative emotions. Cohn, Fredrickson, Brown, Mikels, and Convay (2009) found that highly emotionally stable individuals have positive emotions because they are resilient by nature. Harker and Keltner (2001) researched a sample of females from a women's college and found that those with higher emotional stability had more positive emotions, a creative and artistic sense because they felt the need for affiliation, to nurture, be socially desirable, had temperament-maintenance, and wanted to grow and develop their personality and be emotionally positive.

The final hypothesis of the study was that extraversion, agreeableness, and openness to experience predict positive emotions and creativity in Roman Catholic nuns. The research findings suggest that extraversion is a stronger predictor compared to agreeableness and openness. Stafford, Moore, and Bard (2010) found that the extraversion characteristic predicts positive emotions and creativity in their research and that extravert individuals gain more rewards during which their dopamine activity increases and this results in an increase in positive emotions and creative tasks.

Limitations and Suggestions

The nun population is under researched and studied around the world and also in Pakistan. Foreign research has focused on this population from the biological aspect, for example, health problems, while the psychological perspective has been ignored or not sufficiently examined. As this is very first study of its kind into this population of nuns, they haven't been approached earlier from a local perspective, so they showed great deal of hesitancy towards their participation in the current study. Also security reasons played a role as a barrier to collecting data from nuns as the churches do not have open access. Many of the nuns are associated with foreign NGO's, and the head of the association does not permit them to give any sort of information. The research sample is small because the population is only a small part of a Pakistani minority population and not easily accessible. Some of the alpha coefficients for measures pf personality

(e.g., agreeableness, contentiousness, emotional stability) and creativity were found low which could be somehow attributed toward the small sample size. Though, study findings provide important directions to explore in future, yet a relative larger sample size could also add into the consistency of current study findings.

This study took a quantitative approach. Interviews or focus groups could provide useful supplementary information. A mixed method approach is more suitable when the sample size is small and unique in characteristic. Other researchers might add some psychological and mental health factors on the basis of the current variables' results. In addition to personality assessment, they might address other constructs such as mental health outcomes, life satisfaction in the context of more valuable exploration.

Implications and Future Trends

This study has useful implications from its investigation into the chosen population's personality characteristics and how they correlate with two important variables that is positive emotions and creativity. The study showed that of five personality traits, one trait strongly predicted positive emotions and creativity. The study provides useful information about nuns' personality traits and also that certain personality characteristics act as a trigger for positive emotions and creativity in nuns. This information could be the basis for the further investigation of some variables other than creativity and positive emotions in which personality characteristics play an important role like how individual mood affects performance (Baas, Dreu, & Nijstad, 2008). It is important to look at other variables like mood as they also relate to human personality characteristics. This research points the way to future research areas which have not been much studied yet.

The research also highlights the fact that human health needs not only medical consideration but psychological as well because psychological assessment can provide individuals with self-knowledge. With this they can be informed of the self-rating results of their personality assessment. This study basically assessed the personality traits which trigger creativity and positive emotions, so in future, psychological assessment could involve other assessments in addition to personality features like types of mental disorder in nuns. Mental disorders and their investigation can include which individual could have the tendency to develop mental disorder if their scores are high at assessing tools item. Overall, this study suggests a wide range of possible future directions in this area of investigation by carrying

forward the current study into work for future research. Another important suggestion for future research is to incorporate the nuns' data from this research into a cross-cultural approach.

Conclusion

Personality characteristics including extraversion, emotional stability, openness to experience, agreeableness, and conscientiousness are positively related to creativity and positive emotions. The findings reveal the positive relationship between positive emotions and creativity in all four traits except conscientiousness. It was also found that extraversion, agreeableness, and openness to experience are predictors of creativity and positive emotions. Of all the personality characteristics, the findings show that extraversion was the strong predictor of positive emotions and creativity in the sample of Roman Catholic nuns in Lahore.

The present research results suggest that a combination of personality traits is useful for assessing the correlates/relationship with creativity and positive emotions. Significantly, extraversion turned out to be the strongest predictor of the personality traits of creativity and positive emotions in the nuns. Further qualitative research could help to investigate why extraversion is the strongest predictor and why conscientiousness had no relationship with creativity and positive emotions in the nuns researched. The results could be useful and productive if shared through publications to discover more about which personality traits relate to creativity and positive emotions. This study could be the basis for further research into the nun population and also into personality characteristics and their relationship to creativity and positive emotions.

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