Analysis of Public Health Care Management in Women Suffering from PCOS in India

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ABSTRACT

The concept of "health" is multifaceted and goes beyond simply being free from sickness or illness. Because the concept of health is so nebulous, it is difficult to define. Not only have the most common types of health problems changed over time, but so has our comprehension of health. In the modern world, behaviour often affects one's health because it is influenced by biological, psychological, and social factors. Reproductive processes and events mix with psychological and physiological aspects. In a similar vein, psychological disorders influence reproductive physiology and control reproductive processes. The empirical data points to several aspects that require attention for a deeper comprehension of psychological suffering and ultimately its avoidance. It is quite difficult to learn about the evolution of distress, which means that it is hard to distinguish between acute and persistent manifestations of this condition. According to the few studies that have looked into the problem of psychological discomfort in gynaecology out-patient clinics, women who frequent these clinics are thought to be more distressed than typical—about 50% of them, on average. Additionally, this study will identify the psychosocial variables and aetiology of PCOS in women.

1. Introduction

Health is a condition of excellent physical, mental, and social well-being in addition to the absence of diseases and infirmities. Health psychology is used to reproductive health to address all phases of reproductive systems, processes, and functions [1]. In [2], nine thousand members of the British population were asked questions about what health meant. It is clear that health is a dynamic, multifaceted state. As a result, reaching optimal health necessitates a comprehensive strategy that takes into account every aspect. Because of the complexity of the health care system, patients' commitment to following prescribed treatment plans varies. These practices include things like following behaviour protocols for what to eat, how much exercise, whether to take prescription drugs, and whether to get screenings for preventative healthcare [10]. The field of behavioural medicine has realised that people's health behaviours are shaped by a range of influences [11]. Behavioural scientists have studied and examined models and concepts developed to understand and influence health behaviour in great detail [6]. As theories have evolved, researchers have shifted their attention from understanding why people engage in specific health behaviours to behaviour change, adopting a more precise conceptual description and measurement of constructs [3].

Polycystic ovarian syndrome is one of the most common endocrine disorders and a major cause of anovulatory infertility in women and adolescents of reproductive age (15–49 years) [4]. The condition known as polycystic ovarian syndrome (PCOS) is characterised by the overproduction of androgens, or male sex hormones, which are normally present in women in relatively small amounts. Polycystic ovarian syndrome refers to the several tiny cysts (fluid-filled sacs) that develop in the ovaries. Cysts can form in some women with this illness but not in others without it. When women do not produce enough of the hormones needed for ovulation, ovulation may be delayed and the ovaries may develop a significant number of tiny cysts. Excessive release of androgens can exacerbate the menstrual cycle, impede physiological and psychological functioning, and increase a range of indications and symptoms. John Hopkins Medicine. In 2024, 1.55 million incident cases of PCOS (95%) among adolescent and adult women of reproductive age, including those between the ages of 15 and 49, were recorded worldwide. This is an increase of 8.48% from 2000 to 2024. Even though each woman's symptoms may differ in terms of strength and severity, all PCOS-affected women suffer some degree of these symptoms. Although the exact aetiology of PCOS is still unknown, researchers and medical professionals are aware that environmental and genetic variables can contribute to the disease's development. In conclusion, women with PCOS have higher levels of anxiety and depression

symptoms, and these morbidities coexist till premenopausal age. This emphasises the need of screening for these symptoms in clinical practice. It should be noted that diagnosing PCOS and educating patients about it might make them feel more anxious, which emphasises the importance of a welcoming and encouraging healthcare environment. [5].

2. Literature Review

PCOS is significant for both public health and therapeutic settings because it affects up to 25% of reproductive women. Psychological traits like worry, depression symptoms, stress, and a lower quality of life are significant clinical implications of PCOS [12]. It is often known that women with PCOS experience higher rates of anxiety and depression than women without PCOS. Research indicates that women with PCOS are six times more likely to experience depression symptoms and four times more likely to experience anxiety symptoms. In addition to helping to manage the condition's symptoms, treatment can lower the chance of long-term health issues like obesity, diabetes, infertility, and cardiovascular illnesses. Due to the complexity of PCOS treatment, gynaecologists, endocrinologists, nutritionists, dermatologists, and mental health specialists must work together. Psychotherapy often seems to enhance general life satisfaction and ability to cope with the condition when combined with medication [7]. Pharmacotherapy, such as birth control tablets and progestin treatment, and laparoscopic ovarian drilling—a minor surgical operation that may be used to treat PCOS-related reproductive concerns that do not respond to medication—are the typical management options for PCOS. Yoga, weight control, and physical activity are examples of alternative methods that can assist manage symptoms. Cosmetic procedures have been shown to be helpful in controlling skin tags and facial and body hair, and they may also significantly enhance one's quality of life in terms of health. [8] shown that treatment regimens emphasising nutrition, exercise, and psychotherapy as three components seem to have a bigger effect than those that just focus on medication and diet.

Significant risk factors for psychological distress in the general population include upsetting life experiences or circumstances, a lack of social support system, and unsettling societal roles or identities. Conversely, internal and external resources like self-worth, confidence, and financial security are examples of crucial protective variables. In the current world, a work-life balance that is out of balance, a heavy workload, and a lack of social support are all linked to an elevated risk of psychological distress [9].

3. Methodology

This study's research challenge is thought to have resulted from the interaction of multiple causes. It focusses on how the interdependent strategy helps achieve a certain outcome. It is crucial to comprehend the idea of ontology before categorising the ontology and epistemology to be applied in this study. The researchers contend that the primary goal of the ecological theoretical approach is to investigate the process, create an appropriate environment for it, and base its logic and standards. [14].

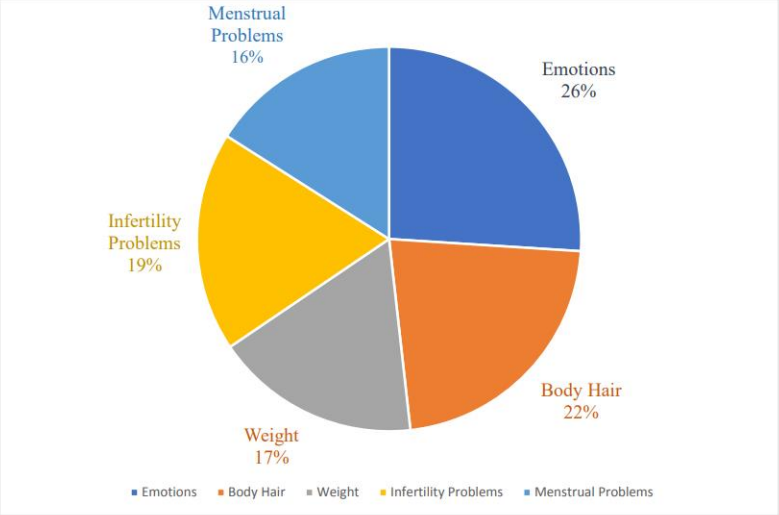

Figure: 1- Chart depicting percentage of PCOS-diagnosed participants

The field of ecological epistemology outlines a region of overlap between current theories, the main idea of which being the recognition of the multiplicity of variables affecting future results. This section covers the research methods used for the current study. If the researcher employs the appropriate method of investigation, they can continue the study in the proper direction and carry out their task in a scientific manner. The conceptual framework of the investigational method for better understanding opens this chapter, which is then followed by the research aim and objectives. All of these points guided the researcher in making a fair assessment of the population under study and in estimating the impact of the intervention. A proper approach was used to accomplish the goals that had been set forth. The primary goal of this study was to create a self-help manual for women with polycystic ovarian syndrome (PCOS) that will help them manage their psychological discomfort and improve their mental health.

Semi-structured interviews were used to collect data for the qualitative analysis. The purpose of the pre- and post-intervention interviews was to get insight into the participant's viewpoint on health and associated matters in light of the process of improvement [13]. The participant's retroactive understanding of her symptoms, as well as her physical and psychological discomfort, were the main topics of discussion during the interview. It also aimed to enhance participants' comprehension of the likely origins and outcomes of the psychological and physiological problems associated with PCOS. In this instance, or the screening stage of the research, there were 120 participants in total; 60 of these women had PCOS and the remaining 60 did not. Young adults, defined as women between the ages of 18 and 30, were invited to participate. The women in the Delhi NCR metro area who did not have PCOS were contacted. In India, gynaecology departments and clinics were contacted by women with PCOS.

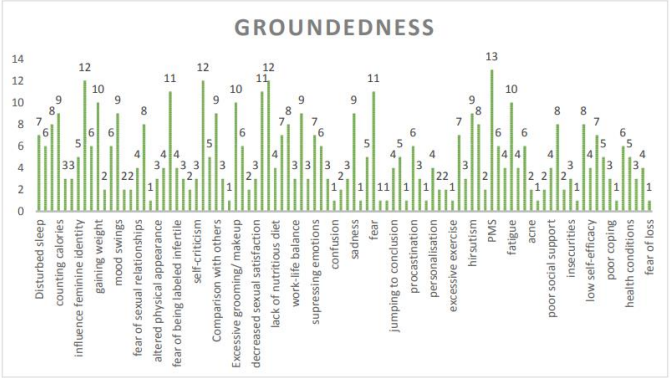

Figure 8: shows the frequency of codes developed from content analysis of the responses

The frequency graph displays the primary and in-vivo codes that were derived from the responses of women with PCOS diagnoses using content analysis. Influence on feminine identity, weight increase, comparison with others, excessive grooming/makeup, premenstrual syndrome, exhaustion, obstacles to routine behaviour, and dread were some of the most often used codes by participants. The subjects were less likely to have low arousal, denial, acne/pimple, mental filters, fear of loss, hopelessness, and side effects from birth control tablets.

Statistical Analysis

This portion of the paper discusses the results of recent research. The data gathered during the study phases were analysed using the relevant statistics, yielding a thorough breakdown of the conclusions made. In this paper, both qualitative and quantitative analysis are offered. The screening results and participant demographics for both the PCOS and non-PCOS groups are presented in this section. We acquired the t-test, mean, standard deviation, and demographic data. The network of themes and codes, family codes, and colour-coding, including a statement and frequency graph, were developed using the ATLAS-ti software. For the study's intervention phase participants, descriptive data were obtained. The Wilcoxon signed-rank test was used to assess the pre- and post-test analyses. The results of the intervention follow-up are covered in the concluding portion of the chapter. Friedman ANOVA and the Wilcoxon signed-rank test were used to acquire the results.

Table 1: Change in Dependent Variables of PCOS Participants Before and After Intervention

Variable	**Pre-test**		**Post-test**	**Z value**		**Effect size**
	Mean	**SD**	**Mean**	**SD**		
Psychological distress	32.43	5.11	26.71	5.89	-3.18*	**0.81**
Positive affect	11.86	3.11	16.83	3.52	-3.30*	**0.85**
Negative affect	**15.71**	**3.89**	**10.43**	**3.52**	**-3.30***	**0.85**

$p<0.05$*

An rise in positive emotions was associated with a substantial positive shift in positive affect (z= -3.30, $p<0.05$), with a high effect size (r= 0.85). Finally, there was a substantial positive shift for negative affect, with a large effect size (r=0.85) and a significant reduction found post-intervention (z= -3.30, $p<0.05$).

Table 2: Mean rank and Friedman $\chi 2$ Value of Dependent variables from Pre-test, Post- test, and Follow-up tests

	Tests	**Mean Ranks**	**Friedman (χ 2)**	**P**
Psychological	Pre-	8.86		
Distress	Intervention	93.62		**Sig****
	Post-	7.36		
	Intervention			
	Follow-up	7.50		
Positive Affect	Pre-	2.71		
	Intervention	93.62		**Sig****
	Post-	4.71		
	Intervention			
	Follow-up	4.93		
Negative Affect	Pre-	4.71		
	Intervention	93.62		**Sig****

	Post- 2.43	
	Intervention	
	Follow-up 1.79	
		p<0.01
		df=8
The table	**shows the effectiveness of the self-help guide**	**intervention on**

psychological discomfort, favourable and unfavourable impact from the pre-, post-, and follow-up tests. The pre-, post-, and follow-up assessments yielded mean psychological distress scores of 8.86, 7.36, and 7.50, respectively. On the pre, post, and follow-up assessments, the mean ranks for positive affect were found to be 2.71, 4.71, and 4.93, in that order. The pre-test mean rank was 4.71, the post-test mean rank was 2.43, and the follow-up mean rank was 1.79 for negative effect. The value of χ 2 was determined to be 93.62, indicating significance at the 0.01 level.

4. Conclusion and future scope

Additional evidence supporting the findings that the participant's degree of concern about having polycystic ovarian syndrome was already high before to research participation came from the participant's answers to psychological tests and semi-structured interviews. Despite having practical skills to address psychological discomfort, participants reported that they remained concerned about managing physical concerns related to PCOS after the intervention ended. Their inability to understand that they had been diagnosed with PCOS or their ignorance of the effects PCOS was having on their physical and mental health contributed significantly to their anxiety.

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