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**Dark Personality, Paranormal Beliefs, And  
Mental Well Being Among Young Adults And  
Middle Adults**

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## Dark Personality, Paranormal Beliefs, And Mental Well Being Among Young Adults And Middle Adults

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### Abstract

The present study explored the relationship between dark personality, paranormal beliefs, and mental well-being among young adults and middle adults. The correlational cross-sectional research design was used. A sample of (n) 200 young and middle adults with an age range of 20 years to 65 years ( $M = 35.33$ ,  $SD = 14.59$ ), including 112 women and 88 men, was accessed by employing stratified random sampling. A self-constructed demographic sheet, the Short Dark Tetrad Scale, the Revised Paranormal Belief Scale, and the Mental Health Continuum-Short Form were used for assessment. The findings highlighted that all the dark personalities were positively related to paranormal beliefs, whereas paranormal beliefs were found to be positively related to mental well-being. The results also showed only psychopathy dark personality as a positive predictor of mental well-being, while paranormal belief did not predict it. The results also highlighted significant differences in young and middle adults in terms of dark personalities, precognition-related paranormal beliefs, and mental well-being. Further gender differences in sadism, witchcraft-related paranormal beliefs, and mental well-being were also reported. The present research has an important contribution to the field of social psychology, highlighting the role of dark personality and paranormal beliefs in determining the mental well-being among young and middle adults.

**Keywords:** Dark personality, paranormal beliefs, mental well-being, young adults, middle adults.

### INTRODUCTION

Dark personality is the dark side of human nature; it is aversive, callous, and immoral in every fiber of its being. Aghababaei and Błachniob (2015) described dark personalities as a term that deals with narcissism, psychopathy, and machiavellianism at non-clinical levels these levels vary within the population. Individuals that have high levels of “dark” personalities are also found to have disagreeableness, cruel disregard of others, untruthfulness, deceitfulness, and are hostile; they are most likely to spend an exploitive and fast-paced life, rather than a good prosocial, life. Recently, a new term was coined by Paulhus et al. (2020) known as the “Dark Tetrad” with a presence of previous personalities remaining a new personality was added known as the sadism. The term dark tetrad and dark personality could be used synonymously.

The development of these personality types is influenced by various factors. Dark personality traits often emerge as a result of negative childhood experiences and may also have a genetic basis (Lyons, 2019). Additionally, Freud and his followers proposed that the unconscious mind plays a central role in shaping human behavior (McLeod, 2023), with past experiences being crucial in personality development. Therefore, if a person's past involves trauma or abuse, these experiences can not only shape their personality but also have a lasting impact on their mental health. Traumatic events or those that influence the unconscious mind can affect personality later in life. As such, traits associated with the dark tetrad, such as psychopathy or sadism, are likely to develop due to adverse childhood experiences, as noted by Jonason et al. (2014) from a different perspective.

It has been suggested that individuals with dark personalities often develop beliefs rooted in myths, tales, or folklore, with a primary focus on paranormal phenomena such as souls, ghosts, and evil spirits (Pyysiainen, 2008). He further explained that paranormal beliefs are socially constructed exceptional ideas about entities like the soul, ghosts, and malevolent spirits. According to Atran and Norenzayan (2004), paranormal beliefs significantly influence people's lives, particularly in the context of religion. Irwin (2009) described various types of paranormal beliefs, including those related to religion and spirituality, such as the power of prayer, supernatural forces, the survival of the soul, and psychic abilities like a sixth sense and psychokinesis. Other beliefs include astrology (the idea that future events are influenced by celestial bodies), reincarnation (the rebirth of the soul), and the existence of extraterrestrial life. Culture has also been found to play an important role in paranormal beliefs, and gender variation was found to exist in paranormal beliefs (Singh & Dangwal; 2019; Vitulli et al., 1999; Zaman et al., 2020). Many paranormal beliefs are already part of Pakistan's culture, and adding mental well-being and dark personality to the study helped to understand where they intersect and come to form a unique psychological dynamic. Paranormal beliefs hold significance in Pakistan's society, where it is often incorporated into religious teachings, superstitions, and folklore. Depending on the nature of paranormal beliefs, their mental well-being is affected (Keyes, 2002).

According to Brown and Janmohamed (2008), mental well-being refers to an individual's psychological functioning, encompassing life satisfaction and the ability to form and maintain mutually beneficial relationships. It is a state of happiness, wellness, and prosperity, reflecting how individuals feel and function. When individuals feel well, they are more likely to perform their roles effectively in life (Barbayannis et al., 2022). The World Health Organization (WHO, 2022) defines mental well-being as the ability to work productively and creatively, build positive relationships with others, and contribute meaningfully to the community. Similarly, Mental well-being is humans' proper mental, cognition, and emotional functioning. Melkonian (2022) suggests that mental well-being consists of three main aspects: psychological, social, and emotional health. If a person performs well in all these three aspects, that individual is mentally healthy. Moreover, some of the work done has concluded the positive aspect of the dark

personality on mental well-being (Aghababaei & Błachniob, 2015) and of paranormal beliefs on mental well-being as well (Bushong, 2018).

In literature, a dark personality was postulated to have a positive effect on mental health (Mushtaq et al., 2018). Following this, it was found that dark personality has been an ancestral marker of survival of the fittest (Egan et al., 2014). Whereas, Paranormal beliefs are usually present in those people who are already suffering from mental illness and mentally strong people have a low trust in the paranormal and lower risk perception (Drinkwater et al., 2018; Fatima & Jameel, 2020). Paranormal beliefs affect mental health, and childhood traumas cause a higher perception of paranormal beliefs (Prasad & Gopal, 2017; Robeyron & Watt, 2010). Furthermore, Illiterate people, people with low salaries, and individuals with family problems were high believers in superstitions (Tahir et al., 2018). Younger people had more paranormal beliefs, paranormal beliefs were also found to be higher in females as compared to males (Lee, 2019; Williams et al., 2007; Zaman et al., 2020). However, little to no study was found that had been conducted between dark personality, paranormal beliefs, and mental well-being. So based on the above discussion, the main objectives of the study are to find the relationship between dark personality, paranormal beliefs, and mental well-being in young and middle adults, and also to find whether dark personalities and paranormal beliefs affect mental well-being among young and middle adults.

#### **HYPOTHESES OF THE STUDY**

- There will likely be a positive relationship between dark personality, paranormal beliefs, and mental well-being among young and middle adults.
- Dark personality and paranormal beliefs will likely positively predict mental well-being among young and middle adults.
- There will likely be age group differences in dark personality, paranormal beliefs, and mental well-being among young and middle adults.
- There will likely be significant gender differences in dark personality, paranormal beliefs, and mental well-being among young and middle adults.

#### **METHOD**

##### **RESEARCH DESIGN**

A correlational cross-sectional research design was used.

##### **DESCRIPTION OF SAMPLE AND SAMPLING STRATEGY**

The sample consisted of 200 young adults and middle adults with an age range of 20 years to 65 years ( $M = 35.33$ ,  $SD = 14.59$ ), including 100 young adults and 100 middle adults. The data for young adults were gathered from different universities in Lahore, and the data for middle-aged adults were gathered from the parents of different participants. The stratified sampling technique was used in the present study. The strata were based on age groups, i.e., young adults and middle adults.

## ASSESSMENT MEASURES

### SHORT DARK TETRAD SCALE (SD4) (PAULHUS ET AL., 2020)

It is a 28-item scale, with 7 items and four sub-scales including psychopathy, Machiavellianism, narcissism, and sadism. It is measured on a five-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*). A higher score indicates the presence of a specific dark personality. The subscales of dark personality had reliability ranging from .78 to .83 (Paulhus et al., 2020).

### REVISED PARANORMAL BELIEF SCALE (R-PBS) (TOBACYK, 2004)

It has 26 items with seven subscales: traditional religious belief, Psi (Extrasensory perception), witchcraft, spiritualism, superstition, extraordinary life forms, and precognition. It is measured on a seven-point Likert rating scale (1 = *strongly disagree*, 2 = *moderately disagree*, 3 = *slightly disagree*, 4 = *uncertain*, 5 = *slightly agree*, 6 = *moderately agree*, 7 = *strongly agree*). A higher score indicates increased paranormal beliefs. The reliability of the scale is .92 (Tobacyk, 2004).

### MENTAL HEALTH CONTINUUM (MHC) (KEYES, 2002)

It has 14 items measuring three sets of well-being: emotional, psychological, and social. It can be measured on a Likert rating scale (0 = *never*, 1 = *once or twice*, 2 = *about once a week*, 3 = *two or three times a week*, 4 = *almost every day*, 5 = *every day*, 6 = *Every day*). A higher score indicates higher mental well-being; a lower score indicates lower mental well-being. The Cronbach alpha of the scale is .80 (Keyes, 2002).

## PROCEDURE

To carry out the research, formal permission from relevant authors was taken to use their scales. Data collection commenced; permissions were taken from the institutes to carry out data collection and participants were divided into two groups based on their ages: young adults (20-40 years) and middle adults (40-65 years) (Shaffer & Kipp, 2014). Informed consent was taken from the participants, and they were informed of their rights to confidentiality, anonymity, and the right to withdraw. Afterward, they were given a demographic form to fill out. Then, the questionnaires were presented to the participants to fill out. After data collection, the data was analyzed using SPSS. In the present study, 255 participants were contacted, 220 participants volunteered, and 200 were considered for analysis. 20 questionnaires were discarded due to being incomplete or missing options. So, the overall response rate was 91%.

## RESULTS

The detail description of the psychometric properties of the scales are discussed below (table 1):

**TABLE 1: PSYCHOMETRIC PROPERTIES OF SCALES AND SUBSCALES**

| Scales                             | <i>k</i> | <i>M</i> | <i>SD</i> | Range        | Cronbach's $\alpha$ |
|------------------------------------|----------|----------|-----------|--------------|---------------------|
| <b>The Short Dark Tetrad Scale</b> |          |          |           |              |                     |
| Machiavellianism                   | 7        | 20.93    | 3.50      | 10.14-29.71  | .57                 |
| Narcissism                         | 7        | 2.44     | .727      | 1.00 – 4.29  | .75                 |
| Psychopathy                        | 7        | 19.15    | 4.82      | 6.14 – 30.29 | .80                 |
| Sadism                             | 7        | 12.46    | 4.27      | 5.14 – 22.71 | .78                 |



|  |    |        |       |                |     |
|--|----|--------|-------|----------------|-----|
| <b>Revised Paranormal Belief Scale</b> | 26 | 103.80 | 21.37 | 38.00 - 163.00 | .83 |
| Traditional Religious Beliefs          | 4  | 19.05  | 4.06  | 7.50 – 50.75   | .39 |
| Psi (Extrasensory perception)          | 4  | 11.84  | 4.67  | 3.25 – 22.75   | .50 |
| Witchcraft                             | 4  | 15.64  | 4.59  | 3.25 – 22.75   | .72 |
| Superstition                           | 3  | 5.25   | 3.41  | 2.33 – 16.33   | .70 |
| Spiritualism                           | 4  | 13.62  | 4.46  | 3.25 -22.75    | .45 |
| Extraordinary Life Form                | 3  | 7.46   | 3.41  | 2.33-16.33     | .65 |
| Precognition                           | 4  | 10.62  | 4.68  | 3.25 – 22.75   | .75 |
| Mental Health Continuum- Short form    | 14 | 38.77  | 13.36 | 11. 00-66.00   | .92 |
| Emotional well being                   | 3  | 9.12   | 3.70  | 0.00 -15.00    | .87 |
| Social well being                      | 5  | 11.38  | 5.32  | 0. 00 - 23.00  | .82 |
| Psychological wellbeing                | 6  | 18.26  | 6.43  | 2.00 - 30.00   | .89 |

Table 1 showed that the short dark tetrad scale showed reliability ranged from .57 to .80. The revised paranormal belief scale had a reliability of .83, and the Mental health continuum indicated a reliability of .92. Hence, the reliability of the measures was good enough to carry out further analyses.

To see the relationship among study variables, Pearson product-moment correlation analysis was conducted (Table 2). The results showed that all dark personalities, i.e., machiavellianism, narcissism, psychopathy, and sadism, were positively related to paranormal beliefs. Further, sadism was found to be negatively related to mental well-being. Whereas paranormal beliefs were positively related to mental well-being. The results also showed that Machiavellianism was positively related to psychological well-being. Psychopathy was positively related to social well-being; Sadism was negatively related to emotional and psychological well-being. Further, paranormal beliefs were positively related to social and psychological well-being. Traditional religious beliefs were positively related to overall mental well-being and its subscales of emotional and psychological well-being. Additionally, witchcraft and spiritualism were positively related to overall mental well-being and its subscales of social and psychological well-being. Psi was negatively related to emotional well-being, while superstition was positively related to social well-being.

The results also highlighted that dark personality was positively related to precognition and narcissism, and sadism was positively related to superstition, whereas narcissism and machiavellianism were also positively related to extraordinary life forms. Furthermore, Machiavellianism was also positively related to witchcraft and traditional religious beliefs, whereas narcissism and psychopathy were positively related to Psi. Individually, psychopathy was positively related to spiritualism.

**TABLE 2: PEARSON CORRELATION OF DARK PERSONALITY, PARANORMAL BELIEFS, AND MENTAL WELL-BEING IN SAMPLE (N=200)**

| Variables                        | 2     | 3     | 4     | 5     | 6    | 7    | 8    | 9    | 10   | 11   | 12    | 13    | 14    | 15    | 16    |
|----------------------------------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1. Machiavellianism              | .21** | .24** | .15*  | .16*  | .17* | .00  | .15* | .07  | .01  | .15* | .16*  | .12   | .05   | .08   | .15*  |
| 2. Narcissism                    | -     | .32** | .36** | .15*  | -.12 | .15* | .00  | .27* | .04  | .15* | .20** | -.05  | -.11  | .04   | -.07  |
| 3. Psychopathy                   | -     | -     | .31** | .22** | .09  | .18* | .08  | .08  | .14* | .09  | .24** | .13   | .02   | .17*  | .12   |
| 4. Sadism                        | -     | -     | -     | .16*  | -.08 | .11  | -.02 | .24* | -.01 | .13  | .34** | -.20* | -.35* | -.04  | -.17* |
| 5. Paranormal beliefs            | -     | -     | -     | -     | .42* | .62* | .61* | .56* | .71* | .72* | .68** | .16*  | -.06  | .20** | .20** |
| 6. Traditional religious beliefs | -     | -     | -     | -     | -    | .10  | .40* | -.09 | .31* | .16* | .06   | .23** | .15*  | .12   | .29** |
| 7. Psi                           | -     | -     | -     | -     | -    | -    | .23* | .34* | .41* | .45* | .35** | -.07  | -.19* | .02   | -.05  |
| 8. Witchcraft                    | -     | -     | -     | -     | -    | -    | -    | .18* | .35* | .31* | .23** | .19** | -.01  | .14*  | .28** |
| 9. Superstition                  | -     | -     | -     | -     | -    | -    | -    | -    | .31* | .46* | .44** | .09   | -.05  | .24** | .02   |
| 10. Spiritualism                 | -     | -     | -     | -     | -    | -    | -    | -    | -    | .45* | .35** | .18*  | .02   | .17*  | .21** |
| 11. Extraordinary life form      | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | .45** | .07   | -.05  | .12   | .08   |
| 12. Precognition                 | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -     | .05   | -.11  | .13   | .08   |
| 13. Mental wellbeing             | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -     | -     | .77** | .88** | .90** |
| 14. Emotional                    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -     | -     | -     | .57** | .54** |
| 15. Social                       | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -     | -     | -     | -     | .67** |
| 16. Psychological                | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -     | -     | -     | -     | -     |

<sup>a</sup> 0 = men, 1 = women. \* $p < .05$ . \*\* $p < .01$ .

Further, multiple hierarchical regression analysis was performed to assess the prediction of mental wellbeing by dark personality and paranormal beliefs in young and middle adults (See Table 3). The results showed that the model of mental well-being explained 35% of the variance with  $F(11, 160) = 988.98, p = .10$ . The results showed that psychopathy positively predicted ( $\beta = .28, p < .01$ ) mental well-being in young and middle adults. However, paranormal beliefs did not predict it. Further, age was found to be a positive predictor ( $\beta = .46, p < .01$ ) of mental well-being

**TABLE 3: MULTIPLE HIERARCHAL REGRESSION ANALYSIS RESULTS FOR MENTAL WELL-BEING AMONG YOUNG AND MIDDLE ADULTS (N=200)**

| Predictors                  | B        | 95% CI for B |       | SE B | $\beta$ | R <sup>2</sup> | $\Delta R^2$ |
|-----------------------------|----------|--------------|-------|------|---------|----------------|--------------|
|                             |          | LL           | UL    |      |         |                |              |
| <b>Step 1</b>               |          |              |       |      |         |                |              |
| Constant                    | 24.01**  | 14.25        | 33.77 | 4.94 |         | .27            | .27***       |
| Age                         | .41**    | .27          | .55   | .07  | .46**   |                |              |
| Gender <sup>a</sup>         | -1.72    | -5.44        | 1.99  | 1.88 | -.06    |                |              |
| Education                   | .06      | -.38         | .50   | .22  | .02     |                |              |
| Family Monthly income       | 1.420E-7 | .00          | .00   | .00  | .00     |                |              |
| Physical health issues      | 3.55     | -1.81        | 8.93  | 2.72 | .09     |                |              |
| Psychological health issues | -5.51    | -12.35       | 1.32  | 3.46 | -.11    |                |              |
| <b>Step 2</b>               |          |              |       |      |         |                |              |
| Constant                    | 10.19    | -6.04        | 26.43 | 8.22 |         | .34            | .08**        |
| Age                         | .42**    | .28          | .57   | .07  | .47**   |                |              |
| Gender <sup>a</sup>         | -.89     | -4.50        | 2.72  | 1.82 | -.03    |                |              |
| Education                   | -.08     | -.51         | .35   | .21  | -.02    |                |              |
| Family Monthly income       | 3.393E-7 | .00          | .00   | .00  | .01     |                |              |
| Physical Health issues      | 2.97     | -2.21        | 8.16  | 2.62 | .07     |                |              |
| Psychological Health issue  | -4.54    | -11.20       | 2.12  | 3.37 | -.09    |                |              |
| Machiavellianism            | .22      | -.27         | .72   | .25  | .06     |                |              |
| Narcissism                  | -.51     | -3.14        | 2.11  | 1.33 | -.02    |                |              |
| Psychopathy                 | .75**    | .37          | 1.13  | .19  | .28**   |                |              |
| Sadism                      | -.24     | -.70         | .20   | .23  | -.08    |                |              |
| <b>Step 3</b>               |          |              |       |      |         |                |              |
| Constant                    | 6.04     | -10.88       | 22.97 | 8.57 |         | .35            | .01          |
| Age                         | .41**    | .27          | .56   | .07  | .46**   |                |              |
| Gender <sup>a</sup>         | -1.35    | -4.99        | 2.28  | 1.84 | -.05    |                |              |
| Education                   | -.04     | -.47         | .38   | .21  | -.01    |                |              |
| Family monthly income       | 4.375E-7 | .00          | .00   | .00  | .01     |                |              |
| Physical health issues      | 2.53     | -2.66        | 7.72  | 2.62 | .06     |                |              |
| Psychological health issues | -4.53    | -11.16       | 2.10  | 3.35 | -.09    |                |              |
| Machiavellianism            | .19      | -.29         | .69   | .25  | .05     |                |              |
| Narcissism                  | -.82     | -3.45        | 1.81  | 1.33 | -.04    |                |              |
| Psychopathy                 | .69**    | .31          | 1.08  | .19  | .26**   |                |              |
| Sadism                      | -.26     | -.71         | .19   | .23  | -.08    |                |              |
| Paranormal beliefs          | .06      | -.01         | .15   | .04  | .11     |                |              |

<sup>a</sup> 0 = men, 1 = women. \*\* $p < .01$ . \*\*\* $p < .00$ .



The same analysis was performed on the sub-scales of mental well-being. The results indicate that the overall variance explained by the model of emotional well-being was 33% with  $F(11,160) = 70.54$ ,  $p = .71$ . The results showed that psychopathy positively ( $\beta = .18$ ,  $p < .05$ ), and sadism negatively predicted ( $\beta = -.22$ ,  $p < .01$ ) the emotional well-being in young and middle adults. Further, age was found to be positive ( $\beta = .35$ ,  $p < .01$ ), and gender was found to be a negative predictor ( $\beta = -.15$ ,  $p < .05$ ) of emotional well-being.

The overall variance explained by the social well-being model was 21% with  $F(11,160) = 95.53$ ,  $p < .05$ . The results showed that psychopathy positively predicted ( $\beta = .25$ ,  $p < .01$ ) social well-being. However, paranormal beliefs also positively predicted ( $\beta = .15$ ,  $p < .05$ ), social well-being. Further, age was also found to be a positive predictor ( $\beta = .29$ ,  $p < .01$ ) of social well-being. The overall variance explained by the model of psychological well-being was 35% with  $F(11,160) = 236.64$ ,  $p < .01$ . The results showed that Psychopathy was a positive predictor ( $\beta = .22$ ,  $p = .00$ ) of psychological well-being. However, paranormal beliefs did not predict it. Furthermore, age was also a positive predictor ( $\beta = .50$ ,  $p < .01$ ) of psychological well-being.

Lastly, an independent sample t-test was performed to compare the means group, i.e., age group and gender in terms of study variables (Table 4 & 5).

**TABLE 4: INDEPENDENT SAMPLE T-TEST COMPARING YOUNG AND MIDDLE ADULTS IN TERMS OF DARK PERSONALITY, PARANORMAL BELIEFS, AND MENTAL WELL-BEING (N=200)**

| Variable                      | Young adults<br>(n=100) |       | Middle adults<br>(n=100) |       | t (198) | p    | Cohen's d |
|-------------------------------|-------------------------|-------|--------------------------|-------|---------|------|-----------|
|                               | M                       | SD    | M                        | SD    |         |      |           |
| <b>Dark Personality</b>       |                         |       |                          |       |         |      |           |
| Machiavellianism              | 20.81                   | 3.45  | 21.06                    | 3.56  | .619    | -.49 | -         |
| Narcissism                    | 2.61                    | .702  | 2.26                     | .712  | 3.51    | .001 | .49       |
| Psychopathy                   | 20.27                   | 4.12  | 18.02                    | 5.23  | 3.37    | .001 | .47       |
| Sadism                        | 14.39                   | 3.77  | 10.52                    | 3.86  | 7.17    | .000 | 1.01      |
| <b>Paranormal Beliefs</b>     | 104.85                  | 21.28 | 102.85                   | 21.53 | .661    | .510 | -         |
| Traditional religious beliefs | 18.53                   | 3.54  | 19.57                    | 4.48  | -1.82   | .070 | -         |
| Psi                           | 12.20                   | 4.38  | 11.48                    | 4.94  | 1.08    | .281 | -         |
| Witchcraft                    | 15.30                   | 4.19  | 15.99                    | 4.95  | -1.06   | .289 | -         |
| Superstition                  | 5.46                    | 3.62  | 5.05                     | 3.20  | .841    | .401 | -         |
| Spiritualism                  | 13.52                   | 4.62  | 13.72                    | 4.32  | -.31    | .755 | -         |
| Extra Life Form               | 7.47                    | 3.42  | 7.46                     | 3.42  | .02     | .984 | -         |
| Precognition                  | 11.56                   | 4.45  | 9.69                     | 4.73  | 2.87    | .004 | .40       |
| <b>Mental well-being</b>      | 31.40                   | 11.17 | 46.14                    | 11.14 | -9.33   | .001 | 1.32      |

|               |       |      |       |      |       |      |      |
|---------------|-------|------|-------|------|-------|------|------|
| Emotional     | 7.30  | 2.90 | 10.95 | 3.52 | -7.99 | .001 | 1.13 |
| Social        | 9.39  | 4.90 | 13.37 | 4.99 | -5.68 | .001 | .80  |
| Psychological | 14.71 | 5.46 | 21.82 | 5.27 | -9.36 | .001 | 1.32 |

**\*\* $p < .01$ .**

The results showed a significant difference between young and middle adults in terms of dark personality, i.e., psychopathy, sadism, and narcissism indicating higher scores in young adults. It was also found that paranormal beliefs related to precognition were significantly higher in young adults. Further significant differences in mental well-being and its subscales were also found in middle adults indicating higher scores. No significant differences were found between machiavellianism and other paranormal beliefs.

**TABLE 5: INDEPENDENT SAMPLE T-TEST COMPARING GENDER IN DARK PERSONALITY, PARANORMAL BELIEFS, AND MENTAL WELL-BEING (N=200)**

| Variables                     | Women<br>(n=112) |       | Men<br>(n=88) |       | t (198) | p    | Cohen's d |
|-------------------------------|------------------|-------|---------------|-------|---------|------|-----------|
|                               | M                | SD    | M             | SD    |         |      |           |
| Machiavellianism              | 20.80            | 3.36  | 21.10         | 3.67  | .588    | .557 | -         |
| Narcissism                    | 2.40             | .695  | 2.49          | .766  | .869    | .386 | -         |
| Psychopathy                   | 19.02            | 4.54  | 19.31         | 5.18  | .421    | .674 | -         |
| Sadism                        | 12.93            | 4.28  | 11.86         | 4.20  | -1.77   | .007 | .25       |
| Paranormal beliefs            | 105.96           | 21.43 | 101.15        | 21.11 | -1.58   | .115 | -         |
| Traditional religious beliefs | 19.40            | 4.64  | 18.59         | 3.14  | -1.41   | .160 | -         |
| Psi                           | 12.08            | 4.91  | 11.53         | 4.36  | -.81    | .414 | -         |
| Witchcraft                    | 16.32            | 4.38  | 14.78         | 4.72  | -.23    | .019 | .33       |
| Superstitions                 | 5.45             | 3.59  | 5.00          | 3.17  | -.94    | .347 | -         |
| Spiritualism                  | 13.54            | 4.73  | 13.71         | 4.12  | .26     | .791 | -         |
| Extra Life Form               | 7.58             | 3.61  | 7.31          | 3.16  | -.56    | .574 | -         |
| Precognition                  | 10.89            | 4.79  | 10.28         | 4.53  | -.91    | .363 | -         |
| Mental well-being             | 36.06            | 13.54 | 42.21         | 12.36 | 3.31    | .001 | .47       |
| Emotional                     | 8.08             | 3.62  | 10.45         | 3.37  | 4.73    | .001 | .67       |
| Social                        | 10.40            | 5.53  | 12.62         | 4.79  | 2.90    | .003 | .42       |
| Psychological                 | 17.58            | 6.70  | 19.13         | 6.00  | 1.70    | .090 | .24       |

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

There were significant gender differences in terms of sadism and witchcraft-related paranormal beliefs indicating higher scores in women. Further significant gender differences in mental well-being and its subscales were also found indicating higher scores in men. Moreover, no significant differences were found in dark personality i.e., Machiavellianism, narcissism, psychopathy, and other paranormal beliefs.

## **DISCUSSION**

The current study examines the relationship between dark personality, paranormal beliefs, and mental well-being among young adults and middle adults. Many paranormal beliefs are already part of Pakistan's culture, and adding mental well-being and dark personality to the study helped to understand where they intersect and come to form a unique psychological dynamic. Paranormal beliefs hold significance in Pakistan's society, where it is often incorporated into religious teachings, superstitions, and folklore. Mental health issues are often discarded in the name of being supernatural, and adding dark personality i.e., Machiavellianism, Narcissism, Psychopathy, and Sadism) adds a layer of complexity to understanding this phenomenon (Kayani et al., 2017).

The present study highlighted multiple significant positive relations between dark personality, paranormal beliefs, and mental well-being. These were aligned with previous scientific articles by Murad et al. (2020), who explored the relationship between dark tetrad and counterproductive work behavior in a sample of ( $n = 400$ ) doctors and discovered a positive relation between well-being and dark personality. Another study conducted by Gunnthorsdottir et al. (2002) explored relations between dark personality and well-being in a sample of ( $n = 126$ ) and described psychopathy as impulsive, thrill-seeking behavior, including low empathy. Similarly, Jonason et al. (2012), while discussing the relationship between dark tetrad and life theory in a scientific article, explained individuals with psychopathy as impulsive, thrill-seeking people with low empathy. Sadism is the callousness and enjoyment of cruelty, and machiavellianism is a manipulative, self-serving, social strategist with a perspective of ends justifying the means. As people with these personalities seek gratification from aversive behaviors, each time such actions are performed, it likely gratifies the individual and enables their social and psychological well-being. Except for sadism, because according to Chester et al. (2018) state in a study to find the link between sadism to aggression, in a sample of ( $n = 2,255$ ), that aggression has a positive effect on sadists only when they are committing aggressive acts however, it leaves a significant negative effect on the well-being of the sadist when the aggressive act by the sadist stops. This ultimately explains the results obtained from the present study.

Positive relations between paranormal beliefs and mental well-being were found in the current study, which aligned with a previous study by Greenfield (2003) while exploring the relations in a sample of ( $n = 3,032$ ) found that paranormal beliefs had a more positive effect on well-being as compared to having a negative effect. Whereas, Kayani et al. (2017) while studying relations between paranormal beliefs and practices in a sample of ( $n = 30$ ) found that because people in Pakistan when they cannot come up with a reasonable explanation for something,

develop superstition-related paranormal beliefs gain control over situations such individuals, although they are mentally disturbed, creating such beliefs and incorporating them into religious teaching and confiding in those beliefs, can help stabilize their mental health for a certain time. From another perspective, the psychodynamic theory explained by Prasad and Gopal (2017) while investigating the influence of childhood trauma and personality beliefs on paranormal beliefs in a sample ( $n = 190$ ) of early adults where 67 were men and 123 were women concluded that negative childhood experiences such as traumas are linked with person's personality and beliefs, and such beliefs can be developed as a result to cope with negative experiences. Rabeyron and Watt (2010), when exploring the relationship between paranormal beliefs, mental boundaries, and childhood trauma in a sample of ( $n = 160$ ), found that certain beliefs are formed as a result of childhood experiences as a coping strategy. As well as McLeod (2023) in a scientific article and Seefeldt (2014) in a book section, both explained the psychodynamic theory and stated that a person's personality and beliefs are formed due to childhood experiences. If a child is being raised or living with individuals who have tendencies to develop superstitions and incorporate them into traditional and religious beliefs, such individuals may develop paranormal beliefs and dark personalities that affect their mental well-being later in life. The existing work done by Schofield et al. (2021) to explore links between dark personality and beliefs in a sample of ( $n = 199$ ) showed that there was a significant relationship between paranormal beliefs and dark personality. Hence, the results indicated links between dark tetrad and paranormal beliefs that aligned with the present study, proving the results to be mostly accurate, with some variations that may be due to differences in culture (Lee, 2019).

The present study highlighted psychopathy and sadism as a significant predictor of mental well-being, however paranormal beliefs did not significantly predict mental well-being. These findings were closely aligned with previous studies, as according to Keyes (2002) who suggested that paranormal beliefs do affect the mental well-being. Aghababaei and Błachnio (2015) as well as Bongu (2017) found while exploring the relationship between well-being and dark personality in a sample of ( $n = 300$ ), suggesting that dark personality has a positive correlation with mental well-being. On the other hand, Schumaker (1987) while studying the relationship between mental health, belief deficit compensation, and paranormal beliefs and found that often paranormal beliefs are significant positive predictors of mental well-being because they can act as self-serving cognitive biases, which can explain the results of the present study. Furthermore, Jung (2020) when finding the relation between belief in the paranormal and mental health, in a sample of ( $n = 1627$ ) participants found that there was a positive association between belief in the paranormal and mental well-being in women, which supports the findings of the present study.

The results of the current study also indicated that psychopathy, sadism, and precognition were higher in young adults, whereas mental well-being (emotional, social, and psychological), was higher in middle adults the results aligned with the study done by Makim and Shetty (2018) while finding the relationship between age, gender, and dark personality in a

sample of ( $n = 90$ ) found that young adults tend to exhibit dark personality more as compared to middle adults. Further, Vitulli et al. (1999), while exploring the relation between age, gender, and paranormal beliefs in a sample of ( $n = 201$ ), also discovered that young adults have more paranormal beliefs as compared to elderly adults. Additionally, Finch et al. (2022), when finding links between age and mental health in a sample of ( $n = 2,348$ ), found that older adults tend to have better mental well-being compared to younger adults.

It is further found in the results that sadism and witchcraft were higher in women. Whereas, mental well-being, and the types that fall under it (emotional, social, and psychological well-being) were higher in men. This aligned with previous research done by Prasad and Gopal (2017) who conducted a study to explore the relationship between childhood trauma, personality traits, and paranormal beliefs in early adults with a sample of ( $n = 192$ ) young adults of age range 18 to 30 years, their findings revealed that witchcraft-related paranormal beliefs were higher in women. Similarly, Tahir et al. (2018) investigated superstitions and behavior in a sample of ( $n = 34$ ) participants, 7 were men and 27 were women, which highlighted that woman are high believers in paranormal beliefs, contradicting the present findings. In addition to that, Zaman et al. (2020) explored links between paranormal beliefs and personality traits within a sample of ( $n = 200$ ) including 100 women and 100 men. The results concluded that women have higher paranormal beliefs as compared to men, especially belief in witchcraft. It was discovered that women also tend to exhibit more dark personalities as compared to men by Luo et al. (2022) when studying relations between sex differences and dark personality in a sample of ( $n = 5,854$ ). Furthermore, Droogenbroeck et al. (2018) found while exploring links between gender differences in mental health problems in a sample of ( $n = 1433$ ), ( $n = 713$ ) men and ( $n = 720$ ) women, that women's mental well-being tends to be lower than men.

The present study highlighted that mental well-being in women decreases with age, Sharifi et al. (2014) explained while investigating the links between middle-aged women and mental health in a sample of ( $n = 23$ ) that middle-aged women's mental health falls under two categories 'increased life concerns' which consisted of mental concerns and burden of roles and 'physical and psychological tensions' which consisted of perceived changes that were undesirable physically and psychological changes that people perceive to be undesirable. With age, there seemed to be a decline in these physically and psychologically perceived desirable traits such as mood and menopause, which can lead to dissatisfaction in life and threaten women's mental health.

## **CONCLUSION**

The results highlighted that dark personality i.e., machiavellianism, narcissism, psychopathy, and sadism were positively related to paranormal beliefs. Sadism was negatively related to mental wellbeing and Paranormal beliefs were positively related to mental well-being. Additionally, it was found that psychopathy was a positive predictor of mental well-being, while paranormal beliefs did not significantly predict overall mental well-being. On the other hand, dark personality and precognition related to paranormal beliefs were higher in young adults, while



mental well-being was higher in middle adults. As well as, women showed higher sadism and witchcraft-related paranormal beliefs while men scored higher in mental well-being. Additionally, in gender differences, women were found to have lower mental health as they aged.

#### **LIMITATIONS AND SUGGESTIONS**

In the present study, the data was collected from the Lahore region only, for further study other geographical locations and regions of Pakistan can be considered. Additionally, the data for young adults was mostly collected from university students, in future research, the young adults from the general public could be considered increase the generalizability. The age range of middle adults was 40 to 65 years, because of the limited life span of Pakistan's population, the data of participants in their early 60s was limited.

#### **IMPLICATIONS**

This research helps individuals understand the role of dark personality in the formation of paranormal beliefs and how they affect mental well-being and seeks to draw attention toward mental well-being in people who hold paranormal beliefs. This study could also be an addition to indigenous literature, studying the relationship between dark personality, paranormal beliefs, and mental well-being among and young and middle adults. In Pakistan, it was never analyzed before that dark personality can be a cause behind the development of paranormal beliefs, and that it can play a vital role in either improving or deteriorating mental well-being. Moreover, the results of this research could be helpful for mental health practitioners working for the well-being of the clients in our culture.

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