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# Consulting Editors

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# Editor's Note/From Editorial Desk

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*Due to interdisciplinary nature of Psychology, it is related to various other fields of study including Sociology, Anthropology, Education, Gender Issues, Organizational Behaviour, Life Sciences and Psychiatry etc. Therefore, all contributions related to these fields of study are considered for publication. As an effective means of knowledge sharing, FUJP encourages articles on theoretical perspectives, grounded theories, innovative measurement tools and procedures.*

*We are looking forward to an enthusiastic response and active participation of not only students and teachers of Foundation University, but also of all the sister institutions to make this initiative a success.*

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**Research Article**

# Common Myths About Coronavirus Disease-19 ( COVID-19) Among Adults

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## Abstract

**Objective.** People adopted different attitudes and behaviors during the outbreak of COVID19 pandemic. It results in development of various myths among the peoplewhichalso effect adoption of precautionary measures. The present study thus attempted to assess common myths related to COVID-19 in Pakistan among general population of adults.

**Method.** A list of 33 myths was generated based on literature, opinion of subject matter experts, and general observation of myths prevailing in Pakistan. It was used to assess myths about COVID-19 for the sample ($N$=220) of adults ($M_{age}$=27.9; $SD_{age}$=10.2).

**Results.** Results suggested that the most prevalent myths are:(a)older people are more vulnerable to get infected of COVID-19 (82%) and (b) thermal scanners can detect if the person is infected of virus (75%). Participants also mention some associated indigenous myths e.g., COVID-19 doesn't prevail, deaths are misreported as caused by Corona virus, and Corona recovered people can't get infected again etc. Results of $t$-test suggested that men are stronger myths believers as compared to women. Differences with respect to education demonstrated that undergraduates and graduates are significantly higher believers of myth than postgraduates.

**Implications.** Findings could help to develop a clear awareness of the false beliefs about COVID-19. Addressing the false beliefs would assist in ensuring the adoption of necessary precautionsas beliefs closely associate with preventive measures adopted.

**Keywords.** *Pandemic, COVID-19, myths, Pakistan, prevalence*.

Foundation University Islamabad

**Introduction**

Coronavirus disease-19 (COVID-19) pandemic imposed a global public health emergency. The first case of COVID-19 was reported at Wuhan, China in December 2019 (Holshue et al., 2020; Sohrabi et al., 2020). The World Health Organization's (WHO, 2020) Public Health Emergency of International Concern (PHEIC) has reported the spread of this virus on January 30, 2020 in four different countries. The spread was attributed to human-human interaction as happened in the previous pandemics (WHO, 2008). The International Health Regulations (IHR) (as cited in Chen et al., 2020) emergency committee also declared the outbreak of this virus. It is an epidemic that has spread around the world whose causative factors and symptoms are yet unidentified. The precautionary measures are being taken at the national and international levels (Gupta et al., 2020; Poole et al., 2020; Sajadi et al., 2020; Tomar & Gupta, 2020) to control its massive spread. Certain preventive measures are also recommended in this regard; like maintaining social distance, frequently washing your hands, using sanitizers, and using tissue in case of coughing or sneezing (WHO, 2020). Pakistan being the central part of South Asia and locating near China (Khalid & Ali, 2020) is largely been affected by the COVID-19. Pakistan confirmed its first two cases of the coronavirus in Gilgit-Baltistan resulting in an indefinite period of lockdown. Afterwards countrywide lockdown situation was declared by Federal Government and an arrest was announced for violation (WHO, 2020).

To minimize the spread of disease the government of effected countries has taken several measures like raising awareness of the disease and encouraging protective behaviors (Wise et al., 2020). These behaviors include washing hands, social distancing, and medical attention-seeking in case of symptoms experience. Meanwhile, some myths about the spreading agents and protective channels to be used against this disease are also prevailing the society. The folklore kind of narratives about the cure and treatment of this disease are spreading worldwide. They are participating to indulge people in risky or dangerous behaviors making it complicated to practice protective behaviors (Sahoo et al., 2020) presented by medical specialists.

While the healthcare systems are unable to find a solution/cure to the COVID-19 pandemic, various facts have emerged, which have low validity and are gradually turning into potential myths related to COVID-19 (Carbone et al., 2020; World Health Organization, n.d.). If we compare the myths related to COVID-19 with myths being associated with Leprosy, Tuberculosis, and Flu in the past, there are some commonalities about the major themes of myths, i.e., the myths mainly prevail around the causation, disease transmission, and cure (Van Reeth et al., 2009).

However, COVID-19 has emerged very recently and affected almost all the countries of the world in a short period. Accordingly, the myths related to its spread, transmissions are much more. This is complicated because there is social media's availability to almost everyone in the world. Hence, these myths spread very fast and extensively across the globe. Further, the lack of any potential medicine, cure, or vaccine has also led to the emergence of multiple claims about the various aspects of COVID-19.The very nature of the myth is that it gets publicized widely in a very short time, and people tend to follow a myth without questioning its authenticity or evidence for/against a myth. Moreover, during a pandemic, crowd psychology plays a major driving force in believing and practicing a ritual or procedure to find a solution. Certain acts or beliefs can enhance public stigma related to COVID-19. A majority of the myths are related to the spread of disease and stigma associated with patients recovered from COVID-19 pandemic and the health care workers; resulting in avoiding interaction with them (Bhandari, 2020).

The focus of the present study was to assess the COVID-19 related myths among the people of Pakistan. The lockdown situation related practices associated with the treatment and the myths about them were also the concern of the present study. The disease-related myths and their practices often enforce people to display health-seeking behavior that is socially suggestible. The confirmation and performance of local health-related myths often help these people to relieve their stress and settle down their worries from a pandemic. Crowd psychology explains that individuals perform certain rituals because of public stigma (Bhandari, 2020).

It also directs a person to maintain beliefs about such a pandemic situation like COVID-19. The information being broadcasted on social media is also spreading fear among people and is often misleading. This information is not generally verified by the people and often leads to certain rituals, which strengthen the already prevalent myths. The present study was designed to explore available guidance about the cognitive misbeliefs or myths related to COVID-19. The main objectives for the study are as follows:

1. To assess common myths related to COVID-19 in Pakistan among general population of adults.

2. To study effect of demographic variables on myths related to COVID-19.

## Method
### Participants

Convenient sampling technique was used to access sample (*N*=220) from Pakistani adult population. Sample was approached through different social networking mediums like Facebook, LinkedIn, Twitter, WhatsApp, and Instagram.The demographic characteristics of the sample are mentioned in **Table 1**.

| Variables | | *f* | % |
|---|---|---|---|
| Gender | Men | 48 | 22% |
| | Women | 172 | 78% |
| Marital status | Unmarried | 128 | 58% |
| | Married | 92 | 42% |
| Education | Undergraduate | 32 | 15% |
| | Graduate | 129 | 58% |
| | Postgraduate | 59 | 27% |
| Residence | Islamabad Capital Territory | 88 | 40% |
| | Punjab | 100 | 45% |
| | Sindh | 3 | 2% |
| | Balochistan | 11 | 5% |
| | Khyber Pakhtunkhwa | 13 | 6% |
| | Gilgit Baltistan | 5 | 2% |
| Diagnosed with COVID-19 | Yes | 11 | 5% |
| | No | 209 | 95% |
| Closed one/relative diagnosed with COVID-19 | Yes | 93 | 42% |
| | No | 127 | 58% |
| Friend/acquaintance diagnosed with COVID-19 | Yes | 105 | 48% |
| | No | 115 | 52% |

**Table-1** demonstrates that majority of the participants were women, unmarried, graduates, and belong to province of Punjab. Also, majority were not diagnosed with COVID-19; neither the close one/relative nor friend/acquaintance had COVID-19 diagnosis.

**Measures**

**Demographic Form.** The demographic form was used to get information about the demographic related details of participant; including, gender, age, marital status, education, residence, diagnosed with COVID-19, closed one/relative diagnosed with COVID-19, and friend/acquaintance diagnosed with COVID-19.

**List of Myths Related to COVID-19.** The myths related to COVID-19 were assessed by using a list of 33 myths identified through review of literature available, discussion with the subject matter experts, and general observation of the myths prevailing in Pakistan. The literature comprised of researches and the myths identified by WHO (Bhandari, 2020; Carbone et al., Gupta et al., 2020; Sahoo et al., 2020). The myths identified were about spread, diagnosis, prevention, and treatment of COVID-19 e.g., the likelihood of spreading COVID-19 through contaminated shoes is very high (item 2) and thermal scanners can detect if a person is infected of Coronavirus (item 7). A number of myths were also associated with negation of Corona virus existence and considering it the part of a conspiracy e.g., COVID-19 is a part of foreign conspiracy (item 28).

The responses are to be made using dichotomous options; that is, 0 for *false* and 1 for *true*. The total score on the measure ranges from 0-33; such that, a higher score demonstrates higher beliefs on myths related to COVID-19. The last item on the scale is kept open-ended to identify indigenous myths through narratives of participants. The reliability was estimated to be .84 which demonstrates high consistency of item scores.

**Procedure**

The present study uses cross sectional research design. Data was gathered through online survey conducted via Google forms. The instructions were clearly mentioned to present opinion on 33 myths as it appears true or false to participants. Also, they were instructed to report any indigenous myth in addition to the one mentioned in the list. The participants were ensured about the confidentiality and anonymity of their responses. The data obtained was analyzed using the SPSS Statistics version 25. The main analysis comprised of reliability estimates, frequencies, and percentages for respective myths related to COVID-19, *t*-test and ANOVA.

## Results

**Distribution of scores on myths related to COVID-19.** The scores for myths show a moderately skewed data indicating that the scores are slightly on lower side of curve. It is shown in figure below:
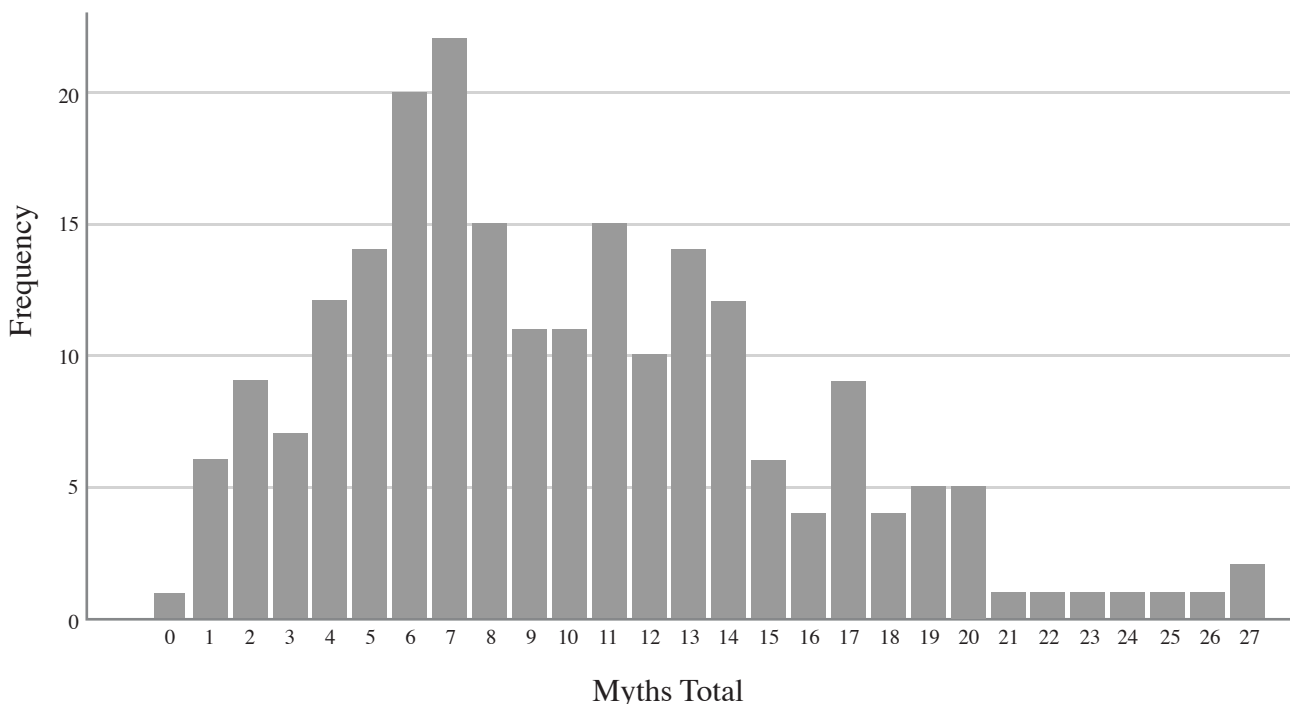


Figure 1. *Data scores for myths related to COVID-19 (N=220)*

**Item-total correlation for scores on myths related to COVID-19.** The item-total correlation for scores was assessed to determine internal consistency of scores (i.e., reliability). The results obtained are mentioned in table as follows:

**Table 2**

*Item-Total Correlation for Myths Related to COVID-19 List (N=220)*

| Item | r | Item | r |
|------|------|------|------|
| 01. | .36** | 18. | .49** |
| 02. | .41** | 19. | .43** |
| 03. | .39** | 20. | .62** |
| 04. | .24** | 21. | .48** |
| 05. | .30** | 22. | .44** |
| 06. | .27** | 23. | .43** |
| 07. | .41** | 24. | .14* |
| 08. | .43** | 25. | .47** |
| 09. | .42** | 26. | .38** |
| 10. | .19** | 27. | .50** |
| 11. | .35** | 28. | .56** |
| 12. | .40** | 29. | .52** |
| 13. | .48** | 30. | .35** |
| 14. | .39** | 31. | .50** |
| 15. | .39** | 32. | .46** |
| 16. | .23** | 33. | .35** |
| 17. | .51** | | |

*Note.* r = item-total correlation

**p<.01.*

Table demonstrated that all items possess significant correlation (r >.30; p <.01) with total score on the construct of myths related to COVID-19. It provides support for internal consistency and thus reliable nature of the scale (DeVellis, 2016; Field, 2013).

**Prevalence of myths related to COVID-19.** The prevalence of myths related to COVID-19 was determined by the frequencies and relevant percentages of responses obtained on each myth. The findings are mentioned below:

**Table 3**

*Prevalence of Myths Related to COVID-19 among Sample (N=220)*

| Myths | True | | False | |
|---|---|---|---|---|
| | *f* | % | *f* | % |
| Older people are more vulnerable to get infected of Coronavirus. | 181 | 82% | 39 | 18% |
| Thermal scanners can detect if a person is infected of Coronavirus. | 54 | 75% | 166 | 25% |
| Taking herbal teas for example ginger, garlic, *sana makki*, and *kalonji* etc. cure or prevent COVID-19. | 142 | 64% | 78 | 36% |
| The prolonged use of medical masks even when properly wore can cause carbon dioxide intoxication or oxygen deficiency. | 121 | 55% | 99 | 45% |
| Drinking or gargling warm water can kill or flush out Coronavirus. | 120 | 55% | 100 | 45% |
| Pets and animals can transfer Coronavirus to human on interaction. | 107 | 49% | 113 | 51% |
| Every one of us has got infected of Coronavirus either in mild or severe form. | 106 | 48% | 114 | 52% |
| Coronavirus can spread in hot and humid climates. | 87 | 39% | 133 | 61% |
| People who eat processed (read to eat/frozen) or fast foods are more vulnerable to get infected of Coronavirus. | 86 | 39% | 134 | 61% |
| COVID-19 is a part of foreign conspiracy. | 85 | 39% | 135 | 61% |
| Spraying and introducing bleach or another disinfectant on your body will protect you against Coronavirus and is safe. | 78 | 35% | 142 | 65% |
| Taking a hot bath prevents COVID-19. | 77 | 35% | 143 | 65% |
| The likelihood of spreading COVID-19 through contaminated shoes is very high. | 70 | 32% | 150 | 68% |
| Being able to hold your breath for 10 seconds or more without coughing or feeling discomfort means you are not infected of Coronavirus. | 71 | 32% | 149 | 68% |
| People who are infected of Coronavirus should wear mask even while sleeping. | 61 | 28% | 159 | 72% |
| Vaccines against pneumonia protect against COVID-19. | 60 | 27% | 160 | 73% |
| Medicine for malaria has clinical benefits in treating COVID-19. | 59 | 27% | 161 | 73% |
| Rinsing your nose with saline prevents COVID-19. | 54 | 25% | 166 | 75% |
| COVID-19 is caused by bacteria. | 47 | 22% | 173 | 78% |
| Ultra-violet (UV) lamps should be used to disinfect hands or other areas of skin. | 49 | 22% | 171 | 78% |
| Hand dryers are effective in killing Coronavirus. | 45 | 21% | 175 | 79% |
| There are number of licensed drugs available for treatment and prevention of COVID-19. | 39 | 18% | 181 | 82% |
| Adding pepper to soup or other meals prevent or cure COVID-19. | 38 | 17% | 182 | 83% |
| Villages and northern areas are free of Coronavirus | 37 | 17% | 183 | 83% |
| Coronavirus transmits through houseflies. | 24 | 11% | 196 | 89% |
| Coronavirus can spread through mosquito bite. | 25 | 11% | 195 | 89% |
| The sinful person is more likely to get infected of Coronavirus. | 23 | 11% | 197 | 89% |
| Drinking methanol, ethanol, or bleach prevents or cures COVID-19 and is safe. | 16 | 07% | 204 | 93% |
| Suffering from COVID-19 means you will have it for life. | 16 | 07% | 204 | 93% |
| Drinking alcohol protects against Coronavirus and is safe. | 13 | 06% | 207 | 94% |
| Cold weather and snow can kill Coronavirus. | 12 | 05% | 208 | 95% |

The frequencies and respective percentages suggest that most prevalent myths (i.e., >50%) among the participants of study are: (a) older people are more susceptible to develop COVID-19 (i.e., 82%), (b) thermal scanners can detect COVID-19 (i.e., 75%), (c) taking herbal teas for example ginger, garlic, *sanamakki, kalonji,* and etc. cure or prevent COVID-19 (i.e., 64%), (d) the prolonged use of medical masks even when properly wore can cause carbon dioxide intoxication or oxygen deficiency (i.e., 55%), and (e) drinking or gargling warm water can kill or flush out COVID-19 (i.e., 55%).

**Indigenous myths related to COVID-19.** Some of the indigenous common beliefs in the context of COVID-19 were also identified by participants of survey. The most mentioned myths are:(a) COVID-19 is notthe reality, (b) in hospitals doctors misreport the deaths as caused by corona virus, (c) Corona recovered person can't get infected by Corona throughout his / her life, (d) it will fade away in summers, (e) it is due to sins of people, and (f) children don't catch the virus.

**Gender related differences on myths related to COVID-19.** The gender related differences on myths related to COVID-19 was determined through t-test. The results demonstrate significant gender differences ($t = 2.59$; $p <.05$); such that men are high scorer ($M$=11.69; $SD$=6.19) on myths than women ($M$=9.35; $SD$= 5.31).

**Education related differences on myths related to COVID-19.** The education related differences on myths related to COVID-19 was determined through ANOVA. The results are mentioned as follows:

**Table 4**

*One-way ANOVA to Check Education Related Differences at Various Levels in Relation to Study Variables (N=240)*

| Variable | Under graduation (n=32) M (SD) | Graduation (n=129) M (SD) | Post graduation (n=59) M (SD) | F | i-j | D(i-j) | 95% CI LL | 95% CI UL |
|---|---|---|---|---|---|---|---|---|
| Myths related to COVID -19 | 10.91 (5.59) | 10.57 (5.55) | 7.75 (5.17) | 6.12 | 1>2 | .33 | -2.27 | 2.93 |
| | | | | | 1>3 | **3.16**[*] | **.27** | **6.05** |
| | | | | | 2>3 | **2.82**[**] | **.76** | **4.90** |

*Note*. Significant difference is in boldface. *$p < .05$, **$p < .01$

Findings indicate that with change in education level from undergraduation to postgraduation myth beliefs related to COVID-19 decreases. The values of mean differences on post-hoc demonstrate that the undergraduation and graduation level of education observe a significant difference from postgraduation level; such that, score on former ones are higher than the later one.

**Discussion**

The literature demonstrates that various facts have emerged during the COVID-19 pandemic, which have low validity and thus gradually turn into potential myths (Carbone et al., 2020). A majority of the myths are related to the spread of disease and stigma associated with patients recovered from COVID-19 pandemic and the health care workers; resulting in avoiding interaction with them (Bhandari, 2020). The present survey explored the myths prevailing among the people of Pakistan related to COVID-19. The demographic characteristics of sample (see Table 1) demonstrate that the majority of participants are female, early adults, unmarried, possess graduate level of education, and belong to Punjab province.

Findings also indicates that a majority of individuals were not diagnosed with COVID-19; neither their closed ones/relatives nor the friends/acquaintances. Thus,majority of sample and their closed ones, relatives, friends, or acquaintances were not infected of COVID-19 as there were very few reported casesof COVID-19 in Pakistanat the time of study; that was during first wave of pandemic. The existence of myths related to COVID-19 were accessed using the scale developed by the researchers. The reliability estimates demonstrate high consistency of item scoresas signified by coefficient of reliability and significant correlation of items with total score (see Table 2) (DeVellis, 2016; Field, 2018). This indicated that the items under the list are appropriate for the assessment of myths related to COVID-19.

The prevalence of myths related to COVID-19 (see Table 3) demonstrate that a large number of myths have high prevalence among sample (i.e., >50%). These myths, however, were stated false (World Health Organization, n.d.) and the related facts are also mentioned. The most common myths are that older people are more susceptible of developing COVID-19 and thermal scanners can detect the virus. The reality, however, suggest that all age groups are equally vulnerable to get infected. Also, as per fact, thermal scanners can detect presence of high fever only which might have resulted from many others causes too and not necessarily from COVID-19. Another myth found commonly prevailing is that the prolonged use of medical masks even when properly wore can cause carbon dioxide intoxication or oxygen deficiency. The WHO, however, stated the fallacy of this myth mentioning that carbon dioxide intoxication or oxygen deficiency could only result if the medical mask doesn't fit properly, is too tight, or not disposed of as soon it gets damp.

A lot of myths prevailing were associated with the cure or prevention of COVID-19 using various herbs or vegetable. Garlic is believed among the sample as one of such preventions, however, though garlic is healthy food but yet no evidence has found on the protective properties of it for the novel Corona virus. Similarly, there is no existing verification of whether herbs like *sannamakki* and *kalonji*, and the use of warm water for drinking or gargling could cure or prevent COVID-19.Literature also demonstrates the practice of home remedies as a culture in Pakistan. People prefer to treat minor illnesses like flu, cough, joint pains, headache, and fever at home mainly through various herbal treatments. Consulting the doctor for aforementioned symptoms isn't a preferred option (Anwar et al., 2015; Shaikh et al., 2008). Also, in the recent times the home remedies are widely shared among each other through YouTube and WhatsApp (Imtiaz, 2020).

Some of the indigenous myths were also identified by participants of survey; of which the highly mentioned one is that COVID-19 is not the reality and deaths are misreported as caused by the virus no matter what real cause is. Findings from recent literature also support the prevalence of COVID-19 related myths (Bhandari, 2020; Carbone et al., 2020; World Health Organization, n.d.).

The high level of myths' existence is consistent with the previous literature supporting that at the time of pandemic, disease associated myths have a widespread among people (Mwamwenda, 2015; Van Reeth et al., 2009). The researchers also indicate that myths prevail because people don't verify them rationally (Carbone et al., 2020).

The findings from t-test suggest that significant gender related differences exist on myths related to COVID-19; such that male are stronger myth believers. The literature also supports that both genders prominently vary on their belief for myths (Jami, 2012; Naqvi, 2017; Waqar, 2015). The differences with respect to education level were also assessed using ANOVA (see Table 4). Results demonstrate that the scores on myths for postgraduates are significantly lower than undergraduates and graduates. However, as the sample comprised of highly educated individuals it is difficult to generalize that education level has a significant effect on myths related to COVID-19.

**Limitations and Recommendations**

The present study collected data through online Google form due to the lockdown situation in the country. The objective of the study is limited to presence of certain myths related to COVID-19 and effect of demographics for belief on these myths. Future studies could assess the effect of other associated variables also like strength of cognitive schemas, reality perception, and crowd behaviour etc.The inclusion of a diverse sample could help better generalize the findings of study.

**Implications**

The literature supports that our beliefs cognitively regulate the behaviors (Bhandari, 2020). Present survey identified the prevailing false beliefs related to COVID-19 among the general population. These beliefs are thus directly associated to increased ratio of wrong practices governed by the myths that prevails. The pandemic situation, however, has not yet ended and there is a significant need to be cautious about the false beliefs/myths associated with COVID-19. It will help in adopting the right preventive measures to stay healthy (i.e., both physically and mentally) and deal effectively with the pandemic. The findings of survey could also help clinical psychologists develop a clear awareness of the false beliefs and formulate the intervention based on readdressing the associated cognitive schemas.

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## Research Article

# Exploring Suicidal Ideation among Psychiatric Patients: Predictive Role of Personality Traits and Religiosity

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## Abstract

**Background.** Suicidal behavior is among one of the leading causes of death which may be a result of suicidal ideations. Biological and environmental factors are said to influence the spectrum of suicidal ideation from passive thoughts about death to active plans to take life. Therefore, the present research aimed at examining the predictive association of personality traits and religiosity with suicidal ideation among patients diagnosed with different psychiatric disorders.

**Method.** The sample consisted of 210 psychiatric patients diagnosed with Substance Abuse Disorder ($n = 88$), Major Depression ($n = 84$), and Generalized Anxiety Disorder ($n = 38$) with a mean age of 26.84 years. The participants filled in Urdu-version of the Sahin-Francis Scale of Attitude toward Islam, the Eysenck Personality Questionnaire, and the Beck Scale for Suicidal Ideation.

**Results.** The results divulged positive relation of suicidal ideation with neuroticism and psychoticism and negative relation of suicidal ideation with extraversion, social conformity, and religiosity. Further, neuroticism emerged as significant predictor of suicidal ideation followed by extraversion and psychoticism. The direction of prediction was in line with correlation.

**Conclusion.** The findings provide substantive implications for suicide prevention through the identification and evaluation of individuals with a higher risk for engaging in suicide ideation as well as highlighting the role of personality and religious attitudes for consideration in future strategies for the prevention of suicide.

**Keywords.** *Suicidal ideation, personality traits, religiosity, psychiatric disorders.*

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**Introduction**

Suicide in Pakistan has become a serious public health problem (Naveed, Qadir, Afzaal, & Waqas, 2017). The suicidal rate has been increased at an alarming pace regardless of social and religious condemnation of suicidal behavior in Pakistani culture (Haider & Haider, 2002; Khan, 1998; Khan & Hyder, 2006; Khan & Prince, 2003). Self-harm and suicidal behaviors are considered as criminalized and stigmatized acts, thus, underreported in Pakistan (Naveed et al., 2017). Evidence existed about the influence of suicidal ideation on suididal behaviors (Phillips et al., 2005; Sareen, Houlahan, Cox, & Asmundson, 2005). Moreover, the patients with psychiatric problems such as depression are more prone to suicidal ideation (American Psychiatric Association, 2000). Therefore, the present research aimed to explored predictors of suicidal ideation (i.e., personality traits and religiosity) among psychiatric patients.

There is a scarcity of research on suicidal behaviors in Pakistan. A study conducted in Karachi revealed suicide rates as 0.11 per 100,000 (Ahmed & Zuberi, 1981). According to World Bank Report, rates of suicide have raised from few hundreds before 1990s to 7,000 occurrences in 2008 (World Bank, 2008). Different media reports indicated that 701 people committed suicide in the first quarter of 2012 (Mirza, 2012). For the most recent years, there is no available systematic and official statistics because of the absence of any formal suicide surveillance system in Pakistan (Jordans et al., 2014; Mamun & Ullah, 2020).

A significant amount of research has reported wide-ranging occurrences of self-harming behaviors during the progression of psychiatric disorders (Fang et al., 2015). More recently, Czeisler et al. (2020) examined substance use, mental health and suicidal ideation during the pandemic of COVID-19. They found that mental health issues such as anxiety and depression as well as suicidal ideation rate enhanced during the pandemic. Rodríguez-Cintas et al. (2018) also found that substance abuse and psychological disorders have associations with suicidal attempts. Another research found that employees with mood disorders were more likely to have suicidal ideation when they were mistreated (Follmer & Follmer, 2021). However, few studies have also focused on risk determinants associated with suicidal thoughts among the psychiatric population.

One such risk is the possession of certain personality traits (Verona, Patrick, & Joiner, 2001). Rudd, Joiner, and Rajab (2004) suggested that personality assessment can provide support in predisposing vulnerabilities to suicide. A study by Duberstein et al. (2000) utilized the taxonomic framework of the five-factor model of personality (Costa & McCrae, 1992) to investigate its association with suicidal ideation in older depressed patients and demonstrated that suicidal ideation has a positive association with neuroticism, self-reported openness, and negative association with extraversion. Further, employing the short form of the Revised Eysenck Personality Questionnaire, Hills and Francis (2005) found that neuroticism was the main significant predictor of suicidal ideation, closely followed by psychoticism. Quite recently, Manning, Chan, Steffens, Pierce and Potter (2021) found that those with high scores on depression, neuroticism and low scores on social support and extraversion have an increased likelihood of suicidal ideation in older adults.

The second predictor of suicidal ideation was religiosity. A large-scale cohort study has been conducted using a sample of 60 countries belonging to five diverse religions. The study examined subjective religiosity, religious practices and suicidal attitudes. Findings revealed that religiosity negatively predicted suicidal rates and positively predicted negative attitudes towards suicidal ideation at national level. However, the attitudes towards suicide may vary across religions (Saiz, Ayllón-Alonso, Sánchez-Iglesias, Chopra & Mills, 2021). Another study found the positive impact of religiosity on happiness and suicidal behavior of psychiatric patients and concluded that religious activities for psychiatric patients may improve their subjective well-being (Dadfar, Lester, & Abdel-Khalek, 2021).

Suicidal thoughts and behaviors can be better explained through the classical sociological work by Emile Durkheim (1987). According to him, social integration prominently plays an important role to understand suicide. He particularly focuses on both sociological as well as psychological factors. In this view, 'anomie' the people who feel depressed are more likely to commit suicide. Durkheim categorized suicide as melancholy type of suicide and maniac type of suicide which are a result of suicidal thoughts (Durkheim, 1897).

Among the other factors, religious integration was also observed by Durkheim who narrates that Catholics commit suicide less frequently than Protestants due to higher level of social integration in Catholic societies. Later, empirical evidences also support the religious integration for other religions . For instance, Islam expects of its followers a daily ritual of prayer and the compliance of the self to the collective will (Simpson & Conklin, 1989). Islam bestowed with sense of community among its adherents (Stack & Kposowa, 2011). Routine prayers at mosque provide the opportunity of social interaction with other community members that decreases suicide ideation among Muslims.

The present study has mainly focused on the identification of specific personality traits and religiosity levels concerning suicidal ideation in psychiatric patients. A study conducted by Beautrais (2002) indicated that the presence of psychiatric disturbances is a strong risk determinant for self-harming behaviors. However, it is important to note that, not every individual has suicidal thoughts during the course of a psychiatric disorder. Thus, psychiatric problems are important but not the single underlying cause for suicidal risk. The question arises that which protective factors may act as buffers against suicidal thoughts and protect individuals from committing suicide even during psychiatric disorders. Therefore, it is assumed that high order personality traits correlate with suicidal ideation among psychiatric patients (Hypothesis 1a).

Past research has identified few factors that work as buffers to protect individuals against suicidal risk; one of which is religiosity (Rushing, Corsentino, Hames, Sachs-Ericsson, & Steffens, 2013; Van Tubergen, Grotenhuis, & Ultee, 2005). However, research with reference to suicidal behavior and religion is not widespread. Additionally, existing literature provides inconsistent findings. Furthermore, the majority of the research investigating the relationship between religiosity and suicidal ideation has been conducted on the general population. Thus, this is relatively a neglected area within psychiatric research. The role of religious variables in suicidology has been examined in view of different religious perspectives and inconsistent findings have been found. Several studies investigated the relationship between Islam and suicide. Findings indicated relatively low rates of suicide in Islamic countries (Daradkeh, 1989; Lester, 2006).

On the other hand, suicide and other self-threatening acts are undoubtedly condemnable in Islam. The low suicide rates in Muslim communities may be attributed to Islamic religious practices and dogmas. Several researchers have argued that perhaps, cultural stigmas and religious factors linked with suicidal behaviors may attribute to the under-reporting of suicide rates in Muslim communities (Abraham, Abraham, & Jacob, 2005; Wasserman, Cheng, & Jiang, 2005). Therefore, it is assumed that religiosity correlate with suicidal ideation among psychiatric patients (Hypothesis 1a).

Despite the great rise in the suicidal rate in Pakistan, only a few studies examined the predictors of suicidal ideation and behavior. The prior research has focused on circumstantial shreds of evidence (Shahid & Hyder, 2008), seasonal variations (Suhail & Qura-tul-Ain, 2002), socio-demographic factors (Khan & Reza, 2000), and self-esteem deficits (Rizwan & Ahmad, 2010). However, the relationship of personality traits and religiosity with suicidal ideation among psychiatric patients has not been explored previously in Pakistan. Further, the literature on suicidal thoughts has mostly focused on depressed patients; however, such findings cannot be generalized to patients with other psychiatric disturbances. The present research has tried to bridge this gap by the inclusion of participants from three different groups i.e., Major Depression, Generalized Anxiety Disorder, and Substance Abuse Disorder. It is assumed that personality traits and religiosity predict suicidal ideation among psychiatric patients (Hypothesis 2). Moreover, to provide more authentic findings. Suicidal ideators were identified and compared with non-suicidal ideators on personality traits and religiosity. It is assumed that group of suicidal ideators differ from non-suicidal ideators on personality traits and religiosity (Hypothesis 3).

## Method
### Participants

Sample consisting of ($N = 210$) outpatients diagnosed with psychiatric disorders was selected through a purposive sampling procedure. Psychiatric patients from three groups of psychiatric disorders: Major Depression (group 1, $n = 84$; males = 48, females = 36), Generalized Anxiety Disorder (group 2, $n = 38$; males = 14, females = 24), and Substance Abuse Disorder (group 3, $n = 88$; all males) were recruited.

Only male participants with Substance Abuse Disorder were recruited because there was no female with substance abuse disorder in the hospital setup. The sample was drawn from different hospitals and rehabilitation centers in Multan. The mean age of the research participants was 26.84 years ($SD$ = 2.96, range = 22-31 years). Most of the participants ($n$ = 86) have matriculation degree, followed by participants with intermediate ($n$ = 52), primary ($n$ = 42), and bachelor degree ($n$ = 30). G power 3.1 (Faul, Erdfelder, Buchner & Lang, 2009) was used to analyze appropriate sample size selecting multiple regression as statistical test and by specifying the effect size of .15 (medium effect size) , $\alpha$ error probability .05, power 95 % (1- B error = .95). The analysis suggested a total sample of 138 participants. However, 210 patients were recruited.

**Inclusion criteria.** Only those participants were included who were diagnosed as the patients of major depression, generalized anxiety, or substance abuse disorder. However, participants were clinically stable as they were taking psychotropic medication. Only Muslim patients were considered for present study (as Muslims accounted for 98% of the population of Pakistan). Only young adults were included to maintain homogeneity and patients with minimum education of primary level were taken so that they can comprehend the questionnaires.

**Exclusion criteria.** Patients with comorbidity on Axis I & Axis II and having severe neurological or physical disturbance were excluded.

## Measures
**The Eysenck Personality Questionnaire** (EPQ; Eysenck & Eysenck, 1975). EPQ is a 59-item measure assessing four personality traits. Three of the subscales (i.e., extroversion, neuroticism, and lie scale) consisted of 17 items while the psychoticism scale consisted of 8 items. Participants rate either the statement applies to them or not on two options: 1 = yes and 0 = No. The sample item is "Do you ever feel 'just miserable' for no reason?" (Neuroticism). Out of 59 items, 41 were keyed 'Yes', and 18 were keyed 'NO'. Urdu version of the EPQ (Amjad & Kausar, 2001) was used in the present research. Internal consistencies of the subscales of the adapted Urdu version ranged between $\alpha$ = .86 to $\alpha$ = .54 (Amjad & Kausar, 2001). In the present research, the internal consistencies ranged between $\alpha$ = .76 (extraversion) to $\alpha$ = .60 (psychoticism).

**The Beck Scale for Suicidal Ideation** (BSSI; Beck & Steer, 1991). BSSI is a 19-item measure assessing suicidal ideation in psychiatric patients. Participants rate the extent to which each statement applies to them on a 3-point Likert scale ranging from 0= *Never* to 2 = *Always*. The sample phrase is "Wish to die". Two of the items were reverse-coded. Urdu version of the BSSI was used in the present research. Internal consistency of the adapted Urdu version was $\alpha$ = .75 (Ayub, 2008) and in the present research was $\alpha$ = .72.

**The Sahin-Francis Scale of Attitude toward Islam** (Sahin & Francis, 2002). SFS-AI is a 23-item measure assessing religiosity. Participants rate the extent to which each item adequately describes them on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The sample item is "I know that Allah/God helps me". The Urdu version of the measure (Musharraf, Lewis, & Sultan, 2014) was adapted on a sample of 174 university students, where the level of internal consistency reliability obtained was $\alpha$ = .89 and internal consistency was also $\alpha$ = .89 in the present research.

## Procedure
The proposed research plan was approved by the first researcher's institutional review board. Participants were approached through psychiatric and rehabilitation centers and major hospitals in Multan. Considering the sensitivity of the research, a formal permission letter was presented before the administration of the hospital and rehabilitation center to seek their approval explaining the purpose and objectives of the research. For the recruitment of participants, archival data of hospitals and rehabilitation centers were checked and participants fulfilling the criteria of the present research were approached. Further, to add more authenticity, the diagnosis was confirmed by the concerned psychologists/psychiatrist in the light of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000). The participants were outpatients and came in for their follow-up sessions. Consent was obtained from psychiatric patients to participate in the present study. They were guaranteed about the confidentiality of data and their right to withdraw from the study at any stage. The interested participants signed a consent form and filled in the study measures.

Participants filled in the study measures of eight different order (e.g., in order 1 EPQ was presented at first followed by SFS-AI, and BSSI) to overcome any possible issue related to order effect. They were asked to respond to each question honestly. The patients completed the research questionnaire in the hospital setting. Finally, participants were thanked for their participation in the study. The data was removed based upon incomplete information of study variables and suspicious response styles. The final dataset consisted of 210 participants.

## Results

The prime objective of the research was to examine the predictors of suicidal ideation among psychiatric patients from personality traits (i.e., extraversion, neuroticism, psychoticism, and lie scale) and religiosity. Another aim of the study was to identify the difference between suicidal ideators and non-suicidal ideators on study variables. It was assumed that personality traits and spirituality related to suicidal ideation. Pearson product moment correlation was computed in this regard. Table 1 provides descriptive and the Pearson product moment correlation between study variables.

**Table 1**

*Means, Standard Deviations and Correlations between Personality Traits, Religiosity and Suicidal Ideation in Psychiatric Patients (N= 210)*

| Variables | M | SD | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| Personality Traits | | | | | | | |
| 1. Extraversion | 7.52 | 3.33 | -.29** | -.24** | .04 | .18** | -.40** |
| 2. Neuroticism | 11.80 | 3.12 | - | .56** | -.03 | -.33** | .62** |
| 3. Psychoticism | 3.01 | 2.26 | | - | -.09 | -.40** | .61** |
| 4. Lie Scale | 10.70 | 3.03 | | | - | .01 | -.11* |
| 5. Religiosity | 76.45 | 16.70 | | | | - | -.46** |
| 6. Suicidal Ideation | 3.40 | 7.70 | | | | | - |

*Note*. *$p < .05$, **$p < .01$.

The table showed that religiosity had a positive association with extraversion and a negative association with neuroticism and psychoticism. Moreover, suicidal ideation correlated positively with neuroticism and psychoticism while correlated negatively with extraversion, lie scale, and religiosity.

Considering the significance of the correlation, hierarchical multiple regression analysis was carried out for religiosity and personality traits (i.e., extraversion, neuroticism, and psychoticism) as a predictor of suicidal ideation (Table 3). Hierarchal multiple regression was preferred because the variance on criterion variable is being explained by correlated predictors (Pendhazur, 1997; as seen in case of personality traits) and indication from existing literature. For instance, literature guided about the substantial role of neuroticism in suicidal ideation, so enter before other personality traits. Religiosity was entered in the first step, neuroticism in the second step, extraversion in the third step, and psychoticism in the fourth step. Further, the lie scale was entered in the fifth and final step.

**Table 2**

*Hierarchical Multiple Regression Analysis Predicting Suicidal Ideation from Religiosity and Personality Traits (N=210)*

| Predictors | $\Delta R^2$ | B |
|---|---|---|
| Step 1 Religiosity | .21** | -.46** |
| Step 2 Personality Trait (Neuroticism ) | .24** | .52** |
| Step 3 Personality Trait (Extraversion ) | .04** | -.22** |
| Step 4 Personality Trait (Psychoticism ) | .05** | .30** |
| Step 5 Lie scale | .00 | -.06 |
| | | |
| Total $R^2$ | .57*** | |

*Note*. **$p < .01$, ***$p < .001$.

Table 2 showed that religiosity, neuroticism, extraversion, and psychoticism explained 21%, 24%, 4%, and 5% variance in suicidal ideation respectively. Lie scale model explained no variance in suicidal ideation. The result indicated that religiosity and extraversion emerged as negative predictors of suicidal ideation. On contrary, neuroticism and psychoticism emerged as positive predictors of suicidal ideation.

Furthermore, another main concern of the present research was to identify the differences between suicidal ideators and non-suicidal ideators with respect to personality traits and religiosity. At first, the suicidal ideator group was identified on the basis of the scores on two of the items of BSSI; one, measuring active suicidal desires and second, measuring passive suicidal desires, the 34 of the participants with suicidal ideation were identified. According to Beck, Kovacs, and Weissman, (1979), when the patients rated these two items as zero, there is no suicidal ideation. After the identification of suicidal ideators, the next step was to balance out the group of non-suicidal ideators for comparison. For this purpose, 34 non-suicidal ideators were selected from 176 non-suicidal ideators on the basis of age, sex, and type of disorder of the suicidal ideator group. The purpose of this selection was to form equivalent groups with reference to sample size and control the confounding effects of certain variables (i.e. age, sex, and type of disorder). An independent sample t-test was employed to find out the difference between the two groups of psychiatric patients on personality traits and religiosity.

**Table 3**

*Differences between Suicidal Ideators and Non-suicidal Ideators for Personality Traits and Religiosity using Independent sample t-test (N=68)*

| Variables | Suicidal Ideators (n =34) | | Non -Suicidal Ideators (n =34) | | t(66) | P | 95% CI | | Cohen's d |
|---|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | | | LL | UL | |
| Personality Traits | | | | | | | | | |
| Extraversion | 4.35 | 2.81 | 7.70 | 2.85 | -4.88 | .00 | -4.72 | -1.97 | -1.19 |
| Neuroticism | 14.45 | 1.50 | 8.96 | 2.52 | 10.91 | .00 | 4.48 | 6.49 | 2.71 |
| Psychoticism | 3.0 | .70 | 0.69 | .43 | 16.39 | .00 | 2.02 | 2.59 | 3.89 |
| Lie Scale | 10.15 | 2.41 | 10.72 | 3.10 | -.84 | .18 | -1.91 | .77 | -0.23 |
| Religiosity | 54.85 | 9.78 | 87.14 | 14.40 | -10.81 | .00 | -38.2 | -26.3 | -2.70 |

Table 3 showed that suicidal ideators and non-suicidal ideators differed on three personality traits of extraversion, neuroticism, psychoticism, and religiosity. It further indicated that non-suicidal ideators had a higher level of extraversion and religiosity. Moreover, suicidal ideators had a higher level of neuroticism and psychoticism.

**Discussion**

The prime aim of the present study was to investigate the impact of personality traits and religiosity on suicidal ideation among psychiatric patients diagnosed with three different psychological disorders (i.e., major depression, generalized anxiety, and substance abuse). Additionally, the focus was to find out the difference between suicidal ideators and non-suicidal ideators among these patients on their personality traits and religiosity.

The order of measurement was shuffled into eight different conditions to eliminate the probability of issues related to the order effect. The present study provided evidence about the role of personality traits (i.e., neuroticism, extraversion, psychoticism, lie scale) and religiosity from a collectivistic Muslim culture of Pakistan. In general, it can be concluded that personality traits and religiosity impact suicidal ideation among patients with psychological disorders.

The findings of the present research revealed (based on Pearson product moment correlation) a significant positive relationship of neuroticism, psychoticism, with suicidal ideation, and negative relationship of extraversion with suicidal ideation. Moreover, the strengths of the positive correlation were higher than the negative correlation. Literature, similar to present findings, also indicated a positive association of suicidal ideation with neuroticism (Cox, Enns, & Clara, 2004), psychoticism (Farmer et al., 2001), and negative association of suicidal ideation with extraversion (Kerby, 2003). A recent study also established the role of elevated neuroticism in suicidal ideation among women with major depression (Rappaport, Flint, & Kendler, 2017).

Moreover, the fourth scale of EPQ, the lie/social conformity scale negatively associated with suicidal ideation. However, previously, Hills and Francis (2005) found no association between lie scale and suicidal ideation, and Knight, Furnham, and Lester (2000) found no association between lie scale and attitude toward suicide. These findings coincide with the Pakistani collectivistic interdependent culture (Hofstede, 2001) where having and reporting suicidal thoughts is taken as a social taboo (Khan, 1998). Moreover, in Islamic culture self-harm is discouraged, so, suicide or deliberate self-harm is an illegal act in Pakistan (Mahmood, 1989), similar to many other Muslim countries. Literature also guided that under-reporting of suicide in Muslim communities may be due to the associated cultural and religious stigmas associated with suicidal ideation(Wasserman et al., 2005). Therefore, due to associated stigmatization in Pakistan psychiatric patients may be underreported suicidal ideation to avoid disgrace and embarrassment. The finding also focused on the significance of collateral source information like personality traits for the assessment of suicidal risk, especially in Pakistan, where suicidal behavior is under-reported due to multiple cultural and legal factors (Khan & Reza, 2000).

The present findings also revealed a negative correlation of religiosity with suicidal ideation. A systematic review of 850 studies that explored the role of religiousness in the mental health of individuals highlighted that religious involvement of individuals especially under stressful life conditions improved their psychological well-being and reduced depression, substance use/abuse, and suicidal thoughts (Moreira-Almeida, Lotufo Neto, & Koenig, 2006).

So, it can be inferred that although life stressors are important events that derail a person from positive feelings to suicidal thoughts, however, religiousness act as a solid wall against suicidal thoughts among religious individuals. Moreover, present findings can also be interpreted considering religious integration theory (Durkheim, 1966) that religion plays an important function in unity. The past research suggests Islam as a highly integrated religion that presumes the followers to perform various religious practices including five prayers in a day. These core religious beliefs and religious practices provide them the perception of a close and cohesive relation with God (Rezaeian, 2009). Thus, low suicidal ideation with high religiosity may be a result of Islamic beliefs and practices.

The findings of correlation analysis were also supported by multiple hierarchal regression. Overall, extraversion and religiosity emerged as negative predictors while neuroticism and psychoticism emerged as positive predictors of suicidal ideation (Hill & Francis, 2006). Few interesting findings have been found about the predictive effects of personality traits and religiosity. Neuroticism appeared to be the most significant positive predictor in present research which has features of anxiety and emotional instability (Widiger, 2009) followed by psychoticism and extraversion. These findings replicate the findings of Hills and Francis (2006) who explored the role of Eysenckian higher-order personality dimensions on suicidal ideation of undergraduate students in the UK. Moreover, a systematic review identified the promising role of neuroticism and extraversion in not only suicidal ideation but also in suicidal attempts and suicidal completion (Brezo & Turecki, 2006).

Lastly, the findings of the t-test by specifically taking suicidal ideators and non-suicidal ideators corroborated the findings of correlation analysis in the general sample. Similar to correlation, the findings suggested a higher score of extraversion and religiosity in non-suicidal ideators and higher scores of neuroticism and psychoticism in suicidal ideators.

**Limitations and Suggestions**

It is hoped that the findings of the study will provide substantive implications for the screening, prevention, and identification of suicidal ideators. However, the present study has few limitations that need to be acknowledged.

The present research examined the role of personality traits and religiousness quantitatively using a cross-sectional design, so, a causal link cannot be inferred. In the future, to infer causality, longitudinal design should be used. Moreover, in-depth exploration of the reasons behind suicidal ideation can be explored in the future to identify other causes of suicidal ideation in psychiatric patients from Pakistan. Furthermore, the present research explored the direct role of personality and religiosity in suicidal ideation. However, they can contribute to suicidal ideation in collaboration. Therefore, in the future, the moderating role of religiosity and personality traits in suicidal ideation needs to be explored.

The data for the present research was taken from the outpatient of hospitals and rehabilitation centers located in Multan, however, these suicidal thoughts are now prevailing in late adolescents and young adults. Therefore, in the future, these populations can also be explored. Furthermore, the participants of the present research were the psychiatric patients who have under the inherent threat of suicidal ideation and suicide. Therefore, in the future, quick management plans must be developed to immediately elevate the crisis and to identify the alarming phase at an early stage.

## Implications

Present findings implicate that psychiatric problems seem like a serious threat to suicidal behavior as mentioned in their criteria of diagnosis too (American Psychiatric Association, 2000). Although personality traits strongly influenced suicidal ideation, specifically in presence of psychiatric problems, however, the environment plays an important role as a protective factor of suicidal ideation. The emergence of religiosity as a protective factor for suicidal ideation among psychiatric patients is an important contribution of present research in the collectivistic Muslim culture of Pakistan where suicide and suicidal ideation is considered as a social taboo and are under-reported due to humiliation and legal actions. Further, the emergence of religiosity in present research as a protective factor may implicate its examination and utilization during a routine clinical session of those psychiatric patients who are at suicidal risk and in the management of suicidal ideation by formulating appropriate management strategies. Moreover, the findings implicated that intervention programs must be focused on religiosity and personality traits in general for timely actions to prevent suicidal behavior.

It is hoped, that the findings of the study will provide substantive implications for the screening, prevention, and identification of suicidal ideators. The findings, in general, propose important implications for community caretakers, mental health professionals, health agencies, and organizations work to improve mental health and reduce suicidal behaviors.

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# Teachers' Mental State Talk with Preschoolers: Assessing through Wordless Storybook Narration

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## Abstract

**Purpose.** Rich language experiences during early school years have been linked with preschoolers' multiple development outcomes. The present study explores preschool teachers' use of mental state talk during wordless picture storybook narration. Additionally, it investigates how teachers' years of experience and educational qualification influence the use and variation in mental state talk.

**Method.** In total, 67 preschool teachers participated in story narration sessions with a group of 4-5 preschoolers, using indigenous wordless picture storybooks. Transcriptions from the audio-recorded storytelling sessions were coded into three mutually exclusive categories of cognition, emotion, and desire of mental state talk.

**Results.** The findings indicated that preschool teachers vary in frequency with which they use mental state talk. Moreover, the results showed that teachers used more cognitive mental state terms than emotional or desire terms. It revealed that teachers with higher educational qualifications and better teaching experience use more mental state talk as compared to lesser educational qualifications and teaching experiences.

**Conclusion.** Teachers need to be aware and conscious about the use of words and mental state terms while interacting with the pre-schooler and their contribution to child-related outcomes. It provides direction for policymakers to induct teachers with proper qualifications and experience to interact with the pre-schoolers. The present research is unique in its utilization of indigenous picture storybooks by preschool teachers and it adds to the dearth of work on teachers' mental state talk.

**Keywords.** *Mental state talk, story narration, preschoolers, preschool teacher, Pakistan, teacher-child interaction.*

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**Introduction**

During the preschool period, children learn numerous skills and abilities that are important for their development (Frye & Moore, 2014). The social interaction of a child with adults and their significant others provides a framework to facilitate the learning and development process; where the role of language input of the significant others with the child is very crucial (Vygotsky, 1987). Research suggested that significant others use a wide variety of mental state words in conversation with children (Dunn, Bretherton, & Munn, 1987; Ensor & Hughes, 2008). The respective mental state talk (MST) is predominantly important for child outcome at an early stage of life (Barnes & Dickinson, 2017; Grazzani, Ornaghi, & Brockmeier, 2016; Ruffman, Puri, Galloway, Su, & Taumoepeau, 2018). MST is defined as the verbal utterances that describe the mental world and cognitive processes of an individual (Misailidi, Papoudi, & Brouzos, 2013). MST could be words that represent thoughts, emotions, desire, and intentions of the individual uttering it and represent the internal state of the individual (Frampton, Perlman, and Jenkins (2009). Therefore, the internal states can be categorized into cognitive terms (think, look, see, decide, believe), emotions (happy, sad, angry), desire terms (hope, want). These are the set of words that explain the contents of one's mind or cognitive processes (Barnes & Dickinson, 2018).

The majority of previous studies generally focused on paternal use of mental state talk while interacting with the child (Baptista et al., 2017; Bekar, Steele, Shahmoon-Shanok, & Steele, 2018; Slaughter, Peterson, & Carpenter, 2009). However, teachers are considered to be extra-familial individuals; they spend significant time with a child and use a diverse range of mental state references that contributes not only to development and learning of a child but also to sensitive and positive child and teacher relationship (King & La Paro, 2015).

Book reading is a context that facilitates interaction between preschoolers and their significant others. Research has identified that reading a book to a child not only contributes to children language development but also yields significant outcomes e.g. literacy skills (Mol, Bus, De Jong, & Smeets, 2008); executive function (Diamond, 2013), Theory of mind (ToM) (Peterson & Slaughter, 2003; Racine, Carpendale, & Turnbull, 2007; Slaughter, Peterson, &

Carpenter, 2008; Symons, Peterson, Slaughter, Roche, & Doyle, 2005), vocabulary growth (Barnes & Dickinson, 2018) and may in return help the children for story comprehension as these language during the storytelling session usually describe talk about mental states when children recognize these talk, they can understand and comprehend the language that describes the story character, motives and actions of the character more efficiently.

These aforementioned studies from maternal use of story picture book narration give direction to the current study and undoubtedly verify that mothers are the most significant to the preschoolers. However, teachers are also the foremost storytelling agents for the children (Ziv, Smadja, & Aram, 2014) and contribute significantly to child development. There is dearth of research that examines how teacher employ mental state with preschoolers. Previous researches assessed teachers' mental state talk during regular teaching practice (King & La Paro, 2015; Pelletier, 1996 ); naturalistic observation (Frampton et al., 2009), and storybook narration (Barnes & Dickinson, 2018; Misailidi et al., 2013). The present study aimed to explore the teachers employ mental state talk with preschoolers while narrating a picture book.. Wordless picture storybooks will help the storyteller to attribute their mental state words to the story character and engage the preschooler.

In Asian countries such as Pakistan, there is a dearth of research that covers the significance of teacher positive interaction and mental state language in early childhood specifically mental state language. The positive teacher interactions are of great importance as they may lead to more mental state terms. Recent researches examined the use of mental state talk in classroom settings suggested that teacher who maintains significant positive interaction with preschoolers use mental state talk more frequently (Frampton et al., 2009).

The main objective of the present research is to explore the Pakistani teachers employ mental state talk while narrating a wordless storybook to the preschoolers. In Pakistan, preschools are usually based on activity-based learning. Book reading and storytelling is the activity that is practiced in Pakistani preschools on regular basis.

Following previous studies (Baptista et al., 2017; LaBounty, Wellman, Olson, Lagattuta, & Liu, 2008) the present research utilizes the method of wordless picture books. Based on the previous work (King & La Paro, 2015; Misailidi et al., 2013) the present study explores the variance in the frequency with which teacher employ mental state talk and differences in specific type (cognition, emotion, desire) of mental state terms teachers use while utilizing wordless picture storybooks. Furthermore, the current study aimed to see whether there are any differences in the use of mental state talk among teachers with different teaching experiences. The current study also aimed at exploring the differences present in the educational qualification of preschoolers' teachers based on previous research which suggested an association between formal education of caregivers and mental state talk (McElwain, Booth-LaForce, & Wu, 2011).

Based on previous research which suggested an association between formal education of caregivers and mental state talk; the current study also investigated the differences present in the educational qualification of preschoolers' teachers.

## Method

**Participants.** For the present study, participants were 67 preschool teachers, who were involved with learning and teaching of 3-6-year-old pre-schoolers. All teachers were females with a mean age of 30.80 (*S.D*=4.40) and worked at a full-day preschool. The sample included 23 schools both public (*n*=8) and private (*n*=15) schools, with the majority of pre-schooler represented low to middle-income families of the urban city of Rawalpindi. Teachers' education ranged from 14 years to 16 years. The recruited teachers varied in their teaching experience. A total of 41.8 % (*n*=28) of teachers had up to 2 years of teaching experience, and 41.3% (*n*=27) had more than 2.1 to 4 years of experience, and 17.9 % (*n*=12) up to 4 years of experience. 41.8% (*n*=28) participants had 14 years of educational qualification and 58.2% (*n*=39) participants had 16 and above years of educational qualification.

## Measure

Mental state talk of teachers was assessed using wordless picture storybooks namely *Where Is Amma* (Nayar, 2010), *Raima and Rehan* (Nayar, 2017), and *The Garbage Monster* (Nazar, 2010).

These picture storybooks were modified and validated by (Toor & Hanif, 2020) by omitting the text from the storybooks to make them wordless picture storybooks to fulfill the purpose of the study. The process of selection and modification of storybooks followed the Subject Matter Experts (SME) review on the content of the storybooks, which not only contain rich references about mental state but also storybooks that deliver explicit and elaborative information about the mental state process of story character. Further, that engages the pre-schoolers and has cultural relevance. The face and content validity of the storybooks were also established. The selected storybooks were similar in terms of length and have a common feature that all storybooks have a main character that helps a teacher to elicit explicit information of the mental state process of that story character. These storybooks were used to have indigenous storybooks as a measure for the assessment of mental state talk of teachers and other significant others to use with preschoolers. The picture storybooks were new to all the teachers and pre-schoolers for the purpose to see how unfamiliar wordless picture storybooks generate complex mental states during the story narration session.

## Procedure

Teachers were recruited from 23 public and private schools. The schools were contacted for permission to assess teachers' mental state talk in their respective schools. From each school, a list of teachers who were teaching to pre-schoolers was collected from the school administration, and teachers were randomly selected from the list. The teachers who gave consent to participate and audiotape the session were included in the study. The demographic information was obtained from the teachers prior to the story narration session. Random selection of the group of 4-5 pre-schoolers was made from each teacher's class, the informed consent form was sent to each pre-schoolers parents/ guardians through the school administration. Only those pre-schoolers were involved in the study whose parents gave consent for participation. Teachers were asked to involve in a storytelling session with the pre-schoolers in a quiet room. They were asked to read a wordless picture story to their group of 4-5 pre-schoolers independently.

The assignment of the three books was counterbalanced among the teachers of the same school, referring to the practice that three storybooks were randomly assigned to teachers within the same school.

The teacher story narration session with the pre-schooler was audiotaped and transcribed. The transcribed interaction was coded to assess the mental state talk employed by the teachers during the story narration session.

**Mental State Talk Coding.** First, the sum of words in teachers' narratives was counted. This reflects the word count or the verbosity of the teacher. During the story narration, the verbosity represents the tendency of the teacher to express them comprehensively. Following the previous studies (Baptista et al., 2017; Bartsch & Wellman, 1995; Jenkins, Turrell, Kogushi, Lollis, & Ross, 2003) the mental state talk from the verbosity was then coded into one of the three exclusive categories, named as cognition, emotions, and desire. The talk that was used for conversational reasons e.g. 'I have no idea' and teachers' own repetition of words or conversation were not coded and considered as one term or reference.

**Cognitive terms.** Cognitive talk is comprised of the words and terms that describe the knowledge, thoughts, or terms pertaining to cognitive processes of the third person, listener, or the speaker e.g. "cat thinks Amma (mom) is gone". This category includes terms like remember, think, know, forget, guess, understand, believe, wonder, etc.

**Emotional terms.** This refers to the various emotional states of an individual. Following previous studies (e.g. Dunn et al., 1987; Jenkins et al., 2003) all the variety of terms sad, happy, afraid, angry, excited, love, fun, glad, hurt, surprise, etc. (e.g. Raima & Rehan were sad).

**Desire terms.** The mental category of desire terms included hope, want, wish and care. These terms capture the individual desires and goals e.g. the monster wants to go further reflects want terms, I wish Ami (mother) comes back soon, reflects the wish of the narrator. As in Shatz, Wellman, and Silber (1983), desire and emotion utterances were differentiated, in part, because emotion terms often have a more well-defined behavioral manifestation.

**Interrater Reliability of the Coded Mental State Talk.** Interrater reliability was evaluated for the coded mental state talk of the teachers on three categories; by calculating Cohen Kappa value for 50 percent ($n$=34) of the teacher story narration session; which was coded independently by two trained rates. The Cohen kappa value for three types of mental state talk was .82, .80, and .81 for cognitive, emotions, and desire terms respectively, which is more than substantial.

## Results

To observe the variation in how teacher employ mental state words, descriptive analysis was carried out. Table 1 shows that preschool teachers use mental state terms in their story narration session. The mean number of teacher's mental state terms was 69.10. There found to be differences among the categories of mental state talk employed by the teachers with the pre-schoolers. Teachers use more cognitive talk as compared to emotional and desire talk. Also, there was a significant variation in the total frequency of mental state talk among teachers while narrating a story; the range was from 42 to 118 mental state references.

**Table 1.**
*Descriptive Statistics for Teachers' Mental State Talk on Wordless Picture Story Books (*N=67*)*

| Variable | Frequency | | Range | |
|---|---|---|---|---|
| | *M* | *SD* | *Minimum* | *Maximum* |
| Total word count | | | | |
| Cognitive term | 54.88 | 13.821 | 29 | 99 |
| Emotion term | 10.64 | 3.49 | 3 | 19 |
| Desire term | 3.63 | 1.98 | 0 | 9 |
| Total MST | 69.10 | 14.93 | 42 | 118 |

MST =Mental state talk

To examine the differences in the type of mental state talk (cognition, emotion, desire) employed by teachers while narrating a story across the year of experience, ANOVA was performed see Table 2. Mean differences in groups showed that teachers with teaching experience of above 4 years across overall more MST (*M*=12.08; *CI* =.21 , 23.95) and specifically on cognitive terms (*M*=12.08; *CI* =.21 , 23.95) were found to be significantly different from the other two groups i.e. teachers with up to 2 years and teachers with 2 to 4 years of experience.

**Table 2.**

*Mean differences on Mental State Talk across Teacher Year of Experience (N=67)*

| Variables | 0 – 2 years (*n*= 28) | | 2.1 – 4 years (*n*=27) | | 4 and above years (*n*=12) | | | | Groups | MD (I-J) | $\eta^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *M* | *SD* | *F* | *p* | | | |
| **MST** | 65.92 | 8.89 | 67.67 | 13.16 | 79.75 | 24.08 | 4.18 | .02 | 4and above years>0-2 years | 13.8* | 0.115 |
| | | | | | | | | | 4and above years>2.1 – 4 years | 12.1* | |
| **Cognitive** | 51.32 | 8.47 | 53.44 | 11.75 | 66.42 | 21.47 | 6.06 | .00 | 4and above years>0-2 years | 15.1* | 0.159 |
| | | | | | | | | | 4and above years>2.1 – 4 years | 12.9* | |
| **Emotion** | 11.07 | 3.51 | 10.41 | 3.88 | 9.92 | 2.71 | .52 | .59 | N/A | | |
| **Desire** | 3.54 | 2.08 | 3.81 | 2.07 | 3.42 | 1.62 | .21 | .81 | N/A | | |

Note. MST= Mental state talk

The analysis was also carried out to see the effect of educational qualification on the use of mental state talk. Results indicated that more qualified teachers use more mental state talk as compared to less qualified teachers (see Table 3). Further, there found to be no relationship between teachers' use of mental state talk and the type of school (*r* = -.114) teachers are employed in.

**Table 3.**

*Mean Differences on Teachers' Educational Qualification on Mental State Talk (N=67).*

| Variables | 14 Years Education (*n*=28) | | 16 Years and above Education (*n*=39) | | *t* | *P* | 95% *CI* | | Cohen's *d* |
|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | | | LL | UL | |
| MST | 63.82 | 10.38 | 72.89 | 16.89 | -2.55 | .01 | 16.17 | 1.98 | -0.62 |
| Cognitive | 48.39 | 8.68 | 59.54 | 14.99 | -3.53 | .00 | 17.46 | 4.83 | -0.87 |
| Emotion | 11.50 | 3.32 | 9.95 | 3.52 | 1.82 | .07 | -.15 | 3.25 | N/A |
| Desire | 3.93 | 1.94 | 3.41 | 2.01 | 1.06 | .29 | -.46 | 1.49 | N/A |

Note. MST= Mental State Talk

**Discussion**

The present study explored the mental state talk employed by preschool teachers during picture book narration. Moreover, it aimed to see whether teacher teaching experience and educational qualification contribute towards their usage and type of mental state talk during storybook narration. The present research is a preliminary study, which explored the phenomenon of teachers' mental state talk in Pakistan and suggests further investigation on a broader level.

Consistent with previous findings (Misailidi et al., 2013; J. Pelletier & Astington, 2004) the present results indicated that Pakistani preschool teachers use mental state talk in their storytelling session. Furthermore, the study highlighted that teachers' frequency of mental state talk and the categories (cognition, emotions, and desire) vary while narrating picture storybooks to pre-schoolers.

Taking direction from studies conducted on mothers (e.g. Bozbıyık, 2016; Hutchins, Bond, Silliman, & Bryant, 2009; Meins et al., 2002) the possible explanation for the variation in the mental state talk with the pre-schoolers could be the presence of certain characteristic possessed by individuals (e.g. mind-mindedness, individual with the simplest epistemologies, interactions of silenced knowers). Furthermore, the variability in teachers' mental state talk may associated with teachers' differences in their readiness to use intentional stance when narrating a story to pre-schooler (Dennett as cited in Misailidi et al., 2013).

Of the three independent categories of mental state talk, cognitive terms were employed most frequently by the preschool teachers. These findings are consistent with the previous research findings which employed the method of story narration using picture storybooks (Misailidi et al., 2013) and naturalistic observation (Pelletier, 1994). It can be inferred from these studies that teachers are prone to use more cognitive terms as compared to other terms when talking to pre-schoolers, especially when narrating a story that requires terms e.g. Look, see, etc. to get the attention of the pre-schooler. Cognitive terms contribute to pre-schoolers outcomes; studies from maternal mental state talk suggested that maternal cognitive mental state talk is related to the theory of mind development (Adrián, Clemente, & Villanueva, 2007; Barreto, Osório, Baptista, Fearon, & Martins, 2018; Bozbıyık, 2016). These studies from maternal mental state talk direct that teachers' mental state talk particularly cognitive terms may contribute to the Theory of mind especially in countries like Pakistan where pre-schoolers are more often exposed to teachers' mental state talk than their other significant others.

The present study also examined the differences in employment of teachers' mental state talk due to different years of teaching experience. The results revealed that teachers' experience with the pre-schoolers are significantly associated to the overall use of mental state talk while narrating the story to pre-schoolers. Teachers with more teaching experience utilize mental state talk frequently. This may be because experienced teachers have employed more mental state references across a number of setting e.g. in conversation, book reading, storytelling, giving instructions. Previous literature (e.g. King & La Paro, 2015) revealed the association between years of experience and mental state talk.

Nevertheless, it showed that with the increase of teaching experience the teacher uses lesser perception terms as they employ different strategies or verbal instructions to catch the attention of the child. Teachers' years of experience with the pre-schoolers is of great importance; it is related to several significant outcomes e.g. language development of a child (Kontos & Fiene, 1987); pre-schoolers learning (Barnett, 2003) and provide high quality of classroom learning environment (Zhang, 2014).

The present research also explored the teachers' mental state talk across their education qualification, which suggested that teachers with more educational qualification utilize more mental state talk than teachers with lesser years of educational qualification. Previous researches supported the idea that teachers' educational qualification and formal degrees are associated with the frequency of mental state terms with which they communicate with pre-schoolers. According to recent studies (e.g. Burchinal, Cryer, Clifford, & Howes, 2002; McElwain et al., 2011), the formal education of the caregivers and their sensitivity is associated with the mental state talk they employ in conversation. Moreover, it suggested that for the expression of mental state talk not only the years of educational qualification are important but also the quality with the teach interact with the child.

The current study showed teacher variation in mental state talk, also it showed that all the teachers in the study used mental state talk in their storytelling session. In past (J. P. Pelletier, 1996) showed contradictory results demonstrating that not all teachers use mental state talk. One of the possible reasons for the different results from the present study might be the methodological approach; where mental state talk was assessed during instruction time and the current study utilized the picture story narration. According to previous studies (e.g. Misailidi et al., 2013; Symons et al., 2005) picture story narration may be one of the methods which call for teachers' use of mental state talk.

## Limitation

Although the present research has the strength, to use indigenous picture storybooks to explore the mental state talk of Pakistani pre-schoolers and opens an avenue for future researchers. However, it has few limitations.

The current study explored the phenomenon using wordless storybook narration; it is recommended that future researches should also explore the phenomenon during naturalistic observation of teacher-child interaction in the classroom. As teacher-child interaction is a bidirectional phenomenon, future research should include shared storybook reading activity.

Furthermore, the context and situation where pre-schooler and teachers interact are very important. However, it was not considered in the present study rather it focused only on the storytelling session. Additionally, pre-schoolers' characteristics such as age, gender, and socioeconomic status may also effect the teachers' frequency to employ mental state talk; therefore future researchers should consider these variables while measuring the mental state talk of the teachers. Likewise, teachers' characteristics such as mind-mindedness, monthly income, their professional training or growth could contribute to the frequency with which teachers' express mental state terms while interacting with the pre-schooler, hence should also be investigated in future

Moreover, taking into account the structure of preschools in Pakistan, both in the public and private sector, a great deal of variation exists in the criteria of hiring the preschool teachers, the physical environment, and the number of students. Therefore future studies should also explore the association between mental state talk and school type (public or private).

## Conclusion

In conclusion, the current study added to the scarcity of researches conducted on teachers' mental state talk and would be very useful for educators and preschools programs in Pakistan. In a country like Pakistan, there is no uniformity in policy for inducting and training teachers at the preschool level, especially in the private sector. The current research provides direction for policymakers to induct teachers with proper qualification and experience to interact with the pre-schoolers. The research indicated that teachers need to be aware and conscious about the use of words and mental state terms while interacting with the pre-schooler and their contribution to child-related outcomes.

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**Research Article**

# Organization Sustainability through Employee Green Behaviour and Ethical Leadership: The Influencing Role of Employee Machiavellianism

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## Abstract

**Objectives.** The objective of the present research is to investigate the impact of ethical leadership on employee green behaviour and sustainability, along with the moderating role of Machiavellianism. In today's global era, it is challengeable for the employees to practice green behaviour in the workplace. The current study analytically analyses the relationships among ethical leadership, employee green behaviour, Machiavellianism and sustainability.

**Method.** Self-administered questionnaires were administered to gather data from 390 managerial level employees of Pakistan Telecommunication Company. Five-point Likert scale has been used as a measurement scale.

**Results.** Partial least square (PLS) SEM is used to test the survey results of the proposed model. The study findings support the argument that ethical leadership has a significant positive effect on employee green behaviour. Also, Employee green behaviour positively mediates the relationship between ethical leadership and sustainability. Besides, Machiavellianism and green practice negatively moderates the relationship on sustainability. The present study is one of its kind to expand the scope of employee Machiavellianism by revealing that Machiavellianism negatively influences green behaviour and sustainability.

**Conclusion.** Our findings show various ways which will help the organisations to focus on employee green behaviour and reduce the effect of employee Machiavellianism to get sustainable environment. Also, the present study suggests human resource managers to understand employee green behaviour in the workplace more better.

**Keywords.** *Ethical leadership, employee green behaviour, sustainability and machiavellianism. JEL classification: M10 general*

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## Introduction

In today's world, the vital issue to pay attention is the environmental condition. There is a strong need to pay attention to such severe problems in the rules, procedures, and practices of the organisations. Many multinational organisations are nowadays taking different initiatives to participate in eco-friendly behaviour (Amisano, 2017; Saleem, Qadeer, Mahmood, Ariza-Montes, & Han, 2020). In organisational behaviour, employee green behaviour is a significant and researchable area to study. Leaders or managers are the ones that motivate and encouraged employees to become actively participate in green behaviour practices. Leadership plays a vital role in achieving organisational goals by making an environment that ought to alter employees' mindsets, enthusiasm, motivation, and performance (Norton, Parker, Zacher & Ashkansay, 2015). Research suggests that understanding may be developed about specific ethical approaches of leadership to weigh up and initiate reform efforts, especially in developing countries like Pakistan (Saleem et al., 2020).

The rise and fall of the nation in this world depend upon the leadership. If the leadership honest, sincere, active and practical, the country will make progress by leaps and bounds (Lemoine, Hartnell, & Leroy, 2019). It sees how the changes will happen. It gives clear manifestation to the nation. Rulers, politicians, poet, teachers, doctors, engineers, lawyers and company executives are our leaders and reflect the leadership qualities (Harris 2004). Some empirical studies confirm the influence of ethical approaches to leadership increase the level of employee commitment in Pakistan. Review of literature suggests that contextual understanding plays a significant role to be useful in a leadership situation (Dimmock & Walker, 2004). The very far-reaching consequences of ethical approaches of leadership on employee organisational commitment. The study found that if leaders motivate employees, invest in training to enhance skills and capabilities, invest in education, consider their personal as well as professional goals and finally empowered employees, it will increase the level of employee commitment with the organisation (Bushra, Ahmad & Naveed, 2011; Yusuf, 2009). Existing literature emphasis that employee green behaviour plays a crucial role in inspiring the environment and substantial outcomes for not only organisations but as well as employees and leaders. It helps the organisations to attain their strategic goals and increase their performance along with the job satisfaction of leaders and employees.

The present research aims to fill the gap that how ethical leadership motivates the employee to practice green behaviour which ultimately leads to organisational sustainability. This research is examining the fact that ethical behaviour of the leader encourages the employee to behave eco-friendly and influence the thoughts, values, beliefs and moral actions of the employees (Amrutha & Geetha, 2020; Saleem et al., 2020; Yong, Yusliza, Ramayah, Chiappetta Jabbour, Sehnem, & Mani, 2020).

A vast focal shift has swept the field of leadership research in the twenty-first century. Scholars had previously argued that leadership should not be concerned with issues of ethics and morality (e.g. England & Lee, 1974; Rost, 1993; Thompson, 1956), the moral nature of leaders now seen by many as not only necessary for the good of society but also essential for the sustainable environment (Gulati, Nohria, & Wohlgezogen, 2010; Padilla, Hogan, & Kaiser, 2007). Leadership effects in every field of life. It sees how changes will happen. It gives clear manifestation to the nation. Rulers, politicians, poet, teachers, doctors, engineers, lawyers and company executives are our leaders and reflect leadership qualities; the concept that leaders have impacted on the climate and motivation of their subordinates prevalent in business literature (Barker, 2001).

The Pakistani research on leadership and sustainability is significant to identify leadership development as well to develop its effect on the employee's green behaviour and environmental sustainability in the Pakistani business environment. This research aimed to study leadership development value and benefits on the business sector in particular employee performance in Pakistan after keeping in view the importance of leadership development and its acknowledgement and benefits drawn in all parts of the world (Naseer, Raja, Syed, Donia, & Darr, 2016).

This study aims to examine the relationship between ethical leadership and sustainability. It also investigates the indirect effect of employee green behaviour between the relationship of ethical leader and sustainability along with the moderating role of employee Machiavellianism. The leaders should take the initiative regarding the followership toward long term organisational sustainability as we investigate this theme and gap: first analysing leadership character and employee green behaviour towards the sustainability of the organisation.

Because there is a vast shift in the field of leadership and the 21st century, the concept is changed in-lieu with a leadership style that leadership should not be concerned with the issues of ethics and morality. The moral nature of leaders is now seen by many as not only necessary for the good of society but also essential for sustainability goals (Hersted, 2019). Our study is trying to fill the gap in Pakistani context that when leaders behave ethically, they influence followers to change their behaviour and practice green performance at the workplace. Previous literature (Dahling, Whitaker, & Levy, 2009; Tang & Chen, 2008; Tang & Liu, 2012; Zagenczyk et al., 2013) claimed that employees who are high in Machiavellianism encourage counterproductive behaviour that may lead to unsustainability. The present study is one of its kind to study the moderating effect of Machiavellianism between green behaviour and sustainability.

## Theoretical Underpinning

The theory adopted in this study is the social learning theory (SLT) by Bandura (1977). SLT proposed that ethical leadership significantly influence green employee behaviour. According to this theory, individuals learn different ways by observing others. This theory draw conclusion on the moral forms of leadership engenders positive relationships that develop followers' positive affect and cognitions, resulting in followers engaging in positive behaviours that generate positive outcomes. The body of evidence establishing this phenomenon indicates that continuing to retreat this ground would do little to enhance our understanding of how moral leadership works (Van Knippenberg & Van Kleef, 2016).

For instance, ethical leaders are motivators for employees, and they can influence their thoughts, beliefs, attitudes and values. Besides, they can change the perception of the employees regarding organisational rules and regulations, policies and practices and corporate sustainability. When an organisation encourages the employee to practice green behaviour, they happily engage in practising eco-friendly environment. This ethical awareness leads them to behave vivaciously, and it can strengthen their relationship with the ethical leader as the awareness to exercise green behaviour is due to the impact of their leader. In particular, the present study contributes to the literature that ethical leadership drives green employee behaviour which ultimately leads to organisational sustainability.

## Literature Review and Hypotheses Development

Dessler (1994) states that the administrative management of human assets to oversee their execution by making them work voluntarily. The leader could be individual who able to impact the behaviour of others. Liu and fellow researcher (2019) characterise leader as a person who acts in the gather of familiar interface, purposes, and objectives. Dessler (1994) has another way of portraying leadership. He says leadership method of impacting others to realise particular goals in particular circumstances.

Definition of leadership presented in this ponder too implies that supervisor features a sense of heading and viability of his endeavour to impact on unique situational variables (Brown et al., 2005). Leadership, therefore, can influence others to meet characterised objectives, goals.

## Ethical Leadership

An ethical leader acts both as 'moral person,' maintaining equality and integrity in relationships with subordinates, and as 'moral manager,' demonstrating and reinforcing desired and normatively appropriate behaviours (Brown et al., 2005; Trevino, Hartman, & Brown, 2000). Based on the conceptual foundations, the framers of ethical leadership posited that ethical leaders are credible role models who emulate desired moral attitudes and behaviours for subordinates and provide rewards for ethical conduct and consequences for "those who don't follow the standards" (Brown et al., 2005). They combine general, a consistent moral character with a focus on organisational, cultural norms, standards, and rule compliance. These conceptual emphases appear in the uni-dimensional measure of ethical leadership, representing both the moral person and manager (Tervino & Brown, 2004). Ethical leadership, for instance, share a focus on moral consistency, although the nature of this consistency varies in a way that mirrors each concept's conceptual emphases. For ethical leadership, this dimension refers to the congruence between the leader's actions and the norms they enforce to their followers. That is, ethical leaders hold themselves to the same high ethical standards that they expect of others, showing consistency and modelling appropriate behaviours. This shared focus on moral consistency suggests that behavioural integrity (Simons, 2002), the alignment between words and actions, famous for both ethical and transformational leaders.

Ethical leadership consists of the leaders that practice ethical behaviour at the workplace. Ethical awareness of the leaders influences the employees at the workplace to behave constructively and help them to understand the legal and illegal decisions at the workplace (Kuntz et al., 2013; Payne, Corey, & Fok, 2016). Leaders who demonstrate virtuous and moral leadership behaviours may affect the ethical environment of the organisation (Amisano, 2017). Ethical leadership has an impact on employee green behaviour and influence employees with their ideal and perfect characteristics.

Ethical leaders influence employee work-related behaviours, organisational commitment, employee well-being, outcomes and job satisfaction (Usman et al., 2018, Khan, Ali, Usman, Saleem, & Jianguo; 2019). Ethical leader fairly treats employees, responsible towards customers, subordinates as well as towards organisational goals. The Pakistani research on leadership is essential to identify leadership development as well to develop its effect on the employee's green behaviour and environmental sustainability in the Pakistani business environment (Khan et al., 2019).

A moral leader is an ethical manager whose responsibilities are not only related to individual level but for all employees of the organisation. These motivated managers use their personalities as a charm to encourage employees. Ethical leader pays attention to organisational sustainability, green behaviour and social responsibility (Norton, Parker, Zacher & Ashkansay, 2015). When employees feel that ethical leaders care for them, pays attention to sustainable development and empower them than they behave positively and ethically. In comparison with other leadership styles, ethical leadership acts more responsible, green and sustainable implementer, which encourages the employees to behave green at the workplace (Amrutha & Geetha, 2020).

**H1:** Ethical leadership has positive association with employee green behaviour.

### Sustainability
Labuschagne, Brent, and Van Erck (2005) define sustainability as accomplishing different strategies and experiences in the organisation that linked with the need of the organisation and its investors, customers and participants in order to protect, sustain and enhance natural as well as human resources that are essential for future perspective.

Organisations castigated for irresponsible behaviour such as pollution, unfair behaviour with employees and selling unsafe products to consumers (Murphy & Schlegelmilch, 2013). Organisational sustainability is one of the essential outcomes of ethical leadership (Amisano, 2017; Eisenbeiss, 2012). Brown et al. (2005) argued that leaders determine the success factor based on its means not only on outcomes. Ethical leaders have tendencies to inspire people in many ways like justice, integrity and sustainability.

Ethical leadership can influence decisions in an organisation, and the overall ethical environment affects decision making in an organisation (Amisano, 2017). Concerning the link between ethical leadership and sustainability, some factors, i.e., condition, awareness, stability, collectivity, and creativity, also considered necessary (Tideman, Arts, & Zandee, 2013).

Organisations want to sustain themselves due to profitability, enhanced performance, and different financial benefits. The financial position of any organisation depends upon the ethical decision-making process with the presence of influential ethical leaders. Sustainability has a link with ethical leadership, organisation culture and practices at the workplace. So to achieve sustainability, the noble leader plays a vital role in making an ethical decision (Amisano, 2017). Accomplishing environmental sustainability for an organisation as well as its employees is tough to achieve. Due to the complex adaptive system, it is difficult for leaders to cope with change. The informative and ethical role of the leader in the complex adaptive system is very crucial, and they are the one who can make or break the organisation. To remain sustain, organisations require a system that handles error learning problems and the capacity to learn (Metcalf & Benn, 2012; Metcalf, & Benn, 2013).

**H2:** Employee green behaviour has a positive association with sustainability.

### Employee Green behaviours as Mediator
Employees' engagement in green behaviours is the employees' actions to perform work in an environmentally friendly way (Junsheng, Masud, Akhtar, & Rana, 2020). Employee green behaviour is the behaviour of employees involves scalable activities that are associated with the environmental sustainability of the organisation.

It includes counterproductive work behaviour, performance and job satisfaction. Employees perspective on green values and practices help the organisation to sustain itself. When employees want to adopt green behaviour at the workplace, it will motivate them and affect their performance (Yong et al., 2020). The ethical standards articulate by ethical leaders at the workplace inspired the followers to abide by those set of rules and that standards encourage the employees to improve their behaviours just as their leaders.

The latter serves as a role model for them (Norton, Parker, Zacher & Ashkansay, 2015). Existing literature on employee green behaviour enhance environmental sustainability. Employees engage in green behaviour not only improve their performance but also plays a vital role in establishing organisation behaviour.

Ethical leadership serve as a role model for the employees to practice green behaviour at the workplace. The employee green behaviour has a positive and significant effect on organisational sustainability (Liu & Zhao, 2019; Norton et al., 2015; Saleem et al., 2020). Studies revealed that employee green behaviour positively contributes to sustainability. Ethical learning and performance found to be significant predictors for the achievement of sustainability (Liu & Zhao, 2019). When employees develop a sense of green behaviour, it will influence the effect on their personality and behaviour. Green learning plays an essential part in contributing to organisational sustainability. Employee green behaviour at the workplace significantly and positively contributes to environmental sustainability and the overall performance of the employees (Amrutha & Geetha, 2020; Yong et al., 2020).

**H3:** Employee green behaviour positively mediates the association between ethical leadership and sustainability.

**Employee Machiavellianism as Moderator**
The literature describes employee Machiavellians as master manipulators who are willing to use all possible means to achieve their ends (El Baroudi, Fleisher, Khapova, Jansen, & Richardson, 2017). Machiavellianism is a social strategy that entails controlling and manipulating others for personal advantage (Ruiz-Palomino, & Banon-Gomis, 2017).

Machiavellians considered as cheaters, conspirators, plotter, and schemers who always try to reduce the capital and always prefer themselves (Paulhus & Williams, 2002; Ruiz-Palomino, & Banon-Gomis, 2017). For instance, Machiavellianism positively relates to one self-interest to lie and cheat (Ross & Robertson, 2000). In contrast, cheating and lying to others is always considered wrong and unethical for the one who practices ethical and moral behaviour at the workplace.

In comparison with employee green behaviour at the workplace, employee machiavellian manipulated others to achieve their goals. Machiavellianism referred to as a characteristic like a conspirator, schemer, plotter, self-interest, and manipulator (Zagenczyk, Cruz, Woodard, Walker, Few, Kiazad, & Raja, 2013). The employee with these negative attributes may ignore the importance of the environment and prefer their benefits. Employees high in Machiavellianism always try to manipulate the situation because they have the strong desire of wealth and treasure, that is why they ignore moral and ethical values (Myung & Yun, 2017; Wu, Wang, Lee, Lin, & Guo, 2019). Individuals with Machiavellianism want to maximise profitability at any cost despite considering the difference between ethical and unethical situations. They usually engage in anti-production work, and their focus is on achieving their own goals without giving any importance to the protection of the environment. They never practice ethical and green behaviour in the workplace. Instead, they are low in emotions and follow their own goals (Wu et al., 2019). Employees with high Machiavellianism may involve in unethical behaviour and prefer their values in comparison with organisational sustainability without any shame or hesitation. They did not pay attention to moral and ethical values, and usually, they are selfish (Gürlek, 2020). Previous literature (Dahling, Whitaker, & Levy, 2009; Tang & Chen, 2008; Tang & Liu, 2012; Zagenczyk et al., 2013) claimed that employees who are high in Machiavellianism encourage counterproductive behaviour that may lead to unsustainability. Machiavellianism has a positive impact on unethical behaviour and negative impact on ethical behaviour. They never care for the environment and eco-friendly practices. Their only goal is to achieve maximum profit at any cost without any guilt or regret (Gürlek, 2020). Machiavellianism is based on self-centeredness, distrust, manipulation and dishonesty.

Although the negative characteristics of the Machiavellianism may lead the employee to ignore the importance of green behaviour, on the other hand, they prefer capital and status. Individuals high in Machiavellianism have a desire to control others and maintain their position. They have excellent skills to pursue their job and grab opportunities to maximize profitability. People with high Machiavellianism have fewer emotions and achieve their goals by controlling others (Wu et al., 2019). It would be interesting to study that individuals who have high Machiavellianism and awareness of green behaviour may lead to sustainability or unsustainability of the organization.

**H4:** Employee Machiavellianism negatively influences the association between employee green behaviour and sustainability.

### Significance of the Study

The importance of this research study will be its potential to extend, contribute to the existing knowledge of the leader's ability to make sound decisions in an ethical environment. This study may be relevant to business leaders because there a wide range of essential perspectives on having moral leadership approaches in the business workplace. Results of this study may contribute to positive social change through the relationship between leadership, decision making, and ethical behaviour (Litchka, 2019). Besides this study will help the leaders to understand how employee Machiavellianism can lead towards unsustainability and how effectively they can control their behaviour through the practices of green behaviour at the workplace.

### Objectives of the Study

1. To understand and analyse the role of ethical leadership and sustainability

2. To understand and analyse the mediating effect of employee green behaviour in the relationship between ethical leadership and sustainability

3. To understand and analyse the interactive effect of employee Machiavellianism behaviour in the relation of employee green behaviour and sustainability.

### Hypotheses

**H1:** Ethical leadership has positive association with employee green behaviour.

**H2:** Employee green behaviour has a positive association with sustainability.

**H3:** Employee green behaviour positively mediates the

association between ethical leadership and sustainability.

**H4:** Employee Machiavellianism negatively influences the association between employee green behaviour and sustainability.

### Method
### Instruments

Ethical leadership measured with a ten-item scale adopted by Brown et al. (2005). Respondents asked to respond on a 5-point Likert-scale. Items measuring ethical leadership include "my supervisor listens to what employees have to say," "My supervisor sets an example of how to do things the right way in terms of ethics," and so on. Cronbach alpha value of ethical leadership is 0.82. Green Behavior is measured with six items, taken from (Bissing-Olson, Zacher, Fielding, & Iyer, 2012). Respondents asked to respond on a 5-point Likert scale. Items include to measure Green behaviour are "I adequately complete assigned duties in environmentally friendly ways," "I take a chance to get actively involved in environmental protection at work," and so on. Cronbach alpha value of Green behaviour is 0.86. To measure Machiavellianism, eight items taken from Christie, and Geis, (1970). Respondents asked to respond on a 5-point Likert scale. Items measuring Machiavellianism consist of "I have used deceit or lied to get my way," "I tend to exploit others towards my own end," and so on. Cronbach alpha value of Machiavellianism is 0.86. To measure Sustainability, Five items adopted by Harmon, Fairfield, and Wirtenberg, (2009). Respondents asked to respond on a 5-point Likert scale. Sustainability items include "Is your organisation/company involved in improving the community/word in the non-business environment?" and so on. Cronbach alpha value of sustainability is 0.90. We controlled variables age, gender and education in the present study. The Cronbach alpha value higher than 0.70 indicates the internal consistency of the items. Cronbach alpha value of present study constructs is between the ranges of 0.82 to 0.90, which reflected that all the constructs had internal consistency in them.

### Sampling and Data Collection

Population for the present study is the Telecommunication Industry of Pakistan. The simple random sampling technique used to collect data through self-administered questionnaires. Data collected from the employees of Pakistan Telecommunication Company (PTCL). PTCL is the national telecommunication company in Pakistan which consists of more than 16000 employees.

The reasons behind to select telecommunication sector are because these sectors are classified with organisational culture, extortion, and inferiorly managed human resource discipline. Besides, a large portion of Pakistan intellectual talent is working in the telecommunication sector, and this sample helps the researcher to understand the ethical leader and employee green behaviour along with the sustainability.

The sample size determined by Krejcie and Morgan (1970) sampling table. Our population is more than 16000; hence data were collected from at least 375 respondents.

Data collected from individual employees of managerial level. We distributed 640 questionnaires. The questionnaire returned were 404. Only 390 questionnaires were considered useable for future data analysis. The response rate of this study is 61.2%.

Among the respondents, 70% were male, and 30% were female. Also, 40% of respondents are within the age range of 31 to 35 years. 20% of the respondents belong to the age group of 26-30 years, and 18.5% were 41 years or above. Table 1 shows the sample characteristics of the study.

**Table 1**
*Sample Characteristics (N=390)*

| Variable | Items | *f* | % |
|---|---|---|---|
| **Gender** | Male | 273 | 70% |
| | Female | 117 | 30% |
| **Age** | 21-25 years | 39 | 10% |
| | 26-30 years | 78 | 20% |
| | 31-35 years | 156 | 40% |
| | 36-40 years | 45 | 11.5% |
| | 41 years and above | 72 | 18.5% |
| **Education** | Bachelors | 102 | 26.1% |
| | Masters | 268 | 68.8% |
| | Others | 20 | 5.1% |
| **Experience** | Less than 1 year | 20 | 5.2% |
| | 1-2 years | 90 | 23.1% |
| | 3-4 years | 80 | 20.5% |
| | 5 years and above | 110 | 28% |
| | Total | 90 | 23.2% |

## Data Analysis

The analysis of this study is conducted by using SPSS version 21 for initial findings and PLS-SEM version 3.2 for hypotheses testing.

First, we examine the data and treated missing values, normality and multicollinearity of the data before testing our hypothetical model on PLS-SEM. We examined the multicollinearity of our study constructs through VIF. According to Hair et al. (2017), VIF values of less than 10 indicates no multicollinearity. Our study variables VIF values range between 1.53 to 2.03; hence there is no multicollinearity. PLS-SEM analysed the data in two phases, first measurement model and second structural model. In the assessment of the measurement model, we analysed the reliability and validity of this study.

First, we examined the internal consistency of our study constructs, which evaluates the result based on compatibility between the measures. The examination conducted with the help of examining individual item loadings, composite reliability (CR), average variance extracted (AVE), and discriminant validity of the study variables (Hair, 2017).

Factor loadings of study variables presented in table 2. These loadings indicate that all factors highly loaded as all values are between the range of 0.70 to 0.90. The composite reliability is between 0.86 to 0.92. Hence, all variables are adequately measuring composite reliability. Average variance extracted (AVE) threshold should be equal to or greater than 0.5. Our study constructs AVE values are above 0.50.

**Table 2**

*Item Loadings, Reliability and Convergent Validity* (*N*=390)

| Variable | | Items | Loadings | CR | AVE |
|---|---|---|---|---|---|
| **EL** | Uni-Dimensional | EL1 | .84 | .86 | .52 |
| | | EL2 | .90 | | |
| | | EL3 | .83 | | |
| | | EL4 | .81 | | |
| | | EL5 | .75 | | |
| | | EL6 | .70 | | |
| | | EL7 | .87 | | |
| | | EL8 | .81 | | |
| | | EL9 | .82 | | |
| | | EL10 | .83 | | |
| **GB** | Uni-Dimensional | GB1 | .86 | .90 | .59 |
| | | GB 2 | .83 | | |
| | | GB 3 | .72 | | |
| | | GB 4 | .77 | | |
| | | GB 5 | .70 | | |
| | | GB 6 | .76 | | |
| **SUS** | Uni-Dimensional | SUS1 | .88 | .89 | .72 |
| | | SUS2 | .86 | | |
| | | SUS3 | .83 | | |
| | | SUS4 | .84 | | |
| | | SUS5 | .82 | | |
| **MAV** | Uni-Dimensional | MAV1 | .81 | .92 | .51 |
| | | MAV2 | .80 | | |
| | | MAV3 | .79 | | |
| | | MAV4 | .75 | | |
| | | MAV5 | .78 | | |
| | | MAV6 | .83 | | |
| | | MAV7 | .84 | | |
| | | MAV8 | .80 | | |

*Note:* EL= Ethical leadership, GB= Green Behaviour, SUS= Sustainability, MAV= Machiavellianism, CR= Composite reliability, AVE= Average variance extracted.

We measured the discriminant validity of our model with the Fornell and Larcker criteria (1981). The bold values in table 3 indicate significant discriminant validity of our study variables. The values present in diagonals represent the discriminant validity of study constructs, and high value horizontally and vertically shows that the current study constructs are not highly correlated.

**Table 3**

*Discriminant Validity*

| Variables | EL | GB | MAV | SUS |
|---|---|---|---|---|
| EL | **0.721** | | | |
| GB | 0.487 | **0.768** | | |
| MAV | 0.146 | 0.272 | **0.714** | |
| SUS | 0.436 | 0.484 | 0.187 | **.850** |

*Note:* EL= Ethical leadership, GB= Green Behaviour, SUS= Sustainability, MAV= Machiavellianism

The second phase, the structural model assessment used to examine the direct and indirect relationship between the study variables. In this assessment, we examined path coefficients, coefficient of determination ($R^2$), and the effect size ($F^2$).

The study results in table 4 revealed that there exists a positive and significant relationship between ethical leadership and employee green behaviour ($\beta$= 0.49, $t$=12.38, $P$<0.001). Hence, H1 is supported. Also, there is a positive and significant relationship between employee green behaviour and sustainability ($\beta$= 0.47, $t$=10.35, $P$<0.001); hence H2 is supported. Besides, there exist positive and significant indirect effect of employee green behaviour between the relationship of ethical leadership and sustainability ($\beta$= 0.23, $t$=6.96, $P$<0.001). Hence, H3 is supported. Figure 2 shows all the direct and indirect relationships of study variables. The $R^2$ value for dependent variable green behaviour is 0.23 and for sustainability is 0.24, respectively.

**Table 4**
*Direct and Indirect Effects*

| Paths | $\beta$ | S.E | $t$ | $p$ | Decision | $F^2$ | Effect | $R^2$ |
|---|---|---|---|---|---|---|---|---|
| EL→GB | .49*** | .039 | 12.38 | .000 | Supported | .310 | Large | 0.23 |
| GB→SUS | .47*** | .045 | 10.35 | .000 | Supported | .266 | Large | 0.24 |
| EL→GB→SUS | .23*** | .033 | 6.96 | .000 | Supported | | | |

*Note:* *$p$<.05; **$p$<.01; ***$p$<.001 (significance levels). EL= Ethical leadership, GB= Green Behaviour, SUS= Sustainability.

To examine the interaction effect of proposed constructs, we run a separate model in PLS-SEM. The result obtained from bootstrapping described in table 5 indicates that the interaction effect of Machiavellianism and Green Behaviour on Sustainability is negatively significant ($\beta$= -.28, $t$=5.75, $P$<0.001). Therefore, we can say that H4 is supported. Figure 3 shows the interaction effect of Machiavellianism and green behaviour on sustainability.

**Table 5**
*Interaction Effects*

| | Dependent Variable | | |
|---|---|---|---|
| | **Sustainability** | | |
| | B | t value | P-value |
| Independent Variable: **Green Behaviour** | .40*** | 8.56 | 0.000 |
| Moderator: **Machiavellianism** | -.10* | 2.43 | 0.015 |
| *Interaction*<br>***Green behaviour x* Machiavellianism** | -.28*** | 5.75 | 0.000 |

*Note:* *$p$<.05; **$p$<.01; ***$p$<.001 (significance levels).

Graph 1 indicates that interacting effect of employee green behaviour and Machiavellianism negatively moderates the relationship on sustainability. Hence, when the impact of Machiavellianism increases, it will negatively enhance the relationship between employee behaviour and sustainability. The higher level of Machiavellianism reduces sustainability.
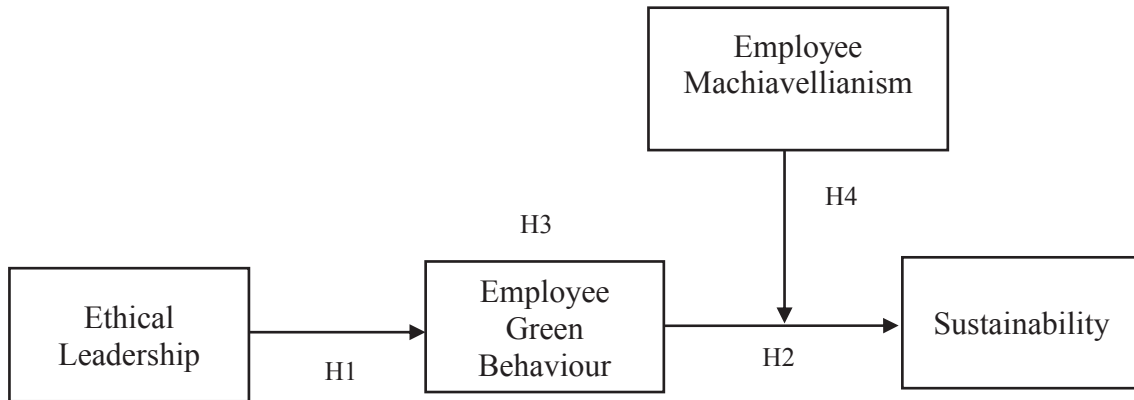
**Figure Legends**


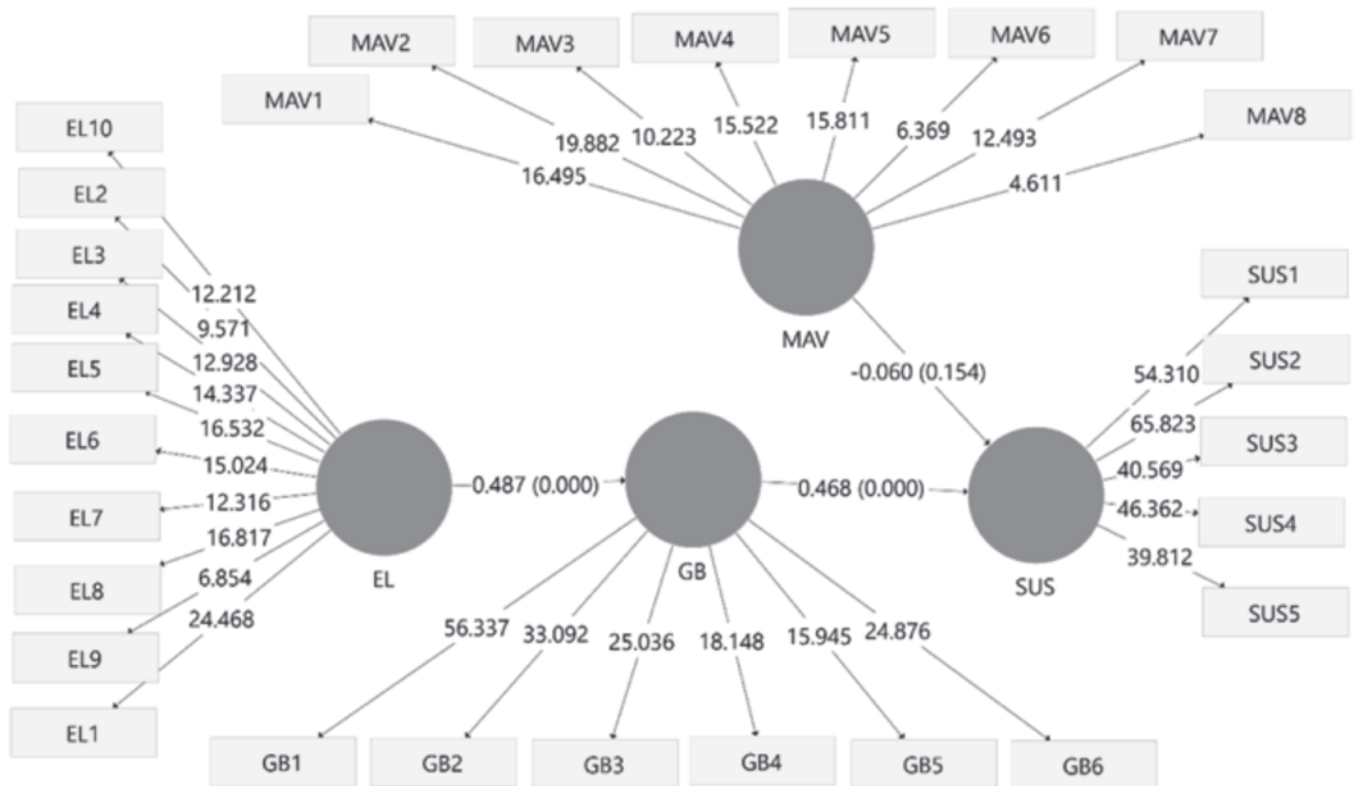
*Figure 1*: Theoretical framework
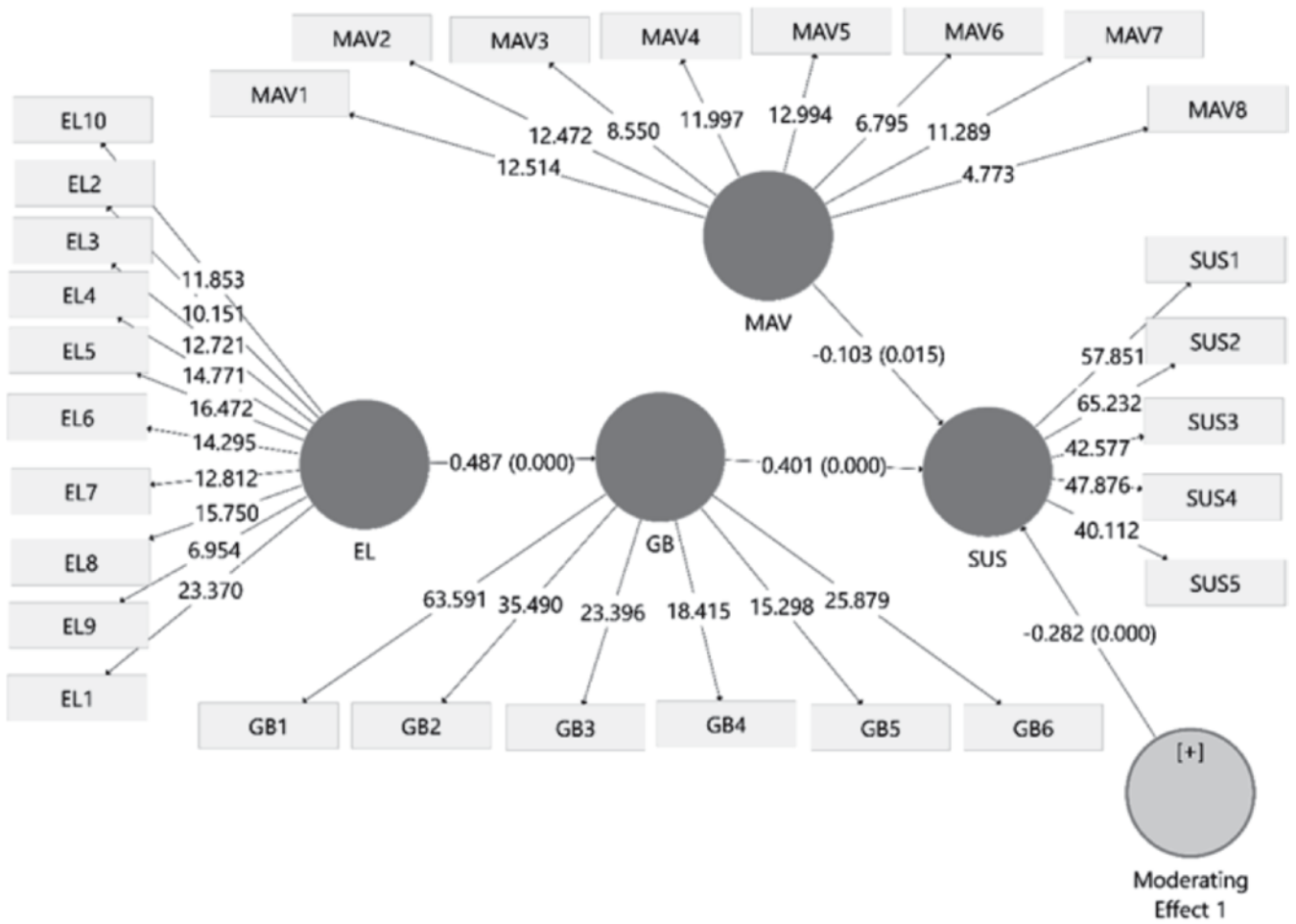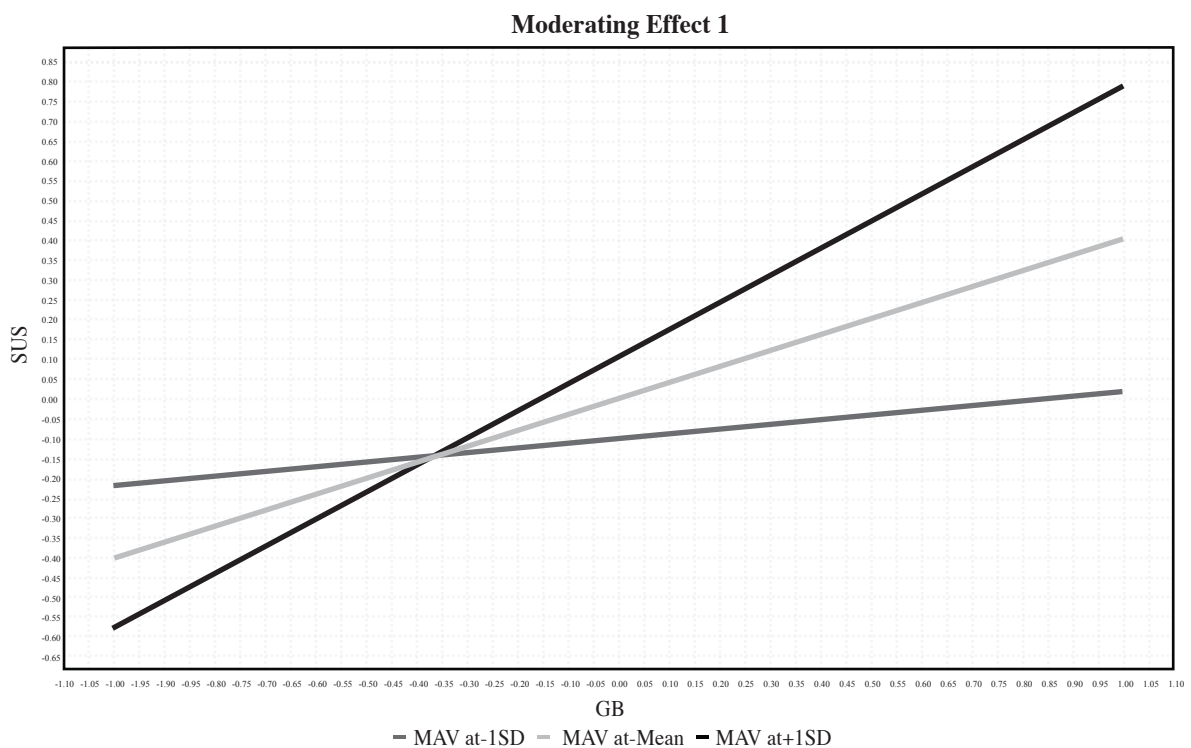


*Figure2:* Structural Model

*Figure3*: Interaction Effect



*Graph 1:* interaction effect of Machiavellianism and Green Behaviour on Sustainability

## Discussion

This research aims to investigate the impact of ethical leadership on employee green behaviour and how this green behaviour influences sustainability of the organisation. Ethical leadership involves ethical practices in the workplace. Our study is helping to identify the impact of employee green behaviour and how it can affect the sustainability of the organisation. Our findings reveal that ethical leadership has a significant positive effect on employee green behaviour (H1). These findings are parallel with the results of previous studies (Liu et al., 2019; Saleem et al., 2020; Yong et al., 2020). Ethical awareness of the leaders motivates the employees to behave productively and help them to understand the legal and prohibited decisions at the workplace (Kuntz et al., 2013). Ethical leadership acts more responsible, green and sustainable implementer, which encourages the employees to behave green at the workplace (Amrutha & Geetha, 2020). In local context, numerous authors also supported the positive relationship between ethical leadership and employee green behaviour. For example, Usman and other (2018) argue that Ethical leaders influence employee work-related behaviours, organisational commitment, employee well-being, outcomes and job satisfaction. Similarly, Khan and his colleague (2019) also supported the direct relationship between ethical leadership and employee green behaviour. They argue that ethical leader has effective moral ground to encourage the employee green behaviour than an unethical leader. Similarly, pakistani research on leadership is essential to identify leadership development as well to develop its effect on the employee's green behaviour and environmental sustainability in the Pakistani business environment (Khan et al., 2019).

For instance, Leaders who demonstrate moral and ethical leadership behaviours may affect the ethical environment of the organisation and encourages the employees to practice green behaviour at the workplace.

Similarly, our study findings indicate that employee green behaviour at the workplace positively and significantly influences sustainability in the organisation (H2). These results are consistent with the past findings (Amrutha et al., 2020; De Roeck, & Farooq 2018; Liu, & Zhao, 2019). Employee green behaviour at the workplace significantly and positively contributes to environmental sustainability and the overall performance of the employees (Amrutha & Geetha, 2020; Yong et al., 2020).

Concerning the link between ethical leadership and sustainability, some factors, i.e., condition, awareness, stability, collectivity, and creativity, also considered essential. The ethical standards convey by ethical leaders at the workplace inspired the followers to accept norms and that particular norms encourage the employees to enhance their behaviours same as leaders who serve as a role model. Employees engage in green behaviour not only improve their performance but also plays a vital role in establishing organisation behaviour. Ethical leadership serve as a role model for the employees to practice green behaviour at the workplace (Saleem et al., 2020).

Besides our study analysis results shows that employee green behaviour positively mediates the relationship between ethical leadership and sustainability (H3). Our study results are parallel with the findings of previous literature which claim that when green behaviour is the practice by the employees, it will ultimately lead the organisation to sustain itself in terms of profitability as well as environmental stability (Amisano, 2017; Liu et al., 2019; Norton et al., 2015). Ethical learning and performance found to be significant predictors for the achievement of sustainability (Liu & Zhao, 2019). For instance, When employees feel that ethical leaders care for them, pays attention to sustainable development and empower them than they behave green, positively and ethically. Our results second the findings that sustainability has a link with ethical leadership, organisation culture and green practices at the workplace. Hence to accomplish sustainability, the moral leader plays crucial responsibility in achieving ethical decisions at the workplace (Amisano, 2017).

Finally, the present study results disclose that employee Machiavellianism negatively and significantly moderates the relationship between employee green behaviour and sustainability. Hence, our hypothesis H4 is supported and parallel with the previous literature findings that employees high in Machiavellianism always try to manipulate the situation because they have the strong desire of wealth and treasure, that is why they ignore moral and ethical values (Myung et al., 2017; Wu et al., 2019). Previous literature (Dahling et al., 2009; Tang & Chen, 2008; Tang & Liu, 2012; Zagenczyk et al., 2013) suggested that individuals who have high-level of Machiavellianism foster counterproductive actions that may lead to unsustainability.

Machiavellianism has a positive impact on unethical behaviour and negative impact on ethical behaviour. Employees with low-level Machiavellianism care for the environment and eco-friendly practices (Gürlek, 2020).

## Conclusion and Research Implications

The current study based on social learning theory discusses the impact of ethical leadership on employee green behaviour and how effectively this green behaviour mediates the relationship between ethical leadership and sustainability. This paper argues that ethical leadership has a positive impact on employee green behaviour. This green practices of employee mediate the relationship positively and strongly between the link of ethical leadership and sustainability. The findings revealed that Machiavellianism negatively moderates the relationship between employee green behaviour and sustainability. Ethical leadership and employee green behaviour can make an excellent combination to help employees to understand the importance of green practices and how these practices help the employees to make their organisation sustain and balanced.

The present study is one of its kind to expand the scope of employee Machiavellianism by revealing that Machiavellianism negatively moderates the relationship of employee green behaviour and sustainability. The current study showed that how unethical behaviour of employee reduces the green practices of the employees at the workplace, which ultimately lead to an unsustainable environment. Liu and fellow researchers (2019) suggested future research due to the lack of empirical findings. Hence, our study is one to its kind to determine the relationship of ethical leadership, green behaviour, Machiavellianism and sustainability with Smart PLS-SEM version 3.2.

Hence, present study helps the literature to find the support that employee green behaviour act as an intermediary between the relationship of ethical leadership and sustainability. Secondly, this study will help the organizations to understand the phenomenon to engage employees in green behaviour and make organization more sustainable. Organization should focus on the leadership styles that are being deployed in the organization, because leadership style can make a drastic change in employee behaviour which will decide the future of the organization.

## Limitation and Future Research

The present study has several limitations. Firstly, it is a cross-sectional study as data collected at a single point of time. Future researches may use longitudinal data to conduct the study. Secondly, we have collected data from Pakistan Telecommunication Company. At the same time, future researchers may conduct this study in other industries like manufacturing and textile of Pakistan or different sectors of different countries. Thirdly, researchers chose ethical leadership style to determine employee green behaviour and sustainability. In future, it would better if researchers may examine this model with more than one leadership style, e.g., servant leadership, autocratic leadership or adverse leadership. In future researchers may also observe the impact of employee Machiavellianism as a mediator between the relationship of ethical leadership and sustainability. Furthermore, future studies may include corporate social responsibility (CSR) as a dependent variable. Future researchers may check the impact of ethical leadership and employee green behaviour on CSR.

**Ethical approval and consent to participant.** Ethical approval is not applicable for this study, and the present study authors obtained the written informed consent form the participants of the survey while collecting data.

**Consent for publication.** Consent approved by authors.

**Author's contribution.** A.S. conceptualised the idea, contributed to study design, completed the entire article, including introduction, literature review, statistical analysis, discussion, conclusion, limitations, and future research. A.S. edited the original manuscript before submission. M.B. conceptualised the idea, contributed to study design, completed the entire article, including literature review, statistical analysis, discussion, limitations, and future research. M.B. edited the original manuscript before submission. F.M. contributed to study design, completed the article, including literature review, discussion, limitations, and future research. F.M. supported in literature investigation. S.M. contributed to study design, data collection procedures, and discussion. S.M. support in the data analysis procedure.

All authors have read and approved the manuscript.

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**Research Article**

# Big Five Personality Traits on Project Success in Marketing-Oriented Organizations: Moderation of Leader Member Exchange

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## Abstract

**Objectives.** The relational interconnectivity of leaders and organizational members in the context of personality traits is in limelight due to market pressing need of antecedents' investigation for project success. This study is about portrayal of big-five personality traits impact on project success in marketing-oriented organizations. In addition, this study is also aimed to explore if leader member exchange plays a role in moderating the relationship between the big five personality traits and project success. Two traits agreeableness and conscientiousness were the focus as per theoretical paradigm.

**Method.** For this purpose, the questionnaire was filled by different public and private organizations. The sample size was 153 respondents (both male and female), collected through convenience sampling due to scattered nature of sample.

**Results.** The study uses a co-relation and regression analysis technique to test the measurement of model. It was found that agreeableness has a significant effect on project success, whereas conscientiousness lacks significant relationship along with absence of moderating relationship.

**Implications.** The managerial implication is marked by the spearhead focus on agreeableness and conscientiousness traits in terms of humanistic capacity building that could install the triggers for project success in marketing-oriented organizations.

**Keywords.** *Agreeableness, conscientiousness, leader member exchange, project success.*

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## Introduction

In recent research the exchange of influence between the leader and the internal customer (employee) is focused through the lens of marketing (Flaherty & Pappas, 2000; Zhao, Liu, Li, & Yu, 2019). Leader member exchange is the leader's relationship with every member of their team. It is usually believed that leaders have a deep imprint on the organization they lead (Smith & Canger, 2004). A significant element in building a strong communication between the leaders and the members is having a solid interpersonal trust between them that goes beyond the official employment contract (Dienesch & Liden, 1986).

This influence impact the individual personality of the employees and make an adjustment in the organizational work settings (Friend, Johnson, Luthans, & Sohi, 2016). The leadership behavior of the managers also influences the training cycles and motivational psychology of the employees. Therefore, the personality of the leader and employee affect the job performance (Blickle et.al, 2007). The specific link of this affect, according to the leader influence, molds the employee personality (Goldberg, 1990). Past empirical studies have debated about the understanding of the aspects of human personality in leader member exchange and its effectiveness. Particularly, the LMX relationship has provided the theoretical foundation for examining the marketing employee's relationships and expand their connection beyond job description (Flaherty & Pappas, 2000). In this context of the most influential big five traits is missing in explanation of organization success with leader member exchange. In this study, the two big five traits (Goldberg, 1990) are utilized to explain the influence in the project success.

Personal characteristics and manners are build trust between managers and subordinate, when quality of leader member exchange is experienced in the organization (Bauer & Green, 1996). Personal similarity between leader and member measured in terms of positive developmental processes, which in turn is related to leader member exchange (Smith & Canger, 2004). In addition to the impacts that leaders may have on the adequacy of groups, leaders might influence emotions and behavior of the group members.

In the light of the past studies, although much has been researched on leader's and subordinates' dyads, the most affective big five personality traits needs to be examined in lieu to project success (Bauer & Green, 1996) from marketing point of view.

Therefore, the aim of this research is to study the impact of two major personality traits (agreeableness and conscientiousness) on project success with moderation of leader member exchange.

This study would help in designing the marketing programs in the context of resilient and harmonized human relationships for better project based organizational working.

## Literature Review

Empirical studies have given the evidence about the basic personality traits as interpreters of human actions (Wiggins 1996). Costa and McCrae (1985), Saucier (1994) and Goldberg (1992) supported the presence of basic dimensions of personality in humans as five. These traits, namely "conscientiousness, agreeableness, extraversion, neuroticism, and openness to experience" foresee work attitudes and behaviors (Witt, Barrick, Burke & Mount, 2002).

Conscientiousness and agreeableness have been suggested the most reliable FFM predictors of performance by meta-analytic studies (e.g., Barrick et al., in press; Salgado, 1997). As in projects we need more and more of collaboration and co-operation with others so (Barrik & Mount, 1991), agreeableness is a valid predictor in those occupations where frequent interaction and co-operation with others is estimated to be more in job performance (Mount et al. 1998). Studies have shown that out of the five dimensions, agreeableness was the best predictor of performance in jobs requiring teamwork. Conscientiousness is a valid interpreter for all employee groups and all job-related measure in the past empirical study (Barrick & Mount, 1993).

**Agreeableness and project success.** This dynamic is defined as "a person who is high on agreeableness can be labeled as compassionate, caring, generous, honest, and cooperative and anxious to support others" (Costa & McCrae, 1992; Goldberg, 1992; Costa & McCrae, 2008). A few people have a feeling that agreeableness concerns a man's intentions in keeping up sound relations with others and permits people to constrain the adverse impacts of interpersonal clash and help them to coexist with others (Blickle et al. 2008). An organized review by Mount, Barrick, and Stewart (1998) reported good relationship between agreeableness and performance (Barrick, Stewart & Piotrowski, 2002).

Agreeable individual is described as gentle and confident to others. This indicates that individuals who have a greater percentage of agreeableness to treat their workers in a just and respectful manner and are not offensive to them.

**H1:** *Agreeableness is positively and significantly related to project success.*

**Conscientiousness and Project success.** Conscientiousness has two important components that are being vigilant while doing any work. Secondly being organized as opposed to easy going and disorderly (Digman, 1990; McCrae & Costa, 1987; Mount & Barrick, 1995). Individuals having conscientiousness in them are very careful and take their time to do the right thing (Moon, 2001). They do not fear challenges instead they saddle up and plan to complete the given task at hand. They are achievement oriented, focused and are hardworking (Witt et al., 2002). However, due to their achievement-oriented nature they tend to negate teamwork and power sharing, if it is a hindrance in their goal. Due to which achievement motivated leaders may try to keep power in their hands rather than maximizing collective efforts.

**H2:** *Conscientiousness is positively and significantly related to project success.*

**Leader-Member Exchange and Project success**

Dubrin (2004) depicted that leadership is the achievement of goals through communication towards others. Lapierre and Hackett (2007) projected that LMX theory explains that bosses discriminate among their subordinates for the amount of support, independence, and career-growth within their powers. Frequently, LMX happens between at least two persons: leader and subordinate (Lapierre & Hackett, 2007) in the marketing departments. LMX is experienced at higher levels of job satisfaction, because employees receive special treatments as compared to their colleagues in low LMX relationships (Elanain, Badri & Ajmal, 2015). Henderson's (2008) studied a positive effect of communication between leader and workers, which results in team productivity and project success. When employee believes that leader is acting in their best interest, their performance and loyalty tends to increase. This results in effective and high quality LMX (Erdogan et al., 2006).

More the leader is concerned to develop a relationship with followers, more the workers will be concerned with the project.

**H3:** *Leader member exchange is positively and significantly related to project success.*

**Moderating Role of Leader-Member Exchange.** Past empirical study has reported significant relationship between the Big Five traits and leader effectiveness" (Hartog & Hoogh, 2011). Social exchange theory also suggests that employees with effective LMX is likely to be more competent and effective workers (Sparrowe & Liden, 1997; Lapierre & Hackett, 2007). Additionally, the point when agents know they are doing good work, their sentiment of self-esteem and achievement is going to increase, thereby improving their employment fulfillment (Phillips & Bedian, 1994). Careful workers encourage most effective LMX contacts than other colleagues, this gives them privileged conduct, resulting in higher job satisfaction (Judge, Thoresen, Bono, & Patton, 2001). Agreeableness leaders divide their work and create a task force to work efficiently. They are not hesitant to do their assigned task and are co-operative to their leader which strengthens their relationship (Nahrgang, Morgeson & Ilies, 2009) which lead to satisfied performance in job.

*H4: LMX moderates the between agreeableness and project success for marketing-oriented organizations*

*H5: LMX moderates the between conscientiousness and project success marketing-oriented organizations*

**Theoretical Framework**
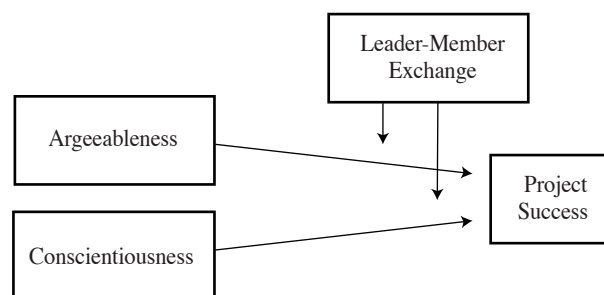


**Method**

For the current study, primary survey method with a structured questionnaire is used.

## Participent

The sample includes the employees of project based organizations (both public and private sectors), with separate marketing department in Pakistan. Because of non-availability of a prior list of employees and scattered nature of sample convenient sampling technique is used as sampling design. The data collected was analyzed for errors and unmarked responses. The data was cleaned for errors and prepared for analysis.

For data was collected form employees working in the organizations based in Rawalpindi and Islamabad. For this purpose, 220 questionnaires were distributed, and 153 responses are included in the final analysis. Response rate was 75.5 %, and a sufficient sample size was gathered for examination of results. The data collection period was five weeks.

## Measures

The survey tool is adapted from different earlier studies. The questionnaire response was evaluated using the Likert scale, anchors on the scale are extend from 1 to 5 (1 = Highly Disagree and 5 = Highly Agree). The questionnaire distributed was in English language, as this language use in office work and majority of the job holder know this language well. Thus, translation of the questionnaire in another language was not needed. The detail of individual scale is mentioned separately in the following paragraphs.

**Big Five Personality Traits.** to measure the Agreeableness and Conscientiousness 18 items scale by (Kacmar et al., 2003) is used. Reliability reported through the Cronbach's Alpha for agreeableness scale is .637 and for conscientiousness was .651, thus all the primary constructs displayed sufficient reliability.

A sample question for Agreeableness is *"to find fault with others"*. A sample question for Conscientiousness is *"does a thorough job"*. This scale is widely used in ongoing research (Teh, Kalidas, & Zeeshan, 2014).

**Leader-Member Exchange.** to gather data on the Leader-Member Exchange 7 items scale by (Joreskog & Sorbom, 1989) is used. Reliability reported through Cronbach's Alpha for this scale was .741. A sample question is *"Do you know where you stand with your leader? Do you usually know how satisfied your leader is with what you do?"*. The same scale is also used in research on organizational identification (Zhao et al., 2019).

**Project Success.** is measured with 10 items scale by Muller and Turner (2010). Reliability reported through the Cronbach's Alpha for this scale was .875. A sample question is *"End-user satisfaction with the project's product or service"*.

## Controlled variable

Age gender and education were used as demographics that can have an impact on relationship between variables. Therefore, they were studied as control variable to identify the impact. One-way analysis was used that revealed that none of the demographic s significant. Significance of gender with respect to dependent variable project success = .173 > 0.05, significance of age = .389 > 0.05 and significance of education = .384 > 0.05 means no impact. Therefore, we don't need to control the demographics.

The data was analyzed using IBM SPSS 23 statistical package according to the moderation analysis guideline in the literature (Frazier, Tix, & Barron, 2004). The results are reported accordingly in this study.

**Table 1:**

*Descriptive Analysis & Correlation*

| | M | SD | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| **Agreeableness** | 3.4205 | .52115 | - | | | |
| **Conscientiousness** | 3.3246 | .57573 | .452** | - | | |
| **Leader-Member Exchange** | 3. 5042 | .59965 | .362** | .351** | - | |
| **Project Success** | 3.7651 | .62387 | .499** | .291** | .337** | - |

*Note.* **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Above table indicates that the Project Success has significant relation with Agreeableness ($r = .499, p >= 0.01$), indicating good statistical power. Conscientiousness, and Leader-Member Exchange also have good statistical correlation ($r = .362, p > = 0.01$). For Agreeableness and conscientiousness the value of $r$ is .452 ( $p > =0.01$). Furthermore, for conscientiousness to project success the correlation value is $0.291$ ($p2 = 0.01$), and lastly, the correlation value for Leader-Member Exchange to project success is $0.337$ ($p2 = 0.01$). Therefore, the study variables displayed good relationship according to the statistical criteria. Hence it is concluded that the variables of this study are having good correlation with each other.

**Table 2:**
*Moderating Regression Analysis (N=153)*

| Predictor | Project Success | | |
|---|---|---|---|
| | β | $R^2$ | $\Delta R^2$ |
| **Main Effect:** Agreeableness and Conscientiousness | | | |
| **Step II:** | | | |
| Agreeableness (IV) | .501*** | | |
| Conscientiousness (IV) | .045 | | |
| Leader Member Exchange (Mod) | .178** | .279 | .279*** |
| **Step III :** | | | |
| Leader Member Exchange x Conscientiousness | -.176 | | |
| Leader Member Exchange x Agreeableness | -.012 | .310 | .031** |

*Note.* *** $p \leq .000$.

This study was comprised on moderated model. The outcomes are mentioned in table 2. According to the results hypothesis 1 "A has positive relationship with PS" is supported at *β*=.501*** and $\Delta R^2$=.279*** at significant level of $p \leq .000$. Similarly, hypothesis 2 "C is positively related to PS" is also supported as *β*=.045*** and $\Delta R^2$=.279*** at significant level of $p \leq .000$. Lastly, hypothesis of moderation i.e. hypothesis 4 and hypothesis 5 which was "LMX moderate the positive relationship between agreeableness and PS, in a way that high orientation of LMX strengthen the positive relationship Between A and PS" and ""LMX moderate the positive relationship between C and PS, in a way that high orientation of LMX strengthen the positive relationship Between C and PS" are not supported ($p > 0.10$).

**Discussion**

The results of the current analysis have displayed significant impact of Big Five Personality Trait on Project Success. Additionally, the Leader Member Exchange has not acted as mediator between independent and dependent variables. According to the outcomes of the survey our first hypothesis (H1) *Agreeableness is positively related to project success* is totally encouraged as it is also too encouraged by Barrick, Stewart and Piotrowski, (2002). Agreeableness in the individuals worked well in the occupations where frequent interaction with other individuals has been required, and in projects one need to be interact with other team members so agreeableness individuals positively affect the project success, as per suggested in the previous research like Barrik and Mount (1991).

Our second hypothesis, (H2) *Conscientiousness is positively related to project success* is rejected.

As all the previous studies were based on the individuals of European countries, but here in Pakistan the scenario is bit different. Notably, most of the individuals are not that much career oriented and organized so they are low in conscientiousness.

For the third hypothesis, (H3) *LMX is positively related to project success* is totally encouraged as it was also encouraged by Henderson's (2008) studies a positive effect of good communication of leader with workers which results in team productivity and project success. When employee believes that leader is doing in their best interest, their performance and loyalty is increased. This results in effective and high quality LMX (Erdogan et al., 2006). More the leader is concerned to develop a relationship with followers, more the workers will be concerned with the project. The moderator's relationship between independent and dependent variable has been rejected.

Our hypothesis (H4) LMX moderates the relationship between agreeableness and project success in marketing-oriented organizations and (H5) LMX moderates the relationship between conscientiousness and project success in marketing-oriented organizations is accepted. This displays that the local organizations in Pakistan also values LMX relationship (Newman, Schwarz, Cooper, & Sendjaya, 2017)

## Implications for Leaders and Managers

The aim of the research was to review the impact of Big Five Personality Trait on Project Success. Out of five traits two traits (Agreeableness and Conscientiousness) was chosen. Leader Member Exchange has been proposed as moderator. Conclusion of the research is that personality trait of an employee plays an important role on project success. According to this research and its outcomes, some of the recommendations are offered for managers and leaders. Managers should have the ability to assess the traits of the employees will be in a good position to understand their employees. Managers should have a better understanding of the traits and should hire those individuals who are high on Agreeableness and Conscientiousness. Other than this leader should have strong relationship with his employees so that it can enhance the potential of employees that leads to the success of the project.

## Limitation and Future Research

This analysis concluded with the measurement of the impact of big five personality traits and project success, and leader-member exchange as moderator between them. Following are some guidelines for future research. More moderators like leadership style, organizational environment, family conflicts, or work pressure along with other job modelling characteristics can be considered for further study. The sample is taken from both Private and Public sectors, having marketing department, from which the research is conducted. Taking sample separately either from private or from public may differ the outcomes. In the future the researcher may study the traits of the leaders and its impact on the project success.

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**Research Article**

# Coping Strategies used by Adults and Adolescents in Distressing Parenting Style

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## Abstract

**Objectives.** The aim of the present study was to investigate coping strategies (problem-focused and emotion-focused) of adolescents and adults with respect to distressing parenting style. It was assumed that adults will score high on problem-focused engagement while adolescents on emotion-focused disengagement Coping Strategies Scale. Another assumption was that adults having parents with authoritative parenting style will use problem-focused engagement coping whilst adolescents will use emotion-focused disengagement coping strategies.

**Method.** A sample of ($N$=300) participants was included in the study out of which ($n$=150) were adolescents and ($n$=150) were adults. The sample was taken from different institutes of Peshawar. Coping strategies of both groups were investigated by using Coping Strategies Inventory (CSI) (Tobin *et al*; 1984) and their parents' parental style through Parenting Style Inventory II (Darling & Toyokawa 1997).

**Results.** Result of the study showed that adults use problem-focused adaptive coping strategies more than adolescents, whereas, adolescents have higher score on emotion-focused maladaptive scale of coping strategies as compared to adults. Results also showed that coping strategies of adults is not affected by parents' authoritative or authoritarian parenting style, however, for adolescents' authoritarian parenting style was distressing and lead them to use emotion-focused disengagement coping strategies.

**Conclusion.** It is concluded from the present study that adults choose adaptive while adolescents choose maladaptive coping strategies. Parenting style does have major effect on coping strategies selection of individuals.

**Keywords.** *Coping strategies, adolescent and adults, distressing situation, parenting style.*

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## Introduction

Life is not a stress- free entity. Every individual has to experience stress to a certain degree. An intense feeling of mental and bodily strain and pressure due to overwhelmingly negative effects of one's environment is known as stress. Stress was defined as biological process by Selye (1936) as "imprecise reaction of the body that is shown due to some demands made on it". Stress can also be good known as Eustress because it works as a motivator for the person to get through a specific exam or task, however, distress is known as bad stress which is restricting ones productivity and ability to go through the stressor and achieve balance (Mark Le, et al., 2006).

Dealing with distress means confronting and evaluating its agents by either adapting to it or altering the stressful situation. Using coping strategies are inevitable in distress in order to eliminate extreme disturbance and harmful effects it has on emotional and physical wellbeing of individuals. According to Lazarus (1993) coping is the means of handling psychological stress both mentally and physically. Coping strategies are specified attempts at reducing, mastering, and with standing the pressures exerted externally and internally due to the stressful transaction between an individual and its surrounding (Folkman & Lazarus, 1984; 1985). Individuals' use of skillful acts upon facing various stumbling situations is known as coping (Sarason & Sarason, 2002). Degree of distress one is experiencing can be understood by coping strategies one uses to handle stress; therefore, coping is an essential clinical construct to study because it can help us to understand the distress level, as well as, the preventing measures for symptoms of distress induced by environmental, biological and psychological aspects (Segal, Hook, & Coolidge, 2001). Manne (2002) was also of the view that persons' overall life's worth can be defined by the coping skills they use to deal with illness. Coping procedures are greatly affected by social situations and interpersonal relationships (Zimmer-Gembeck & Skinner, 2011).

Coping strategies has two major types: "problem-focused coping" and "emotion-focused coping" (Folkman & Lazarus, 1980). Problem-focused coping strategies concentrate on actively resolving the problem causing distress and take actual steps to control the stressor by altering the distressing situation or finding a way of adjustment.

Emotion-focused coping strategies focus on changing one's thoughts and feelings towards the stressor and managing emotional responses in terms of stress.

Ickes, Brown, Reeves, and Martin (2015) stated no imperative differences among stress levels of adolescents and adults but there were significant variations among their coping strategies that were displayed, and these distinctions revealed that adolescents usually undergraduates use maladaptive coping to deal with stress such as drug abuse while adults graduates opt for more adaptive approaches e.g. social support, pets, and exercise. Drug abuse is a cognitive and behavioral coping approach; adolescents use to combat distressing situations (Wagner, Myers, & McIninch, 1999). Hamarat et al. (2001) observed that as age increases, coping resources also increases whilst degree of apparent stress decreases (Hamarat et al., 2001, as cited in, Monteiro et al., 2014). Aldwin (1991) explained that it is the persons' age that influence their selection of coping strategies, for as compared to adolescents adults make use of adaptive and problem-focused coping styles greatly when confronted with distressing situations and this is because of the skills adopted with age and awareness that enable them to differentiate between events that require problem-focused coping and uncontrollable circumstances that need emotion-focused coping (Aldwin, 1991 as cited in, Richard, 2003). Zimmer-Gembeck and Skinner (2011) was also of the same view in their developmental research on kids and teenagers, individuals' strategies to administer stress managing techniques becomes efficient when they grow older because the maturity and experience, they gain facilitate them to employ such strategies of coping that are the demands of the given situation and will work effectively.

Monteiro, Balogun, and Kutlo (2014) examined the effects, emotional control, age and sex has on coping strategies of individuals. To 128 students with ages from 18-29, Difficulties in Emotion Regulation Scale (DERS) and Coping Strategies Inventory (CSI) scales were administered. Results showed that use of problem-focused engagement/adaptive coping were found more among adult students specifically problem solving, emotional expression and mental reconstruction.

Furthermore, it was also found that female students employed problem-focused disengagement coping and wishful thinking more than male students. Parenting plays a major role in shaping children behavior towards stress. Parental behavior of assisting and regulating their kids to thrive ahead is called as parenting style (Gafoor & Abidha, 2014). But if that parenting style restrict a child's conduct and choice from availing opportunities to learn, practice and handle events by their own, then such parenting style becomes a distressing situation that hinder a person capabilities to employ adaptive coping strategies during stress; instead, they acquire denial or withdrawal as coping or adopt maladaptive coping styles. Societal regulations and cognition of adolescents are greatly influenced by parental conduct (Mason, Cauce, Gonzales, Hiraga, & Grove, 1994) that also takes part in shaping their adult lives. Ghafoor and Abidha (2014) believed that parental rearing practices are deeply affected by one's culture which determines social, moral and behavioral limits by stating socially acceptable and unacceptable behaviors.

According to Lipps et al. (2012) adolescents with authoritative and permissive parents have lesser symptoms of depression but authoritarian and neglectful parenting lead adolescents to show greater depressive symptoms. Individuals having authoritative parents are confident with self-worth and autonomy which facilitate them to use adaptive coping strategies such as problem-solving and support seeking, on the other hand, kids with authoritarian parenting develop dependency and lack of self-esteem that is why make use of avoidant and less active coping strategies (Nijof & Engels, 2007). Many researches support the notion that authoritative parenting is associated with adaptive problem-focused coping while authoritarian parenting is related to emotion-focused disengagement coping strategies. Wolfradt, Hempel, and Miles (2003) conducted a study to explore the correlation between adolescents coping styles, their perception of parental rearing styles, depersonalization and anxiety. Correlation analysis of data obtained from a sample of 276 adolescents proved that students who perceived their parents as authoritative scored low on anxiety and depersonalization scales while higher on problem-focused engagement coping strategies.

Scores on depersonalization and anxiety scales were noticed greater for adolescents with authoritarian parenting and scored minimal on adaptive and problem-focused coping.

## Rationale

The aim of the current is to distinguish the problem and emotion-focused coping strategies of adolescents and adults under distressing parenting style. Coping strategies are set of defense and resistance mechanisms used against stressful situations that can be affected by number of factors in which parenting can be considered as a primary factor which is inevitable. Parenting styles can make distressing environment when children feel confined and restrained from using their prime autonomy and freedom to become effective in their selection and decisions. They are hindered from using their best possible options to overcome a situation or solve a problem by their own in a highly demanding and firm parenting.

The present study will be useful for parents to understand the consequences and effects of their parenting styles on children. They will be able to assess their rearing styles and to make it effective for the growth of their kids. Adolescents and adults will be benefited to know about their weaknesses and events that are restricting the emergence of their adaptive form of coping. It will enable them to better communicate their choices and strategies to their parents and find a collective solution to stressors.

## Objectives

To investigate coping strategies used by adolescents and adults in distressing situations.
To find out distressing parenting style of adolescents and adults.

## Hypotheses

1. Adults will score high on problem-focused engagement scales of CSI as compared to adolescents in distressing situation.

2. Adolescents will score high on emotion-focused disengagement scales of CSI as compared to adults in distressing situations.

3. Adults raised by authoritative parents will obtain higher score on the problem-focused engagement scale of the CSI as compared to those with authoritarian parenting style.

4. Adolescents having authoritarian parenting style will use emotion-focused disengagement strategies than those with authoritative parenting style.

## Methodology

### Sample

The sample of the present study was consisted of 300 participants ($N$ =300) out of which 150 were adolescents and 150 were adults ($n$=150) with age range from 16-28 years. They were selected through random sampling technique from different organization of Peshawar including educational institutes, economic and banking sectors. Although greater part of sample encompasses of student population particularly adolescents, some of adult subjects were also on job in the above mentioned-organizations.

## Instruments

### Demographic Sheet

Semi-structured interview was designed to obtain information about participants' demographic by asking questions about their age, name, religion, gender, educational qualification, occupation and marital status. It also asked about family status, relationship with parents and family members.

## Coping Strategies Inventory (CSI)

Coping Strategies Inventory (CSI) is a 72 item self -report questionnaire used to measure coping strategies both emotionally and behaviorally in response to certain stressors. The inventory was developed by Tobin et al. (1984) whose format was adopted from Folkman & and Lazarus's (1981), "*Ways of Coping*" scale. The scale incorporates 14 subscales having *eight primary, four secondary* and *two tertiary* scales. Subjects used to respond on the format of five point likert scale that is to say a=not at all, b=a little, c=somewhat, d=much, e=Very much.

Four main domains of CSI were problem-focused engagement with alpha coefficient reliability of .83, emotion-focused engagement having a reliability of .75, *problem-focused disengagement* containing alpha coefficient of .79, and *emotion-focused disengagement* with reliability coefficient of .90.

## Parenting Style Inventory II (PSI-II)

Parenting style inventory II (PSI II) was designed by Nancy Darling and Teru Toyokawa (1997) for measuring parenting styles. This is 15 item self- report questionnaire consist of three subscale named *responsiveness, autonomy granting and demanding*. Response format was five- point likert scale such as from 1= strongly disagree to 5 = strongly agree. Alpha coefficient reliability of subscale assessing authoritative parenting style is .823; moreover, authoritarian parenting style has a reliability of .789.

## Procedure

Officials' of different institutes were contacted for authorization of data collection. Subjects were randomly selected from different institution of Peshawar. Subjects were briefed about objective of the study and procedure for answering questionnaires. They were explained about their doubts and queries regarding study and Performa, and were requested to respond honestly and impartially. Before the questionnaires distribution, participants were given a consent form and were asked to read and provide their signatures to ensure their willingness to participate in the study. The Coping Strategies Inventory and Parenting Style Inventory II were given to the participants to measure their problem and emotion-focused coping strategies and distressing parenting style. Participants were appreciated and thanked at the end for their time and efforts. Privacy of their provided information was ascertained to be used only for research purpose.

## Results

The independent sample $t$-test was used for the analysis of data.

**Table 1**

*Means, Standard Deviation and t-values scores of Adolescents and Adults on Problem-focused and Emotion-focused engagement scale of CSI. (N=300)*

| Groups | N | M | SD | t | p | LL | UL | Cohen's d |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 95% confidence interval of the difference | | |
| Adolescence | 150 | 6.36 | 6.36 | | | -11.56 | -8.60 | |
| Problem-foc | | | | -10.08 | .00 | | | 1.55 |
| Adults | | 6.65 | 6.65 | | | -11.56 | -8.60 | |
| Adolescence | 150 | 40.29 | 9.61 | | | 15.36 | 19.37 | |
| Emotion-foc | | | | 17.05 | .00 | | | 1.97 |
| Adults | | 22.92 | 7.94 | | | 15.36 | 19.37 | |

*Note.* Problem-foc = problem focused engagement scale of CSI. . Emotion-foc = emotion-focused disengagement scale of CSI

Table 1 shows that there is highly significant difference between scores of the adolescents and adults on problem–focused and emotion- focused engagement scale of coping strategies. Result shows that adults scored higher on problem-focused engagement scale as compared to adolescents and the obtain score of the adolescents is higher on emotion-focused disengagement scale of the Coping Strategies Inventory. These findings support first and second hypotheses of the study.

**Table 2**

*Mean Standard Deviation and t-values of the scores of Adults on Problem-focused engagement scale of CSI with Authoritative or Authoritarian Parenting Style. (N=150)*

| Groups | N | M | SD | t | p | LL | UL | Cohen's d |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 95% confidence interval of the difference | | |
| Authoritative | 61 | 30.77 | 7.01 | -1.59 | .11 | -5.28 | .57 | |
| | | | | | | | | 0.35 |
| Authoritarian | 32 | 33.12 | 6.24 | -1.65 | .10 | -5.19 | .48 | |

*Note.* Problem-foc = problem focused engagement scale of CSI

Table 2 shows insignificant difference between the scores of adults on problem-focused engagement scale of the CSI and authoritative scale of parenting style inventory II. The results revealed that use of problem-focused engagement coping strategies by adults is same regardless of authoritative or authoritarian parenting style. These results do not support the third hypothesis.

**Table 3**

*Mean score, Standard Deviation and t-values of the scores of Adolescents on Emotion-focused disengagement scales of CSI with Authoritative or Authoritarian Parenting Style. (N=150)*

| Groups | N | M | SD | t | p | LL | UL | Cohen's d |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 95% confidence interval of the difference | | |
| Authoritative | 42 | 38.00 | 7.16 | -7.40 | 0.000 | -11.56 | -6.66 | |
| | | | | | | | | 1.60 |
| Authoritarian | 43 | 47.11 | 3.67 | -7.35 | 0.000 | -11.59 | -6.63 | |

*Note.* Emotion-foc = emotion-focused disengagement scale of CSI

Table 3 shows highly significant difference between scores of adolescents on emotion-focused disengagement scale of the CSI and authoritarian parenting style. Result shows that adolescents reared under the authoritarian parenting style scored higher on emotion-focused disengagement scale of the CSI. These results support forth hypothesis of the study.

## Discussion

The present study was aimed to compare the use of coping strategies (problem-focused and emotion-focused) of adolescents and adults under distressing parenting style and whether age and maturity has an effect on coping strategies of both the groups.

First hypothesis of the study stated that adults will score high on problem-focused engagement scale of the CSI in comparison with adolescents in situations of stress. The assumption is based on the fact that adults emerging with experience of all the teenage years become adapted to dealing with stressors either adaptively or in maladaptive ways. They have learned about the affectivity of certain engagement coping strategies and deficiencies of other disengagement styles of coping; therefore prefer instrumental and adaptive coping strategies. Present study results (table 1) indicated a highly significant difference between the scores of adults and adolescents, which shows adults having higher scores, thus proving the hypothesis. A study by Monteiro et al. (2014) also concluded that adults showed higher use of problem-focused engagement coping such as resolving problems, as well as emotion-focused e.g. expression of emotions and also cognitive reconstruction more often than adolescents.

Blanchard-Field, Mienaltowski, and Seay (2007) study was also in line with our results, stating that adults reported greater utilization of problem-focused coping in situations of instrumental problems, while day by day difficulties are resolved more efficiently as compared to young adults who make use of passive emotion-focused coping in response to stress that are mainly maladaptive. Blanchard-Fields and Irion (1988) found that adults exhibit capability of using problem-focused coping in conditions that can be handled instrumentally and emotion-focused coping in irrepressible events, in contrast, adolescents largely employ emotion-focused and defensive coping strategies in both controllable and non-controllable situations and hence confirming our hypothesis.

Second hypothesis of the study states that adolescents will score higher on emotion-focused disengagement scale of the CSI in distressing situations. It was hypothesized on the basis of explanation that teenagers are dependent, juvenile and temperamental creatures who are undergoing a transitional stage and are easily stressed by life events and have adjustment problems. A lack of supportive and cohesive environment makes them to adopt maladaptive coping strategies that are frequently emotion-focused because of their inexperience to solve the problem actively.

A highly significant difference was found in the results (table 2) which showed greater score of adolescents on emotion-focused disengagement scale as compared to adults and hence support our hypothesis. Raheel (2014) concluded that adolescents apply emotion-focused coping strategies that are primarily maladaptive including withdrawal, overeating, crying, isolating oneself and engaging into fights and argumentations. Furthermore, they have a far less use of problem-focused coping which approve our research hypothesis. Halstead, Johnson and Cunningham (2010) study results also show consistency with our findings suggesting that emotion-focused disengagement coping strategies are largely used by adolescents in situations of parental and family conflicts or stress regarding school life and social events. Horwitz, Hill, and King (2011) conducted a research to study adolescents' precise coping strategies in relation to depression concluded that their usage of emotion-focused disengagement and avoidant coping is high which elevate depression and suicidal ideation i.e. maladaptive behavior and self- blame.

Third hypothesis assumed that adults when raised by authoritative parents score high on problem-focused engagement scale of the CSI in comparison to those reared by authoritarian parents. Authoritative parenting carries obvious qualities of support, warmth and constructive supervision that allow individuals to solve their problems both instrumentally and emotionally with the guidance of their parents yet having the autonomy to work on their preferences which make them productive. They remain positive upon confrontation with a problem and strive for active solutions. Nonetheless, results (table 3) found no significant relationship between adults' use of problem-focused coping strategies and their parenting style (either to be authoritative or authoritarian). So, result does not support our hypothesis. A probable justification for irrelevant results may be most adults have moved out and are not under the influence of the parents. They are mostly on job and are independent plus being on their own make them to sought out their problems and cope with stressors in ways that have long term effectiveness irrespective of parenting stimulus.

That is what Vescio (2016) found out revealing that perceiving one's parents as authoritarian does not promote disengagement coping styles nor does the perception of authoritative parenting inculcate engagement coping styles. Seeley (2009) also arrived at analogous results signifying that children selection of different coping strategies are not influenced as of parenting styles which indicates that they may apply varied types of coping strategies (adaptive or maladaptive) irrelevant of rearing under authoritative or authoritarian rearing style. Similar results were found by Meesters and Muris (2004) suggesting that perceiving demand and controllability by parents lead people to make higher use of active coping strategies whereas no correlation was found between coping strategies and parental affection/warmth.

Last hypothesis of the study state that adolescents with authoritarian parenting style will score high on emotion-focused disengagement scale of CSI as compared to those having authoritarian parenting. Authoritarian parents exercise excessive control and harsh evaluation of children which on one hand making them extremely dependent also make them reluctant to accept new challenges, adapt and adjust to new situations due to restrictions. That is why the only safe options they can think of is choosing to adopt emotion-focused maladaptive coping strategies such as drug abuse, isolation, restraining oneself from communicating feelings, social withdrawal etc. Table 4 showed a highly significant result (p<.001), with adolescents reared by authoritarian parents scoring higher on emotion-focused disengagement scale than those of authoritative ones; thus supporting the hypothesis. McGrew (2016) findings are in line with our results asserting that authoritarian style of fathers develop disengagement emotion-focused copings, such as frequently involving in anxious thoughts and behaviors, while authoritative mode of fathers is meant be eliminating maladaptive elements of coping strategies. Sarwar (2016) found consistent results disobedient and disruptive behaviors emerge in children due to authoritarian style of parenting which often result into delinquent conducts.

Hypothesis is also supported by Kritzas and Grobler (2005) results affirming a positive correlation between authoritarian parenting style (as perceived by adolescents) and maladaptive emotion-focused coping that create psychological disturbance. On the contrary, authoritative parenting direct adolescents to build resilience and active coping skills.

## Conclusion

Current study was designed to contrast coping strategies of adolescents and adults (mainly two types i.e. problem-focused and emotion-focused) to understand the effect of age on coping skills, furthermore, to examine the coping functionality of both age groups under the impact of a stressful parenting style. Present study attempted to ascertain that adults have a higher use of engagement coping strategies especially problem-focused coping whilst adolescents make higher use of maladaptive emotion-focused coping. Research outcomes confirmed that adults does scored significantly superior on problem-focused adaptive coping and adolescents scores were larger on maladaptive emotion-focused coping verifying the age effects and proving that coping strategies do gets improve with age mastering careful selection and practical affectivity.

To see the effects of distressing parenting style we compared authoritarian parenting style (known for its distressing properties of undue demand, coldness and freedom restrictions of children) with authoritative parenting method (associated with parental support and warmth towards children). So it is also concluded from the present study that adults will choose coping strategies independent of distressful or supportive parental style but adolescents will make use of emotion-focused maladaptive coping strategies under the influence of authoritarian parenting style while authoritative ones will prefer adaptive coping style.

## Limitations

The first limitation of the present study is that the sample size is small and the data is collected only from Peshawar. Secondly the study did not measure gender differences regarding coping strategies and distressing parenting style. Thirdly the uneducated people were ignored in the present study.

## Recommendations

For future research it is recommended that the sample size would be large, focus on gender differences to know differences between male and female use of coping strategies and study more variables in distressing situations.

## Implications

In recent years, substantial gains have been made in our understanding of the influence of parenting behaviors and styles on adolescent emotional and behavioral outcomes. Empirical work focusing on the associations between parenting and adolescent outcomes is important because the influence of parenting during adolescence continues to affect behaviors into adulthood.

The development of insight among educationists, parents, health and educational psychologists regarding coping strategies of adolescents and adults is one of the most pertinent implications of the current research. Obviously, adolescents' and adults relationship with their parents impacts multiple areas of their development. So it is also concluded from the present study that adults will choose coping strategies independent of distressful or supportive parental style but adolescents will make use of emotion-focused maladaptive coping strategies under the influence of authoritarian parenting style while authoritative ones will prefer adaptive coping style.

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# Effect of Negative Parenting Dimensions on Adolescent's Psychological Wellbeing: The Moderating Role of Age

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## Abstract

**Background.** Adolescence psychological wellbeing is affected by several factors but the most important are parenting practices perceived by them. The parenting practices in the form of dimensions especially negative undermine their psychological wellbeing as a result they feel less competent and this hinders the ideal ways to reach the level of optimal functioning. This study was carried out to examine the effect of negative parenting dimensions on adolescents' psychological wellbeing. It is hypothesized that negative parenting dimensions (poor monitoring, inconsistent discipline, and use of corporal punishment) negatively correlate with the adolescents' psychological wellbeing. The moderating role of age was also explored.

**Method.** A sample of 400 adolescents aged 13-19 years ($M = 15.98$, $SD = 1.90$) comprising 50% boys and 50% girls approached from educational institutions of Islamabad and Rawalpindi, and the willing participants completed the questionnaires. The study variables were measured by the Alabama Parenting Questionnaire (Frick, 1991) and the Ryff Scale of Psychological Wellbeing (Ansari, 2010). The convenient sampling technique was used to gather the data.

**Result.** The results of the study showed that negative parenting dimensions have significant negative relationship with the adolescents' psychological wellbeing ($r = -0.35$, $p < .001$). The moderation analysis revealed that there is a significant negative moderating role of age in the relationship of negative parenting dimensions and adolescent's psychological wellbeing ($\beta=.44**$, $p<.01$, $\Delta R2 = 0.173$).

**Conclusion.** It is concluded that when individuals have a restrictive and controlled environment, it may hinder personal growth, individuals feel less competent and psychologically disturbed. The findings of the study can help educate the parents to use more productive and positive parenting practices. It is recommended that different intervention strategies can be planned to educate the parent and adolescent and how they make a strong relationship among them.

**Keywords.** *Negative parenting dimensions, psychological wellbeing, adolescence.*

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**Introduction**

Nowadays, the study of adolescences' psychological wellbeing emerged as a significant area for research in the field of Psychology. In the phase of development, the adolescents pass by a number of significant changes that are physically as well as psychologically challenging (Rosenfeld & Nicodemus, 2003). Adolescence strives to learn more and more about the world around them, and they try to make themselves more independent and confident (Spear & Kulbok, 2004). They are also influenced by their parents, and the nature of their relationship with their parents is an important factor for the positive outcomes in their lives as well as for their psychological wellbeing (Collins & Laursen, 2004). No doubt adolescence first shaped by their families especially parents and primary caregiver; and the importance of parent's role cannot be underestimated on the adolescences' development and this also paves the directions for the future development in the life of adolescents (Steinberg, 2001).

Parenting plays a vital role in the socialization of adolescence and making them to be fully competent in their lives (Baumrind et al., 2010). Parenting is the uninterrupted practice of nurturing a child from infancy to adulthood; encompasses the multiple levels of development including emotional, intellectual, physical, and social support to guarantee the protection and wellbeing of the young one (Shaffer & Kipp, 2010). Parents are provoked by a vital and necessary but along with challenging task: coaching them about different values and rules that are necessary to move and expedite meritoriously in society whereas also fostering adolescence to regulate and express them and to achieve their inimitable wellbeing and happiness (De Bruyn et al., 2003; Scaramella & Leve, 2004). Adolescence is a precarious developmental period that is accomplished more efficiently in families where independence is exhilarated, clashes are commendably coped with, and each person of the family feels cared for and respected (Patton et al., 2016; Ryan & Deci, 2000).

Parenting dimensions are well-defined characteristics, assets, and eloquent schemes accustomed, to sum up, the practices of parenting behaviors, and each dimension has its effects on the development of adolescents in unique manners (Skinner et al., 2005).

These parenting dimensions are the particular behaviors that make an interaction between the parent and the adolescent, and in this way, these parenting dimensions make an effect on the process of socialization (Bradley & Wildman, 2002). The dimensions of parenting which are strict, coercive, impulsive, rejected, and neglecting to facilitate the poor and undermine the development of strong and secure relationships, instead, these behaviors deployed by parents increases the unhealthy, unadjusted, and poor psychological wellbeing in adolescents (Skinner et al., 2005).

The parenting dimensions that are strict and rigid are characterized by high in control and low in response, warmth, and care toward the child; so associated with the deprived level of independence and psychological wellbeing in their children (Baumrind, 2012). The substantial existing literature shows that the parenting dimensions that comprised of negative practices such as withholding of love, punitive, restrictive, temporary approval, are linked with the poor outcome for children and adolescents (Deci, 1985; Goraya & Shamama-tus-Sabah, 2013; Saeed & Hanif, 2014; Sastre & Ferrière, 2000). These practices showed that children and adolescents lose their self-esteem, self-regard, independence and it will undermine their potential skills, as a result, ultimately these socialization practices make them vulnerable and make them psychologically unhealthy (Assor & Roth, 2007; Assor et al., 2004; Aunola & Nurmi, 2005; Barber & Harmon, 2002; Kausar & Shafique, 2008).

Psychological wellbeing defines as self-evaluation of oneself, how the person knows his or her abilities to deal with daily life matters such as relationships and work (Flouri & Buchanan, 2003). So it can be said that psychological wellbeing is the way to live a healthy and optimally functioning life. Psychological wellbeing describes and determines the strengths of an individual and leads toward a purposeful life (Ryff & Keyes, 1995; Ryff & Singer, 2008). The construct of psychological wellbeing is associated with the life goals, the relationship of the individual with others, quality of relationship with significant others, personal development, make the individual competent and resourceful.

Parenting practices in the form of different dimensions are at the core of adolescents' psychological wellbeing and pivotal development. If this relationship between the parent and adolescents is harmonious and good enough psychological benefits will get to both people along within the wider society. But on the other side of this relationship is not good enough then the individuals and society both suffer. So there is a dire need to study the relationship of parenting practices especially negative and to look at the effects of those practices on the adolescents' psychological wellbeing. This relationship is being studied under the umbrella of Self Determination Theory. As theory posits that for having healthy and optimal functioning, there should be connected and relatedness among the parents and adolescents. On the other side, if this relationship has coldness, restrictiveness, both parties suffers. Considerable findings of many kinds of research illustrated the impacts of different parenting dimensions on adolescents' outcomes. Deci and Ryan, (2000) reported that when the relationship between the adolescent and the parent is very rigid, inflexible, very coercive, then there is a lack of relatedness as a result adolescents suffer, and consequently there psychological wellbeing is thwarted. So it's the universal belief if adolescents negatively perceive their parenting, it affects their developmental outcomes and their well-being suffers (Maccoby, 2000).

Several research findings reported that adolescents who face rejection, strictness, rigidity, physical as well as psychological punishment, are on the verge of adversity and are linked with the less desired outcome (Campos et al., 2013). The existing literature also showed that demographic variable that is age also has a significant relationship between the parenting practices and the adolescents' psychological wellbeing. Voluminous research findings are indicating the association of psychological wellbeing with the number of variables such as age (Bauer & McAdams, 2004; Kessler et al., 2007); physical, social, and psychological health (Ryff et al., 2002).

Keeping in view the existing literature, it's important to study the effects of negative parenting dimensions in our collectivistic culture. And by studying indigenously at how these practices affect the psychological wellbeing of the adolescents.

As it's already discussed that adolescence is a crucial time period in which they pass from different physical and psychological changes and these parenting behaviors affect them from time to time. Most literature cited above is from the individualistic culture, hence there is a need to check these relationships in our Pakistani culture. As in Pakistan family dynamics are versatile and have a different approach to socialization. So the current research was planned to see this assumption that is the effect of negative parenting dimensions on adolescents' psychological wellbeing, wherein this relationship the role of age was seen as the moderator between the study variables.

**Hypotheses**

The following hypotheses formulated for the current research:

1. Negative parenting dimensions (poor monitoring, inconsistent discipline, and use of corporal punishment) negatively correlate with the adolescents' psychological wellbeing.

2. The demographic variable (age) moderates the relationship between negative parenting dimensions and adolescents' psychological wellbeing.

**Method**
**Participants**

The current research was executed on 400 adolescents including 200 boys and 200 girls aged 13-19 years ($M = 15.98$, $SD = 1.90$). The convenient sampling technique was used to gather the data. They were contacted from their education institutions residing in Islamabad and Rawalpindi. According to the existing literature, adolescence as a precarious developmental period is important to study concerning parenting practices and psychological wellbeing (Ryan & Deci, 2000). Those participants selected who willingly participated; living with both parents was the main inclusion criteria for the participants.

## Measures

**Alabama Parenting Questionnaire (APQ).** APQ is a 42-item questionnaire that measures different parenting dimensions. For the current research, only the negative parenting dimensions were catered which is poor monitoring having 10 items, inconsistent discipline having 6 items, and use of corporal punishment has 3 items. So the 19 items were used from the selected instrument as the main aim was to see the impact of negative parenting dimensions on the adolescents' psychological wellbeing. Permission was obtained from the author to use in the current research. Items were scored on a 5 point Likert rating scale ranging from Never to Always. A high score on each dimension indicating that the adolescents identify their parents as more strict, harsh, careless, rejecting, and coercive, and vice versa. Internal consistency of the scale is ranged from 0.50 to 0.90.

**Ryff Scale of Psychological Well-being (RSPWB).** *The Ryff Scale of Psychological Well-Being (RSPWB) is a 54-item scale.* The scale caters the six dimensions of psychological wellbeing that are autonomy, self-acceptance, positive relations with others, personal growth, environmental mastery, and purpose in life (Ryff & Keyes, 1995). Each dimension has 9 items and scored on a 6-point Likert rating scale that ranged from strongly agree to strongly disagree. High scores on the scale is indicating that beings are well-adjusted in their lives and surroundings, competent, independent, goal-oriented, socially well trained, and vice versa. Internal consistency of the scale is ranged from 0.82 to 0.90.

## Procedure

For the current research, consent was taken from the authors to use their scales. The number of educational institutions of Islamabad and Rawalpindi approached. The permission to get the data from the participants taken from the authorities. The convenient sampling technique was used to collect the data. The permission from the participants was also taken and only agreeable participants were included in the sample. The willing participants were informed about the nature and objectives of the research. Furthermore, ethical protocols are also ensured. The questionnaires were handed over to the participants after briefing them about the intention of the research. The above-explained instruments were administered and the approximate time for the completion of the questionnaire was about 15 to 20 minutes.

## Results

The current research planned to see the effect of negative parenting dimensions on adolescents' psychological wellbeing: age as a moderator. The results were analyzed by using statistical procedures. Normality assumptions of the data were checked by the values of skewness and kurtosis that fall between the acceptable range i.e., +2 to – 2 (George & Mallery, 2010). Descriptive statistics checked to see the Cronbach alpha coefficients, the mean, and the standard deviation also computed. The relationship between the study variables was seen by the correlation coefficient. Moderation analysis was done to check the effect of age in the relationship of negative parenting dimensions and adolescents' psychological wellbeing.

**Table 1**

*Descriptive Statistics for Negative Parenting Dimensions and Adolescents' Psychological Wellbeing, and Correlation coefficients of Study Measures (N = 400)*

| Variables | *n* | α | *M(SD)* | Skewness | Kurtosis | 1 | 2 |
|---|---|---|---|---|---|---|---|
| Negative Parenting Dimensions | 19 | .74 | 53.73(20.56) | .2 | -.19 | _ | -.35** |
| Psychological Wellbeing | 54 | .86 | 155.30(18.27) | -.16 | .90 | | – |

*Note*. n represents the no of items

*p<.05: **p<.01

**Table 1** shows the descriptive statistics and correlation coefficients of the study variables that are negative parenting dimensions and adolescents' psychological wellbeing. Results show that study measures have sound reliability estimates, indicating that study measures are internally consistent and meet the desired level of acceptance; and are measuring the construct what they are hypothetical to measure. The average and variability of the scores made by the participants of the study were seen by mean and standard deviation scores. Normality assumptions of the data were checked by the values of skewness and kurtosis that fall between the acceptable ranges i.e., +2 to – 2. The findings of the correlation matrix showed a significant negative pattern of relationship between the negative parenting dimensions and adolescents' psychological wellbeing.

Moderation analysis executed to see the effect of age between the relationship of negative parenting dimensions and adolescents' psychological wellbeing. An interaction term between the independent variable (negative parenting dimensions) and the moderating variable was analyzed for the dependent variable (adolescents' psychological wellbeing). The multicollinearity issue was addressed by centering the mean of the variable scores of the sample, the interaction term computed. After the computation of the interaction term, multiple regression analysis was done to see the moderation between the study variables.

It was seen that age had significant interaction effect with negative parenting dimensions on adolescents' psychological wellbeing.

**Table 2**

*Moderating Effect of age between Negative Parenting Dimensions and Adolescents' Psychological Wellbeing (N=400)*

| | Psychological wellbeing | | |
|---|---|---|---|
| | | Model 2 | |
| Variables | Model 1 $\beta$ | $\beta$ | 95% CL |
| (Constant) | 78.54** | 80.904** | [62.880, 98.929] |
| Negative Parenting Dimensions | 1.32** | 1.614** | [1.206, 2.022] |
| Age | .3 29 ** | 0.629 ** | [.134, 1.125] |
| Negative Parenting Dimensions * Age | | -.012** | [-.023, -.002 ] |
| R$^2$ | 0.261 | 0.434 | |
| F | | 155.187 ** | |

*\*\*p< .01*

**Table 2** shows the moderation analysis for age in the relationship of negative parenting dimensions and adolescents' psychological wellbeing. Result indicating that age act as a moderator for the relationship between negative parenting dimensions and adolescents' psychological wellbeing. The interaction effect of negative parenting dimensions and age has a significant moderating effect along with added additional explaining variance (26% to 43%) in the relationship between the study variables ($\beta$=.44**, p<.01, $\Delta R^2$ = 0.173). Figure 1 further illustrates that significant interaction effect.
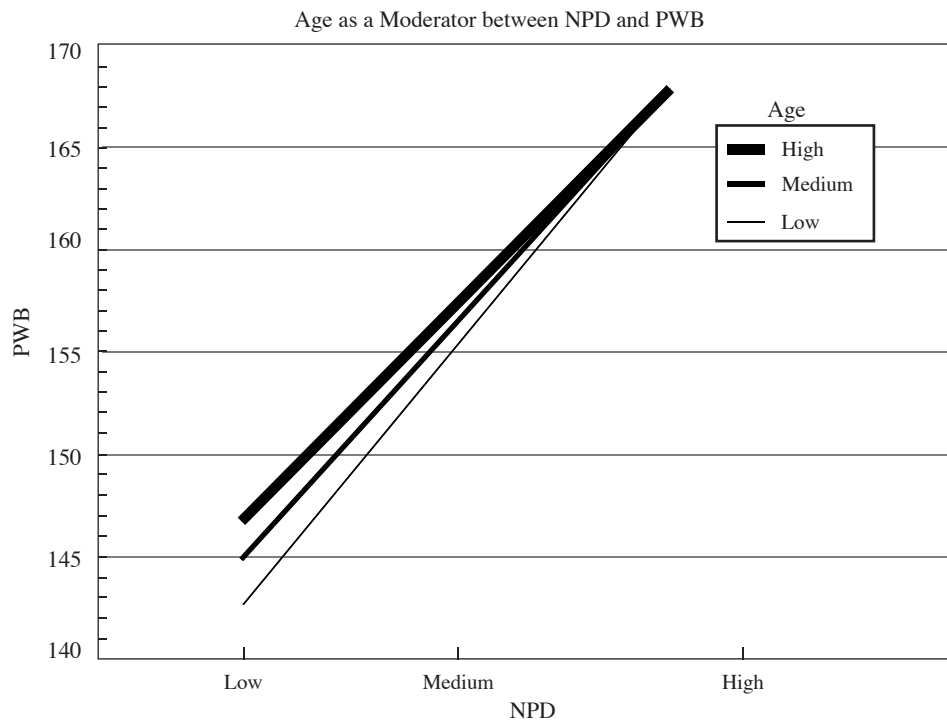
Figure1. *Age as a Moderator between Negative Parenting Dimensions and Adolescents' Psychological Wellbeing*

Modgraph shows that as the age of adolescence increase (early, middle, and late adolescence (i.e., ages 13-14, 15-16, and 17-19 years, respectively) there is a decline in their psychological wellbeing. The findings showed that negative practices such as rejection, coercion, carelessness when faced by the adolescence, this undermines their potentials for growth, make them less competent and don't strive for their autonomy.

## Discussion

The relationship between the parents and the adolescents has variations, as existing literature shows that adolescence as a precarious developmental period is important to study with reference to parenting practices and psychological wellbeing (Ryan & Deci, 2000). At this time of development, adolescents need more autonomy and independence to propagate them and make their own choices to fulfill the desired goals (Deci & Ryan, 2000). A number of researches highlighted this important phenomenon, showing that if there is a healthy, supportive, and caring relationship between the parent and adolescent it nurtures the ideal growth and development (Gurland & Grolnick, 2003). On the other hand, if there is restrictive, controlled, punitive, coercive, and careless relationship exists between the parents and adolescent it hinders the ideal growth and development (Deci & Ryan, 1985; Goraya & Shamama-tus-Sabah, 2013; Saeed & Hanif, 2014; Sastre & Ferrière, 2000).

Existing literature showed that in the rearing of children and adolescents, parents faced a number of challenges. Parents as the socializing negotiators are the basic role model for their children. Keeping in view of Pakistani socialization culture, the parent-adolescent bond is an important and significant factor to study the effect of negative parenting practices on adolescents' psychological wellbeing; as this relationship has more closeness and a huge impact on the later on life also elaborated by a number of studies (Assor & Roth, 2007; Assor et al., 2004; Aunola & Nurmi, 2005; Barber & Harmon, 2002; Kausar & Shafique, 2008). The consulted literature exhibited that negative parenting dimensions have a yawning impact on adolescents' psychological wellbeing, when experience strict control, rejection, awfulness, this diminish their self-growth and self-esteem as a result they have thwarted psychological wellbeing and this was supported by empirical evidence.

The ongoing research was planned to look at the effect of negative parenting dimensions (poor monitoring, inconsistent discipline, and use of corporal punishment) on the adolescents' psychological wellbeing where age act as a moderator between this relationship. It was carried out on the sample of 400 adolescents aged 13-19 years ($M$ = 15.98, $SD$ = 1.90) comprising 50% boys and 50% girls were approached from educational institutions of Islamabad and Rawalpindi, and the willing participants completed the questionnaires.

The present research deal with the poor monitoring, inconsistent discipline and use of corporal punishment as a negative parenting dimensions. It was assessed by Alabama Parenting Questionnaire (Frick, 1991). Adolescents' psychological wellbeing was measured by Ryff Scale of Psychological wellbeing (Ansari, 2010) and psychological wellbeing construct was in use as a composite in this present research.

A cross-sectional research design of the survey method was used to get the data from the targeted sample. The present research used the self-report measures, first of all, permission was granted from the authors to use their scales. After getting permission translated and adapted instruments were given to the participants of the research. The psychometric properties of the selected instruments were established; normality assumptions of the data were checked. The internal consistency of the selected instruments was assessed by Cronbach alpha, which was above .70 indicating that the instruments are reliable measures showing internal consistency satisfactory for the construct; what they were supposed to measure. The direction of the relationship was checked by correlation coefficient. The matrix of the correlation coefficient showed a significant negative correlation between the study variables ($r$ = -0.35, $p$ < .001) and this verified the first formulated hypothesis. This finding was also supported by the existing and consulted literature (Assor & Roth, 2007; Assor et al., 2004; Aunola & Nurmi, 2005; Barber & Harmon, 2002; Kausar & Shafique, 2008).

Moreover, moderation analysis was executed to comprehend the effect of age on the relationship of negative parenting dimensions and adolescents' psychological wellbeing.

Result indicating that age act as a moderator for the relationship between negative parenting dimensions and adolescents' psychological wellbeing. The interaction effect of negative parenting dimensions and age has a significant moderating effect along with added additional explaining variance (26% to 43%) in the relationship between the study variables ($\beta$=.44**, $p$<.01, $\Delta R^2$ = 0.173). It was seen that as the age of adolescents increase, there is a decrease in their psychological wellbeing when facing negative parenting practices. This finding was also supported by the existing literature (Kessler et al., 2007).

**Implications**

This study indigenously contributes to the negative parenting dimensions. This study can be helpful in educating the parents to use more productive and positive parenting practices. The results of the present research can be useful in the development and execution of different types of intervention practices for educating the people, how they make the strong relationship among the parent and adolescents. By having a healthy relationship maximum problems can be sorted. In this way, most of the adjustment and psychological problems can be resolved. This research provides the evidence that parent should use those parenting practices which are healthy for the adolescents and gave such nurturing environment to their children which promote their psychological wellbeing. Different training programs and workshops can be arranged to educate the parents as well as adolescents, how they can effectively communicate and learn new ways of communication and social skills.

**Conclusion & Limitations**

The results of the present research are consistent with the previous literature, revealing that negative parenting dimensions play a significant negative role in adolescents' psychological wellbeing. When individuals have a restrictive and controlled environment, it may hinder personal growth, feel less competent and psychologically disturbed. Hence, healthy environments are necessary for healthy and optimal growth.

The major limitation of this research is that it used self-report measures. For getting a more clear and complete picture of this relationship, the information can be obtained from multiple respondents.

As the self-report technique arises social desirability issues and can address in the future. The other limitation is of research design, longitudinal design can give a better predictive relationship picture of the variables cater in this study. And for the generalization of the results, the sample can be obtained from multiple strata.

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AS completed the study and the article under the supervision of RH. RH helped AS to refine the conceptual model of the study and finalize the article.

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## Research Article

# Relationship of Parenting Styles with Decision-Making and Self-concept among Adolescents

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## Abstract

**Objectives.** The current research aimed to examines the relationship of parenting styles with decision-making and self-concept among adolescents (*N*=400).

**Method.** The sample comprised of College students from Rawalpindi and Attock including both government and private colleges. There were 200 male and 200 female college students recruited into present study. Data were collected through the Parental Authority Questionnaire (Buri, 1989), Self-Concept Questionnaire (Robson, 1989), and Melbourne Decision Making Questionnaire (Mann et al., 1997).

**Results.** Self-concept has significant negative correlation with authoritarian father, authoritarian mother, permissive father, permissive mother, whereas significant positive correlation with authoritative father and authoritative mother Decision making style is also significantly correlated with parenting styles. The findings revealed that gender moderates the relationship between authoritarian parenting styles and hypervigilance as well as procrastination. Moreover, gender also moderates the relationship between authoritarian parenting and self-concept.

**Conclusion.** Study demonstrate that parenting styles play a distinctive role especially authoritarian parenting style to determine the adaptive decision making and firm self-concept among adolescents.

**Keywords.** *Parenting styles, self-concept, decision making styles.*

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## Introduction

Adolescence is a specific period of human growth in which the home environment and the school gain perilous importance. All through this period, by using a growing experience of autonomy and self-exploration, adolescents shift from the notably established yet precise period of adolescence into adulthood (Wentzel & Battle, 2001). Adolescents' expectations about their future evolutions are assumed to influence the decisions they make and the concepts they develop about themselves (Carlo, Crocket, Wolf & Beal, 2017). Notably, at this period in life, they are in the process of constructing their self-concept, which includes attributes including their self-confidence, self-attention, self-confidence, self-pride, and self-identity. Self- concept and decision-making ability notably play an essential role in such a transition in human life. Positive self-concept results in excellent academic performance and relationships with others, while those who've negative self-concept, do not well carry out in academics as well as have awful relationships. Decision-making ability is a vital part of transition during this phase of life. If a child has rightly developed decision-making ability, he will make his decisions impartial to others. Parenting performs a crucial role in growing self-concept as well as decision-making competencies; therefore, this research aims to examine parenting styles with decision making and self-concept.

Parenting style is a mental paradigm demonstrating general techniques that are used by parents in their children-rearing. Children go through various stages of development; therefore, to raise their child healthily, parents use a variety of parenting strategies following their parenting behaviors. Parenting style contrasts from parenting practice as parenting style forms a standard method of parenting to influence specific behaviors in adolescents (Spera, 2005). Coplan et al. (2002) described parenting styles as the ways of interactions, relations, and communication among parents and their children. Diana Baumrind became a researcher and a developmental psychologist, her paintings represent various kinds of child-rearing patterns, and her work is famous with the name of Baumrind's Parenting Typology. Four famous classes are usually used to classify parenting authority patterns: authoritative, authoritarian, permissive, and indifferent-uninvolved.

They suggested that dimensions of parental demand and responsiveness categorize these parenting authority styles (Baumrind, 1966; Steinberg, 2006).

Self-concept is an element that has evolved based on people's environment and the way they connect with social existence (Rahman, Shahrin & Kamaruzaman, 2017). It is related to the intellectual dimension of man or a woman, and that also represents the individual's motion in the direction of himself or herself (Wentzel & Battle, 2001). The self-concept has two broad domains positive self-concept as well as negative self-concept. Positive self-concept entails knowing oneself, respect towards oneself, exhibiting positive and rational thinking and a firm sense of self in comparison to others. A negative self-concept included, negative evaluation of oneself, self-doubt, and sense of worthlessness and insecurity (Badgujar & Mundada, 2014).

Decision -making has been described by Bednar & Fisher (2003) as making selections from the given alternatives, it is a continuous process to negotiate the best course of action for a range of situations (Mann, Harmoni, & Powers, 1989). In the preset study we are interested in decision making styles that young people adopt in dealing with their day to day matters. Decision making is one of the most complicated processes while considering the nature of cognitive approaches or human thinking. Decision-making differs from one individual to another (Galotti et al., 2006) Child-rearing is crucial in supporting the improvement related to positive judgmental styles among young people. The social settings are one of the arenas in which decisions are often made, mostly in areas where children live with their guardians. A significant role is played by the societal context as the nature of decision making depends upon the adaptation and change of actions from the persistently faced situations (Riaz et al., 2012).

Parenting style is a significant contributing factor in the lives of adolescents having a substantial influence on their major life domains such as decision making and self-concept (Rizvi & Najam 2015). Keeping in view existing literature present study will be carried out to explore the relationship of parenting styles with self-concept and decision making in adolescents from Pakistan. Family plays a vital role in one's life and in the society.

The importance of the family as a social structure is something distinctive. Correct and balanced relationship between parents and their children is one of the factors influencing both their physical and mental health. Interaction between children and parents and how parents communicate with children are considered to be the most important and fundamental factors among the various factors that affect children's fostering and healthy character (Kimble, 2014).

In Pakistan most past researches emphasized on the relationship of parenting styles with academic performance. However, the relationship of self-concept and adolescents' decision making with parenting styles is relatively a less explored area of research in the context of Pakistan. In the Western research self-concept and adolescents' decision making has been a focus of extensive research for career development of adolescents. In a Pakistani context due to traditional family practices resultant parenting styles may hold a special significance in developing self-concept and an independent decision making among adolescents. Therefore, present study focuses on parenting styles and their relationship with self-concept and decision making among adolescents as specific parenting styles are considered important in the formation of self-concept as well as decision making of the adolescents. Pakistan is a patriarchal society and female are expected to be higher on foreclosure. therefore, it will be interesting to find how parenting styles are predictive of female and male students' self-concept and decision making (Bednar & Fisher, 2003). The study findings would increase understanding regarding effectiveness of different parenting approaches in the development of self-concept and decision making ability among undergraduates' adolescent students.

## Method
### Objectives
1. To investigate the relationship between parenting styles, decision making styles, and self-concept among adolescents

2. To study the moderating role of gender between parenting styles, self-concept, and decision making among adolescents.

### Hypotheses
1. The authoritative parenting style is positively related to decision making ability among adolescents.

2. Authoritarian and permissive parenting styles will be negatively related to the self-concept among adolescents.

3. Gender moderates the relationship between authoritarian parenting styles and decision-making styles including Vigilance, Hypervigilance, Procrastination, and Buck Passing among adolescents.

4. Gender moderates the relationship between authoritarian parenting styles and self-concept among adolescents.

### Sample
The present research sample comprises of college students ($N$=400), including male ($n$=200) and female ($n$=200) college students. Sample was taken from different colleges of Rawalpindi and District Attock. These include Punjab College Rawalpindi, Govt Post Graduate College for Women, Govt Hashmat Ali College for Boys Rawalpindi, Punjab College, Govt Degree College for Girls Jand and Govt college for Boys Jand. Age range was from 16 to 20 years ($M$= 18.5; $SD$=2.25). The sample was selected using a purposive convenient sampling method.

### Instruments
Parental Authority Questionnaire has two versions, i.e., mother and father having the same items. It was formed in 1991 by John R. Buri, and its purpose is to measure disciplinary practices or parental authority from the children's perspective. It comprises of 30 items having three subscales developed on the parental power designs, and each subscale comprises of 10 items. Alpha coefficient of .75 for permissive, .85 for authoritarian and .82 for authoritative scale while great dependability in test-retest unwavering quality that .81 for permissive, .86 for authoritarian and .78 for authoritative scales separately (Buri, 1991).

Self-Concept Questionnaire (SCQ; Robson, 1989) deals with attitudes and beliefs which some people have about themselves. SCQ consisted of 30 items. Sixteen items are reverse scored i.e. 4,5,7,8,11,13,14,17,19,20,21,22,23,25,27,28). The SCQ has proved to have good reliability (Cronbach's α of .89) and high validity (clinical validity of .70) (Robson, 1989).

Melbourne Decision Making Questionnaire (Mann et al., 1997) consisted of 22 items. This scale has the reliability ranged from .74 to .87. It was designed to assess how individuals approach decision situations. It was intended to be an improvement on Mann's (1982) Flinders Decision Making Questionnaire (Mann et al., 1997).

## Procedure

The researcher approached students with the permission of concerned authorities' in each College for data collection. Participants were briefly informed regarding the purpose of research reason, and they were assured about the privacy of the information acquired from them. Also, participants were instructed to respond to each statement. Students were approached in their classrooms, and questionnaires were administered in a group setting. The total time for completing a questionnaire was 25 minutes. Students were thanked for their participation.

## Results

### Table 1

*Descriptive Statistics and Alpha Reliability Coefficients for Parenting Styles, Decision Making and Self-Concept among Adolescents (N = 400)*

| Variables | *M* | *SD* | Range Minimum | Maximum | $\alpha$ |
|---|---|---|---|---|---|
| Authoritarian Father | 31.39 | 7.20 | 10 | 50 | .74 |
| Authoritative Father | 26.90 | 7.56 | 10 | 50 | .81 |
| Permissive Father | 30.61 | 6.40 | 10 | 48 | .72 |
| Authoritarian Mother | 30.92 | 6.78 | 10 | 50 | .77 |
| Authoritative Mother | 26.62 | 7.42 | 10 | 50 | .80 |
| Permissive Mother | 30.30 | 6.43 | 10 | 50 | .81 |
| Vigilance | 7.63 | 2.29 | 0 | 12 | .72 |
| Buck-passing | 7.56 | 2.33 | 1 | 12 | .70 |
| Procrastination | 6.16 | 2.01 | 0 | 10 | .74 |
| Hyper vigilance | 6.60 | 2.02 | 0 | 10 | .77 |
| Self-concept | 91.55 | 9.19 | 69 | 121 | .83 |

Table 2 shows descriptive statistics and alpha reliability coefficients for parenting styles, decision making and self-concept among adolescents. Results show that all variables have satisfactory psychometric properties as well as alpha reliability of the scales ($\alpha > .70$).

### Table 2

*Pearson Correlation for Parenting Styles, Decision Making and Self-Concept among Adolescents (N = 400)*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Authoritarian Father | -- | -.53** | .50** | .38** | -.21** | .22** | .32** | -.39** | .46** | .16** | .33** |
| 2. Authoritarian Mother | | -- | -.71** | -.25** | .41** | -.28** | -.17** | -.37** | .38** | .51** | .39** |
| 3. Permissive Father | | | -- | .24** | -.31** | .39** | .34** | -.31** | .33** | .37** | .31** |
| 4. Permissive Mother | | | | -- | -.58** | .56** | .50** | -.20** | .32** | .17** | .23** |
| 5. Authoritative Father | | | | | -- | -.67** | -.30** | .30** | -.34** | -.43** | -.22** |
| 6. Authoritative Mother | | | | | | -- | .54** | .26** | -.29** | -.25** | -.21** |
| 7. Self-Concept | | | | | | | -- | -.23** | -.25** | -.14** | -.22** |
| 8. Vigilance | | | | | | | | -- | .57** | .44** | .47** |
| 9. Buck-passing | | | | | | | | | -- | .50** | .47** |
| 10. Procrastination | | | | | | | | | | -- | .47** |
| 11. Hyper vigilance | | | | | | | | | | | -- |

Table 2 shows Pearson correlation for parenting styles, decision making and self-concept among adolescents. Results show that vigilance has significant negative correlation with authoritarian father $r(398)$ = -.39, $p < .01$, authoritarian mother $r(398)$ = -.37, $p < .01$, permissive father $r(398)$ = -.31, $p < .01$, permissive mother $r(398)$ = -.32, $p < .01$, whereas significant positive correlation with authoritative father $r(398)$ = .30, $p < .01$, and authoritative mother $r(398)$ = .26, $p < .01$. Buck passing has significant positive correlation with authoritarian father $r(398)$ = .46, $p < .01$, authoritarian mother $r(398)$ = .38, $p < .01$, permissive father $r(398)$ = .36, $p < .01$, permissive mother $r(398)$ = .32, $p < .01$, whereas significant negative correlation with authoritative father $r(398)$ = -.34, $p < .01$, and authoritative mother $r(398)$ = -.29, $p < .01$. Procrastination has significant positive correlation with authoritarian father $r(398)$ = .16, $p < .01$, authoritarian mother $r(398)$ = .51, $p < .01$, permissive father $r(398)$ = .37, $p < .01$, permissive mother $r(398)$ = .17, $p < .01$, whereas significant negative correlation with authoritative father $r(398)$ = .43, $p < .01$, and authoritative mother $r(398)$ = .25, $p < .01$. Hyper vigilance has significant positive correlation with authoritarian father $r(398)$ = .33, $p < .01$, authoritarian mother $r(398)$ = .39, $p < .01$, permissive father $r(398)$ = .31, $p < .01$, permissive mother $r(398)$ = .23, $p < .01$, whereas significant negative correlation with authoritative father $r(398)$ = -.22, $p < .01$, and authoritative mother $r(398)$ = .21, $p < .01$. Self-concept has significant negative correlation with authoritarian father r(398) = -.54, $p < .01$, authoritarian mother $r(398)$ = -.34, $p < .01$, permissive father $r(398)$ = -.32, $p < .01$, permissive mother $r(398)$ = -.50, $p < .01$, whereas significant positive correlation with authoritative father $r(398)$ = .30, $p < .01$, and authoritative mother $r(398)$ = .17, $p < .01$.

**Table 3**

*Moderating Role of Gender between, Authoritarian Parenting Styles and Vigilance, Buck Passing, Procrastination, and Hyper Vigilance among Adolescents (N = 400)*

| | [a] Vigilance | | | [b] Buck Passing B | | | [c] Procrastination B | | | [d] Hyper Vigilance B | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B [95% CI] | SE | β | [95% CI] | SE | β | [95% CI] | SE | β | [95% CI] | SE | β |
| **Step I** | | | | | | | | | | | | |
| Constant | 13.10** [7.60, 9.57] | .52 | | 13.94** [12.80, 15.07] | .57 | | 8.59** [12.07, 14.12] | .50 | | 10.28** [9.27, 11.29] | .51 | |
| Authoritarian Mother | -.11** [1.18, .41] | .01 | -.36** | -.68** [-.15,-.09] | .21 | -.14** | -.79** [-.14,-.08] | .19 | -.19** | -.08** [-.11,-.05] | .01 | -.29** |
| Authoritarian Father | -1.24** [-.06,-.01] | .20 | -.27** | -.04** [-1.10,-.27] | .01 | -.12** | -.03** [1.64, .84] | .01 | -.14** | -.03* [-.06,-.00] | .01 | -.12** |
| | $R = .47, R^2 = .225, \Delta R^2 = .221,$ $\Delta F(1, 398) = 37.41, p < .01.$ | | | $R = .50, R^2 = .250, \Delta R^2 = .250,$ $\Delta F(1, 398) = 6.58, p < .01.$ | | | $R = .25, R^2 = .361, \Delta R^2 = .322,$ $\Delta F(1, 398) = 8.31, p < .01.$ | | | $R = .35, R^2 = .127, \Delta R^2 = .123,$ $\Delta F(1, 398) = 5.68, p < .01.$ | | |
| **Step II** | | | | | | | | | | | | |
| Constant | 18.16** [10.59,16.27] | 1.49 | | 18.83** [14.63, 21.53] | 1.49 | | 13.68** [15.23, 21.16] | 1.43 | | 10.80** [9.76, 11.85] | .53 | |
| Authoritarian Mother | -.27** [-5.38,-1.68] | .04 | -.87** | -.29** [-.40,-.20] | .04 | -.89** | -4.02** [-.37,-.18] | .87 | -1.00** | -.23** [-.31,-.14] | .04 | -.81** |
| Authoritarian Father | -4.45** [.03, .06] | .91 | -.97** | -3.85** [-5.55,-.98] | .91 | -.82** | -.20** [-6.44,-2.58] | .04 | -.72** | .09** [.01, .17] | .04 | .32** |
| Authoritarian Father*Gender | .10** [-.28,-.19] | .02 | .92** | -.03* [.09, .10] | .01 | -.10** | .10** [-.02,-.02] | .02 | 1.06** | .09** [-.14,-.04] | .02 | .96** |
| Authoritarian Mother*Gender | .01 [.05, .15] | .47 | .02* | .10** [.05, .17] | .02 | .89** | 7.45** [7.60, 9.57] | .31 | | .08** [.04, .14] | .02 | -.92** |

*\*p< .05, \*\*p< .001*

Table 3 shows moderating role of gender between, authoritarian parenting styles and hyper vigilance among adolescents. Results show that gender significantly moderated the relationship between authoritarian father and hyper vigilance ($\beta = .09$, $p < .01$), and significantly moderated the relationship between authoritarian mother and hyper vigilance ($\beta = .08$, $p < .01$) among adolescents. The overall model was significant, $F(1, 398) = 18.42$, $p < .001$. [b] Results show moderating role of gender between, authoritarian parenting styles and procrastination among adolescents. Results show that gender significantly moderated the relationship between authoritarian father and procrastination ($\beta = .10$, $p < .01$), and significantly moderated the relationship between authoritarian mother and procrastination ($\beta = 7.45$, $p < .01$) among adolescents. The overall model was significant, $F(1, 398) = 14.32$, $p < .001$. [c] Results show moderating role of gender between, authoritarian parenting styles and buck-passing among adolescents. Results show that gender significantly moderated the relationship between authoritarian father and buck-passing ($\beta = .03$, $p < .05$), and significantly moderated the relationship between authoritarian mother and buck-passing ($\beta = .10$, $p < .01$) among adolescents. The overall model was significant, $F(1, 398) = 38.07$, $p < .001$. [d] Results show moderating role of gender between, authoritarian parenting styles and vigilance among adolescents. Results show that gender significantly moderated the relationship between authoritarian mother and vigilance ($\beta = .10$, $p < .05$), and did not significantly moderated the relationship between authoritarian father and vigilance ($\beta = .01$, $p > .05$) among adolescents. The overall model was significant, $F(1, 398) = 43.92$, $p < .001$.
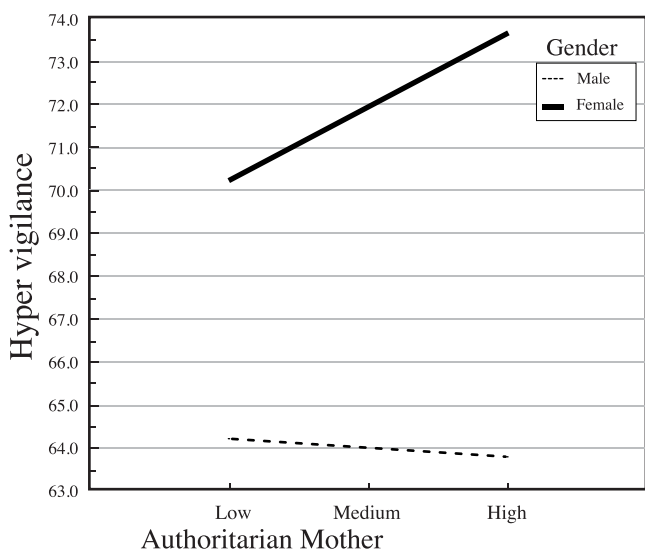


*Figure 1*. Moderating role of gender between, authoritarian mother and hyper vigilance among adolescents. The figure is showing that with higher level of authoritative maternal parenting style females were higher on hyper vigilance whereas males were lower on hyper vigilance and vice versa.
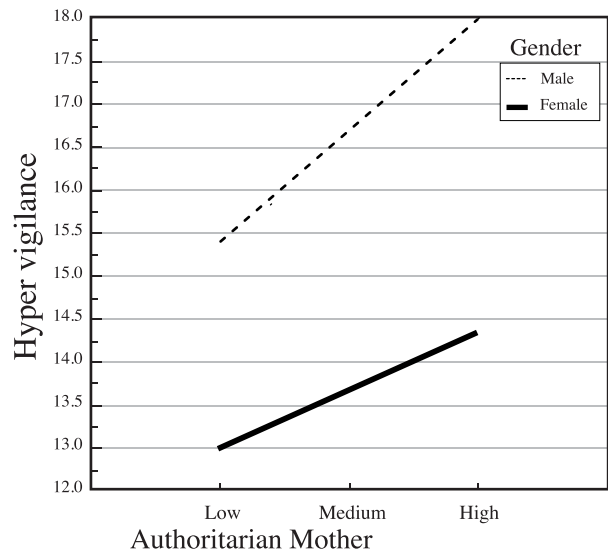
*Figure 2*. Moderating role of gender between, authoritarian father and hyper vigilance among adolescents. The figure is showing that with higher level of authoritative paternal parenting style both females and males were higher on hyper vigilance and vice versa.
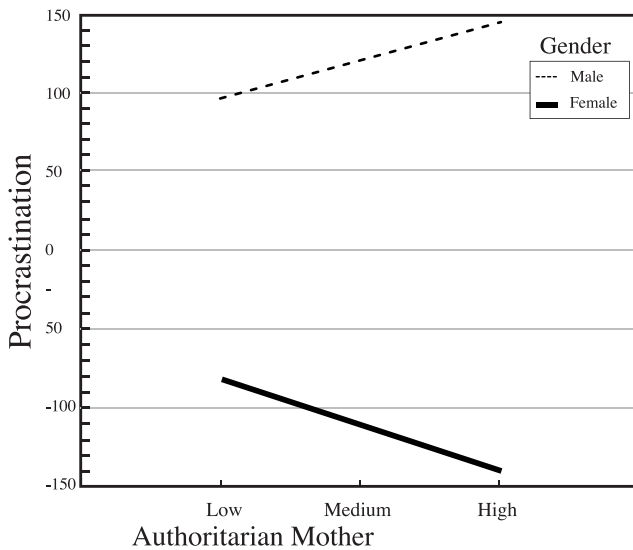
*Figure 4*. Moderating role of gender between, authoritarian mother and procrastination among adolescents. The figure is showing that with higher level of authoritative maternal parenting style females were lower on procrastination whereas males were higher on procrastination and vice versa.



*Figure 3*. Moderating role of gender between, authoritarian father and procrastination among adolescents. The figure is showing that with higher level of authoritative paternal parenting style females were higher on procrastination whereas males were lower on procrastination and vice versa.



*Figure 5*. Moderating role of gender between, authoritarian mother and buck passing among adolescents. The figure is showing that with higher level of authoritative maternal parenting style both females and males were lower on buck passing and vice versa.



*Figure 6*. Moderating role of gender between, authoritarian father and buck passing among adolescents. The figure is showing that with higher level of authoritative paternal parenting style both females and males were lower on buck passing and vice versa.

Figure 7. Moderating role of gender between, authoritarian parenting styles and vigilance among adolescents. The figure is showing that with higher level of authoritative maternal parenting style both females and males were lower on vigilance and vice versa.

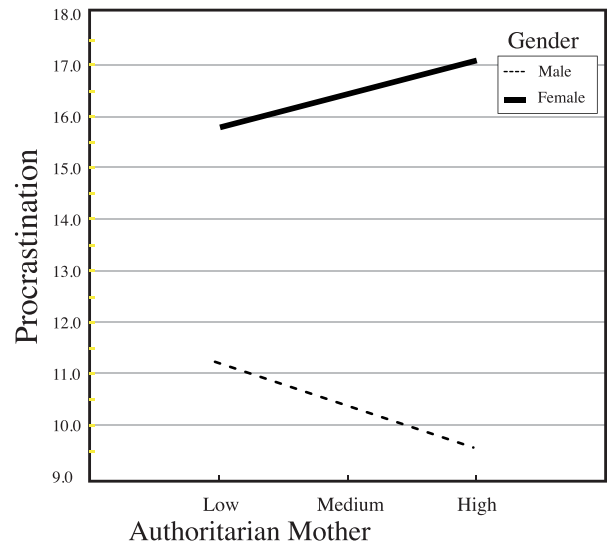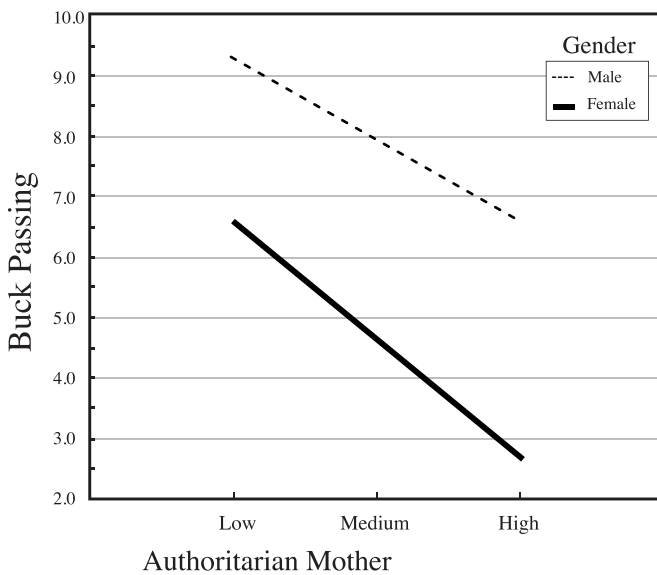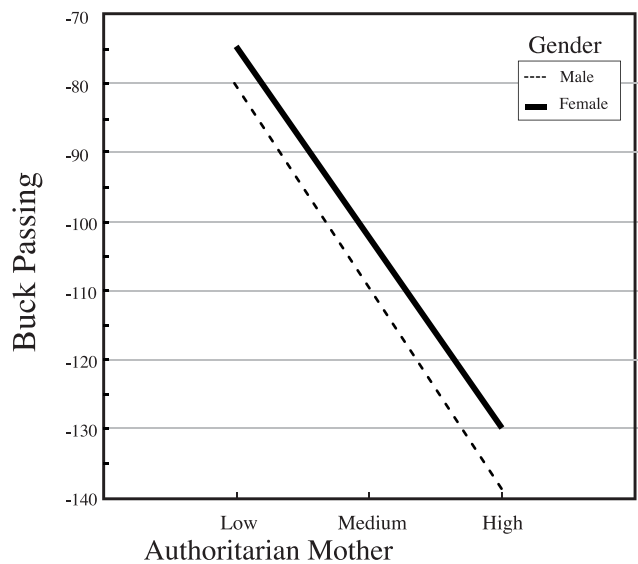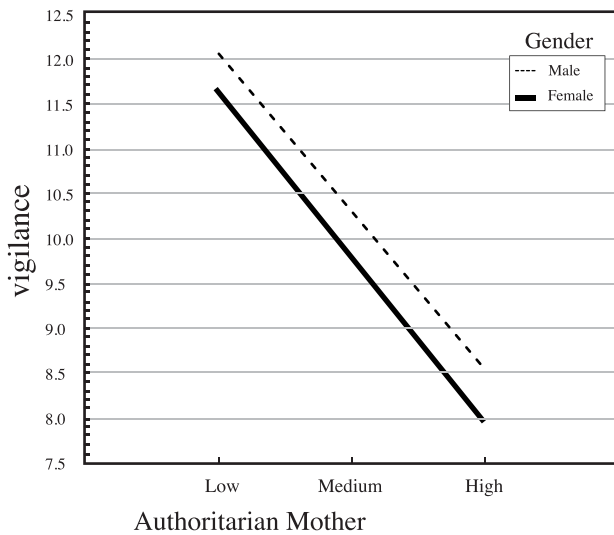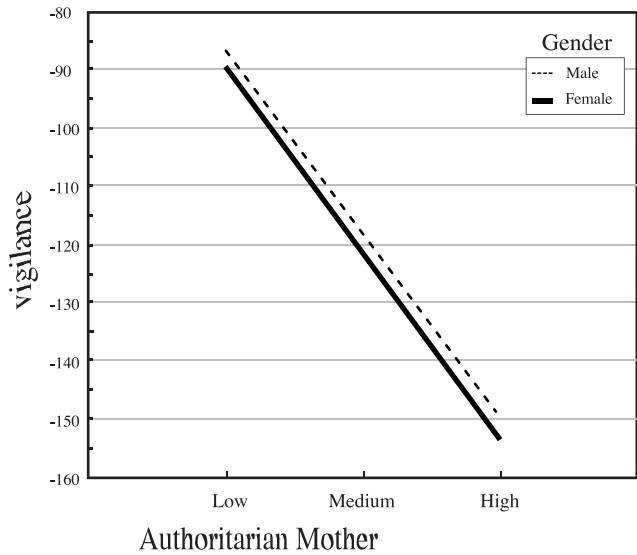Figure 8. Moderating role of gender between, authoritarian father and vigilance among adolescents. The figure is showing that with higher level of authoritative paternal parenting style both females and males were lower on vigilance and vice versa.

**Table 4**

*Moderating Role of Gender between, Authoritarian Parenting Styles and Self-Concept among Adolescents (N = 400)*

| | Self-Concept | | |
|---|---|---|---|
| | *B* [95% CI] | *SE B* | *β* |
| Step I | | | |
| Constant | 66.84** [7.60, 9.57] | 2.13 | |
| Authoritarian Mother | .61** [1.18, .41] | .06 | -.36** |
| Authoritarian Father | .18* [-.06,-.01] | .05 | -.27** |
| | $R = .52, R^2 = .275, \Delta R^2 = .272, \Delta F (1, 398) = 9.83, p < .01.$ | | |
| Step II | | | |
| Constant | 64.26** [10.59, 16.27] | 2.23 | |
| Authoritarian Mother | .24** [-5.38,-1.68] | .16 | .18** |
| Authoritarian Father | .70** [.03, .06] | .17 | .54** |
| Authoritarian Father*Gender | -.32* [-.28,-.19] | .10 | -.73* |
| Authoritarian Mother*Gender | -.27* [.05, .15] | .10 | -.62* |
| | $R = .54, R^2 = .298, \Delta R^2 = .290, \Delta F (1, 398) = 6.25, p < .01.$ | | |

*p< .01, **p< .001.

Table 4 shows stepwise multiple regression analysis to investigate moderating role of gender between, authoritarian parenting styles and self-concept among adolescents. Results show that gender significantly moderated the relationship between authoritarian father and self-concept ($β = -.73, p < .01$), and significantly moderated the relationship between authoritarian mother and self-concept ($β = -.62, p < .01$) among adolescents. The overall model was significant, $F(1, 398) = 41.84, p< .001.$

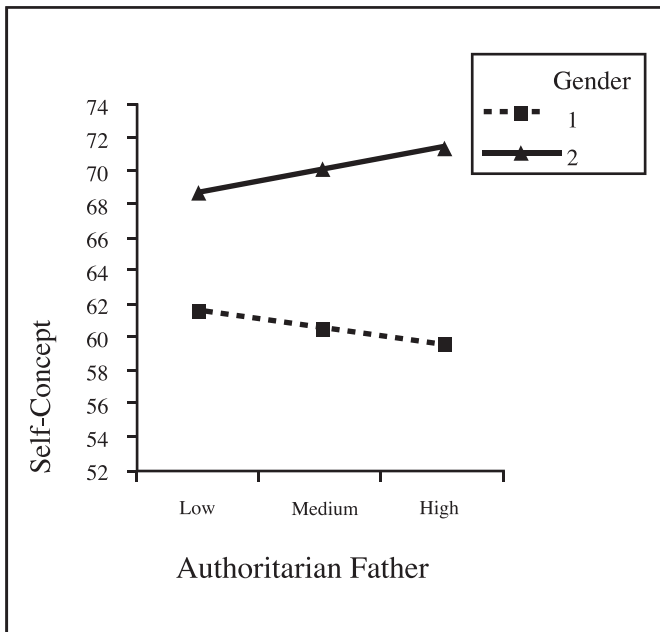*Figure 9*. The above figure shows that male adolescents with authoritarian father have better self-concept whereas female adolescents with authoritarian father have lower level of self-concept, Note. 1 = Male Adolescents, 2 = Female Adolescents
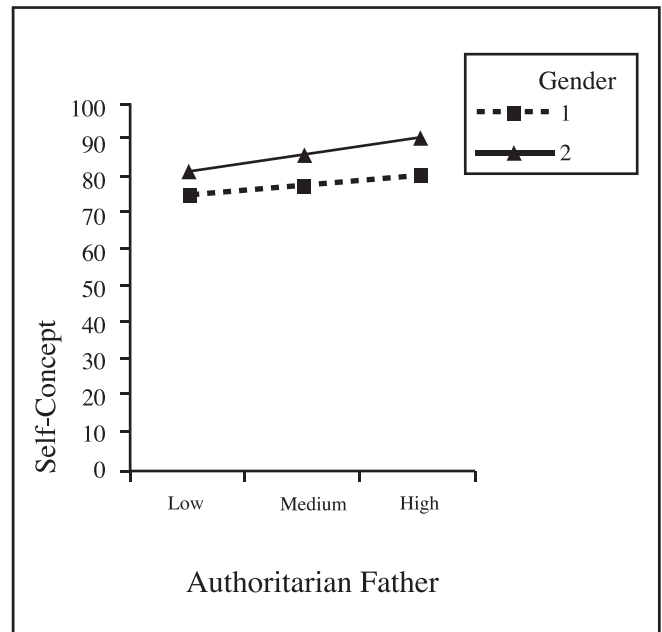


*Figure 1*0. The above figure shows that both male and female adolescents with authoritarian mothers have better level of self-concept, Note. 1 = Male Adolescents, 2 = Female Adolescents

## Discussion

The present study was conducted to examine the relationship of parenting styles with decision making and self-concept among adolescents. The 1st hypothesis presumed a positive relationship between authoritative parenting style and decision making among adolescents, marginally supported by the current findings. Study findings revealed that authoritarian father, authoritative father, and authoritative mother significantly predicted decision making including vigilance, buck passing, procrastination and hyper vigilance among adolescents. This is consistent with past research work indicating that authoritarian parenting style has negative impact on decision making whereas authoritative parenting is positively related with constructive decision making among adolescents (Booth, Scott, & King, 2010; Ceballo, Ramirez, Hearn, & Maltese, 2003; Hoskins, 2014). Although both authoritarian and authoritative guardians hold elevated expectations and authority over the adolescents' conduct. However, authoritative guardians force tight control over their children, they assume that they are the specialists who are in every case right. Compared with authoritarian parents, authoritative parents are likely to be warm, nurturing and responsive (Mason, Walker-Barnes, Tu, Simons, & Martinez-Arrue, 2004; Steinberg, Blatt-Eisengart & Cauffman, 2006).

Therefore authoritative parenting is linked with adaptive decision making styles in this study.

The 2nd hypothesis "there will be negative relationship between authoritarian and permissive parenting style and self-concept." was also partially supported by the current findings. Results show that authoritarian father, authoritarian mother, authoritative mother, authoritative father, permissive father, and permissive mother predicted self-concept among adolescents. The findings are in the line with the previous research suggesting that authoritarian parenting style and permissive parenting style have a negative impact on adolescents' self-concept whereas authoritative parenting style has positive impacts on self-concept among adolescents (Steinberg et al., 2006). Authoritarian parents just permit single direction communication. They use "since I said as much" as the purpose behind principles (Martínez, García, & Yubero, 2007). Adolescents are required to aimlessly obey without questioning. They are not permitted to have or voice for their feelings. Adolescents are regularly "seen yet not heard". Adolescents whose guardians have an oppressor authoritarian parenting style can be anxious and insecure.

However, on the other hand authoritative parents discuss, explain and discuss the matter with their children (Wolff, 2000). Further studies have linked permissive parenting to lower academic achievement (Ghazi, Ali, Shahzad, Khan, & Hukamdad, 2010; Zahedani, Rezaee, Yazdani, Bagheri, & Nabeiei, 2016). Moreover, authoritative parents make poor decisions regarding their children (Rudy & Grusec, 2006).

In the current findings moderating role of gender between authoritative parenting style and decision making was also investigated. Outcomes of the current study indicate that both female and male adolescents with authoritarian fathers have a better level of decision-making, authoritarian parenting negatively predicted vigilance, buck-passing, procrastination, and hypervigilance. female adolescents with authoritarian father are found to be higher on hypervigilance. There is little research work available that is evident in the powerful role of authoritarian parenting in manifesting different decision-making styles among males and females. There is a concern to anticipate that distinction should be found in spite of the fact that outcomes may contrast contingent upon the child-rearing styles and adolescent-parents relationship (Booth, Scott, & King, 2010; Zakeri & Karimpour, 2011). For example, Shek (2002) detailed a relationship between parental pessimism and a more prominent parent-juvenile clash, just for young ladies. These distinctions may reveal distinctive socialization objectives for adolescent girls and boys, with young girls associated more toward family relationships and consistency, and young boys inclined toward self-reliance and independence (Shek, 2002; Zhang et al., 2006). There were no gender differences found on procrastination and vigilance.

Results of the study further revealed that male adolescents with authoritarian father have better self-concept whereas female adolescents with authoritarian father have lower levels of self-concept. On the other hand, both male and female adolescents with authoritarian mothers have better level of self-concept. Adolescents raised in an authoritarian parenting style have poorer social skills and lower self-concept and tend to be uninvolved in problem behavior (Ceballo, Ramirez, Hearn, & Maltese, 2003; Simons, Simons, Conger, & Brody, 2004). In the current findings, the only difference that male adolescents with an authoritative father have better self-concept as compared to females.

This is may be due to indigenous cultural context of Pakistan, Pakistan has a collectivistic culture that possesses the values of a male dominating society. In Pakistan, males have more freedom of expression and therefore have stronger self-concept despite their fathers have authoritarian parenting (Mariam, 2000).

## Limitations and Suggestions

The sample size of the current study was sufficient however data was collected only from Rawalpindi and Islamabad and other cities and rural areas of Pakistan were not approached due to accessibility reasons which can affect the generalizability of results. In future research, it is suggested to study the entire phenomenon based on the sample which represents the other regions of Pakistan to make this phenomenon more representative and generalizable. Secondly, a cross-sectional survey design was used in the current study, in which different participants were selected to study the phenomenon, the study can be more appropriate if it would be based on a longitudinal data evidence to demonstrate how parenting styles gradually impact on the adolescents' decision making and self-concept.

## Conclusion

Our study demonstrate that parenting styles play a distinctive role especially authoritarian parenting styles in determine the adaptive decision making and firm self-concept among adolescents. Therefore, parents need educating to adopt authoritarian parenting styles as it is more considerate towards adolescents in comparison to authoritative parenting styles.

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This study received no specific grant from any funding agency in the public or private sector.

## Competing Interests

The authors are well informed and declared no competing interests.

## Ethical approval

The study was approved by the Ethics Committee (DPEC).

## Consent for publication

Consent approved by the authors.

## Availability of data and materials

Contact corresponding author.

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**Research Article**

# Perceived Organizational Support as the Moderator Between Psychosocial Safety Climate and Organizational Citizenship Behaviour Among Nurses

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## Abstract

**Background.** Psychosocial Safety Climate (PSC) refers to an organizational atmosphere that is characterized by mental wellbeing and security of workers. Literature suggests PSC fosters Organizational Citizenship Behavior (OCB) particularly when employees perceive high degree of organizational support. Therefore, the present study aimed at empirically testing this proposition by investigating the moderating role of Perceived Organizational Support (POS) among nurses.

**Method.** The sample included 86 male and 214 female nurses recruited from different government and private hospitals of Rawalpindi and Islamabad. Psychosocial Safety Climate Scale (Hall et al., 2010), Organizational Citizenship Behavior Scale (Lee & Allen, 2002), and Survey of Perceived Organizational Support (Eisenberger et al., 1997) were used to measure constructs of the present study.

**Results.** PSC significantly and positively correlated with OCB and POS. PSC also had a significant main effect (positive) on OCB, and the interaction of PSC and POS on OCB was also significant, suggesting that this positive relationship between and OCB was moderated by POS.

**Conclusion.** Our findings indicated that POS is an important organizational resource for enhancing the OCB in employees. High degree of organizational support to nurses can influence positive effect of on their OCB.

**Keywords.** *Psychosocial safety climate, perceived organizational support, organizational citizenship behavior.*

Foundation University Islamabad

## Introduction

Due to globalization and changing work environments, job demands are increasing and empirical evidence supports high job demands and low resources are major problems which influence worker health and poor work engagement (Bakker & Demerouti, 2007). Posterity of workers is the main focus in occupational health psychology, and was realized 20 years ago that it could be improved (Karasek & Theorell, 1990) by training opportunities in sheltered atmospheres by supervisors. Tuckey et al. (2012) consider such training and learning as occupational assets that fortify inherent and external motivations of workers improving their engagements and employment performances. Therefore, it is essential to study psychosocial safety climate (PSC), perceived organizational support (POS) and organizational citizenship behavior (OCB) that would create better workplace environment and employee well-being.

Safety in an organization, such as PSC is a recent construct that measures worker perceptions of responsibility shouldered by organizations to meet their needs and promote mental wellbeing and prosperity in the organization; in addition, PSC evaluates psychosocial work hazards at working environments (Hall et al., 2010). Managers support PSC by assessing risk components in organizations, use resources carefully to make reasonable demands on their workers, which is true for competitive organizations and environments (Dollard & Bakker, 2010). In addition, when workers go beyond their work demands to organizational loads, PSC reassures positive behaviors in workers (Li et al., 2015), called organizational citizenship behavior (OCB) that adapts them to changing work environment. PSC not only supports such behavior but boosts organizational productivity, help employees accomplish their objectives and thrive in their areas of expertise. Hall et al. (2010) point out PSC improves mental wellbeing and security of workers, which is achieved by authoritative management that uses methodologies, frameworks and practices in garnering these, aims (Dollard & Bakker, 2010). Moreover, if supervisory practices, administrative standards and common methods prompt stress for workers, PSC is conceptualized as "cause of causes" for organizational stress (Dollard, 2012). In Pakistani context, Shakeel (2015) reported perceived psychosocial safety climate as a positive predictor of employee performance.

Dollard and Bakker (2010) suggest PSC covers four dimensions and include senior management support and commitment, management priority, organizational communication and organizational participation (also see Idris et al., 2012 for details of these dimensions).

When efficient supervisory practices are in place, workers perceive organization as supportive, which is measured by Perceived Organizational Support (POS), and is related to well-being. Eisenberger et al. (1986) described POS in the context of worker feelings and beliefs about their worth and approval given by their organization; and that the organization cooperates, assists and supports employees. Supportive organizations breed perception of such support in employees and their future welfare. Eisenberger et al. (1997) further elaborated when POS is high workers will act in line with the ambitions of their organizations.

Well supported workers go beyond their regular workload to express their extraordinary performance or OCB. Bateman and Organ (1983) pioneered the term, and defined it as discretionary conduct of workers, not clearly or unequivocally demanded by the formal reward structure and enhances healthy and positive work environment in the organization (Organ, 1988); this conduct guides the psychosocial conditions in which execution of tasks take place, "… perceived [as] formal reward framework" (Organ, 1997).

One of the important correlates of OCB is POS, and a number of studies have demonstrated a positive relationship between the two. Many studies do find POS as an important antecedent of OCB (Jain et al., 2013; Kim et al., 2016; Mio, 2011; Miao & Kim, 2010; Neves & Eisenberger, 2012; Rhoades & Eisenberger, 2002).

Idris and Dollard (2011) explored the direct and indirect effect of PSC and its dimensions on positive and negative emotions of employees and found a positive relationship between positive emotions with support of coworkers and supervisor. Similarly Law et al. (2011) explored the relationship of PSC with supervisor support and organizational reward and found a positive relationship with both.

Based on these findings, the current research aimed to study the relationship of PSC with POS and OCB (see Dollard & Bakker, 2010; Nimran, 2011). Based on literature above, the present study predicted a positive relationship between PSC (and its dimensions) with OCB (and its subscales) and POS; and predicted that POS would strengthen the relationship between PSC and OBC.

## Method
### Sample

G*Power 3.0 was used for power analysis. To get a small to medium effect size (Cohen's $f2 = .06$) could be reliably assessed with a sample size of 279 ($\alpha = .05$) at power of .95 (Faul et al., 2008). To be conservative, 300 (71% female) nurses were recruited from different government and private hospitals of Rawalpindi and Islamabad through purposive sampling technique, where the age of participants ranged from 20 to 58 ($M = 28.56$, $SD = 5.96$) years, with job experiences that ranged from 1 to 23 years ($M = 4.13$, $SD = 3.46$). As per the inclusion criteria, only the full-time nurses were recruited in the sample who had an age of > 18 years with a minimum job experience of 1 year. The data were collected between August 2019 and January 2020. Details of other demographic variables are presented in Table 1.

**Table 1**
*Demographic Characteristics of the Sample (N = 300)*

| Variable | $f$ (%) |
| --- | --- |
| Gender | |
| Male | 86(29) |
| Female | 214(71) |
| Job Status | |
| Permanent | 185(62) |
| Contractual | 115(38) |
| Organizational structure | |
| Public | 150(50) |
| Private | 150(50) |
| Education level | |
| Matric | 11(4) |
| Intermediate | 76(25) |
| Bachelors | 213(71) |
| Job designation | |
| Head Nurse | 65(22) |
| Staff Nurse | 234(78) |

## Instruments

**Psychosocial Safety Climate (PSC-12).** Hall et al. (2010) developed PSC with 12 items, divided into 4 subscales that measure management commitment, organizational communication, organizational participation and management priority. Each item is measured on a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). The overall reliability of the scale was $\alpha = .89$ and reliabilities of management commitment ($\alpha = .91$), organizational communication ($\alpha = .76$), organizational participation ($\alpha = .80$) and management priority ($\alpha = .90$) respectively (Hall et al., 2010).

**Survey of Perceived Organizational Support (SPOS).** Eisenberger et al. (1986) developed SPOS, and its shortened version was used in this study; the scale contains eight items, where items 2, 3, 5 and 7 were reversed scored. Each item is rated on a 7-point Likert scale and responses ranged from "strongly disagree" (1) to "strongly agree" (7). Composite score on the scale could range from 8 to 56, and the reliability of scale was high ($\alpha = .90$) determined by Eisenberger et al. (1997).

**Organizational Citizenship Behaviour Scale (OCBS).** Lee and Allen (2002) developed OCBS, which consisted of 16 items, divided into two subscales (eight items each) that measured OCB targeted at individuals (OCBI), and the other that measured OCB targeted at organization (OCBO). Each item was measured on a 5-point Likert scale ranging from "Never" (1) to "Always" (5), where the composite score ranged from to 16 to 80. The reliability of OCBI ($\alpha = .83$) and OCBO ($\alpha = .88$) were similar and moderately high (Lee & Allen, 2002).

## Procedure

After official permission from the hospitals, the employees were contacted individually in their respective departments and requested to participate in the study. Willing employees were briefed about the purpose of the study and provided with a booklet containing informed consent, demographic information and instruments. Assurance was provided to the participants about the confidentiality of the data and that the information will be used only for the research purpose. Finally, the participants were heartily thanked for their participation, support and cooperation.

## Data Analysis

The data was analyzed by SPSS version 24 (IBM Corp. Released, 2016). The missing values (8% of the total data) were replaced through linear interpolation. Descriptive statistics, Cronbach's alpha coefficients of reliability, and Pearson correlations were computed. Furthermore, model 1 of the PROCESS macro (Hayes, 2013) for the SPSS was used for examining the moderating role of POS between PSC and OCB.

## Results

Table 2 shows high reliabilities for PSC ($\alpha$ = .94) and its four dimensions and OCB ($\alpha$ = .87) an its two dimensions and acceptable reliability for POS ($\alpha$ = .70). All the values of skewness and kurtosis were within normal range i.e. +2 to -2 standard deviations so the data is normally distributed (George & Mallery, 2010).

**Table 2**

*Descriptive Statistics and Reliability of Scales and Subscales*

| Scale/Subscale | *M* | *SD* | k | $\alpha$ | Range Actual | Range Potential | *Sk* | *Ku* |
|---|---|---|---|---|---|---|---|---|
| PSC | 37.95 | 11.00 | 12 | .94 | 12 -60 | 12 -60 | -.45 | -.82 |
| MC | 9.15 | 3.25 | 4 | .83 | 6 -20 | 4 -20 | -.33 | -.78 |
| OC | 9.74 | 3.32 | 4 | .86 | 5 -20 | 4 -20 | -.29 | -.84 |
| OP | 9.75 | 3.33 | 4 | .87 | 4 -20 | 4 -20 | -.35 | -.76 |
| MP | 9.56 | 3.35 | 4 | .88 | 4 -20 | 4 -20 | -.34 | -.81 |
| OCB | 57.56 | 10.85 | 16 | .88 | 18 -80 | 16 -80 | -.96 | 1.72 |
| OCBI | 24.24 | 5.56 | 8 | .83 | 14 -40 | 8 -40 | -.89 | 1.56 |
| OCBO | 29.65 | 6.27 | 8 | .85 | 16 -39 | 8 -40 | -.82 | 1.13 |
| POS | 25.18 | 4.50 | 8 | .70 | 10 -55 | 8 -56 | .26 | 1.78 |

*Note*. Sk = skewness; Ku = kurtosis; k = number of items; $\alpha$ = alpha reliability coefficient; POS = perceived organizational support; OCB = organizational citizenship behavior; PSC = psychosocial safety climate; MC = Management Commitment; OC = Organizational Communication; OP = Organizational Participation; MP = Management Priority; OCBI = OCB targeted at individuals; OCBO = OCB targeted at organization

Table 3 represents PSC and its dimensions are significantly positively related to OCB (and subscales) and POS. Table 2 also shows that significant positive relationship exists between OCB, OCBO and POS; however OCBI is not related to POS.

**Table 3**

*Correlations among Scales and Subscales*

| Scale/Subscale | PSC | MC | OC | OP | MP | OCB | OCBI | OCBO | POS |
|---|---|---|---|---|---|---|---|---|---|
| PSC | - | .88** | .91** | .91** | .91** | .36** | .28** | .37* * | .49** |
| MC | - | - | .71** | .71** | .72** | .38* * | .31** | .35** | .42** |
| OC | - | - | - | .92** | .79** | .30** | .23** | .30** | .46** |
| OP | - | - | - | - | .78 ** | .29 ** | .22 ** | .28 ** | .44 ** |
| MP | - | - | - | - | - | .35* * | .25* * | .37* * | .44* * |
| OCB | - | - | - | - | - | - | .84* * | .89* * | .20* |
| OCBI | - | - | - | - | - | - | - | .53 ** | .09 |
| OCBO | - | - | - | - | - | - | - | - | .26** |
| POS | - | - | - | - | - | - | - | - | - |

*Note*. POS = perceived organizational support; OCB = organizational citizenship behavior; PSC = psychosocial safety climate; MC = Management Commitment; OC = Organizational Communication; OP = Organizational Participation; MP = Management Priority; OCBI = OCB targeted at individuals; OCBO = OCB targeted at organization *$p< .01$;**$p < .001$

Table 4 shows the interaction between PSC and POS was significant and added a unique variance of 2% in predicting OCB ($\Delta R^2 = .02$, $\Delta F (1, 296) = 9.60$, p = .001) and an overall 17% of explained variance OCB ($R^2 = .17$, $F (3, 296) = 17.83$, $p = .001$). The conditional effects of PSC on OCB increased as the degree of POS increased.

**Table 4**

*Conditional Effects of PSC on OCB on levels of POS*

| Predictor | B | 95% CI | | $\Delta R^2$ |
| --- | --- | --- | --- | --- |
| | | LL | UL | |
| PSC | .27** | .19 | .36 | |
| POS | -.01 | -.17 | .16 | |
| PSC × POS | .18* | .05 | .31 | .02** |
| Conditional Effects | | | | |
| POS Low | .18* | .08 | .28 | |
| POS Average | .27** | .19 | .36 | |
| POS High | .36** | .25 | .48 | |

*Note*. PSC = psychosocial safety climate; POS = perceived organizational support; OCB = organizational citizenship behavior.
*p < .01; **p < .001

The value of the moderator that defined Johnson-Neyman significance region was -.81 Figure 1 shows, POS moderated the relationship of PSC and OCB among nurses and strengthened the positive relationship between PSC and OCB.

**Figure 1**

Perceived organizational support as moderator between psychosocial safety climate and organizational citizenship behaviour
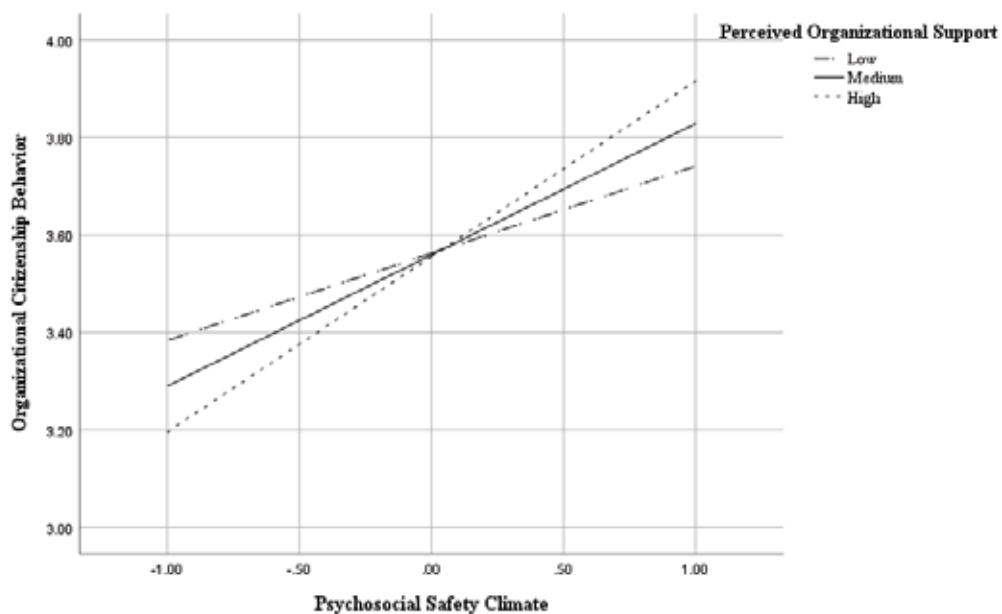
## Discussion

All the measures used for the operationalization of the focal constructs of the present study demonstrated satisfactory levels of internal consistency as Cronbach's alphas of all the scales and their subscale remained ≥ .70. The reliability coefficients of the scales and their subscales in the present study are comparable to those reported by the authors of these scales. The present study revealed a positive relationship between PSC and its dimensions with OCB among nurses (Table 3); Grant et al. (2008) report if workers observe organization is looking for their prosperity they put their efforts to enhance the organizational workplace expressing OCB. Dollard and Bakker (2010) suggest PSC is more specific to the mental strength of workers than other organizational climate constructs. In addition, Bakker and Demrouti (2007) in their job demands-resources (JD-R) model show sufficient resources prompt inspiration and engagement, resulting in improvement in worker performance. Dollard and Bakker (2010) also suggest PSC is an expansion of JD-R model and high PSC prompts low demands and high resources use leading to positive results; as PSC enhances, employees get more involved in cooperative work. Workers caring and support each other in problems, and engage in OCB.

Results also revealed PSC and its dimensions were positively associated with POS among nurses (Table 3). Previous literature confirms PSC should have a positive relationship with POS (Kath et al., 2010). A supportive organization is expected to take care of the psychological as well as physical needs of its employees (Rhoades & Eisenberger, 2002). Therefore, it should include a careful and considerate regard to its employees' psychosocial safety at the workplace.

POS was positively associated with OCB in nurses and moderated the relationship between PSC and OCB such that it increased OCB among nurses (Table 4). Jebeli and Etebarian (2015), and Muhammad (2014) demonstrated significant positive relationship between POS and OCB. The present research suggests PSC and OCB relationship is positively affected by higher level of POS. When PSC of an organization increases its environment becomes stable, OCB increases, and so does work performance.

## Limitations and Suggestions

First of all, use of self-report measures is the primary impediment of this research, especially in measuring OCB. The issue of common method variance has its drawback in inflating responses. To cope up the bias related to self-report measures in measuring OCB, future researchers should also get data from supervisors or colleagues about respective employees' OCB. Secondly, data were collected from the nurses in two cities of Pakistan, so its generalizability is also restricted to the nursing population. Thus, future research ought to concentrate on taking information from other occupational settings and cities too.

The findings of the present study may be compared across male doctors and female nurses as we anticipate that female nurses might have lower levels of perceived organizational support and psychosocial safety climate as compared to the male doctors. Owing to their gender and lower socioeconomic status, they might have been more vulnerable to harassment that may inculcate a perception of unsafe, hostile, and non-supportive organizational climate resulting in compromised job performance and psychological well-being.

## Conclusion and Implications

The current study provides data that supports the premise that if management ensures employee safety from psychosocial hazards in the work environment it will increase employees' OCB. It further indicates that perceived organizational support invigorates the positive association between psychosocial safety climate ant the OCB. It provides base for the future researchers to further explore the relationship of PSC with other organizational variables like in-role job performance, affective organizational commitment, job satisfaction, job stress and turnover intention (Geisler et al., 2019). The study shows PSC and its four dimensions and POS are positively related to OCB. The results of this study showed PSC increases the intensity of OCB when it interacts with POS in affecting it. These findings are especially pertinent to the nursing profession because nurses are exposed an environment that is relatively poor in terms of psychosocial safety climate. They have to attend all types of patients and are very vulnerable to catch contagious diseases because our hospitals do not equip them with any safety apparels or measures.

They may also experience greater degree of harassment in hospitals, which may jeopardize their perception of a safe organizational climate. Our findings suggest that establishing a psychosocially safe climate with high degree of organizational support may be a pragmatic step towards enhancing nurses OCB.

## Declarations

**Ethics Approval and Consent to Participate.** This study was approved by the Institutional Ethics Committee of the Department of Psychology, University of Sargodha, Sargodha (Approval Letter from the Ethics Committee is attached herewith) and all the participants granted their written informed consent to participate in this study.

**Consent for Publication.** All the authors consent to get this manuscript published in Foundation University Journal of Psychology.

**Availability of Data and Materials.** Contact corresponding author for data.

**Competing Interests.** The authors declare no competing interests.

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## Authors' Contributions

A. T. conceived the research idea, reviewed the literature, collected the data, and wrote the initial draft of the manuscript. I. B. contributed to study design, analysed the data, and compiled the references and the results. A. A. provided the technical assistance in data analysis and interpretation of results, proof-read the manuscript, approved the revised manuscript for submission to the journal.

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**Research Article**

# Self-Criticism, Attribution Style, Hope, and Depressive Symptoms in Adolescents

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## Abstract

**Background.** Mental health problems are most commonly underreported or kept undiagnosed in the developing countries. Manifestation of such issues during adolescence could result in long-term adverse consequences. Thus, present study attempted to explore predictive role of self-criticism, attribution style, and hope in depressive symptoms in adolescents.

**Method.** A sample of 290 students (145 male & 145 female; aged 11-23 years) was recruited from different schools and colleges by using convenient sampling technique. The Forms of Self-Criticizing/ Self-reassuring Scale (FSCRS) (Gilbert et al., 2004), The Measure of Attributional Style (Kwon & Whisman, 1992), Psychological Capital Questionnaire (Luthans et al., 2007), and Depression, Anxiety, Stress Scale (Lovibond & Lovibond, 1995) were used to measure self-criticism, attribution style, hope, and depressive symptoms.

**Findings.** Results revealed a significant positive relationship between self-criticism and depression while significant negative association was found between depression and hope. Furthermore, self-criticism and hope significantly predicted depressive symptoms in adolescents. Comparison of family systems showed significant differences on hated-self, attribution style, hope, and depressive symptoms. Results revealed that individuals belonging to joint family system experience more hated-self, depressive symptoms, and attribute to internal causes while individuals belonging to nuclear family system experience more hope and attribute to external causes.

**Conclusion.** The study findings highlight the role of self-criticism, attribution style, hope, and depressive symptoms in adolescents. Thus, present study may also help in evaluating and eliminating risks associated with depressive symptoms. Teachers/parents and caregivers working with adolescents may also benefit from the findings of the research. Implications of the findings are discussed.

**Keywords.**  *Self-criticism, attribution style, hope, depressive symptoms, Pakistan.*

Foundation University Islamabad

## Introduction

Mental health is a key aspect of health. Specifically depressive symptoms are serious concerns in mental illness in teenagers (Reynolds, 1994). In teenage, individuals come across thousands of events that may affect them and their evaluation of themself and others. These events may be pleasant or undesirable/unpleasant. Particularly unpleasant events experienced by teenagers may lead them to avoidance in daily activities, hindrance in enjoying life and develop low moods and in extreme cases, depression. There are a number of risk factors that may socially and individually pressurize an adolescent such as hormonal changes, genetics, and environment (Thapar et al., 2012). Hence, teenager undergoes a number of factors which may give rise to challenges in developing mental health problems. Additionally mere prone to socialization through technologies and fake id's teenagers may not develop skills to solve their problems adequately and may have less adaptive problem-solving behavior. This may and does sometimes result in a disproportionately self-critical personality and hopelessness in an individual. During the age of teenage, individuals blame themselves for disappointments and devalue themselves. This may develop the tendency for being self-critical (Panayotova, 2016). Thus negative views about self, negative views about others, and hopelessness may directly influence an individual's mental health.

The severity of depressive symptoms is usually judged by the criteria given in DSM V; it characterizes depression by lack of problem-solving and motivation in daily activities, feelings of worthlessness, hopelessness, isolation, difficulty in retaining information, loss of energy, and lack of interest in all activities of life (Ranttila & Shrestha, 2011); therefore any individual who may indicate difficulties in these areas of life for minimum two weeks warrants a diagnosis of depression (Bennett, 2011). Depression is a mental disorder that is commonly diagnosed in adolescents (WHO, 2018); the reason being the different developmental milestones that the adolescents have to deal with. Most overcome their depressive tendencies, but others may not recover well. For these individuals, depression in adolescence leads to serious mental disabilities in adulthood. Individuals who may develop depression in adolescence may have varying levels of depression.

They may have low levels of depression or they may have major depressive tendencies which sometimes lead to suicidal attempts (Reynolds, 1994). There is also a greater tendency in mental health professionals to miss the symptoms of depression in adolescents and children (Son & Kirchner, 2000). Previous research has called for research that indicates symptoms that may help in the identification of depressive symptoms in adolescents.

A systematic review conducted by Khan et al. (2021) revealed that pooled prevalence rate of depressive symptoms was 42.66% among university students in Pakistan. A meta-analysis conducted in China reported 24.3% pooled prevalence of depressive symptoms (Wartberg et al., 2018) while study conducted in US suggested 18% of depressive symptoms among 9863 screened adolescents (Saluja et al., 2004). In addition, literature suggests that substance use, family history of depression (Khan et al., 2006), academic failure, poor peer relationships (Muhil, 2015) and female gender (Thirunavukarasu, 2015) are major risk factors for depressive symptoms during adolescence. On the basis of levels of depression, Naveeda and Aftab (2021) illustrated that boys with lower depressive symptoms scored higher on hated-self and internal attribution while girls scored higher on hope and generality however, non-significant results were reported for adolescents with more depressive symptoms.

Self-criticism refers to an individual's ability to see one's own perceived flaws (Panayotova, 2016). The symptoms of self-criticism include feelings of shame, worthlessness, dishonor, shrink, self-devaluing, and self-blaming (Tangney et al., 2007). According to Starrs et al. (2015) the ability of pessimistic thoughts about self mainly causes mood, anxiety, eating, and other disorders. Children are most prone to develop a sense of self-criticism due to parenting styles such as restrictive environment, less warmth, and unnecessary rules (Sachs-Ericson et al., 2006). In psychiatric patients, it is observed that exposure to stress and negative life experiences leads to self-blame and inferiority (Kannan & Levitt, 2013). Additionally self-critical psychiatric patients also experience psychological problems such as anxiety, substance abuse, personality disorders, and suicide (Kannan & Levitt, 2013).

Therefore, it is vivid that self-critical individuals experiencing highly stressful events are more likely to develop post-traumatic stress disorder (Harman & Lee, 2010).

Previous studies explored the significant positive relationship between self-criticism and depression (Luyten et al., 2007; Mongrain & Leather, 2006; Petrocchi et al., 2018). Likewise, Kopala-Sibley et al. (2015) investigated the function of events related to an individual's self-definition and relatedness in the formation of personality traits (self-criticism & dependency) and also its association in further development of depressive and anxiety symptoms. Findings revealed significant relation between self-definitional events and self-criticism that directly predicted an increase in depressive symptoms. However, results show a significant relationship between relatedness events and dependency but there was non-significant relation between dependency and depressive symptoms. Another research concluded that the association between childhood abuse from parents verbally and depression is mediated by self-criticism in late adolescence (Campos et al., 2010). It is clear from past content that depression and self-criticism play a direct relationship, self-silencing on the other side has also proved to be an important role in depression and self-criticism that causes harm to the self-esteem and identity of an individual (Rajabi et al., 2015).

Heider (1958) was the founder of attributional theory and his coworkers defined attribution as "the way of individual to describe everyday event" (Myers, 2010 p.104). Attribution is a study of how the social perceiver utilizes information to explain the events. It involves a type of information being gathered and the way it is combined to shape a causal judgment (Fiske & Taylor, 1991). Moreover, negative or depressive attributional style is defined as an individual's ability to attribute negative events to internal causes. However, attributing positive events to external causes such as fortune is known as positive attribution (Abramson et al., 1978). Studies have proved that negative attribution has a significant relation with depressive symptoms (Alloy et al., 2004; Alloy, 2000; Joiner, 2000). Additionally, Seligman and his co-workers found that negative attribution of events (depressogenic attributional style) to internal, stable, and global factors is directly related to depression in adults (Seligman et al., 1979) and children (Seligman et al., 1984).

According to study individuals possessing negative attributing styles had high levels of depression which was inversely related to the quality of their friendship. In adolescents increased level of loneliness with attributing styles was due to the extent of their friends' level of betrayal. Findings of the study indicate that high intensity of negative affect is associated with a lack of social relationships (Grove et al., 2016; Holmes et al., 2012; Whitehouse et al., 2009).

Hope is defined as a combination of cognition, agency, and pathways. Cognitions include conscious thinking about future aims; agency means the level of motivation to achieve those goals and pathways involve ways to achieve future goals (Synder et al., 1991). Hope is a sum of mental plans and determination of an individual which assists in attaining purposes (Synder, 1994). It is a personality trait and a changeable state of mind. However, any setback and major loss can descend an individual into hopelessness (Allen, 2008). Synder (1994) suggested that hope is not an emotion but it involves cognition, a motivational and dynamic process. In the literature of positive psychology, hope has an influential role (Peterson & Seligman, 1984). It is known as character strength (Cotton et al., 2009). Hope plays an essential role in a successful transition from adolescence to satisfying adulthood (Shorey et al., 2003). In youth, the key to psychological strength is hope (Valle et al., 2004). Moreover, studies suggested that hope is negatively associated with the level of depression (Du et al., 2016; Kwon, 2000; Schrank et al., 2014) and self-stigma (Schrank et al., 2014). In cancer patients, hope and optimism significantly predict depression and anxiety (Rajandram et al., 2011). It is found that individuals having low hope (but not optimism) were more likely to report different health issues including occurrence and severity of illness (Scioli et al., 1997). Moreover, it is vivid that hope influences the quality of life (Rustoen et al., 2010; Stevens et al., 2018). Past researches reported that hope is related with significantly associated with academics, physical and psychological health (Ciarrochi et al., 2007; Snyder & Shorey, 2002).

The etiology and maintenance of depression have been extensively provided by cognitive theories including Beck's theory of depression (Beck, 1987) and hopelessness theory of depression (Abramson et al., 1989).

These cognitive theories provide the understanding of distinctive cognitive vulnerabilities in the maintenance of depression. According to Beck's cognitive theory of depression, maladaptive schemas such as feelings of inadequacy, failure, worthlessness account for cognitive vulnerability.

It is suggested that negative schemas about self, others, and the future result in depressive symptoms. Furthermore, Beck suggests that depressogenic self-schemata remain inactive in the absence of stressful events while in the presence of a stressful event, depressogenic schemata influence cognitive processing (Lakdawalla et al., 2007). In addition, the hopelessness theory of depression posits the role of three types of negative inferences i.e., causal inferences (why an event occurred including stable and global attribution), inferred consequences (inferences about the consequence of event), and inferences about self (inferences regarding oneself in accordance to the event) in the development of hopelessness. Such inferences increase the likelihood of hopelessness which in turn results in depression (Lakdawalla et al., 2007).

In Pakistan, there is a lacking of large mental health surveys on adolescents' mental health (Khalid et al., 2018). However, small scales studies have been conducted to explore the prevalence and factors associated with depressive symptoms among adolescents (Khalid et al., 2018; Khan et al., 2021; Mehmood et al., 2014; Naveeda & Aftab, 2021; Prasle, 2012; Sarwat et al., 2009). Besides, there is a dire need for the exploration of the role of self-criticism, attribution style, and hope in depressive symptoms among Pakistani adolescents. Thus, the present research aimed at identifying the relationship between selected psychological constructs that pertain to the mental health of individuals and see if they are related to the presence or absence of depressive symptoms in adolescents. In the light of previous literature, study hypotheses include the following:

**H1:** There will be a significant positive correlation between self-criticism and depressive symptoms.

**H2:** Hope and generality attribution will be negatively associated with depressive symptoms among adolescents.

**H3:** Adolescents living in joint family system will score higher on depressive symptoms in comparison to adolescents living in nuclear family system.

**H4:** Self-criticism, attribution style, and hope will significantly predict depressive symptoms.

## Method
### Sample

A sample consisted of 290 adolescent students. The age of participants ranged from 11-24 years ($M = 17.28$, $SD = 2.86$). The sample was recruited from different colleges and universities in Rawalpindi and Islamabad. The institutions were both government and private. A convenient sampling technique was used for sample selection in the current study.

### Instruments

The following scales (English versions) were used to assess the constructs of the study.

**The Forms of Self-Criticizing/Attacking and Self-Reassuring Scale (FSCRS).** FSCRS (Gilbert et al., 2004) was used to measure the tendency of self-criticism in adolescents. Two subscales i.e. inadequate-self and hated-self were used in the present study. Items are scored on a 5-point Likert scale. Response options range from 0 (*not at all like me*) to 4 (*extremely like me*) where a higher score shows more self-criticism. Cronbach alpha of the total items used was .67. Likewise, the analysis of the subscales revealed values of .54 for inadequate-self and .58 for hated-self.

**The Measure of Attributing Styles (MAS).** MAS (Kwon & Whisman, 1992) was used to assess the attributional style of adolescents. For the present research only ten scenarios related to academic settings were selected; attribution styles were classified as *Internality* and *generality* (Kwon & Whisman, 1992). Internality relates to the tendency of attributing causes to self and generality refers to the tendency of the sample to attribute causes to general causes. A score is generated for each participant for each of these dimensions; this is done by calculating the product of the count for each attribution style with the impact score for the scenarios. The test re-test reliability has been reported to be .82 (Kwon & Whisman, 1992).

**Psychological Capital Questionnaire (PCQ).** It is used for the assessment of psychological capital (Luthans et al., 2007). The scale comprised of 24 items using a 6-point Likert ranged from 1 (*strongly disagree*) to 6 (*strongly agree*).

PCQ measures four dimensions including hope, optimism, resilience, and self-efficacy. In the present study, the hope subscale is used to measure the level of hope in respondents. An alpha coefficient of .66 for hope was reported for the sample of the present study.

**Depression, Anxiety and Stress Scale (DASS-21).** DASS-21 was used to access the emotional states of an individual which includes depression, anxiety, and stress (Lovibond & Lovibond, 1995). The scale comprised of 21 items (7 items in each subscale) using a 4-point Likert type scale (0 = *did not apply to me at all*, 3 = *applied to me very much or most of the time*). In the present study depression subscale is used to assess depression in respondents. Cronbach's alpha for the depression subscale was .65 for the present study.

**Procedure**

The consent to participate in the study was taken from every participant. Rights of confidentiality were explained to the participants and made assured that the information gathered will be kept confidential and it would be used for research purpose only. Furthermore, study participants were informed that they have right to quit the study at any time. Individuals who were willing to participate in the research were provided with a booklet of questionnaires. The booklet consisted of instructions and items related to the constructs of the study. These instructions were read to the participants and they were encouraged to ask questions. Approximately 20 minutes were required to complete the entire questionnaire.

**Results**

The relationship between self-criticism, attribution style, hope, and depressive symptoms was determined by using Pearson Product Moment Correlation. Additionally, in the present study Linear Regression analysis was used to find the predictors of depressive symptoms.

**Table 1**

*Pearson Correlation of Forms of Self-criticizing/Re-assuring Scale, Psychological Capital, Depression, Anxiety, Stress Scale (N = 290)*

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1.Self-criticism | - | $.87^{**}$ | $.79^{**}$ | $-.15^{**}$ | $.50^{**}$ | -.00 | $-.14^{*}$ |
| 2.Inadequate-self |  | - | $.41^{**}$ | -.06 | $.38^{**}$ | -.02 | -.09 |
| 3. Hated-self |  |  | - | $-.22^{**}$ | $.47^{**}$ | .02 | $-.16^{**}$ |
| 4.Hope |  |  |  | - | $-.26^{**}$ | $-.23^{**}$ | $.23^{**}$ |
| 5.Depression |  |  |  |  | - | .01 | -.11 |
| 6.Internality |  |  |  |  |  | - | $-.58^{**}$ |
| 7.Generality |  |  |  |  |  |  | - |

*\*\* p<.01*

Results in Table 1 show significant positive relationship between self-criticism inadequate-self, hated-self, and depression while a significant negative association between self-criticism, hope, and depression is also found. Additionally, hope shows a significant negative relationship with depression and internality. Likewise, hope also shows a significant positive relationship with generality. Table 1 depicts that depression has a non-significant association with internality and generality.

**Table 2**

*Comparison of Family System on Self-criticism, Hope and Depressive Symptoms among Adolescents (N = 290)*

| Variables | Joint (n = 142) | | Nuclear (n = 148) | | p | t | 95%Cl | | Cohen's |
|---|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | | | LL | UL | d |
| Self-criticism | 38.7 | 7.40 | 37.35 | 9.19 | .15 | 1.42 | -.52 | 3.32 | 0.17 |
| Inadequate-self | 25.3 | 5.15 | 25.46 | 5.91 | .91 | -.11 | -1.35 | 1.20 | -0.01 |
| Hated-self | 13.3 | 3.95 | 11.89 | 4.69 | .00 | 2.89 | .47 | 2.47 | 0.34 |
| Hope | 22.7 | 5.38 | 25.22 | 5.30 | .00 | -4.22 | -3.88 | -1.4 | -0.50 |
| Depression | 5.62 | 3.47 | 4.36 | 4.21 | .00 | 2.78 | .37 | 2.15 | 0.33 |
| Internality | 334.5 | 98.61 | 312.1 | 94.57 | .04 | 1.97 | 311.8 | 334.2 | 1.85 |
| Generality | 214.9 | 135.2 | 247.1 | 133.5 | .04 | -2.04 | 215.7 | 246.9 | -2.66 |

*\*\* p<.01*

Results in table 2 depict that categories of the family system show significant differences in hated self (subscale of self-criticism), hope, and depression. The results illustrate that individuals belonging to the joint family system more experience depressive symptoms than individuals belonging to the nuclear family system. However, internality and generality are non-significantly associated with the family system.

**Table 3**

*Comparison of Attribution Categories on Self-criticism, Hope and Depressive Symptoms (N = 290)*

| Variables | Internal Attribution (n=166) | | External Attribution (n=63) | | Mixed styles (n=61) | | F | i-j | MD (i-j) | 95%Cl | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | | | | LL | UL |
| Self-criticism | 38.1 | 7.59 | 37.5 | 9.18 | 38.3 | 9.59 | .13 | - | - | 37.0 | 39.0 |
| Hope | 23.0 | 5.52 | 25.0 | 5.76 | 25.0 | 4.78 | 4.79\*\*\* | 1<2 | -2.04* | 23.2 | 24.5 |
| Depression | 5.20 | 3.88 | 4.63 | 4.19 | 4.72 | 3.69 | .61 | - | - | 4.52 | 5.43 |

*\*p < .05, \*\*\*p < .001*

The mean difference of categories of attribution such as individuals with internal, external, and undecided attribution styles is shown in table 3. Results illustrate the categories of attribution show significant differences in hope. The comparison of mean values of attribution groups shows that adolescents with external attribution (*M* = 25.0, *SD* = 5.76) show higher hope than internal attribution adolescents (*M* = 23.0, *SD* = 5.52).

**Table 4**

*Regression Analysis of Study Variables on Depressive Symptoms (N = 290)*

| Model | B | S.E. | $\beta$ | $p$ |
|---|---|---|---|---|
| (Constant) | .50 | 1.88 | | .78 |
| Self-criticism | .16 | .03 | .23 | .00 |
| Hated-self | .30 | .05 | .34 | .00 |
| Hope | -.12 | .03 | -.17 | .00 |
| Internality | -.00 | .00 | -.03 | .62 |
| Generality | .00 | .00 | -.00 | .90 |

| | |
|---|---|
| $R^2$ | .298 |
| $\Delta R^2$ | .285 |
| F | 24.06** |

*\*\*p<.01*

Table 4 shows the results of linear regression analysis. The results indicate that self-criticism and hope are significant predictors while generality attribution is a non-significant predictor of depressive symptoms in adolescents. Results indicated a significant prediction accounting for 29% in depressive symptoms by self-criticism and hope in adolescents.

## Discussion

The aim of the current research was to study the relationship between self-criticism, attribution style, hope, and depressive symptoms in adolescents. In line with previous literature the findings of the current study indicated that a positive relationship between self-criticism and depressive symptoms (Gilbert & Procter, 2006; Khan & Shahzad, 2015; Kopala et al., 2015; Zuroff et al., 2016). Self-criticism in children is developed due to parental styles i.e. restrictive environment, less warmth and love, and controlling unnecessarily (Sachs-Ericsson et al., 2006). Consequently, self-criticism tendencies in individuals may cause hostile behavior (Gilbert et al., 2016). Thus the findings of the present study would be useful for assessing the factors that may also affect the mental health of adolescents.

The study hypothesized that generality attribution is negatively correlated with depressive symptoms in adolescents. However, analysis shows a non-significant relationship between attribution generality and depressive symptoms. Results of the present contradict past literature. For instance, Kwon (1999) suggested that high generality attribution is linked with high depression in individuals. It means individuals who externally attribute to any situation may experience more depression.

The non-significance results of attribution style with depression might be due to cultural differences. It is also possible that a sample of study adolescents that include one category of early adolescents might not properly understand the questionnaire. Due to its hypothetical assumed scenarios, it might become tricky and difficult for students to answer properly. Lack of interest in respondents also affects the responses of the sample.

Results indicated that an increase in the level of hope would decrease the degree of depressive symptoms in adolescents. These results are consistent with the previous research findings (Arnau et al., 2007; Du et al., 2016; Peleg et al., 2009; Taysi et al., 2015). Hence, trait hope is linked with reduced depressive symptoms and alleviates the effects of bad experiences in an individual's life (Reff et al., 2005). It also influences coping, adaptive problem-solving, and goal persistence (Synder et al., 1991). It is vivid that individuals with a high level of hope may have positive outcome expectancies, optimism, problem-solving capabilities, and self-esteem (Snyder et al., 2002). Hope not only helps a person to attain his life goal but also improves his self-confidence and mental health; and enables a person to reach his full potential.

Study hypothesized that individual living in a joint family system experience more depressive symptoms than individuals living in a nuclear family system. It means the family system influences the mental health of adolescents. Study findings in line with previous research conducted in Pakistan. In Pakistan, the extended family system is the most common. In such family systems, individual autonomy is equivalent to group autonomy and the group is the complete family unit. People in Pakistan mainly follow the joint family system and live their life along with their folks (Naeem, 2005). Due to the complete size of the family, some of the family members do not get proper attention and required care. Current study confirms that living in a joint family has a significant relationship with depressive symptoms in adolescents. However, some studies suggested that living in a joint family system has a non-significant association with depression (Mumford et al., 1996; Luni et al., 2009)

Furthermore, another aim of the current study was to explore the prediction of depressive symptoms by self-criticism, attribution style, and hope. Self-criticism significantly predicted depressive symptoms among adolescents. Additionally, results also showed that hope negatively predicted depressive symptoms in adolescents. Literature suggests that individuals involved in self-blaming are at risk of developing depressive symptoms (Zuroff et al., 1990). Likewise, individuals experiencing a higher level of hope are less prone to depressive symptoms and may have better mental health (Wong & Lim, 2009). Thus, as an implication increasing the hope of adolescents may help enhance their better mental health.

**Limitations and Suggestions**

Even though the study has some strengths including some limitations is a part of the process. A primary limitation of the current study includes the use of cross-sectional study, however longitudinal is suggested. Future studies should observe the longitudinal effects of depression and attribution style in adolescents. From the current study, causal effects of depression are not observed however, the relationship between variables of the study was a major focus of research. Future researchers may conduct longitudinal studies to examine the causal factors of depression in adolescents.

One of the study limitations is the use of a self-reported questionnaire to examine depression attribution style and hope in an individual, which may be over-reported by respondents. However, accurate data can also be collected by interview-based and observational-based measures i.e. from parents and friends. Future studies should also consider parental marital status (married, divorced) and the attachment style of an individual to observe its effects on depressive symptoms, self-criticism, attribution style, and hope in adolescents. Future studies should also consider other stressors as family conflict and history of parents' health to examine depression and self-criticism in a sample of the study.

Data was collected from two cities of Pakistan by using a convenience sampling procedure. However, the sample is not a true representative of the whole population. So, the findings of the present study cannot be generalized. Sample should be taken nationwide (both rural and urban areas) to achieve valid and appropriate results in future studies.

**Implications of the Study**

Despite limitations, the current study has some implications in daily life.

**Theoretical Implications.** The findings of current study provide ground in the relationship between self-criticism, attribution style, hope, and depressive symptoms to comprehend the underlying factors in more detail. Furthermore, the present study can also be useful in the cross-sectional comparison of results.

**Practical Implications.** Current study findings can be used to develop intervention programs to minimize self-criticism and depression among adolescents. The findings can also be effective in clinical settings to manage adolescents' mental health to reduce depression and self-criticism.

**Conclusion**

The results of the study revealed that subscales of self-criticism are significantly related to depressive symptoms while hope is negatively correlated with depressive symptoms in adolescents. However, the dimension of attribution style (internality and generality) has non-significant relation with depression. The present study also explored those individuals living in a joint family system experience more depressive symptoms than individuals living in a nuclear family system.

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