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BIOMEDICAL AND CULTURAL EXPLANATORY MODELS OF WOMEN'S MENTAL DISTRESS IN SOUTH ASIA, WITH PARTICULAR FOCUS ON PAKISTAN: A SCOPING REVIEW

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Abstract

Background: In South Asia, women's mental distress is understood in a range of systems of meaning, some of which are conflicting and some of which are complementary. Psycho-medical and/or psycho-pathological discourses along with explanations of local origin, such as stress, family relations, jinn or spirit possession, black magic, nazar, curses, and religious idioms and other locally meaningful explanations, coexist. Such explanatory models are important as they influence who is approached initially, if there is any delay in seeking medical help, and whether the various treatment systems are pursued one after another or simultaneously. The aim of this study is to identify, map and critically compare biomedical and cultural explanatory models of women's mental distress in South Asian contexts, especially in Pakistan and to explore their implications for help-seeking and pathways to care. Methods: This was done using a JBI-informed scoping-review framework in all the eight SAARC countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka following PRISMA-ScR. Twenty-six empirical evidence reports have been identified and included from Pakistan, India, Bangladesh, Nepal and Sri Lanka, the lack of mapped evidence from Afghanistan, Bhutan and Maldives is not an exclusion but a geographical research gap. Data charting distinguished source-documented psychiatric diagnosis, validated screening results and reproductive status and diagnosed reproductive/endocrine disorders from cultural attributions. Biological factors were included for individual cases/samples if they were explicitly mentioned in the original source. Results: There is evidence of explanatory pluralism and evidence in the biology and the reproductive evidence base is reduced, but clinically significant. Psychiatric evidence was source-documented psychiatric presentations where psychosis or serious mental illness was part of the pathway studies and women-specific reproductive evidence was clinically diagnosed PCOS with depression/anxiety screening in Islamabad and postpartum or perinatal depressive morbidity in India, Bangladesh and Sri Lanka. In the Islamabad PCOS study, the prevalence of depression and anxiety were 17.6% and 20.3% respectively in the women with clinically diagnosed PCOS and defined by HADS. The prevalence of PPD at 4 week and 24 week postpartum was 29.2% and 18.0% respectively in the Sri Lankan postpartum cohort using the validated EPDS cutoff. South Asian

context studies included were not directly measuring reproductive hormone levels and so, in absence of hormone measurements or clinically documented hormone levels, no a priori assumptions were made about hormones or endocrine mechanisms and women. Conclusion: The difference between biomedical and cultural is not just 'clinically relevant' or not. A more useful model is to distinguish between biomedical-first, spiritual/traditional-first and informal/family-first and plural/parallel pathways. In some studies, supernatural/ spiritual attribution was associated with a longer or more complex route to formal care, but in some situations, a person's faith or the traditional healers served as a buffer between the tribal and the biomedicine.

1. INTRODUCTION

Mental distress does not come as a culturally neutral list of symptoms. Distress is understood and explained in light of the explanatory resources that are available: medical explanations, somatic experiences, family accounts, religious worldviews, gender roles, past experiences of care and what is acceptable in terms of care. This is especially relevant to South Asia, where formal psychiatry exists alongside plural medical systems, as well as faith and traditional healing, extended family decision-making and large differences within countries in terms of class, ethnicity, language and religion and access to rural/urban areas. WHO's current framework for mental health prioritizes person-centered, community-focused approaches to mental health, as well as the social determinants of mental health, while an explanatory-model perspective also highlights the importance of the question of what meaning the symptoms take on before the woman ever arrives at a clinic (WHO, 2022; Jain et al., 2025).

The path is further influenced by gendered exposure and reproductive transitions for women. Depression and anxiety can be related to violence, loss of independence, financial issues, marital or family problems, work or school stress, pregnancy, childbirth or endocrine disorders. However, contemporary evidence does show clinically meaningful association with PCOS and depression/anxiety and vulnerability to affective symptoms around reproductive-hormonal transitions, but these are not necessarily the bases for universal 'hormonal' explanations of women's distress (Nasiri-Amiri et al., 2023; Islas-Preciado et al., 2025; Atinga et al., 2025; Stańczyk et al., 2026). Thus, what is medical, can be somatized; what is spiritual, can be medicalized; what is "normal" can be hidden; and what is spiritual, can be hidden, all in one and the same presentation. Also an explicit evidence boundary for the biological evidence is needed. Depressive/anxiety morbidity by screening and/or psychiatric diagnoses by source can be specified as well as pregnancy and postpartum status and PCOS diagnosis for the South Asian empirical map. Changes in the HPA-axis, and/or reproductive-hormone fluctuations, or neurosteroid mechanisms, androgen excess or other endocrine pathways should not be attributed to individual women without a measurement or clinical documentation of these changes in the primary study. A biological context of vulnerability may be present in the general literature on the topic of Neuroendocrine and PCOS, but not in the context of the individual participant data (Nasiri-Amiri et al., 2023; Islas-Preciado et al., 2025; Atinga et al., 2025; Stańczyk et al., 2026).

Pakistan offers a very significant focal scene. Previous studies reported that those who consulted faith healers may have been diagnosed with either saya or jinn possession and also with psychiatric diagnosis (Saeed et al., 2000). Recent research paints a more complicated scenario. The Pashtun culture and social norms in Peshawar can both facilitate and hinder help-seeking and stigma has a negative impact (Daraz et al., 2025). Experiences of shame and financial constraints (Lasi et al., 2025), as well as sociocultural restrictions (Shabbir et al., 2026), are reported for

rural women, while for female university students, there are experiences of negotiation with academic and social pressures, and A recent study on untreated psychosis in Pakistan indicated the presence of spiritual explanations and family concerns and stigma (Sanauddin et al., 2026) in the care pathways that were delayed or complicated with complex sociocultural issues but these explanations were not necessarily causal and should be interpreted as associated with delayed care. These findings suggest not to view 'culture' as a standalone risk factor.

This broader comparison with South Asia is important **since the region is not culture homogenous.** Explanatory models vary from tension/stress, to biopsychosocial, to black magic, spirit explanations, to tribal supernatural attitudes and contact with faith healers, and are quite different in different regions of India (Hegde and Karkal 2022; Ali et al. 2023; Kaur et al. 2023). In Bangladesh, jinn possession and religious/traditional healing is salient in some contexts, but some recent studies also identified that women rely on their spouses, families, and informal networks and found that faith healers differentiate between cases of jinn possession and serious mental disorder (Dutta et al., 2022; Soron et al., 2024; Walter et al., 2025). In Nepal, some traditional faith healers also believe that depression can be caused by spirits or curses, and that psychosocial stress is also a contributing factor, and that some refer individuals to hospital, and patient's narratives are multi-somatic, multi-psychosocial and multi-supernatural perceived causes (Luitel et al., 2025; Luitel et al., 2026). Research in Sri Lanka in the current map focuses on postpartum depression, reflecting the disparity in pathway evidence in relation to culture in South Asian countries.

The biomedical and cultural explanations are thus regarded as analytically equivalent explanatory models, rather than as equally verified causal claims, in this review. Clinical diagnosis and reproductive/endocrine conditions are only recorded if a belief/attribution is stated in the original report, otherwise they are recorded as a belief/attribution. It is an epistemically cautious and clinically useful boundary, which maintains the patient's meaning-making world while avoiding the invention of a diagnosis.

The purpose is to map out and then critically compare biomedical, reproductive/endocrine and culturally embedded explanatory models of women's mental distress in South Asian countries (SA) with Pakistan as the focus for comparison and to explore the ways in which explanatory models impact on treatment decisions and pathways to care. The review aims at four objectives: (1) identifying the dominant biomedical and cultural attributions; (2) distinguishing between women-specific and contextually culture/pathway specific; (3) classify pathway topology as biomedical first, spiritual/traditional first, informal/family first or plural/parallel; and (4) identify where explanatory models seem to redirect, complement or delay formal care.

The major new feature is a 'explanatory-model concordance and pathway topology' approach, which is non-reductionist. Current reviews tend to list the stigma, beliefs or interventions in the perinatal period. In this case the unit of comparison is the relationship of an attribution and the next care action. This allows to differentiate between sequential care from spiritual to medical providers and truly parallel or integrated care, and to avoid the inference of prevalence rates for women from mixed sexed cultural studies. The review also establishes a clear evidence perimeter around the reproductive/endocrine explanations, as coded only if provided, but not being assigned a posteriori to culturally-described distress (e.g., PCOS, postpartum state, hormonal issues).

2. LITERATURE REVIEW

Explanatory models shape how mental health problems are understood and sought for help within South Asian communities, and family and social dynamics play a role in how perinatal problems are understood (Insan et al., 2022; Jain et al., 2025). There are three limitations which are important. Biomedical and cultural explanations are often framed as competing, when in reality care often occurs in a pluralistic manner in the real

world; South Asia is viewed as culturally homogeneous, even though there is significant regional variation; and women-specific conclusions are sometimes drawn from mixtures of the sexes evidence of pathways. This review is thus going to make comparisons between cultures, care pathways and differentiate between direct and contextual evidence to women.

Pakistan and India are examples of the need for a model that is not applicable at the regional level. In Pakistan faith-healing categories are not mutually exclusive of psychiatric diagnoses, but rather are a focus on stigma, honour-related issues, financial and family influences rather than a single supernatural belief (Saeed et al., 2000; Daraz et al., 2025; Lasi et al., 2025; Sanauddin et al., 2026). Findings in India are consistent with either stress or tension (rural studies) or with the involvement of the faith-healer (clinical studies), and a smaller repertoire of explanations for the supernatural (rural studies) or family-led decisions and biopsychosocial explanations (tribal/regional studies) (Hegde & Karkal, 2022; Kudi et al., 2022; Ali et al., 2023; Kaur et al., 2023; Panolan et al., 2026). The common subtext is pathway pluralism, not just the polarisation between culture and medicines.

Especially visible interaction between religious/traditional explanations and informal care can be seen in Bangladesh and Nepal. Bangladeshi studies refer to family mediated help-seeking and jinn-related interpretation and contact with religious or traditional healers, and some healers report referring cases that they deemed to be serious mental disorders to biomedical services (Dutta et al., 2022; Soron et al., 2024; Al Azdi et al., 2025; Rafi et al., 2025; Walter et al., 2025; Jilka et al., 2026). In Nepal, there is also a combination of spirits or curses and psychosocial stress, somatic explanations and referral to hospital, and education and caste have an influence on pathways (Luitel et al., 2025; Luitel et al., 2026). Recent evidence in Sri Lanka suggests that there is an evidence-production gap, not an absence of evidence, on postpartum depression, compared to culture-pathway analysis (Aththanayaka & de Zoysa, 2026; Poddar et al., 2026).

In settings, symptom language and family gatekeeping and changing of beliefs seem more clinically informative than any one attribution. Distress can be expressed as tension, weakness, physical complaints, interpersonal problems or a spiritual disturbance and these distress labels can determine the need for formal care. Stigma, resources and families' understanding of the problem may result in referral or delay of referral (Kudi et al., 2022; Rafi et al., 2025; Sanauddin et al., 2026). Despite the pathways indicating that explanations may change post-treatment, referral and disappointing encounters, most studies measure beliefs at a single time point. The present review aims to fill this gap by associating explanatory models with the next step in care as well as by recognizing biomedical-first, spiritual/traditional-first, informal/family-first and plural/parallel pathways.

3. METHODOLOGY

3.1 Review Design and Framework

This scoping review was performed in line with the best available JBI guidelines for conducting scoping reviews (Tricco et al., 2018) and reported based on PRISMA-ScR (Peters et al., 2024). The review question and evidence boundaries were created using the framework of Population-Concept-Context. Women and female specific or sex extractable evidence was included in the population. Occasionally, prevalence statements in mixed-sex or system-level reports were only retained if they included an important prevalence statement in the explanatory model or care pathway. Biomedical and psychiatric explanations, reproductive/endocrine explanations, psychosocial explanations, culturally embedded explanations and pathways to biomedical and psychiatric explanations and help-seeking. For the sake of convenience, Pakistan was chosen as the primary comparative country and Pakistan along with seven other SAARC countries namely Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka was referred to as

context. The identification, verification and charting process is shown in Figure 1.

3.2 Eligibility Criteria

Empirical qualitative, quantitative, mixed methods, pathway and case-based studies were acceptable if they had the following: evidence of women's mental distress, explanation models, or psychiatric and/or reproductive/endocrine factors documented, or pathways to help-seeking or to care documented in the South Asian context. Studies that were women-only or sex-extractable were considered direct evidence. Mixed-sex or system-level studies were only included when necessary to describe cultural explanations, traditional/family or faith healers, referral patterns or pathways to services; and to provide prevalence estimates for women, the prevalence of these studies was calculated separately from the mixed-sex studies. Prevalence-only studies were very sparsely used when they had a biomedical or reproductive anchor that was relevant such as PCOS or postpartum depression. Prioritizing studies published since the year 2020, and retaining earlier studies if they offered a point of comparison that was not represented in more recent studies, were done. All the eight member States of the South Asian Association for Regional Cooperation were eligible. If there was no eligible study in a country, this was identified as a gap in geographic research but the country was not excluded from the review.

If the individual case or the study sample was clearly documented as a clinical diagnosis or as a validated screening result, as a reproductive state (pregnancy or postpartum) or as a diagnosed reproductive/endocrine condition (PCOS), or as a directly measured endocrine/hormonal variable, then the biological coding was assigned. Biological mechanisms discussed but not participant level findings in the background of a source were not reclassified. If an endocrine marker, medical condition or symptom was not measured as part of a study, reviewers were not allowed to infer it from a cultural description, but rather were required to write "not reported.

3.3 Information Sources

Evidence was found by performing targeted scholarly searches in PubMed/PMC, publisher-indexed journal pages, title and DOI searches, and by reference chaining from relevant contemporary evidence syntheses. Prior to report entry in the evidence map, bibliographic identity was checked using the search function on the DOI, PubMed/PMC or journal-publisher websites. The number of hits for databases were not reconstructed in the review build as complete proprietary multi-database export with locked screening log was not available. This limitation is clearly outlined and the search-concept architecture and reproducible source-specific search syntax is presented in the appendices prior to journal submission.

3.4 Search Strategy

The search strategy included combining population, mental distress, explanatory model, pathway to care and geographic context. Population terms used were: women, female, maternal, pregnancy, postpartum, postnatal, perinatal and sex-stratified. As mental-distress words, the terms depression, anxiety, psychosis, serious mental illness, mental illness, mental distress and mental possession were used. Explanatory-model terms comprised: cultural belief, jinn, spirit, black magic, faith healer, traditional healer, stigma and PCOS. Pathway terms included: help seeking, first contact, referral, pathway to care, treatment delay and service utilization and informal support. Pakistan, India, Bangladesh, Nepal, Sri Lanka, Afghanistan, Bhutan and the Maldives were part of the geographic block. If the original report was of a reproductive/endocrine finding, this was coded based on the reproductive/endocrine findings obtained from the search but not coded retroactively. A detailed table of a full search strategy is not provided in the main text but is found in Appendix B.

3.5 Study Selection

The potentially relevant records were assessed at both the topical level (Population-Concept-

Context) and the full-report level, if information was available. The number of duplicate and bibliographically redundant reports was reduced during verification. Reports were retained if they included any direct evidence about women or evidence about a model or care pathway that was not able to be split into sex-specific evidence. The final evidence map comprised 26 empirical reports that were verified from Pakistan, India, Bangladesh, Nepal and Sri Lanka. Three countries (Afghanistan, Bhutan and Maldives) were identified as geographic evidence gaps and were thus included in the scope of the review, as they did not have any eligible report for the scope of the review identified in the final mapped evidence. The review build was not able to keep a complete database-native screening export, so all numbers were verified and no PRISMA numbers were made up.

3.6 Data Charting/Extraction

All reports were mapped for country, regional/cultural context, study design, evidence unit, sex-specificity, biomedical or clinical frame, psychiatric diagnosis or screening measure, reproductive status, diagnosed reproductive/endocrine condition, directly measured endocrine or hormonal factor, cultural attribution, dominant first-contact pathway, delayed or access signal, evidence tier, explanatory orientation, and a short finding based on the source. Reports were coded as women-specific/system extractable where information specifically related to women was identified and mixed-sex/system-level reports were kept as pathway evidence but with context.

Biological variables were charted separately. For example, source documented psychiatric diagnoses were separated from psychiatric symptoms and screening positive scores; clinical diagnosis of PCOS was separated from a hypothesized mechanism (hyperandrogenism or insulin resistance); postpartum status was separated from unmeasured postpartum hormonal change; and documented endocrine factors were separated from factors that were not actually measured in the original study. No value or abnormality was inferred if an included report did not include estimation of estrogen, progesterone, androgens, cortisol, thyroid hormones or other endocrine markers. Supernatural attribution and delayed formal care were also identified and plotted as independent variables that may co-occur or fall in a time series without necessarily leading to one another.

3.7 Data Synthesis

Populations, outcomes, designs and measures were heterogeneous and thus synthesis was not meta-analytic. Number of figures is NOT individual prevalence estimate, but number of reports coded by a characteristic. The synthesis was conducted, preserving complexity within the studies and comparing biomedical, spiritual/traditional, informal/family and plural/parallel pathways. Only evidence from the original source was accepted for diagnosis in the psychiatric field, PCOS, postpartum status and other biomedicine or reproductive/endocrine factors. Supernatural explanations were taken as models of reported explanations. When there was a delay in care and it was located in the same pathway as the supernatural attribution or faith-healer consultation, the relationship was classified as an association, sequence or co-occurrence unless the original study design allowed for a causal inference. This was not seen as evidence of a lack of underlying explanatory models or clinical problems, but rather as a research gap in countries without an appropriate evidence.

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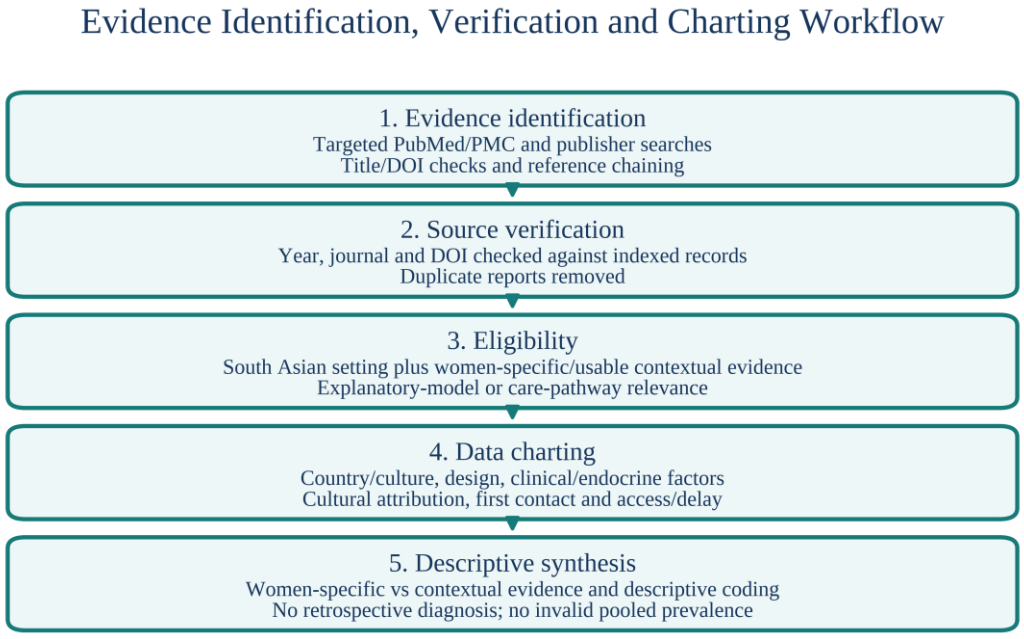


Figure 1. Evidence identification, verification and charting workflow for the 26 empirical reports in the evidence map.

To keep the main manuscript focused on the principal synthesis, only the most important comparative and practice-oriented tables are retained in the main text. Detailed study characteristics and the comparative study matrix are provided in Appendix A; the search-concept architecture and complete search strategy in Appendix B; the full data-charting/extraction matrix in Appendix C; and extended country-level information, including geographic evidence gaps, in Appendix D.

4. RESULTS

The charting data set consists of 26 empirical reports (6 from Pakistan, 7 from India, 7 from Bangladesh, 5 from Nepal and 1 from Sri Lanka). The map is recent – 18 out of the 26 reports were published between 2024–2026. This recency is a reflection of the desired focus on more recent evidence, and a few older "anchor" studies were included to illustrate the continuity of the faith healer/explanatory-model research.

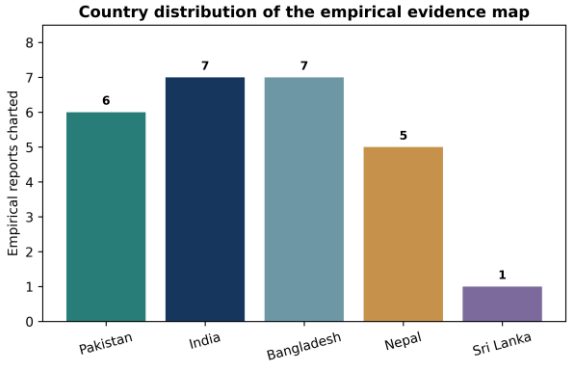


Figure 2. Country distribution of empirical reports.

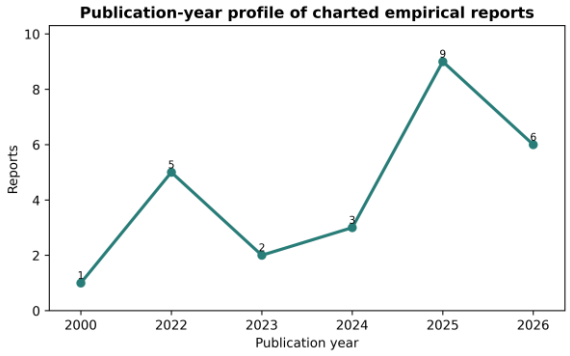


Figure 3. Publication-year profile of the included evidence.

The evidence base has a diversity of methods. Qualitative and ethnographic studies are invaluable as they help to understand how distress is named and negotiated, while surveys and secondary analyses of surveys can quantify help seeking patterns of larger samples. The temporal sequence is provided by pathway and case studies, but no one design provides all needed information. That is the very reason that evidence mapping is the better approach than "pooling" across incomparable denominators.

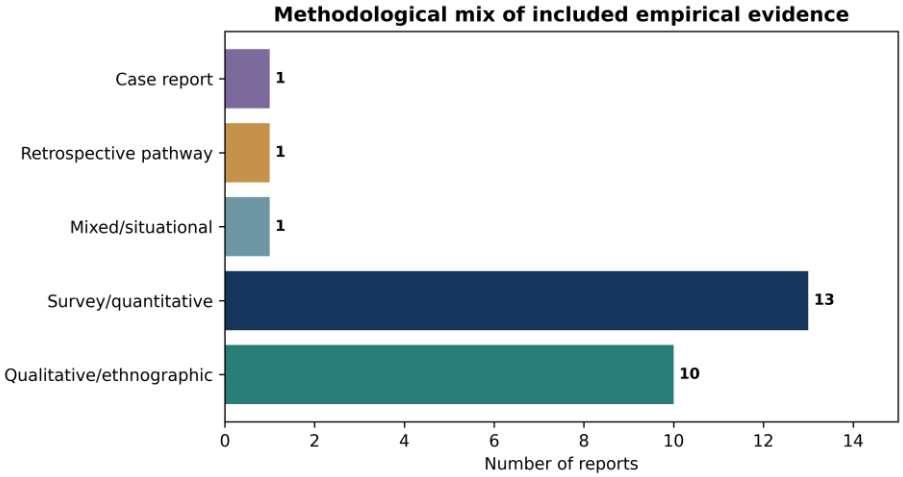


Figure 4. Methodological mix of the included empirical reports.

4.1 Biological, Psychiatric and Reproductive/Endocrine Findings

Biological and clinical evidence was not as comprehensive as the cultural and care-pathway evidence, but was sufficiently different to warrant reporting separately. Women-specific evidence were clinically diagnosed PCOS, pregnancy/postpartum status, validated depression/anxiety screening and postpartum depressive morbidity. Pathway studies with source-defined psychosis or serious mental illness also featured, although several of the studies were mixed-sex and system-level and were thus used to describe diagnostic co-occurrence and care pathways instead of prevalence in women.

In Islamabad PCOS study 74 women aged 18-40 years were clinically diagnosed with PCOS prior to mental-health outcomes evaluation. Depression was present on the HADS in 17.6% and anxiety was present in 20.3% and a further 17.6% and 23.0% respectively were in the borderline range of HADS scores. Other clinical features reported to be associated with PCOS were menstrual irregularities (77.0%), weight gain (67.6%), hirsutism (55.4%), alopecia (51.4%), acne (48.6%), infertility (20.3%) and acanthosis nigricans (13.5%). BMI, education and household income were associated with depression and employment status and current pregnancy with anxiety (Khan et al., 2024). The present review does not directly measure the levels of circulating reproductive hormones and specific hormonal mechanisms were not assigned to these women, but these results suggest that there is an intersection between an endocrine/reproductive disorder and clinical-relevant mental-health symptoms.

Postpartum and perinatal studies were conducted to provide a second biological/reproductive context. The Kerala study employed the Edinburgh Postnatal Depression Scale to determine 560 women with depressive symptoms in the first six weeks after childbirth and barriers and facilitators to seeking help among women with postpartum depressive symptoms (Panolan et al., 2026). The study on mental-healthcare seeking in the perinatal period in rural Bangladesh revealed high rates of non-use of services, but did not include endocrine biomarkers (Dutta et al., 2022). One of the factors associated with PPH is a

diagnosis of postpartum depression (PPH) with 29.2 percent at 4 weeks postpartum and 18.0 percent at 24 weeks postpartum diagnosed using the validated Sinhala EPDS in Sri Lanka (Aththanayaka & de Zoysa, 2026). Although these studies directly report postpartum state and depressive morbidity, they are lacking in measurement at the level of the participant for estrogen, progesterone, neurosteroids, HPA-axis markers or thyroid hormones.

Medical/clinical definition of psychosis and serious mental illness were also included as a pathway related piece of evidence. The Pakistan study of untreated first-episode psychosis looked at delayed diagnosis and treatment in young people, carers, health-care workers and traditional/spiritual healers (Sanauddin et al., 2006) and an older study of healers found that participants who had been diagnosed by a health-care professional also had a diagnosis from a Saneet, a traditional healer (Saeed et al., 2000). Not all of these studies were women-specific and were only used to infer that cultural labels are not mutually exclusive of clinical psychiatric categories and to describe pathways to care but not prevalence of disorder in women. No psychiatric diagnosis, PCOS-related mechanism or postpartum hormonal change or other endocrine abnormality was assigned to any individual throughout the evidence map unless reported by the primary source.

Plural/combined care; family/gendered norms; and involvement of faith/traditional healers were the coded signals most commonly used. These themes overlap. For instance, a woman may have depressive symptoms as part of her postpartum experience (biomedical/reproductive frame), may think of it as a family issue (psychosocial/cultural frame), tell her spouse or elder first (informal pathway), seek out a faith healer, and eventually seek out a clinician. Combining each source in one code point, either 'medical' or 'cultural', would mean that the most relevant sequence for service design is lost.

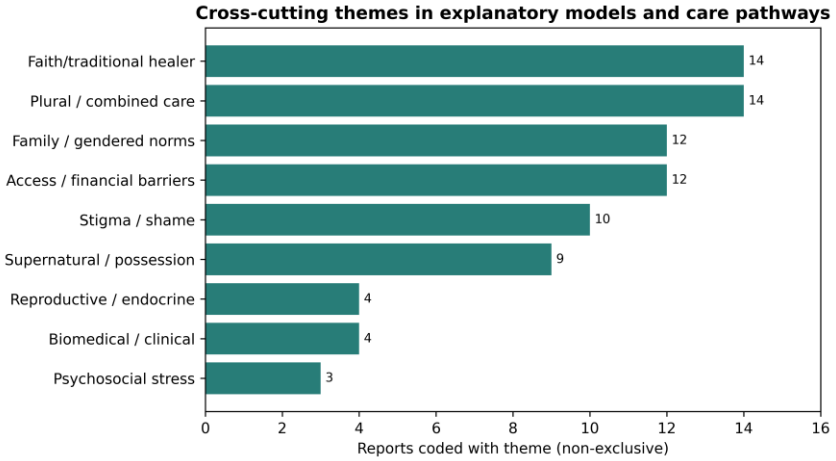


Figure 5. Non-exclusive explanatory and care-pathway themes across the evidence map.

Four predominant types of pathways were identified. Spiritual-first pathways were present in Pakistan, India, Bangladesh and Nepal, where a faith/traditional healer or supernatural interpretation was the first step prior to specialist care. Informal/family first pathways were particularly observed in women-centric Bangladeshi datasets and in rural/gendered studies, where the first point of disclosure was with a spouse, relative or community networks. Biomedical-first pathways were present in clinical/reproductive studies and where medical recognition was already in place. Plural/parallel pathways included reports that there was coexistence or deliberate combination of spiritual, traditional, psychosocial and biomedical systems.

The between country contrast is illuminating at this descriptive level. Informality/family-first

pathways are more prominent in Bangladesh due to several recent national studies involving women that focus on who women do consult, while such contextual pathway studies are more prevalent in India where faith healers and plural systems are prominent. Pakistan brings together evidence-based research that is spirituality first (psychosis/faith-healer research) and informal channels (women-focused studies). There is evidence from both traditional-healers and biomedical surveys in Nepal. This variation is partly due to the actual service cultures, but also partly due to the approach used by researchers in measuring the services, so interpretation should be based on study design and country.

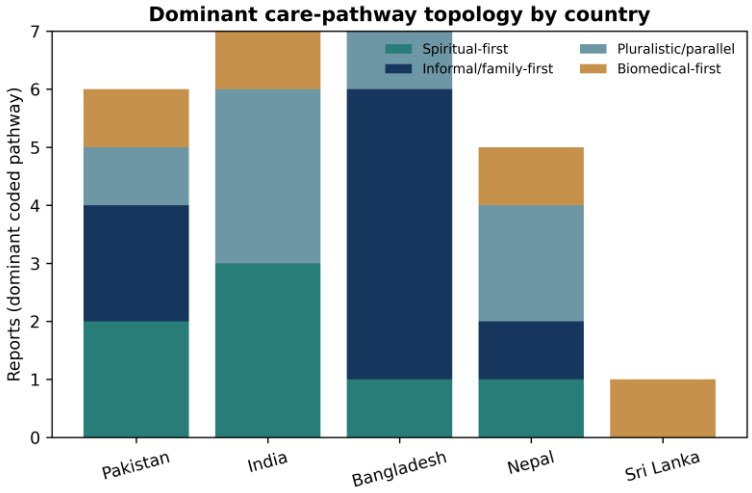


Figure 6. Dominant care-pathway code by country.

About half of the charted reports contain elements of evidence for or about women, and the rest contain background information about culture, treatment pathways, traditional healers, or pathways for serious mental illness. This difference affects interpretation. For instance, a mixed-sex study can validly reveal that faith healers are a frequent initial source of contact in a given area, but cannot on their own demonstrate that women have more frequent contact with faith healers than men. On the other hand, women-only national surveys can provide an accurate measurement of help-seeking, but may not provide an in-depth description of supernatural or religious significance. The two tiers are thus not interchangeable.

The tiering process also serves to identify the areas of apparently rich cultural literatures where there is still no direct evidence about women. There are numerous informative culture/pathway studies, the majority of which are mixed sex or system-level; Bangladesh and Nepal do have greater representation of women-specific studies in the recent past. In this map, Pakistan is relatively balanced, as it is women-specific studies that cover different populations and not a nationally representative pathway cohort. This distinction avoids a common error in making a sex-specific utilization claim using a mixed-sex faith-healer study, which is at the Q1 level of inference. It also indicates where the targeted female cohorts can make the most contribution.

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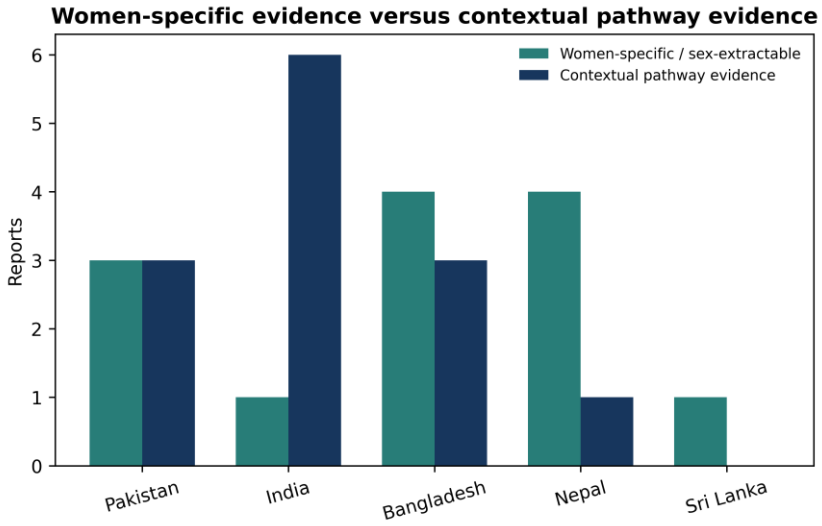


Figure 7. Women-specific versus contextual culture/pathway evidence by country.

There were no single explanatory orientations for each country. Both spiritual/traditional explanations and plural models were found in the studies conducted in Pakistan, India, Bangladesh and Nepal. Reproductive/biomedical-dominant reports were found where the epidemiology of PCS was directly investigated, such as PCOS. The Sri Lankan column is particularly illuminating; the current evidence map has a robust postpartum biomedical signal but not a considerable amount of contemporary culture-pathway evidence to draw on to make confident claims to Sri Lankan explanatory pluralism. This does not mean that such pluralism is not found: it is rather a lack in mapped research.

For this reason the orientation plot is to be interpreted as evidence-structure map, rather than cultural ranking. Strong spiritual, psychosocial and biomedical explanations may coexist in a country and the "balance" will fluctuate, depending on which population or outcome is sampled. Coexistence is the useful signal: In four countries reports of foreground spiritual/traditional meanings coexist with reports of foreground clinical or plural models. This reinforces the review's central argument to question the combining and ordering of explanations and not to assume some cultural preference based on nationality alone when planning treatment.

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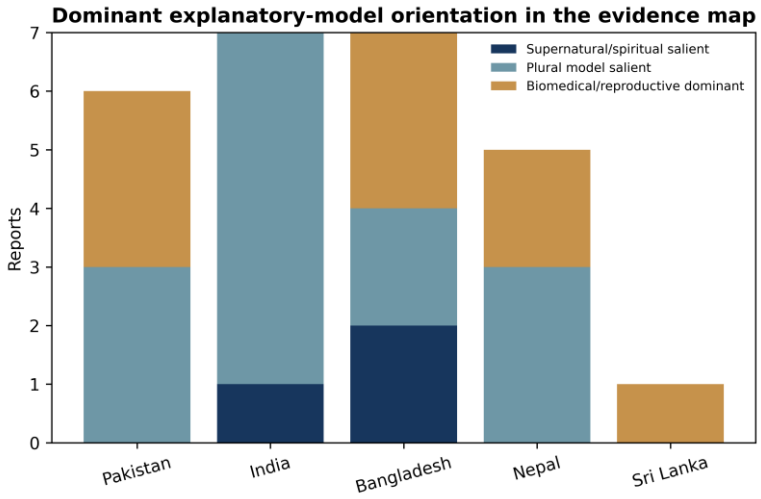


Figure 8. Dominant explanatory-model orientation by country.

Table 1. Culture-sensitive comparison across South Asian settings

Setting	Dominant explanatory signals	Pathway implication	Key evidence gap
Pakistan	Pashtunwali/honour in Peshawar; shame and gender expectations in rural/female samples; possession/spiritual models in psychosis pathways.	Stigma and family concerns can delay care; cultural narratives can also support help-seeking; spiritual and biomedical systems may be sequential.	Country is internally heterogeneous; strongest recent culture-pathway evidence is concentrated in specific regions/settings.
India	Stress/tension and biopsychosocial explanations coexist with black magic/spirit beliefs, faith healing, AYUSH and tribal variation.	Faith healers often appear early; family decision-making is powerful; postpartum care in Kerala shows stigma/spiritual treatment plus medical concerns.	Very large regional diversity makes national generalization particularly risky.
Bangladesh	Jinn and religious/traditional healing visible in some communities; strong family/spouse and informal support pathways in women's surveys.	Formal professional help remains limited for many women; some faith healers differentiate spiritual vs psychiatric cases and can refer.	Need more women-specific qualitative work linking exact attribution to timing of formal referral.
Nepal	Supernatural/curse and psychosocial explanations coexist; traditional faith healers and caste/education influence pathways.	The pathways identified in the case that involved healing were suggested as pathway before or pathway redirect to formal care, and as potential pathway through referral; the evidence available doesn't support a claim that the supernatural attribution alone caused delay, but pathway association, sequence.	More longitudinal work needed to measure time from first cultural attribution to evidence-based care.

Setting	Dominant explanatory signals	Pathway implication	Key evidence gap
Sri Lanka	Biomedical/postpartum evidence in current map; insufficient recent culture-pathway evidence for robust comparative coding.	Maternal clinics offer a potential platform for culturally sensitive mental-health identification.	High-priority geographic gap for contemporary explanatory-model and pathway studies.

Careful separation between the reproductive/endocrine evidence and cultural inference. PCOS studies and meta-analyses indicate a higher prevalence of depression and anxiety in women with PCOS, while recent neuroendocrine research suggests that they may be sensitive to menstrual and postpartum periods (Nasiri-Amiri et al., 2023; Islas-Preciado et al., 2025; Atinga et al., 2025; Stańczyk et al., 2026). The empirical evidence map reveals two examples of reproductive contexts with directly documented evidence of PCOS in Islamabad and postpartum depression in Kerala, rural Bangladesh and Sri Lanka (Khan et al., 2024; Dutta et al., 2022; Panolan et al., 2026; Aththanayaka & de Zoysa, 2026). The results were consistent with the integration of women's health, primary care, and mental-health screening, but there is no clinical evidence to support speculating on what is actually cultural distress as "hormonal.

The high number of publications in 2025–2026 should be seen as a good sign, but also as a red flag. It offers unique and up-to-date data concerning women students, women's national help-seeking, postpartum pathways, and untreated psychosis, but on the other hand it is also known that many data were not yet replicated in other areas. There are a number of recent papers that are single-setting qualitative studies or are secondary analyses of one survey. It is particularly pertinent before any culturally specific mechanisms are applied to a country or the whole of South Asia.

The review was across all eight SAARC countries. Empirical reports were found in Pakistan, India, Bangladesh, Nepal and Sri Lanka and were included in the final evidence map if they met the inclusion criteria. As part of the search and eligibility framework, Afghanistan, Bhutan and Maldives were searched but there was no eligible report mapped in the mapped empirical core that met the criteria for the review from Afghanistan, Bhutan or Maldives. They are therefore assumed to reflect an area of geographic research gap as opposed to an exclusion of South Asia or that the pathways of mental health, RE/cultural are not relevant in the region. This spatial imbalance also cautions against the use of the available evidence as being a representative sample of the region.

Gaps in the population are evident as well. The questions answered by the women are different for each of the samples (University students, postpartum women, women with PCOS, women exposed to IPV, severe-mental-illness service users and community samples). Other groups of women – such as older women, adolescents not in educational institutions, women with disabilities, minority-language communities, or migrants within South Asia – are less represented in the mapped literature. Different gatekeeping, explanatory models and access constraints might be found in these groups. In the future, updates to scoping should include these sub-groups specifically and not refer to the group as 'women'.

5. DISCUSSION

The main conclusion is that, rather than a biomedical versus cultural dichotomy, it is the configuration of explanations over time that is clinically most useful. South Asian women might not subscribe to models (permanently) but move between models. A spiritual explanation may go hand-in-hand with the recognition of stress; a family might want religious healing and then psychiatric treatment; a woman might accept a medical diagnosis but be afraid of the effects of medication or the stigma of the diagnosis; a traditional healer might refer the case, which is not seen as spiritual. This pluralism can be seen

throughout Pakistan, India, Bangladesh and Nepal and is consistent with the systematic-review evidence of psychosocial-spiritual explanatory repertoires among South Asian people (Jain et al., 2025).

This is also an interpretation that avoids 2 symmetrical errors. One is cultural reduction, in which the seeking of help in the South Asian context is largely attributed to superstition or stigma. The second is biomedical reductionism, which sees clinically measurable symptoms as a full description of the woman's experience. Both are capable of hampering communication. Instead, the review separates causal verification from explanatory meaning: an explanatory label does not require clinicians to verify that jinn or possession are biomedical causes, but rather that families make decisions, and have expectations about treatments and the timing of referrals based on those labels.

The unique combination of spiritual attributions and highly gendered social regulation, and in some contexts, honour related norms, is the comparative distinctiveness of the mapped literature in Pakistan. Stigma can be a factor that deters people from seeking help, and supportive cultural narratives can be a factor that helps encourage people to seek help, as is demonstrated in the Pashtunwali related social environment in Peshawar (Daraz et al., 2025). The 'first provider' is but one component of the pathway, as the female rural population experience shame and financial and sociocultural restriction (Lasi et al., 2025), and the gendered consequences are described in the pathways to psychosis (Sanauddin et al., 2026). Sometimes disclosure is allowed, sometimes it is not, and sometimes who is allowing the travel or expenditure and what a psychiatric diagnosis could do to the family's reputation are important as well.

This implies that interventions solely based on 'mental-health awareness' might not be enough to help design services. Referral systems must interact with the decision ecology surrounding women: family gatekeepers, providers of primary-care, women's health services, other trusted figures in the religious/community sphere. The goal is not to shift the diagnosis to community providers but to provide low barriers for concerning presentations (psychosis, suicidality, severe postpartum symptoms, functional collapse or suspected endocrine/reproductive factors) to the appropriate clinical assessment earlier in the process.

The risks of cultural labelling at a national level is seen in India. Different explanatory ecologies include a rural community in Karnataka (pathway sample from AIIMS), a tribal/non-tribal comparison, Haryana service setting, South Kashmir and postpartum women in Kerala. Stress-based lay model, biomedical acceptance, supernatural attribution, faith healing, AYUSH use and postpartum spiritual treatment are all found in the same country. Bangladesh demonstrates an alternate pattern with the presence of jinn discourse and the role of religious/traditional healing, while family support is informal and professional care is limited and recent women-specific population analysis is emphasized. Nepal also incorporates traditional healer systems where supernatural and psychosocial explanations may coexist and sometimes includes a referral to hospital within the healer system. These differences will further enable a culture and region-specific implementation and not some generic 'South Asian cultural competence' package.

Geographic interpretation should also be done keeping in mind the complete SAARC context. All 8 countries were eligible and included in the search framework, but only 5 countries had evidence that was eligible for inclusion in the empirical map. Afghanistan, Bhutan and the Maldives are thus high priority evidence gaps and Sri Lanka was represented mainly by biomedical evidence, but not a significant contemporary literature of culture-pathways. The pattern should be reported as included and should not be reported as excluding these countries or absence of these clinical/cultural phenomena.

One key safeguard is to strengthen the biological narrative and not diminish the mental health narrative of women to a reproductive one. Whereas, direct evidence in the South Asian

context would suggest that the topics might be clinically diagnosed PCOS and screening for depression/anxiety in the latter; pregnancy and postpartum status and depressive morbidity, or source-defined psychiatric disorders (e.g. psychosis, serious mental illness) in pathway studies. These findings underscore the importance of taking into account family, violence, poverty, stigma, academic stress, and culturally meaningful interpretations as well as a biological, psychiatric assessment when addressing this issue. They do not constitute evidence that reproductive biology offers an explanation for distress for all women.

The easiest-to-understand endocrinopathy present in the women evidence is PCOS. The Islamabad group were clinically diagnosed with PCOS and the depression and anxiety were assessed using the HADS (Khan et al., 2024). Reproductive hormones, insulin resistance or HPA-axis biomarkers were not directly measured in the primary study. Thus, potential background mechanisms from the wider literature on PCOS (hyperandrogenism, insulin resistance or HPA-axis dysregulation) can be referred to as possible mechanisms, but not as measured causes of the mental distress of the individual women assessed in this review.

The same goes for the postpartum biology. Extensive literature indicates that there are significant fluctuations in reproductive hormones and neuroendocrine processes, such as steroid-hormone fluctuation or withdrawal sensitivity, changes in HPA-axis, and neurosteroid/GABAergic pathways, that occur during the transition from pregnancy to postpartum period. The South Asian studies reviewed for the empirical map, however, generally only assessed postpartum timing or depressive symptoms or study defined postpartum depression and not actual hormone assays. This ought to be noted in the biological interpretation because it is a co-occurrence in the evidence included, but not at the level of the evidence participants, and the mechanistic hormonal explanations are contextual but not findings from the evidence. Furthermore, the mapped empirical core does not include sufficient source-documented endocrine (thyroid) or other specific biomarkers of abnormality data to make thyroid or other abnormalities attributable to individual women as a result of this review, but a clinical differential assessment consideration.

When the pathway is only a cultural or supernatural explanation for the illness, the culture may be linked with a delay in assessment of postpartum depression/psychosis and/or relevant medical conditions, however to emphasize the evidence of association and sequence does not evidence the attribution as causing a delay. The recommended clinical response is the additive assessment – psychiatric assessment based on the symptoms and level of risk and reproductive/endocrine assessment when clinically indicated; culturally sensitive questioning of the women's self-explanation and the previous care pathway.

Table 2. Practice and policy implications

Actor	Action	Why it follows from the evidence
Traditional / faith healers	Brief red-flag training and bidirectional referral protocols; preserve role boundaries.	Earlier referral without requiring theological agreement or biomedicalizing the healer role.
Primary care	Ask what the patient/family believes is happening and which providers have already been consulted.	Makes prior spiritual/informal care visible and reduces duplicate or unsafe treatment.
Women's health /	Embed mental-health screening in postpartum and PCOS care; assess violence and psychosocial stress.	Prevents endocrine/reproductive and psychosocial factors from being treated as mutually exclusive.

Actor	Action	Why it follows from the evidence
endocrinology		
Psychiatry / psychology	Use culturally safe explanatory-model questions; clarify diagnosis while validating the importance of the patient's meaning.	Improves alliance and reduces confrontation over causal beliefs.
Families / community	Target shame, marriageability fears and misinformation; promote confidentiality and supportive referral.	Addresses gatekeeping and delay mechanisms that occur before any provider is reached.
Health systems	Measure pathway sequence and delay, not only service utilization.	Identifies whether informal/spiritual care is a bridge, parallel support or source of harmful delay.

Based on the evidence, the practical three-person concordance model that incorporates the woman, influential family network and first practitioner is suggested. For Concordance, it is not necessary that the three have the same causal belief. Rather, it inquires if they can agree on a next action that is safe. For instance, a female and family might still have a spiritual understanding; and they could agree that if the insomnia is severe, or suicidal thoughts, or postpartum deterioration or psychosis, are present, clinical assessment is necessary. Faith healer can keep a religious activity going and refer on for psychiatric assessment. Instead of trying to change cultural beliefs prior to treatment, this is an action oriented

6. CONCORDANCE

This can be translated into the following five brief questions that can be used in clinical and research contexts: What is the name of the problem? What do you think was the reason for it? Who did you go to or consult first? What treatment has been attempted so far – religious or traditional treatment? What would or would NOT make you go and seek medical or psychological help today? These questions elicit causal beliefs and one's current treatment acceptability and history of treatment pathways without forcing the patient to make a biomedical/cultural dichotomy. These answers can then be correlated with a red flag assessment, reproductive/endocrine testing as appropriate and a negotiated referral plan.

Measurement of concordance at more than one time point should be performed for research. Baseline attribution, attribution after first treatment contact, and attribution after symptom change might be compared to time-to-formal-care, dropout, adherence and perceived benefit. This would shift the field from correlating the 'belief' and 'help-seeking' dimensions in cross-sectional studies to a mechanism-based understanding of the timing of when cultural explanations delay, facilitate or simply accompany evidence-based care.

The results suggest that in the future, there is a need for researchers who study explanatory models to differentiate at least four constructs: attribution (what is believed to be the problem), legitimacy (whether the experience is serious enough to warrant help), authority (who can decide what happens next), and pathway topology (the sequence or combination of practitioners). This is because many of the current surveys combine these into one attitude score. This difference is particularly significant for women, as authority can be partially in the hands of spouse, elders/gatekeepers even if the woman herself concurs that there is a mental health issue.

A second implication in the measurement is that supernatural belief cannot be assumed to be anti-medical belief. In turn, more positive supernatural attitudes did not necessarily result in lower professional help-seeking attitudes among tribal participants as demonstrated by Ali et al. (2023),

and healer studies conducted in Nepal and Bangladesh demonstrate that spiritual healers can refer people to hospitals (Soron et al., 2024; Luitel et al., 2025). Future instruments should then distinguish between belief endorsement and exclusiveness, e.g. by asking 'I believe a spirit may be involved' vs. 'medical treatment cannot help'. This distinction is crucial to consider when creating interventions for collaboration.

This difference is significant in looking at delayed care. Supernatural attribution, first contact with faith healers or traditional healers and family issues and stigma were all concurrent with delayed access to specialist services in some of the pathways mapped throughout the studies. Therefore, the review considers supernatural attribution as a correlate of, concurrent with, or prior to formal help-seeking. There were also traditional or faith healers in Bangladesh and Nepal who were able to distinguish between what they believed was spiritual and any severe mental illness; these referred them to hospital or biomedical services suggesting that there is no necessary conflict between attribution of supernatural causes and a biomedical referral (Soron et al., 2024; Luitel et al., 2025).

Lastly, quantitative studies should pre-specify what they are estimating: population prevalence, the probability of the use of services, delay time, and/or frequency of explanatory models. The underlying denominators in the present review are not exchangeable, therefore, all descriptive counts are reported at the report level, as intended. A harmonized set of measures could enable multi-level analyses of country, region, gender, education, caste/ethnicity and religious practice, and reproductive status and service availability, in the future, without assuming culture as a residual variable.

There are four strengths of this review. It maintains the epistemic distinction between a cultural attribution and a confirmed medical diagnosis, separates the evidence of women and contextual evidence, and it is not monolithically South Asian, but differentiates cultures and subregions, and it creates a transparent evidence-map data set from which all descriptive figures can be reproduced. The focus on literature for 2020-2026 also reflects the very new research on gendered help-seeking, postpartum mental health and culturally-specific pathways.

Restrictions should explicitly be stated. The studies included in the report are heterogeneous and many assess stigma/symptoms and help-seeking using different measures, so the numbers do not represent prevalence estimates. A dominant pathway code is used to help visualize complex pathways. There are some settings where research is much better developed than in others and evidence from Pakistan, India and Bangladesh is clumped. The manuscript-build search was carried out based on the available scholarly records that could be accessed via the Internet and are indexed in one or more databases, and was not a completed multi-database export with a locked screening file; therefore, the manuscript should be considered as a manuscript-ready evidence-led scoping synthesis, with the possibility of rerun and archive database-specific searches run in the MEDLINE, PsycINFO, Embase, Scopus/Web of Science and relevant regional indexes as available. This is reported rather than PRISMA counts being manufactured.

Prospective pathway data collection and association of explanatory model with time-to-care should be considered for future studies. The basic information that should be collected should include the following: date of onset of symptoms; the woman's own explanation; the family's explanation; the first person told; the first practitioner seen; the sequence of biomedical, spiritual and informal contacts; and the interval between contacts; the amount of money spent; whether a healer or clinician referred on; the woman's reproductive/endocrine status if clinically documented; perceived benefit/harm; date of formal treatment acceptance. This would enable future reviews to quantify delay that can be attributed to pathway type, without getting to the point of assuming it was caused by cross-sectional associations.

Qualitative work also needs to be done in under-represented, South Asian contexts and with minority cultures within countries. Instead of

interrogating people about whether they 'believe in' jinn, black magic or possession, researchers should query them about what evidence they use to determine which explanations to use and how they change an attribution and what makes a spiritual/traditional practitioner defer to medical care. These questions are more action oriented and can help to collaborate and stay safe.

For future evidence to be quantitatively comparable, a multi-country study should gather a minimal, common set of evidence of pathway variables and maintain open-ended cultural description. The following elements are recommended for the core: symptom onset date, woman's self-labeling of the problem, family labeling of the problem, date of initial disclosure, practitioner of initial disclosure, sequence and timing of all contacts, reason for switching providers/combining providers, direct cost, indirect cost, perceived helpfulness, stigma or anticipated social consequences, autonomy regarding treatment decisions, and clinically documented reproductive/endocrine status. Open text fields should be used to keep local terms instead of automatically assigning them to one category.

Time-to-event methods would then be able to be compared analytically between different types of pathways, and multilevel models could test whether country, region, rurality, gendered decision authority, education, socioeconomic position or service availability moderate those relationships. Qualitative interviews, also conducted within the same cohort, would help to understand how seemingly identical sequences could be differently interpreted. This would result in a kind of evidence that would take us beyond a descriptive cultural competence to testable culturally responsive service interventions.

The data provided with this review is intentionally developed as a prototype to that future work. It distinguishes between source-reported diagnosis, reproductive/endocrine factor, cultural attribution, and first-contact topology and access signal, allowing for traceable inferences to the original evidence unit. It is not meant to be confused with the individual participant level data, but it illustrates how a clear evidence map can help in the creation of reproducible figures without creating denominators or effect sizes.

7. CONCLUSION

Four plural biomedical, reproductive, psychosocial, familial and spiritual explanatory models are used to interpret women's mental distress in South Asia. The evidence is not one that suggests a straightforward battle between one culture that prefers faith and the other medicine. Rather, women and families navigate context-specific pathways, whether biomedical-first, spiritual/traditional-first, informal/family-first or plural/parallel. Pakistan exemplifies the interplay between gendered shame and family and honour-based norms, and spiritual interpretation; India exemplifies the regional and tribal differences; Bangladesh exemplifies the role of families and the status of healer-clinician referral; Nepal exemplifies the coexistence of supernatural and psychosocial explanations in the practice of traditional healers; and Sri Lanka exemplifies the need for linking up biomedical postpartum evidence with contemporary culturally oriented pathway studies.

The practical significance of this is a culturally responsive referral model, not uncritical validation or dismissive correction. Clinicians should learn what model the woman is using to explain her illness, and what sequence of care she has been following; judge psychiatric conditions independently of the presence of reproductive/endocrine conditions; and develop referral partnerships that allow trusted people and organizations in her community to alert her to red flags. Such an approach respects cultural meaning while keeping causal claims evidence-based and may help reduce avoidable delay to appropriate care.

In pathways involving delayed formal care, where supernatural/ spiritual explanations are employed, the relationship should be viewed as a perceived association or a sequence of events, unless there is evidence of a specific study design that supports causation, and, sometimes, faith and

traditional healers can help to refer individuals to formal care (indicated in the evidence base).

8. DECLARATIONS

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Appendix A. Comparative Literature Matrix

Table A1. Comparative literature matrix: what prior studies examined and what this review adds

Study	Context	Design / evidence	What the study established	Gap addressed by this review
Saeed et al. (2000)	Pakistan	Faith-healer clinical sample	Healer labels such as saya/jinn coexisted with psychiatric diagnoses.	Separates cultural attribution from verified clinical diagnosis and traces subsequent pathway.
Daraz et al. (2025)	Pakistan / Pashtun	Survey, n=400	Cultural narratives/social norms could support help-seeking; stigma impeded it.	Models culture as bidirectional rather than uniformly obstructive.
Lasi et al. (2025)	Rural Pakistan	Qualitative	Shame, financial and sociocultural barriers shaped women's access.	Integrates gendered structural constraints into pathway topology.

Study	Context	Design / evidence	What the study established	Gap addressed by this review
Sanauddin et al. (2026)	Pakistan	Focused ethnography	Spiritual explanations, stigma and family factors affected psychosis pathways.	Distinguishes spiritual-first sequence from parallel/integrated care.
Hegde & Karkal (2022)	India / Karnataka	Community survey	Stress/tension dominated; supernatural explanations persisted in a minority.	Avoids treating India as a single belief system.
Kudi et al. (2022)	India / Delhi	Retrospective pathway	Faith healers and AYUSH were frequent early contacts; family decided pathways.	Codes first-contact topology and family decision structure.
Ali et al. (2023)	India / tribal	Comparative survey	Tribal supernatural attitudes were higher but professional help attitudes did not differ.	Shows belief does not equal treatment rejection.
Panolan et al. (2026)	India / Kerala	Qualitative postpartum	Stigma, spiritual treatment, family support and medication fears shaped PPD care.	Places reproductive state and cultural pathway in the same analytic frame.
Dutta et al. (2022)	Bangladesh	Perinatal pathway	Formal mental-health care was rare; religious/informal routes were common.	Links gendered reproductive context to first-contact pathway.
Soron et al. (2024)	Bangladesh / Korail	Ethnographic	Faith healers differentiated jinn possession from SMI and sometimes referred.	Identifies healer-to-clinic referral as a bridge rather than only a delay.
Walter et al. (2025)	Bangladesh	National women's data	Most symptomatic women did not seek help; informal support predominated.	Separates women-specific access evidence from mixed-sex cultural evidence.
Luitel et al. (2025)	Nepal	Healer interviews + woman vignette	Supernatural and psychosocial causes coexisted; hospital referral occurred.	Operationalizes plural explanatory models and gateway potential.
Kurvinen et al. (2025)	Nepal	National women's data	IPV-related mental-health burden accompanied limited, mostly informal help.	Adds structural/gendered vulnerability to explanatory-model analysis.
Aththanayaka & de Zoysa (2026)	Sri Lanka	Population-based postpartum	PPD burden documented at 4 and 24 weeks postpartum.	Highlights strong biomedical evidence but weak recent culture-pathway evidence in map.

Appendix B. Search Strategy and Concept Architecture

Table B1. Search-concept architecture for reproducible database adaptation

Concept block	Illustrative terms	Purpose
Population	women OR female OR maternal OR postpartum OR perinatal OR sex-stratified	Retain women-only evidence and mixed studies only when women's data or pathway context is usable.
Mental distress	depression OR anxiety OR psychosis OR mental illness OR mental distress OR possession	Capture diagnosed disorders and culturally named distress without retrospectively equating them.
Explanatory model	cultural belief OR jinn OR spirit OR black magic OR faith healer OR traditional healer OR stigma OR PCOS	Map biomedical, cultural and reproductive/endocrine meanings as separate but intersecting domains.
Pathway	help-seeking OR first contact OR referral OR pathway to care OR treatment delay OR informal support	Link attribution to what happens next rather than treating belief as an isolated attitude.
Context	Pakistan OR India OR Bangladesh OR Nepal OR Sri Lanka OR Afghanistan OR Bhutan OR Maldives	Permit regional comparison while identifying geographic gaps rather than assuming South Asian homogeneity.

Reproducible Boolean search string: (women OR female OR maternal OR pregnancy OR postpartum OR postnatal OR perinatal OR sex-stratified) AND (depression OR anxiety OR psychosis OR "serious mental illness" OR "mental illness" OR "mental distress" OR possession) AND ("cultural belief" OR jinn OR spirit OR "black magic" OR "faith healer" OR "traditional healer" OR stigma OR PCOS) AND ("help seeking" OR "first contact" OR referral OR "pathway to care" OR "treatment delay" OR "service utilization" OR "informal support") AND (Pakistan OR India OR Bangladesh OR Nepal OR "Sri Lanka" OR Afghanistan OR Bhutan OR Maldives).

Appendix C. Data-Charting/Extraction Matrix

The full data-charting/extraction matrix is supplied with the manuscript as the structured evidence-charting dataset described in the Data availability statement.

Appendix D. Extended Country-Level Information

Map geographically focuses on Pakistan, India, Bangladesh and Nepal. Sri Lanka is charted with the more evidence of the postpartum period, but not much more recent culture-pathway work, and Afghanistan, Bhutan and Maldives are not charted in the empirical core. This distribution is similar to the geographical distribution found by Poddar et al. (2026) in the literature of postpartum-depression interventions in South Asia. The high priority research need is not, therefore, 'more South Asian studies' but coordinated studies in countries that are under-represented, but where the pathway variables are the same.