

COMPARATIVE ANALYSIS OF PERSONALITY TRAITS BETWEEN MURDERERS AND SERIAL KILLERS USING THE BIG FIVE FACTOR INVENTORY

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ABSTRACT

This research was conducted to study the differences in extraversion, agreeableness, conscientiousness, neuroticism, and openness between murderers and serial killers. A sample of 62 participants, consisting of 31 murderers and 31 serial killers, was collected through a purposive sampling technique. The data were obtained using the Big Five Factor Inventory, and a comparative research design was applied to evaluate the results. The analysis highlighted significant differences in the five personality factors between murderers and serial killers. These findings contribute to the understanding of personality traits within these two distinct groups. It emphasizes the importance for educators, such as parents, teachers, and relatives, to be vigilant in the upbringing of children and to be conscious of the individuals by whom they are surrounded. The findings can enhance the understanding of the psychological profiles of murderers and serial killers, aiding forensic psychologists and criminal profilers in identifying and differentiating between these types of offenders. Insights from this research can assist law enforcement agencies in developing better investigative techniques and strategies tailored to the distinct personality traits of murderers and serial killers.

Keywords; Serial killers, Murderers, Personality Factors, Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness

INTRODUCTION

Rationale

Killing is an act that goes against any code whether it is moral, social, cultural or religious. In addition, killing someone is against the humanity. Not even a single religion permits murder. Islam states killing one person is equals to killing the entire humanity on the earth. In Pakistan, rapid increase in poverty, unemployment, inequality of rights, discrimination, low social or economic background, illiteracy, have become the root causes of rage, irritability, impulsivity, illegal actions or crimes and irrational thinking pattern. People with such factors don't know how to attain their rights, or jobs or simple

human right. Therefore, they are opting such ways through which they can out let their stress and frustration the way they want without considering what is white or black and what is right and wrong. Keeping in mind such hideous problems people are losing temper and ready to walk over another person because nobody is there to listen them or to their problems. These problems have generated two extremities one which causes a person to do suicidal bomb attacks and the other is randomly killing people. Researcher's objective is to high light the differences in the core five factors of personality among murderers and serial killers and to grasp the attention of educators like parents, teachers,

relative, neighbors and sibling in order to make them conscious and realize how they can prevent themselves and others from such future curse.

Objectives

- To determine the differences in extraversion among murderers and serial killers.
- To determine the differences in agreeableness among murderer and serial killers.
- To determine the differences in conscientiousness among murderers and serial killers.
- To determine the differences in neuroticism among murderers and serial killers.
- To determine the differences in openness among murderers and serial killers.

Hypotheses

H₁: There is a difference in extraversion among murderers and serial killers.

H₁: There is a difference in agreeableness among murderers and serial killers.

H₁: There is a difference in conscientiousness among murderers and serial killers.

H₁: There is a difference in neuroticism among murderers and serial killers.

H₁: There is a difference in openness among murderers and serial killers.

Methodology

This chapter follows a series of steps that was implemented to achieve the purposes and objectives of this research, details about the samples and sampling technique, selected variables, as considerably as the specific tool that were utilized. It also outlined the procedural steps that were initiated in the inquiry, and discusses how the data was broken down and computed statistically.

Research Design

Comparative research design was used for this study to find the differences in big five factors (dimensions) of personality such as extraversion, openness, neuroticism, conscientiousness and agreeableness between murderers and serial killers (Cherry, 2015).

Sample

The sample of present study was 62 members (N=62), consisted of murderers males (n=31) and serial killers males (n=31) the age range of the sample is from early adulthood to late adulthood. After taking consent from the sample, they were asked to fill out a questionnaire which was used to measure the differences between big five factors (dimensions) such as extraversion, openness, neuroticism, conscientiousness and agreeableness among murderers and serial killers.

Sampling strategy

Purposive sampling strategy was used to collect the data. Purposive sampling is a method of sampling in which information regarding the particular study is gathered from specific individuals from the general population that fulfill the requirement of the study and for their active involvement as a sample (Cherry, 2015).

Variables

There were two variables independent and dependent variable. In this research independent variables were big five factors of personality such as extraversion, openness, neuroticism, conscientiousness and agreeableness and dependent variables were murderers and serial killers.

Tool

Big five inventory is developed by John, O. P., & Srivastava, S. in (1999). It has been translated in to 10 different languages. It has 44 items. It has five core dimensions of personality such as extraversion vs introversion, openness vs closeness, neuroticism vs emotional stability, conscientiousness vs lack of direction and agreeableness vs antagonism. Time to administer this test is 10-20 minutes. Reliability of each dimension is as following: extroversion =0.76; agreeableness =0.62; conscientiousness =0.78; neuroticism =0.74 and openness =0.77. For the complete scale a reliability is 0.82 and it has greatest construct validity (Srivastava, 1999).

Procedure

For this survey, comparative research design was conducted to seek out quantitative data for measuring the differences in big five factors (dimensions of personality) such as extraversion,

openness, neuroticism, conscientiousness and agreeableness among murderers and serial killers. The sample was collected from Lahore, Pakistan prison. The participants were informed about the purpose of study beforehand, furthermore, participants were assured about confidentiality and were given the choice to either participate or refuse. Consent form was filled by participants. The sample was collected via purposive sampling strategy which is a non-probability sampling technique. Sixty two participant were asked to fill big five inventory. The test was administered in 10-20 minutes and the scores was interpreted accordingly.

Statistical Analysis

Independent- sample *t* test was employed to analyze the differences of big five factors of personality between murderers and serial killers (SPSS-18).

Literature review

Labrode (2007) conducted a research based on etiology and different characteristics of psychopathic serial killers. The sample was of hundred and twenty serial killers. He conducted personality and behavioral tests. The data was analyzed through NCAVC. The purpose of his study was to define the differences between antisocial personality disorder and psychopathy among serial killers. He discussed multiple reasons, characteristics and historical aspects of killer. He demonstrated that due to differences in the environment and biological factors a person turns into killer. He also discussed the traits of antisocial-personality-killer including lack of remorse, blameful of others, dominant, unthankful to others, cold, desperate understanding of acceptable behavior, disobedient, no respect for authority and highly irresponsible whereas the psychopathic serial killers are remorseless predators. They were intimidating, used charm and cold-blooded violent in nature. According to the statistics only five to six percent of adult males were responsible for crimes whereas fifteen to twenty five percent psychopathic serial killers were involved in violent and criminal acts.

David and Wentink (2007) conducted a research based on serial murderer's typology. The sample was of total fifty two serial killers. His study was based on empirical method known as small

space analysis. Through this procedure he measured the differences in the level of different characteristics. He gave this research concluding that all serial killers had one basic characteristic known as dominance/power/control. He stated that more than fifty percent of serial killers have this characteristic. Only ten percent serial killers showed low level of lust. His research not only became popular in the field of forensics but also helped in future assessments.

Egan and Gargan (2008) conducted a survey based on sensational interests and general personality traits of serial killers. In this study, Sensational interest questionnaire was established to assess the level of interest along with violent acts and unusual behaviors among criminals. From the Sample of three hundred and one individuals, more than two hundred and fifty individuals had criminal history. This questionnaire highlighted the high level of interest in violent activities. Moreover, big five inventory was used which gave clear picture of the study. The results showed high level of extraversion, low level of IQ, low level of agreeableness and low level of conscientiousness.

Dalal, Aggarwal, Bhullar, and Manisha (2009) conducted interviews of five serial killers. These were most popular and renown serial killers in their respective countries. These serial killers were investigated by Federal Bureau. Behavioral science unit of federal bureau gave final results after extended period of investigation. They showed possible causes and characteristics of serial killers through these five case studies of different serial killers. These case studies showed that different causes such as environment, mental illness, brain damages, biological disabilities, parenting styles and poverty led people toward horrible future consequences such as fantasy, inflexibility, lack of guilt, sadistic nature, impulsivity, aggression, isolation, inability to love, depression, psychopathy and turn an individual into serial killer.

Weathersby (2009) conducted a study based on the etiology and consequences of homicidal serial killer. He conducted an extensive study on four renowned serial killers. He used two models such as Buller integrated model and the motivation model of sexual homicides to analyze the data. He focused on the causes of serial killing and its consequences. Study yielded that

poverty, poor home environment and poor social environment led person toward future isolation, depression, emotional instability, inflexibility, inability to see reality and restlessness.

Choi and Lee (2014) conducted a research based on different approaches. Those approaches had different perspective about why a person turns into serial killer. Psychological researches stated that there was psychological disturbance, impulsivity and unnecessary feeling of power that led a person towards such crime. Environmental researches stated that factors such as family disturbance, neglected parents, social taboos, rejection and inferiority complexes were playing important role in generating such

crimes. Many other researches stated that serial killers were inflexible, judgmental, dominant

and emotionally unstable. He concluded that such reasons led people towards violence and criminal acts.

Results

This chapter includes results which have been determined after data analysis by using SPSS. Independent sample *t* test is employed to deduce results. This chapter includes tables and figures for explaining results of this study.

Hypothesis I

H₁: There is a difference in extraversion among murderers and serial killers.

Table 4.1.

Differences in extraversion among murderers and serial killers

<i>Variable</i>	<i>Criminals</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>P</i>
Extraversion	Murderers	31	23.19	3.85	60	.00
	Serial Killers	31	25.90	3.48		

Note. M= mean; SD= standard deviation; df= degree of freedom; p < 0.05

The calculated p value of extroversions

is less than the alpha value; hence the hypothesis is supported which states that there is a significant difference in extraversion among murderers and serial killers.

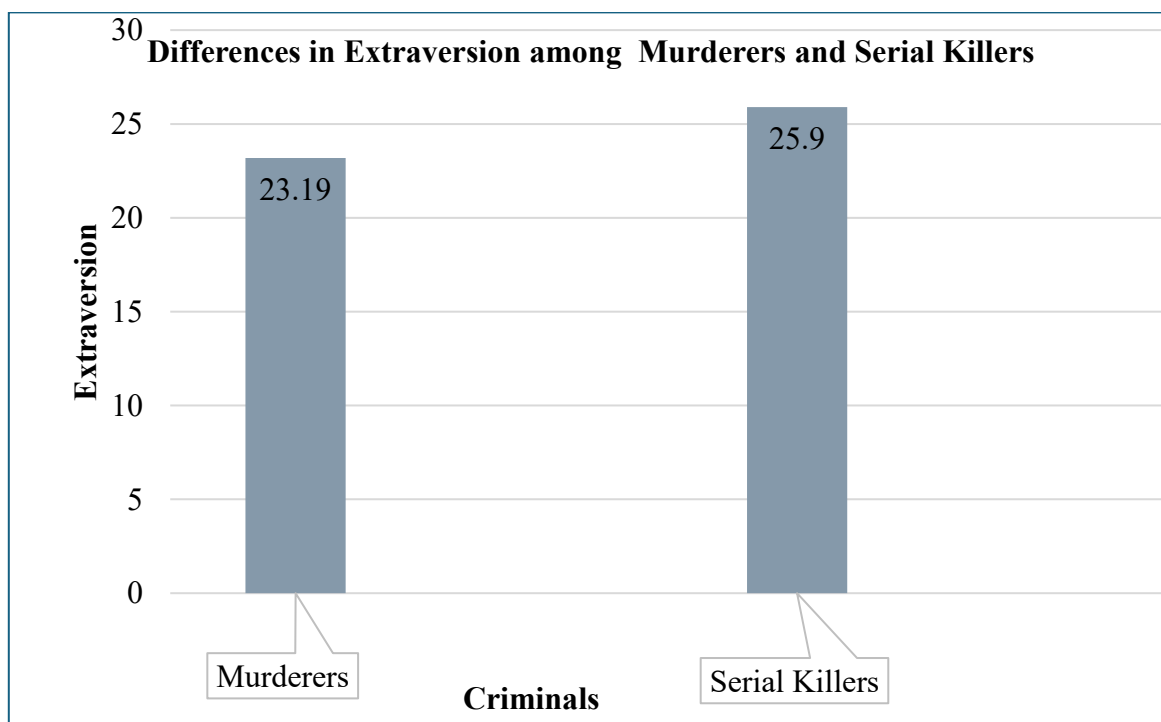


Figure 4.1 is showing that extraversion is higher in serial killers than murderers.

Hypothesis II

H₁: There is a difference in agreeableness among murderers and serial killers.

Table 4.2.
Differences in agreeableness among murderers and serial killers

<i>Variable</i>	<i>Criminals</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>p</i>
agreeableness	Murderers	31	31.23	5.16	60	.98
	Serial Killers	31	31.19	5.71		

Note. M= mean; SD= standard deviation; df= degree of freedom; p > 0.05

The calculated p value of agreeableness is greater than the alpha value; hence the hypothesis is not supported which states that there is no significant difference in agreeableness among murderers and serial killers.

Hypothesis III

H₁: There is a difference in conscientiousness among murderers and serial killers.

Table 4.3.
Differences in conscientiousness among murderers and serial killers

<i>Variable</i>	<i>Criminals</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>p</i>
Conscientiousness	Murderers	31	25.52	7.99	60	.03
	Serial Killers	31	29.35	5.55		

Note. M= mean; SD= standard deviation; df= difference in conscientiousness among murderers and serial killers; p < 0.05

The calculated p value of conscientiousness is less than the alpha value; hence the hypothesis is supported which states that there is a significant

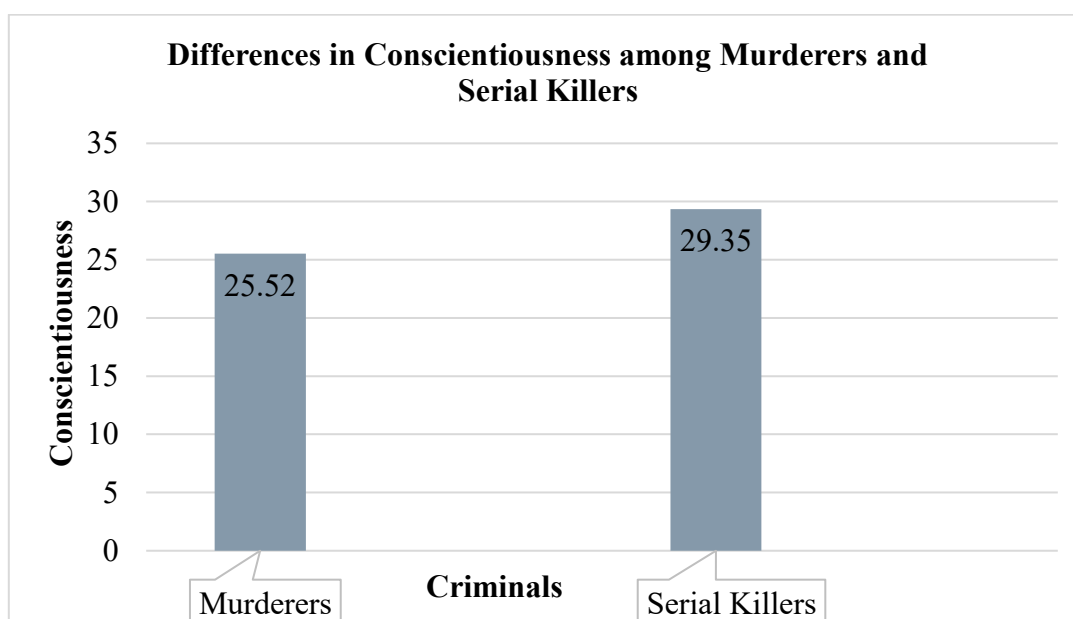


Figure 4.3 is showing that conscientiousness is higher in serial killers than murderers.

Hypothesis IV

H₁: There is a difference in neuroticism among murderers and serial killers.

Table. 4.4.

Differences in neuroticism among murderers and serial killers

<i>Variable</i>	<i>Criminals</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>p</i>
Neuroticism	Murderers	31	18.68	5.87	60	.00
	Serial Killers	31	23.35	4.50		

Note. M= mean; SD= standard deviation; df= degree of freedom; p < 0.05

The calculated p value of neuroticism is less than the alpha value; hence the hypothesis is

supported which states that there is a significant difference in neuroticism among murderers and serial killers.

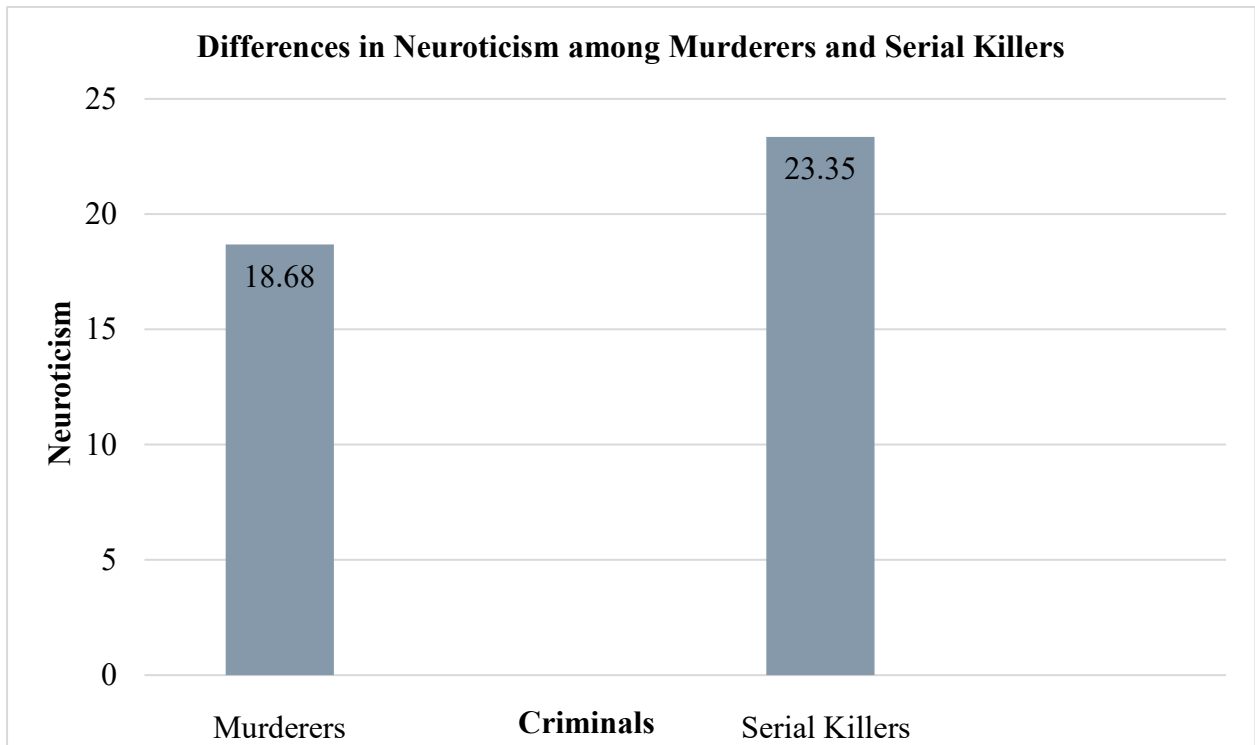


Figure 4.4 is showing that neuroticism is higher in serial killers than murderers.

Hypothesis V

H₁: There is a difference in openness among murderers and serial killers.

Table 4.5.
Differences in openness among murderers and serial killers

<i>Variable</i>	<i>Criminals</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Df</i>	<i>P</i>
Openness	Murderers	31	27.94	5.74	60	.00
	Serial Killers	31	34.00	5.96		

Note. M= mean; SD= standard deviation; df= degree of freedom; p < 0.05

The calculated p value of openness is smaller than alpha value; hence the hypothesis is

supported which states that there is significant difference in openness among murderers and serial killers.

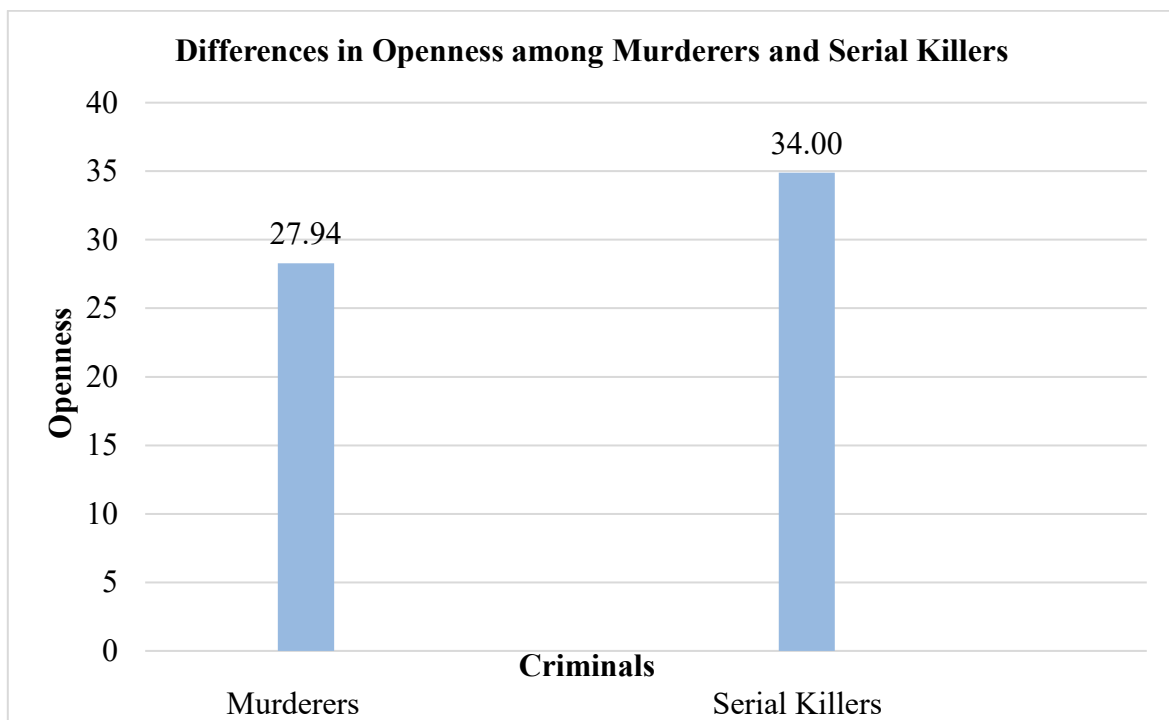


Figure 4.5 is showing that openness is high in serial killers than murderers.

Discussion

This research determine the differences in the big five factors (neuroticism, extraversion, agreeableness, conscientiousness, extraversion and openness) between murderers and serial killers. A sample of criminals (N=62) was obtained which was further divided into two categories murderers (n=31) and serial killers (n=31).The Big Five Inventory (BFI) was employed to measure neuroticism, extraversion, agreeableness, conscientiousness and openness between the two groups. Independent sample t test was applied to analyze the five factors of

personality of murderers and serial killers for deducing the results.

Hypothesis I

The research hypothesis suggests that there is a significant difference in extraversion between murderers and serial-killers. The results suggest that extraversion is high in serial killers as compared to murderers. Extraversion is the tendency of an individual to express and talk. Individuals expressing extraversion are likely to engage themselves in gatherings and meetings

and are self-confident, energetic, chatty and dominating (Hawley, 1999). In line with these definitions, Kraemer, Lord and Heilburn (2004) suggested that victims of serial killers are likely to be vulnerable, susceptible, and defenseless women that are easy to catch/attack and therefore, can be easily targeted. Furthermore, it was also found that serial killers specifically targeted mentally disabled individuals, prostitutes, and children, homeless and old people since they could be targeted easily and are weak and defenseless. Most serial killers are likely to select victims that feeble and can provide the killer with a sense of power and dominance. Such victims allow the killer to exercise control over them, to dominate them. Dominance - the tendency to control others allows the serial killers to feel empowered. Dominance, along with socialization is the characterizing feature of extraversion. Individuals measured high in extraversion are likely to possess the tendency to make decision for others and desire to exercise control over them. Similarly, Ted Bundy (1989) who killed almost 30 women in 1988 was one of the most notorious serial killers. What made him different was his ability to mask his true intentions and interests through his extraversion abilities. Ted Bundy was highly educated and good looking, and he left out no trick to dodge his execution with the help of his wit. Characterizing features of his personality was extraversion - he was very jolly, friendly, outgoing and had a lot of friends and colleagues. He socialized really well due which when he was caught and charged with 30 murders, many people were unable to believe it at first. All of his victims were females which suggests the need to dominate and exercise control thus extraversion. The famous serial killer Jack-The Ripper was notorious for his crimes in London in 1888. Although he went unidentified throughout most of his killings, most of his victims were prostitutes that dwelled in the slums of London thus dominance. All of these women were defenseless, easy targets and were unable to protect themselves. Dominance which is the characterizing feature of extraversion is largely evident and possessed by serial killers. These findings indicate that serial killer possess high level of extraversion as compared to murderers which are in line with our study.

Statistical analysis of crime and rapid increase in the number of murders and serial killings in Pakistan have motivated criminologists to explore the reasons behind such inhuman crime. According to Qureshi (2015), Pakistani males can do whatever it takes to protect their ego. They have been brought up in a way which fills their personality with feeling of dominance and control. They are also allowed and motivated to express themselves in any manner they want. He believes that all these small acts (over speeding, signal breaking, shouting, beating, hitting, threatening, show off, physical and mental torture, vandalism, stealing, snatching, animal-violence etc.) are root causes of major crimes. All these crimes are known to be the part of their early life, which brings happiness and greater level of satisfaction lead them towards serious crime known as serial killings.

Overall as proven by the results, case study and accompanying literature, serial killers have high level of extraversion as compared to murderers. There is a significant difference in the findings and that same difference was supported by previous literature done in this domain.

Hypothesis II

The findings of the currents study suggest that there is insignificant difference in agreeableness between serial killers and murderers. Agreeableness is characterized by friendly, tactful, warmth, love, trust and altruistic behavior. Interpersonal preferences are the primary facet of agreeableness. Agreeableness can be simply defined as positive interpersonal strategies (Cherry, 2015). In line with the results, Cook (2011) conducted a research based on the relationship among, callousness, harshness, rudeness, violence, antagonistic attitude and murderers and serial killers. He highlighted the traits which turns normal person into murderer and then into serial killer. The sample was based on ten notorious serial killers who happened to be normal people before but then circumstances and personal events turned them into someone else. He suggested that murderers and serial killers are likely to have superficial charm, lack of remorse and shame, irritability, loss of insight, poor judgment, poor family integration, failure in interpersonal relationships, disturbed sex life, lack of empathy, poor financial conditions and incapacity to love. Thus, they become unable to

show positive emotions towards others thus agreeableness. The study indicated that there significant relationship between murderers, serial killings and callousness, harshness, rudeness, violence, antagonistic attitude. Briefly, he highlighted some of the very prevalent problems in the family structure, culture and society that contribute to lack of love, agreeableness and altruism in these individuals. Due to this alarming lack of agreeableness, these individuals are deviated and commit acts that are unspeakable. Similarly, Asim (2014) highlighted the characteristics of Pakistani notorious serial killer Javed Iqbal (1999) who killed 100 children, cut them into 100 pieces 100 times and then dumped them into an acid tank. According to forensic reports, ninety percent of children were sexually assaulted before they got killed which showed the symptoms of rage, anger and hate. An interview with him revealed that he had no shame, guilt or remorse over taking innocent lives. He further explained that if he ever got a chance to do such an act again, he would happily do it which showed that he had no feeling of love, affection or kindness. In addition, Kelly (2014) highlighted the characteristics of Mohammad Arif (2011), who is the first Pakistani cannibal individual. He allegedly chopped the heads of babies, mutilated the body parts of teenage boys and women and ate their flesh. In an interview, he revealed that he experienced severe marital problems that forced his wife to take his kids and move out of the house. This drove him mad to the point that he could think of nothing else then cannibalism as a means to avenge him. Therefore, he began digging graves and devouring the dead bodies. All these case studies and previous literature have influenced the psychologists to explore the hidden causes behind these inhuman acts which make a person numb, cruel, emotion less and unkind. As an Islamic state, Pakistan is supposed to be a land where inhuman or violent acts should not exist and Pakistani males are supposed to be known as symbol of kindness, love, protection and altruism but personal grudges, parental conflicts, negligence, loneliness, hunger for rights, lust, aggression, physical/ emotional/psychological abuse, unfulfilled desires, early exposure to violence, unnecessary pampering and tragic losses leads a person towards crimes i.e. serial killings. Overall

as proven by the results, case study and accompanying literature, there is no difference in agreeableness between serial killers and murderers.

Hypothesis III

The hypothesis suggests that there is a significant difference in conscientiousness between murderers and serial-killers. The results suggests that conscientiousness is high in serial killers as compared to murderers. Conscientiousness is characterized by impulsive, highly organized goal-directed behavior (Cherry, 2015). The characterizing features of some of the very famous and notorious serial killers is high organized behavior and goal oriented behavior. Ted Bundy, famous for his killings in 1988, was highly organized. This key feature allowed him to execute his killings without being noticed by anyone. For successful execution of murders, it is necessary to be organized. Along with Ted Bundy, Frank Breitkoof was also a very organized serial killer. This trait of him allowed him to continue killing individuals over decades without being noticed. Similarly, Ferguson, White, Cherry, Lorenz and Bhimani (2003) suggested that killers are likely to commit murder under stressful circumstances which can vary in nature. These stressful circumstances can be financial or personal in nature. Actions of these killers depict a certain degree of control and planning thus organization and conscientiousness. Due to this component, the crime being committed is carried out and continued in an orderly and methodological approach. Thus, serial killers are equipped in handling interpersonal situations effectively because they are socially skilled and organized. This very characteristic i.e. conscientiousness is therefore evident in the criminal act. The theory suggests that serial killers are likely to possess a degree of impulsiveness and control and organization which are facets of conscientiousness which aids them in carrying out their criminal acts in a smooth manner. The propositions of the above mentioned theory are in line with the findings of the current study that suggests serial killers possess higher level of conscientiousness as compared to murderers. In addition to these case studies, famous article writer of Pakistan Sarhandi (2015) has highlighted the main reasons behind "Organized

crimes". Raising Un-employment, poverty, inequality in Pakistani society, discrimination on the basis of gender, sect, race, age, color, caste are causing frustration, anger, hate and intolerance. Not only these factors but lawlessness, illiteracy, fundamentalism, backwardness and double standards regarding rich and poor are root causes of such hideous crimes. After dealing with all these issues men chase one opportunity to show who they are, what they can do, how well organized they can be, how they control things and how they can rule the world and take themselves towards destructive path, the path which is illegal, immoral and dangerous for themselves and others. They indulge in crimes which can provide them with immense pleasure and greatest level of satisfaction at the same time.

Overall as proven by the results, case study and accompanying literature, serial killers have high level of conscientiousness as compared to murderers. There is a significant difference in the findings and that same difference was supported by previous literature done in this domain.

Hypothesis IV

The hypothesis suggests that there is a significant difference in neuroticism between murderers and serial-killers. The results suggest that that serial killers have higher level of neuroticism as compared to murderers. Neuroticism is the tendency of an individual to express, anxiety, moodiness, fear, worry, depression, envy, frustration, jealousy, depression and loneliness (Cherry, 2015). Individuals expressing neuroticism are likely to focus on negativity in society. Individuals with neuroticism are more likely to detect negativity in other people which can lead them to have problems in relationships and indulge themselves in rumination (Baer, 2014). In line with result, Schlesinger (1998) conducted a research based on relationship between pathological neuroticism and serial killers. According to the findings of his research, various characteristics are dominant in the personality of a serial killer. These include anxiety, moodiness, and frustration, which collectively contribute to neuroticism. Similarly, Mitchell and Aamdot (2005) conducted a research in an attempt to study the relationship between psychological traumas, neuroticism and

serial killings. He analyzed the underlying reasons behind the presence of neuroticism in serial killers. The findings of the research indicated that there is a significant relationship between neuroticism and psychological traumas (sexual, emotional, physical or mental) and that it can also turn into pathological narcissism. His research gave evidence that psychological traumas are one of the major reason behind serial killings. Pakistani paramedic Ehsan killed three homosexual men in 2014. The underlying motive behind his vindictive attitude towards killing the homosexual men was his desire to refrain from committing sins. However, what made him furious is that these homosexual men did not listen to him and continued their sinful activities. Then he decided to send a message to the rest of the "evils" by killing these three homosexual men. Criminologists investigated and found the real reason behind his brutal killings was a suppressed childhood memory. Ehsan was raped by an older man when he was only but a young boy which made him emotionally unstable, frustrated and moody and contributed to the development of neuroticism in him. This characteristic of his personality dominated him which led him to kill those three men (AFP, 2014).

Overall as proven by the results, case study and accompanying literature, serial killers have high level of neuroticism as compared to murderers. There is a significant difference in the findings and that same difference was supported by previous literature done in this domain.

Hypothesis V

The hypothesis suggests that there is a significant difference in openness between murderers and serial-killers. The results suggest that that serial killers possess higher level of openness as compared to murderers. Openness is characterized by insight and imagination. People who consumes high level of openness are imaginative, curious, artistic, unconventional and excitable (Vogt & Laher, 2009). In line with the results, Vries (2003) explored the history of four notorious serial killers, researcher found that serial killers are unconventional and have artistic ways to commit a murder. Similarly, Webb, Sweet and Pretty (2000) conducted a study based on forensic implication on biting behaviors. Researchers have highlighted that

creativity factor which is a facet of openness exists in almost every act of serial killers. They use it either in terms of behaviors or in terms of planning. Furthermore, it was found that sadistic serial killers leave bite marks all over the body and put bodies in a particular position. They also found that serial killers who were abandoned especially by females, plan extremely classic and poetic situation to kill females. Furthermore, it was found that such crimes are highly influenced by violent games and violent movies. Furthermore, Dennis Rader, who was notorious for his serial killings during the 1970's continuing to commit his crimes and remained at large for almost 30 years. What was intriguing about him were his methods. He used to taunt the police and agencies looking for him by sending them poems and letters related to him. In addition, he also suggested himself many nicknames, one of which got stuck and described his modus operandi as well: bind, kill and torture. All of his killings were based on this three step procedure. All of this was done a particular fashion which required creativity and imagination thus openness which he did not lack. He would report his murders himself, leave notes in libraries regarding his recent killings or use other methods to notify the officials but remained at large. After his arrest, he revealed on inquiry that all of his victims were 'projects' to him and that he produced and directed these projects. This shows how serial killers sue openness in executing their killings. The findings of this case study and accompanying literature are in line with the findings of current study and suggest that openness is high in serial killers as compared to murderers.

As highlighted through the findings of this research, it is evident that neuroticism, extraversion, agreeableness, conscientiousness and openness are prevalent in serial killers as compared to murderers. In Pakistani context, various factors contribute to the development of such heinous tendencies. Initially, male dominant mindset of the society towards men harbors externalizations and reinforces the need to exercise control. If at any point, these needs are not fulfilled; men tend to use other ways to fulfill thus explained by the findings. Secondly, financial uncertainty, economic pressure and unfair system contribute to these tendencies and individuals revert to other means to seek justice,

power and feelings of worth and control. Another factor contributing is psychological trauma. In many instances, sexual abuse and childhood molestation has also contributed in shaping the personality and developing afflictions in serial killers. Individuals who are abused in any way in their childhood become frustrated because of feeling helpless and therefore try to avenge themselves if not by hurting the abuser then by hurting other people. It can be safely said that these factors are the leading causes that motivate serial killings and related inhumane acts.

Conclusion

The research was conducted to analyze the difference in the big five factors (neuroticism, extraversion, agreeableness, conscientiousness, extraversion and openness) among murderers and serial killers. It is concluded from the findings of the research that serial killers have higher extraversion as compared to murderers, serial killers have higher conscientiousness as compared to murderers, and serial killers have higher neuroticism as compared to murderers. It is also concluded from the findings of the current study that there is insignificant difference in agreeableness among serial killers and murderers and that serial killers have higher openness as compared to murderers.

Limitations

Following are some of the short coming of this research.

- The sample size was small which can affect the generalizability of the research.
- The sample was comprised of all-male criminals. Therefore, this lacks diversity as far as gender is concerned.
- Difficulty was encountered during data collection since the nature of sample was unique and difficult to approach.
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Further recommendations

Following are some of the suggestions that can be used to overcome the shortcoming of this research.

- Gender diversity should be introduced in this research so that insight can be gained regarding female serial-killers and murderers as well.

- Attempts must be made to facilitate research in unique domains
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