

ORIGINAL ARTICLE

Illness-Perception, Coping Strategies and Psychological Distress among Polycystic Ovary Syndrome WomenQURAT-UL-AIN¹, AFSHEEN GUL²^{1,2}Department of Applied Psychology, Kinnaird College for Women, Lahore, Pakistan.Correspondence to: Afsheen Gul, Email: afsheenhussnain@gmail.com, Cell: 03216457616**ABSTRACT**

Background: Polycystic ovary syndrome is the most common disorder among women. Globally 2.2% to 26 % of the women suffers from this syndrome. Illness perception change the coping strategies and attitude towards illness. Psychological distress is assumed to be significantly influenced by coping strategies and illness perception.

Aim: The present study aimed to investigate the relationship among illness-perception, coping strategies and psychological distress among PCOS women.

Methods: A sample of n=90 females with age range of 20 to 35 years (M= 26.3, SD=3.3). Through probability sampling strategy. Illness perception questionnaire (Broadbent et al., 2006), brief coping scale (Carver, 1997) and psychological distress scale (Kessler et al., 1992) measures were used.

Findings: The results were analyzed through Pearson Product Moment Correlation and Multiple hierarchical regression tests which shows significant relationship among psychological distress and one dimension of brief coping (problem focused coping), whereas shows significant positive and negative relationship with illness perception dimensions

Practical Implication & Conclusion: Findings implies that high psychological distress would be due to high perception of illness. Women uses problem focused coping strategies more readily cope the stress in illness and experienced less psychological distress in polycystic ovary syndrome. So this review helps the clinicians in reducing distress among PCOS women.

Keywords: Illness perception, Coping Strategies, Psychological distress, polycystic ovary syndrome

INTRODUCTION

Polycystic ovary syndrome (PCOS) is the most common disorder among women. Globally 2.2% to 26 % of the women suffers from this syndrome¹. According to the world health organization 116 million women affected from PCOS. Approximately 6.6% of women diagnosed with PCOS in USA¹. It is found that women above the age of 25 negatively suffered from the syndrome. PCOS lead to hypertension, depression, anxiety, hirsutism (hair growth on women' body), obesity, hormonal problem, infertility and body dissatisfaction which causes psychological distress. Both genetic and environmental factors were involved in which illness perception during illness affect the emotions and cognitions of the individuals. Illness perception is defined as the individual's belief of illness or somatic symptoms¹¹. Illness perception change the coping strategies and attitude towards illness²⁰. It comprises of perceived control and perceived consequences of illness⁶. Laventhal (1980) gave Common Sense Model of Self-regulation" (CSM) which represent the illness belief of the individuals and expectations towards the somatic symptoms. CSM model basically based on the cognitive and perceptual experiences. Common sense model (CSM) of self-regulation explained the theoretical background of illness perception, which are five domains- Identity explained illness experience and identification of illness e.g² Timeline are the belief about the duration of illness³ Consequences explain the illness belief of the individual, and illness impact on life⁴ Causes, explained the facts or perception of the individual regarding illness development and causes behind the symptoms⁵ Control, belief of the individual about control over illness can be achieved. Model explain the relationship among the cognitions processing which consist of internal and external stimulus of illness that affect the perception, and health outcomes of the individual's illness. Illness perception affect the way of coping. Stress-coping theory explained by Lazarus and Folkman (1988) implies the cognitive appraisal to evaluate whether an individual competent enough to deal with challenges of stressor. Coping process included two types such as problem focused coping and emotion focused coping which is also known as active and passive coping process. It is explained that individual chooses emotion focused coping strategies when the stressful situation is out of control whereas, individual is more likely to turn towards problem focused coping strategies, if the individual has capacity or has resources to deal with stressful situation⁸. Every individual used different coping style to deal with stressful situation.

Inefficient coping strategies cause high illness perception risk led to physiological and psychologically disturbances contribute to mental health^{7,14}.

Lack of awareness about physical symptoms of polycystic ovary syndrome cause high illness perception, and maladaptive use of coping strategies. Light, Chilcot, and McBride (2021) study identified the role of illness perception among polycystic ovary syndrome women. The result predicted psychological distress is caused by high illness perception. The women with lower educational background, cause high illness perception significantly cause psychological distress^{15,18}. It was found that illness perception affect the thinking pattern of women linked with passive coping strategies which were adopted to overcome stress. Emotion focused coping and avoidant coping are considered maladaptive and short term effective. Women suffers from depression, anxiety, body-dissatisfaction, fear of rejection, social isolation to severe mental health problems due to inefficient coping strategies¹.

According to national researches, 60% women suffering from multiple cysts, obesity, acne and hirsutism which linked with cardiac, hypertension, diabetes, sleep apnea, infertility and miscarriages used emotion coping strategies. It has been found that 85% of women in PCOS suffers from depression in Pakistan^{16,18}. Body mass index (BMI) is considered the predictor of depression, which shows that (51.8%) women were obese and (22%) were extremely obese. Obesity in PCOS related with fertility issues. (55.1%) women were not aware about PCOS diseases. Hence, lack of awareness about symptoms of illness are one of the main cause of increases depression and anxiety symptoms in women¹³. Descriptive analytical study in India showed 38% of the women suffers neurotic anxiety whereas 25% suffers from depression⁵. These clinical sign of PCOS are critical warning lead to serious mental health consequences¹⁴. Similarly, a study in Italy reported that high prevalence of depressive and anxiety symptoms due to infertility, body dissatisfaction, low quality of life and physical symptoms of the body in PCOS⁷. It was reported that 40% women suffered from depression and psychological distress such as difficulty in coping with stress, anxiety and low quality of life while suffering from polycystic ovary syndrome in their adolescent age¹².

Hypotheses: There were following hypotheses were proposed:

Hypothesis 1: There is likely to be a significant relationship of illness perception and coping strategies with psychological-distress among PCOS women.

Hypothesis 2: Illness perception and coping strategies are likely to be a predictor of psychological distress among women with PCOS

METHOD

Research Design: Quantitative research method was used. Correlation Research design was used to find the relationship among illness-perception, coping strategies and psychological distress in polycystic ovary syndrome women.

Sampling Strategy: Purposive sampling strategy was used. Participants were selected who meet inclusion criteria requirement from public sector of the hospitals in Lahore. They were referrals from gynecologists

Participants: Data was collected through questionnaire. Sample size for this study was n=90, which included unmarried females diagnosed with PCOS in the age range of 20 to 35 years. Participants were excluded who seek psychological treatment or counselling, having other chronic illness like Thyroid, Cushing syndrome, and females' sufferings from infertility

Kessler Distress scale (K-10): The Kessler distress scale (K10) is a self-report measure which is used to measure psychological distress which measure anxiety and depression symptoms (Kessler et al., 1992). It consists of 10 items which included questions of anxiety and depression symptoms which the individual experienced during last four week. Cronbach's alpha was 0.94.

Procedure: Permission was taken from the original authors of the scale. After the permission granted from the authors. Purposive sampling strategy was used, and collected the data from the public hospital settings.

The participants were provided an informed consent and they were informed about the purpose of this study. Demographics and the scales were administered to the participants. Rights were given to the participants to withdraw at any time from the research. They were given a complete right to enquire about any query related to the research study.

RESULTS

Data analysis was done using Statistical Package for Social Sciences (SPSS, Version 20). Descriptive (Mean, Standard Deviation and Frequency) and inferential statistics were employed in the data analysis. Reliability analysis was applied to find out the reliability of the scales. alpha (α) level was set to be at 0.5 in this research study. Pearson Product Moment Correlation were applied in order to assess the relationship between psychological-distress, illness perception and coping strategies among women with PCOS. Multiple Hierarchal Regression analysis was applied in order to assess illness perception and coping-strategies as predictor among polycystic ovary syndrome women..

Result in Table 2 suggest that the sample are normally distributed and the skewness or kurtosis falls in the acceptable range which explain normality of data. Cronbach alpha of all the measures falls in the fair to good reliability used in this study.

The result in the table 3 showed that there is a significant negative relationship of psychological distress with problem focused coping subscale which indicates that if psychological distress increases then less problem focused coping strategies women implied. Psychological distress shows significant positive relation with subscales of Illness perception i-e consequences, timeline, illness concern and emotional representation. Psychological distress shows negative significant relationship with personal control, treatment, identity and coherence. This shows increase psychological distress would decrease the personal control, treatment, identity and coherence. Problem focused coping was positively correlated with illness perception subscale; personal control, treatment and coherence which implies increase uses of problem coping would help in increase control over symptoms and understanding towards illness. Emotion focused coping subscale shows positive significant relationship with coping subscale; avoidant coping which predicts that if women used more avoidant coping (deny, suppress, uses distraction etc) would also use emotion focused coping (shows anger, humor, acceptance) together.

In model 1, outcome variable's three coping subscales i.e problem focused coping, emotion focused coping and avoidant coping were added and the significant relationship was observed $R^2 = .57$, $F(3,86) = 38.33$, $p < .001$. In this 57% variance was observed in psychological distress. In model 1, outcome variable is significantly related with dependent variable. In model 2, eight dimensions of brief illness perception were entered as predictor variables along with three coping subscale and the regression model turned to be significant, $R^2 = .71$, $F(11,78) = 3.83$, $p < .001$. The variance of 14% was observed in regression analysis. Among all the predictors problem-focused coping emerged as the negative predictor of psychological distress which indicated that individuals who used problem focused coping strategies to deal with disease suffered from less psychological distress. In model 2, emotion focused coping, show positive significant relationship with psychological distress which increases emotion focused coping

Table 1: Demographic Characteristics of Sample

Variables	M	SD	f	%
Age	26.34	3.38		
Education				
Primary			32	35.6
Matric			39	43.3
Intermediate			11	12.2
Bachelor			8	8.9
BMI				
Normal weight			10	11.1
Overweight			47	52.2
Obese			33	36.7
Family income	26322	9675.4		
Family System				
Joint			41	45.6
Nuclear			49	54.4
PCOS diagnostic age	22.7	2.35		
PCOS causes				
Hormonal imbalance			28	31.1
Abnormal Androgen			18	20.0
Not-known			44	48.9
Menstrual irregularities				
Yes			80	86.0
No			10	10.8
Physical disease				
Hypertension			64	71.1
Sugar			7	7.8
No-disease			19	21.1
Psychological help				
Yes			9	9.9
No			81	90.1

M=Mean, SD=Standard deviation, f=frequency

Measures: Demographics: Demographic Information Sheet was developed in order to get information about the client's age, education, occupation, duration of marriage, family system, economic status, monthly income, clinical diagnosis, duration of treatment, Body-mass Index (BMI), age at onset, age at marriage, and history of psychological treatment.

Brief Illness Perception Questionnaire: Brief Illness Perception Questionnaire (Brief-IPQ) is used to measure the cognitive and emotional perception of illness. First 1 to 5 items measure consequences, timeline, personal control, treatment control and identity of illness. Item 6 and 8 represent emotional aspects whereas the item 7 assesses understanding of illness. Moreover item 9 consist of 3 categories involves illness. High score indicates threatening view of the illness. Cronbach's α value was 0.85³.

Brief-Cope: The Brief-cope consist of 28 items which measures coping-strategies used in order to regulate cognitions and deal with stressors. It consist of 14 subscales and each subscale comprises of 2 items with 4-point Likert scale. Higher the score, higher the uses of coping strategies to deal with stressors. Cronbach's alpha reliability of brief-cope was 0.85.

strategies would suffers from more psychological distress due to illness. Treatment and illness concern also predict positive significant relationship with psychological distress. Women who

are going through the treatment of PCOS are more concerned about their illness and suffers from psychological distress.

Table 2: Psychometric Properties of the study variables in the Sample(N=90)

Variables	M	SD	Range	Cronbach's a	Skewness	Kurtosis
Psychological distress	30.63	4.30	10-40	.81	3.63	0.01
Brief illness perception	25.34	4.02	9-45	.82	-1.92	-2.01
Coping strategies						
Emotion focused coping	25.84	3.30	12-48	.70	-0.99	-0.58
Avoidant coping	24.24	3.72	8-32	.80	-1.91	-0.03
Problem focused coping	18.8	3.74	8-32	.80	-2.98	1.63

Table 3: Pearson Product Moment correlation among Illness Perception, Coping Strategies and Psychological distress

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Psychological distress	1	-.74***	-.03	.07	.53***	.36***	-.41***	-.51***	-.27**	.42***	-.55***	.34***
Problem focused coping		1	.18	.02	-.41***	-.22*	.27**	.36***	.18	-.27***	.41***	-.25*
Emotion focused coping			1	.22*	-.16	-.073	-.04	-.16	-.06	-.06	-.12	.06
Avoidant coping				1	-.01	-.01	-.03	-.10	.14	-.01	-.01	.25*
Consequences					1	.32**	.51***	.57***	.31***	.31***	.65***	.29***
Timeline						1	.43***	.40***	.08	.23**	.48***	.32***
Personal control							1	.80***	.14	.38***	.70***	.15
Treatment								1	.07	.37***	.69***	.04
Identity									1	.37***	.17	.35***
Illness concern										1	.29***	.24*
Coherence											1	.17
Emotional representation												1
M	30.6	18.89	25.8	24.24	3.10	3.0	3.10	3.04	3.30	3.40	3.13	3.31
SD	4.27	3.80	3.30	3.72	.78	.66	.82	.90	.66	.61	.83	.70

M=Mean, SD=Standard deviation, *p<.05. **p<.01.***p<.001

Table 4: Multiple Hierarchical Regression showing Illness perception, Coping strategies and Psychological distress

Predictors	B	95% CI for B		SE B	β	R ²	ΔR ²
		LL	UL				
Step I							
Constant	41.80	35.80	47.80	3.01		.57***	.57
Problem focused coping	-.86	-1.02	-.70	.08	-.76***		
Emotion focused coping	.11	-.07	.31	.09	.09		
Avoidant coping	.08	-.08	.24	.08	.07		
Step II							
Constant	24.90	17.34	32.46			.71***	.14
Problem focused coping	-.62	-.78	-.46	-.55	-.55***		
Emotion focused coping	.17	.00	.34	.13	.13*		
Avoidant coping	.06	-.08	.21	.05	.05		
Consequences	.39	-.57	1.35	.07	.07		
Timeline	.41	-.53	1.36	.06	.06		
Personal control	-.87	-2.03	.27	-.16	-.16		
Treatment	1.22	.12	2.31	.25	.26*		
Identity	.27	-.64	1.19	.04	.04		
Illness concern	.98	-.02	1.98	.14	.14*		
Coherence	.72	-.32	1.78	.14	.14		
Emotional representation	.46	-.43	1.37	.07	.07		

CI = confidence interval, LL = lower limit, UL = upper limit, β=Standard coefficient beta ΔR²=Change in variance, R=variance *p<.05. **p<.01.***p<.001

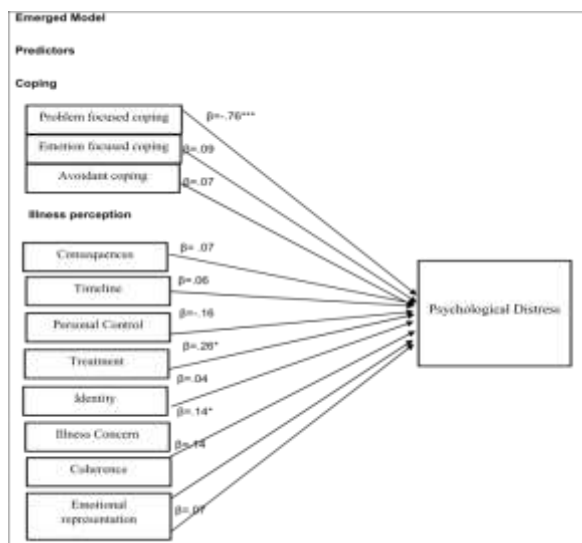


Figure 1: Emerged Model

DISCUSSION

The hypothesis of current study was that illness perception, coping strategies and psychological distress have significant relationship among women suffering from PCOS. Result revealed that psychological distress have negative significant relationship with one subscale of coping; problem focused coping and illness perception subscales. It means that women suffers from less psychological distress by using efficient problem focused coping strategies which included reframing of situation, active planning, use of information, problem solving and practical approach; consult the doctor, take proper diet to deal with physical complaints such as hypertension, obesity, sleep apnea, and cardiac problem^{2,15}. It is proven that problem solving coping are greatly effective in improving quality of life and resilience while suffering from illness^{14,19}.

Symptoms of depression or anxiety increased by using maladaptive coping strategies (emotional and avoidant); taking emotional support, praying, acceptance denial, behavioral disengagement, using self-blaming not taking practical steps, deny the illness presences, feeling helplessness, unworthiness, avoiding the problems or try to escape the problem ended up failure in coping with stress which lead to stress, anxiety, social isolation, body dissatisfaction and low self-esteem¹. Similar results were

reported from a study conducted in Italy, highlighted emotion focused coping and avoidant coping strategies are short term effective. The result of present study further reported that emotion coping and avoidant coping directly affect their quality of life ⁷.

Illness perception and psychological distress has significant positive and negative relationship. Subscales: Consequences, timeline, illness concern and emotional representation shows significant positive relationship with psychological distress. It means high perceived outcome of illness, increase duration of illness, more concerned about their illness which bring emotional burst cause high level of psychological distress in PCOS women ^{6,9}. Psychological distress also has significant negative relationship with personal control, treatment, identity and coherence which explained that if women perceive more confidence on personal control over illness, more belief on treatment, identify the illness symptoms which bring more understanding of illness experienced low psychological distress and better improve the symptoms of illness ^{2,20}. Current findings are consistent with previous literature that illness perception plays significant role in controlling psychological distress in women ^{12,17}. Due to low understanding of illness, women do not go for medical treatment appropriately, instead used avoidant coping which prolong the illness, causes frustration and distress ¹³. It was hypothesized that illness perception and coping strategies predict psychological distress. Result proved that illness perception domains and coping strategies are related with psychological distress. It was supported by previous literature that both high illness perception and lack of using appropriate coping exacerbate anxiety and depressive symptoms among PCOS women ^{9,19}. The result of current study explained is also supported by national study that illness perception is also indirectly related with coping which indicates inefficient coping strategies increases the negative perception of illness which led to negative emotions ¹⁶. Mostly women deny the problem due to religious beliefs or uses praying to solve the PCOS problem which also help in decreasing distress shortly but in long term, it causes severe mental health problem ^{13,14}.

CONCLUSION

It is concluded that lack of understanding of illness, and inefficient coping strategies cause high illness perception led to psychological distress in PCOS women. If women adopt problem solving coping strategies, understand their illness symptoms, it helps in decreasing anxiety and depression. However, if women used emotional coping strategy for treatment uses avoidant coping strategies which eventually faced serious mental health problem ^{1,13}

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