PSYCHIATRIC MORBIDITY IN INFERTILE PAKISTANI WOMEN: A SYSTEMATIC REVIEW

Samia Hussain

INTRODUCTION

The parental role has high priority in the lives of Pakistani women. Fertility is considered a blessing; childlessness is a cause of pity. Despite the fact that women are considered to suffer oppressive structures, the role of the mother is highly valued and respected in the religion. Muslims generally believe that 'Heaven lies under the mother's feet'. Sons are regarded as the necessity for the continuation of the family name, for the strength and security of the family, for old age security of the parents, and for protecting the honour of the family particularly its female component[2].

When examining infertility in the Pakistani context it is important to take into account the Pakistani definition. A woman is not permitted to try for a child unless she is married and living with her husband, held to be according to interpretation of Islamic laws. "In Pakistan a woman is considered infertile if she is living with her husband for two or more years after marriage, is not using any contraceptive and has not conceived a child during this period". The proportion of such women with primary infertility was found about 5 per cent in the PRHFP survey (PRHFPS, 2000-01). The secondary infertility prevalence was reported to be 24%, in a study carried out by the UNDP/UNFA/WHO/World Bank special programme of Research, Development and Training in Human Reproduction[3].

Women encounter numerous difficulties when they have to deal with infertility. According to Ahmed, Chu and Robson (1998), women in Pakistan, who are childless after a couple of years of marriage, become a focal point within their extended family and community. As time goes on they are blamed for infertility. They are viewed as "barren", "bad-luck" and a "curse" on a family[4].

Screening infertile women for psychological distress is rarely done particularly in the developing countries such as Pakistan; perhaps because no formal services exist to address, any identified problem. The World Health Report (2001) says, "Women's health is inextricably linked to their status in society. It benefits from equality, and suffers from discrimination. Today, the status and well-being of countless millions of women worldwide remain tragically low". For women, neuropsychiatric conditions were reported to be second leading cause of disease burden worldwide, following infections and parasitic diseases[5].

A recent systematic review of published literature to assess the available evidence on the prevalence, aetiology, treatment, and prevention of anxiety and depressive disorders in Pakistan carried out at Institute of Psychiatry, London, found that factors positively associated with anxiety and depressive disorders were female sex, middle age, low level of education, financial difficulty, being a housewife, and relationship problems. Arguments with husbands and relational problems with in-laws were positively associated in 3/11 studies. Those who had close confiding relationships were less likely to have anxiety and depressive disorders. Mean overall prevalence of anxiety and depressive disorders in the community population was 34% (range 29-66% for women and 10-33% for men)[1].

Another study carried out at the Institute of Psychiatry, WHO Collaborating centre for Mental Health, Research and Training, Rawalpindi on prevalence of psychiatric morbidity among the attendees of a native faith healer at Rawalpindi, showed that there were marked gender disparities in the diagnostic labels. Depression and Dissociative disorders were found to be more common in women and psychosis among the men[6]. Therefore the evidence suggests that women are at a risk of suffering from psychiatric morbidity in Pakistan.

Psychiatric Morbidity in Infertile Women

Many studies have reported that depression and anxiety are highly prevalent among infertile women[7]. Greil (1997) postulated that these psychiatric symptoms may either be the cause of infertility or the consequence of it, or both[8].

Although a number of studies have been carried out to assess the mental health of Pakistani people, this has not focused on the mental health of infertile Pakistani women of childbearing age. Similar studies and findings are required to resolve the psychological, social and even medical problems of infertile women in Pakistan. Before embarking on research work on infertile women of childbearing age I first carried out a review of published literature on psychiatric morbidity in infertile Pakistani women.

Samia Hussain, Institute of Public Health, University of Cambridge, Cambridge UK. Newnham College Cambridge, UK. E-mail: sh531@cam.ac.uk

Correspondence:

Samia Hussain

There has been no systematic review of studies on psychiatric problems in infertile Pakistani women to date. We conducted a systematic review of literature on psychiatric problems in Pakistani women with infertility following the search strategy described below. According to the search strategy only two studies met the inclusion and exclusion criteria. In the view of the lack of studies found in this systematic review, it is apparent that in order to work out the most appropriate methodology for future research a systematic review of methodologies was needed. Therefore a systematic review of studies on all women of childbearing age was also carried out rather than just including infertile women, in order to analyze the quality of the methods used in them. These are described separately below.

METHODS

This is a systematic review of published as well as grey literature. The main Outcome measures were nature and severity of psychiatric disorders, and the associated risk factors.

Data Sources

The following databases were searched using the key words, "Pakistani women", "Infertility" and ("Psychiatric Morbidity" or "Mental health" or "Psychiatric disorders"): Medline (Pub med), Medline (Science Direct), University of Cambridge E-Journals and PAK MEDINET. Furthermore grey literature and reference lists of retrieved articles were searched to date (25-06-10).

Study Selection

All the studies conducted in Pakistan that focused on infertile women of childbearing age (15-45) to study psychiatric problems of infertile women were selected. Studies retrieved for data extraction included quantitative as well as qualitative ones.

Study Synthesis

The studies were reviewed to assess the suitability for meta-analysis but this was not feasible and a narrative synthesis of extracted studies was done using summary tables.

Results

In this systematic review only two studies were found in Pakistan that addressed any of the questions of the systematic review.

First was a population-based study carried out in Pakistan to study, psychiatric aspects of primary infertility among Pakistani women. The aim was to find out the prevalence, frequency and risk factors for psychiatric morbidity. This was carried out in two cities (Rawalpindi and Kharian) of Pakistan. There were 100 women in each group that is 100 (cases) infertile women were sampled, and 100 women with one live issue were sampled for the control group (see table 1). Psychiatric morbidity was higher in cases i-e 75% as compared to 32% in controls[9]. Findings of the study as measured by GHQ 12 were as follows (see table 2):

The second study included couples but it has been included as it provided significant information on women with infertility in Pakistan. It was carried out more recently, and aimed to examine psychosocial, psychosexual and emotional impacts of infertility. It was a comparative analytical study conducted at Infertility Advisory Centre (IAC) Lahore and Antenatal clinic at the same premises[10]. Methods and findings of this study as shown in table 1.

Quality assessment of studies included

These two studies met some of the standards for review as they used a standard instrument and design, and they were conducted by experienced researchers in Pakistan. Results of the study carried out at the military hospital in Kharian were reliable as the diagnostic criteria used (ICD-10) is an internationally recognized gold standard. There are some biases, most particularly sampling bias, as all the women included were those attending fertility clinics at two military hospitals, whereas many women go to traditional healers for fertility help as they do not have access to the relatively sophisticated services. Moreover women attending clinics in rural are not represented. Another key issue is that GHQ does not provide information about the patient's presenting complaints and the ICD-10 diagnosis was assigned on the basis of this scale which is not a diagnostic interview. Therefore the diagnoses would have been more reliable if a diagnostic interview of identified cases has been done after initial screening with GHQ-12.

The recent study carried out at Infertility Advisory Centre Lahore provides complementary information on psychological impact of infertility among women in Pa-

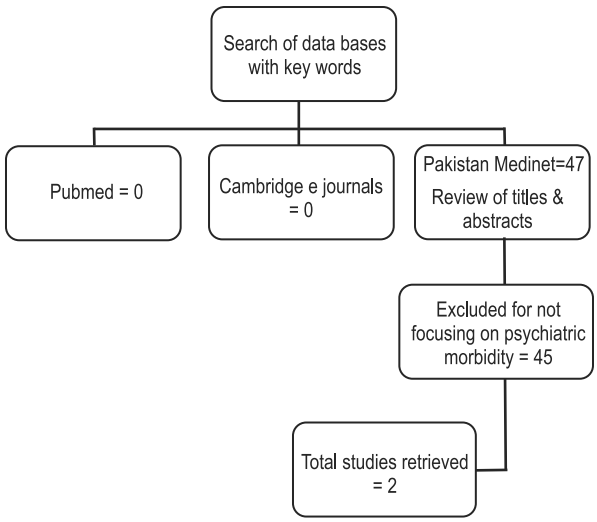

Fig. 1: Study selection process for the review

kistan but it also has a selection bias. Participants have been recruited from only one infertility clinic whereas Pakistan as a country and Lahore in itself is a diverse place where women suffering from this problem seek health care from different types of healthcare providers. Furthermore like the previous study this study also lacks robust diagnostic methods required to assess psychiatric problems. The generalisabilty of the findings is limited from these two studies.

Systematic Review of Methodologies

Search Strategy and Study Selection

Studies which were included investigated psychiatric/psychological morbidity among women with infertility as well as studies on all women of child bearing age outside and within Pakistan using the same databases, and grey literature. Excluded studies in the previous review were included if these met these inclusion criteria.

RESULTS

After carefully searching the databases the following studies were retrieved that met the inclusion criteria for this review and their quality and methods were assessed in detail (see table 3). All of these studies were conducted in Pakistan except one study that was conducted in Bradford UK to study psycho social aspects of infertility among Pakistani and White couples. In the light of above systematic reviews it was evident that there is a dearth of knowledge on psychiatric morbidity among infertile women in Pakistan.

As far as other findings of the above review are concerned there are a number of issues raised which need further investigation in Pakistani settings such as the length of time spent in seeking fertility treatments and psychological support for infertile women. Ahmed in his study on Pakistani and white couples in Bradford (UK) found that participants reported high levels of depression and anxiety at all stages of treatment and this increased over time[4]. Moreover this depression and anxiety was not restricted to initial stages of treatment but in fact increased with the passage of time and did not stop until a pregnancy was achieved[4].

Table 2: Findings of the study on psychiatric aspects of primary infertility among Pakistani women[9]

Disorder	%
Depression	46
Somatization disorder	21
Conversion disorder	16
Generalized Anxiety disorder	10
OCD	5
Phobic disorder	2
Panic disorder	2

Another key issue raised in the above study regarded counselling and psychological treatment for people suffering from fertility related distress. According to Ahmed, Pakistani participants reported a number of reasons for not using the counselling service, e.g. counselling sessions were expensive, they did not know a psychologist who they could contact or they believed that only 'mad' people need counselling[4].

There is a need to explore this issue further in Pakistan in order to see what sort of psychological interventions; counselling or such services are there in primary care, particularly for infertile women and to design better public health policies. The last but not least thing that also needs to be looked at is the assisted reproduction in Pakistan and the epidemiology of depression and anxiety within such settings. It would also help to look at the quality of care and access of infertile women to

Table 1: Methods and findings of the study on psychosocial impacts of infertility: a comparison of fertile and infertile couples on psychological, sexual and marital functioning[10]

Study	Designs	Instrument	Sample	Findings
Shoaib et al 2004 (Kharian)[9]	Case control study	General Health Questionnaire (GHQ 12)	100 infertile women (cases) and 100 women with one live child (controls)	See (Table 3.3)
Khan et al 2009 (Lahore)[10]	Comparative analytical study	Beck depression Inventory, Life Event Scale and Locke Wallace Marital Adjustment test	Fifty infertile and fifty fertile couples	Emotional stress, depression (severe) (12% in women/0% in men), sexual problems and poor marital relationship in infertile couples and no affect on fertile couples by such pressures

Table 3: Detailed methodologies and quality check of studies included in the review

Study	Study type	Main outcome measures	Diagnostic criteria	Explicit aims	Sample size adequate	Exclusion/ inclusion criteria stated	Reliability/ validity of measures specified	Response rate/drop-out rate specified	Data adequately	Statistical significance assessed	Discussion of generalisability
Karmaliani et al 2009[11] (population based)	Cross-sectional study	AKUADS*	DSM-IV	√	√	√	√	√	√	√	√
Muneer et al 2009[12] (hospital based)	Cross-sectional study	EPDS*, HRSD*	Not known	√	×	√	×	×	√	√	√
Ali et al 2009[13] (population based)	Quasi-experimental study	AKUADS*	DSM-IV	√	√	√	√	√	√	√	√
Ali et al 2009[14] (hospital based)	Case control study	SRQ*	DSM-IV	√	√	√	√	√	√	√	√
Rahman et al 2007[15] (population based)	Cohort study	SCAN*, SRQ*, BDO* and a modified life events checklist	ICD-10	√	√	√	√	×	√	√	√
Rahman et al 2007[16] (population based)	A nested case-control study	SCAN	ICD-10	√	√	√	√	×	√	√	√
Niaz et al 2004[17] (hospital based)	Descriptive survey	PSE* HADS*	ICD-10	√	√	×	×	×	√	√	√
Rahman et al 2004[18] (Clinic based)	Case-control study	WHO SRQ-20	Not known	√	√	√	√	×	√	√	√
Ahmed 2005[4] (PhD thesis) (hospital based)	Longitudinal mixed design	FPI*, HADS*	Not known	√	√	√	√	√	√	√	√
Qadir 2004[19] (PhD thesis) (population based)	Cross-sectional catchment area survey	SRQ-20	Not known	√	√	√	√	√	√	√	√
Fikree et al 1999[20] (Clinic/ hospital based)	Cross-sectional study	AKUADS*	DSM-IV	√	√	√	√	×	√	√	√

- Repeated search without key word Infertility = 158 (Pub med) & 2 grey literature (No relevant study found in Psych info or Cambridge e journals or Pakistan Medinet, other than the ones matching our Pub med search)

Total studies retrieved = 160

Review of hypothesis and aim of paper

- Excluded for not having measurement of prevalence of depression among women in Pakistan as the aim of the study =139
- Excluded for not focusing on women of child bearing age = 9
- Excluded because it was a literature review, not an original study = 1

Total studies included in the review = 11

Fig. 2: Study selection process for the review

private hospitals providing assisted reproduction treatments.

Except the study by Ahmed, all studies targeted women in general rather than infertile women in particular. But they give a good over view of the type of the studies that are carried out in Pakistan to study psychiatric morbidity, especially in women. The above mentioned studies have been included in this review as they were targeting women of reproductive age group in Pakistan except the study by Ahmed that was carried out in Bradford UK[4]. All the studies retrieved and analyzed have a good quality methodology except the one carried out by Unaiza Nia which has certain weaknesses such as lack of information about the validity and reliability of the instrument used[17]. On the other hand the cohort study done by Rahman A, et al has a very sound methodology, particularly when we look at it from our first review's perspective, in the sense that it has used both screening tests such as Self Report Questionnaire (SRQ) and a diagnostic interview SCAN (Schedules for Clinical Assessment in Neuro-psychiatry) simultaneously, which is a strategy that no other study has adopted[15].

Implications of findings

Despite the fact that the results of these studies cannot be generalized and the absence of formal diagnostic steps, the above studies suggest that psychiatric morbidity in infertile women in Pakistan is indeed high. There is a need to study this issue in more depth. No information on health care services and pathways to care apart from the reached settings collected which could be of importance in policy development. There have been qualitative studies discussed earlier in the narrative review that focused on psychosocial aspects of infertility, but none of them addressed the issue of psychiatric morbidity in Pakistani women with infertility and none the role of health care services as a risk factor. No study has compared women attending fertility clinics with those seeking help from traditional healers and those residing in urban areas with those residing in rural areas, having no access to fertility clinics.

CONCLUSION

The review has highlighted particular gaps in knowledge: role of health care services and pathways to care. Providing better information should help public health policy makers to plan services that cater needs of infertile women and help to minimize their risk of psychiatric morbidity.

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