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Editor's Note/From Editorial Desk

Foundation University Islamabad's mission is to nurture creativity and promote research to develop personal and professional growth of its students. Issuance of the Foundation University Journal of Psychology (FUJP) is a step forward towards this direction. The journal accepts and publishes original articles, research papers and reviews of high quality.

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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Impact of Depression, Aggression, and Self-Esteem on Students' Scholarly Execution

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Abstract

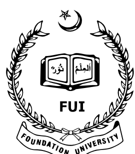
Introduction. Students at any educational level tend to face many issues which lead them to depression, aggression, and low self-esteem. They can excel in any field if they have a healthy mindset and personality. So, the principal point of this current study is to discover the effects of depression, aggression, and self-esteem on college students' scholarly execution.

Method. A cross-sectional study was conducted in which 600 students enrolled in the second-year class and 42 subject instructors were included from government institutes located in Rawalpindi and Islamabad by using the convenience sampling technique. Goldberg Depression Scale (Goldberg, 1993), Buss-Perry Aggression (1992), and Rosenberg Self Esteem scale (Rosenberg, 1965) were utilized for data collection. Further, to discover the impact of these variables on students' scholarly execution, the Academic Performance Rating Scale (APRS) for instructors was directed to educators for taking their responses about students' performance. Moreover, students' scholastic record was likewise taken out from the respective institute.

Result. The findings revealed the negative impact of depression, aggression, and self-esteem on students' scholastic execution. Further results also showed that there is a significant difference between scholarly execution of students having low, medium, and high levels of depression, aggression, and self-esteem.

Conclusion. Study findings highlighted that depression, aggression and low self-esteem have an impact on their academic career. It is strongly recommended that educational institutes need to hire school counselors and psychologists to help out students.

Keywords. *Depression, aggression, self-esteem, students, scholarly execution, education, mental health.*



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Introduction

Depression characterized by hopelessness and helplessness is considered one of the most threatening and challenging issues in today's modern world. Its most common prevalence can be found among students all around the world. It not only impacts their ability to perform daily life activities but also affects their overall personality. Depression is set apart by tragic sentiments among students which is known as a typical mental illness. National Institute of Mental Health (NIMH, 2012) found that during college life, students encounter different issues such as unhappiness, dejection, and depression (Insel & Gogtay, 2014). Depressed students regularly feel tragic sad, exposed to low self-esteem, displeasure, and diminishments in academic accomplishments. Depression meddles in their everyday life and misery related to depressed feelings leads them to low self-esteem and eventually, they start to develop aggression and anger.

Aggressive conduct is an extremely regular marvel of our everyday life. Aggression can be characterized as an activity which expected to hurt others. At the end of the day, we can say that physical or verbal conduct to hurt others is known as hostility. For instance to hurt other individuals both physically and mentally, slaps, direct affront, harm one's property, and so on. It rejects car crashes, dental medications, and sidewalk impacts. We can say the world has turned into a more brutal place now. Distinctive unmistakable mental and social issues including conduct issues, tension, and misconduct are connected with aggression (Marsee et al., 2011). A common relationship existed between scholarly execution and conduct. At the college level, low scholarly execution for the most part prompts hostility. At some points, students show aggressive conduct to end up dominating each other. Aggressive conduct of a man can harm the individual or items, such as verbal, physical attacks property destruction, and so on. Animosity can be seen as a type of conduct. The learning process makes troublesome by students' conduct which diminishes their scholarly execution and self-idea for quite a while (Taylor et al., 2007) Research has likewise demonstrated that aggressive young people show issues with self-esteem (Locke, 2009). Self is the essential accumulation of convictions about one's self. Self-esteem is known as an assessment that we make about ourselves.

Assess the self is one of the elements of the self-idea self-concept and this self-assessment is known as self-esteem. The students' scholarly self-idea academic self-concept predicts execution (Marsh & O'Mara, 2008). Low self-esteem is the inverse of high self-esteem, for instance, individuals with high self-esteem, for the most part, feel that "they are incredible," yet low self-esteem persons say "they are bad". It is not hard to comprehend that people have high self-esteem. They generally have great characteristics, need to share others' views, are willing to take risks and they believe that they will succeed so they attempt new things. Understudies having high self-esteem give better execution and stay guaranteed and certain. High self-esteem encourages scholarly accomplishment. Self-esteem is known as a central point in learning results (Lawrence, 2000). After a disappointing Low self-esteem individual gets to be discouraged. Scientists examined that understudies who were more fruitful in school had originated from all the more animating home situations (Cleveland et al., 2000).

The relationship between depression and students' scholastic execution has been inspected by numerous analysts. Depression can affect students' educational execution (Eisenberg et al., 2007). There are negative effects of depression on students' achievement. Students' achievement is contrarily related to depression. Discouraged Students with depression, for the most part invest less energy in homework and accomplish lower grade point averages. An across-the-nation overview directed by American College Health Association on college students in 2011 at two and four-year organizations reasoned that right around 30 percent of students were observed to be depressed even if it is hard to perform capacity (Assessment, 2012). Undergrads endure indications of depression, which influence their scholarly execution (Lindsey et al., 2009) Another study highlighted the strong link between mental health issues and student scholarly accomplishment. They described that students who are mentally healthy, and free from depression will show good academic performance (Khurshid & Khurshid, 2018). Whereas, Chen and his partner(2010) clarified the special impacts of aggression on social fitness and scholastic achievement of students.

Some natural components and home environment are likewise connected with aggression like swarming, clamor, and thickness. Moreover, previous studies have shown the drastic effects of aggression on students' academic performance and success (Stipek & Miles, 2008). These studies demonstrated that students who are undergoing a high level of aggression tend to perform badly in their academic performance (Khurshid et al., 2017), and even internalize and externalized aggression share a positive relationship with students' academic success (Khurshid et al., 2021).

Forceful conduct debilitates adapting in a roundabout way, For instance, forceful understudies invest generally more energy acting up which lessens the scholarly work time. While in the region of achievement, high self-esteem has not appeared to be a solid reason for good scholarly execution (Forsyth et al., 2007). Truth be told, it might be the (feeble) consequence of doing great in school. Different elements may underlie both self-esteem and scholarly execution. Concerning execution, the outcomes are blended. A few studies demonstrated that fundamentally poor scholarly achievement is not generally equivalent to low self-esteem (Pullmann & Allik, 2008). They uncovered that a huge indicator of good school execution can likewise be low broad self-esteem. Just those people who can discover the arrangement of issues and put themselves into difficulties given by others have a constructive level of self-esteem.

By looking at theoretical orientation, answers can be found about how these constructs impact one's academic struggle. The self-determination theory (SDT) answers this query in the form of motivation. Self-determination theory focuses on a person's motivation, development, and how different factors affect motivation. According to SDT, every individual has some basic psychological needs, and satisfaction of these needs promote the optimal motivational state (Ryan & Deci, 2000). Thus, this optimal motivational level tends to bring multiple outcomes in which academic achievement and well-being stand out as the most prominent (Howard et al., 2021). Another theory of educational productivity by Walberg (1982) explains psychological characteristics and the psychological environment of students drastically impact educational outcomes. In these characteristics, students' motivation, ability, psychological health, and classroom environment are more prominent (Walberg, 1982). So it can be understood easily that if students suffer from depression, aggression, and low self-esteem then they also going to experience low motivation and thus low academic performance.

Depression, aggression, self-esteem, and students' scholarly execution are additionally interrelated with each other. Investigates uncover that component of depressive manifestations among individuals matured 18 to 88 is observed to be steady by low self-esteem. Low self-esteem incorporates the side effects of Stress. Further, low self-esteem connection to individuals' danger for gloom is free of different elements, for example, upsetting life occasions (Orth et al., 2009). So, the current study was carried out to determine the impact of depression, aggression, and self-esteem on students' academic performance at the college level. So the main force o=working behind the motivation is students' satisfaction and high self-esteem.

Hypotheses

In the context of the above-mentioned aims and objectives, the following hypotheses were developed:

1. Depression, aggression, and self-esteem have a negative impact on students' academic performance.
2. There is a significant difference between students' scholarly execution and low, medium, and high levels of depression, aggression, and self-esteem

Method

The present study applied a cross-sectional study designed to fulfill the aims of the study. Through the convenience sampling technique, the sample of N=600 students and N=42 subject instructors were recruited from the government colleges located in Rawalpindi and Islamabad. The study was limited to students who are enrolled in their second year and their subject teachers.

Instruments

Depression Screening Test. To gauge the level of depression, Depression Screening Test by Ivan Goldberg, (Goldberg 1993) was applied. This scale consisted of 18 items and responses on the scale on a 5-point Likert scale, ranging from 1 strongly disagree to 5 strongly agree.

Buss-Perry Aggression Scale. A modified version of Buss and Perry's Aggression scale (Buss & Perry, 1992) was utilized to collect the data from participants. It comprised 29 items and was divided into four categories such as hostility, anger, and physical and verbal aggression.

Rosenberg Self Esteem Scale. Rosenberg self-esteem scale (Rosenberg, 1965) was applied to determine the self-esteem of students. It has 10 items scale which measures self-esteem and self-worth. It has 4 point rating scale ranging from strongly agree to strongly disagree.

Academic Performance Rating Scale. To determine the impact of these variables on students' scholastic execution, the Academic Performance Rating Scale (DuPaul et al., 1991) for educators was utilized. It is 5 points Likert scale ranging from 1 (never or poor) to 5 (all the time or great). 4 (if the number of items is seven then use e.g. rather than i.e.) APRS items (i.e., items 12, 13, 15, and 19) were conversely entered in scoring so that a higher aggregate score compared with a positive scholastic status.

Procedure

The purpose of the study was communicated and permission was obtained from respective institutes to gather the data. Informed consent was obtained from participants and they were assured that their information would be kept confidential and would be used only for research purposes. Scales were personally administered by researcher in an organized manner by students and instructors. Participants were asked to read every statement and instructions carefully. There was no strict time limit; however, participants took approximately 10 to 15 minutes to fill the given questionnaire.

Results

To determine the impact of depression, aggression, and self-esteem on students' scholarly execution, Chi-Square statistical analysis was applied.

Table 1

Difference between the Academic performance of a student across the high, medium, and low levels of depression, aggression, and self-esteem

Variables	Level	Academic Performance			Total	Chi-square tests of independence
		Low	Average	High		
Depression	Low	5	48	29	82	χ^2 (3) = 6.72,
	Medium	35	260	138	433	p = .121
	High	2	69	14	85	
	Total	42	377	181	600	
Aggression	Low	3	10	5	18	
	Medium	22	247	118	387	χ^2 (4) = 4.63,
	High	2	125	68	195	p = .211
	Total	27	382	191	600	
Self-esteem	Low	13	166	84	263	χ^2 (2) = 5.62,
	High	11	230	96	337	p = .054
	Total	24	396	180	600	

Results demonstrate the impacts of depression, aggression, and self-esteem on students' scholastic accomplishments. It revealed that there is no significant impact of depression on students ' scholastic execution, $\chi 2$ (3, N=600) = 6.72, p = .121. Esteem for measuring the relationship between two variables is low which demonstrates a moderately little relationship between depression and scholastic execution. Further, it highlights that no significant impact of aggression on the scholarly execution of understudies, $\chi 2$ (4, N=600) = 4.63, p = .211, which is more noteworthy than the alpha level of importance of 0.05. It likewise uncovered that there is no impact of aggression on understudies' scholarly execution $\chi 2$ (2, N=600) = 5.62, p = .054. Esteem for measuring the relationship between two variables is low which demonstrates a moderately low relationship between self-esteem and scholarly execution of students. Moreover, the findings demonstrate the distinction between scholarly execution of understudies having high, medium, and low levels of depression, aggression, and self-esteem. This table demonstrates that the majority of students with average and high academic performance lie in the category of moderate levels of depression and aggression. Whereas, the majority of the students with high self also exposed average academic performance.

Table 2

Chi-Square for Depression, Aggression, Self Esteem, and Academic Performance of Students

Overall Score	Academic Performance			Total	Chi-square tests of independence
	Low	Average	High		
Low		23	5	30	χ^2 (4) = 10.60,
Medium		268	109	396	p = .026
High		114	58	174	n=600
Total		405	172	600	
Symmetric Measures	Contingency Coefficient Value				.125

Finding in Table 2 given the overall effect of depression, aggression, and self-esteem on understudies' academic performance. This table demonstrated that the probability of the chi-square test statistic ($\chi 2$=10.060) is p = 0.026, less than the alpha level of significance of 0.05. The research hypothesis that "there is the negative effect of depression, aggression and self-esteem on students' academic performance" is acknowledged. So we can say that the aforementioned independent variables individually don't have an impact on the student's academic execution yet if an understudy display depression, aggression, and high or low self-esteem in the meantime then it would influence its academic performance.

The findings additionally showed a low possibility coefficient of 0.125, which demonstrated a low relationship between the aforementioned variables. results demonstrates the relationship between depression and the academic performance of understudies. To begin with, the column let us know no understudies uncovered low academic performance with a low level of depression, aggression, and self-esteem, 23 understudies with a low level of depression, aggression and self-esteem demonstrated normal academic performance, and 5 communicated high academic performance with the low level of depression, aggression, and self-esteem. The second column demonstrated that 19 understudies with a medium level of depression, aggression, and self-esteem indicated low academic performance, 268 understudies with a moderate level of depression, aggression, and self-esteem indicated normal academic performance, 109 understudies with a medium level of depression, aggression and self-esteem indicated high academic performance. Whereas the third column uncovered that 2 students with an abnormal state of depression, aggression, and self-esteem demonstrated low academic performance, 114 understudies with an abnormal state of depression, aggression, and self-esteem indicated normal academic performance and 58 understudies demonstrated high academic performance with an abnormal state of depression, aggression, and self-esteem. Thus, we can say that there is a significant difference between the academic performance of students having high, medium, and low levels of depression, aggression, and self-esteem. So second hypothesis is accepted.

Discussion

Students' academic achievement is influenced by various variables including depression, aggression, and self-esteem. A depressed mindset likewise influences behavior. Depressed individuals once in a while feel useless and exposed to aggression and low self-esteem. So the motivation behind the present study was to discover the impacts of depression, aggression, and self-esteem on understudies' scholastic execution.

The after effects of the study uncovered the negative association of depression, aggression, and self-esteem on students' scholarly execution. Further results demonstrated that there is essentialness distinction between the academic performance of understudies having different levels of depression, aggression, and self-esteem. Discoveries demonstrated that depression, aggression, and low/high self-esteem independently don't have an impact on students' academic performance, yet if an understudy displays depression, aggression, and high or low self-esteem at once then it would influence its academic performance. The discoveries likewise uncovered the relative impact of depression, aggression, and self-esteem on understudies' Academic Performance. Results uncovered that more understudies with a medium level of aggression and depression and high self-esteem uncovered normal and high academic performance. Furthermore, students with a high and low level of aggression, depression, and self-esteem show high academic performance. The aforementioned results are upheld and observed to be inconsistence by the past studies.

A study on the state of mind issue, particularly uneasiness, depression, and scholastic accomplishment results demonstrated that Females were discovered more on edge and less discouraged than males and guys are more discouraged and less on edge than females. A positive relationship between accomplishment and uneasiness and a negative connection with depression were found (Al-Qaisy, 2011). In 2003, Russell et al. led a culturally diverse study to examine the child-rearing style and personality and its effect on star social conduct, obvious aggression, and social aggression. The test was comprised of the kids, chosen from Australia and the United States. Results showed that females are occupied with social aggression, while guys use more plain aggression. Discoveries additionally uncovered disposition is not identified with the decision of forceful system, and results were not definitive as to the association between child-rearing style and social aggression. A study conducted by Khurshid et al., (2015) exposed a negative effect of depression on students' academic performance. Furthermore, a significant difference was acknowledged between the low, medium, and high levels of depression and students' academic performance. Chen et al., (2010) directed a longitudinal study in China to discover the commitments of aggression for the advancement of social skills and academic accomplishment. The outcomes indicated noteworthy aberrant consequences for social and academic results and found the commitment of Social capability and academic accomplishment on advancement, however, no impact was found on aggression. A negative impact of aggression on students' academic performance was found by Khurshid et al., (2017). However study exposed a significant relationship between academic performance and low, mild, and high states of aggression. (Khurshid et al., 2017).

A noteworthy relationship between self-esteem and scholastic execution was explored by Khalid (2003). He found that students with low self-esteem are less upbeat and get to be discouraged and forceful which impacts singular execution in an instructive setting (KHALID, 2003). Further, the more previous study highlighted that self-esteem and scholarly execution are impacted by instructors, companions, and co-curricular exercises and parental foundation and gender likewise impact self-esteem and students' scholastic execution (Okoko, 2012). Colquhoun and Bourne (2012) examined the impact of self-esteem on scholastic execution of Jamaican fourth-grade understudies and found a positive connection between self-esteem and scholarly execution.

Students with low self-esteem are less cheerful and get to be discouraged and forceful which impact singular performance in an instructive setting. Low self-esteem's connection to individuals' danger of depression is free of different elements, for example, upsetting life occasions. Negative impacts of depression were found on scholastic accomplishment. Discoveries uncovered that depressive understudies don't perform well scholastically. Further discouraged sentiments were observed to be predictable decreases in GPA (Jones, 2008). So it can be reasoned that students endure with a low level of self-esteem, and a low and abnormal state of depression and aggression consequently uncovering low scholastic execution. Furthermore, there was a huge contrast between the students' scholarly execution having a high, direct, and low level of depression, aggression, and self-esteem.

Conclusion

The results of the current study have indicated that depression, aggression, and self-esteem have a negative impact on students' academic careers. If the student has a poor mindset and always feels depressed or aggressive, tends to perform poorly in his studies. Thus as a result he is unable to achieve his aims and goals. A healthy mindset and free from negative feelings will gear up the progress to achieve set targets.

Practical Implications

The present study's findings have strong practical implications for the educational policymaker. There is a strong need to develop mental health projects to upgrade students'' self-esteem by minimizing negative emotions. Educational departments need to hire qualified school counselors and provide training to their teachers about how to help students who are undergoing depression and performing badly in their academics. Different mindfulness programs and relaxation training sessions should be conducted to improve students' coping skills and enhance their productivity. Most important educators need to understand the power of their role in students' lives. They need to improve their communications with students to understand their psychological issues and figure out the solution. Parents would also be included to improve the students' well-being. The home environment influence students in both positive and negative way and thus affect their academics. Parents need to narrow down the communication gap and be fully available to their children when they need them.

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Conflict of interest. The authors are well informed and declared no competing interests.

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Availability of data and materials. The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable request.

Ethics approval and consent to participate. Formal permission was acquried from institutional Ethical board to conduct research.

Competing interest. The authors declare to have no competing interests.

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Organizational Virtuousness and Burnout among Call Center Employees: Moderating Role of Affective Commitment

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Abstract

Objective. The present research was conducted to examine the role of organizational virtuousness in affective commitment and burnout among call center employees. It was also intended to determine the moderating function of affective commitment in predicting burnout from organizational virtuousness. In addition, group differences were also investigated across personal (gender) and organizational (job experience) demographics in relation to study variables.

Method. A purposive sample (N = 450) comprised of night shift call center employees (men = 203 and women = 247) with age range 22 to 38 years located in Islamabad and Rawalpindi. Measures of Organizational Virtuousness Scale (Cameron et al., 2004), Affective Commitment Scale (Meyer & Allen, 1997), and Burnout Scale (Erickson & Ritter, 2001) were employed to assess organizational virtuousness, affective commitment, and job-related burnout, respectively.

Results. Findings showed that organizational virtuousness positively predicted affective commitment and negatively predicted burnout while, affective commitment was negatively linked with burnout. Findings further indicated that affective commitment buffered the relationship between organizational virtuousness and burnout. Group differences revealed that men and employees with lesser work experience exhibited better perceptions of organizational virtuousness with higher level of affective commitment and lesser burnout as compared to their counterparts.

Conclusion. Inferences based on the findings of this study would bear both managerial and practical implications for HR practitioners in enhancing organizational virtuousness and affective commitment thereby minimizing the impact of negative work-related outcomes such as job burnout.

Keywords. *Organizational virtuousness, affective commitment, burnout, employees.*

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Introduction

Organizations of the modern world are facing many challenges to sustain a competitive edge in the emerging market trends. During the last decade, a parallel stream of research (Abedi & Eslami, 2014; Sun & Yoon, 2020; Williams et al., 2015) in administrative and organizational sciences has been emerged focusing on the fundamental structures and practices of the organizations which play pivotal role in shaping the behaviors of employees and subsequently determining the organizational output. In this regard, the construct of organizational virtuousness gained attention initially coined by Cameron et al. (2004). Organizational virtuousness is considered as the quest of the highest form that the human goodness can attain within organizational context where virtues such as kindness, honesty, mercy and faith are experienced at both individual and collective levels. Focus of these virtues is on excellence or strength and are those events due to which both social and personal good is produced, consequently once there is an increase in organizational virtuousness thereby leading to enhanced positivism. There are six levels across which organizational virtuousness is categorized such as courage, wisdom, justice, temperance, transcendence humanity which allowed a five-factor model comprising of organizational optimism, trust, forgiveness, integrity, and compassion (Rego et al., 2011; Yousof et al., 2020).

Affective commitment has been considered in the present study as an outcome of organizational virtuousness. Affective commitment is generally described as identification of the employee with sensitive attachment and participation in the organization (Asif et al., 2019). Meyer and Allen (2001) described the theorization of organizational commitment which primarily consisted of three components, that is, affective commitment (emotional attachment to identify and to be involved in organization) continuance commitment (responsiveness of the cost linked with exiting the organization) and normative commitment (sense of responsibility to continue employment). However, later set of studies (Abedi & Eslami, 2014; Maxwell & Steele, 2003; McGuire & McLaren, 2009) asserted that it is the component of affective commitment which pertains to the psychological and emotional bonding with one's organization, therefore, plays a vital role in manipulating considerable job-related behaviors.

Likewise, Ribeiro et al. (2018) deliberated that affective commitment can be considered as an exclusive factor to correspond in principal core construct of organizational commitment as it bears the emotional and internalized underpinnings of connection and attachment.

Another outcome of organizational virtuousness considered in the current study is job related burnout. Primarily, Maslach (2001) defined job-related burnout as propensity of doing continuous work under constant pressure that is not handled proficiently, and mainly consist of three dimensions, that is, depersonalization, overwhelming emotional exhaustion, and feelings of cynicism. Schaufeli and Bakker (2004) explained burnout as a lingering reaction to persistent interpersonal and stressors of emotions on the job often paired with associated feelings of fatigue, pessimism, and absence of efficacy.

Organizational Virtuousness, Affective Commitment and Job Burnout

Empirical Evidences

Several empirical investigations have been undertaken to provide direct and indirect evidence for the relationship among organizational virtuousness, affective commitment and job burnout. For instance, Armenio (2004) suggests that nurturing organizational virtuousness (e.g., through truthfulness, interpersonal respect, and kindness combination of elevated standards of performance and tradition of mercy and learning from mistakes) helps employees to improve emotional wellbeing and encourage feelings of dedication and commitment. Ahmed et al. (2018) asserts that positive exchanges in organizations in regard to work environment and positive emotions as experienced by people who are honored virtuous. Moshabaki and Rezai (2014) demonstrated that organizational virtuousness generates positive influence on enhancing work engagement, prosocial behavior, and affective commitment among employees. Emmons (2003) found that sense of gratefulness and gratitude in employees triggered positive perception of affective commitment. Fernet et al. (2012) also asserted that the physical and psychological atmosphere of organization affect the commitment level of the employees to their organization among call center employees.

Based on meta-analysis, Rasheed et al. (2020) inferred that perceived compensation fairness, job design, employee motivation and reasonable organizational practices are the strong correlates of affective commitment reflected in terms of motivational commitment, lowered stress, occupational job involvement, and occupational commitment. Rego et al. (2010) demonstrated that tendency to experience work-based burnout is reduced by the practices of virtuousness at workplace and moral goodness of the organization assist the employees to lessen the impact of negative outcome such as emotional exhaustion and intention to leave the organization. Similarly, additional set of studies (Ribeiro et al., 2018; Semedo et al., 2019) also affirmed that authentic leadership enhances the virtuosity of the organization which helps the employees to manage harmful repercussions of emotional and physical exhaustion and lead to greater work happiness. Further, Shepherd et al. (2011) proposed major determinants of burnout at work are the poor supervisory support, lack of humane considerations by the managers, and absence of objectivity in decisions. Sun and Yoon (2020) suggested that there is a growing anticipation from employees that organizations will take an active role in sustaining their well-being by developing organizational virtuousness which, in turn, facilitate augmented perceptions of work engagement and organizational citizenship behavior.

Moderating Role of Affective Commitment

A notable set of studies have investigated the moderating role of affective commitment in predicting various individual and collective work-related outcomes. For instance, Nielsen et al. (2011) argued that employees are shielded by affective commitment from negative outcomes that they experience at work such as mental fatigue, attention and cognitive failures, and absenteeism. Tan and Akhtar (1998) found that organizational commitment act as a cushion to prevent the negative effects of apprehensions and work-related strain. Additional evidence (Usman & Raja, 2013; Williams et al., 2015) asserted that affective commitment being a strong indicator of emotional attachment and bonding works as an internal force to protect the employees from experiencing drastic effects that they might encounter while performing their occupational obligations.

Model of Job Demands-Resources (Bakker & Demerouti, 2007) offered plausible explanation for the buffering role of affective commitment in terms of psychological resource which when accompanied by positive organizational determinants such as person-oriented leadership, compassionate managerial supervision coupled with mutual trust and honesty serve as an accelerating force to diminish the drastic impact of many undesirable work-related behaviors. Additionally, it has been rigorously found that affective commitment tend to enhance (as a moderator) job related wellbeing (Van Driel & Berry, 2012); work engagement, psychological ownership (Yogamalar & Samuel, 2019) as well as minimizing the impact of employee exhaustion (Yücel et al., 2020) and emotional labor (Hakanen et al., 2018).

Diverse group differences across gender and job experience in relation to study variables have been highlighted in empirical literature. For instance, it has been found that men managers in vehicle manufacturing firms expressed augmented perceptions of supervisor support, procedural justice and lower inclinations of burnout as compared to their women managers (Ashill & Rod, 2011; Kurian, 2018; Semedo & Coelho, 2019)). Similarly, Quing (2019) demonstrated that positive perceptions of organizational support, job-related wellbeing, and job commitment with lesser inclinations of work-based emotional exhaustion have been endorsed more by male telecommunication employees than female workers. However, indigenous studies (Abbas et al., 2022; Ahmed et al., 2018) reported nonsignificant gender differences in terms of organizational virtuousness, person-oriented leadership, and turnover intentions. On the parameter of job experience, set of mixed findings has been documented, such as, Yogamalar and Samuel (2019) and Halliden and Monks (2005) declared that work experience may act as a facilitating factor in overcoming task-related hurdles but restrain coping with organizational stressors. Similarly, Moshabeki and Rezaei (2014) asserted that as time passes by in the same organization, employees may face the performance plateau and encounter problems in moving forward with respect to their professional growth. Additional set of studies (Falatah & Conway, 2019; Iqbal et al., 2022) highlighted a consensus in establishing a linear relationship between elevated favorable perceptions of organizational commitment, departmental support, and intrinsic motivation to flourish among newly inducted employees; while team-based problem solving is better among experienced employees.

Rationale

Primary motives in designing the present study are based on multiple reasons. Foremost, the construct of organizational virtuousness has been adequately examined in the context of organizational settings as an outcome of leadership styles and managerial support. However, there is dearth of research on the predictive role of organizational virtuousness in manipulating various organizational outcomes. Therefore, the present study attempted to investigate the possible influence of organizational virtuousness on employees' level of commitment and experiences of job burnout. Moreover, affective commitment and burnout have been focused in prior studies as personal factors which would function in relation to personal dispositions. Nonetheless, literature is relatively silent about the possible outcome role of these personal factors which carry long term repercussions for both job performance and task efficiency. Hence, the current study strives to address this gap by considering the constructs of affective commitment and burnout at workplace in crucial response to organizational virtuousness. In the present study, night shift employees of call centers have been specifically focused. Mainly call centers are characterized as places of work having devoted telephone employee positions, in which the staff use technologies of computer and telephone at the same time as interacting with customers and clients (Benner, 2006). According to Hauptfleisch and Uys (2006), job requirements of the call centers are diverse, yet, equally demanding in nature to maintain a pressurizing balance across inbound-outbound calls, innovative information system and virtually relating with clients. Most recently, native set of studies (Abbas et al., 2022; Iqbal et al., 2022; Naseem et al., 2022) further added that employment in private sector (inclusive of call centers) is usually exemplified by casual and part time with low wages and lack of proper training. Therefore, focusing on employees of call centers for the present study owing to its uniqueness from other regular organizations in terms of repetitive nature of work, lesser flexibility in job hours, and intensely demanding nature of occupational precision. In addition, night shift call center workers had to bear additional strain of odd timings of duty with fewer support from familial and organizational domains. Hence the present study intended to investigate the relationship between organizational virtuousness, affective commitment, and burnout among call center employees. It also attempted to determine the role of personal (gender) and organizational (job experience) factors in relation to organizational virtuousness, affective commitment, and burnout among call center employees.

Hypotheses

To achieve the above-mentioned objectives, the following hypotheses were phrased:

1(a). Organizational virtuousness will positively predict affective commitment and negatively predict job burnout.

1(b). Affective commitment will negatively predict job burnout.

2. Affective commitment will moderate the relationship between organizational virtuousness and job burnout.

3. Male employees would reflect better perceptions of organizational virtuousness and affective commitment and lesser burnout as compared to female employees.

4. Employees with minimal work experience would reflect favorable perceptions of organizational virtuousness and affective commitment and lesser burnout as compared to their counterparts.

Method

Sample

A sample (*N* = 450) constituted employees of night shift call centers located in Rawalpindi and Islamabad were selected by purposive sampling. Respondents included both men (*n* = 203) and women (*n* = 247), with age ranged from 22 to 38 years (*M* = 28.17 SD = 6.05). Education level of the respondents was intermediate (*n* = 212) and graduates (*n* = 238). Job designation of the participants included customer support representatives (*n* = 227), operational managers (*n* = 135), and team leaders (*n* = 88). Additional criteria were to take only those employees with minimum job duration of at least one year in the present organization and two years of overall work experience.

Instruments

The following measures were used:

Organizational Virtuousness Scale (OVS). To assess, perceptions of organizational virtuousness, the scale developed by Cameron et al. (2004) was used. It consisted of 29 items and responses were to be rated on 5-point Likert scale, ranging from *Strongly Agree* (5) to *Strongly Disagree* (1). Possible score range that could be attained on OVS was 29-145 where high scores were indicative of better perceptions of organizational virtuousness. The Cronbach alpha for the total scale was reported as .89 (Cameron et al., 2004) although, in the present study alpha coefficient of .84 was achieved for the total OVS, while the coefficient of internal consistency ranged from .71 to .77 of subscales of OVS.

Affective Commitment Questionnaire (ACQ). Originally derived from the Organizational Commitment Questionnaire (Myer & Allen, 1997), ACQ consisting of 7 items was employed to assess affective commitment of the employees. Responses were on 5-point Likert scale, ranging from *Strongly Agree* (5) to *Strongly Disagree* (1) with possible score range of 7-35 where high score on this scale indicated higher level of affective commitment. The Cronbach alpha for the ACQ was reported as .84 (Myer & Allen, 1997) by original authors whereas, adequate reliability index (.81) was developed for this scale in the current study.

Job Burnout Scale (JBS). To assess subjective perceptions of work-related burnout, JBS (Erickson & Ritter, 2001) was employed. The unidimensional scale consisted of 7 items to be responded on 5-point Likert scale, ranging from *Never felt this way while at work* (1) to *Felt this everyday* (6). Possible score range on Job Burnout Scale was 7-35 and high score on this scale showed elevated level of work-based burnout. Satisfactory reliability indices were reported for JBS (.89 Erickson & Ritter, 2001) whereas, alpha coefficient of .85 was obtained in the present study.

Procedure

Appointments were obtained before visiting every call center. Official permission from Admin/HR heads of the respective organizations (Call Centers) were also sought. Informed consent was taken from every participant and was assured about the confidentiality of any personal information shared by respondents during data collection. Participants were also briefed about their right to quit at any time if they feel uncomfortable. Afterwards, respondents were graciously thanked for their time and support towards the study.

Results

Multiple linear regression was computed to determine the predictive role of organizational virtuousness and affective commitment in job burnout. In addition, hierarchical multiple regression was tabulated to establish the moderating role of affective commitment in predicting job burnout. Finally, independent sample t-test and one-way ANOVA was done to examine the group differences along gender and job experience.

Table 1
Multiple Linear Regression Analysis Predicting Job Related Burnout (N = 450)

	Job Burnout					
Predictors	***B***	***SE***	***β***	***p***	R^2	ΔR^2
Constant	49.62	4.43				
Age	.13	.08	.10	.27		
Education	.07	.15	.03	.31		
Organizational Virtuousness	-.84	.05	-.41	.00	.34	.32
Affective Commitment	-.58	.12	-.36	.00	.27	.24

Note. Age and education are entered as controlled variables

Results presented in Table 1 showed that organizational virtuousness and affective commitment are significant negative predictors of job-related burnout. It has been found that organizational virtuousness explained 34% variance while affective commitment accounted for 27% variance in job related burnout thereby providing substantial support for H1a and H1b.

Table 2

Moderation of Affective Commitment for Organizational Virtuousness in Predicting Job Related Burnout (*N* = 450)

Predictors			Job Related Burnout	
			95% CI	
	B	*t*	*LL*	*UL*
Constant	123.13**	11.03**	101.16	145.10
Organizational Virtuousness	-1.34**	-5.53**	-1.81	-0.86
Affective Commitment	-11.20*	-3.65*	-17.23	-5.17
Org. Virtuousness x Affective Commitment	.15*	2.76*	0.12	2.38
	R^2 = .19	ΔR^2 = .04	F = 23.58**	

Note: Org. = Organizational

* $p < .01$. ** $p < .00$.

Figure 1. Moderating Role of Affective Commitment in Predicting Job-related Burnout From Organizational Virtuousness

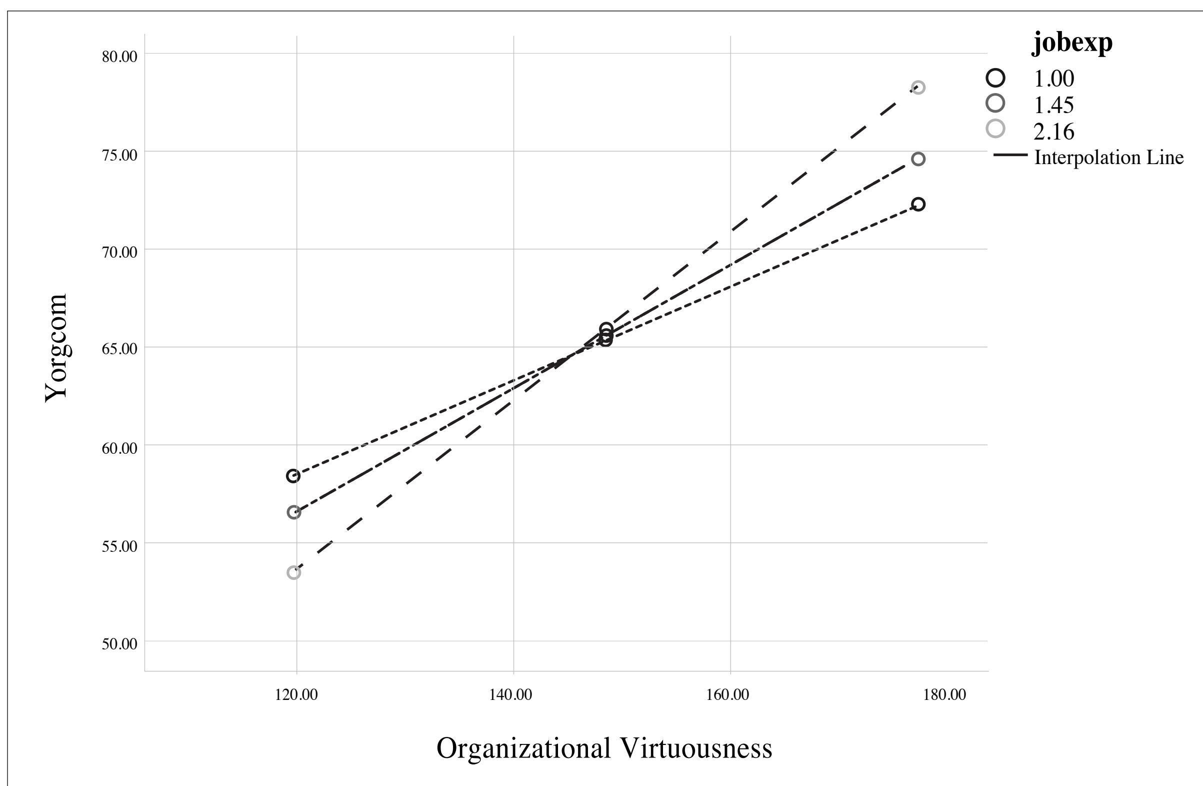

Table 2 and Figure 1 shows the moderating role of affective commitment for organizational virtuousness in predicting job related burn out among employees. The main effect of organizational virtuousness is significantly negative in predicting of job-related burn out, while affective commitment is also predicting job related burn out negatively. Upon addition of 4% variance, the interaction effect is significant indicating that perceived affective commitment is moderating the relationship between organizational virtuousness and job-related burn out. Moderation of affective commitment for organizational virtuousness in leading to job related burn out revealed that high level of organizational virtuousness sharply decreased job-related burn out with increase in affective commitment. This shows that affective commitment acts as a buffer in reducing feelings of job-related burn out and help employees to sustain on their job. These results offer reasonable support for H2.

Table 3

Gender Differences on Study Variables (*N* = 450)

Variables	Men (*n* = 203)		Women (*n* = 247)		*t*	*p*	95% CI		Cohen's *d*
	M	*SD*	*M*	*SD*			*LL*	*UL*	
Org. virtuousness	116.20	10.24	112.07	10.93	2.42	.02	1.59	5.63	.36
Aff. commitment	23.96	5.43	19.42	4.32	3.37	.01	0.74	6.65	.41
Job burnout	18.56	6.81	22.36	5.22	4.54	.00	1.4	3.82	.48

Note: Org. = Organizational Aff. = Affective

Table 3 indicate significant gender differences revealing that male employees exhibited better perceptions of organizational virtuousness and high levels of affective commitment with reduced experiences of job-related burn out. These results offer substantial support for H3.

Table 4

Group Differences on Job Experience Along All Study Variables (*N* = 450)

Variables	1 - 3 Years (*n* = 289)		3.1-6 Years (*n* = 161)		*t*	*p*	95% CI		Cohen's *d*
	M	*SD*	*M*	*SD*			*LL*	*UL*	
Org. virtuousness	82.47	10.61	76.22	9.81	6.43	.00	-7.08	-1.01	.71
Aff. commitment	23.91	5.03	20.00	5.43	4.05	.01	-3.52	-0.44	.43
Job burnout	19.94	4.79	24.65	5.11	5.32	.00	-5.13	-1.68	.67

Note: Org. = Organizational Aff. = Affective

Table 4 shows significant differences along overall job experience. Job experience tenure is divided into two groups with respect to work experience ranging from 1 – 3 years and the other group with 3.1 – 6 years. It has been found that employees having lesser work experience reflected better perceptions of organizational virtuousness, elevated levels of affective commitment and lesser experiences of job-related burnout. These findings provide grounds for the support of H4.

Discussion

The present study attempted to examine the role of organizational virtuousness and affective commitment in job related burnout among call center employees. Findings of the study indicated that organizational virtuousness positively predicted affective commitment and negatively predicted job burnout. These findings can be best explained within the context of job demands-resources model (Bakker & Demerouti, 2007) advocating that cultured organizational factors such as fair practices in distribution of work and rewards play pivotal role in encouraging desirable work behaviors such as organizational commitment, job satisfaction and improved work performance.

This model further asserts that feelings of trust and faith inculcated by seasoned organizational practices often lead to reduced counterproductive work behaviors such as turnover intentions, job related stress and cognitive failures. Armenio et al. (2004) also deliberated that fostering organizational virtuousness (e.g., through honesty, interpersonal respect, and compassion combining high standards of performance with a culture of forgiveness and learning from mistakes) is likely to promote a more committed workforce. In addition, organizational support in terms of good managerial practices and compassionate leadership styles enhances positive and desirable work-related behaviors such as job performance (Schwartz, 2002), job optimism (Ugwu, 2012), and institutional affiliation (Halbesleben & Wheeler, 2008).

Results further showed that affective commitment negatively predicted job-related burnout. Falatah and Conway (2019) proposed reasonable explanation in support of these findings. They argued that affective commitment bears the emotional and psychological sense of belongingness to one's occupational place which serve as a catalyst to conserve motivation and impulse to adhere to the organization thereby reducing intentions of turnover and also overcoming the feelings of emotional exhaustion and depersonalization. Sohrab et al. (2011) found that burnout is a negative experience which is usually triggered by the lack of optimal personal (lack of association with one's organization) and organizational (poor supervisory support) factors. Additionally, Usman and Raja (2013) found that ability to cope up with tasks of the job and the loyalty to the organization is a strong precursor of employee's experiences of job insecurity, burnout, and job related wellbeing. Fernet et al. (2012) concluded that dedication and commitment with the industrial place or institute serve as an inspiring factor for the employees to reduce the impact of many devastating personal (job related mental fatigue, attention, and task execution errors) and organizational (absenteeism, lateness, and accidental loss) outcomes.

Findings of the study also revealed that affective commitment act as a moderator in the relationship between organizational virtuousness and job-related burnout. The buffering effect of affective commitment has been extensively highlighted in numerous studies (e.g., Emmons, 2003; Moshabeki & Rezaei, 2014; Rasheed et al., 2020; Rego et al., 2011) asserting that affective commitment is primarily an internalized concept of connectedness and emotional attachment to one's workplace which serve as a cushion to protect the employees from various adverse personal and organizational behaviors. In addition, Meyer, and Allen (2001) emphasized that among three types of organizational commitment (i.e., continuance, affective, and normative), only affective commitment has the strong potential to safeguard the employees from experiencing unfavorable repercussions in occupational health and performance strains. Later, Maxwell and Steele (2003) reported protective impact of affective commitment against job stress and counterproductive work behaviors among employees of hospitality management.

Recently, Sun and Yoon (2020) also found that affective commitment buffers the relationship between authentic leadership and turnover intentions.

Findings further indicated that male employees reflect better perceptions of organizational virtuousness and affective commitment and lesser burnout as compared to women employees. A rational justification is inferred from the evidence (Asif et al., 2019) declaring that men are more likely than women to hold jobs with commitment-enhancing features on the basis of their improved work engagement and creativity. Numerous studies (Ahmed & Anwar, 2018; Nielsen et al., 2011; Rasheed et al., 2020) conclusively found that female employees tend to report unfavorable perceptions of supervisory support, uneven opportunities of managerial promotions, and fewer prospects of attaining the highest level of executive leadership owing to glass ceiling effect. Likewise, several evidences (Ashill & Rod, 2011; Kurian, 2018; Semedo & Coelho, 2019) deliberated that women worker are inclined to be more emotionally exhausted and accounted elevated levels of job-related stress, burnout, psychological distress, and intentions to quit the job. Bakker and Demerouti (2007) explained this discrepancy in terms of social roles that many female workforces have to encounter due to multiple societal tasks that they have to comply both at work and family front. This, in turn, is likely to elevate the poor equation between demands and available resources thereby causing an additional strain for the female workers. On the other hand, Quing (2019) suggested that promoting women's integration in non-work-related interactions in the department (e.g., eating out together, sharing leisure activities, having conversations about personal matters) may be a useful strategy in making them more likely to want to stay at the institution and become more committed.

Results also revealed that employees with lesser work experience expressed favorable perceptions of organizational virtuousness, enhanced magnitude of affective commitment, and minimal experiences of job-related burnout. These findings can be convincingly justified in the context of organizational virtuousness theory (Cameron et al., 2004) proposing that employees joining the new organization tend to focus on the major strengths of their workplace which subsequently helps them in making adjustment and developing emotional attachment with the organization.

This notion is further endorsed in later studies (Fernet et al., 2012; Hakanen et al., 2006; Halbesleben & Wheelar, 2008; Sohrab & Khurram, 2011) inferring that interpersonal conflict and poor administrative supervision is less likely to be noticed and reported by freshly inducted employees and new employees have a propensity to report more engagement and organizational embeddedness in predicting their job performance. Conversely, Maslach and Leiter (2005) illustrated that employees with extended work experience and occupancy in the current organization described elevated levels of job-related strain, work overload and burnout. McGuire and McLaren (2009) demonstrated that workers of call centers with lesser job period in the current organization scored higher on the indicators of employee loyalty and wellbeing. Relatively recent study (Hwang, 2019) also endorsed that new employee believed that loyalty and performance at work are the major parameters to assure their stay in the office with the supportive role of organizational culture in which employee settles, develop recognition of job essentials and expect rewards in return of their good work.

Limitations and Suggestions

The present study bears few potential limitations which should be kept in consideration while inferring the results and contributions. Firstly, with restrictive capability of the present study by using correlation design may not offer causal interpretations in relation to study variables. Hence, longitudinal design could be undertaken in upcoming studies which would provide more insight regarding the changes over a period of time. Secondly, measures used in this study were based on self-report perceptions and quantitative nature of instruments thereby, limiting the in-depth and diverse objectivity of the information. Hence, the use of qualitative techniques such as interviews and focus group discussions on the future investigations may offer more response variability and diverse angles of the constructs to be captured. Thirdly, sample was taken from only Islamabad and Rawalpindi call centers which may represents a selected geographical area. Hence, results may be inferred with caution with respect to generalizability of the findings. Finally, inclusion of single occupational group would not be able to provide more detailed interplay of the study constructs. Therefore, it is recommended that inclusion of diverse organizational setups could be considered in future endeavors so as to offer more in-depth understanding of the phenomenon.

Lastly, other related constructs such as supervisor support, distributive and procedural justice could be investigated in the context of organizational virtuousness which would provide a better comprehensive understanding of the occupational strengths of the organizations.

Implications

Findings of the present study would offer numerous pragmatic applications. Firstly, results inferred from the current study would be beneficial for the leaders working at middle level management to optimize the functioning of the employees by enhancing perceptions about the organization. This, in turn, would expand positive psychological and behavioral outcomes such as organizational commitment, citizenship behavior, and overall job performance. Secondly, keeping in view the findings of the study, HR practitioners may develop outline of the job design in a manner that can foster employees' behaviors based on transparency, authentic, and unconditional moral goodness towards others. This would bring healthy consequences in regard to both individual (e.g., organizational commitment, job satisfaction) and managerial (e.g., organizational efficiency, productivity) outcomes. Thirdly, counselors of industrial sciences may develop training modules for executive leadership in promoting policies for highlighting the organizational strengths on humane and existential terms. It would not only supplement the trusted repute of the organizations but also boost the morale of their employees thereby augmenting the loyalty and commitment with their occupational settings and reduces the dark side of burnout and turnover intentions.

Conclusion

This study attempted to determine the relationship among organizational virtuousness, affective commitment and burnout. Findings showed that organizational virtuousness positively predicted affective commitment and negatively predicted job burnout while affective commitment is negatively related with job related burnout. In addition, affective commitment has been found to moderate the relationship between organizational virtuousness and burnout by acting as a buffer against the burnout. Significant group differences are found on gender and job experience.

Declaration

Consent for publication. Consent approved by the authors

Availability of data and materials. Not Applicable

Competing Interests. The authors are well informed and declared no competing interests.

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Psychological Issues among Individuals with Chronic Illnesses: A Multi-Informant Perspective in Pakistan

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Abstract

Background and Objective. Individuals with the chronic illnesses also experience the psychological issues along with the physiological ones. These psychological issues have devastating effects on the overall health of these individuals. It has been evident from the literature that the psychological issues are deteriorating their quality of life (Awopetu, Omadu & Abikoye, 2017). Current study was conducted to discover the psychological issues of individuals with chronic illnesses (i.e., cardiac, diabetes and cancer).

Method. Focus Group discussions were conducted by using multi-informant approach to provide a broader picture. The focus group guides were prepared following the Self-determination Theory (Deci & Ryan, 2004), the Diathesis–stress model (Ingram & Luxton, 2005), and the Disability-Stress-Coping Strategy (Wallander & Varni, 1998). Twenty-four focus group discussions (1-6 focus groups with individuals having chronic illnesses, six with caregivers of the individuals having chronic illnesses, six with the doctors treating these patients and six were conducted with nurses and paramedical staff) comprised of 6-9 members each.

Result. After the collection of data, it was organized and coded after which themes were generated by using the content analysis approach (Berelson, 1952). Generated themes have provided the major indicators of psychological issues and these are crying spells, sleeping difficulty, sadness, hopelessness, loss of interest in life, appetite problems and loss of interest in everything, aggression (physical and verbal).

Conclusion. Findings have its implication for caregivers and professionals working with the patients i.e. the doctors, nurses, paramedical staff etc. It may also help the doctors to consider the psychological condition of the patients while treating their physiological problems.

Keywords. *Chronic illness, multi-informant approach, psychological issues, loss of interest, sadness, sleeping difficulty.*

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Introduction

The individuals with chronic illnesses also develop psychological issues (Turner & Brain, 2000). Chronic diseases or medical condition always accompanies the diminished self-esteem, personal worth and self-efficacy of an individual (Bedrov & Bulaj, 2018). Psychological issues include depression, anxiety etc. anxiety disorders and adjustment disorder are common among cancer patients (Gregurek et al., 2010; Hadi, Asadollahi & Talei, 2009; Pasquini & Biondi, 2007). Higher rates of depression, anxiety and many other problems are being commonly observed in heart patients (Ilic & Apostolovic, 2002; Zafar, 2022). Depression is commonly reported among individuals with chronic diseases like heart diseases, diabetes, asthma, cancer etc. (Clarke & Currie, 2009).

Chronic diseases are not completely curable but are manageable. Diabetes is a condition which really requires a complex self-management and medical treatment. Holistic approach is needed to deal with such patients. Psychological interventions can be used to treat common mental health problems in diabetes (Britneff & Winkley, 2013). These psychological problems may take any form (Verhaak, Heijmans, Peters & Rijken, 2005) i.e., depression and other negative mood related problems (Brown, Nicassio, & Wallston, 1989). Depression is common among diabetics (Anderston, Freedland, Clouse & Lustman, 2001; Lewko & Misiak, 2015; Solowiejczyk, 2010). In a meta-analysis, the odds of having depression were two-fold in patients with diabetes compared with those without. Many psychological issues of chronically ill patients are being reported by their caregivers (Taylor, 2006).

The World Health Organization (WHO) has reported that the seven of the top ten causes of death in 2010 were chronic diseases, among those chronic diseases, heart diseases, cancer and diabetes are considered as a leading cause of death (CDC, 2014; NVSS, 2013). Approximately half (117 million) of US adults have at least one of the 10 chronic conditions examined (i.e., hypertension, coronary heart disease, stroke, diabetes, cancer, arthritis, hepatitis, weak or failing kidneys, current asthma, or chronic obstructive pulmonary disease (Ward, Schiller & Goodman, 2014).

Considering the situation of Pakistan, the prevalence of chronic diseases is increasing day by day. As reported by WHO (2005), 60% of deaths worldwide and 80% in developing countries, like Pakistan, have been reported due to neglected health issues and chronic diseases (Abegunde, Mathers, Adam, Ortegon, & Strong, 2007; WHO, 2005). Jafar et al (2013) have anticipated that the 3.87 million Pakistanis will lose their lives between 2010 to 2025 due to NCDs (Non Communicable Diseases) like cardiovascular diseases, cancers and chronic respiratory diseases. They also highlighted that the economic burden associated with NCD deaths will also rise from $152 million to $296 million during these years (Jafar et al, 2013).

It has been indicative from the literature that chronic illnesses are accompanied by psychological issues i.e., certain psychological disorders are common among cancer patients (Audrey, 1988, Bodurka-Bevers et al., 2000; Carroll, Kathol, Noyes, Wald, & Clamon, 1993; Katon & Sullivan, 1990; Kugaya et al., 2000), cardiac patients (Friedman, 2000; Katon & Sullivan, 1990) and diabetics (Anderson, Freedland, Clouse, & Lustman, 2001; Lustman, Clouse, Griffith, Carney, & Freedland, 1997). As most of the times these psychological issues go unattended and unnoticed by the health practitioners but these issues play a significant role in aggravation of these symptoms and eventually hampers the treatment process. This fact is indicating a dire need to assess the psychological condition of the patients.

Daughter of cancer patient reported that her father said that "let me alone. No more treatments" (cited in Taylor, 2006). According to doctors the patients are more in a hopeless condition and as one of the diabetic patient on doctor's suggestion she bursts out sadly and started crying and said on doctor's advice that "she has tried everything but nothing works" (Greenberg, 2007).

However, health professionals working with these chronic patients often identify psychological problems and disorders associated with their diseases. Moreover, about two out of three patients with serious psychological problems remain undiagnosed (Hermanns, Kulzer, Krichbaum, Kubiak, Haak, 2006; Pouwer, Beekman, Lubach & Snoek, 2006).

Therefore, it is very important for the healthcare professionals to be able to identify these problems with ensuring their treatment and ongoing support (Britneff & Winkley, 2013). Most of the researches done on exploration of psychological issues are either done only with patients (Anderston, Freedland, Clouse & Lustman, 2001; Brown, Nicassio & Wallston, 1989; Lewko & Misiak, 2015; Solowiejczyk, 2010) or the caregivers or the doctors (Mitnick, Leffler & Hood, 2009), there is a less research on having all these perspectives (patients, caregivers, doctors, nurses and paramedical staff) under one umbrella of research. There is an exigent need to conduct a research that may focus on the psychological issues of patients by taking all the perspectives into consideration including patients themselves, doctors, caregivers, nurses and paramedical staff. Literature provide evidences that multi-informant approach for chronically ill patients provide broader and in depth information as compared to single informant (Mandelbaltt, Figueiredo & Cullen, 2003). Keeping in view the significance of topic and methodology, the present study was conducted to fill this gap of literature.

Methods

For the exploration of the psychological issues among individuals with chronic illnesses the Focus Group Discussions (FGDs) were conducted. Focus groups have been reported as a suitable method for the exploration of such sort of research questions (Morgan, 1996). 24 focus group discussions were conducted in the Pakistan Institute of Medical Sciences Islamabad (PIMS).

Focus group guides

On the basis of the literature review (Crane, 1981; Dahlem & Deffenbacher, 2001), and different theoretical models i.e., the Self-determination Theory (Deci & Ryan, 2004), the Diathesis–stress model (Ingram & Luxton, 2005), and the Disability-Stress-Coping Strategy (Wallander & Varni, 1998) focus group guide for patients, caregivers, doctors, nurses and paramedical staff were prepared. The examples of questions are: What type of difference you feel in your life after this disease? With physiological problems, what other problems you are suffering from after this disease? If psychological one then what they are? Please explain detail what these psychological issues are? Probing questions were also generated under each question for getting a breath of responses. Focus group discussion guides covered different categories i.e., chronic illness, change in behavior, emotions, cognition and feelings of the patients associated with the chronic illness.

Participants

Focus group comprised of 43 patients (16 cancer patients, 13 diabetic patients and 14 cardiac patients). These patients were taken from wards of Oncology, Cardiology, and General Medicine Department of PIMS. Age of the patients ranged from 25 to 63 years. These patients were married and belonged to lower socio economic status as most of the patients are getting treatment with the help of Pakistan Bait-ul-Mal, social welfare services of the hospital.

Similarly, 6 FGDs were conducted with the caregivers as well. 48 caregivers (17 caregivers of diabetic and cancer patients, 14 caregivers of cardiac patients) were approached for the FGDs. Only those caregivers were included who volunteered to participate in discussions to share their opinions.

6 FGDs were conducted with doctors 33 doctors (21 females and 12 males) were approached for the FGDs. These were doctors of individuals with chronic illnesses at Pakistan Institute of Medical Sciences.

6 FGDs conducted with nurses and paramedical staff (Pakistan Institute of Medical Sciences Islamabad), those who are dealing with patients from last at least 6 months. 35 nurses and 16 paramedical staff members were approached for the FGDs.

Procedure

The standard procedure (Chrzanowska, 2002) was executed to conduct series of FGDs. The participants (patients, caregivers, doctors, nurses and paramedical staff) were approached with the permission of the hospital authorities. The consent was taken from the participants, and these discussions were conducted in the side room of the wards. The participants (patients, caregivers, doctors, nurses and paramedical staff) those who were only having one chronic illness at a time were included, whereas those who had co-morbidity were excluded. The well trained moderator and note taker were accompanying by the observer in the FGDs. After describing confidentiality measures the session was started. It took almost one hour and forty-five minutes to complete the focus groups. The moderator commenced the sessions with introductions and then by asking generally how they were feeling then the respondents were asked to state their chronic condition. Firstly, the topic to be addressed was introduced and then the respondents asked to briefly discuss their various conditions and symptoms. Next the respondents discussed the psychological issues, they were facing from.

In the end of every session the moderator summarized the major points and participants were asked to add any information they believed to be important and to comment on the accuracy of reflection. The best efforts were made to have as homogeneous group as possible. A series of FGDs were conducted till the saturation point. The order of putting the question was rotated in every focus group, so that the order effect on the responses of the participants could be minimized.

Data analysis and Results

The information gathered through the FGD was analyzed with the help of content analysis approach (Berelson, 1952). Content analysis helps in determining the characteristics of content, to develop the insight about the sources or producers of the content and also to determine the effects of content upon the audience (Feliciano, 1967). It is defined as "a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (Berelson, 1952, p. 17). The researcher organized the data, after this the data was coded and then themes were generated. After the data analysis by the researcher the committee approach was conducted. This committee of experts revisited the statements and themes. This committee comprised of 2 health psychologists, 2 M.Phil and 2 Ph.D (psychology) scholars. They have extensive knowledge about the psychological issues of individuals with chronic illnesses and qualitative research. They first independently gone through the statements and themes, then it was checked that whether they all have consensus on the given themes or not. It was found that they have consensus on all the given themes. To explore the inter-rater reliability Krippendorff's Alpha was computed as it is the standard reliability statistic (inter-rater reliability) for content analysis and similar data (Hayes & Krippendorff, 2007).

Table 1

Krippendorff's Alpha for inter-rater reliability of coders (*N* = 6)

N	Krippendorff's Alpha
6	.89

Result in table 1 indicates that the Krippendorff's Alpha is .89 which is high reliability, which indicates that the six coders did agree on themes.

The results of the FGDs indicated that the individuals with chronic illnesses feel low and sad as 32 years old cancer patient have said that "بہت اُداسی ہے" sadness is very common among them as mentioned by the mother of cardiac patient that "بہت اُداس رہتی ہے۔" Doctors and nurses of the cardiac, cancer and diabetic patients have also reported the same thing about the patients "ہر وقت اداس رہتے ہیں۔". They wanted to be alone and in FGD's almost every patient has reported it, as 50 years old cardiac patient said that "اکیلے رہنے کا دل کرتا ہے۔" According to the caregivers, doctors and nurses of these patients they wanted to be alone all the time and have no interest in life "ان کا اکیلے رہنے کا دل کرتا ہے۔" they wanted to be all alone.

They also experience the feelings of hopelessness in their life, as 32 years old cancer patient said that "بہت نا امیدی ہے۔" their caregivers also mentioned the same thing about them as mother of cancer patient said that "بہت نا امیدسا رہتاہے۔ جیسے زندگی سے بےزار ہوں۔" .Doctors and nurses have also reported that the cancer, diabetic and cardiac patients have intense feelings of hopelessness as one of the doctor said that "ہروقت ناامید رہتے ہیں۔ جس طرح سے زندگی سے بےزار ہوں۔" doctors, nurses and paramedical staff have clearly mentioned that individuals with chronic illnesses have diminished hope about the disease and it's outcomes. They have lost all their interest in life and its activities. It is commonly experienced by cardiac, diabetic and cancer patient as one 45 years old cancer patient said that "سب کچھ جیسے ختم ہوگیا ہوں۔ , کسی چیز میں دل نہیں لگتا۔", one 40 years old diabetic patient said that "کسی سے بات کرنے کا بھی دل نہیں کرتا۔" furthermore one patient said that "لگتا ہے جیسے زندگی ختم ہوگئی ہے۔" they are uncertain about their future as 45 years old cancer patient have said that "کبھی کبھی سمجھ نہیں آتی کہ آگے کیا ہوگا۔" they are not sure about their future. They have lost interest in everything they also experience sleep disturbances as 45-year-old cancer patient reported that "نیند بھی جیسے ختم ہی ہو گئی ہے۔ساری رات پڑی رہتی ہوں پر نیند نہیں آتی۔" along with the sleep their appetite also gets affected as 32 year cancer patient said that "کھانے پینے کو دل نہیں کرتا۔" they don't want to live even.

The FGD's also highlighted that these individuals who are with chronic illnesses also experience anger as 50 years old cancer patient said that "کبھی کبھی دل کرتا ہے کہ چیزیں اُٹھااُٹھاکے پٹخوں۔بہت غصہ آتا ہے۔" .40 years old diabetic patient said that "پہلے کبھی اتنا غصہ نہیں آتا تھا جتنا اب آتا ہے۔" .32 years old cardiac patient said that "بے وجہ غصہ کرنے لگی ہوں۔ کبھی کبھی کنٹرول ہوتا ہے اور کبھی کبھی نہیں۔" their caregivers and paramedical staff have also mentioned the same thing.

Through the analysis the most commonly reported psychological issues were highlighted.

Table 2

Statements and indicators of patients for the information provided as an understanding of psychological issues among individuals with chronic illnesses

Statements by patients	Indicators
Feel like life is meaningless.	Hopelessness
End of this disease is death I feel like life is moving towards its end.	
I am sure I will not survive.	
I know every single patient who suffers from cancer will die soon and I will also die soon.	
Most of the heart patients have painful death and I know I will also die with it.	
Feel like crying a loud.	Crying spells
Don't know why I all the time want to cry.	
Feels like life is aimless.	
Don't have any interest in doing anything.	Loss of interest
Have sleeping difficulty. I use to spend hours on bed but unable to sleep.	Sleeping difficulty
Have appetite problem. Sometimes I don't want to eat anything.	Appetite problems
Sometimes food is in front of me and I don't want to eat.	
I have developed anger after this disease.	Anger
Sometimes I feel it's difficult to control aggression.	
Sometimes I react without good reason.	
I have no control over my anger.	
Feel like hitting others	
Common statements by caregivers	
Their behavior is changed after this disease.	Loss of interest
They have loss interest in life.	
She doesn't have any interest in anything.	
His eyes are always fill with tears and sometimes unable to calm her down from crying.	Crying spells
All the time he uses to be sad.	Feelings of sadness
She is unable to sleep properly. Mostly she lies on bed for hours but is unable to sleep not even at night.	Sleeping difficulty
They feel like they will not get well.	Hopelessness
Most of the time we request him to eat but she always refuses.	
On our numerous request he use to take food but of very less amount.	Appetite problems
Because of negative thoughts they react aggressively.	Negative thoughts
Before this disease he was very polite.	Change in behavior
Common statements by doctors, nurses and paramedical staff	
They have lost all hopes.	Loss of hopes
They have firm faith that they will die soon.	Hopelessness
On every statement patient show less or no interest.	Loss of interest
They are least interested in doing anything.	Uncertainty
Because of uncertain future they react aggressively	Anger
Sometimes they report that they wanted to shout loudly	
Sometime behave aggressively.	

With the help of the content analysis the data was analyzed and the above mentioned indicators were identified from the data. The data revealed that the indicator of hopelessness is identified by patients, caregivers, doctors, nurses and paramedical staff. Crying spells and difficulty falling in sleep were identified by patients and caregivers. Loss of interest and irritability is identified by patients, caregivers, doctors, nurses and paramedical staff. Shouting and behaving aggressively was identified by patients themselves, caregivers, doctors, nurses and paramedical staff. Following is the table indicating the frequency percentages of all participants (patients, caregivers, doctors and paramedical staff) on different indicators of psychological issues.

Table 3

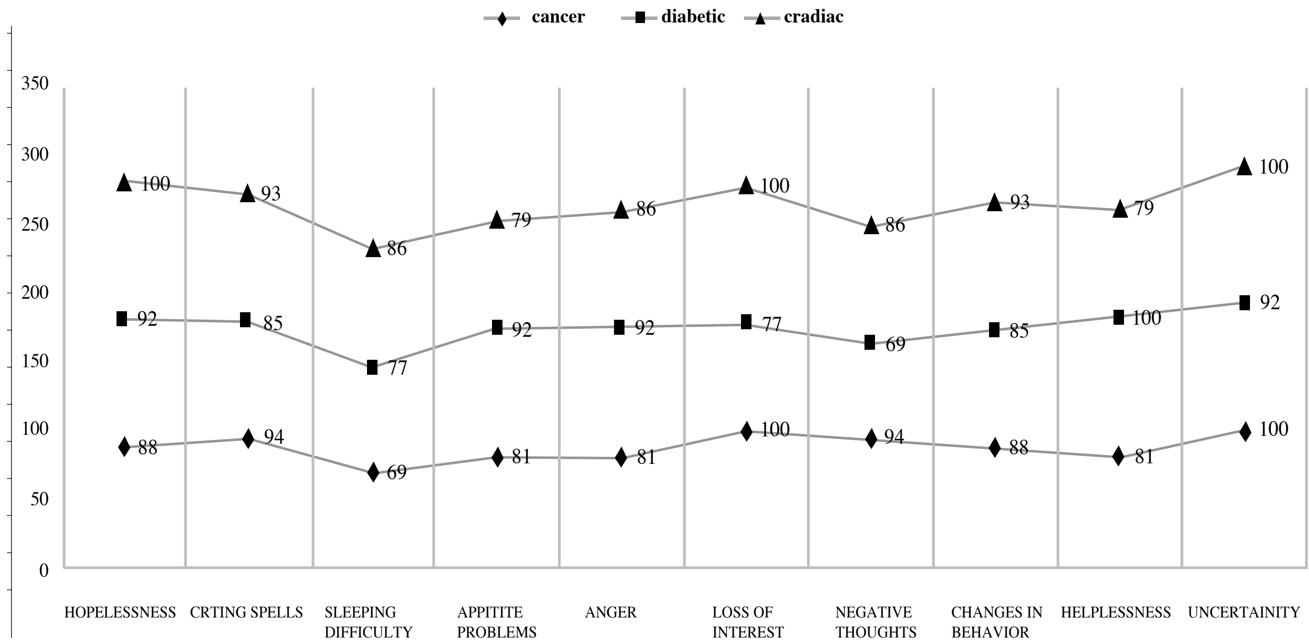
Frequency percentages of psychological symptoms of individuals with chronic illnesses, which are reported by them, their doctors and their caregivers

	Individuals with Cancer			Individuals with Cancer			Individuals with Cancer			Doctors	Caregivers
	Total *f (%)*	*Females* *f (%)*	*Males* *f (%)*	*Total* *f (%)*	*Females* *f (%)*	*Males* *f (%)*	*Total* *f (%)*	*Females* *f (%)*	*Males* *f (%)*		
Hopelessness	14 (88)	9 (100)	5 (71)	12 (92)	9 (100)	3 (75)	14 (100)	8 (100)	6 (100)	30(92)	46(95)
Crying Spells	15 (94)	9 (100)	6 (86)	11 (85)	9 (100)	2 (50)	13 (93)	8 (100)	5 (83)	30(90)	43(90)
Sleeping Difficulty	11 (69)	6 (67)	5 (71)	10 (77)	8 (89)	2 (50)	12 (86)	8(100)	4 (67)	29(89)	43(90)
Appetite Problems	13 (81)	7 (78)	6 (86)	12 (92)	9 (100)	3 (75)	11 (79)	8(100)	3 (50)	30(90)	43(90)
Anger	13 (81)	6 (67)	7 (100)	12 (92)	8 (89)	4 (100)	12 (86)	7 (88)	5 (83)	26(80)	38(80)
Loss Of Interest	16 (100)	9 (100)	7 (100)	10 (77)	9 (100)	1 (25)	14 (100)	8(100)	6 (100)	27(82)	40(83)
Negative Thoughts	15 (94)	9 (100)	6 (86)	9 (69)	8 (89)	1 (25)	12 (86)	8 (100)	4 (67)	27(82)	40(83)
Changes In Behavior	14 (88)	7 (78)	7 (100)	11 (85)	9 (100)	2 (50)	13 (93)	8 (100)	5 (83)	28(85)	40(84)
Helplessness	13 (81)	8 (89)	5 (71)	13 (100)	9 (100)	4 (100)	11 (79)	7 (88)	4 (67)	30(90)	46(95)
Uncertainty	16 (100)	9 (100)	7 (100)	12 (92)	9 (100)	4 (100)	14 (100)	8 (100)	6 (100)	31(95)	47(97)

The results in table 3 indicate the frequency percentages of all the patients on psychological symptoms which are reported by them, their caregivers, doctors, nurses and paramedical staff.

Following graph is presenting the overall percentage of psychological symptoms of individuals with chronic illnesses.

PSYCHOLOGICAL ISSUES AMONG INDIVIDUALS WITH CHRONIC ILLNESSES



Graph is showing the complete comparative picture of the psychological issues which are reported by those individuals who are having chronic illness. These symptoms are commonly reported by these patients.

Discussion

Chronic illnesses or diseases are the major cause of death and disability worldwide. In Pakistan, chronic diseases or illness are projected to account for 42 percent of all deaths. The burdens of chronic illnesses like cancer and many others in which patient faces, not only include deteriorating health, but also a significant decline in the quality of Life and substantial working disability (Awopetu, Omadu & Abikoye, 2017; Short, Vasey & Bellue, 2008). The present study was conducted to explore the psychological issues among individuals with chronic illnesses. This study is providing the multi-informant approach to provide a broader and clear picture about psychological issues because it is assumed that patients sometimes exaggerate the problems and sometimes cannot properly report their problems so it is necessary to get the information from some other sources.

Literature highlighted that most of the researches done on exploration of psychological issues are either done only with patients (Anderston, Freedland, Clouse & Lustman, 2001; Awopetu, Omadu & Abikoye, 2017; Lewko & Misiak, 2015; Solowiejczyk, 2010) or the caregivers or the doctors (Mitnick, Leffler & Hood, 2009), there is a less research on having all these perspectives (patients, caregivers, doctors, nurses and paramedical staff) in one research. There is a need to have a research which explains the psychological issues of patients by having the perspectives of all informants by using multi-informant approach, including patients themselves, doctors, caregivers, nurses and paramedical staff.

In order to have a detailed picture of the psychological issues among individuals with chronic illnesses, the FGDs were conducted. On the basis of the literature review (Crane, 1981; Dahlem, & Deffenbacher, 2001), and different theoretical models i.e., the Self-determination Theory (Deci & Ryan, 2004), the Diathesis–stress model (Ingram & Luxton, 2005), and the Disability-Stress-Coping Strategy (Wallander & Varni, 1998) focus group guides for patients, caregivers, doctors, nurses and paramedical staff were prepared. Probing questions were also generated under each question for getting a breath of responses. FGD guides covered different categories i.e., chronic illness, change in behavior, emotions, cognition and feelings of the patients associated with the chronic illness.

After FGD the data was analyzed with the content analysis method. The data was organized, coded separately and then themes were generated through content analysis approach, which is widely used to have a detailed and in-depth analysis of qualitative data (Berelson, 1952). Through the analysis the most commonly reported psychological issues were crying spells, difficulty in sleeping, sadness, hopelessness, aggression (verbal and physical), loss of interest (in everything) and appetite issues. Literature also indicated that these issues are common among individuals with chronic illnesses (Anderston, Freedland, Clouse & Lustman, 2001; Lewko & Misiak, 2015; Solowiejczyk, 2010). Furthermore, the data revealed that the indicator of hopelessness is identified by patients, caregivers, doctors, nurses and paramedical staff. Crying spells and difficulty falling in sleep were identified by patients and caregivers. Loss of interest and irritability is identified by patients, caregivers, doctors, nurses and paramedical staff. Shouting and behaving aggressively was identified by patients themselves, caregivers, doctors, nurses and paramedical staff.

After the data analysis by the researcher the committee approach was conducted. This committee of experts revisited the statements and themes. This committee comprised of 2 health psychologists, 2 M.Phil and 2 Ph.D (psychology) scholars. They have extensive knowledge about the psychological issues of individuals with chronic illnesses and also expert in qualitative research. The chronic diseases increase the chances of severe psychological issues i.e., diabetes increases the risk of depression (Anderston, Freedland, Clouse & Lustman, 2001) which is consistent with the results of present study. Results of the present study revealed that depressed mood and anger is common among cardiac patients and literature also indicated this fact (Ilic & Apostolovic, 2002; Solowiejczyk, 2010). Caregivers and doctors also mentioned that the patients have crying spills and develop hopelessness, in other words a depression. In a meta-analysis, the odds of having depression were two-fold in patients with diabetes compared with those without. Depression is also reported by the caregivers of the chronically ill (cancer) patients (Taylor, 2006). Daughter of cancer patient reported that her father said that "let me alone. No more treatments" (cited in Taylor, 2006). According to doctors the hopelessness is very common among patients, as one of the diabetic patient on doctor's suggestion she bursts out sadly and started crying and said to the doctor that "she has tried everything but nothing works" (Greenberg, 2007).

Anger, guilt and sadness have been reported by chronically ill patients (Shapiro, 1996). Present study results also revealed the incidence of anger among individuals with chronic illnesses. The most common psychiatric disorders in cancer patients are depression, anxiety disorders and adjustment disorders (Gregurek et. al, 2010). The increasing number of persons suffering from major chronic illnesses faces many obstacles in dealing with their painful condition and unable to get the psychological support and information. Heath care programs are developed by the government to deal with all the issues related with the chronic illnesses (Wagner, Austin, Davis, Hindmarsh, Schaefer & Bonomi, 2014). It is important to explore the psychological issues of the individuals with chronic illnesses for their better treatment outcomes so it is very important for the healthcare professionals to identify those affected, ensure they receive appropriate care and provide ongoing support (Britneff & Winkley, 2013).

Conclusion

Chronic illnesses are silent killers as their symptoms are more evident in the latter stages or in the last stages in which survival is minimal. They never come alone, they always accompany certain problems and sometimes the disease in itself is not very dangerous but the complications lead the early deaths in patients. Psychological issues are very common among individuals with chronically illnesses. Present study highlighted the fact that these psychological issues are effecting the patients most and it has been evident with the multi-informant approach (patients, caregivers, doctors, nurses and paramedical staff) that these are not only reported by patients themselves but also the people around them. The common issues are crying spells, sleeping difficulty, sadness, hopelessness, loss of interest in life, appetite problems and loss of interest in everything, aggression (physical and verbal). So it is loud and clear that chronic illnesses are great burden in society but this burden is manageable with proper planning.

Limitations and recommendations

In the present study only three chronic illnesses were taken and only focused group discussion were conducted. The other chronic illnesses should be studied in the future researches and multimethod approach should be used for detailed and clearer explorations. The mixed approach can be used by opting the multi-informant and multimethod approach for detailed description and explanation about chronic illnesses.

Declaration

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Availability of data and materials. The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable request.

Authors contributions. SY: study design, literature search, manuscript preparation, data collection and analysis. RH: literature search, manuscript revisions, analysis, approval of the final version.

Ethics approval and consent to participate. The integrate study was approved by the National Institute of Psychology Review Board. Consent was obtained from all participants.

Competing interest. The authors declare to have no competing interests.

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Exploring the Role of Family Dynamics in Suicide Attempt: Indigenous Perspective

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Abstract

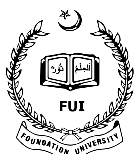
Background and objectives. In recent years, incidences of suicide appear to have increased in Pakistan and suicide has become a major public health problem. Present qualitative inquiry aimed to explore different family dynamics that leads to suicide attempt.

Method. In present study collective case study was used as research strategy. Research participants were recruited through purposive sampling strategy. Sample comprised two female suicide attempt survivors, aged 24 and 25 years. Semi-structured interviews were used as a tool of data collection.

Results. The findings of the study revealed that in family dynamics, parental neglect, hostility, disregard, bundles of restrictions, lack of warmth and communication gap had the leading role towards suicide attempt in young adults. Moreover, findings showed that conflictual relationship with parents and siblings makes an individual feel worthless, and consider self as burden for the family. It is also emerged from the data that parental disputes had devastating effects in life of young adults. Psychological outcomes of all sorts of unhealthy family dynamics were worthlessness, hopelessness and suicidal ideation ultimately leading to suicidal attempt.

Conclusion. Research findings contribute to a meaningful understanding of how suicide risk is increased by unhealthy family dynamics and paved the way for an effective intervention plan.

Keywords. *Family dynamics, suicide attempt, conflicts, communication gap, worthlessness, hopelessness.*



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Introduction

The rates of suicidal attempts among adolescents and young adults, ages 15 to 25 years, have increased substantially during the past decade (WHO, 2014). More than 700 000 people die due to suicide every year. Suicide is the fourth leading cause of death among 15-19 year-olds. 77% of global suicides occur in low- and middle-income countries. Ingestion of pesticide, hanging and firearms are among the most common methods of suicide globally (WHO, 2019). In recent years, incidences of suicidal have increased in Pakistan and suicide has become a major public health problem (Shekhani et al., 2018: Khan, 2007; Agha, 2001). Brent (1993) have found among adolescents with a psychiatric disorder, that past suicidal ideation with a plan is as strongly associated with completed suicide.

Suicide, an act of deliberately killing one's own self, emerges from a population of suicide ideators. Suicide and suicidal behavior has long been regarded as a serious social problem. Suicidal ideation is defined as thoughts about suicide which may be as detailed as a formulated plan, without the suicidal act itself (Bo Bi et al. 2010). Suicidal ideation has been identified as both a common antecedent and a significant risk factor for suicidal attempt and complete suicide (Gliatto, Michael & Anil, 1999).

The social environment plays an important role in shaping individuals' behavior and preparing them for life's challenges. The family as a social resource is viewed as an important regulating mechanism of society in that stable families contribute towards a stable society (Thompson, 2012). The way family members live and interact with each other makes family dynamics. Family patterns has deep relation with individual personality, so if family dynamics are unhealthy individual would be affected. Better formation from the family improve the adolescent's mental growth and there by benefits the society whereas unstable family patterns can lead adolescents towards self-destructive behaviors like suicide (Evans, 2004).

Empirical Evidence consistently found lower levels of family cohesion among the families of suicidal youth as compared to the families of non-suicidal psychiatric subjects and healthy controls (Gencoz & Or, 2006). Individuals with family problems commonly manifest a suicidal attempt, which highlights the importance of family environmental factors when assessing suicide risk (Xing et al., 2009). So, the present research aimed to explore different family dynamics that leads to suicidal attempt.

Rationale

In an adolescent's world, the family dynamics are of paramount importance because their lives are centered initially around their families so family becomes the primary agent of socialization (Zhang et al., 2011). This special significance of family dynamic has important consequences in the life of an individual. Low family cohesion and support (Reams, & Jacobs, 1982) as well as familial conflict and dysfunction (Gencoz & Or, 2006) can lead to suicidal behaviors or can indirectly aggravate risks through depressive symptoms. In Pakistan, family is a very strong institution and has a deep impact on the individual's life. So, it is of great importance to explore family dynamics in relation with a suicide attempt, which is now a days very alarming issue in Pakistani youth.

Research question

What are the family dynamics leads to suicide attempt?

Sub questions

- What sort of parental relationship contributes towards suicide attempt?
- What sort of sibling relationship contributes towards suicide attempt?
- What is the role of parent's marital relationship in contributing towards suicidal attempt?

Method

Research strategy. Present qualitative research is based on collective case study. As in present inquiry, two suicide attempt survivor cases were chosen for within and cross case analyses.

Sampling strategy. Purposive sampling strategy was used to select the research participants. Specifically, among purposive sampling, intensity sampling was used which contains information rich cases that manifest the phenomenon intensely but not extremely. Sample comprised two unmarried female participants aged 24 and 25 years. Sample was taken from Government Sector Universities of Pakistan. The education of case 1 and case 2 participants was graduation and matric respectively.

Inclusion criteria

- Physically and medically healthy female participants.
- Female participants with atleast one suicide attempt.
- Duration after suicidal attempt less than 4 months.

Demographic information of cases. ***Case I.*** Factitious code 01 was assigned to participant. She was young unmarried female of 24 years. She had education till graduation. Her mother was of strict nature and her father was not alive; he died due to blood cancer. She had 4 sisters and no brother. She was the youngest child among siblings. She lived in a nuclear family system with her parents, one sister was married. She was teacher in private primary school.

Case II. Factitious code 02 was assigned to participant. She was young unmarried female of 25 years. Her education was matriculation. She had 3 sisters and two brothers. She was the youngest child among her siblings. All siblings were married. She lived in a joint family system with her parents and two married brothers.

Data collection tool. For the purpose of investigation semi-structured interview guide "containing questions regarding family dynamics (Relationship with Parents, sibling relationship, relationship between parents) and suicidal attempt" was developed by the committee which comprised researchers and subject matter experts. Interview guide was developed in Urdu language. The duration of each interview was approximately 45 to 50 minutes. Each interview was audio-taped then interview data were transcribed and subsequently analyzed to facilitate the development of themes.

Procedure

Data was collected from two females who attempted suicide 4 months earlier. The participants were identified through purposive sampling strategy. Written consent was taken from both participants. Interviews were conducted in distraction free room and participants were seated comfortably on couch. Each participant was interviewed face to face using the semi-structured method of open-ended questions. Confidentiality of data was assured to participants. Within case analysis of both cases and cross case analysis on common themes of both cases were completed. Results were reported and discussed.

Results

The first stage of analyzing the data involved focusing on one transcript, this stage included reading and re-reading the text and making notes of any initial thoughts and observations. The second stage was to identify and label themes that were emerging from the data. In the third stage the researcher proceeded to connect the themes within the transcript and thus formed 'clusters of themes'. The fourth stage involved constructing a summary table of the structured themes, together with verbatim from the transcript that illustrate each theme. The themes within the table only included themes that capture something about the quality of the participant's experiences of the phenomena. The four stage process was then applied to the next transcript from which themes were identified and clustered together with the themes from the first transcript.

Within case analysis I. ***Method of suicide attempt.*** She attempted suicide by taking an overdose of sleeping pills. It was her first suicidal attempt. Her family environment was stressful, there were several conflicts in her family. Her family was going through financial crisis. She had feelings of worthlessness and hopelessness that contributed to her suicidal attempt.

Relationship with Parents. Parental relationship refers to how parents interact with their offspring. Themes that emerged from data analysis of this category are as follows:

Communication Gap. For the purpose of current study, communication gap is defined as when individuals cannot express to each other. Participant listed lots of complaints about her relationship with parents. She wanted to have warm, caring parents but she did not have. She reported her mother very strict person who can only express anger and cannot understand other's point of view. She also told that she cannot share anything with her mother even if she wants to.

امی بہت سخت مزاج ہیں۔بات بات پرڈانٹ دیتی ہیں۔ ویسے بھی کچھ شیئرنہیں کیا جا سکتا ان سے۔ وہ کچھ نہیں سمجھتی غصہ کرتی ہیں۔ امی سےرشتہ اتنا close نہیں ہے۔ امی سے کوئی بات شیئرنہیں کرتی۔

Neglect. In present study, neglect in relationships refers to give little attention or disregard towards the participants by family members. Participant sadly expressed that her mother never loved her never paid attention to her. She also told that her mother always humiliated her for being girl. As she was last born among her sisters so at her birth her mother desperately wanted to have a boy but again it was a girl that's why she never attained love, care and warmth that she deserves to get from her parents.

کبھی پیار نہیں دیا امی نے کبھی توجہ نہیں دی۔

Hostile. Hostile means feeling or showing dislike or opposition marked by malevolence or having an intimidating, antagonistic, or offensive nature while talking with someone. Participant revealed her mother's hostile attitude by telling that her mother always disregarded her daughters especially participant for being girl. Her mother never gave respect to her and always being very ironic on all her daughters that was quite disappointing for participant.

امی یہ کہتی ہیں میرا کوئی بیٹا ہوتا میرا سہارہ بنتا۔۔پھر ہم ساری بہنوں کو بہت دکھ ہوتا ہے۔ان کی یہ باتیں سن کے ۔طعنے مارتی ہیں بیٹی ہونے کے کوئی عزت نہیں دی جاتی۔

Restrictions. Restrictions is defined as to keep or confine within limits. Participant reported that parents put lots of limitations on everything life feels static. No personal decisions were allowed no one could live life of their own choice. Further participant reported.

بہت پابندیاں ہیں یہاں نہین جانا وہا ں نہیں جانا۔دوستوں کےساتھ نہیں جانا۔ اور کبھی چلے جاو اور دیر ہو جائے تو بہت ڈانٹ پڑتی ہے۔اکثر تو اجازت ملتی ہی نہیں۔اگر کچھ کرلو اپنی مرضی سے تو ناراضگی ہو جاتی ہے۔ جھگڑے ہوتے ہیں۔ اس لیے میں کچھ کرتی ہی نہیں۔ گھر میں ہر لحاظ سے بہت سختی ہے۔

Sibling Relationship. Sibling relationship is defined as, the way siblings in a family interacts with each other. Themes that emerged from data analysis of this category are as follows:

Conflicts. For the purpose of analysis, Peterson (1983) definition of Conflicts was used, and he defined conflicts as inter personal process that occurs whenever the actions of one person interfere with actions of other persons. Participant reported that there were always conflicts between siblings on little things.

بہنوں کی آپس میں زیادہ تر لڑائیاں ہی ہوتیرہتی ہیں آپس میں بہت ہی زیادہ ۔ ۔چھوٹی چھوتی باتوں پر جھگڑا ہوتا ہے۔

Communication Gap. Participant's siblings were having lack of communication. There was lack in sharing anything with each other rather a sort of cold distant relationship existed between them as reported by participant.

کوئی بہن خیال نہیں رکھتی کسی کا۔لڑائیاں نہ بھی ہوں تو آپس میں بات چیت بہت کم ہوتی ہے۔ بہت کم ہوتا ہے کہ کبھی اکٹھے بیٹھ جائیں۔ورنہ عام طور پر ایسا نہیں ہوتا بس سب چپ چپ ہی رہتے ہیں۔ ایک دوسرے سے باتیں شیئر نہیں کرتے۔

Selfishness. Selfishness is showing concern excessively with oneself, seeking or concentrating on one's own advantage, pleasure, or well-being without regard for others. Sibling's relationship in participant's family was quite selfish as no one care for other person. Participant reported in interview that

میں نے اپنی کبھی بھی اپنی بہنوں میں یا گھر میں یہ چیز نہیں دیکھی کے سب مل بیٹھ کے کسی مسلے کا حل نکالیں ہر کسی کو اپنی اپنی پڑی ہوتی ہے۔ ہر کوئی اپنی فکر کرتا ہے۔دوسرے کی کوئی پروہ نہیں کرتا۔ کوئی بھی چیز گھر میں اجائے سب لڑنے لگتے ہیں کے یہ میں نے لینی ہے یہ میں نے لینی ہے۔

Relationship between Parents. Relationship between parents refers to how parents interact with each other. Themes that emerged from data analysis of this category are as follows:

Conflicts. Participant told that her parents always had conflicts and they use to scream on each other every day. Financial crisis was one of the reasons of fight between parents. Another main reason of all time conflicts was, that her mother didn't have son. Because of that her parents always use to feel irritated and exhausted and her father always blamed her mother for not having son.

امی ابو کی لڑائیاں ہوتی تھی۔ امی ابو کو بیٹا نہیں دے سکی یہ وجہ ہوتی تھی لڑائی کی۔ خرچہ بھی زیادہ تھا۔

Dissatisfaction. Dissatisfaction have been defined as the state of being displeased, discontented, or uneasiness proceeding from the want of gratification. Participant's parents used to feel dissatisfied form their life and the main reason of that dissatisfaction was not having a son in their life.

دونوں مطمین نہیں تھے اپنی زندگی سے۔

Psychological Outcomes. In present study psychological outcomes are what participant feels about herself and life. Themes that emerged from data analysis of this category are as follows:

Worthlessness. Worthlessness for the purpose of analysis is defined as feeling one own self of no, dignity and value. Participant shared her feelings of worthlessness by telling that she felt herself a burden for family and assumed that after her death her family's problem would be resolved.

مجھے لگا میرے مرنے کے بعد میری فیملی کے مسلے حل ہو جائیں گے۔ کسی کو کوئی پریشانی نہیں ہوگی۔ پہلے سب روئیں دھوئیں گے لیکن بعد میں سب ٹھک ہو جائیں گے۔

Hopelessness. Hopelessness refers to having no expectation of good or success. Participant revealed that she is not hopeful regarding her life and future. She also showed feelings in entire interview that life will be always be the same.

بس نہ امید ہو گئی ہوں اپنی زندگی سے ---اور مستقبل سے بھی۔

Loss of interest in life. Loss of interest in life refers to when person doesn't find life charming and colorful anymore. Participant depicted same kind of loss of interest in life because her family was quite heedless and irritating; no one in her family could understand her. She used to share her problems with her friends that she should have discussed with her sisters and parents. So as she reported.

مجھے زندگی میں کوئی دلچسبی نہیں رہی۔ میں دوسروں کو دیکھتی ہوں کہ سب کے گھر والے اتنے اچھے ہوتے ہیں آپس میں خوشی سے رہتے ہیں لیکن میرے گھر ایسا کچھ بھی نہیں ہے۔

Suicidal ideation. Participant was having suicidal ideations very frequently whenever some critical moment came in her life. As participant reported that

مشکل وقت میں سوچ تو ہمیشہ آتی ہے کہ مار لوں خود کو ۔ لیکن کیا میں نے صرف ایک بار ہے۔ لیکن جب بھی کوئی پریشانی آتی ہے تو یہ سوچ آتی ہے کہ خودکشی کر لوں۔

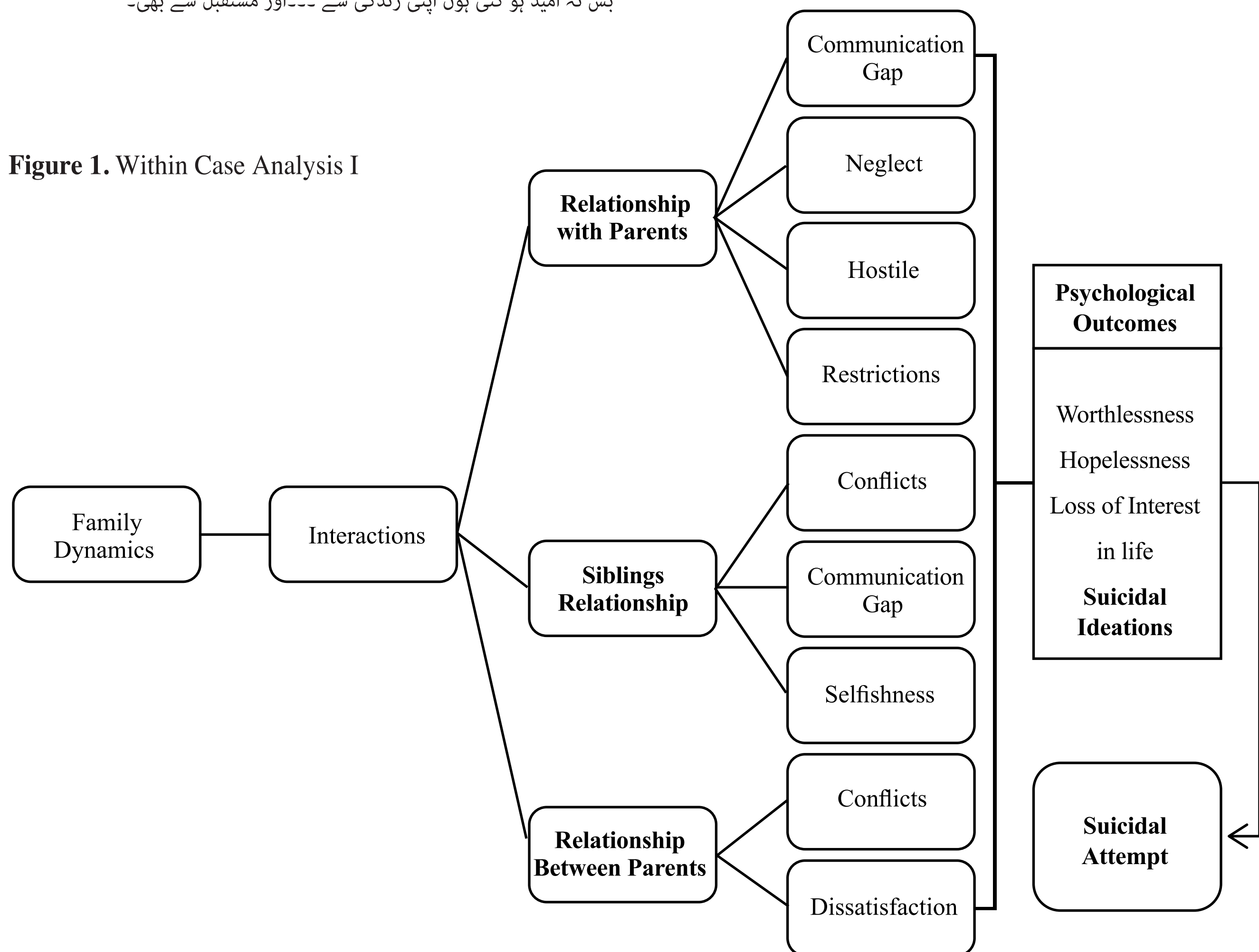


Figure 1. Within Case Analysis I

Within Case Analysis II. ***Method of suicide attempt.*** She attempted suicide by taking overdose of sleeping pills. Sleeping pills were recommended by doctor to her one tablet daily because she had complained of sleeplessness but during stress she used it for suicide. She didn't tell anyone about her decision of suicide attempt. Her family environment was stressful; there were several conflicts in her family (i.e. Conflict with parents, conflict between siblings and conflict between parents). Participant had feelings of worthlessness and wish to die that might lead her towards suicidal attempt.

Relationship with Parents. Themes that emerged from data analysis of this category were as follows:

Communication gap. For the purpose of this study, communication gap was defined as something when there is no proper communication between family members. Participant reported that she could not share her feelings and thoughts to her parents. She had a distant relationship with his father. She was reserved from her family. She showed a need for love and care from her father. She wasn't not involved in any family decisions. Decisions of the family were taken by mother and elder brother. She never shared her feelings and thoughts with her mother.

میرے والد ہم سے دور دور رہتے ہیں۔ وہ شروع سے ہی ایسے ہیں۔وہ ہمارےمیں نہیں بیٹھتے۔میرادل کرتا ہے کہ میرے والد مجھےپیسے دیں ۔لیکن وہ کہتے ہیں کہ بھائی سے لو۔ گھر کے فیصلے بھی امی کرتی ہیں۔ یا بڑے بھائی کرتے ہیں۔ہمارے والد کا زیادہ عمل دخل نہیں ہے ہمارے گھر میں۔میریوالدہ مجھ سے بہت پیار محبت کرتی ہیں۔نہیں والدہ کو نہیں بتاتی[باتیں] میری والد اور والدہ سے بہت ہی کم بات چیت ہوتی ہیں۔

Restrictions. For the analysis restriction was defined as limitations or rules set by the family which cannot be broken, either explicit or implicit. Participant wasn't allowed to look outside the door and to go outside the house. If she had to go, she should go with brother. She had to take permission from elder brother if she wanted to arrange meeting with friends. It pictured a complex restricted family environment.

ایک حد تک جتنی لڑکیوں کو ہوتی ہے مگرہم باہر نہیں دیکھ سکتے۔ باہر نہیں جا سکتے ۔آپنے علاقہ کاہنہ میں تو بالکل نہیں جا سکتے۔جانا ہو تو بھائی لے کے جاتے ہیں۔گھر میں رہ کر جو مرضی کرو۔ اگر کچھ خاص کرنا ہو تو بڑے بھائی یا والدہ سے اجازت لینی ہوتی ہے۔اگر کسی سے غلطی ہو جائے تو ہم اس سے ناراض ہو جاتے ہیں۔اس سے بات نہیں کرتے۔کبھی لڑائی ہوجاتی ہے۔

Sibling relationship. Sibling relationship was defined as the way siblings in a family interact with each other. Themes that emerged from data analysis of this category were as follows:

Injustice. For the current study, Injustice was defined as gross unfairness. Participant was facing difficulty of injustice at home. Her brothers were being unfair to her. They didn't take her to shopping and she was deprived of money as well.

میرے بھائی میری بھابیوں کو خود شاپنگ کرواتے ہیں۔ ہماری دفعہ صرف تھوڑےسے پیسے دے دیتے ہیں کہ جا کہ کر لو۔اپنی بیویوں کو زیادہ دیتے ہیں۔میرادل کرتا ہے کہ میرے والد دیں مجھےپیسے اور زیادہ دیں لیکن وہ کہتے ہیں کہ بھائی سے لو۔

Incoherence. Here incoherence specifically means lack of cohesion among family members. Participant reported that her family lack coherence. Everyone had their isolated life. After the marriage of siblings, everyone got busy in their own family. She reported that we never had a family lunch and dinner together.

نہیں سب علیحدہ علیحدہ کھاتےہیں۔میں کبھی امی اور بھانجی کے ساتھ کھا لیتی ہوں۔بھائی بھابیوں ساتھ اور ابو الگ ہی کھاتے ہیں۔بہن بھائی اپنی اپنی زندگی میں مصروف ہیں۔

Communication gap. Communication gap for the analysis of this study, was something when there is no proper communication between siblings. In participant's family, a communication gap was existed. She reported that she could not share her feelings and thoughts with her siblings.

امی سے باتیں نہیں کرتی۔ہم بہن بھائی ایک دوسرے سے باتیں شیئربہت کم کرتے ہیں۔ چھوٹا بھائی تو بالکل نہیں کرتا باقی پھر بھی کر لیتے نہیں۔

Relationship between Parents. Themes that emerged from this category are as follows:

Conflict. Participant told that relationship between her parents was conflictual. They always disagreed with each other.

میرے والدین بہت زیادہ لڑتے ہیں۔شروع سے ہی ان کی آپس میں نہیں بنتی۔بات ہی نہیں مانتے ایک دوسرے کی

Psychological Outcomes. In present study psychological outcomes are what participant feels about herself and life Themes that emerged from data analysis of this category are as follows:

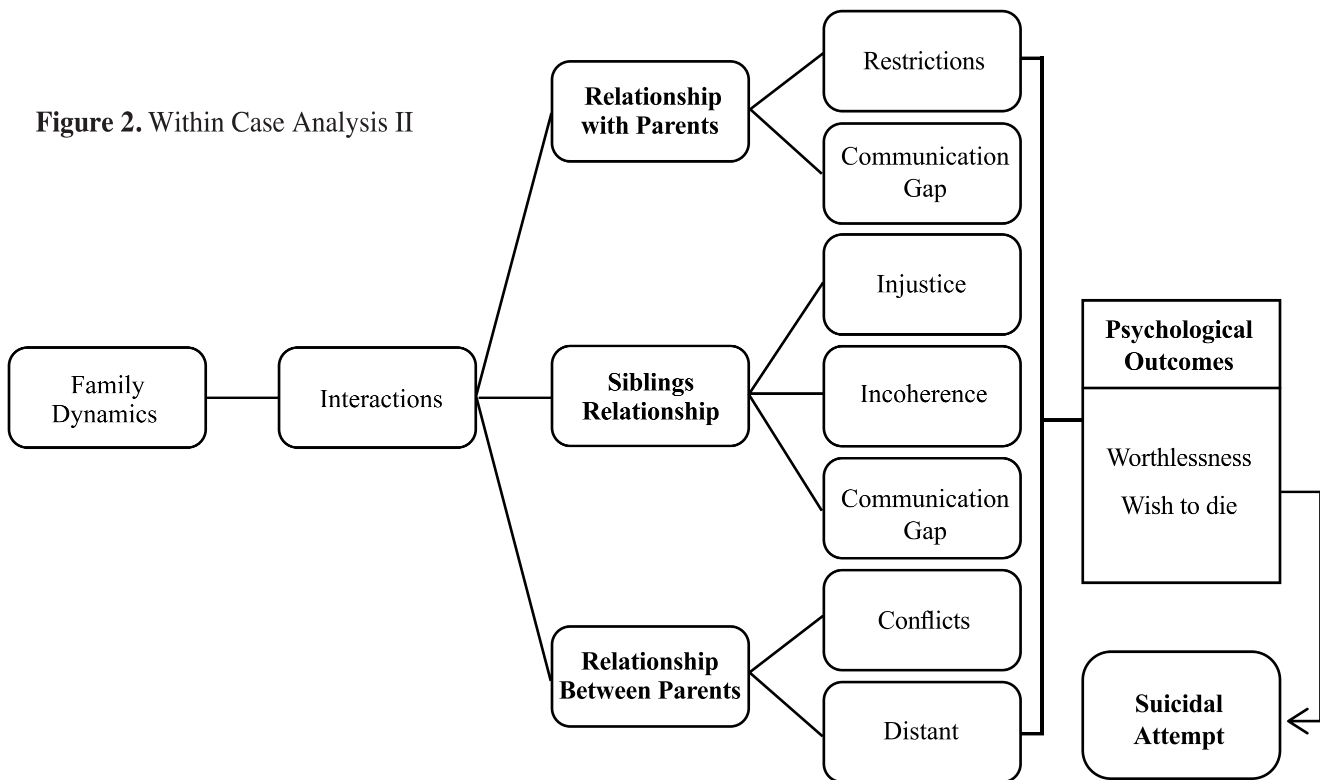
Wish to die. In the current study, wish to die theme means when someone don't want to live. Wish to die is different from wish to suicide but it could lead to suicidal attempt. Participant developed feeling of hopelessness and wish to die. When she was inquired, why you attempted suicide, she replied that she didn't want to live.

بس زندہ رہنے کا دل نہیں کرتا تھا۔

Worthlessness. In present study for the analysis of worthlessness theme, Grohol (2010)'s description of worthlessness was used. Participant experienced feeling of worthlessness. She had unrealistic negative evaluations of her own worth. Moreover, she used self-critical dialogue that generated a sense of worthlessness. She considered herself as a reason of family conflicts. As she said "I feel that my death would comfort all". Her self-worthless caused distress and lead her to commit suicidal attempt.

میرا رشتہ نہیں ہوتا تھاتو گھر والے آپس میں لڑتے تھے۔ مجھے لگتا تھا میں عذاب ہوں۔اس لیے میں نے خود کشی کر لی۔ مجھے لگتا تھا کہ میرےمرنے سے سب سکون میں ہو جاہیں گے۔ سارے کہتے ہیں کہ میری وجہ سےبھابیوں کی لڑائی ہوتی ہے زیادہ تر۔

Figure 2. Within Case Analysis II



Cross case analyses

Themes that were identified as common in both cases are discussed below. In present research, participants of both cases experienced communication gap and bundles of restrictions from their parents that made them feel worthless, hopeless and eventually lead them towards suicide. These findings are consistent with some of the existing researches. Researchers have found contextual factors (family violence, support from parents and peers) as well as personal factors (reduced levels of hope, low self-esteem and self-efficacy) as contributing to an increased risk of self-destructive behaviour (Beautrais, 2000; George, 2005; Hall & Torres, 2002; Larson, Wilson & Mortimer, 2002). Lipschitz et al (1990) suggested that emotional neglect was an important and deleterious component of maltreatment experiences and might be a more powerful predictor of suicidal behavior in hospitalized adolescents than physical abuse, emotional abuse, and physical neglect.

Results of present research are also consistent with findings of Hollis (1996) research in which he assessed the specific influence of family relationship difficulties on the risk of adolescent suicidal behavior. Family discord, disturbed mother-child relationship, and low familial warmth were the prominent risk factors suicide behavior.

Conflictual relationship between parents emerged as significant theme in both cases. It is evident from previous researches that stable relationship between parents was found to protect adolescents from suicidal behavior (Evans et al., 2004; Paulson & Everall, 2001). Adolescents with good relationships with their parents appear less intimidated by stressful experiences and better 24 equipped to manage negative situations. Consequently, their resistance to suicidal behavior is augmented (Liu, 2005). Conversely, adolescents who perceive that their relationships with their parents are problematic, report greater difficulties in forming relationships outside the family and express a negative outlook on life (George, 2005). King et al (2001) suggested that suicidal attempters as compared to people with suicidal ideations were experienced more discordant relationship between their parents, stressful life events, poor family environment, parental psychiatric history, low parental monitoring, and low instrumental and social competence. Jackson and Nuttall (2001) found that adolescents who are affected by their parents' marital instabilities and discord report feeling isolated and rejected by their parents with a subsequent increase in their levels of distress and loneliness as well as their risk of suicidal behavior.

In both cases family relationships were not stable as there was communication gap among parental and sibling relationships. Evans et al. (2004) posit that good communication and understanding in the family, family harmony and cohesion and spending quality time with the family are considered protective factors while family discord, poor cohesion, and living apart from the family were viewed as risk factors. Stivers (1988) suggested that parent-adolescent communication had relationship to adolescent depression and suicide proneness. If parent-adolescent communication is not well established it could lead to depression and suicidal attempt.

As the themes related to parental and siblings relation like conflicts, communication gap, restriction that emerged from the current research showed that negative family relationship have adverse influences on individual life and can eventually lead them to suicide attempt similarly various researchers describe the strong impact of the family as a predisposing factor in adolescent suicide while stable family relationships was found to be a strong protective factor (Beautrais, 2000; Compton, Thompson & Kaslow,2005; George, 2005; Marianne &Wamboldt, 2010; 2004; Pena, 2011).

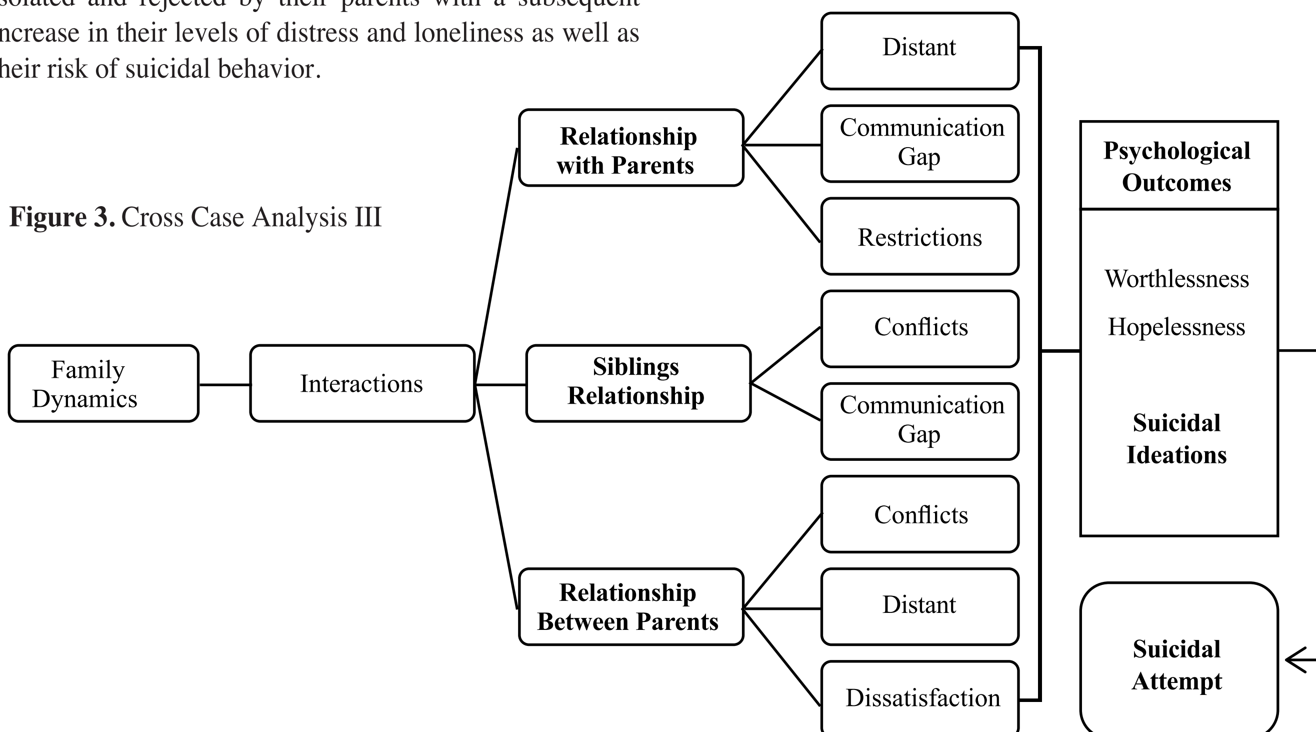


Figure 3. Cross Case Analysis III

Conclusion

Cyber victimization is a new kind of social evil whichFindings of study revealed that in family dynamics parental neglect, hostility, disregard, bundles of restrictions, lack of warmth and communication had negative impact on individual's relationship with parents. Poor parental relationship could make person feel worthless, and seeing self as burden for the family and ultimately leads to suicidal attempt as well conflictual relationship between parents having devastating effects on life of their adolescents. Siblings' relationship is one of the most important factor of family dynamics and the findings of the study indicated that the impact of siblings' relationship is quite profound in the life of an individual, without siblings' support it's hard to cope with problems of life. Communication gap, conflicts and selfishness among siblings' relationship can lead to an individual towards self-destructive behavior like suicidal attempt. In sum present study highlighted unhealthy family dynamics as potential indicators of suicide attempt.

Limitations and suggestions

For future research male participants should also be included in the sample. After effects of suicide on life of suicide attempt survivor were not explored that should be evaluated in future research.

Implications

Findings of the study would enable us to create awareness through counseling programs among parents that if they provide healthy family dynamics to adolescents, risk of suicide can be prevented. Both parents and adolescents can benefit from these counseling programs through developing skills to strengthen adolescents' resistance to suicidal behavior.

Declaration

Consent. All the participants involved in the research signed consent form to participate in the research.

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Data availability. The data analysed in current research is available upon request.

Conflict of interest. There lies no conflict of interest between the authors.

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Development and Validation of Cyber Victimization Scale

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Abstract

Background and objectives. Cyber victimization is one of the current most threatening issues. Ease of access to internet and availability of electronic devices has created a new medium of social interactions. These new ways of communication are not without its misuse and exploitation. The main objective of the present study was to develop an indigenous scale to measure cyber victimization and to determine the reliability validity indices of the measure. Furthermore, gender differences in cyber victimization were also studied.

Methods. The study was conducted to develop Cyber Victimization Scale (CVS). Literature review and focused group discussions were held to generate item pool. Initially 50 items were generated. After subjective evaluation by experts 35 items were identified. Scale items were evaluated empirically for content validation and exploratory factor analysis. Sample was college and university students(*N*=317) both boys (*n*=138) and girls (*n*=179). Furthermore, psychometric properties of the scale were established. Test – test reliability, split half reliability and coefficient alpha was used to establish reliability of the scale. The convergent and discriminant validity was established with the help of Cyber Bully/Victim scale (Horzum, 2010).

Results. Result indicated that cyber-victimization scale (CVS) is an internally consistent scale. Five factors were identified with principal axis factoring. The CVS showed excellent internal consistency (α=.92) with strong coefficient alphas on the factors ranging from .73 to .90. The scale was proved to be valid and reliable measure for future use. Results also showed that gender differences were also found in cyber-victimization.

Conclusion. The results indicate that Cyber Victimization Scale (CVS) is a valid, reliable and a comprehensive instrument to measure cyber victimization in adolescents

Keywords. *Cyber victimization, development, focused group, factor analysis, validation, convergent validity, discriminant validity.*

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Introduction

From past few decades there has been an enormous development in the field of internet and communication devices. This rapid growth in technology has changed the ways of connecting and communicating with each other. Easy access towards cyber social networks has facilitated interactions and acquaintances. One of the emerging issues in the realm of technology and communication is cyber bullying giving birth to cyber victimization. Especially in the developing country like Pakistan increase in the usage of social networking sites and mobile phones has become a major precursor in cybervictimization (Saleem, Khan & Zafar, 2021). Though multiple instruments are available to measure cyber victimization, a psycho metrically sound and elaborative one was required within the context of Pakistani culture, markedly different from western cultures. This led to the development of cyber victimization scale.

Cyber Victimization

Cyber victimization typically refers to the implication of anger and offences though electronic tools such as cell phones internet and related soft-wares. Cyber victimization generally involves essentials of intended and recurring harm imposed through technology. It may contain frequent messages or calls with threatening content, sexual images communicated through e-mail, instant message, offensive posts in chat rooms, controversial blogs or any other thing that is inflicting. Such harassment may cause varied levels of physical or emotional problems to the victim (Addington, 2013; Bossler et al., 2012; Del Rey et al., 2012; Greenwood, 2016).

Moreover, cyber victimization involves experience of humiliation, distress, harassment (Grigg, 2010) identity theft and cyber-stalking (Holt & Bossler, 2008). Cyber victimization can be experienced individually or in group form (Dooley et al., 2009). Cyber victimization can take a variety of forms. Nocentini et al. (2010) highlighted four kinds of cyber victimization written and verbal, visual, impersonation and online exclusion.

1. **Visual cyber victimization.** It includes images, photos or videos generally being taken or forwarded via electronic sources and are usually offensive, injurious, or harmful for the victim (Nocentini, & Menesini, 2015).

Sexual cyber victimization is concerned with the inappropriate demands for sexual nature photos, videos and sharing of explicit sexual content (Wolak & Finkelhor, 2011). Current cyber victimization scale presents combined category of visual and sexual form of cyber victimization. These can be the images victim has shared with third party usually trusted (Drouin et al., 2015; Morelli et al., 2016).

2. **Written-Verbal Cyber Victimization.** It is the other category that is included in current scale. When the victim is target of annoying, infuriating, offensive or threatening written or verbal comments, messages or calls through mobiles or internet it refers to the written-verbal cybervictimization. Verbal cybervictimization usually happens through voice calls or voice messages. Written cybervictimization occurs through written comments, instant text messages or symbols. This form is more prevalent as it encourages disinhibition and is more robust (Hinduja & Patchin, 2015). In present study attention is given to the relational form of cyber victimization other than before mentioned categories.

3. **Catfishing or Impersonation.** It involves pretending different, lying about identity, making fun of or getting victim into the trouble. This classification has got relevance in many qualitative and quantitative researches (Nocentini et al., 2010; Palladino et al., 2015).

4. **Forgery.** It also involves cyber forgery, and blackmailing, in which the individuals who have the pictures can blackmail victim, threaten to disseminate or further share images, especially if the victim denied to go with their wishes (Kopecký, 2017).

5. **Exclusion.** This is a form of relational victimization involves which online exclusion which suggests being expelled or not being accepted from a group, usually an instant messaging or a social network program. Relational victimization is a construct which is understudied resulting in limited viewpoints. Relational victimization incorporates, giving harm to victim's reputation by spreading rumors and doing gossips about the victim, or humiliating victim in front of others.

It also involves withdrawal of attention and abandonment of friendship. Psychological manipulation and intimidation via internet and social networks can also be considered as victimization (Steinberg, 2008).

Present study is designed to measure cyber victimization keeping in mind the social dynamics of Pakistan. There is a significant increase in cyber victimization in last decade specially in educational settings such as schools, college and universities (Saleem et al., 2021). It is reported that one fourth of adolescence are cyber bullies and half of them are cyber victimized (Raskauskas & Stoltz, 2007). To study cyber victimization effectively an adequate measure was required with rigorous and sound content and psychometric metric properties. Currently many instruments are available to measure the construct (Berne et al., 2013; Gámez-Guadix et al., 2014; Gul &Hanif, 2013). Though all have contributed greatly in the field of cybervictimization but some limitations such as lack of expressive statements in terms of cyber victimization experiences and suggesting limited factors (Shapka & Masoudi, 2017; Topcu & Erdur-Baker, 2010) have suggested us to develop a new scale in order to present a more elaborative view of cyber victimization.

Gender Differences in Cyber-Victimization

Research indicated higher chances for victimization among girls (Görzig & Olafsson, 2013). Barlett and Coyne (2014) found girls more likely to report victimization than boys. Among the Portuguese sample girls were significantly more likely to report victimization than boys regardless of age (Almeida et al. 2012). In present time, the aspect of cybervictimization is very much complex, both in theory and research findings which illustrates the need for more in-depth analyses. The present study investigated the gender difference in cyber victimization among school and college students of Pakistan. Sun and Fan (2016) also conducted a meta-analysis to identify a gender difference in cyber victimization. In which Females are reported to more cyber victimized as compare to males. Kowalski et al., 2012 found same results conducted to explore gender difference in cyber victimization.

Aims and Objectives

Advancement in the field of technology and communication has the led the way for easy and excessive exposure to internet and social networks. In the developing country like Pakistan cyber victimization is growing rapidly. There are various factors making Pakistani youth making them vulnerable to the cyber victimization. As cyber victimization has appeared as a new challenge for the society a great need was felt to identify key markers defining online victimization. Current study is aimed to contribute both theoretical and practical understanding of cyber victimization by developing a new scale.

Most of the previously available scales present a unifactorial model of cyber victimization thus unable to provide complete understanding of the construct (Alvarez et al., 2017; Dey Rey, et.al, 2015; Garaigordobil, 2015; Lam & Li, 2013). Present study is intended to contribute a multifactorial scale to present a more comprehensive and detailed view of cyber victimization.

To construct a cyber victimization scale for Pakistani population is also significant, as existing scales are validated on population with different societal and cultural values. Pakistani population being part of specific geographical region (South Asia) demands relevant indicators to measure cyber victimization. So, the current study is aimed to generate a scale with content appropriately matching their needs. Keeping in view the framework of above-mentioned rationale, the major objectives of the current research are as follow;

- To develop an indigenous scale for measurement of cybervictimization among students.
- To determine reliability and the validity indices of scale to establish psychometric properties of the scale.
- To explore the gender difference in cybervictimization.

Method

To develop the scale methodology given by Boateng, et al. (2018) was used. Procedure was carried out in following steps;

Item Pooling

First step was to generation pool of sample items for each relevant concept of the cyber victimization. To generate items literature review and focused group discussions were conducted.

a. Literature Review. Items for measuring cyber victimization generated from previous literature. Literature review was done with two basic aims; First, the past studies on cyber victimization reviewed to recognize content that previous studies had used to obtain satisfactory level of psychometric properties. Secondly, literature review was done to create items from relevant conceptual definitions. It was done to make sure that all aspects and domains of the construct were covered and reflecting appropriately the particularities of present research.

b. Focused Group Discussions. Focused group discussion was related to the use and prevalence of mobile phone, internet and social networking sites. Semi-structured pattern of questioning was followed. Participants were asked to share their experiences as well as observation related to cyber bullying and cyber victimization. Furthermore, following prompts were given to the participants.

i. How often someone threatened or harassed the participants when online

ii. whether the respondents have ever felt worried or threatened because of someone harassing them online by sending text messages etc

iii. whether the respondents have ever felt embarrassed or threatened because of someone sending messages to see them online

Focused group one was conducted with female students (*N*=10) of intermediate, graduates and post graduates. 17 to 23 years (*M*= 21.34, SD=3.06). Participants were from both government (*n*=5) and private (*n*=5) educational institutes.

Focused group two was done with male students (*N*=08) of intermediate, graduates and post graduates. Age range of participants was from 18 to 24 years (*M*= 22.83, SD=3.24). Participants were from both government (*n*=05) and private (*n*=03) educational institutes.

Focused group three was carried out with the target population i.e. students of intermediate, graduates and post graduates (*N*=12), both boys (*n*=04) and girls (*n*=8). Age range of participants was from 17 to 24 years (*M*= 22.13, *SD*=3.17). Participants were from both government (*n*=10) and private (*n*=2) educational institutes. Participants were from both government (*n*=10) and private (*n*=2) educational institutes.

Focused group four was conducted with the professionals (*n*= 7) i.e. lecturers and assistant professors of psychology (*n*=4) and information technology (*n* = 3).

Item Generation

Total 50 items were generated after evaluation of content obtained in result of literature review and focused group discussions. These items were given to a panel of students, the target population, and were asked to assess item according to the conceptual definitions of the cyber victimization. Panels of students were asked to mark each item on three points scale, as relevant, relevant but not essential or irrelevant. 35 items from initial 50 sample items were selected for the final scale.

Categories Identification

A panel of five experts and five students in the field of psychology as well as information technology were requested to identify categories of cyber-victimization and were requested to sort developed items into these categories. The categories were also labeled considering the literature and language of general population. The items that are most similar in meaning to each other are retained in suggested category. For retention of items it was also considered that they are dissimilar from item from other categories.

Developing Factorial Structure of Cyber Victimization Scale

In order to find out factorial and dimensional structure of items generated exploratory factor analysis (EFA). This procedure also helped to enhance the ultimate selection of items for the scale.

Sample

Target sample was *N*=317 students, boys (*n*=138) and girls (*n*=179). Age range of the participants was between 15 - 25 years (*M*=18.58, *SD*=2.20). Data was collected from different colleges and schools [both private (*n*= 79) and govt. (*n*= 238)] of Islamabad and Rawalpindi. For current study purposive convenient sampling technique was used. Students from intact families either living in joint (*n*= 83) or nuclear (*n*= 201) family system were selected. Time spent on social media range from 1 – 12 hours (*M*=4.02, *SD*=2.51).

Measure

Cyber Victimization Scale. With 35 items was used to collect data. Scale items are representative of the experiences of cyber victims specifically on social networking sites. Scale was constructed by following a rigorous method and based on a model of cyber victimization presented by Nocentini et al. (2010). Response categories used are every time=5, often=4, sometimes=3, once/twice=2 and almost never= 1. Item 5, 12, 14 and 27 have reverse scoring. The greater score on CVS represents higher victimization on cyber space and vice versa.

Results

Preliminary Analysis

Normality Check. Normality in the distribution of the data is a fundamental assumption for the procedure of factor analyses (Tabachnick & Fidell, 2007). Two methods were used to assess normality of the distribution of data: (a) descriptive statistics i.e. kurtosis and skewness of the 35 items were examined, and (b) the variability in the data by examining the standard deviation of 35 items. For the present scale of cyber victimization two items violates this basic assumption of normality i.e. items number 10 (*M*= 1.68, SD=1.14, Skew=1.14, Kurtosis=2.3) and 29 (*M*=1.15, SD=.59, Skew=4.78, Kurtosis=24.51). Item number ten was considered as worst offender but included in the initial analysis of dimension reduction while item number 29 was discarded at this stage for not fulfilling the criteria of normality. On variability check all the items were within the suggested range of SD >0.5 and <1.5.

Exploratory Factor Analysis. The factorability of the Cyber Victimization Scale (CVS) was assessed before starting data reduction and measuring potential factor solution. First of all, the correlation matrix was inspected to identify items that yielded a correlation of at least .30 with one or more items (Tabachnick & Fidell, 2007). Examination of the correlation matrix specified that 32 items had a correlation of at least .30 with at least on other item. The item number 16 and 18 do not correlate more than .30 with the any other items. Therefore, they were deleted.

Multicollinearity and singularity were calculated by examining the correlation matrix. None of the item correlate more than 0.9 with other items so, singularity was not detected within the data. Correlation among item 10 and 11 exceeds the upper limit of 0.80.

Therefore, the assumption of collinearity was violated. Multicollinearity was identified within the data. Item number 10 was considered as worst offender on the basis of normality check, further this item creates multicollinearity. Therefore, item number 10 was not included in final data reduction procedure.

Sample Suitability

Results reported a significant Bartlett's test of sphericity (χ^2 (378) = 5611.614, p <.000) suggesting that present sample can be used for factor analysis. The Kaiser-Meyer-Olkin (KMO) test of sample suitability was .837, which is above the suggested cutoff of .50 (Carpenter, 2018). KMO value gives additional indication for the factorability of a correlation matrix.

For the resulting 31 items a principal-axis factoring (PAF) analysis was used for dimension reduction. Eigen values were first inspected to determine the total variance described by the categories of the cyber victimization scale. In the preliminary model there are six factors with eigen values greater than 1.0, and it described 69.22 % of the total variance.

Moreover, a scree plot was examined to evaluate the potential number of factor. The scree plot showed that a more meaningful six factor model is reasonable. The item loadings and cross-loadings on the factors, as well as communality estimates were considered as criterion for item retention and deletion. Pett et al. (2003) suggested that if an item has factor loading less than .40, it should be deleted. All of the 31 items fulfilled this inclusion criterion.

Furthermore, Tabachnick and Fidell (2001) suggested that if an item has cross-loading more that .32 on two or more factors, it should be deleted. Three items were dropped for having cross-loadings above .32. Costello and Osborne (2005) maintained that item communality below .40 is also consider challenging; thus, it should not be retained. All items satisfied this criterion and were retained from further analysis.

Another iteration of principal axis factoring was conducted with the left over 28 items. The eigenvalues proposed a five-factor model which explained 67.93% of the total variance. The final five factors solution, consisted of 28 items in total, and is summarized below:

Factor I. The first factor, labeled as catfishing, comprised of seven items that explained 27.78% of the variance. The example of an item having the highest loading on this factor include; "*I received repeated requests to share my privacy (e.g. via webcam)*".The content of items on this factor suggests the situations in which someone impersonate the victims over the mobile phone or internet to make fun of or get him/her into trouble, or pretended to be someone else and sharing information to damage his/her reputation. Therefore, we labelled this factor as "Catfishing" where a higher score on this subscale indicates greater impersonation of catfishing.

Factor II. Second factor, labeled as visual sexual, comprised of six items that explained 12.90% of the total variance by the scale. The example of an item having the highest loading on this factor include; *"I received calls having obnoxious sexual sounds"*. The items loading onto this scale clustered around the theme of a sexual and visual content, where a higher score on this subscale indicates greater victimization by visual and sexual content and vice versa.

Factor III. The first factor, labeled as forgery, comprised of five items that explained 11.04% of the variance. The example of an item having the highest loading on this factor include; *"Someone has blackmailed me through making my fake or manipulated photos"*.

The content of items on this factor suggests the situations of blackmailing and fraudulent acts. Therefore, we labelled this factor as "Forgery" where a higher score on this subscale indicates greater chances of forgery and vice versa.

Factor IV. The fourth factor, labeled as exclusion, comprised of five items that explained 9.61% of the variance. The example of an item having the highest loading on this factor include; *"Social networking sites were used to defame me"*. The content of items on this factor includes a maliciously leaving a person out of a group online, such as chat time or group. Therefore, we labeled this factor as "Online exclusion" where a higher score on this subscale indicates greater exclusion and vice versa.

Factor V. The fifth factor, labeled as written-verbal, comprised of five items that explained 6.88% of the variance. The example of an item having the highest loading on this factor include; *"I received frequent instant messages on social networking sites"*. The content of items on this factor refers to being target of annoying, threatening or offensive calls, messages or written comments through mobile phone or internet. Therefore, we labeled this factor as "written-verbal" where a higher score on this subscale indicates greater victimization by written-verbal mean and vice versa.

Table 1

Factor loading of Cyber-Victimization Scale

Items		Factor Loadings				
***Factor 1*: Catfishing (α = .90)**		**1**	**2**	**3**	**4**	**5**
1.	P4. I received repeated requests to share my privacy (e.g via webcam)	.80				
2.	P22.My shared information on social networking sites was made fun of	.79				
3.	P23.Someone has written offensive comments about my posts	.74				
4.	P6. My social networking profiles were used to make calls to others	.73				
5.	P19.Someone has deceived me by lying about his or her gender	.71				
6.	P21.I felt betrayed after being cheated by someone on social networking sites	.71				
7.	P5. My social networking profiles were used to send messages or emails to others	.64				
***Factor 2:* Visual Sexual cyber victimization (α = .89)**						
8.	P27.I received calls having obnoxious sexual sounds		.64			
9.	P26.I received messages with sexual symbols		.56			
10.	P25.Someone has pressurized me to share my naked photos		.54			
11.	P33.Someone has posted sexual images on my profile		.47			
12.	P32.Someone has forced me to talk about sexual content		.44			
13.	P34.Someone has sent me links which are connected to sexual or porn sites		.43			

Factor 3: Forgery (α = .90)	1	2	3	4	5
14. P31.Someone has blackmailed me through making my fake or manipulated photos			.88		
15. P13.My personal information on social networking profiles was used for fraudulent act			.79		
16. P7. Someone has stolen passwords of my social networking accounts			.78		
17. P30.Someone has blackmailed me through breech of my personal information			.76		
18. P28.Someone has captured my photos while video chatting			.74		
***Factor* 4: Exclusion (α = .73)**					
19. P12.Social networking sites were used to defame me				.81	
20. P17.Someone has designed a webpage / blog against me				.78	
21. P11.Someone has forced me to leave chat rooms				.78	
22. P9. Someone has formed a group against me on social networking sites				.75	
23. P20.I felt hurt as a result of internet friendship				.65	
***Factor* 5: Written Verbal cyber victimization (α = .83)**					
24. P1. I received frequent instant messages on social networking sites					.84
25. P3. I received frequent emails / messages having viruses					.75
26. P2. I received frequent unknown calls on social networking sites					.67
27. P35.I get upset on receiving sexual content through messages					.63
28. P15. I feel fearful on receiving frequent calls by unknown persons					.57

Note. *N*=317t able here shows exploratory factor analysis i.e. factor loadings of Cyber Victimization Scale. Five factors were identified with principal axis factoring. The CVS demonstrated excellent overall internal consistency (α=.92) with strong coefficient alphas on the factors ranging from .73 to .90. Overall, there appears to be good internal consistency based on the reliability estimates.

Determination of Psychometric Properties of Cyber Victimization Scale. After developing factorial structure of cyber-victimization scale psychometric properties i.e. reliability and validity of the scale were measured.

Sample. for the current study sample comprised of *N*= 75 students, boys (*n*= 31) and girls (*n*= 44). Age range of the participants was between 17-25 years (*M*= 21.09, *SD*= 1.83). Sample was selected from educational institutes of Islamabad and Rawalpindi. The demographic information such as age, gender, discipline and time spent on social networking sites was also obtained along with data on study variables.

Measures

Cyber Victimization Scale CVS; (Riaz, Iram & Hassan; 2018). The cyber victimization scale constructed and validated for present study is a self-report Likert-type scale comprised of 28 items. Scale items are representative of the experiences of cyber victims specifically on social networking sites.

Response categories used are every time=5, often=4, sometimes=3, once/twice=2 and almost never= 1. CVS has five subscales i.e. catfishing, visual-sexual, forgery, exclusion and written-verbal.

Cyber Bully/Victim Questionnaire (Horzum, 2010). The cyber bully / victim questionnaire is a self-report Likert-type scale comprised of 15 items. Scale items are representative of the experiences of cyber victims and bully side by side. Response categories used for both bully and victimization are every time=5, often=4, sometimes=3, rarely=2 and almost never=1. Cyber bully/victim questionnaire has two subscales i.e Sexual Cyber bullying in Cyberspace and Embarrassing and Inserting Malicious Content in Cyberspace. Scale has excellent internal consistency (α=.81).

Reliability of Cyber-Victimization Scale. In order to find out consistency of scores from CVS, following methods were used:

Cronbach alpha. CVS has a Cronbach alpha of .82 which showed that test is internally consistency and items are homogeneous measuring single construct i.e. cybervictimization.

Split half reliability. In order to find inter-item consistency of CVS split-half reliability was calculated. Table 2 is showing result of odd even split half reliability.

Table 2

Odd even split half reliability coefficient of CVS

CVS	No. of items		Alpha coefficient		Split half reliability
	Part I	Part - II	Part - I	Part - II	
	14	14	.62	.64	.94

Note. *N*=75 Spearman Brown split half reliability of .94 showed that the scale has inter-item consistency and will give reliable result in future use.

Test – Retest Reliability. To find out temporal stability of CVS test-retest reliability was calculated. Sample. Cyber victimization scale was administered to 35 adolescents meeting inclusionary criteria of the sample (girls *n*=18, boys *n*= 17). There was an interval of nine days between the administration of the test and the retest. Scores on CVS obtained on two administration of the same scale was used to calculate test-retest reliability. The correlation between the test and retest of CVS is .79 and was significant at $p<.01$.

Convergent and Discriminant Validity. Convergent and discriminant validity of scale was determined by identifying correlation between CVS developed in current study and cyber bully/ victim questionnaire (Horzum, 2010).

Table 3

Convergent and discriminant validity of CVS

Scales	I.	II.	III.
CVS	1	-.57**	.68**
Cyber bullying questionnaire		1	-.80**
Cyber victim questionnaire			1

Note. (*N*=75) here table 3 showed a correlation of CVS developed in the current study and cyber bully and victim questionnaire. Results showed that CVS has significant positive correlation with cyber victim questionnaire (r =.68, $p<.001$), this value indicate high convergent validity between the scales. Results also showed that CVS has a significant negative correlation with cyber bully questionnaire (r = -.57, p < .001), this value indicates high discriminant validity between the scales.

Gender differences in cybervictimization. Present study aimed to find out gender differences in cybervictimization.

Table 4

Gender wise difference in cybervictimization and its subscale

Variables	Male (*n*=152)		Female (*n*=165)			95% CI		Cohen's
	M	*SD*	*M*	*SD*	*t*	LL	UL	D
Cybervictimization	61.64	10.12	71.20	16.34	2.88*	-16.16	-2.95	0.70
Catfishing	15.96	3.74	17.43	5.18	1.34	-3.63	.71	0.32
Visual/Sexual	14.16	3.06	15.06	3.89	1.08	-2.57	.76	0.25
Forgery	9.83	3.00	12.20	3.32	3.15**	-3.85	-.87	0.74
Exclusion	12.09	2.66	13.18	3.77	1.37	-2.65	.48	0.33
Written/Verbal	9.58	2.64	13.31	3.36	5.15**	-5.18	-2.29	1.23

Note. (*n*= 317) Results showed that there was a significant gender difference in cybervictimization and in its subtypes as forgery and written verbal cybervictimization. Results all showed that there was no significant gender difference in catfishing, visual-sexual and exclusion.

Discussion

Cyber victimization is a new kind of social evil which is rapidly prevailing in the society. Current study was conducted to develop an indigenous scale measuring cyber victimization with precision and accuracy. Though, many instruments have been found currently to assess cyber victimization among adolescents, but some culture implications and methodological limitations paved the way to bring a newly developed scale. Core objective of current study was to establish factors, reliability, convergent as well as discriminant validity of the scale with a sample from Pakistani population.

Another difficulty with most of the previously developed scales was the problem of unifactorial nature of the scales. In current study attention was given to the factors that contribute to the cyber victimization. Such as visual-sexual cyber victimization, written verbal cyber victimization, catfishing, forgery and exclusion. Some of the factors were given more importance due to the prevailing culture scenario such as forgery, catfishing and sexual cyber victimization.

Psychometric properties of the scales were tested in the first place. Reliability of the full scales and subscales were satisfactory. Satisfactory results of reliability suggested the consistency of the scale and subscale and implied that instruments can be used for the further studies.

The convergent and discriminant validity of the Cyber victimization scale was determined with an already developed reliable scale of cyber bully/victim scale (Horzum, 2010). The correlation between cyber victimization scale and cyber victim as well as cyber bully part of cyber bully/victim scale (Horzum, 2010) came out to quite satisfactory and assured the convergent and discriminant validity of the scale.

Test retest reliability with an interval of nine days was calculated to establish the temporal stability of the scale. Results showed that findings from cybervictimization was consistent from one time to another. Split half reliability and coefficient alpha was calculated to establish internal consistence of the results showed that cyber victimization scale was an internally consistent measure.

It was assumed that females are more cyber victimized as compare to males. Results indicated significant gender difference in cyber victimization, with females experiencing more cybervictimization than their males. Results also indicated significant gender difference specifically on factors of forgery and written-verbal cyber victimization. Females were found more cyber victimization in terms written-verbal cyber victimization and forgery. These findings were consistent with previous research finding by Barlett and Coyne, (2014) as well as Sun and Fan (2016).

Limitations and Suggestions

Certain limitations were found during present study. For instance;

1. Sample size can be increased so that more generalizable results can be generated.
2. Low response rate was also a problem faced during study.
3. For future use it is also suggested to use adults and uneducated sample can be used and will generate interesting results.
4. Furthermore, data can be collected from diverse geographical area to make findings more generalizable.
5. Also, the cross-sectional data is unable to measure changes over time in cyber victimization, difficulties in emotion regulation and mental health. Longitudinal data can help to overcome this limitation.

Implications

- Current study has contributed in the field of cyber phenomenon. Development of cyber victimization scale study has tried to overcome some limitations represented in previously developed scale. Factors created in current scale are more comprehensive in measuring cyber victimization. In this regard EFA was employed to exclusively measure variety of cyber victimization.

- Specifically, in context of Pakistani scenario it was for the first time that cyber victimization was chosen for scale development keeping in view the resources and context of its population.

- Items of present scale constitute five factors of cyber victimization each measuring fundamental aspect of cyber victimization. It will help to enhance the sensitivity of the scale while measuring types of cyber victimization.
- Current study contributes theoretically by presenting a scale which conceptually supports theories and observations made during its development.
- Current scale is multifactorial tool which can be used by researchers, clinicians, teachers and educational counselors to identify cybervictimization, its prevalence and outcomes.

Declaration

Consent for publication. Consent approved by the authors

Availability of data and materials. Not Applicable

Competing Interests. The authors are well informed and declared no competing interests.

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Development and Validation of Gender Role Strain Scale for Women

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Abstract

Objective. Our society expects specific behaviors, and performance from women associated with their gender. Sometimes to act upon and to fulfil these expectations becomes the cause of pressure and strain in a person. This research purported to develop as well as validate an indigenous measure to gauge Gender Role Strain experienced by women (GRSS-W).

Method. The study comprised three phases. In the first phase, phenomenology of gender role strain was identified through review of literature, semi structured interviews with mental health professionals (N=4), and conducting a focus group with women (N=7), thus generating a list of items. Experts' ratings (N=10) were used for establishing content validity of the GRSS-W. Piloting (N=35) was carried out. For establishing construct validity, factor analysis was carried out using varimax rotation method. A sample of 399 women participated in the second phase. Psychometric indices of GRSS-W were determined in the third phase (N=100).

Result. Three factors emerged including Pressures of Marital Life , Familial and Social Pressures, and Workplace Pressures, yielding alpha coefficients .88, .84, and .77 respectively. The overall reliability of the scale was .89. For assessing discriminant validity, Satisfaction with Life Scale (Diener et al, 1985) was used and a value of r= -.27, p <.01 was obtained.

Conclusion. GRSS-W can be used as a reliable and valid instrument for measuring gender role strain in Pakistani women.

Keywords: *Gender role strain,women, development, validation.*

Foundation University Islamabad

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Introduction

Gender role strain (GRS) refers to the stress, burden, or pressure that people experience while trying to match the socially expected standards of behaving associated with their respective genders (Pleck, 1981, 1995). There are societal expectations attached with each social role including gender role. People might undergo uneasiness while struggling to fulfil social expectations which may result in role strain. For some people it may be smooth sailing, for some there may be manageable strain, while some may experience serious negative fallouts.

The feeling and realization of one's inability to meet the expectations attached with a role and the accompanying stress can become troublesome for the individual. The frustration and stress experienced by individuals may in turn negatively affect the society. According to Levant (2011) GRS has roots in social constructionism. Gender is socially developed and is ever changing. As described by Ellsberg and Heise (2005), gender discrimination's origin is from social institutions. At these institutions, already recognized theories of women's subordination and gender differences are formed. Both, men and women are socialized to conform to gender-stereotyped roles. Stereotypical role expectations may get affected by changing social conditions. It has been reported that changes have taken place in women's role as employees but not in their role as home makers and in child care. Under the predominant societal view, women are expected to indulge in care provision to their families and to be devoted to their role as a mother (Chasteen & Kissman, 2000). One can experience a similar scenario in the Pakistani society.

Some scales are accessible to measure gender roles and conflicts that arise from enacting them out. For example, Bem Sex Role Inventory (Bem, 1974) evaluates masculinity-femininity, and gauges how individuals recognise their gender psychologically. Gender Role Beliefs Scale (Kerr & Holden, 1996), a self-report scale evaluates gender role ideology, i.e. beliefs about appropriate behavior for men and women. Gender Role Conflict Scale (O' Neil et al., 1986) gauges masculine gender role conflict, and Women's Role Strain Inventory (Lengacher, 1997) measures role strain in women who have multiple roles. The above cited foreign measures do not assess the degree of gender role strain in women. It is important to understand the perceptions of gender role strain held by Pakistani women. Therefore, the construction of local scale of gender role strain among women is need of the hour.

Literature Review

Gender role strain rests on the idea that men and women follow societal roles based on masculinity and femininity principles. Societal expectations, social approval and social conformity are the major sources which contribute in role strain. There are quite a few theories of gender role strain whose focus is on men. Gender role strain is looked at from the sociological perspective (Turner, 1970). Gender role strain paradigm (Pleck, 1981), masculine stress (Eisler, & Skidmore, 1987), and the integrative model of masculinity (Meek, 2011) are significant such perspectives. Gillespie and Eisler (1992) took a different perspective and examined Feminine Gender Role Stress (FGRS) as a cognitive tendency in women to appraise specific situations as highly stressful. Those women who have a lot of FGRS probably encounter more daily stress by perceiving more events as threatening to their femininity such as fear of victimization, being in an unemotional relationship or not being nurturant. Typically, women go through role strain more (e.g., performing multiple role playing and overloaded responsibilities) than men (Kazmierczak, 2010).

It has been suggested by role theorists that the commitment with different roles is related with the magnitude of role strain. Strain is subject to commitment. There is one theory (Enrichment Hypothesis) that proposes that multiple roles can be buffer against stress (Rothbard, 2001). There can be a positive influence of the feelings of well-being produced in one role on the experiences in other roles (Barn, 2008). This may lead to adverse physical and psychological consequences such as depressive tendencies, anxiety and fatigue in women (Chrouser, & Ryff, 2006).
Strain for men might have negative fall outs too like anger, negative thoughts, and mood swings (Hunt et al., 2007). There is some research evidence suggesting that living in the extended family system may further add responsibilities and more pressures on Pakistani men, not just because of their role as a bread-winner, but as a protector of the family too (Arshad & Shahed, 2019). Women, on the other hand, experience discrimination and have family responsibilities to carry out. Therefore, they may undergo greater strain than men (Muller & Volkov, 2009). It has been observed that the main cause of role strain among working women is high expectations for fulfilling a role (Longest & Thoits, 2012).

Gender role strain can be a major factor in effective socialization of an individual. There is a need to develop instruments to gauge the nature and magnitude of gender role strain experienced by women. Indigenous instrument to measure gender role strain in women, in Urdu language, are not available. Therefore, the present study was designed to develop an instrument to address this gap.

Method

The study was divided three phases, where Phase I developed indicators for gender role strain; Phase II is assessed construct validity of these items and lastly, in Phase III psychometric properties were established.

Phase I: Indicators for Gender Role Strain

The following steps were taken for generating the initial indicators of gender role strain.

Step I. Research literature regarding gender role strain, especially in women, was reviewed. Additionally, semi-structured interviews and focus group were conducted to attain a list of women's gender role strain indicators.

Review of Literature. Existing gender role strain related scales were looked into. Relevant literature including books and research journals pertaining to gender role strain was also reviewed. Significant indicators of women's role strain were recorded.

Focus group. A focus group comprising seven women participants was conducted. Purposive sampling was adopted for the selection of participants. These women were educated (Bachelors, Masters, Doctorate), coming from various walks of life, married ones as well as unmarried, working, and aged 30-45 years. With the consent of the participants, audio recordings of the proceedings were made. Both open and fixed ended questions were used for initiating discussion on various aspects of gender role strain experienced by women. The contents of the discussion highlighted a number of significant aspects and helped in compiling inclusive lists of women's gender role strain indicators.

Semi structured interview with mental health professionals. A psychiatrist (man) and three clinical psychologists (one man and two women) were interviewed. They had more than six years of clinical expertise and were aged 32-45 years. All interviews were conducted separately.

Open ended as well as fixed ended questions were used to ascertain the nature of gender role strain either personally experienced by the interviewees themselves or having had observed in clients/patients. The interviews were audio recorded, later on transcribed, and then analysed.

Step II. A list of 33 items was finalized after converting the indicators (compiled from step I) into self-report statements. This list of items was screened for discrepancies and ambiguities. Twenty eight items were left in the initial pool of items after deleting five items (i.e., 1, 2, 3, 32, and 33) and rephrasing two items (18, 26).

Step III. The 28 items were validated by three female counselors and seven female clinical psychologists with more than 5 years of experience on the subject. The experts were asked to rate each item of the pool on 4-point scale from 1 (not relevant) to 4 (highly relevant) based on relevance to construct. The CVI (Content Validity Index) was computed and found to be high, $r = .82$. Five items (6, 7, 12, 13, and 16) were removed as experts consented less agreement on these items. The final list has 23 items and structured into five-point Likert-type scale. It was labelled as Gender Role Strain Scale for Women (GRSS-W).

Step IV. Pilot study includes 35 women from various professions such as house maids, female sweepers, lady security guards, nurses, doctors, lawyers and university teachers. The age range of sample was $M= 32.37$ and $SD = 6.06$. The participants were requested to complete the questionnaire by reading and responding it themselves. No ambiguity was pointed out by the participants. The GRSS-W included 23 items as final form.

Phase II: Establishing Construct Validity

Sample. The sample consisted of 399 urban women selected through a purposive sample; with an age range of 21- 60 years ($M = 36.90$, $SD = 9.50$). Fifty-eight percent of women had 12 years or above level of education, 27% had less than primary educational level and 15% of women had primary (7.5%) and secondary (7.5%) level of education. Fifty-five percent of the participants were married and others were single. All women were employed, and worked as doctors (15%), nurses (15%), teachers (15 %), bank employees (7.5 %), lawyers (7.5%), lady security guards (7.5%), house maids (13.5 %) and sweepers (19 %).

Procedure

For data collection, permissions were sought from universities, banks and hospitals. Women were informed about the purpose of the research and written permission were sought individually. Information regarding GRSS-W was evident on the questionnaire and administered individually on women.

Phase III: Establishing Psychometric Properties

Sample. In this Phase, the reliability and validity of GRSS-W were explored by establishing discriminant validity, using purposive sample of 100 woman participants. Twenty women participants were preferred from each profession (lawyers, doctors, university teachers, house maids and female sweepers) respectively. The age range of these women participant was 26-50 years (M = 31.61, SD = 5.39).

Assessment Measures

a) Gender Role Strain Scale for Women (GRSS-W). The above scale with 22-items developed in the first two phases of this study was used. Each item was measured on a 5-point rating scale (0-4) with three subscales.

b) Satisfaction with Life Scale (SWLS). This scale's Urdu version by Butt et al., (2014) was gauged for establishing the discriminant validity of GRSS-W. The original version of SWLS has five items with seven anchors (Diener et al., 1985). The reliability of SWLS in Pakistani population was .90 (Barki, et al., 2020).

Procedure

The two scales were administered carefully in a packet after getting informed consent from women. They were requested not to skip any item on the scales.

Results

Factor Analysis

Principal component analysis was carried out to obtain initial factors from GRSS-W items through varimax rotation. Kaiser-Meyer-Olkin (KMO) was .93 with significant Bartlett's test of sphericity ($p < .001$).

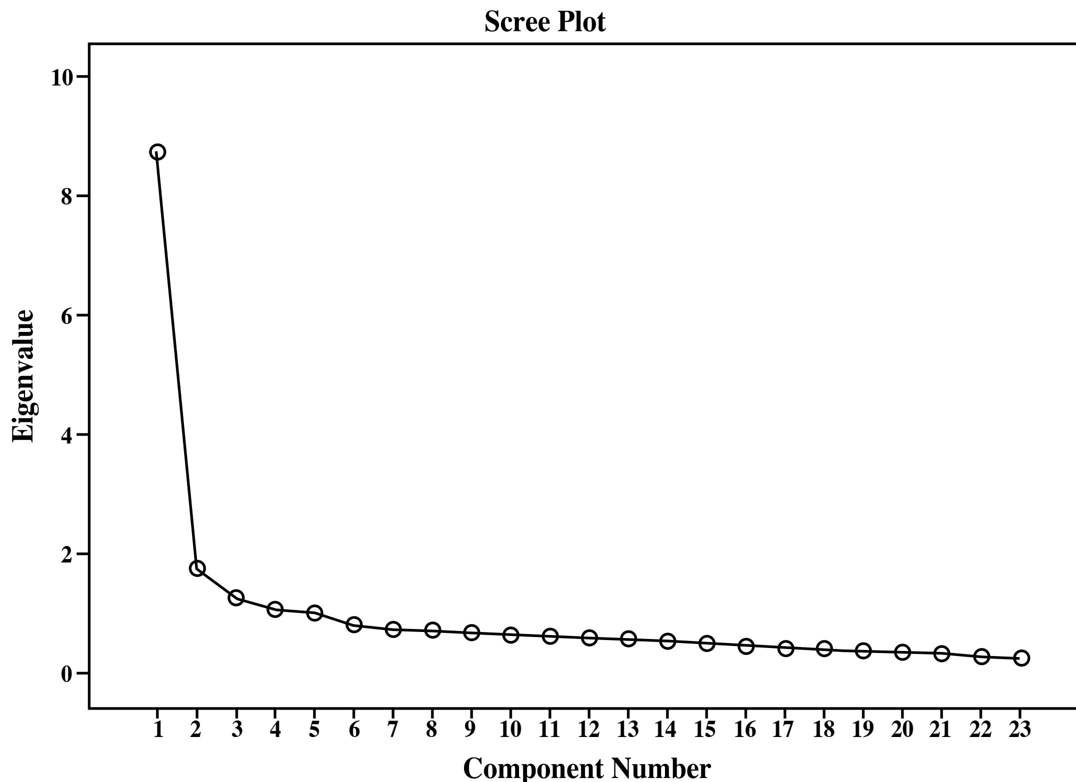

Figure 1. Scree Plot for Gender Role Strain Scale for Women

Scree plot suggested a three factor solution covering the total item variance of 52%. The Cronbach Alpha values for the final 22 item GRSS-W were ranging from .35 to .77 (Table 1).

Table 1

Factor Loadings of GRSS-W with Three-Factor Solution

Item	Factor Loadings *I*	*II*	*III*	*h*
1	*.15*	*.61*	*.29*	*.47*
2	*.25*	*.67*	*.07*	*.52*
3	*.35*	*.58*	*.22*	*.51*
4	*.18*	*.71*	*.17*	*.56*
5	*.24*	*.72*	*.19*	*.60*
6	*.30*	*.52*	*.35*	*.49*
7	*.33*	*.61*	*.03*	*.48*
9	*.59*	*.37*	*.10*	*.49*
10	*.09*	*.26*	*.59*	*.43*
11	*.58*	*.32*	*.27*	*.50*
12	*.68*	*.31*	*.08*	*.56*
13	*.03*	*.08*	*.77*	*.60*
14	*.26*	*.09*	*.76*	*.66*
15	*.43*	*.12*	*.52*	*.46*
16	*.27*	*.30*	*.60*	*.53*
17	*.53*	*.37*	*.20*	*.45*
18	*.56*	*.23*	*.28*	*.44*
19	*.54*	*.39*	*.19*	*.48*
20	*.61*	*.22*	*.34*	*.54*
21	*.70*	*.21*	*.11*	*.55*
22	*.69*	*.15*	*.23*	*.56*
23	*.62*	*.16*	*.41*	*.57*
Eigen Value	4.59	3.79	3.07	
Variance	20.84	17.26	13.97	
Cum. Var.	20.84	38.12	52.08	

Note. Items with factor loadings .35 or greater are bolded; *h* = communalities; Cum. Var. = Cumulative Variance

Three subject-matter experts agreed with this three factor solution and labelled them as Pressures of Marital Life (10 items), Familial and Social Pressures (7 items), and Workplace Pressures (5 items).

Table 2

Reliability and Correlations among GRSS-W Subscales (*N*=399)

Subscale	**α†**	**1**	**2**	**3**	***M***	***SD***	**Min-Max Range** **Potential**	**Actual**
Marital Life Pressures	.88	-	.72*	.57*	20.05	9.21	0-40	0-40
Familial & Social Pressures	.84		-	.53*	14.59	6.69	0-28	0-28
Workplace Pressures	.77			-	12.30	4.68	0-20	1-20

Note. †Reliability coefficient Cronbach alpha, *$p < .01$

Discussion

Gender role pressures and stereotypes restrained femininity. Some western culture's feminine gender stereotypes are considered improper in Pakistani traditions. For instance, family bonds are strong and embedded deeply in Pakistani women while women are usually more socially detached in western culture. Women still understanding to gender role strain is typical and is transformed by cultural beliefs and values. Therefore, it is necessary to measure the extent and incidence of gender role strain particularly in Pakistani women in this present era. To achieve this goal, a self-constructing scale (GRSS-W) is developed with well-established psychometric properties. In the present study, the content of GRSS-W items emulate cultural practices and relevance and were generated after exploring the phenomenology with the help of indigenous samples. The scale has three factors and it can be evaluated on normal women facing gender role strain in their daily lives. These dimensions are discussed as follows:

Marital Life Pressures (first factor) comprised of items for example, 'seeking my husband's permission in every matter after getting married', 'having sexual relations with my husband without my consent', and 'reducing my body weight on repeated insistence of my husband'. Pakistani women's life after marriage move around responsibilities of domestic chores, satisfying husband needs and above all, taking care of off springs. This new role add pressure and strain on women. Generally, a woman adapt or reorganize to these new roles (daughter in law, wife, and mother) with her own pace and tries to conform to these roles. A study by Chowbey (2017) supported this view that women are front-runner of home and manages house chores including preparation of meal, looking after children and husbands. Before being married, women are dependent on their fathers and brothers for trivial permissions as Pakistani society is dominant by patriarchal system. This control is inevitably moved to husband and in-laws after woman is married. Ibrahim (2005) revealed that raising voice against Pakistani men (husbands, fathers, brothers, father or brother in law) is not permitted despite of women being married or not. Pakistani women most significant considered achievement is to take care of their husband's demands and marital satisfaction. One of the demand of husbands are insisting their wives to reduce body which contribute to women's strain. A study found that there is 50/50 ratio of anticipations regarding women's body image before and after marriage in Pakistani society (Zubair & Ali, 2019).

Familial and Social pressures (second factor) include items for instance, 'going out at night all by myself', 'not being able to get married to the person of your choice', and 'in all circumstances, I have to stick to the opinion held by the rest of the family members even if I believe otherwise'. Women are also concerned about their family and social life to great extent. This also adds strain that they experienced in their everyday lives. At times these stresses are unnoticed but they play a crucial share in gender role strain found in women. Pakistani women' social life turn around family and relatives. It is the foundation of social association, offering both identity, honour and protection. A study by Markward et al., (2003) revealed that women demand more social support than men. Eventually, women freedom to make choices for themselves (i.e., to marry, get an education, having a baby or not, divorce, doing work) differs considerably reliant on the attitude of their life partners or closest male relative. For instance, traditional rural homes in regions of four provinces of Pakistan are mostly more conservative on the subject of social roles and community participation of women. These delicate issues were found in Khyber Pakhtunkhwa study (Jamal, 2014).

Workplace pressures (third factor) cover items like 'working at a workplace where the head of the organization and colleagues are men', 'mixing up more with my men colleagues', and 'not feeling healthy due to over work'. In present scenario of Pakistani society, a woman role keeps on summing in the responsibilities from home to work. A woman should have sense of balance to maintain the burdens and challenges of both domains (Sun, 2005). Another study by Mostert (2009) disclosed that the family relations and stressed women's health could suffer if needs were not met. Women's family commitments were more hindered with increasing duties at work than to men (Cha, 2013). Every employed woman has to deal with men at work place which is very difficult at times. For example, women can face sexual harassment and cannot discuss as it is considered a conservative taboo in Pakistani community. This is point of view is acknowledged by Kausar and Anwar (2015) study as Pakistan is a male dominated society.

Women may confront difficulties in their familial and professional life due to their secondary position and conventional expectations from their gender role in Pakistani society. Usually women are financially reliant on men and have to go along with men's wishes (Kazmi, 2005). Women encounter culturally held gender stereotypes rooted in the patriarchal system.

This experience may affect and shape their life and circumstances in many ways. For instance, the socially desired role of a woman is that of a home maker. Even when she is a professional as well, she expected to be a great home maker first.

Conclusion

The newly developed GRSS-W is a reliable measure with psychometric indices. Among Pakistani women, the effect and consequences of gender role strain is particularly given less consideration. Due to cultural and social restrictions, the statements or wordings of foreign measures related to gender role strain might not be understandable. Pakistani people's beliefs and standards for femininity should be reassessed and studied positively so that women be able to face less strain in their routine lives.

Suggestions and Limitations `

The sample was taken from Lahore only. In future, large sample sizes can be drawn from different cities of Pakistan for generalization of GRS. Rural and urban women can be included for comparative studies. In upcoming years, the study can be conducted on working and non-working women for screening of GRS. However, the extent of GRS in women is needed to be revealed in various marital statuses and professions. In addition, confirmatory factor analysis should be measured for more accurate psychometric indices.

Implications of Study

The construction of GRSS-W itself will gauge the gender role strain in Pakistani women irrespective of their level of education. It is mandatory for every woman to be screened for GRS because of increasing health concerns in women. The screening of GRS is also important for women's physical and mental well-being. The usage of GRSS-W will contribute to the body of indigenous literature in forthcoming researches as merely limited work is found on GRS (Adil, et al., 2017).

Declaration

Ethical Approval. The study was approved by the Board of Studies of the Department of Applied Psychology, Government College University Faisalabad.

Consent for Publications. Consent approved by the authors.

Availability of Data and Materials. Contact corresponding author.

Authors Contribution. All authors contributed to the study equally.

This model further asserts that feelings of trust and faith inculcated by seasoned organizational practices often lead to reduced counterproductive work behaviors such as turnover intentions, job related stress and cognitive failures. Armenio et al. (2004) also deliberated that fostering organizational virtuousness (e.g., through honesty, interpersonal respect, and compassion combining high standards of performance with a culture of forgiveness and learning from mistakes) is likely to promote a more committed workforce. In addition, organizational support in terms of good managerial practices and compassionate leadership styles enhances positive and desirable work-related behaviors such as job performance (Schwartz, 2002), job optimism (Ugwu, 2012), and institutional affiliation (Halbesleben & Wheeler, 2008).

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Construction and Validation of Internet Gaming Disorder Scale for Children and Adolescents

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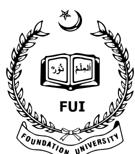
Abstract

Objective. The present study was designed to construct a reliable and valid measure of internet gaming disorder for children and adolescents.

Method. The age of the sample, of 300 children and adolescents, ranged from 11-20 years (M = 1.50, SD = .50) Scale was based on an empirical keying approach. Two studies were designed to accomplish the objectives. In study 1, with the help of experts, literature, and feedback from the student the items for the internet gaming disorder scale were formed. The number of items was curtained to fourteen items out of fifty items after the EFA was performed. Principal axis factoring with varimax rotation was used to produce the factorial structure ofthe internet gaming disorder scale (IGDS).

Result. Three distinct factors emerged namely, Escape (8 items), giving up activities (3 items), and inability to reduce playing (3 items) respectively. Confirmatory factor analysis in Study-II showed the structural validity of all scales (for example the dimensional structure). Pilot research was performed to assess the overall psychometric properties of the IGDS and its factors. Reliability coefficients were found .70, .71, .70 for Escape, Giving Up Activities, and Inability Reduce Playing respectively, whereas overall reliability was .70. Convergent and discriminant validities were ensured through the correlation of IGDS and its subscale with loneliness, life satisfaction, procrastination, and Internet gaming disorder scale-short-form.

Keywords. *Internet gaming disorder scale, escape, giving up activities, inability to reduce playing.*



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Introduction

The Internet gaming disorder (IGD) is also conceived as an online gaming disorder. It is described as consecutive and regular use of the internet to participate in games, often causing other gamers to have clinically relevant disabilities or distress (DSM-5, 2013). Over the last decade, experts have become increasingly worried about gaming addiction worldwide. In this modern era, it has become the need of the time that this issue should be accepted as an independent disorder in the clinical field, as suggested by the American Psychiatric Association (2000). For gaming addiction treatment, unification and consensus is the need of time. The clinical diagnosis of IGD, according to the APA, requires a behavioural pattern that involves constant and repeated gaming using the internet to participate in games, which may lead to severe distressor impairment. It is shown by five or more symptoms out of the main criterion which should be found, within 12 months. More specifically, the nine proposed IGD criteria include: 1) internet games concern; 2) signs of withdrawal due to the removal of internet-based gaming; 3) tolerance is developed, which results in spendingmore time in playing internet-based games 4) repeated, unsuccessful efforts to control the desire;5) lacking interest in past favourite activities; 6) continuous extreme use of internet-based games despite knowledge about its problems; 7) deceptive attitude regarding the amount of time spent on internet gaming; 8) playing games to regulate negative moods; and 9) due to severe involvement in internet-based games losing a relationship, job, or career (Rehbein et al., 2015).

Consequences of IGD

A considerable concern that the excessive and pathological use of computers and video games will adversely affect the psychosocial well-being of players.This concern is focused on the premise that excessive (internet) gaming displaces behaviours that help sustain and strengthen healthy relationships. (for example, Colwell & Kato, 2003; Kraut et al., 1998). In addition, violent video games can decrease empathetic feelings (Gao, Pan, Li, Weng, Yao, & Chen, 2017). It also can encourage the growth of aggressive problem-solving abilities (Anderson & Bushman, 2001). Minimizing empathy and problem-solving skills for aggression may prevent healthy friendships or romantic relationships from being sustained. Thus, reducing the psychosocial well-being of players (Colwell & Payne, 2000) While theoretically possible, the idea that pathological gaming reduces the psychosocial well-being of players has no empirical support.

Prevalence

It is noted in the current literature that quite a pertinent literature has investigated the epidemiology and basis of IGD across different populations, ranging from 8 years-old children to (Han, et al., 2009) older adults aged 40 years and above (Festl, Scharkow, & Quandt, 2013). For example, research has shown that IGD prevalence in younger age groups (16-21 years) is higher than in older age groups (34-40 years) (Mentzoni al., 2011).

IGD as Behavioral Addiction

The neuropsychological function of IGD has been analyzed by many neurobiological and neuro-cognitive research studies (Dong et al., 2011; Zahra, Kiani, & Shahbaz, 2019). While certain clinical reports and suggested criteria of IGD diagnosis share similarities with that of substance addiction (Ko et al., 2012; Zahra, Kiani, & Shahbaz, 2019;), so far no research study has reached a decisive conclusion that IGD and substance use disorder have a commonality of functional mechanism to a certain degree. As substantial research has been carried out to address the neurobiological function of substance use disorder for the last ten years (Volkow et al., 2010), analysis of IGD's neurobiological functional mechanisms may uncover their similarity to those of substance use disorder (Montag et al., 2015). The interconnection of the addictive behaviour cycle is such that the joyful activities are trailed after by intoxication (increased dopamine). An increase in the dopamine level leads to addictive behaviour (Young & Abreu, 2010).

Psychosocial Well-Being as an Epidemiology

The impact of well-being on pathological gaming indicates that socially inept, low self-esteem, alienated and/or generally unhappy adolescents with their lives are more likely to experience symptoms of pathological gaming behaviour. People with low self-esteem or unsatisfactory personal relationships will usually use video gaming to escape from reality, find fellowship, or gain a sense of accomplishment that they cannot gain in a real life. (e.g., Leung, 2004; Williams et al., 2008). In this regard, multiplayer online games are considered to be especially appropriate as a replacement for social interaction in real life since they allow large-scale social interaction within the Internet's anonymity (Morahan-Martin & Schumacher, 2000; Peters & Malesky, 2008).

Time Spent on Internet Gaming and Academic Achievement

Several studies have shown that addicted adolescents, with particular regard to the relationship between addictive tendencies and school outcomes, have lower school grades than their non-addicted peers (Hauge & Gentile, 2003) Previous study findings have mixed the relationship between the amount of time spent playing video games and academic success. Some studies of the video gaming effect have shown that the amount of time spent playing video games is inversely related to scholastic achievement (Charlton, 2002; Van-Schie & Wiegma, 1997). No substantial correlation between video gameplay and academic success has been identified in other research (Sharif & Sargent, 2007).

Correlates of IGD

The correlates of IGD given below are used for the validity of the scale.

Satisfaction With Life

Life satisfaction with life applies to a general cognitive evaluation of the subjective well-being of a person (Diener et al., 1985). Studies have found that game addiction is connected to less satisfaction with everyday life (Ko et al., 2012; Lemmens et al., 2011; Shapira et al., 2003). It also seems that compulsive use of online games stems from the motivation to mitigate real-life dissatisfaction (Chiou & Wan, 2006). Such research indicates that we should anticipate a negative relationship between IGD and satisfaction with life.

Loneliness

Loneliness has been characterized as an uncomfortable experience that results from major deficiencies in an individual's social relationship network (Peplau, 1982). The association between loneliness and addiction to online games has been repeatedly verified by cross-sectional research (Qin et al., 2007). Loneliness is both a cause and a consequence of online pathological gaming, suggesting a mutual relationship (Kim et al., 2009; Lemmens et al., 2011). Such studies indicate that pathological gaming does nothing to facilitate the creation or Real-life contact maintenance while playing online games can briefly provide an escape from the negative feelings related to social deficiencies. The resulting displacement of social contact in the real world is likely to lead to the deterioration of established relationships, thereby growing isolation.

A positive relation between IGD and loneliness is expected irrespective of the causal order between these constructs. In any formative phase of human life, the feeling of isolation can be discovered, and it may have more effects on puberty and young adulthood than every other age group.

Procrastination and IGD

Procrastination was found to be correlated positively with task aversion, delay sensitivity, low self-efficacy, and self-regulation failure (Bui, 2007; Hajloo, 2014; Steel, 2007). A delay in critical work and inability to self-regulate to maintain performance can result in characteristic procrastination. Procrastination appears to be one of the most negative effects of internet addiction (Sirois, 2014). Literature shows that the internet appears to be a huge distracting factor for students, shifting their focus away from studies to trivial activities.

The purpose of the study is to construct and validate a new scale of internet gaming disorder for adolescents and children in the Pakistani population. The present scale on internet gaming disorder would be in Urdu language and used for both children and adolescents for both clinical and non-clinical populations. This is an emerging pathological behaviour in Pakistan. The interest in this behaviour even rose with the suicides of two Pakistani youngsters who committed suicide when they were forbidden to play or when they missed the mission (Khan, 2020).

The previous scale on IGD develops in those cultures which are different from Pakistani culture, so this scale measures the gaming behavior for the Pakistani population and beyond. The purpose is to develop a criterion-based scale on the population of adolescents and children is therefore based on the notion that previously develop scales were constructed for the concerned population instead it can be applied in vast cultures previously no such tool was constructed for the concerned population.. The aggression due to online gaming addiction pave way for the development of the IGDQ scale.

Method

The present study tends to develop an indigenous scale that measures the symptoms of internet gaming disorder in children and adolescents. An empirical keying approach was used for the test construction. Exploratory factor analysis (EFA) was used to determine the factor structure of the newly developed scale. The process of scale development was completed in two studies. Study-I involved the instrument purpose and construction method whereas psychometric properties of the scale through confirmatory factor analysis would be completed in Study II. Furr (2011) also described it as a process completed in five steps: (1) Describe the construct measured and the Context, (2) Select response format, (3) Assemble the initial item pool, (4) Select and revise items and (5) Evaluate the psychometric properties (see relevant section). A brief description of the two studies is given below:

Study 1: Instrument Purpose and Construct Measured. ***1. Describe the Construct Measured and The Context.*** The construct was identified with the help of experts from the psychology, education, and sociology department to know the experience and identify the psychological, economical, educational, and social aspects due to excessive gaming. Two focus group discussions were conducted. The first one included adolescents to know the experience and symptoms faced by the individuals who involve in excessive online gaming. A second focus group discussion was conducted that included a psychologist, educationist, sociologist and two parents of those adolescents and children who involve in excessive online gaming to know the psychological, social educational and physical changes that occurin an individual due to excessive online gaming.

2. Response Scale Format. The response format is based on five-point Likert scale ranging from (not at all =0, rarely=1, to some extent =2, very =3, very much=4).Five to nine points are suited for most occasions and in any case (Streiner et al., 2015; Krosnick & Presser, 2010) and are the most frequently used (Furr, 2011).

After that, the collected data was given to the experts consisting of clinical psychologists, assistant professors, and lecturers of the department of psychology through the help of that gathered data comprised of opinion was utilized in the development of construct. After that scale was constructed and experts thoroughly viewed the scale and finished the construct.

3. Item Pool Generation. The data collected from the experts and adolescents was not only comprised of their opinion and experiences they also took consideration of the collected data by experts and utilized it when they were developing the construct the generated items were then viewed by the assistant professors and then finalized fifty items based on the IGD symptoms.

The process of generating items was the technical step on which the whole construct was based. So, the statements that were generated were reviewed again and again to ensure that the behaviour properly addressed the symptoms of online gaming disorder mentioned in the given criteria of DSM 5. Some expert's opinion was taken after item generation when those statements were accepted by the expert then the items were taken to the third step.

4. Select and Revise Items. This step involves the procedure of item formulation which included previous scales, literature, theories and its description in the DSM 5 criteria. Previous scales on IGD help in the development of new scales. That scale helped in item formulation. Therefore, the DSM criteria, research and literature were described by the adolescents, parents and expert psychologists who were concerned with the domain of IGD and evaluating it. So, the items were revised and then select with the help of previous scales used.

5. Empirical Item Evaluation. In this step screening of items was performed to view the verbatim are according to the symptoms of the disorder in the true sense. Item was avoided with double meaning and ambiguity and developed in indigenous language as constructed for the Pakistani population.

Sample

The sample of study I comprised of adolescents and children therefore the sample was selected purposively so it could be representative of the population (N = 300). The sample was based on students including girls (n = 100) and boys (n = 200) based on convenient sampling. The inclusion criterion for the study was adolescents and children who play online games and they were students. Permission was taken from the heads of school colleges and university heads from the city of Sargodha Punjab province. Thereafter questionnaire was distributed to collect the data. The sample size consists of 300 adolescents and children including boys and girls. For the present study, a purposive sampling technique was used to approach adolescents and children.

Instruments

The instruments that are given below were used in the present study.

Satisfaction With Life Scale. To measure the life satisfaction of participants "satisfaction with life scale" by Diener et al. (1985) was used. The scale is a psychometrically sound measure of LS as the Cronbach alpha is .87 and test-retest reliability is .82. the scale is to be responded to on a 7-point Likert scale where 0= strongly agree (SA) and 7= strongly disagree (SD). The scale includes five items where a high score indicates a high level of satisfaction with life and a low score indicates a low level of satisfaction. There is no reverse item on this scale. The translated version of this scale was used which was in the Urdu language.

Procrastination Scale. To measure procrastination in participants procrastination scale by Lay (1968) was used. The scale is a psychometrically sound measure of procrastination as the Cronbach alpha is .82. The scale is to be responded to on a five-point Likert scale where 1=extremely uncharacteristic (EU) and 5= extremely characteristic (EC). The scale includes 20 items where a high score indicates high procrastination and a low scoindicates low procrastination.
This scale has 10 reverse coded items.

UCLA Loneliness Scale. To measure loneliness in participants "The UCLA loneliness scale" by Russel et al (1978) was used. The scale is a psychometrically sound measure of loneliness as the Cronbach alpha is .96 and test-retest reliability is .94.

The scale is to be responded on a four-point Likert scale where 1 = never and 4 = often. This scale used 20 items where a high score indicates a high level of loneliness and a low score on the scale indicates a low level of loneliness. This scale has no reverse item scores.

Internet Gaming Disorder Scale-short-Form (IGD-SF-9). To measure gaming disorder in participants "IGD-SF-9" by Pontes and Griffiths (2014) was used. The scale is a psychometrically sounded measure of gaming disorder as the Cronbach alpha is .87. the scale is to be responded on a five-point Likert scale where 0 = strongly agree and 4 = strongly disagree. This scale includes 9 items where a high score indicates a high level of gaming disorder and a low score indicates a low level of gaming disorder. This scale has no reverse coded items.

Procedure

A list of experts was made, and they were requested for a committee approach to finalize the items which were empirically based on the symptoms of IGD. They were further asked to correct or discard the irrelevant items from the construct.

The starting point was the permission that was taken from the supervisor for the collection of data from different schools and colleges in Sargodha Punjab province. An informal talk was held with the principal of colleges and universityheads to take permission. After taking the permission questionnaire was distributed among participants to collect the data. The questionnaire comprised of 4 different scales to assure convergent and divergent validity. Participants were approached in their school and colleges, a brief description of the study was given to them and about filling out the form and before all of these informed consents was taken out from them. The sample was consisting of 300 comprised of 150 children and 150 adolescents. The age of adolescents ranges from (12-to 18) and children (from 9-11) according to the psychosocial stages of development defined by (Erickson, 1968). Moreover, important demographic information was also taken from respondents through a form. The time required for the completion of a questionnaire was ten minutes. All the participants were assured that their information will be kept confidential. In the end, participants were thanked for their corporation and time.

For the item generation of the construct, two focus groups were conducted one from the adolescents (2 male and 2 female undergraduate students) and their parents (2 male and 1 female) and the second from experts and psychologists having knowledge of internet gaming disorder symptoms and their consequences. Second focus group was composed of 2 PhD assistan professors from sociology department (1 male & 1 female), four PhD from psychology department (2 male assiatant professor & 2 female associate professors) in University of Sargodha The generated themes (symptoms) that were proposed through interviews were also taken from the gamers so the intended phenomenon can be clearly defined the themes (symptoms) that were generated were mainly addressed by the gamers and experts were "inability to reduce playing despite problems" often participants reports that they do not have control on the urge to play the game despite having problems. On the other hand, "deceiving family members about the time of games being played by the" most of the students reported that they do lie about the time of gaming and deceive about their other tasks done. One of the themes (symptom) that was addressed by the participants was violence or aggressive behaviour that arises due to excessive gaming because they usually play games in which they have to play an aggressive role and character in gaming.

Study II Psychometric Properties of the Newly Constructed Instrument. Study II comprised two steps to ensure the psychometric properties of the scale. Step one consists of exploratory factor analysis (EFA). The response format is based on a five-point Likert scale that ranges from (not at all = 0, rarely = 1, to some extent = 2, very = 3, very much = 4). The demographics that were included to assess some credentials of adolescents were gender, age class family system, number of siblings, birth order, and institute fwhich here they study. The sample size for the EFA was 200 adolescents and boys and girls. The permission was taken from the headsschools and colleges. To fillof , the form informed consent was taken and ensured that the information will be kept confidential.

After the data collection, the factorial structure was extracted by using principal axis factoring analysis through varimax rotation. The total factors extracted were three in total, which included escape named factor I, second-factor named as giving up activities and the third factor was named as the inability to reduce playing game.

The initial eigenvalues displayed 20.40% variance was of the first factor, 13.88% variance was of the second factor and the third factor explained 11.48% variance. In step two confirmatory factor analysis (CFA) was done to ensure the reliability and validity of the questionnaire.The demographics that were included to assess some credentials of adolescents were gender, age class family system, number of siblings, birth order, and institute from whichthey study. The sample size for the CFA was 300 adolescents and boys and girls. (see Table 1). Again, the permission was taken from the heaschoolsschool and colleges of students. To fill, the form informed consent was taken and it was ensured that the information will be kept confidential.

To ensure the convergent and divergent validity of the scale different scales were used satisfaction with life scale, procrastination scale, UCLA loneliness scale, IGSF-9.

Reliability of Construct

The reliability of the scale ensures how consistent its vignettes are and although a scale is developed carefully and minutely there also requires that a scale should ensure its reliability. Reliability of a scale must be ensured whicelps further researchers to be carried out in future. To ensure the reliability of scale Cronbach alpha method is used to ensure its reliability.

Cronbach alpha reliability of the total scale was .70 and the reliability coefficients of subscales extracted from item analysis were .70 (escape), .70 (giving up activities), and .71 (inability to reduce playing).

Validity of Scales

The worth of a scale is seen when it proves to be worthy. If the scale is not proving reliable, it does not matter to that extent but if the scale is not proving its worth, no matter how much effort and care it is developed it is of no worth. Therefore, a scale basic element is to prove validity. Validity and reliability do not ensure that the test is valid or accurate, but validity is the most important thing and ensures the accuracy of the scale. In the procedure of the scale construction ensuring validity is the first step to enhancingand provingthe worth of the scale to be developed.

After the data collection for CFA, the factorial structure was extracted by using principal axis factoring analysis through varimax rotation to ensure the maximum dispersion of loadings within factors.

Moreover, varimax rotation in contrast to quartimax rotation attempts to load a smaller number of variables high on every factor thus clarifying the factors more simply and clearly interpretable (Field, 2013). Three factors namely *escape, giving up activities, and inability to reduce playing game* were extracted through EFA. The initial Eigenvalues displayed 20.40%, 13.88%, and 11.48% variances respectively for three factors. That also confirmed the factorial validity of the scale. The factor loadings werehigher than .40 and the model fit indicates as described above were ranging from acceptable to high.

Results

Table 1

Demographic Variable of the Sample of Main Study (*N* = 300)

Demographic variables	Male		Female		Total	
	f	(%)	*f*	(%)	*f*	(%)
Gender	200	66	100	33	200	
Age						
children	100	50	50	50	150	50
Adolescents	100	50	50	50	150	50
Class						
High school	100	50	100	100	200	66
College	100	50	0	0	100	33
Family system						
Nuclear	124	62	51	51	175	58
Joint	76	38	49	49	125	41
Gaming duration						
1 hour or above a day	54	27	41	41	95	31
2 hour or more a day	88	44	59	59	147	49
4 hour a week	31	15	0	0	31	10
7 hours in week	27	13	0	0	27	9
Gaming starting period						
1 year or below	4	2	27	27	31	10
Year or above	196		73	73	269	89
Institute		98				
Government	100		100	100	200	66
Private	100	50	0	0	100	33

Table 1 shows the frequency and percentage of all adolescents and children in the terms ofdemographic variables utilized in this present study.

Table 2

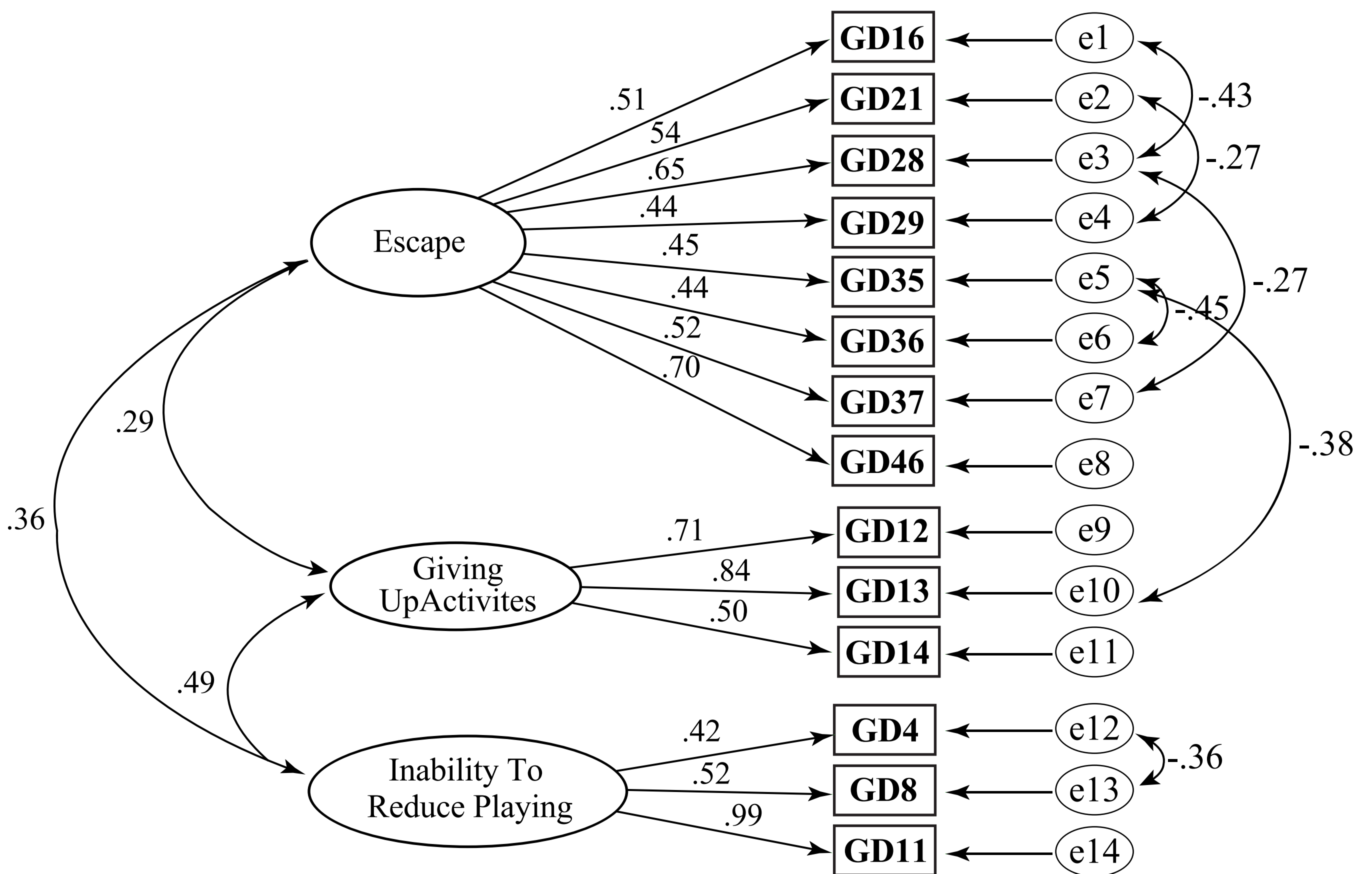
Exploratory Factor Analysis and Confirmatory Factor Analysis for Internet Gaming Disorder Scale

	EFA		CFA	
	Factor 1 (Escape=08)			
16	.40		.51	
21	.44		.54	
28	.47		.65	
29	.38		.44	
35	.55		.45	
36	.45		.44	
37	.42		.52	
46	.66		.70	
	Factor 2 Giving up other activities (Items=03)			
12	.63		.71	
13	.89		.84	
14	.51		.50	
	Factor3 Inability reduce playing (Items=03)			
04	.71		.42	
08	.68		.62	
11	.64		.99	
Cum variance %	20.40	34.29	45.77	100.46

To see the dimensionality of the internet gaming disorder scale exploratory factor analysis was done. The Kaiser measure Olkin measure of sampling adequacy was .610 which is above .6 which indicates its acceptability It also enhanced the appropriateness of factor analysis. Secondly,the significant Bartlett's test of Sphericity (χ^2 (78) = 1026.2, p = .000) confirmed that the correlation matrix significantly differed from an identity matrix the values of commonalities were above .3 which indicates that some common variance was shared by every other item, therefore, it can be concluded that 14 items should include in factor analysis.

Principal component analysis with varimax rotation was used as an extraction method to extract the factor structure of the internet gaming disorder scale. The initial Eigenvalues displayed 20.40% variance was of the first factor, 13.88% variance was of the second factor and the third factor explained 11.48% variance.

Figure 1
CFA of the Three Retained Factors



This Figure 1 portrays the confirmatory factor analysis of the internet gaming disorder scale for adolescents and children. Model fit indicates as described above are ranging from acceptable to high. Moreover, the fit indicates are acceptable to good i.e CMIN/df = 3.71, GFI = .88, AGFI = .85, NFI = .81, TLI = .80, CFI = .85, RMSEA = .09, PCLOSE = 00, SRMR = .072

Discussion

The present study was an empirical effort to construct a reliable and valid instrument to measure the internet gaming disorder scale for adolescents and children. Although much has been done to examine internet gaming disorder and its impact on adolescents to the psychological health. But little assessment had been made by the researchers and psychologists for the development of standardized instruments to measure internet gaming disorder in the Pakistani population and culture. It is broadly recognized that adolescence and childhood are among the most critical age periods of an individual where certain changes occur that exert a lifelong impact on personality. Having through a review of literature it was found that there are only a few measurements available to measure internet gaming disorder but none of the available instruments was measuring internet gaming disorder-specific for the Pakistani population as thereof adolescents toward internet games. Particularly in Pakistan, there was no such scale available that was developed within indigenous and cultural contexts. Another sole purpose of the current study was to find out whether a model with a smaller number of items can have a data definition that is comparable or even better.For the development of short-scale models, the maximum load item for each criterion was selected to create fourteen items.Keeping in view the worth of the variable concerned researcher planned the current study to develop an indigenous and culture effective tool in the Urdu language to measure internet gaming disorder among adolescents and children. The current study is a significant advance toward this path as it has built up a measure of internet gaming disorderand its psychometric accuracy in terms of validity, reliability, and factorial structure.

To investigate the factor structure of the IGD Scale, principal axis factoring with varimax rotation of the 14 items uncovered that three elements had an eigenvalue > 1 and the scree plot demonstrated inflection at five components. Along with these lines, as per the Kaiser model of factor extraction, we retain three factors (total explained variance was 45.7%), fourteen items with factor loadings of ≥.40 (see Table 4) were retained and each of these items loaded on its respective factor. "Escape," "Giving up activities," and "inability to reduce playing" was decided to be the name of the factors.

Although the explained variance of the Internet Gaming Disorder Scale is moderate, it is acceptable given the high factor loadings, communalities >.30. CFA was also done on the internet gaming disorder scale toconfirm the scale's factorial structure.

The CFA's results showed that all the indicators were corresponding with their respective latent factors and that the superordinate latent factor of the IGD converged with the three latent factors. The three-factor structure obtained by EFA was therefore complied with by CFA, which demonstrates a good model with 14 items suitable for the data.

The first-factor Escape (8 items) resulted in the EFA & replicated in the CFA is very reliable & it tends to measure the Escape of an individual from negative moods, such as guilt hopelessness, and also depersonalization from the self and others and to avoid the situations that cause the problem and indulged in pathological gaming. First, a specific psychiatric disorder may likely be a cause to develop the IGD scale. Second, that the resulting IGD problems and adverse effects either later evolve into a psychiatric condition, or third, that both of the problems share underlying genetic, psychological mechanisms, socio-demographic or, making people prone to both pathologies(Dong et al., 2011). These behavioural addictions can cause a very serious effect, often affecting the affected person's family and social interactions or their academic duties or work(Baer et al., 2011). Due to these problems, a comorbid situation can occur which causes problems that accumulate and linger as the behaviour persists (e.g. depression, social phobia, anxiety) (Griffiths & Meredith, 2009).

The second factor is "Giving up Other Activities" (3 items), which demonstrates individual behaviour of giving up activities during gameplay and important tasks despite causing problems. The individual postpones or delays the task or activities due to gaming and becomes irresponsible toward his or her duties as the symptoms described in DSM-5. The consequences of these behavioural addictions could be severe, often affecting the person's family and social interactions along with academic or job responsibilities (Baer et al., 2011).

These issues often contribute to comorbid psychological & health-related problems that accumulate and stay behind as the behaviour persists (e.g. depression, anxiety, social phobia) (Griffiths & Meredith,2009).

The third factor "Inability to Reduce Playing" (3 items) is the personal behaviour of unsuccessful attempts of playing the game the individual has no control over the urge to play the game as the individual involves in pathological addiction to gameplay according to the symptom given by the DSM -5. It seems to affect the occurrence of the issue concerning self-control (Ng & Hastings, 2005). Video games encompass a high concentration potential, and certain individuals lose control over their urges due to these characteristics. The outcome of the present study showed that for the Pakistan community, the newly developed scale of internet gaming disorder for children and adolescents was internally consistent and accurate. Three IGD Scale factors were significantly positively related to each other. This study also identifies the high prevalence of IGD in adolescents & children.

Construct validity of this newly developed scale was increased by the findings of IGDQ and its all domains (escape, giving up other activities, and inability to reduce playing) that were significantly correlated with loneliness. The association between isolation and addiction to online games has been repeatedly verified by cross-sectional research (Qin et al., 2007),but the fact that they had a non-significant link with academic procrastination, except for the inability to minimize play, indicates an essential connection with procrastination. To be more specific, IGD and its other sub-domains showed a positive correlation with IGDSF-9. This smaller, 14-item IGD scale was closely associated with the 9-item dichotomous IGDSF scale and proved to be accurate, having Cronbach's alpha value as .71. Working with these scales of all versions the studies yielded good results.

The prevalence of IGDQ in adolescents and children address through percentage (see table 6) respective to their family system, age, and gender. The results show that males have a higher prevalence of IGDQ as compared females. Previous research also supports the findings that the prevalence of IGD is high in the younger age group (16–21 years old) as compared to the older age groups (34–40 years old) (Mentzoni et al., 2011).

It also seems that compulsive use of online games originates from the impulse to lessen the frustration that occurs due to different real-life problems (Chiou & Wan, 2006). Different studies suggested a negative association between IGD & satisfaction with life. But this study predicted a positive correlation between the IGDQ and satisfaction with life; it might be due to the reason that adolescents and young players often feel satisfaction and player while indulging in online gaming and escaping from negative moods or thoughts. As documented in some research examining healthy populations with Internet or video games addiction, the psychological symptoms associated with IGD may be related to loss of control throughout the problem and/or previous and primary variables of mental disorder (Berner et al., 2014; & Su, 2007).

Conclusions

Overall, as suggested by the DSM-5, the conclusion of the current study provides empirical evidence for the definition of IGDQ (APA, 2013). While the present study also supports the reliability of further study of the phenomenon. Moreover, the findings of the current study suggested that the IGDQ is a shorter standardized and psychometrically sound measure of gaming disorder, following the new structure as defined by the DSM-5 (APA, 2013). Three factors were retained based on symptoms which were escape, giving up other activities, and inability or reduced playing.

Limitations of the Study

Although the results on the psychometric properties of the internet gaming condition were generally solid, some possible limitations are worth noting. First of all, the data was self-reported that is vulnerable to different established biases (for example desire for social approval, biases in memory retrieval, and so on). Second, the participants were selected from the Punjab province Sargodha division, the existing results should not be applied directly to the general population. Thirdly, only Pakistani adolescents and children were included in the sample of this study, the present results may Therefore, adolescents from other ethnic backgrounds and adult samples should not be generalized. There was another major factor affecting the results was the COVID-19 due to which it was difficult to take a large sample. Maladaptive behaviour might increase due to this pandemic situation because free time during COVID- 19 adolescents showed more tendencies toward online gaming.

Suggestions

Hopefully, this study will be helpful in carrying out more IGD studies both in Pakistan and worldwide as well. Future research may also get benefit from this study; it can be replicated more broadly, i.e., working on it at a national level, to advance the accurate estimate of this disorder. This can only be made after broad support has been given for the proposed cutoff score for the IGDS9-Short form. The sample size should be increased as it was not taken much in this study due to COVID -19. In the context of Pakistani cultural history, the Internet gaming disorder questionnaire is the first to measure IGD and further research on IGD will ideally emerge for this purpose.More studies on IGD should be carried out to collect evidence of the clinical validity of this phenomenon, considering the severity and adverse effects arising from IGD in a minority of game players. Players who live separate, i.e., with no partner or roommate or family member, could under-diagnosed this problem the reason is they do not obtain the social supervision that is needed for its criteria. Studies that will be conducted in future mustaddress home, family, or other social metrics which would help provide additional information about the social dimensions of such IGD parameters.

Implications

This short fourteen item scale is a valid and reliable questionnaire that will measure IGD. This questionnaire yields good diagnostic accuracy which is why; IGDQ can be used for research and diagnosis for both genders' gamers specifically in adolescents and children. By developing an instrument that is suitable for all types of gamers, it can be hoped that IGDQ psychometrically a robust scale that will be helping future research which is intended to report important questions related to the IGD, such as Its causes and implications among different age groups and its effects with and without proper treatment. A serious problem around the world has been its term, disordered participation in video games, and this phenomenon needs more specialized scientific attention. Therefore, in estimation, validation and a general understanding of IGD, this research is a big step forward.

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Availability of data and materials. The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable request.

Ethics approval and consent to participate. Formal permission was acquried from institutional Ethical board to conduct research.

Competing interest. The authors declare to have no competing interests.

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Role of Social Support and Cognitive Emotion Regulation in Mental Health Outcomes of Women Behind Bars in Punjab Province

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Abstract

Purpose. The current research investigates the role of social support and cognitive emotion regulation strategies in mental health outcomes of women behind bars in the Punjab province of Pakistan.

Method. A sample of 200 female prisoners above 18 years of age (both convicted and under-trial; 50% each) was drawn from four district jails of the Punjab province using purposive sampling technique. Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001), General Health Questionnaire-28 (GHQ-28; Goldberg ,1978) and Multidimensional Scale of Perceived Social Support (MSPSS, Zimet et al., 1988) were used to measure cognitive emotion regulation strategies, mental health and social support among female prisoners respectively.

Results. Results of regression analysis revealed that social support by significant others predicted adaptive cognitive emotion regulation approaches whereas, lack of perceived social support contributed to maladaptive cognitive emotion regulation strategies. Lack of social support from significant others and two maladaptive strategies i.e. catastrophizing and rumination predicted poorer mental health outcomes. Group difference based on age and type of imprisonment were however significant for depression and social dysfunction and also for types of social support especially across convicted and under-trial inmates.

Conclusions. This study provides an understanding of the differential mental health problems of women inmates and the relevant social and personal factors that may help the psychologists in correctional settings to develop and implement evidence based clinical interventions for transforming lives of women in prisons.

Keywords. *Cognitive emotion regulation, perceived social support, female prisoners, mental health.*

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Introduction

Since the last two decades, the ratio of women prisoners has almost 53% increased than the previous years, which resulted in a rise of worldwide female prison population (Walmsley, 2017). South Asian countries include one quarter of the world population and with the growing population, these countries have shown an increase in crime rates and resulting mental health issues (Thara & Padmavati, 2013). Pakistan is one of these South Asian countries having no exception in crime rates and psychological problems of prisoners regardless of the gender (Jamadar, 2012). Though the number of women inmates is far less than men (884 as compared to 47840 in all prisons of the Punjab, Pakistan), as reported in ("884 female inmates", 2021); however, they may undergo worse mental health issues as compared to their male counterparts (Ali & Shah, 2011; Bartlett & Hollins, 2018).

Imprisonment itself is tough, stressful and challenging for all the prisoners. General Strain Theory (GST) considers the environmental stressors as one of the reasons for developing negative affectivity (Agnew, 1992) such as sadness and anger that may result in psychopathological outcomes like depression and anxiety in prison set up (Weißfloga et al., 2012). Several personal and social factors may contribute to adverse mental health conditions of prisoners (Fazel, et al., 2016). In addition to individuals' predispositions, their ability to combat stressful situation such as coping skills and emotion regulation strategies are linked to mental health conditions of incarcerated individuals (Saeed, 2021) including women (Khalid & Naz, 2019). There is evidence for both gender-specific and gender-neutral mental health sufferings of imprisoned offenders as well (Edgemon & Clay-Warne, 2019). Both men and women in prison face miserable physical, psychological and social conditions yet the case becomes worst especially for female prisoners as there are several reports of physical and sexual victimization not only by jail authorities but also by the other prison inmates (Zadeh & Ahmad, 2012). Almost 80% percent of the female prisoners worldwide reported mental health problems (Cai et al., 2017). There is five times more risk for females who are behind the bars to develop mental health problem than the women in general population (Tyler et al., 2019). Mostly, female prisoners had the long histories of domestic, emotional, sexual and physical abuse before the commitment of crime and imprisonment, which may be a causal factor to trauma and other related mental health issues (Alves et al., 2016; Gunter, 2012; Jewkes et al., 2019; Karlsson and Zielinski, 2018).

Prevalence rate of overall psychological disorders among female prisoners is approximately 3.9% (Fazel et al., 2016). Various personal and environmental factors may contribute to such problems. Some common personal factors are poor physical health, maladaptive cognitive emotion regulation strategies and drug abuse (Alves et al., 2016). Whereas some social and environmental factors such as long periods of segregation from families and significant others, poor social support during prison and after release, job loss, stigmatization and disapproval from the society lead female prisoners towards somatic symptoms, sadness, insomnia, anger, anxiety and even suicidal ideations and attempts (Baranyi et al., 2018; Pratt et al., 2010). The collectivist nature of our culture highlights the need to consider social support while explaining the psychopathological outcomes among female population in prison.

Social support can be defined as one's belief that he/she is cared for, being valued and esteemed, and one of a member of a set-up with shared rights and responsibilities. Family, friends or other close companions are regarded as major sources of such social support (Chan & Cheng, 2004; Zimet et al., 1988). Such type of relationships with shared rights and responsibilities among people can regulate and control negative consequences of environmental stressors (Moore, 2021). These social support mechanisms have positive effects on inmates' adjustment to prison through healthy cognitive and behavioral mechanisms (Jiang & Winfree, 2006). Due to the implications of social support for the reduction in offenses (Balogun, 2014; Zadeh & Ahmad, 2012), numerous studies have concluded that good social support lead a person towards positive mental health outcomes, whereas poorer social network had negative consequences on physical and mental health of individuals (Berkman & Glass, 2000; Balogun, 2014). A strong family bond can provide passionate support, understanding of one another's problems, give the sense of well-being and provide comfort, which strengthens the individuals during stressors and enables them to cope with the adversities of life (Birmingham, 2003). Social support may be considered more crucial rule for women prison inmates as compared to men (Bartlett & Hollins, 2018) due to the impact on family ties and social stigma, associated with crime and prison especially in a patriarchal society.

Social support networks to women prisoners are not adequate and they mostly seek support from on their fellow prisoners (Enos, 2001), so there is need to sort the type and resource of social support for using this interpersonal strength to enhance the psychological wellbeing of women prisoners (Ehsan, 2021). Reentry to community, after life in prison may also be demanding for women and lack of social support may affect their ability to cope with this stress. Social support and emotion regulation patterns are closely associated, as the results of a longitudinal study concluded that people who had rigid and fix emotional patterns and poor emotion regulation strategies regarding situations, had lesser social support from their groups than those with flexible emotional and behavioral patterns (Tamir et al., 2007).

According to Garnefski et al. (2001) the notion of cognitive emotion regulation can be defined as intellectual dealing with the adversities of life, with several behavioral, emotional, cognitive and physiological mechanisms. Cognitive emotion regulation strategies involve both adaptive (for example: positive reappraisal, positive-refocusing, acceptance and putting into perspective) and maladaptive approaches (such as: cognitive restructuring, blaming oneself, ruminating, catastrophising, blaming others). Adaptive strategies are vital for health and positive functioning and are essential for the commencement of a task, eagerness to do something new, and overall success in a task, however maladaptive approaches usually resulted in maladaptive behaviors and negative consequences and ultimate negative physical and mental health outcomes (Pejičić et al., 2018). Contemporary research had established the link among cognitive emotion regulation strategies, social net-work and inner well-being during stressful life events. As Vanderhasselt et al. (2014) suggested that maladaptive cognitive strategies which emerge during stressful situations can lead towards poorer mental health consequences. On the other hand, solicitous usage of several adaptive strategies moderates the correlation between maladaptive behavior and mental health issues. A recent study (Saeed et al., 2021) with Pakistani women in prison demonstrated the effectiveness of psychological intervention to enhance adaptive cognitive emotion regulation approaches further resulting in increased wellbeing of inmates.

The literature provides sufficient evidence for the interrelationship of social support, use of compatible and non-compatible cognitive emotion regulation strategies, and psychological health especially during stressful life situations. Mental health strain experienced in prison during and after incarceration may lead to adverse circumstances especially in the form of high rates of prisons' misconduct (Ehsan, 2021), reduced chances of employability after the period of imprisonment (Mallik-Kane & Visher, 2008) and risk of severe psychiatric illness (Bartlett & Hollins, 2020). It is therefore important to address the mental health issues of the prisoners right in time to identify potential factors associated with mental adversities.

Hypotheses

1. High level of perceived social support would predict adaptive cognitive emotion regulation whereas decreased level of social support would predict maladaptive cognitive emotion regulation strategies among women behind bars.
2. Lower level of social support would predict poorer mental health outcomes (depression, anxiety/insomnia, somatic symptoms and social dysfunction) among women behind bars.
3. Maladaptive cognitive emotion regulation strategies would predict poorer mental health outcomes among women behind bars.
4. Level perceived social support, use of adaptive and maladaptive emotion regulation strategies and mental health outcomes would differ across convicted and under-trial female prisoners.

Method

Sample

A sample of women inmates (*N* = 200) was recruited from four district jails of Punjab (Faisalabad, Jhung, Multan and Shekupura). From the total sample 50 % females were convicted and 50% were under trail drawn purposively. Participants were divided into three age groups, young (19-35), middle aged (35-50) and older (50 years and above). Female prisoners less than 18 years of age were excluded from the sample. The sample was purposively approached on the basis of the participant's age (adults only, without physical disability) and category of imprisonment (convicted or under-trail).

Purposive sampling technique has been frequently used in studies with prisoners (Saeed et al., 2021; Jewkes et al., 2019; Zadeh & Ahmad, 2012) due to the systematic nature of the study for the selection of participant who are proper fit according to the study objectives. The study was based on correlational (cross-sectional) research design. Demographic details of the participants are presented in table 1.

Instruments

Demographic Data Sheet. Demographic data sheet was used to obtain relevant information from the participant, such age group, marital status, socioeconomic status, category of prison, and category of education.

Cognitive Emotion Regulation Questionnaire (CERQ, Garnesfski, Kraaji, & Spinhoven 2001). CERQ is a multidimensional scale which was developed to assess conscious coping strategies used by individuals who have some adversities in life. It was aimed to find out the conscious aspects of emotional control, people usually use after having any negative life event.it has 36 items and 9 subscales which are graded on a likert point scale which ranges from 1 (almost never) to 5 (almost always). Reliability of all of the nine subscales ranges from 0.66 to 0.83 (Garnefski, Kraaij et al., 2002).Urdu translated version of this questionnaire by Khawar, Butt, Saeed, Malik & Summan (2016) with the reliability of .89 was used in the present study.

General Health Questionair_28 (GHQ-28, Goldberg, 1978). General Health Questionnaire aims to evaluate current overall health of adult population. It is divided into four groups and each one consisted on seven questions. Each seven questioned group form a subscale naming a) Somatic symptoms, b) anxiety symptoms, c) social dysfunction and d) depressive symptoms respectively. Response format of the questionnaire is three point (0-3) Likert scale. Maximum score is 84 and the cut-off score is 23 which depict that a global GHQ score of 23 or above indicates a poorer general health. Urdu version of GHQ by Riaz and Reza (1998) was used in the current research.

The Multidimensional Scale of Perceived Social Support (MSPSS, Zimet, Dahlem, Zimet & Farley, 1988). It is an easily administered, self-reported, short scale with just 12 items. This Scale is used to judge the individual's perception regarding the amount of social support, which one is receiving from three sources. These three sources are Significant Others denoted by (SO), Family denoted by (FA), Friend denoted by (FR). Response format of the scale is a seven point Likert scale in which"1"represents "very strongly disagree" and"7" shows "very strongly agree". It has confirmed to be psychometrically up to the mark on varied samples and has sound internal reliability and test-retest reliability.88 was the total scale reliability.

Procedure

We collected the data from four district jails of Punjab based on formal permission sought from the authorities and availability of sufficient number of prisoners in both of the categories of convicted and under-trail prisoners. We briefed the participants about the purpose of the research and took verbal and written consent from them. Participants were also assured about the confidentiality of their given information. Above-mentioned questionnaires along with the demographic datasheet were administered to assess the presence of social support and nature and severity of any mental health issues faced by them. At the end, they were thanked for their cooperation.

Results

Pearson product moment correlation was computed for all the study variables followed by stepwise multiple linear regression analysis for significantly correlated variables. Mental health was the major outcome variable while social support and cognitive emotion regulation strategies were their contribution to mental health outcome and interrelationship also. Additionally, using Multivariate Analysis of Variance (MANOVA), participants were compared on all the study variables based on categorization into age groups and type of imprisonment.

Table 1 demonstrated the percentages of demographic features of the sample such as age, marital status, socio-economic status, category of imprisonment and education of female prisoners.

Table 1

Demographic Characteristics of Participants (*N*=200)

Variables	*f*	%
Age Groups		
Young adults (18-30)	67	33.5%
Middle aged (30-50)	69	34.5%
Old aged (50 and above)	64	32.0%
Total	200	100%
Marital Status		
Married	144	72.0 %
Unmarried	24	12.0%
Divorced	10	5.0%
Widow	22	11%
Total	200	100%
Socioeconomic Status		
Middle class > 70000Rs.	13	6.5%
Lower middle class (40000-70000Rs.)	77	38.5%
Low income class < 40000Rs.	110	55%
Total	200	100%
Type of Imprisonment		
Convicted	100	50.0%
Under trail	100	50.0%
Total	200	100%
Education		
Illiterate	126	63.0%
Primary	45	22.5%
Matric and above	29	14.5%
Total	200	100%

Table 2

Inter-correlation among Cognitive Emotions Regulation Strategies, Perceived Social Support and Mental Health Outcomes (somatic symptoms, anxiety, social dysfunction, severe depression) among Women behind Bars (*N* = 200)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Self blame	1															
2. Rumination	.36***	1														
3. Catastrophizing	.23**	.43***	1													
4. Blaming-other	-.02	.22**	.40***	1												
5. Acceptance	.72***	.43**	.31***	.08	1											
6. Positive refocusing	.21**	.36***	.16*	.12	.27***	1										
7. Refocus on planning	.12	.26***	.10	.03	.11	.53***	1									
8. Positive reappraisal	.20**	.34***	.36***	.14*	.22**	.59***	.50***	1								
9. Putting into perspective	.34***	.25***	.23**	.13	.34***	.50***	.32***	.44***	1							
10. Significant others	.04	-.03	-.05	-.03	.02	.21**	.24**	.19**	.23**	1						
11. Family	-.07	-.11	-.14*	-.004	-.08	.20**	.13	.14*	.16*	.72***	1					
12. Friends	.00	-.05	-.11	-.04	-.01	.15*	.21**	.17*	.22**	.72***	.73***	1				
13. Somatic symptoms	.05	.36***	.35***	.26***	.10	.12	.10	.22**	.03	-.33***	-.33***	-.30***	1			
14. Anxiety	-.10	.16*	.24**	.24**	.03	.04	.06	.00	.09	-.25***	-.17*	-.19**	.44***	1		
15. Social Dysfunction	.07	.22**	.29***	.19**	.02	-.01	-.05	.01	.03	-.38***	-.34***	-.30***	.64***	.53***	1	
16. Severe Depression	.10	.24**	.25***	.21**	.11	-.15*	-.10	-.09	-.11	-.35***	-.32***	-.29***	.45***	.45***	.51***	1

Note: $*p < .05$, $**p < .01$, $***p < .001$.

Table 2 shows the results of inter-correlation among adaptive (acceptance, positive refocusing, refocus on planning, putting into perspective, positive reappraisal) and maladaptive (self-blame, rumination, catastrophizing, blaming others) cognitive emotions regulation strategies; subscales of perceived social support (significant others, family, friends) and general health questionnaire subscales (somatic symptoms, anxiety, social dysfunction, severe depression). Results showed that all maladaptive cognitive emotion regulation strategies (except for self-blame) rumination, catastrophizing, and blaming others were found to be highly significantly related to all the mental health outcomes such as somatic complaints, anxiety, social dysfunction and severe depression (measured through General Health Questionnaire). There was no significant relationship between adaptive cognitive emotion regulation strategies and mental health outcomes but positive reappraisal showed a significant negative association with depression. Among maladaptive strategies, catastrophizing was inversely correlated with social support from the perspective of family. All adaptive cognitive coping strategies (other than acceptance) including positive refocusing, refocus on planning, positive reappraisal and putting into perspective showed significant positive association with all the subscales of social support specially with significant others followed by friends and family. Perceived social support from all sources (friends, family, significant others) was highly inversely correlated with poor mental health outcomes (social dysfunction, somatic symptoms, severe depression and anxiety respectively).

Table 3

Social Support as a Predictor of Adaptive and Maladaptive Cognitive Emotion Regulation Strategies among Female Prisoners (*N*=200)

Predictors	Outcomes	*B*	*SE*	*β*	*p*	R^2
	Adaptive					
Significant others	Positive Refocusing	.61	.203	.209	.003	.044
	Positive Reappraisal	.54	.200	.189	.007	.036
	Put into Perspective	.65	.199	.235	.001	.055
	Refocus on Planning	.71	.202	.243	.001	.059
	Maladaptive					
Family Support	Ctastrophising	-.24	.123	-.142	.045	.020

Table 3 demonstrates significant predictors only. Results of stepwise liner regression revealed that social support significantly predicted adaptive and maladaptive cognitive emotion regulation strategies among female prisoners. So for as adaptive strategies were concerned, one of the aspects of social support (i.e. significant others) predicted all types of adaptive strategies other than acceptance while other two aspects (family and friends' support) were excluded being insignificant predictors. Support from significant others significantly predicted positive refocusing (β=.209, p =.003), positive reappraisal (β =.189, p =.007), put into perspective (β = .235, p = .001) and refocus on planning (β =.243, p =.001) by accounting 4%, 3%, 5% and 6% variances respectively. Whereas, only family subscale of social support predicted ctastrophising (one of the factors of maladaptive cognitive emotion regulation strategies) of female prisoners, while other three factors (rumination, self -blame and blaming others) were not correlated with any of the sub scale of social support hence they were not discussed here. Whereas family subscale of social support significantly predicted ctastrophising (β =-.142, p=.045) accounting for 2% of variance.

Table 4

Social Support as a Predictor of Mental Health among Female Prisoners (*N*=200)

Predictors	Outcomes	*B*	*SE*	*Β*	*p*	R^2
Significant others	Anxiety insomnia	-1.97	.34	-.374	.000	.14
	Social dysfunction	-.88	.24	-.247	.000	.06
	Somatic system	-1.69	.39	-.326	.000	.10
	Severe depression	-1.7	.31	-.357	.000	.12

Table 4 also reports significant findings only and the results of stepwise multiple linear regression showed that only one aspect of social support (significant others), significantly predicted mental health outcomes of female prisoners, while the other two subscales (support from family and friends) were excluded being insignificant. Table revealed that absence of support from significant others was a significant predictor of anxiety insomnia (β= -.374, p= .000), social dysfunction (β =-.247, p =.000), somatic symptoms (β= -.326, p =.000) and severe depression (β =-.357, p =.000) by accounting 14%, 6%, 10% and 12% of variances respectively.

Table 5

Maladaptive Cognitive Emotion Regulation Strategies as Predictor of General health of Female Prisoners (N=200)

Variables	B	*SE*	β	*t*	*p*	R^2	ΔR^2
Step 1							
Catastrophising	1.66	.357	.315	4.66	.000	.099	.095
Step 2							
Catastrophising	1.20	.388	.228	3.10	.002	.133	.124
Rumination	1.14	.411	.204	2.78	.006		

Result of multiple linear regression showed that disruptive cognitive emotion regulation approaches predicted general mental health among female prisoners. Results were significant not only for general mental health, but for somatic complaints (β= .211, p= .021) and depression ((β= .211, p=.006) also. In step 1 ctastrophising significantly predicted mental health (β= .315, p=.000) accounting for 9% of variance. In this step, rumination and blaming others were excluded because of insignificant predictors. Whereas in step 2 ctastrophising (β= .228, p= .002) and rumination (β=.204, p=.006) accounting for 13% of variance are significant predictors of general mental health among female prisoners. Hence again, blaming others emerged as an insignificant predictor and was excluded.

Table 6

Table 6. MANOVA for General Health Questionnaire Subscales, Adaptive & Maladaptive Cognitive Emotion Regulation Strategies and Types of Social Support across Groups based on Age and Type of Imprisonment (N = 200)

Groups	*DV's*	*SS*	*Df*	*MS*	*F*	*p*
Age	Depression	294.72	2	147.36	4.59	.011
	Positive Reappraisal	79.25	2	39.63	3.49	.032
TOI	Social Dysfunction	132.33	1	132.33	7.36	.007
	Acceptance	191.17	1	191.17	17.79	.000
	Self-blame	166.88	1	166.88	12.25	.001
	Blaming Others	113.09	1	113.09	4.56	.034
	Significant Other	14.92	1	14.92	10.69	.001
	Family	42.89	1	42.89	12.09	.001
	Friend	16.19	1	16.19	4.80	.030
Error	Depression	6217.69	194	32.05		
	Social Dysfunction	3488.28	194	17.98		
	Positive reappraisal	2203.72	194	11.36		
	Acceptance	2084.37	194	10.74		
	Self-blame	2599.66	194	13.40		
	Blaming Others	4811.43	194	24.80		
	Significant Other Support	270.82	194	1.39		
	Family Support	688.58	194	3.55		
	Friends Support	654.02	194	3.37		

Table 6 presents significant results compiled from MANOVAs computed for the main effects and interaction of groups based on age and type of imprisonment on mental health outcomes (GHQ subscales), adaptive and maladaptive cognitive emotion regulation strategies (CERQ subscale) and three types of social support (MPSS subscales). None of the interaction effects was found significant for any of the dependent variables.

However, significant main effect of age was found on severe depression and positive reappraisal of the stressful situation; while type of imprisonment also showed significant main effect on social dysfunction and one adaptive regulation named as acceptance. Main effect of age was insignificant on all maladaptive emotion regulation strategies, whereas type of imprison showed significant main effect on both self-blame and blaming others for the negative event. Age groups did not differ in terms of perceived social support from three sources; yet convicted and under-trial female prisoner showed significant differences on all the types i.e. support from significant other, family and friends. Nature of these differences is illustrated in the table 7. Magnitude of age group differences was further analyzed using Tukey's Poc Hoc test. It shows that younger and older women prisoners were more depressed than middle aged while Post Hoc results were significant across young and middle aged groups only ($Mdiff = 2.65, SE = .97, p = .01$). The middle aged female prisoners scored significantly higher on positive reappraisal than the older group ($Mdiff = 1.45$, $SE = .59$, $p = .03$). Convicts were socially lesser dysfunctional than the prisoners under trial. Despite having greater scores on acceptance, convicts reported higher levels of self and other blames than women in the under trial group. Female prisoner going through trials reported higher levels of perceived social support from all the sources as compared to the convicted group. In general, participants reported greater support from family and friends than received from the significant others. Finally, figure 1 illustrates the most frequent type of mental health issue among women behind bars. Somatic symptoms were the most prevalent issue followed by anxiety insomnia and social dysfunction respectively whereas, severe depression was relatively less frequently reported by the participants.

Table 7

Means and Standard Deviations across Groups on Variables with Significant Differences

Variables	Age			Type of Imprisonment		
	Young **M(SD)**	Middle ***M(SD)***	Older ***M(SD***	Convicted ***M(SD)***	Under-Trial ***M(SD)***	Total ***M(SD)***
Depression	10.38(6.0)	7.73(5.0)	8.10 (5.7)	9.14(5.1)	8.35(6.2)	8.74(5.7)
Social Dysfunction	9.10(3.9)	9.36(4.4)	9.32(4.4)	8.47(3.8)	10.06(4.5)	9.26(4.2)
Positive Reappraisal	13.70(3.9)	14.78(3.2)	13.32(2.9)	13.78(3.4)	14.13(3.4)	13.95(3.4)
Acceptance	11.94(2.9)	12.15(3.3)	12.64(3.3)	13.24(3.3)	11.24(3.2)	12.24(3.4)
Self-Blame	10.43(3.6)	11.75(3.8)	11.46(3.7)	12.18(3.7)	10.26(3.5)	11.22(3.7)
Other Blame	15.80(7.1)	14.59(3.5)	14.73(3.5)	13.47(3.6)	10.72(3.5)	12.15(3.8)
Significant Other	2.79(1.0)	2.96(1.2)	2.78(1.2)	2.58(1.1)	3.12(1.2)	2.85(1.8)
Family	3.85(1.8)	4.00(1.9)	3.96(1.9)	3.44(1.7)	4.05(1.7)	3.94(1.9)
Friends	3.79(1.7)	3.86(1.9)	3.86(1.8)	3.55(1.7)	4.12(1.9)	3.83(1.8)

Discussion

The current study intended to explore the role of social support and cognitive emotion regulation strategies in mental health outcomes of women behind bars. It was observed that majority of women prisoners belonged to economically disadvantaged groups (lower middle to lower socioeconomic background; 93.5 %) and were married. Literature had supported these statistics by reporting that people with low socioeconomic conditions indulge more criminal acts (Nicolau et al., 2012) and the majority (80%) of women inmates were married (Mitra & Agarwal, 2016). Demographics of the current study also reported that the majority of the female prisoners were not educated (63%), while only 14.5% completed school education. Achakzai et al. (2012), reported that 93% of women inmates in Baluchistan jails were illiterate, supported the findings of our research.

Initially, interrelationships for all the study variables through Pearson Product Moment Correlation were computed and the results showed that maladaptive cognitive emotion regulation strategies e.g. rumination and catastrophizing generally were more strongly associated with somatic symptoms followed by social dysfunction and severe depression. Blaming others was more strongly related to anxiety/insomnia as compared to other types. As negative response to stressful situation, both rumination and catastrophizing have been linked with development of psychopathological outcomes such as depression, anxiety and the somatic complaints as well (Enea et al., 2017). Correlation results (table 2) also showed that social support from significant others and friends had positive correlation with adaptive emotion regulation strategies. Keeping the positive affect regulation mechanism underlying adaptive strategies, we claim the findings to be consistent with the existing literature (Balogun, 2014) that provides evidence for positive correlation between social support and happiness among Nigerian inmates. Among maladaptive cognitive strategies of emotion regulation, only catastrophizing was found to be significantly correlated with support from the family. These findings go in line with (Cai et al., 2017) who concluded that along other variables psychological problems had significant association with negative emotion regulation strategies. Surprisingly, none of the other incompatible strategies correlated significantly with perceived social support among female prisoners (Dadi, 2019).

Table 2 further revealed that social support from all sources was negatively correlated with adverse mental health outcomes assessed through GHQ. Type and sources of social support can play different role in the course of psychopathological symptoms among imprisoned women. Supporting bonds in terms of significant others, are explored further to identify the actual source of such social support. Alves (2016) have also highlighted the importance of supporting bonds over primary bonds for female prisoners.

Table 3 reported that, social support (particularly support from significant others) significantly predicted adaptive coping strategies (other than acceptance), whereas perceived lack of social support from family members significantly predicted ctastrophising tendencies among female prisoners. These findings are consistent with the outcomes of existing literature on social support and cognitive emotion regulation strategies (Kiral et al., 2015). These coping strategies in turn played an important role for their adjustment. The existence of family support was the strongest predictor of cognitive functions and perceived unavailability of social support had an inverse relationship with cognitive emotion regulation strategies (Besser & Priel, 2010; Zhu, Hu & Efird, 2012). Other studies also supported the above findings that social support (both perceived and received) and cognitive emotion regulation strategies are important environmental and personal causal factors respectively (Alves, 2016).

The present study revealed that mental health of female prisoners is not associated with their social support from family and friends, suggesting the possible loss of their primary bonds (Celinska et al., 2022). Results from regression analysis (table 4) revealed that the perception of less social support (especially from significant others) also contributed remarkably towards the presence of mental health problems among participants. It was proposed that lack of support from significant others can lead female prisoners to develop insomnia, social dysfunction, somatic symptoms and severe depression. Yet, it is important to note that overall perceived support scores from family were higher than significant other (table 7). Hence it can be interpreted that even being lesser in magnitude, support from significant other has worthwhile contribution in emotion regulation, coping and resulting psychological health during imprisonment.

These findings may be explained in view of the existing literature that there was an association between social support and mental health of prison inmates. It was found that when the prisoners know that a network of people is available to provide physical and emotional support to them, during imprisonment and after release, there might be lesser chances to indulge in negative environmental stressors of imprisonment (Jamadar, 2012).

Step wise regression analysis (table 5) showed that, malfunctioned cognitive emotion regulation approaches for example ctastrophising and rumination considerably predicted poor general mental health of female prisoners. Martin and Dahlen (2005), provided evidence for the above-mentioned findings by stating that the maldaptive cognitive emotion regulation strategies (especially catastrophizing and rumination) were the predictors of mental health problems. These findings were supported by Samyuktha and Sowmyya, (2018) who reported that the percentage of female prisoners suffering with poor mental health conditions like neuroticism and psychoticism have always been high because of several internal factors (such as poor health, drug abuse and cognitive strategies to regulate emotions) and external factors (social support, poverty, jobless and stigmatization. Effect of age and Type of Imprisonment (TOI) on mental health (depression, anxiety, social dysfunction and somatic symptoms) of women prisoners were analyzed through Multivariate Analysis of Variance (MNOVA). The results (table 6) revealed main the age of female prisoners had an impact on depression. Findings are somewhat contrasting to the existing literature that reported middle-aged incarcerated women having a high risk of suffering from depression (Khan, 2012). Our result found more depressive tendencies among younger group that could be attributed to lesser maturity level and inability to handle stressful situation in early adulthood compared to later years of age. Hagan and Foster (2003) supported the above findings by reporting that criminal behaviors is prominent among early adults, it starts from minor rule breaking to major criminal acts. A parallel finding from our study itself explains the fact as how middle- aged female prisoners were better able to use adaptive strategy of positive reappraisal than the other two groups, indicating the role of this functional cognitive emotion regulation approach in avoiding deleterious impact of stressful environment.

Table 6 also showed significant main impact of the type of imprisonment on acceptance. Existing literature supported the findings by stating that prisoners manage their emotions through different coping mechanisms response strategies, selection of the situation- specific responses and positive reappraisal of the situation supported these findings (Laws & Crewe, 2015). Age groups did not differ on any other study variables. These findings supported the notion that the imprisonment causes negative cognitive and emotional impacts regardless of prisoners' age.

Moreover, results in table 6 for main effect of type of imprison yielded significant differences on social dysfunction, acceptance, self and others blame and all the three types of social support. Social dynamics seems to vary across convicts and under-trial female prisoners and present a complex picture. Despite having significantly greater perceived support, prisoners under-trial scored higher on social dysfunction. Greater support may serve as a ray of hope to them, yet social deprivation due to imprisonment causes perception of dysfunction. Moreover, this support seemingly prevented under-trial inmates to blame themselves or others for their plight, which was significantly higher in convicts. Convicted women showed greater levels of acceptance of their situation than under-trial women in jails did. Studies have also indicated that type of imprisonment had effect on self-blame (Khan, 2012). It is important take duration of imprisonment and stage of trial into account for drawing conclusions that are more accurate. Findings therefore, must be interpreted with caution.

Implications

In the context of Pakistan, extant literature about female prisoners'' environmental and psychosocial plight in the provinces of Sindh and Khyber-Pakhtunkhwa (Junejo & Sharif, 2019; Zakir, 2020) is available while data from Punjab are less documented. Hence, the existing document is a valuable addition to the existing works. Researchers across the world have advocated gender-specific mental health care for prisoners (United Nation office on Drug and Crime, 2012), and the present study may provide evidence for gender-specific mental health recommendations for Pakistani women in prisons. The findings of the study also suggest that women prisoners having mental health problems must be provided with range of psychological and emotional coping tools as part of intervention and rehabilitation programs.

Correctional and forensic psychologists must use strategies to address psychosocial adjustment and emotion regulation needs for dealing with female prisoners'' mental health problems.

Limitations and Suggestions

Although study is significant contribution to the field of psychology, but some limitations were also found. Sample size was limited due to short time period, issues of permission and accessibility. It is suggested to obtain a larger sample to generate results that are more generalizable and design longitudinal studies. Gender based conclusion could be better drawn by comparing men and women prisoners. A matched control group of non-offenders from general population would have provided better understanding. Because there is an overwhelming need to recognize the problems of females behind bars and to rehabilitate them accordingly, intervention studies are suggested. Problems other than mental health issues, such as sexual harassment and abuse, their physical health, and maltreatment should also be considered. Qualitative account of social support especially from significant others may enable the psychologists to identify specific support required for better psychosocial adjustment and improved wellbeing to avoid adverse outcomes of the stressful environment.

Declaration

Ethical Approval. The study was approved by the Board of Studies of the Department of Applied Psychology, Government College University Faisalabad.

Consent for Publications. Consent approved by the authors.

Availability of Data and Materials. Contact corresponding author.

Authors Contribution. All authors contributed to the study equally.

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Mediating Role of Tawakkul Between Religious Orientations and Anxiety Among Muslim Adults

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Abstract

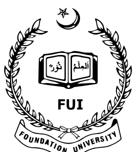
Purpose. Being an important Islamic concept, tawakkul is a fundamental and core value in the Islamic belief system. The present research intended to investigate its role in the relationship between religious orientation and anxiety.

Method. A purposive sample of (*N* = 350) muslim adults with the age of 25 years and above (*M* = 31.92, *S.D* = 8.72) were included in the study. A cross-sectional survey research design was used in the present study. Tawakkul Scale (Gondal et al., 2021), Urdu version of Anxiety subscale of DASS-21 (Aslam, 2018), and Urdu version of Religious Orientation Scale (Khan, et al., 2016) were used in the present study.

Results. Results indicated that tawakkul had a negative relationship with anxiety and extrinsic social religious orientation. On the other hand, it had a positive relationship with intrinsic religious orientation and extrinsic personal religious orientation. Findings of the structural model indicated that tawakkul mediated the relationships of intrinsic and extrinsic personal religious orientations with anxiety.

Conclusion. Tawakkul helps reduce anxiety. The findings of the present study indicated that individuals who are sincere with their religion have a high degree of tawakkul, which in turn may prevent them from developing symptoms of mental health issues. Hence, in the present age with a high prevalence of these mental issues, particularly anxiety, there is a dire need to create awareness in society about the importance of tawakkul. Tawakkul is also beneficial in the field of clinical and counseling psychotherapy as it may help alleviate clinical disorders and other daily routine life problems.

Keywords. *Tawakkul, intrinsic religious orientation, extrinsic personal religious orientation, extrinsic social religious orientation, anxiety.*



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Introduction

Tawakkul is a fundamental and core value in the Islamic belief system. There are numerous verses in the Holy Quran in which the word 'tawakkul' has been used. God has ordered Prophet Muhammad (PBUH) and Muslims to put tawakkul in Him. Previous Prophets who put tawakkul in God were rewarded and there are rewards for those who put tawakkul in God as it is one of the basic requirements of faith. Tawakkul in God-the Exalted is a great virtue that has an important standing in the religion of Islam. It is one of the most essential obligations of faith, one of the most highly appreciated beliefs in Islam that brings the individual closer to the creator. This is because nothing can be done without the will of God and reliance on Him and seeking His help is highly appreciated (Al-Munajjid, 2017).

In Islamic literature, tawakkul means trusting, relying, depending, and having confidence in God alone. In psychology, tawakkul has been defined as the belief in the sufficiency of God that involves positive efforts to achieve one's goals along with unconditional acceptance of God's will. The highest degree of tawakkul is expressed by the annihilation of one's own will (Gondal et al., 2021). According to this definition, tawakkul has four components. The first one is belief in the sufficiency of God. It is defined as a faith that God alone is the creator, master, and controller of everything in the universe; He is enough for me and He will take care of all my affairs in this world and the hereafter. Thus, if an individual has belief in the sufficiency of God, only then he/she will be able to put tawakkul in Him.

The second component is unconditional acceptance of God's will. 'Unconditional acceptance of God's will' can be easily understood in relation to belief in God. When an individual has the faith that God loves him and is taking care of all his affairs, he will be satisfied with what has been going on in his life. Even in times of difficulties, the individual will not be tensed or get stressed rather he will be sure that God has planned something good for me even in the face of difficulty. The individual will accept all the circumstances in his life because he thinks that everything that happens, happens with the will of God as God is the Most Merciful and loves His servant more than anyone else, then every decision of God is also full of mercy and betterment for an individual. Hence, the individual will unconditionally accept God's will and will also be satisfied with it.

The third component is 'efforts'. Putting efforts into achieving one's goals and moving towards betterment is also an important factor of tawakkul. It is ordered to Muslims that put efforts into achieving something along with keeping trust in God. In the Holy Quran, God Almighty says "Man will get only what he will try for" (Surah Najm, 39). So, just sitting idle and saying I have tawakkul in God, is not tawakkul. Efforts must be put to achieve something in this world and the Hereafter. Islam teaches efforts in tawakkul. From the Islamic point of view, just keeping trust and relying on God without doing efforts is not tawakkul. It is just a misunderstanding of people that their tasks will be automatically done by putting tawakkul in God and not doing efforts for it. God has created this world with resources. The system of this world works on efforts and resources. Without effort, success can't be achieved. Islam does not promote this misperception. Hence, 'efforts' in tawakkul is defined as doing positive tasks to achieve one's goals, solve one's problems, and live a better life. For example, when someone is ill, taking medicine along with being optimistic to God is included in efforts. Doing a job to earn one's livelihood along with belief in God is also included in efforts. Keeping one's house locked at night along with trust in protection by God is also included in efforts.

The fourth component is the 'annihilation of one's own will'. This factor corresponds to the highest degree of tawakkul. There are three degrees of tawakkul. This third and the highest degree of tawakkul, as explained by the scholars, is similar to the example of a dead person, whose corps is in another person's hands, and the dead person has no movement in itself and it only moves in the direction in which the person moves him. Similarly, the mutawakkil, who is at this third level, annihilates his own will and wishes and has completely given his life in the hands of God. This individual does not want anything for himself, does not seek help from anyone including God, does not pray to God because he thinks that what God has given me and what God has planned for me is the best, whatsoever it is (Naraqi, 1431 AH, as cited in Maktabdar, 2014). Hence, 'annihilation of one's own will' is defined as completely nullifying personal desires, wishes, needs, and wants; and leaving oneself completely in God's hands. Just as a dead body has no personal movement or desires, the annihilation of one's own will is also similar to that.

In clinical psychology, anxiety is a common indicator of poor mental health. Religiousness and putting trust in God could be one of the effective ways to ameliorate anxiety. Results of an empirical study found that strong faith (tawakkul) and high trust in God were linked with a lower degree of anxiety, and greater personal contentment (Rosmarin, et al., 2009). Another research found that religion has a strong positive relationship with mental health and well-being and a negative relationship with anxiety and depression (Ismail & Desmukh, 2012). Wills et al. (2003) found that religious beliefs significantly reduced the negative impact of life stressors and also prevented drug abuse. Another research depicted that being pure in one's religious beliefs is linked with lower levels of depression (Smith et al., 2003, as cited in Stulp et al., 2019). A systematic review study found that religious and spiritual involvement is inversely proportional to suicidal ideation, suicidal attempts, and completed suicide (Koenig et al., 2012). Therefore, having a strong reliance and belief in God, a mutawakkil may prevent anxiety, and if the negative symptoms of anxiety are already present, inducing tawakkul as a therapeutic intervention may result in their significant reduction. In other words, tawakkul and anxiety are likely to be negatively related to each other. The next section describes religious orientation and explains it in relation to the focal variables of the present study.

Religion has a very important role in human life. Allport (1967, as cited in Titov, 2013) defined religious orientation as the perceptions about religion to be either as an end to itself or a means to an end. In simpler words, religious orientation is the view of an individual about religion as either to be devoted purely to religion or use religion to gain personal/social benefits. According to Allport and Ross (1967) theory of religious orientation, there are two main religious orientations: intrinsic and extrinsic. People with intrinsic religious orientation have a pure commitment to their religion and they live their lives in accordance with the principles of religion. Moreover, they regularly practice their religious rituals and have high levels of religiosity. Whitley and Kite (2010) proposed that people with intrinsic religious orientation are sincere with their religion and completely believe in their religion and its teachings with a pure heart. They try their best to live their lives as suggested and taught by their religion. On the other hand, people with extrinsic religious orientation are not sincere with the religion and use religion to seek non-religious, personal, and social goals.

These individuals usually live their lives in accordance with the social norms and demands irrespective of what their religion demands from them (Allport & Ross, 1967). Moreover, extrinsically oriented individuals can manipulate and mold their religious beliefs as and when required socially, personally, or politically. They perceive religion as a source to obtain social status, participate in a social group, and seek support (Hunsberger & Jackson, 2005). These people tend to be more rigid and prejudiced as compared to intrinsically orientated people (Allport & Ross, 1967). Based on this theory of Allport and Ross (1967), an instrument Religious Orientation Scale was developed (Allport & Ross, 1967) to measure intrinsic and extrinsic religious orientations. This scale was proved to be psychometrically sound (Allport & Ross, 1967).

As stated above, people with intrinsic religious orientation have a pure commitment to their religion, and tawakkul is one of the positive virtues that is taught by religion. People with intrinsic religious orientation have a more positive connection with God and they have a high belief in the positive aspects of religion. This positive involvement in religion is usually accompanied by following all the principles of religion positively. Since tawakkul is also a positive virtue, the requirement of faith, and a way of connecting with God, therefore, it is expected to positively correlate with intrinsic religious orientation. Moreover, tawakkul is strongly related to religion and its base 'belief in the sufficiency of God' is a manifestation of religion. Therefore, it is possible that intrinsic religious orientation would predict tawakkul positively. Moreover, a study conducted in Iran depicted that intrinsic religious orientation was a significant positive predictor of happiness (Moltafet et al., 2010), and tawakkul also leads to satisfaction over God's will. As both constructs lead to positive outcomes, therefore, it is very likely that both will have a positive relationship with each other. On the other hand, people with extrinsic religious orientation just use religion to achieve certain gains and are not sincere with religious beliefs. These individuals have a shallow connection with God. Their shallow bond with God may preclude them from developing tawakkul in God's sufficiency. Tawakkul only spawns in the heart of a person who has a pure belief in the sufficiency of God; hence, it is expected that extrinsic religious orientation would be a negative predictor of tawakkul.

Findings of a recent study suggested that intrinsic religious orientation may yield positive outcomes like satisfaction whereas extrinsic orientation may lead to certain negative outcomes like suicidal ideation (Lew et al., 2018). Regarding religious orientation and indicators of mental health, findings of a study depicted that intrinsic religious orientation has negative effects on depression and anxiety, which in turn, improved mental health. However, extrinsic religious orientation increased anxiety (Amrai et al., 2011). Another study found that people with extrinsic religious orientation had higher levels of depression and uncontrollable stress as compared to those who had intrinsic religious orientation (Darvyri et al., 2014). A study involving a systematic review and meta-analysis of previous studies found that anxiety and depression had negative correlations with internal religious orientation and positive correlations with the external religious orientation (Forouhari et al., 2019). In the light of the above discussion, it can be argued that intrinsic religious orientation leads to tawakkul, which in turn may lower down the anxiety. For example, people with intrinsic religious orientation likely to have a stronger connection with God which will lead them to put trust in Him and this trust will serve as a buffer against anxiety. Alternatively, people with extrinsic religious orientation are less positively connected to God and this will lead to a lack of trust in Him which will likely to increase anxiety. Hence, tawakkul may mediate the relationship between religious orientations and anxiety.

Hypotheses

1. Intrinsic religious orientation will have a positive correlation with tawakkul and a negative correlation with anxiety.
2. Extrinsic religious orientation will have a positive correlation with anxiety and a negative correlation with tawakkul.
3. Tawakkul will have a negative relationship with anxiety.
4. Tawakkul will mediate between religious orientation and anxiety.

Figure 1. Conceptual Framework of the Present Study

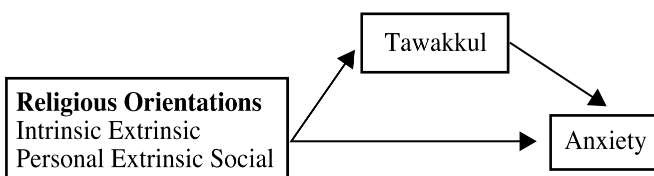

Figure 1 describes the conceptual framework of the present study. It is expected that intrinsic religious orientation would positively predict tawakkul and negatively predict anxiety. Extrinsic religious orientation is expected to positively predict anxiety and negatively predict tawakkul. Tawakkul would likely to mediate between religious orientation and anxiety.

Method

Research Design

A cross-sectional survey research design was used in the present study.

Sample

Sample was comprised of 350 Muslim adults from Sargodha and Lahore cities with age of 25 years and above (M = 31.92, $S.D$ = 8.72). A purposive sampling technique was used to collect data. All the participants were Muslims. Men and women both were included in the study. All the participants were literate, with a minimum education of matriculation level.

Instruments

Following instruments were used in the present study.

Tawakkul Scale. Tawakkul Scale (Gondal et al., 2021) had 24 items with a 7-point Likert response format, ranging from 1 (strongly disagree) to 7 (strongly agree). It had four dimensions: (i) belief in the sufficiency of Allah; (ii) unconditional acceptance of God's will and satisfaction; (iii) effort-putting; and (iv) absolute annihilation of one's own will. It had no negative item. Scoring was done by adding responses. A higher score represented a higher level of tawakkul and vice versa. The potential score can range from 24 to 168.

Urdu version of Anxiety subscale of DASS-21. Urdu version of the anxiety subscale of DASS-21 (Aslam, 2018) was used to assess anxiety. This subscale has 7 items with a 4-point Likert type response format; ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). Scores for anxiety are calculated by summing the scores on each of the items. There is no negative item in the sub-scale. The reliability for the anxiety subscale was .86 (Aslam, 2018).

Urdu version of Religious Orientation Scale. Urdu version of ROS (Khan et al., 2016) was used to determine the religious orientation of the participants. It consists of 14 items with a 5-point Likert-type rating scale with 1 (strongly disagree) to 5 (strongly agree). It has 3 subscales: intrinsic orientation; external social; and extrinsic personal. Items 1, 3, 4, 5, 7, 10, 12, and 14 correspond to intrinsic orientation; items 2, 11, and 13 correspond to extrinsic social; and items 6, 8, and 9 correspond to extrinsic personal dimension. There is no reverse-coded item on the scale. Scoring for each dimension is obtained by adding the responses of individual items in each subscale. A high score on each domain indicates a high degree of that orientation. Cronbach's alpha coefficient for external orientation dimension was .69 and that for internal religious orientation dimension was .84 (Khan, et al. 2016).

Procedure

After the finalization of scales, permission was taken from the authors for using the scales. For data collection, participants were approached directly and after their consent for participation, they were briefed about the objectives and nature of the study. They were ensured that the confidentiality of their provided information will be maintained and it will only be used for research purposes. Then, a test booklet including all the scales and demographic sheets was given to participants and they were asked to fill every portion of the questionnaire correctly, sincerely, and honestly. There was no time limit for filing the scales. Data was collected from a sample of 350 participants. Then, data was entered in IBM-SPSS and different statistical analyses were run on it to test the proposed hypotheses. After analysis, results were compiled and discussed.

Results

Table 1

Frequency and Percentage of Participants (*N* = 350)

Demographic variables	*f*	(%)
Gender		
Male	102	29.1
Female	248	70.9
Family System		
Nuclear	250	71.4
Joint	100	28.6
Residence		
Urban	281	80.3
Rural	69	19.7
Marital Status		
Single/Unmarried	226	64.6
Married	124	35.4
Education		
Matriculation or below	3	0.9
Intermediate	7	2.0
Bachelor	40	11.4
Masters	300	85.7
Profession		
Govt./Private Job	184	52.6
Private business	8	2.3
Agriculturists	1	0.3
Unemployed/housewife/retired	157	44.9
Age	31.92 years (M)	8.72 years (SD)

Note. *f* = frequency; %=percentage; *M* = mean; *SD* = standard deviation.

Table 1 shows the distribution of various demographic characteristics such as gender, family system, residential background, marital status, educational qualification, and profession of the participants of the present study in terms of frequency and percentage. It also reports the mean and standard deviation of the age of the participants in years.

Table 2

Descriptive Statistics, Alpha Reliability Coefficient, and Univariate Normality of Scales in Study and their correlation matrix (*N* = 350)

Scales	*M*	*SD*	*α*	*Sk*[a]	*Ku*[b]	*Twkl*	*Anxiety*	*Int Ro*	*ES RO*	*EP RO*
Twkl	142.56	23.16	.95	-1.95	5.74	..	-.17***	.45***	-.12*	.40***
Anxiety	12.59	4.18	.81	.73	.04		..	-.13	.17**	-.12*
Int RO	27.91	3.72	.45	-.68	1.20			..	.33***	.48***
ES RO	7.24	2.44	.66	-.04	-.47				..	-.08
EP RO	12.32	2.37	.77	-1.03	1.27					..

Note. *$p< .05$ **$p< .01$ ***$p<.001$ Twkl. = Tawakkul; Int. RO = Intrinsic religious orientation; ES RO = Extrinsic social religious orientation; EP RO = Extrinsic personal religious orientation

[a] Standard error = .13; [b] standard error = .26

Table 2 shows the psychometric properties and correlation matrix of scales used in the present study. The alpha reliability coefficients of all the scales were > .60 except intrinsic religious orientation which was .45. The values of skewness and kurtosis of all scales are within the acceptable range, which provides evidence for the univariate normality of the focal measures of the present study. Tawakkul has a significant positive relationship between intrinsic religious orientation and extrinsic personal religious orientation. Tawakkul relates negatively and significantly with anxiety and extrinsic social religious orientation. Anxiety has positive and significant relationships with an extrinsic social religious orientation and has a significant negative relationship with extrinsic personal religious orientation.

Meditational Model

The proposed path model of the present study was tested in IBM-SPSS Amos version 24. The path coefficients were computed through the maximum likelihood method along with bias-corrected 95% bootstrap confidence intervals generated from 2000 bootstrapped samples. The chi-square to df ratio was 1.49. Other indices of model fit also demonstrated an excellent fit between the data and the model. The values of CFI, GFI, and IFI are all above .90 and hence meet the most stringent criteria of fit indices (GFI = .995; AGFI = .974; CFI = .995; NFI = .985). The value of RMSEA is .038 with a non-significant pclose value (pclose =.52). All these indices suggest that the data fitted well to the proposed model. The path diagram of the model is schematically presented in Figure 2

Figure 2. Meditational Model of Religious Orientation

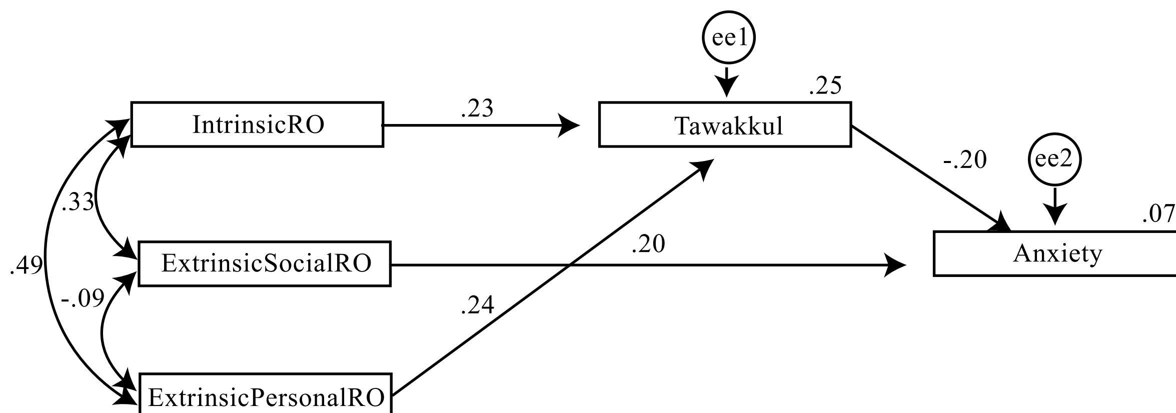

Table 3

Path Coefficients for Direct and Indirect Effects of Different Religious Orientations and Tawakkul on anxiety(N = 350)

Path	*B*	95% *CI*		β
		LL	*UL*	
Intrinsic RO → Tawakkul	2.06	.04	.15	.33**
Extrinsic Personal RO → Tawakkul	2.36	-.23	-.11	.24***
Extrinsic Social RO → Anxiety	.34	.13	.35	.20**
Tawakkul → Anxiety	-.04	-.19	-.76	-.20***
Intrinsic RO→ Tawakkul → Anxiety	-.07	.25	.42	-.07***
Extrinsic Personal RO → Tawakkul → Anxiety	-.08	-.21	-.08	-.05***

Note. ****p*<.001 RO= Religious Orientation

Table 3 depicts unstandardized and standardized coefficients for various direct and indirect effects which were computed through Amos. Intrinsic religious orientation has a significant positive direct effect on tawakkul. The direct effect of extrinsic social religious orientation on anxiety was significant and positive. The direct effect of extrinsic personal religious orientation on tawakkul was significantly positive. Tawakkul has a significant negative direct effect on anxiety. Extrinsic personal religious orientation and intrinsic religious orientation depicted negative and significant indirect effects on anxiety through tawakkul. Thus, tawakkul mediated the relationships between extrinsic personal religious orientation and anxiety; and intrinsic religious orientation and anxiety.

Discussion

The present study aimed to explore the link of tawakkul in the relationship between religious orientation and anxiety. Results depicted that tawakkul was negatively related to anxiety (see Table 2). It can be easily justified through the fact that tawakkul involves a strong belief in God along with satisfaction over God's will. The negative emotional states emerge from negative thoughts, emotions, beliefs, and cognitions. But in tawakkul, an individual has the belief that everything that happened in the past was good for him/her; and everything that will happen in the future would also be good for him/her because everything is done by God and He is the most merciful. Hence, there is no space left for negative thoughts; therefore, anxiety may not emerge. A saying of the Prophet of Islam (PBUH) can also be quoted in this regard. The Holy Prophetﷺ advised his Ummah to recite, "God is sufficient for us, and He is an excellent guardian, and we repose our trust in Him" for seeking help in distressful condition (Athar, 2017). This saying is a manifestation that tawakkul has a negative effect on negative emotional states, particularly anxiety. Results of an empirical study found that strong faith (tawakkul) and high trust in God were negatively linked with anxiety and depression, and might lead to greater personal contentment (Rosmarin et al., 2009).

Correlation analysis depicted that tawakkul was significantly and positively related to intrinsic religious orientation and extrinsic personal religious orientation; while it was very weakly related to extrinsic social religious orientation (see Table 2). Path analysis was also carried out with religious orientation as a predictor and anxiety as an outcome. Magnitudes and directions of direct and indirect effects in this model have been shown in Table 3. Model fit indices of this model, depicted in Table 3 and Figure 2, testified that the proposed measurement model fitted well to the data since values of CFI, GFI, NFI, AGFI were greater than .90 with a non-significant chi square value; while the value RMSEA was .038. It was postulated that intrinsic religious orientation will have a direct positive effect on tawakkul; and a direct negative effect on anxiety. This hypothesis was partially supported. It was also postulated that extrinsic religious orientation will have a direct negative effect on tawakkul; and a direct positive effect on anxiety. This hypothesis was partially supported. The direct effects of this model depicted that intrinsic religious orientation and extrinsic personal religious orientation had a positive and significant effect on tawakkul and tawakkul negatively predicted anxiety. These findings are in line with previous findings of different studies. Whitley and Kite (2010) proposed that people with intrinsic religious orientation are more committed to their religion and completely believe in the teachings of their religion with a pure heart.

They try their best to live their lives as suggested and taught by their religion. However, people with extrinsic religious orientation are not sincere with the religion and use religion to seek non-religious goals. These individuals usually live their lives in accordance with the social norms and demands irrespective of what their religion demands from them. Moreover, they can manipulate and mold their religious beliefs as and when required socially, personally, or politically. They perceive religion as a source to obtain social status (Hunsberger& Jackson, 2005). Tawakkul, as mentioned earlier, is strongly related to religion and its component 'belief in the sufficiency of God' is actually a manifestation of religion, hence, tawakkul is strongly related to intrinsic religious orientation but weakly with extrinsic social religious orientation. Regarding extrinsic personal religious orientation, tawakkul is significantly and positively related to it. In extrinsic personal religious orientation, religion is being used for achieving some positive personal gains. As depicted by the items of extrinsic personal religious orientation, religion is used to get rid of tensions and to get protection; to seek relief in times of difficulties and grief, and to seek happiness and peacefulness. All these functions are positive and Islamic Shari'ah allows its followers to achieve these goals through religion. Only one verse is enough to provide for its justification. In the Holy Quran, God stated, "Be aware! Remembrance of Allah brings peace to heart" (Surah Ra'ad, 28). Similarly, the basic function of tawakkul is also to reduce the anxiety and tension related to any matter. Hence, extrinsic personal religious orientation and tawakkul are positively related to each other.

The present study hypothesized that tawakkul would mediate between religious orientation and anxiety. This hypothesis is also supported. The indirect paths of this model depicted that tawakkul mediated two paths. Firstly, tawakkul mediated the relationship between intrinsic religious orientation and anxiety. The direction of this path was negative. It means that having intrinsic religious orientation will lead to high tawakkul, and high tawakkul will lead to a very low degree of anxiety. As discussed earlier, people with intrinsic religious orientation are sincere with their religion and have positive perceptions of religion; and tawakkul is also a positive manifestation of religion; hence, intrinsic religious orientation was a positive predictor of tawakkul. Further, having high tawakkul lowers down anxiety levels.

This is because tawakkul involves complete trust in God that everything is better for oneself and this trust eliminates anxiety. Secondly, tawakkul mediated the relationship between extrinsic personal religious orientation and anxiety. The direction of this path was also negative. As discussed earlier, extrinsic personal religious orientation functions to get rid of negative emotions and to achieve peace; hence, it positively predicted tawakkul. Further, tawakkul reduced the anxiety levels because the peace of mind created as a result of tawakkul tends to reduce negative emotional states.

Conclusion

Tawakkul is an important concept in Islamic literature. Tawakkul helps reduce anxiety. Our findings indicated that individuals who are sincere with their religion i.e., who have intrinsic religious orientation may have a high degree of tawakkul, which in turn may prevent them from developing symptoms of mental health issues. Alternatively, individuals who use religion to gain certain social benefits may have a low degree of tawakkul, which may increase their susceptibility to symptoms of anxiety. Hence, in the present age with a high prevalence of these mental issues, particularly anxiety, there is a dire need to create awareness in society about the importance of tawakkul. Tawakkul is also beneficial in the field of clinical and counseling psychotherapy as it may help alleviate clinical disorders and other daily routine life problems.

Limitations

Like every empirical research, the present research has its share of limitations, which are highlighted below:

1. The study has limited generalizability as the data were collected from some cities of the Punjab province only (Sargodha, Khushab, Lahore, etc), so to enhance the external validity, further research should be conducted on a large and diverse sample.

2. The present study used cross-sectional research. Although several potentially important associations were identified, causality cannot be inferred without follow-up experimental research or longitudinal research exploring proposed causal mechanisms over time. It might be checked through longitudinal research that whether the participants' tawakkul remains the same over time or there might be some fluctuations in its levels.

3. All the scales used in the present study were self-reported measures, therefore mono-method bias and social desirability can be a potential threat for internal validity.

Recommendations and Suggestions

Several recommendations are given to future researchers as highlighted below:

1. It is recommended to practically introduce tawakkul in clinical and counseling therapies. Patients should be taught about the importance of tawakkul in solving their problems. The findings of the present research can be very insightful for psychologists, psychiatrists, counselors, and psychotherapists. They can develop programs, seminars, and workshops for fostering tawakkul in their clients which help them deal more effectively with the adversities and setbacks of life; particularly anxiety. Psychologists and Islamic scholars should play an active role in developing tawakkul in the general population. The importance and benefits of tawakkul should be repeatedly promoted so that the common masses get to know them and adopt tawakkul as a cardinal feature of their lifestyle.

2. Tawakkul can also be explored in relation to certain focal constructs that are pivotal in explaining the development of mental health issues. From the perspective of cognitive psychology, hopelessness and helplessness are the key variables that explain the development of depression. Tawakkul is expected to show a negative relationship with these variables. People with tawakkul are always hopeful that Allah will do better to them; hence, no space is left for hopelessness. Similarly, people with tawakkul do positive efforts along with keeping hope to bring positivity in their lives; hence, there is no chance of learned helplessness. These relationships may also be explored.

Practical Implications of the Present Study

Some practical implications of the present study are discussed here

1. In the field of clinical psychology, tawakkul should be incorporated in clinical therapy as it reduces anxiety. Clinicians should strengthen the belief system of patients along with encouraging them to put in positive efforts.

Clinicians should incorporate in the patients how to be satisfied over God's will. Tawakkul should be put in one's every matter of life because it leads to reduction of the anxiety caused by different factors. Thus, the inclusion of tawakkul in therapies may prove very beneficial in the treatment of different mental health issues.

2. Tawakkul finds another implication in cognitive-behavioral therapies such as CBT and REBT. These therapies work on patients' cognitions, emotions, and beliefs to cure the problems. Clinicians can incorporate tawakkul in these therapies by strengthening their beliefs in God. This positive belief can help change the negative beliefs; ultimately changing the patient's thoughts and behaviors.

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Availability of data and materials. The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable request.

Ethics approval and consent to participate. Formal permission was acquried from institutional Ethical board to conduct research.

Competing interest. The authors declare to have no competing interests.

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