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The Moderating Role of Coping Strategies between Perceived Stress and Quality of Life among Caregivers of Schizophrenia and Obsessive-Compulsive Disorder (OCD) Patients

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Abstract

The present study aimed to study the moderating role of coping strategies between perceived stress on quality of life with moderating role of coping strategy among caregivers of schizophrenia and OCD patients. Additionally, examine the relationship among perceived stress and quality of life among caregivers of schizophrenia and OCD patients. 200 participants (caregivers of schizophrenia patients, n=116, caregiver of OCD patients n=84) were incorporated from different hospitals of Rawalpindi and Islamabad, Pakistan. Purposive sampling technique was used based on cross-sectional design. In this study Coping strategy is measured by Brief cope scale (carver, 1997), Quality of life was measured by WHOQOL Brief (Crespo &Cruzado, 1997), perceived stress was measured by Perceived stress scale (Cohen, Kamarck, & Mermelstein, 1983). Results revealed that coping strategy was positively related to quality of life but negatively associated with perceived stress among caregivers of schizophrenia and OCD patients. The findings of study also demonstrated that coping strategy is negatively significantly linked to perceived stress among caregivers of schizophrenia and OCD patients. Study results shown that coping strategy is playing the role of moderator between perceived stress on quality of life with moderating role of coping strategy among caregivers of schizophrenia and OCD patients. This study results revealed that caregivers of OCD patients had better quality of life than care givers of schizophrenia patients. The study also revealed that no significant difference between caregivers of schizophrenia and OCD patients in terms of perceived stress. This study would be helpful to spread awareness how to tackle psychological issues among caregivers of OCD and schizophrenia patient.

Introduction

In recent decades, care giving has turned into a developing attraction amongst many researchers (Haley, Levine, Brown, & Bartolucci, 2004). In the United States, 44 million caregivers are giving casual care to chronic sick people without getting benefit of formal trainings (Ryn et al., 2011). Over all areas of care giving, caregivers encounter abnormal amounts of stress and fell burden contrasted with their non-care giving companions. Psychological well-being issues among children and adolescents represent general wellbeing concern. Parents giving care to adults with psychiatric disorder may feel over burden (Angold, Messer, et al., 2003), where burden is portrayed as the effect of psychological related challenges influencing relatives or caregivers (Reinhard, Gubman, Horwitz, & Minsky, 2001). Burden can increase with the seriousness of youth psychological symptoms and make difficulties for families (Angold, Costello, & Worthman, 2004; Compton et al., 2014). Past researches have demonstrated that care giving to people with prolonged illnesses can influence a guardian's physical, mental, and social life, bringing about low physical wellbeing, social detachment along with high level of burden and stress. Moreover, caregiver with young people with psychiatric symptoms and so much care demand can encounter stress, which is characterized as a subjective assessment of a person's association with environment, the dangers exceeding his or her accessible assets, and the powerlessness to adapt. Research found that feelings of anxiety were high for guardians who experienced issues dealing with their kid's indications or acclimating to the circumstance(Vaughan et al., 2013). Moreover, a corresponding relationship can exist between parental stress and young people's psychiatric issue, which can intensify adolescents' symptoms and further increment in parental stress. Concerning young people's psychiatric admission in hospitalization, families caring to psychiatric patients can encounter burden, for example, negative emotion (Jungbauer, Wittmund, Dietrich, & Angermeyer, 2003; Östman&Hansson,2002), which may require family support. Moreover, researcher (Östman & Hansson, 2002) recommended that burden research ought to be focused around various subgroups of relatives. In this investigation, gather contrasts in family history of mental illness and young people's earlier hospitalization on burden were of interest. Caregiver's stress in families with young people with serious mental illness is complex. As per (Lazarus &Folkman, 1984), the occasions in environment or reaction to the occasions in the environment can't be considered in isolation of individual characteristics. It is essential to comprehend the idea of the relationship that exists between the individual and the environment with a specific end goal to understand the complexity of reactions and adjustment. People with prolonged disability and their caregivers have been studied in detail by researchers in past decade. Significant research has been finished surveying the psychological problems of caregivers of patients with psychiatric illness, for example, schizophrenia or affective disorder. A few investigations have discovered significant level of stress on part of care giver of patients with schizophrenia (Kate, Grover, Kulhara, & Nehra,2013;Wing,1978). Indian investigations have been made on the caregivers of schizophrenia and mood disorders (Gautam &Nijhawan, 1984; Vasudeva, Sekhar, & Rao, 2013). Family caregiver plays a pivotal role in a society by providing social and economic value; they consume less cost of care to patient as compare to patients admitted in hospitals and receiving costly treatment. Care at home will lead to an expansion in monetary, physical, and emotional responsibility, and it is on part of the individual who is providing all kind of care to the patient with a long duration disorder (Dorfman et al.,1996; Emanuel, Fairclough, Slutsman, & Emanuel, 2000; Ownsworth et al., 2010). Caregivers, not only provide support to their patients, they are using compound and immense therapeutic equipment's, coordinating medical and diagnostic equipment's (Keith, 2009) as well as managing daily life projects (Pearlin et al., 1990; Wolfe et al.,2000).

In general, they discovered that caregivers of patients with schizophrenia have increased level of burden of care. In comparison, there is limited studies related to caregivers' stress and burden of patients with obsessive compulsive disorder (OCD) and there has been increasing commitment knowing the effect of OCD on family members. Two examinations recommended that family members regularly adjust the members' schedules and other related activities to accommodate their relative's gatherings(Amir, Freshman, & Foa, 2000; Calvocoressi et al., 1999) family members are additionally indulge into the formal actions of OCD patients (Calvocoressi et al., 1999).

Caregiving Stress

The commitments of family members giving care are not met without introducing significant damage to the psychological and physical wellbeing of the people providing essential care. In another study it was revealed that providing care to disabled old age family members can adversely affect both physical and emotional wellbeing of individuals (Schulz & Beach, 1999; Schulz et al., 1995). However, care giving may likewise have useful components for caregiver. In reality, research on stress of caregiver has brought about two wide decisions about psychological wellbeing of caregiver.

Caregiver Identity Theory. The Caregiver Identity Theory (Montgomery &Kosloski, 2009; Montgomery & Kosloski, 2013), was put forth as conceptual , which is relatable, with discoveries from broad studies on the experience of giving care to the family members. The Theory, which builds on identity theory (Stryker, 1968; Stryker &Burke, 2000; Stryker & Serpe, 1994) and further extended by (Burke & Reitzes, 1991), conceptualizes care giving as an element that will lead to the growth and maturity of personality, which comes out to be the outcome of providing care to the family members. Keeping this perspective in mind, a personality is set of meaning of implications connected to the self in a social part or circumstance that characterizes a person's conception of self within that relationship. Those set of meanings is attached to set of persons' own standards or identity standards that are used as a reference point to guide behavior. As individuals make various relationships, they likewise have many identities, which collectively form an individual's conception of self. The caregiver identity theory is centered on a caregiver's conception of self in relationship to the care recipient. An important principle of this theory is identity discrepancy, defined as incongruence between a caregiver behavior and his or her identity models, is an important source of behavior of a caregiver.

Perceived Stress

Stress has been characterized essentially as "the strain that goes with demand perceived to be either testing (positive) or threatening (negative) and, depending on appraisal, either versatile or debilitating" (Sanders & Lushington, 2002). Population is experiencing a formative change are believed to be especially presented to the event and impacts of stressful processes (Cohen, Burt, & Bjorck, 1987). Stress can be experienced when people see a circumstance as burdening and beyond their adaptive capacity (Cohen, Deverts, & Miller, 2007; Turner, Wheaton, Cohen, Kessler, & Gordon, 1995). Researcher has discovered that adolescents' psychiatric issue can be hard to manage and caregivers encounter stress (Baker & Heller,1996; Farmer, Burns, Angold, & Costello, 1997; Vaughan et al., 2013).

Caregiver Stress Theory

According to the theory proposed by Lazarus (Lazarus & Folkman, 1984b)namely Transactional Stress Theory, (Pearlin et al., 1990) comes up with a an idea to conceptualize stress inside the setting of care giving. According to this, stress among caregivers has been inspected crosswise over different chronic conditions (Alzheimer's sickness, tumor, stroke, multiple sclerosis, Parkinson's disease).

Different caregivers react to stress in a variety of ways because of individual differences and how good or bad they perform under distressing conditions may also depend upon individual differences. These stress responses will at last influence the individual caregiver's satisfaction and quality of life. Consequently, psychological stress happens when the individual encounters special circumstances, which are said to be beyond his reach and potential and it will cost individual's psychological, social and physical domain.

Caregiver stress model

Caregiving stress model (Pearlin et al., 1990)is one of the models that incorporate an integration of positive and negative factors that impact caregivers who have a relative with chronic illness. As indicated by caregiving stress model (Pearlin etal., 1990), providing care is a procedure made out of numerous conditions and the result of the association of these conditions. There are four fundamental domains in the model: The background and context of stress, the stressors, mediator of stress and the results. The background qualities are age, education level, SES, and caregiver history (relationship to the patient and length of caregiving so on.). As per the model, there are two kinds of stressors. Primary stressors are the providing care task, working of the patient, risky behavior of the patient, and the day-by-day needs. The risky behaviors and challenges in fulfilling the necessities are more viable in making worry than the providing care undertakings and the day by day needs (Pearlin et al., 1990).

Factors effecting perceived stress

Three key discoveries have emerged from past studies that investigate issues of gender. First, majority of people providing care are female. Secondly, male and female while performing role of care giving have different construct. Thirdly, female care givers tend to report increase level of stress and strain as compare to male care givers (Neal,Ingersoll-Dayton, & Starrels, 1997). Many studies show that ladies constitutes around 75% of every primary caregiver (Montgomery & Kosloski, 2013; Stone et al., 1987; Wagner, 1997). Be that as it may, there is an increase in the number of male caregivers. A study led by the National Family Caregiver Association (NFCA) in 2000 reveal that male caregivers were 44%(NFCA, 2000). Additionally, while taking spouse as caregivers , males are as liable to be the primary caregivers as are ladies (Tennstedt, 1999). Particular from gender difference in giving care, are gender difference with respect to the effect of family providing care. Studies demonstrate that ladies encounter more prominent caregiver strain than men do, regardless of handicap level of the patient (Neal et al.,1997; Young & Kahana, 1989).

Quality of life

Quality of life comprehensively includes how an individual measures the 'goodness' of different parts of their life. These assessments incorporate one's emotional responses to life events, mien, feeling of life satisfaction and fulfillment, and fulfillment with work and individual relationship (Diener, Suh, Lucas, & Smith, 1999). The term "Quality of life" has many dimensions having numerous purposes behind the multi-dimensionality of the concept. Fundamentally, the concept includes an enormous variety of physical, mental and social marvels, basically all those things that comes under the umbrellas of bliss. Happiness, thusly, can be extracted out from a naturalistic or humanistic point of view. The previous spotlights on biological unthinking processes and views happiness as far as delight, while the last complements of the cognizant part of individual, joy being accompanying of inventiveness and self-completion. In this manner, happiness is considered to be hedonism and eudemonism according to the two methodologies namely naturalistic and humanistic (Beckman, & DItlev, 1997).

Coping Strategies

Coping is characterized as a person's effort in actions and in thought processes in order to manage exceeding demands (Lazarus, 1993). Coping strategies allude to the particular endeavors, both behavioral and psychological, that individuals utilize tomaster, endure, lessen, or limit events that are stressful. Two different coping

strategies that have been differentiated are: problem solving and emotion focused coping strategies. Problem solving are endeavors to accomplish something dynamic to ease upsetting demanding conditions, whereas the later one includes efforts to manage the emotional outcomes of pressured situations or events that are beyond individual's potential. Study demonstrates that people reside to both kinds of coping mechanisms when they are experiencing stressful situations. (Folkman & Lazarus, 1980). Lazarus characterized coping strategy as an action in order to manage and compensate demands and basic occasions that is challenging, risk, damage or advantage to a man (Lazarus, 1991). It basically reflects to a person's capacity to adjust to unfavorable conditions. There are other aspect of this term as it incorporates objective fulfillment systems, self-awareness, and a general positive slant (Schwarzer & Knoll,2007; Snyder, 1999).

Coping Behaviors

Folkman & Lazarus, 1980, researcher followed after 100 members for complete year to establish coping strategy trends in 1332 nerve-racking daily occasions. In 1305 (98%) of the coping situations, both (emotions focused and problem focused) coping strategies were utilized, while in 2% of the coping circumstances, just problem focused strategy or emotion focus coping were utilized. The primary reason in this examination was to decide whether members were steady in coping strategies used or if coping strategy utilized were controlled by the circumstance of the distressing occasion. Coping strategies play a vital role in decreasing stress and help in coping with psychological wellness. Different components related with positive care giving encounters in corporate caregiver's right to use efficient coping strategies. Coping refers to effort made by a person to overcome challenges and demands that are seen as distressing.

Coping Strategies

Coping is defined as the common style adopted by an individual in order to counter distressing circumstances and usually have two parts; emotion and problem focused (Folkman et al., 1991).

Problem focused coping. Problem focused coping is linked to a person who deliberately enhances stressful circumstance through action. Examples incorporate looking for information while confronting another circumstance or resisting impulsive activity for more thoughtful action (Folkman et al., 1991).

Emotion focused coping. Feeling centered adapting; it is linked with efforts regarding observable actions or thought processes made to reduce the outcome of tense situation. For example crying, detachment of self from the circumstance or find out a way to get relaxes (Folkman et al., 1991).

Different variety of coping styles maybe developed in order to deal challenging situations; some coping mechanisms are considered as positive yielding better result for an individual (reflecting, adapting more around a disease), while some coping mechanisms may yield negative outcome for individuals (like drugs or using alcohol, problem avoidance). Few circumstances are better managed by choosing particular coping style as compare to other coping styles. Like emotion focused coping may not be effective in a circumstance in which there is a demand of immediate and quick activity. However, in different circumstances when it demands a man to keep up a feeling of wellbeing, emotion coping maybe useful and healthy (Folkman et al.,1991). To conclude it all, people don't utilize some style solely, however complex combination of both in various situations is effective (Folkman et al., 1991).

Schizophrenia

Schizophrenia is a psychological disorder described by abnormal interpersonal behavior and inability to comprehend reality (WHO, 2015). Signs include false belief, indistinct or confusion in thought processes, hearing voices that others don't, diminished interpersonal activities and emotional expression, and absence of

motivation (WHO, 2015, National Institute of Mental Health, 2016). Individuals with schizophrenia frequently have psychological health issues, for example, mood disorders, or other substance use disorder (Buckley, Miller, Lehrer, &Castle, 2008). Symptoms remain for a long time and they are appeared in young adulthood, (NIMH, 2016).

Causes of schizophrenia

Two main causes of schizophrenia are environmental and genetic factors (Owen& Sawa, 2016).

Possible environmental factors incorporate being brought up in a city, cannabis use in adolescence age, certain diseases, parental age and poor nutrition and diet in pregnancy (Chadwick, Miller, & Hurd, 2013; Owen & Sawa, 2016).

Genetic factors including various of common and rare hereditary factors variants (Kavanagh, Tansey, O'Donovan, & Owen, 2015).

Sign and Symptoms

People with schizophrenia may encounter hallucinations (most reporting hearing voices), delusions (frequently odd or persecutory in nature), and disorganized speech and thinking pattern. The last may extend from loss of line of reasoning, to sentences loosely connected in meaning, to understandable speech known as words alad. Social withdrawal, messiness of dress and cleanliness, and loss of inspiration and judgment are altogether common in schizophrenia (Carson, 2000). Distortion of self-experiences, for example, feeling as one's thoughts and feelings are not so much one's own trusting thoughts are being embedded in to one's brain, at times named passivity phenomena, are common (Heinz et al., 2016).There is frequently observable pattern of emotional difficulty, for instance absence of responsiveness. Impairment in social cognition related with schizophrenia (Gouet & Decety, 2006). Social isolation normally happens (Hirsch, & Weinberger, 2003). Trouble in working and long term memory, attention and speed of processing also usually happens (Van, 2009). In one remarkable subtype, the individual might be to a great extent quiet, stay still in unusual stances, or show purposeless disturbance, all indications of catatonia (Hirsch, & Weinberger, 2003). Individuals with schizophrenia regularly observe facial emotion perception to be difficult. It is hazy if the phenomenon called "thought blocking", where a talking individual all of a suddenly become silent for few moments to minutes, occur in schizophrenia (Oyebode, 2014).

Defective theory of mind. (Frith, 1992) recommended that defective theory of mind could represent three noteworthy groups of schizophrenic features: willed action disorder (apathy and bizarre behavior) emerge from the person's failure to see their own particular aims, or to see their behavior similar to result of their own willed activity. Second, disabled self-monitoring and lessen aware of self-generation of thoughts prompt of delusion of outsider control and auditory hallucination. Third, defective other monitoring could clarify an absence of awareness to others' thoughts and intentions, bringing about persecutory delusions, delusions of reference and misidentification, and disorganized communication.

Factors effecting Schizophrenia

Research demonstrates that combination of hereditary factor and environmental components cause schizophrenia (Harrison &Owen, 2003), and that the hereditary issues prompting this sickness are caused by different factors and genes (Owen, Craddock, & O'donovan, 2005). In any case, the genetic component of schizophrenia has been difficult to evaluate as a result of the trouble of isolating hereditary and environmental causes (Donovan et al. 2003). Research made on twins has discovered an abnormal state of heritability, and recommended that genes are the fundamental driver of the illness. The theory of hereditary causation likewise contends that schizophrenia is an ailment of complex legacy; accordingly, research has concentrated on finding the genes that may cause this psychological issue (Owen et al., 2005). Astrong evidence on the link between drug use and schizophrenia has been found in

study on the impacts of cannabis. researches propose that drugs fundamentally builds the risk of developing symptoms related to schizophrenia, yet found that it is neither an adequate nor an important factor in building up disorder (Arseneault, Cannon, Witton, &Murray, 2004). Or maybe, it is expected that it is just a one of many complicated factors contributing to the symptoms of this disorder. Researches directed by Arsenault et al (in the same place.), cannabis double the risk of development of schizophrenia in a person level, and could, a causal relationship expected, represent 8% percent of cases in the overall population. Other than cannabis and stimulant drugs, for example, amphetamines have been connected to causing schizophrenia. Amphetamines may decline schizophrenia side effects, since the drug activates the release of dopamine (Laruelle et al., 1996).

Obsessive Compulsive Disorder (OCD)

Obsessive compulsive disorder is described by anxiety caused by uncontrollable and intrusive thoughts known as obsession, and repetitive behavior is known as compulsion (March &Mulle, 1998). Youth having obsessive compulsive disorder (OCD) can't stop their stress and anxiety. Fixation subjects may incorporate contamination, hurting oneself or others, hostility, religiosity, symmetry urges, and the need to tell, ask, or admit (March & Mulle, 1998). Compulsions appear as clear behavioral acts, rituals or behavioral mental acts (e.g. counting silently). Compulsions may likewise incorporate washing, repeating, checking, touching, counting, arranging, accumulating and praying (March & Mulle, 1998). Compulsions lessen the anxiety related with the child obsession (APA, 2000). Obsessive compulsive disorder is chronic psychological health issue described by recurrent obsession and compulsion that are tedious and cause trouble or weaken functioning (APA, 2000). It is one of the top ten most weakening conditions in world (WHO, 2001), and can cause disability in every aspect of functioning, including social and work related aspect (Palermo et al., 2011). When OCD becomes chronic, it leads to impairment and misery on individual level, and can influence functioning of both the patient and others involved (e.g., relatives, careers). Additionally, there are noteworthy monetary and social ramifications of OCD, as it can lead delayed joblessness and costs system of health a million of pounds every year ([NICE, 2005). Considering about serious outcomes for people and families and the financial effect OCD can have, it is essential to understand how it creates and is kept up, and to plan successful counteractive action and treatment projects to focus on disorder.

Prevalence

Estimate the prevalence of OCD vary in general population. Prevalence has been reported in adults between 1% and 2.3% in twelve months (Ruscio et al., 2010; Voderholzer, Schlegl, & Külz, 2011), and 0.8% - 3% in life time (Fullana et al., 2010; Kessleretal.,2005;Ruscioetal.,2010).Lifetimeprevalencehasbeenreportedbetween .01%and4%inyoungadulthood (Heymanetal.,2001;Zohar, 1999).

Behavioral Aspects of Obsessive-Compulsive Disorder

OCD is a heterogeneous issue that can show in a wide range of structures (e.g., washing, checking, requesting and so forth.). compulsion ordinarily have comparing obsession, so for instance obsession of contamination prompts to compulsion of cleaning things and symmetry obsession to compulsion of ordering things. Cognition around responsibility has been connected to checking and seeking reassurance (Rachman, 2002).

Factors effecting OCD

The particular thoughts and behavioral patterns that youngsters and youths with OCD developed all depend on learning procedures and experiences in life. Study has proposed that the sorts of repetitive thoughts that lead to trouble in youngsters with OCD are experienced by generally people. Such contemplations are likely to start with painful experiences, illness and information from other (e.g. family members,

companions, news reports, etc.). In any case, youngsters and teenagers with OCD may encounter disgrace, blame or dread in light of these thoughts and experience issues rejecting them (March &Mulle, 1998). Because of such unhealthy and dreadful sentiments, the adolescent attempt to run or keep away from the fear (Mowrer, 1939).
Further studies reveal that individual's upbringing or other family issues are not like to lead OCD , however, the way family members reacts to a child with this disorder can influence the disorder (March & Mulle, 1998; Mowrer, 1939).

Quality of life of Caregiver and Schizophrenia patient

Attributable to insufficiency of community-based services, family of origin remains the most vital social contact and wellspring of help for source of schizophrenia patients. The effect of caring to a relative with a psychological issue on (QOL) of family caregivers were recognized in previous reports (Rie, furth, De Koning, Noordenbos, &Donker,2005). It has been demonstrated that schizophrenia patients' family caregiver have scored low while measuring QOL contrasting caregiver of other psychiatric illness patients(Awadalla, Ohaeri, Salih, &Tawfiq, 2005).. There is a distinction in association in caring process between relatives of patients with schizophrenia. By and large the mother takes the vast majority of responsibility of taking care of patient (Bloch, Szmukler, Herrman, Benson, & Colussa, 1995). In the investigation of (Kurs, Farkas, & Ritsner, 2005) there was no distinction in areas of QOL between kin of patients with schizophrenia and control subjects, however it was uncertain from the examination if the kin were likewise the caregivers. Guardians demonstrated lower QOL contrasting with other relatives in the investigation of (Awadallaetal.,2005), yet other relatives were not differentiated as indicated by family relationship status (Maldonado et al., 2005) recognized connection status as a critical indicator of relatives' subjective burden, an idea related with QOL. In any case, it isn't clear if and how the distinctions in family relationship might be identified with contrasts in their QOL.

Rationale of the study

The purpose of this study is to add to the extensive research in the field of coping strategies, perceived stress and quality of life, to investigate the previous research and to help this area of research find a way to reduce perceived stress from being a debilitating factor on the individuals giving care to patients with OCD and schizophrenia. Only people providing care to OCD and to schizophrenia were selected because with living with such serious problematic patient is not easy and causing high stress level in caregivers. Previous studies have supported this research in such a way that caregivers of schizophrenia and obsessive-compulsive disorder is more stressed out and they have poor quality of life. Past researches have demonstrated that a guardian's physical, mental and social life is considerably influenced while providing care to chronic illness, bringing
About low physical wellbeing, social lyaloof and high level of stress and burden (Pinquart& Sörensen, 2003; Schulz & Sherwood, 2008; Smith et al., 2011). Secondly study teach and encourage caregivers to increase adopting coping strategies to reduce level of stress and enhance quality of life. In addition to this, it allows to explore new and better coping strategies and enhance the quality of life of individuals providing care. In theoretical models used as a part of research on coping strategies linked with quality of life and perceived stress (Chronister & Chan, 2006; Kershaw et al.,2008).

Objectives

To study relationship among coping strategies, perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia.
To determine the impact of perceived stress on quality of life across caregivers of patients with schizophrenia and obsessive-compulsive disorder
To determine the impact of coping strategies on quality of life across care givers of patients with obsessive compulsive disorder and schizophrenia.
To study differences in coping strategies, perceived stress and quality of life on the

basis of demographic variables (i.e. gender, age, education) across caregivers of patients with obsessive compulsive disorder and schizophrenia

To investigate the moderating role of coping strategies on the relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia

To study the moderating role of gender on relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia.

Hypotheses

- Active avoidance and religious coping strategies will be positively related to perceived stress across caregivers of patients with OCD and schizophrenia.
- Positive and problem focused coping strategies will be negatively related to perceived stress across caregivers of patients with OCD and schizophrenia.
- Active avoidance and religious coping strategies will be negatively related to quality of life across caregivers of patients with OCD and schizophrenia
- Positive and problem focused coping strategies will be positively related to quality of life across caregivers of patients with OCD and schizophrenia.
- Perceived stress will negatively predict quality of life across caregivers of patients with OCD and schizophrenia.
- Perceived stress will positively predict active avoidance and religious coping strategies across caregivers of patients with OCD and schizophrenia.
- Perceived stress will negatively predict positive and problem focused coping strategies across caregivers of patients with OCD and schizophrenia.
- Active avoidance and religious coping strategies will negatively predict quality of life across caregivers of patients with OCD and schizophrenia.
- Positive and problem focused coping strategies will positively predict quality of life across caregivers of patients with OCD and schizophrenia.
- Older caregivers (i.e. 50-65years) will have better QOL and reduced perceived stress as compare to younger caregivers (i.e. 20-50years) of patients with obsessive compulsive disorder and schizophrenia.
- Coping strategies (i.e. positive, active avoidant, religious and problem focused) will moderate the relationship between perceived stress and quality of life across caregivers of patients with OCD and schizophrenia.
- Gender moderates the relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia.

Method

Conceptual and operational definition of variables

Perceived Stress: Stress can be experienced when individuals perceive a situation as taxing and beyond their adaptive capacity (Cohen et al., 2007).It was assessed from perceived stress scale, developed by Cohen and colleagues in 1983 and translated by Tahira and Kausar (2005). High score reflects more perceived stress while low scores reflect less perceived stress.

Quality of life. It is defined as the extent to which an individual is comfortable, healthy and is able to participate in or enjoy life events (Clarke et al., 2000; Farquhar,1995). It was assessed from WHOQOL brief scale developed by Crespo & Cruzado (1997) and translated into Urdu language by Fahad et al., (2017). High scores reflect high quality of life and low score represent low quality of life.

Care giver. A person who is providing direct care to a family member with the symptoms of OCD and Schizophrenia (Akbar, Bajwa & Saif, 2017). One member of the family who is providing direct care to the patient is selected as a care giver. He/she is spending minimum 6 hours with patient daily and is taking care of the

patient for past one year at least. Also, caregiver is not suffering from any mental or physical illness with age range from 20 to 60 years.

Sample

Purposive sampling technique was used based on cross sectional design. 200 participants (caregivers of schizophrenia patients, n=116; caregivers of obsessive-compulsive disorder patients, n=84) were selected from different hospitals of Rawalpindi and Islamabad. Only those participants were selected for data collection those who had spent at least6hours per day with patient and were living with patient for at least past one year. Care giver is not suffering from any other mental or physical illness with age range from 20 to 60 years. Only one member from the family of a patient was selected as a care giver. Participants could read and write Urdu language. Informed consent of the care giver was taken first. Caregivers were selected from various government and private hospitals. This study was approved by ethical review committee of Foundation University Rawalpindi Campus.

Table 1 Demographic Characteristic of Sample (N=200)

Variables	**Categories**	**F**	**%**
Schizophrenia/OCD	Schizophrenia	116	58
	OCD	84	42
Gender	Male	98	49
	Female	102	51
Age	30.00	11	5.8
	40.00	26	13.7
	50.00	44	23.2
	60.00	35	18.4
	70.00	34	17.9
Education	Matric	102	51
	FA	28	14
	BA	42	21
	MSC	18	9
	MA	6	3

Instruments

Brief cope scale. Coping strategies were measured through brief cope scale developed by carver in 1997. It was then translated by Akhter in 2005. Brief cope scale contains 28 items designed on 4-point Likert scale i.e., 1= Never, 2= Very less, 3= Sometimes and 4= A lot. This scale has four subscales: religious coping, active avoidant coping, positive coping and problem focused coping. Active avoidant coping strategy includes10 statements including statement no.1,4,6,9,11,13,16,19,21and 26.
Sub scale religious coping strategy contains 4 statements including item no.3,8,22,27. Positive coping contains 7 statements including item no.12,15,17,18,20,24 and 28 problem focused coping contain 7 statements including statement no.2,5,7,10,14,23 And 25. Their liability of the scale is 0.86 (Akhtar,2005; Carver, 1997).

Perceived stress scale. It was developed by Cohen, Kamarck, and Mermelstein, (1983) and translated into Urdu language by Tahira and Kausar (2005). Itis one-dimensional scale with 14 items which evaluate perceived stress. 7 items of scale were scored reverse (Item no. 4, 5, 6, 7, 9, 10, and 13). Responses are rate from 0 (never) to 4 (always). Scores are obtained by reverse scoring by scoring the positively stated items and then by summing the scores across all 14 items. The obtained score ranges from 0 to 56 with higher scores indicating greater perceived stress and lower scores indicating low perceived stress. The reliability of the scale is 0.80 (Kausar, 2005).

WHOQOL Brief. It was developed by Crespo and Cruzado, (1997) and translated

into Urdu language by fahad et al., (2017). It is a 26- item self- administered questionnaire and covers 4 dimensions of quality of life (6 items for psychological, 7 for the physical, 3 for social, and 8 for environmental domains). The physical dimension consists of 7 items (3,4,10,15,16,17,18),psychological consists of 6 items (5,6,7,11,19,25),social consists of 2 items (20 and 21),and environmental consists of 8 items (item no.8,9,12,13,14,22,23 and 24).There liability of the scale is 0.93.The 3 reverse scored items are 1, 11 and 8. Responses are rated from 1 (very bad) to 5 (very good), High scores indicate good quality of life and low scores reveal bad quality of life(Crespo & Cruzado, 1997).

Personal and demographic sheet

Personal and demographic data sheet was formulated in order to gather information regarding demographic variables for the present study. The demographic data sheet was consisted of gender, age and education.

Procedure

The data of 200 caregivers of obsessive-compulsive disorder (n=84) and schizophrenia (n=116) were collected from different hospitals of Rawalpindi and Islamabad. The information provided by all participants would be kept confidential and would only be used for research purpose. Those caregivers were included who were willing to participate. Inform consent was obtained from caregivers of both schizophrenia and obsessive-compulsive disorder patients. All the scales were compiled in the form of booklet containing consent form, demographic data sheet, COPE brief scale, Perceived Stress Scale and World Health Organization Quality of Life (WHOQOL) brief. On average each participants took 20-25 minutes to complete booklet.

Research Design

Purposive sampling technique was used for data collection, based on cross sectional design. This study was carried out in different government and private hospitals included both in and out patients of Rawalpindi and Islamabad**.**

Results

Table 2 Descriptive table among coping, perceived stress and QOL (N=200)

					Range			
Variables	**k**	**A**	**M**	**SD**	**Potential**	**Actual**	**Skewness**	**Kurtosis**
Cope	46	.73	72.10	10.03	28-112	43-89	-.49	1.10
AAC	21	.64	22.89	4.18	10-40	13-34	.19	.49
Religious	10	.87	11.10	10.03	4-16	6-16	-.04	1.66
PFC	16	.97	19.84	3.05	7-28	10-25	.04	1.62
PC	15	.61	18.25	3.51	7-28	10-26	-.47	-.50
PS	36	.76	31.76	6,51	0-56	12-48	-.27	1.10
QOL	80	.63	93.24	15.29	26-130	56-126	.51	.49

Note. Cope = coping strategies, AAC=Active avoidance coping, PFC =problem focused coping, PC = positive coping, PS = perceived stress, QOL= quality of life

Table 1 shows the mean, standard deviation, range, skewness, kurtosis and Cronbach alpha reliability of the study variables. In order to check the overall distribution of data across variable, these descriptive statistics were computed. Mean and standard deviation shows that the data is distributed normally and it is yielding enough information to fulfill assumption of parametric testing. The skewness values and kurtosis values ranged between -1 to +1, which reflects that are acceptable statistically (George & Mallery,2010). Cronbach alpha reliability estimates of perceived stress, quality of life and coping strategies ranged from .61 to .97 which is acceptable as per criteria specified by George & Mallery (2010).

Table 3 Bi variate correlation among coping, perceived stress and quality of life (N=200)

	M	SD	α	1	2	3	4	5	6	7
1. COPE	69.71	10.57	.72	-	.77**	.65**	.89**	.87**	-.38**	.19*
2. AAC	21.89	3.75	.66	.75**	-	.31**	.55**	.52*	.13**	-.04**
3. REL	10.98	2.32	.75	.67**	.36**	-	.49**	.49**	.30**	-.29**
4. PC	17.55	3.61	.72	.60**	.04	.42**	-	.77**	-.49**	.29**
5. PFC	19.29	3.25	.68	.78**	.45**	.42**	.40**	-	-.32**	.13*
6. PS	31.34	5.08	.58	-.21**	-.00	-.01	-.32**	-.28**	-	-.44**
7. QOL	90.63	15.74	.69	.00**	-.21*	-.25*	.09*	.07**	-.06*	-

Note. ***p < .00, **p < .01, *p < .05Schizophrenia caregivers' results are above the diagonal whereas OCD caregivers' results are below the diagonal; PS = perceived stress, QOL = quality of life, cope = coping strategies, AAC = active avoidance coping, rel = religious coping, PC = positive coping, PFC = positive focused coping

Table 3 represents the correlation coefficient between study variables. All variables have good reliability. Active avoidant coping, religious coping has significant positive correlation with perceived stress among caregivers of schizophrenia and OCD patients. Positive coping and problem focused coping have a significant negative correlation with perceived stress and positive significant correlation with QOL among caregivers of schizophrenic and OCD patients. Active avoidance coping, religious coping has significant negative correlation with quality of life among caregivers of patients with schizophrenia and OCD. Perceived stress is significant negative correlated with QOL among caregivers of schizophrenic and OCD patients.

Table 4 Mean differences between Gender on the Study Variables coping, perceived stress and quality of life (N=200)

Male (n=98)			Female (n=102)				95%CI		
	M	SD	M	SD	t	p	LL	UU	Cohen' sd
PS	30.67	6.02	32.88	6.86	1.96	.05	-.01	3.59	0.34
QOL	92.93	14.55	93.52	16.03	-.27	.78	-4.86	3.68	0.42
Cop	73.10	9.66	71.15	10.32	1.37	.17	-.85	4.74	0.50
AAC	23.57	4.04	22.23	4.22	2.28	.02	.18	2.48	0.32
Rel	11.24	2.14	10.96	1.91	.98	.32	-.28	.852	0.45
Pc	18.38	3.53	18.11	3.50	.54	.58	-.71	1.25	0.42
Pfc	19.85	3.00	19.84	3.11	.02	.98	-.84	.86	0.56

Note. ***p < .00, **p < .01, *p < .05 PS = perceived stress, QOL = quality of life, cop = coping strategies, AAC = active avoidance coping, rel = religious coping, PC = positive coping, PFC = positive focused coping

Table 4 illustrates significant mean differences among male and female caregivers of schizophrenia and OCD patients on Perceived stress, Quality of life and Coping strategies. Female caregivers have more perceived stress than male caregivers. Male caregivers have more active avoidance coping than female caregivers. Table indicates that no significant mean differences are the rein Quality of life, positive coping and problem focused coping across male, female caregivers of schizophrenia and OCD patients. Cohen's d was also calculated to measure effect size of mean differences among caregivers of schizophrenia and OCD patients.

Table 5 One Way ANOVA comparing five groups of Age of OCD and Schizophrenia caregivers

	Age							
	20-30	30-40	40-50	50-60	60-70			
Variables	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	F	p	η
PS	31.2(6.82)	32.2(5.92)	32.9(3.00)	31.4(8.33)	30.2(6.25)	.48	.50	.55
Coping	93.2(16.5)	89.0(12.2)	95.3(12.9)	97.5(17.0)	100.5(17.9)	2.55	.06	.94
AAC	25.1(10.1)	22.1(3.28)	24.1(3.00)	26.2(8.52)	24.2(4.02)	2.29	.06	.57
PC	31.9(5.34)	31.1(5.44)	24.7(5.07)	35.1(8.92)	35.1(8.92)	3.82	.005	.52
Rel	7.58(1.89)	7.62(1.00)	7.27(2.09)	6.57(2.21)	8.25(1.90)	3.03	.09	.64
PFC	28.5(5.41)	28.2(4.59)	29.2(4.78)	29.5(4.30)	32.2(6.43)	1.47	.21	.86
QOL	71.4(8.15)	69.5(12.0)	74.9(8.74)	76.3(8.48)	70.5(10.5)	3.38	.01	.54

Note.PS=perceived stress, AAC=Active avoidant coping, REL=Religious coping, PFC=problem focused coping, PC = positive coping, QOL= quality of life.

The results demonstrated that there were no significant values of perceived stress, problem focused coping, active avoidance coping, problem focused coping in five groups of age difference. However, at least one age group was different from other in positive coping F (4, 195) = 3.82, p=.005, and quality of life F (4, 195) = 3.38, p=.01. To check this difference post hoc (Tukey HSD) was run.

Table 6 Posthoc analysis for mean differences of quality of life and Active avoidant coping

Variables	**Testing conditions**		**Mean differences**
PC	50-60	20-30	3.19
		30-40	4.01*
		40-50	.377
		60-70	-.644
QOL	50-60	20-30	4.92
		30-40	6.77*
		40-50	1.46
		60-70	5.86

Note: p* <.05, p*<.01QOL =quality of life, PC=positive coping

The results of post hoc (Tukey HSD) analysis reported that positive coping of 30- 40 age group (M=32.25, SD= 5.92) was good as compared to 50-60 age group (M=

31.47, SD= 8.33). Likewise, there was significant mean difference of QOL among age groups 30-40 and 50-60. Results indicated better QOL (M=76.36, SD= 8.48) among age group 50-60 as compared to 30-40 (M=69.59, SD= 12.06).

Table 7 One Way ANOVA comparing five groups of education

	Education							
	Primary	**Matric**	**FA**	**BA**	**MA**			
Variables	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	F	P	H
PS	32.2(6.43)	32.2(5.92)	35.1(8.92)	31.4(8.33)	24.1(3.00)	3.21	.30	.57
Coping	93.2(16.5)	24.7(5.07)	7.58(1.89)	28.2(4.59)	24.7(5.07)	3.11	.06	.94
AAC	7.27(2.09)	6.57(2.21)	7.27(2.09)	26.2(8.52)	7.27(2.09)	2.55	.09	.07
PC	29.2(4.78)	29.5(4.30)	25.1(10.1)	31.9(5.34)	25.1(10.1)	.48	.08	.10
REL	7.58(1.89)	97.5(17.0)	8.25(1.90)	6.57(2.21)	8.25(1.90)	3.03	.06	.38
PFC	28.5(5.41)	28.2(4.59)	29.2(4.78)	29.5(4.30)	31.2(6.82)	1.47	.12	.62
QOL	7.58(1.89)	97.5(17.0)	7.27(2.09)	6.57(2.21)	8.25(1.90)	2.66	.16	.31

Note.PS=perceived stress, AAC=Active avoidance coping, REL=Religious coping, PFC=problem focused coping, PC = positive coping, PSS = perceived stress, QOL= quality of life.

The results demonstrated that there were no significant values of perceived stress, active avoidance coping, problem focused coping, positive coping, perceived stress and quality of life in five groups of education.

Table 8 Linear Regression Analysis Predicting quality of life among caregivers of patients with schizophrenia and OCD

	Variables	B	S.E	B	P	R^2	F
Outcome	Predictor						
Schizophrenia							
	(Constant)	21.83	3.25		.00	.08	28.18
QOL	PS	.58	.18	-.29***	.00		
OCD							
QOL	(Constant)	26.92	3.17		.00	.05	.31
	PS	.34	.16	-.22**	.03		

Note. ***p <.00, ** p<. 01,* p<.05PS = Perceived stress, QOL=Quality of life

Results of table 9 revealed that for quality of life among care givers of patients with schizophrenia, perceived stress is a negative significant predictor. Results of table also revealed that for QOL among caregivers of OCD patients, perceived stress is a negative significant predictor.

Table 9 Linear Regression Analysis Predicting perceived stress among caregivers of patients with schizophrenia and OCD (N=200).

	Variables	B	S.E	β	p	R^2	F
Outcome	Predictor						
Schizophrenia							
	(Constant)	27.40	2.79		.00	.18	2.05
PS	AAC	.18	.12	.13*	.05		
	(Constant)	24.05	2.18		.00	.09	11.57
	Religious	.66	.195	.30***	.00		
	(Constant)	19.18	2.05		.00	.24	36.51
	PC	.69	.11	-.49***	.00		
	(Constant)	21.57	2.75		.00	.10	12.90
	PFC	.50	.14	-.32***	.00		
OCD							
	(constant)	31.32	5.03		.00	.00	.00
PS	AAC	.00	.20	.00**	.02		
	(constant)	31.72	6.60		.00	.00	.00
	Religious	.05	.58	.01	.92		
	(constant)	16.48	5.23		.00	.10	9.41
	PC	.82	.26	-.32***	.00		
	(constant)	13.71	6.87		.00	.08	7.44
	PFC	.90	.33	-.28***	.00		

Note. ***p<.00, **p<.01, *p<.05PS =perceived stress, AAC= Active avoidance coping strategy, PC= positive coping, PFC = Problem focused coping

Active avoidance and religious coping strategies is positive significant predictor of perceived stress among caregivers of schizophrenia patients. Whereas positive coping and problem focused coping strategies are significant negative predictor of perceived stress among caregivers of schizophrenia patients. Similarly, active avoidance and religious coping strategies are positive significant predictor of perceived stress among caregivers of OCD patients. Positive coping and problem focused coping strategies are negative significant predictor of perceived stress among caregivers of OCD patients.

Table 10 Linear Regression Analysis Predicting quality of life among caregivers of patients with schizophrenia and OCD patients (N=200)

	Variables	B	S.E	β	P	R^2	F
Outcome	Predictor						
Schizophrenia							
	(Constant)	94.69	8.71		.00	.00	.22
QOL	AAC	-.18	.39	-.00**	.63		
	(Constant)	68.61	6.79		.00	.088	10.96
	Religious	2.00	.60	-.29***	.00		
	(Constant)	68.00	6.98		.00	.08	10.93
	PC	1.29	.390	.29***	.00		
	(Constant)	77.58	8.91		.00	.01	2.17
	PFC	.67	.45	.13**	.04		
OCD							
	(Constant)	113.34	8.49		.00	.04	3.90
QOL	AAC	-.68	.34	-.21*	.05		
	(Constant)	70.45	11.00		.00	.06	5.85
	Religious	2.34	.96	-.25**	.01		

	(Constant)	88.81	9.49		.00	.00	.73
	PC	.41	.48	.09	.39		
	(Constant)	88.16	12.36		.00	.00	.49
	PFC	.42	.59	.07**	.04		

Note. ***p < .00, **p < .01, *p < .05 QOL = quality of life, AAC = Active avoidance coping strategy, PC=Positive coping, PFC = Problem focused coping

Results of table 10 revealed that active avoidance coping and religious coping strategies are negative significant predictor of quality of life among caregivers of schizophrenia patients. Positive coping and problem focused coping strategies are positive significant predictor of quality of life among caregivers of schizophrenia patients. Table illustrates that for quality of life among caregivers of OCD patients, active avoidance coping and religious coping strategies are negative significant predictors, positive coping strategy is positive non-significant predictor and problem focused coping strategy is positive significant predictor respectively.

Table 11 Moderating role of coping strategies on relationship between perceived stress and quality of life among caregivers of schizophrenia patients (N=200)

	Schizophrenia					
Outcome	Predictor	B	S.E	B	ΔR^2	F
	PS	3.14	1.74	1.01	.00	1.00
	AAC	1.86	2.32	.44		
QOL	AAC_PS	-.07	.07	-.83		
	Constant	3.84	52.86			
	PS	-1.37	1.46	-.44	.02	3.21
	REL	-5.37	3.71	-.79		
QOL	REL_PS	.22	.124	-1.46		
	Constant	15.54	43.64			
	PS	3.96	1.41	1.28***	.02	3.92
	PC	4.90	2.29	1.12**		
QOL	PC_PS	-.14	.07	1.65*		
	Constant	-39.66	43.34			
	PS	4.78	2.10	1.54**	.01	2.66
	PFC	5.07	3.15	1.04		
QOL	PFC_PS	-.16	.10	1.75		
	Constant	-56.28	64.53			

Note. ***p<.00, **p<.01, *p<.05PS=perceived stress, AAC=Active avoidance coping strategy, REL = religious, PC=positive coping, PFC=Problem focused coping, QOL=Quality of life

The result revealed that perceived stress was positive non-significant predictor for quality of life (β= 1.01, p = .073) in caregivers of patients with schizophrenia. It further reveals that active avoidance coping was positive non-significant predictor for quality of life (β= .44, p = .425) in caregivers of patients with schizophrenia. The outcome also explains that interaction between active avoidance coping and perceived stress was negative non-significant predictor for quality of life (β= -.83, p = .31)

among caregivers of schizophrenia patients. Our results revealed that in caregivers of patients with schizophrenia, active avoidance coping is not playing a role of moderator between perceived stress and quality of life. The result revealed that perceived stress was negative non-significant predictor for quality of life (β = -.44, p = .35) in caregivers of patients with schizophrenia. The outcome further explains that religious coping was negative non-significant predictor for quality of life (β = -.79, p = .15). In addition to this, results reflect that interaction between religious coping and perceived stress was negative non-significant predictor for quality of life (β= -1.46, p = .07) among caregivers of schizophrenia patients. Our results revealed that in caregivers of patients with schizophrenia, religious coping is not playing role of moderator between perceived stress and quality of life. The result revealed that in caregivers of schizophrenia patients, perceived stress was a significant positive predictor for quality of life (β = 1.28, p = .00). It further explains that positive coping was a significant positive predictor for quality of life (β = 1.12, p =.03) in caregivers of patients with schizophrenia. Moreover, the outcome reflects that interaction between positive coping and perceived stress was a significant positive predictor for quality of life (β=1.65, p = .05) among caregivers of schizophrenia patients. Our results revealed that in caregivers of schizophrenia patients, positive coping is playing role of moderator between perceived stress and quality of life.

The result revealed that in caregivers of patients with schizophrenia, perceived stress was as significant positive predictor for quality of life (β=1.54, p=.02). The outcome further reveals that problem focused coping was positive non-significant predictor for quality of life (β = 1.04, p = .11) in caregivers of schizophrenia patients. It also reflects that interaction between problem focused coping and perceived stress was a non-significant positive predictor for quality of life (β= 1.75, p = .10) among caregivers of schizophrenia patients. Our results revealed that problem focused coping is not playing role of moderator.

Table 12 Moderating role of coping strategies on relationship between perceived stress and quality of life among caregivers of OCD patients (N=200)

OCD						
Outcome	Predictor	B	S.E	B	ΔR^2	ΔF
	PS	-2.83	1.03	-1.64	.07	7.14
	AAC	-4.19	1.35	-1.31***		
QOL	AAC_PS	.11	.04	-1.94**		
	Constant	201.92	33.40			
	PS	-.19	2.45	-.11	.00	.00
	REL	2.11	7.06	.23		
QOL	REL_PS	.00	.20	.05		
	Constant	76.83	83.87			
	PS	-5.52	1.59	3.20***	.12	11.41
	PC	-8.88	2.83	2.00**		
QOL	PC_PS	.28	.08	4.30**		
	Constant	266.43	52.55			
	PS	-7.24	1.56	-4.19***	.20	20.67
	PFC	-10.66	2.53	-1.97***		
QOL	PFC_PS	.34	.07	5.12***		
	Constant	318.29	51.40			

Note.***p<.00,**p<.01,*p<.05PS=perceived stress, AAC=Active avoidance coping strategy, REL =religious, PC = positive coping, PFC = Problem focused coping, QOL = Quality of life

Perceived stress was negative non-significant predictor for quality of life (β= - 1.64, p

= .07) in caregivers of patients with OCD. It further reveals that active avoidance coping was negative significant predictor for quality of life (β= -1.31, p = .00) in caregivers of OCD patients. The outcome also reflects that interaction between active avoidancecopingandperceivedstresswasnegativesignificantpredictorforqualityof life (β = -1.94, p = .09) among caregivers of OCD. Our results revealed that active avoidance coping is playing role of moderator in caregivers of OCD patients. Perceived stress was negative non-significant predictor for quality of life (β=-.11, p = .93) in caregivers of OCD patients. It further explains that religious coping was positive non-significant predictor for quality of life (β= .23, p = .76) in caregivers of patients with OCD. The outcome also reflects that interaction between religious coping and perceived stress was positive non-significant predictor for quality of life (β=.05, p= .97) among caregivers of OCD. Our results revealed that religious coping is not playing role of moderator in caregivers of OCD patients. Perceived stress was a significant positive predictor for quality of life (β = -3.20, p = .00) in caregivers of OCD patients. It also explains that positive coping was positive significant predictor for quality of life (β = -2.00, p = .02) in caregivers of patients with OCD. The outcome also reflects that interaction between positive coping and perceived stress was positive significant predictor for quality of life (β= 4.30, p = .01) among caregivers of OCD patients. Our results revealed that positive coping is playing role of moderator in caregivers of OCD patients. Perceived stress was a significant negative predictor for quality of life (β = -4.19, p = .00) in caregivers of patients with OCD. It further explains that problem focused coping was negative significant predictor for quality of life (β = -1.97, p = .00) in caregivers of OCD patients. The outcome also reflects that interaction between problem focused coping and perceived stress was positive significant predictor for quality of life (β= 5.12, p = .00) among caregivers of OCD patients. Our results revealed that problem focused coping is playing role of moderator in caregivers of OCD patients.

Table 13 Moderating role of male gender on relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia.

Schizophrenia						
Outcome	Predictor	B	S.E	B	ΔR^2	ΔF
QOL	PS	2.23	.85	.62*	.19	1.08
	male	12.88	16.56	.32*		
	male_ PS	-.74	.55	-.72**		
	Constant	26.23	25.35			
		OCD				
QOL	PS	2.08	.71	1.24*	.10	8.78
	male	45.39	14.41	1.65**		
	male_ PS	-1.29	.51	-1.62**		
	Constant	18.00	25.81			

Note.***p<.00,**p<.01,*p<.05PS=perceived stress, QOL=Quality of life

Perceived stress was positive non-significant predictor for quality of life (β= .62,p = .05), (β= 1.24, p = .05) in male caregivers of patients with schizophrenia. It further explains that male gender was positive significant predictor for quality of life (β= .32,p= .05), (β= 1.65, p = .04) in caregivers of schizophrenia and OCD patients. The results further revealed that interaction between male gender and perceived stress was negative significant predictor for quality of life (β = -.72, p = .04), (β = -1.62, p = .04) among caregivers of schizophrenia OCD patients. Our results revealed that male gender is playing role of moderator in caregivers of schizophrenia and OCD patients.

Table 14 Moderating role of female gender on relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia.

Schizophrenia						
Outcome	Predictor	B	S.E	B	ΔR^2	ΔF
QOL	PS	3.24	.84	.72*	.16	1.07
	female	14.88	17.56	.41*		
	female_ PS	-.65	.57	-.81**		
	Constant	28.23	26.35			
		OCD				
QOL	PS	3.08	.75	1.29*	.12	7.09
	female	46.59	16.43	1.68**		
	female_ PS	-1.36	.52	-1.54**		
	Constant	17.04	29.71			

Note.***p<.00,**p<.01,*p<.05PS=perceived stress, QOL=Quality of life

Perceived stress was positive non-significant predictor for quality of life (β= .72, p = .05), (β= 1.29, p = .05) in female caregivers of patients with schizophrenia. It further reveals that female gender was positive significant predictor for quality of life (β=.41= .05), (β= 1.68, p = .04) in caregivers of schizophrenia and OCD patients. The results further revealed that interaction between female gender and perceived stress was negative significant predictor for quality of life (β=-.81, p=.02), (β=-1.54, p=.03) among caregiversofschizophreniaOCDpatients.Ourresultsrevealedthatfemalegenderis playing role of moderator in caregivers of schizophrenia and OCD patients.

Discussion

The aim of the present study was to study the moderating impact of coping strategies on perceived stress and quality of life among caregivers of schizophrenia and obsessive compulsive disorder patients. The sample comprised of caregivers of schizophrenia and OCD patients, in which there were 116 schizophrenia patients and 84 OCD participants. Coping strategy is measured by Brief cope scale (carver, 1997) which consisted of 28 items. Quality of life was measured by WHOQOL Brief (Crespo & Cruzado, 1997) while perceived stress was measured by Perceived stress scale (Cohen, Kamarck, & Mermelstein, 1983). The first objective of the studywas to study relationship among coping strategies, quality of life and perceived stress across caregivers of patients with schizophrenia and obsessive compulsive disorder. It was hypothesized that active avoidance and religious coping strategies will be positively related to perceived stress across caregivers of patients with OCD and schizophrenia. Findings through Pearson correlation indicates that Active avoidance and religious coping strategies have positive significant relationship with perceived stress among caregivers of schizophrenia patients and caregivers of OCD patients. This suggests that those caregiver of patients with obsessive compulsivedisorder and schizophrenia having high level of Active avoidance and religious coping strategies will experience have high level of perceived stress. These findings support the first hypothesis of the study that active avoidance and religious coping strategies are positively related to perceived stress. In order to manage distressing occasions, positive coping strategies are proposed to be the most ideal approaches in this regard. while negative coping strategies have all the earmarks of being a mental hazard factor or marker for unfavorable reactions to unpleasant life occasions (Holahan & Moos, 1987). People adopting more religious coping are strongly correlated to perceived stress. As

religious coping level is increased , the tendency to perceive stress also increases (Andel, Westerhuis, Zijlmans, Fischer, & Leijten, 2011). Maladaptive coping strategies will lead to high level of perceived stress (Nolan, Grant, & Keady, 1996). Hence, literature supports findings on the correlation between perceived stress and active avoidance and religious coping strategies. The analysis further supports second hypothesis that Positive and problemfocused coping strategies will be negatively related to perceived stress. Findings through Pearson Product correlation indicates that there exists a significant negative relationship between Positive, problem focused coping strategies and perceived stress among caregivers ofschizophrenia and OCD patients. This suggests that those with high level of Positive and problem focused coping strategies have less perceived stress among caregivers of patients with schizophrenia and obsessive compulsive disorder. These findings support the second hypothesis of the study that there is negative relationship between Positive and problem focused coping strategies and perceived stress.

Effective coping strategies bring down level of perceived stress (Nolan, Grant, &Keady, 1996). Coping strategies adopted by people who are giving care to person with psychologicalillnesslikeschizophreniaand OCD willimprovefromperceived stress and other psychological illnesses (Grover, Pradyumna, & Chakrabarti, 2006). Coping strategieschangethenatureofthestressors.Differentcomponentsrelatedwithpositive care giving encounters incorporate a caregivers choice to incorporate effective coping strategies(Nolan, Grant, &Keady,1996).Positive and problem focused coping strategies overcome challenges and demands that are seen as distressing (Folkman, Lazarus, &Monat, 1991).

Current study further supports third hypothesis active avoidance and religious coping strategies will be negatively related to quality of life across caregivers of patients withobsessivecompulsivedisorderandschizophrenia. Findings throughPearsonProduct correlation indicated that active avoidance and religious coping are significantlynegative related to quality of life, among caregivers of Obsessive compulsive disorder and schizophrenia patients. This suggests those with high level of Active avoidance and religious coping strategies will have low qualityof life among caregivers of patients with schizophrenia and obsessive compulsive disorder. These findings support the third hypothesis of the study.

Previous researches indicates that giving care to elder family member suffering from psychological illness, dementia, epilepsy, or brain injury has been linked to low quality of life (Kershaw et al., 2008; Chronister, & Chan, 2006; Riedijk, Duivenvoorden, Niermeijer, Van, Verhey, & Tibben, 2006 & Chronister, Chan, Sasson, & Chiu, 2010). Caregivers of patients with obsessive compulsive disorder and schizophrenia will experience low quality of life. Caregivers adopting avoidance and religious coping strategies are negatively correlated to quality of life. The study strengthens the evidence on relationship between avoidance coping strategy and quality of life of caregiver has been negatively correlated to stress (Li, Cooper, Bradley, Shulman, & Livingston, 2012).

Current study further supports fourth hypothesis Positive and problem focused coping strategies will be positively related to quality of life across caregivers of patients withobsessivecompulsiveandschizophreniadisorder. Findingsthrough PearsonProduct correlation indicated that there is a significant positive relationship between Positive and problem focused coping strategies and quality of life among caregivers of patients with OCD and schizophrenia. This suggest those with high level of Positive and problem focused coping strategies have high quality of life among caregivers of patients with schizophrenia and obsessive compulsive disorder.

Previous studies indicated the relationship between copingand caregiver's quality of life. Coping strategies adopted bythe caregiver has been positivelylinked with quality of life, coping strategies improves the quality of life of a caregiver (Chronister & Chan,2006; Kershaw et al., 2008; Kate, Grover, Kulhara, & Nehra, 2014), however there have been few investigations on the link among coping and quality of life in casual care and even less in casual care of the dependent elder with no time limit (Ekwall, Sivberg, &Hallberg,2007;Riedijk etal.,2006;Kapteinet al., 2007;Kateet al.,2014; Yu,Hu,Efird,& McCoy, 2013). Also, the consequences of concentrates on coping and quality of life in casual care have been conflicting. In this manner, positive coping strategies have been related with a more awful quality of life by a few authors (Andel, Westerhuis, Zijlmans, Fischer, & Leijten, 2011) and an enhanced quality of life by others (Ekwall et al., 2007; Helder, Kaptein, Kempen, Houwelingen, & Roos,2001;Yuetal.,2013).The result indicated that there is significant correlation between quality of life and coping strategies. Results ofthis study are in line with previous literature and the similar results.

The second objective was to determine the impact of perceived stress on qualityof life across caregivers of patients with schizophrenia and obsessive compulsive disorder. It was hypothesized as Perceived stress will negatively predict quality of life. Findings through regression analysis indicated that in caregivers of patients with OCD and schizophrenia, perceived stress has negative impact on quality of life. This suggests those with high level of perceived stress have low quality of life among caregivers of schizophrenia and obsessive compulsive disorder. These findings support the fifth hypothesis of the studythat there is negative impact of perceived stress on quality of life. Caregiver's perceived stress in mental disorder is entirely connected with seriousnessofabnormal behaviorsandlowqualityoflife (Ohaeri,2003). researches have noticed psychological illness, perceived stress and qualityof life of caregivers (Grover etal., 2014; Zendjidjian et al., 2012) of patients with OCD (Grover & Dutt, 2011; Torres,Hoff, Padovani, & Cerqueira, 2012) and schizophrenia (Foldemo, Gullberg, Ek, &Bogren, 2005; Grandón, Jenaro, & Lemos, 2008; Lauber, Eichenberger, Luginbühl,Keller, & Rössler, 2003): giving care to somebody with these disorders can bring about significant results for the person providing care that usually, are within the family. It further indicated how person providing care is not so happy with his or her generalquality of life and are fundamentally troubled and feel stressed because of givingcare to a family member with a psychological issue (Foldemo et al., 2005; Martens & Addington, 2001). According to sixth hypothesis, Perceived stress will positively predict active avoidance and religious copingstrategies. Findings through regression analysis show that perceived stress is positive significant predictor of active avoidance and religious coping strategies among caregivers of schizophrenia and OCD patients. The results suggest that perceived stress is positive predictor of active avoidance and religious coping strategies. According to seventh hypothesis Perceived stress will negatively predict positive and problem focused coping strategies across caregivers of patients with obsessive compulsive disorder and schizophrenia. Findings through regression analysis show that perceived stress is negative significant predictor of positive and problem focused coping strategies among caregivers of schizophrenia and OCD patients. The results suggest that perceived stress is negative predictor of positive and problem focused coping strategies.

Coping strategies like problem focused strategy and emotion focused coping strategies include efforts to manage the stress or events that are stressful. Research demonstrates that individuals use both kinds of strategies to overcome the events that are stressful (Folkman & Lazarus, 1980). Coping strategies have negative impact on

anxiety and stress (Schwarzer & Knoll, 2007; Snyder, 1999). Different components related with positive care giving encounters incorporate a caregivers choice of using effective coping strategies (Nolan, Grant, & Keady, 1996). Coping is defined as efforts on part of individual to compensate challenges and demands that are seen as distressing (Folkman,Lazarus, & Monat, 1991).Results from the previous literature also approved the hypothesis of this study and indicated that coping strategies have negative impact on perceived stress.

Third objective was to determine the impact of coping strategies on quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia. According to eighth hypothesis Active avoidance and religious coping strategies will negativelypredictqualityoflifeacrosscaregiversofpatientswithobsessivecompulsive disorder and schizophrenia. Findings through regression analysis show that Active avoidance and religious copingstrategies have negative significant predictor of qualityof lifeamongcaregivers of schizophrenia and OCD patients. The results suggest that Active avoidance and religious coping strategies are negative predictors of quality of life. These findings support hypothesis which stated that there is negative impact of Activeavoidance and religious coping strategies on quality of life across caregivers of patients with schizophrenia and obsessive compulsive disorder. According to ninth hypothesis Positive and problem focused coping strategies will positively predict quality of life. Findings through regression analysis show that positive and problem focused coping strategies will positively predict quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia. The results suggest that positive and problem focused coping strategies are negative predictors of quality of life. These findings support hypothesis which stated that there is positive impact of positive and problem focused coping strategies on quality of life across caregivers of patients with schizophrenia and obsessive compulsive disorder. Previous studies have shown strong positive impact of coping strategies onquality of life among caregivers (Yu et al., 2013). Different attributes of caregiver have been related with an enhanced quality of life, including old age (Yang, Hao, George, &Wang, 2012; McCullagh, Brigstocke, Donaldson, & Kalra, 2005),quality of health and quality of life is improved by using healthy coping strategies (White, Mayo, Hanley, & Dauphinee, 2003). A functional status ofthe copingstrategyhas been relatedwith a good quality of life of caregiver (Yu et al., 2013). Greater understanding of connection among coping and quality of life is required to help and promote the improvement of medications and interventions to improve the caregiver's life (Myaskovsky et al., 2005). Previous studies indicated that coping strategy has positive impact on quality of life. The fourth objective is to study differences in coping strategies, perceived stress and quality of life on the basis of demographic variables (i.e. gender, age, education) across caregivers of patients with obsessive compulsive disorder and schizophrenia. Findings of the study supports objective and shows significant differences among gender with reference to perceived stress, quality of life and coping strategies. results illustrate that female caregivers have more perceived stress than male caregivers. It furthersuggests that male caregivers adopt more coping strategies than female caregivers. Previous findings support hypothesis of study.

Past research found difference between gender, diagnosis of ill relative and the Quality of life of spousal caregivers of people with schizophrenia. Female caregivershave more stress level than male (Angermeyer, Kilian, Wilms, & Wittmund, 2006). Studies demonstrate that ladies encounter more prominent caregiver strain than men do, regardless level of handicap of the care recipient (Neal et al., 1997; Young & Kahana,1989; Doty et al., 1998). Male caregivers adopted more coping strategies to overcome with stress of care giving than female caregivers (Grover, Kulhara, & Nehra, 2013;Nehra, Chakrabarti, Kulhara, & Sharma, 2005;

Kate, Grover, Kulhara, & Nehra, 2014). Previous studies demonstrated that Female caregivers have more quality of life than male caregivers of patients with psychological illness. Female caregivers have more social and environmental quality of life if they have support of spouse or peers (Holahan& Moos, 1987; Ayuurebobi, Doku, Asante, & Agyei, 2015). The fourth objective is to find differences in coping strategies, perceived stress and quality of life in terms of age. Finding through ANOVA indicates that there are significant differences regarding age between caregivers of OCD and schizophrenia patients in terms of quality of life and active avoidant coping strategy. Study supports fourth objective. Different attributes of caregiver have been related with an enhanced quality oflife, including old age (Yang, Hao, George, & Wang, 2012; McCullagh, Brigstocke,Donaldson, & Kalra, 2005),with age and time,quality of health and quality of life is up graded with healthy coping mechanisms (White, Mayo, Hanley, & Dauphinee, 2003). A functional status of the coping strategy has been related with a good quality of life of caregiver (Yu et al., 2013).

The fourth objective is to study differences in coping strategies, perceived stress and quality of life in terms of education across caregivers of patients with obsessive compulsive disorder and schizophrenia. Finding through ANOVA indicates that there are no significant differences regarding education between caregivers of OCD and schizophrenia patients in terms of qualityof life and active avoidant coping strategy. The study is supporting fourth objective.

There are very few researches done on demographic variable education in termsof perceived stress and quality of life. However, research reported that there is no significant difference in terms of educations in caregivers of OCD and schizophrenia. Every individual either he is educated or not both feel equal level of caregiving stress (Yousafzai, Bhuto, Ahmer, Siddiqi, &Salamat, 2008; Basher, Niazi, Minhas, Ali, & Najam, 2005).

The fifth objective of the study was to investigate the moderating role of coping strategies on the relationship between quality of life and perceived stress acrosscaregivers of patients with schizophrenia and obsessive compulsive disorder. It was hypothesized as coping strategies (i.e. positive, active avoidant, religious and problem focused) will moderate the relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia. Results of the studyshow that coping strategies act as significant moderator in relationship between quality of life and perceived stress across caregivers of patients with obsessive compulsive disorder and schizophrenia. The results suggest that coping strategies are moderating the relationship of perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia. The findings of the study is partially supporting objective 4 and hypothesis which stated that moderating role of coping strategies on the quality of life and perceived stress across caregivers of patients with schizophrenia and obsessive compulsive disorder**.**

Those people who have shown low level of coping strategy tend to seek higher perceived stress. Family caregiver who adopt positive and negative coping strategy hasan impact on perceived stress and quality of life among caregivers of schizophrenia and OCD patients (Ayuurebobi, Doku, Asante, & Agyei, 2015; Azman, Jamir Singh, & Sulaiman, 2015; Hogan & Langba,2016). Positive Coping strategies change the nature of the stressors. Different components related with care giving encounters and incorporate a caregiver's access to effective coping strategies. Positive coping strategies make the quality of life better. (Nolan, Grant, & Keady, 1996).

Coping strategies overcome challenges and demands that are seen as distressing (Folkman, Lazarus, & Monat, 1991).

The sixth objective of the study was to investigate the moderating role of gender on the relationship between coping strategies, quality of life and perceived stress across caregivers of patients with schizophrenia and obsessive compulsive disorder. It was hypothesized as Gender moderates the relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia. Results of the study show that gender act as significant moderator in relationshipbetweenqualityoflifeandperceived stressacross caregiversofpatientswith obsessive compulsive disorder and schizophrenia. The results suggest that gender is negatively moderating the relationship of perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia. Thefindings of the studyis supporting sixth objective and its hypothesis which stated Gender moderates the relationship between perceived stress and quality of life across caregivers of patients with obsessive compulsive disorder and schizophrenia.

Male caregivers adopted more coping strategies to overcome with stress of caregiving than female caregivers (Grover, Kulhara, & Nehra, 2013; Nehra, Chakrabarti, Kulhara, & Sharma, 2005; Kate, Grover, Kulhara, & Nehra, 2014). Female caregivers have more perceived stress than male caregivers (Yu et al., 2013).

Conclusion

The present study was conducted to investigate the relationship between perceived stress on quality of life with moderating role of coping strategies among caregivers of schizophrenia and OCD patients. Findings of the study provided strong empirical support that perceived stress is strongly predicting quality of life among caregivers of schizophrenia and OCD patients. Perceived stress is significantly negatively related to quality of life among caregivers of schizophrenia and OCD patients. Coping strategy is significantly positively related to quality of life and negatively related to perceived stress among caregivers of schizophrenia and OCD patients. Present study has also found the moderating role of coping strategies and gender on the relationship between stress and quality of life. Results revealed that coping strategies and gender are significant moderators between perceived stress and quality of life across caregivers of patients with schizophrenia and OCD.

Limitations and Suggestions

The limitations of the currentstudyarediscussed along with somesuggestions for future researchers. The sample of present study was collected from Rawalpindi and Islamabad which only included caregivers of schizophrenia and OCD patients, which is not true representative of whole society. In future, it would be more appropriate to select the sample from hospitals in other cities as well. The present study was done by cross-sectional research design, in future longitudinal studycan be conducted on the topics ofcopingstrategy, perceivedstress and quality of life which can make study more effective, help to generate rich data and have more comparability in the study.
Another limitation of the studyis that onlyself-reported information was used for analysiswhichcanbebiased.Interviewmethodcanalsobeusedtogetmore comprehensive and detailed picture of phenomena. The sample was found through purposive sampling. Future studies should use random sampling in order to get an unbiased and true representation of sample.

Implications

The findings of this study reveal that the quality of care given to the patients with schizophrenia and OCD depends on their caregiver. If perceived stress and quality of

life is compromised on part of caregivers, the patients ultimately suffers. Thus it becomes essential to plan interventions that would reduce their stress of care and improve the psychological wellbeing.

By use of the impact of type of coping strategies on extent of perceived stress sustained by the caregivers, training problem-centered and positive coping strategies to caregiversmaybe considered asan approach for reducing burdentolerated bycaregivers. This research would create awareness among caregivers and development of psychological problems in caregivers. It would be advisable to educate caregivers of schizophrenia and OCD patients and make them aware about development of psychological problems in them, which may help caregivers in enhancing their ability to cope in difficult situations and therefore will positively influence their daily lives. Also, the burden sustained to them may be reduced by planning medical sessions based on increasing use of problem-centered and positive coping approaches.

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