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Strengthening Postpartum Depression Screening and Treatment within Primary Healthcare Centers in Riyadh 1st Cluster

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Abstract

Postpartum depression (PPD) is a mental health issue impacting 10-20% of women worldwide and has far-reaching consequences on both child and maternal health. Despite these far-reaching consequences, PPD incidences are often underdiagnosed and undertreated in primary healthcare, including in the primary healthcare centers (PHCs) of Riyadh 1st Cluster, increasing systemic health burden and limiting timely detection and treatment. This systematic review appraises several peer-reviewed articles published between 2000-2023 and synthesizes research on awareness, screening rates, barriers, and interventions for PPD in primary care, with a focus on adapting findings to the context of Riyadh 1st Cluster PHCs. We report that effective tools for measuring PPD, such as the Edinburgh Postpartum Depression Scale (EPDS), are underutilized due to cultural stigma, limited provider training, and resource constraints within Riyadh's PHCs. Key barriers identified include cultural stigma towards mental health in Saudi society, lack of standardized PPD protocols, and incomplete mental health resource integration in the Riyadh 1st Cluster. Evidence suggests routine screening during 6-week postpartum visits, culturally competent provider training, and improved case management workflows (e.g., collaboration between triage, waiting room, and shared charts) are effective. Telehealth and automated telephone assessments also show promise for improving PPD detection and treatment in Riyadh's PHCs. Policy options, such as mandating PPD screening or enhancing provider reimbursement for integrated care, are proposed to address gaps. Reducing these gaps will mitigate short-term consequences like poor mother-infant bonding and yield long-term economic benefits in Riyadh's healthcare system.

Keywords: postpartum depression, primary healthcare, Riyadh 1st Cluster, barriers to screening, EPDS, integrated care

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Introduction

Postpartum depression (PPD) is a public health concern affecting an estimated 10-20% of women globally within their first year after childbirth (O'Hara, 2009). Characterized by chronic sadness, anxiety, fatigue, and functional disability, PPD impacts maternal mental health, child development, and mother-child attachment (Slomian et al., 2019). Primary healthcare centers (PHCs) in Saudi Arabia, with a focus on PHCs in Riyadh's 1st Cluster that serve as entry points for postpartum women, are essential to recognizing and managing postpartum depression (PPD) early (Cox et al., 2016). Despite this, PPD is often not diagnosed or treated in these PHCs, primarily due to provider gaps in knowledge, societal stigma associated with mental disorders, as well as lack of resources (Byatt et al., 2013). The impact of untreated PPD is significant, as healthcare costs increase, family relationships deteriorate, and mothers and children experience potential long-term mental health problems (Wisner et al., 2013). This review examines evidence on PPD awareness, screening practices, barriers, provider training, and interventions in relation to PPD, with a focus on PHCs in Riyadh's 1st Cluster, with the overall aim of providing targeted recommendations that will help improve maternal and infant outcomes in this context.

The importance of addressing PPD in Riyadh 1st Cluster PHCs cannot be overstated. These centers, serving diverse populations in Riyadh, are well-positioned to identify PPD during routine postpartum follow-ups (6 weeks to 1 year post-delivery) (Gjerdingen & Yawn, 2007). However, cultural beliefs around motherhood and mental health, particularly in Saudi Arabia's conservative society, often hinder detection and treatment (Bina & Glasser, 2014). Additionally, resource limitations and lack of standardized protocols in Riyadh's PHCs exacerbate these challenges (Fisher et al., 2012). This review highlights how screening tools, provider training, and interventions can be optimized to address PPD in Riyadh 1st Cluster, while proposing culturally and contextually appropriate solutions.

1. Methods

This review brings together evidence from peer-reviewed articles between 2000 and 2023 from three large academic databases: PubMed, PsycINFO, and CINAHL. Article selection was according to rigorous inclusion criteria, such that articles had to specifically be about PPD screening, awareness, or interventions within primary health care settings, including general practice, family medicine, and obstetric care in Saudi Arabia. Exclusion criteria excluded studies that had discussed PPD in non-primary care contexts (e.g., psychiatric hospitals) or had discussed other perinatal mental health disorders without reference to PPD. Search terms were combinations of the terms "postpartum depression," "primary health care," "screening," "awareness," "provider training," and "interventions" with Boolean operators to limit findings. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines were employed to ensure maximal methodological rigor, such that there was a systematic study identification, screening, eligibility, and inclusion process (Moher et al., 2009). Methodological quality was investigated for each study, covering sample size, study design (e.g., randomized controlled trials, observational studies), and primary care relevance. Data extraction was according to major themes: prevalence, screening practice, barriers, provider training, and intervention efficacy. Synthesis of findings was narrative, with quantitative data (e.g., prevalence rates, screening adherence rates) reported where possible to provide strong evidence for the review's conclusions.

2. Prevalence and Impact of PPD

Postpartum depression is a complex psychiatric disorder with chronic symptoms of sadness, anxiety, irritability, and fatigue that significantly impair a woman's functioning and engagement in activities of daily living (American Psychiatric Association, 2013). The prevalence of PPD varies worldwide, with rates of 10% to 20% in high-income countries, compared to potential rates of 20% to 30% in low- and middle-income countries with little access to mental health care (Fisher et al., 2012). This variation is due to a number of factors, including, but not limited to, social class, socially supportive networks, and culturally interpreted views of motherhood and mental illness (Halbreich & Koren, 2006). As previously mentioned, a cross-sectional study conducted in Riyadh found that PPD

was prevalent in 38.5% of their sample of 174 mothers. Some significant predictors bordering on their PPD included having an unsupportive spouse (OR=4.53, P=0.049), recent stressful life events (OR=2.68, P=0.006), and C-section delivery (OR=1.56, P=0.049) (Seif Al Nasr et al., 2020).

Cultural beliefs, like the expectations of motherhood being central to good motherhood in Saudi society, as well as the stigma surrounding mental health, lead to underreporting of PPD (Halbreich & Koren, 2006). The untreated PPD creates challenges in the mother and child bonding process, later leading to developmental delays, behavioral issues, and cognitive issues for the child (Slomian et al., 2019). If untreated, PPD has other implications for the mother, creating chronic depression and suicidality (Wisner et al., 2013). The cost of PPD can be tremendous for Riyadh's healthcare system (Bauer et al., 2016); this is why early detection in Riyadh 1st Cluster PHCs must become a priority, to avoid these bad outcomes.

3. Screening Practices in Primary Care

Screening is the first step in detecting PPD early, with the goal being timely intervention to prevent unwanted outcomes. The Edinburgh Postnatal Depression Scale (EPDS) is the most commonly used screening tool, using a 10-item self-report inventory format, due to its high sensitivity (86%) and specificity (78%) for detecting symptoms of PPD (Cox et al., 1987). Despite its effectiveness, screening for PPD occurs inconsistently across primary care. Gjerdingen and Yawn (2007) noted that, of 369 responses from primary care providers, only 50% routinely screen for PPD; barriers discussed included time constraints, lack of familiarity with the screening tool, and competing clinical priorities. Introducing screening alongside routine postpartum visits, e.g., six-week check-up, has been associated with higher detection rates, as demonstrated by Evins et al. (2000) who conducted a study prior- and post-standardization of suppliers' screening procedure, with a 20% increase in detection rates post-standardization. Other screening tools such as the Patient Health Questionnaire-9 (PHQ-9) are also used, although less frequently, and are equally effective, with added value in detecting co-occurring symptoms of anxiety (Yawn et al., 2012). Standardization in protocols, such as explicit details on what and when to screen, has been shown to increase compliance. Milgrom et al. (2011) noted a 35% increase in postpartum depression screening rates in the setting of the study in Australian primary care after standardizing protocols. Patient and provider discomfort discussing mental health remains a key barrier in Saudi Arabia (Bernstein et al., 2008). Regardless, the reluctance of patients to engage in screening and the discomfort on the part of the clinician to discuss mental illness are barriers to optimization of screening and detection (Bernstein et al., 2008; Figure 1).

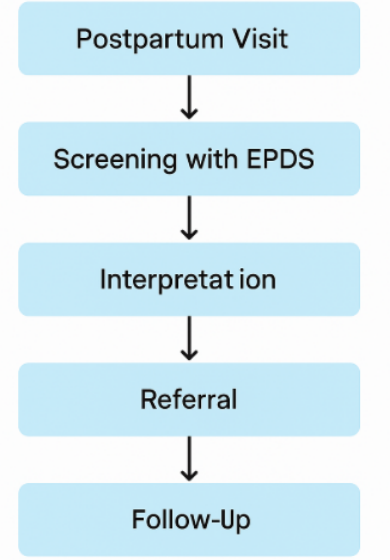

Figure 1. Flowchart of PPD Screening Process in Primary Care.

4. Obstacles to PPD Detection

Detection of PPD within primary care is impacted by patient-level, provider-level, and system-level barriers. Patient level barriers such as stigma in mental health, where the majority of women are concerned about being judged and resulting social consequences once they divulge their presentation of PPD (Byatt et al., 2013) is especially relevant to those cultures where motherhood is revered, thus undervaluing the individual and limiting self-expression by the woman (Bina & Glasser, 2014). Provider-level barriers such as inadequate training to be enabled to recognize PPD

symptoms and apply screening tools, with Leach et al. (2017) stating that the majority of primary care providers lack confidence addressing mental health, and constrained time in high-velocity clinics that prevent exhaustive assessment (Smith et al., 2019). Type of barriers related to the system can also be a significant challenge; resources regarding mental health are limited, a weak referral system exists, and fundings have been inadequate to manage inefficiencies within Riyadh's healthcare system (Kozhimannil et al., 2011). Additionally, cultural beliefs that surround mental health and motherhood (particularly for Saudi women) complicate the ability to disclose their PPD (Hansotte et al., 2017). Overcoming barriers requires a multilevel intervention involving patient education, provider training, and system reform that enables detection of PPD.

5. Healthcare Provider Education and Awareness

Training programs are critical for equipping primary providers with the confidence and skill levels necessary for the detection and treatment of PPD. Morrell et al. (2009) demonstrated that brief training interventions, including workshops on detection and screening for PPD, enhanced detection by 30% among United Kingdom health visitors. Such programs are successful over time only if supported through ongoing reinforcement; however, as illustrated by Edge (2010) and providers' return to pre-training practice after six months without ongoing training. Culturally anchored training is particularly important considering the role played by attitudes toward motherhood and mental illness in perceptions and disclosure of PPD (Bina & Glasser, 2014). For example, training highlighting cultural stigma and including case examples from culturally different populations can enhance provider sensitivity and patient trust levels, particularly among minorities (Hansotte et al., 2017). Provider confidence must also be addressed through training on initiating mental health discussions as well as referral system navigation because providers report feeling uncomfortable discussing psychological complaints for fear of appearing to be without mental health knowledge (Glasser et al., 2016). Comprehensive training programs with didactic education, practical skill development, and continuing mentoring work best for sustaining awareness and management gains regarding PPD.

6. Interventions and management measures

Several interventions to treat PPD in primary care have been created, with differing effectiveness. Cognitive-behavioral therapy (CBT) is a very effective treatment; meta-analyses of PPD demonstrated a reduction of symptoms with the use of CBT either by primary care providers or mental health providers trained in treatment with CBT (Dennis & Hodnett, 2007). Pharmacotherapy with an SSRI is effective in the treatment of moderate to severe PPD; however, the use of pharmacotherapy should be cautioned due to side effects and breastfeeding issues (Wisner et al., 2006). Integrated models of care, which provide interaction between primary care providers and mental health providers, showed better outcomes than either provider working alone, with Yawn et al. (2012) demonstrating a 25% lowering of PPD symptoms in clinics using these models. Additionally, Telehealth interventions have become a valuable treatment method, particularly for those in rural or underserved populations, with similar results as in-person care and improved access to care with a Telehealth model (Nair et al, 2018). Community-based interventions, which are peer support groups, have improved emotional support and reduced stigma, with Segre et al. (2011) showing improved outcomes in low-income women receiving a group intervention. These diverse interventions underscore the necessity of individualizing interventions to the client's objectives, resources, and culture.

7. Discussion

Primary healthcare centers in Riyadh 1st Cluster serve a critical role in support for postpartum depression (PPD), which is a common mental health problem that affects 10-20% of women worldwide and is seen in ess than 38.5% of women in Riyadh (O'Hara, 2009; Seif Al Nasr et al., 2020). Primary care providers, including family physicians, nurse practitioners, and midwives, are optimally positioned to screen for PPD in the process of routine postpartum follow-up examination and diagnostic interviews that for most women constitute their sole health contact subsequent to birth (Cox et al., 2016). Screening tools, including the Edinburgh Postnatal Depression Scale (EPDS), have been established as highly suitable for early identification due to their good psychometric properties, such as high sensitivity

and good specificity rates of 86% and 78%, respectively (Cox et al., 1987). However, failure to apply screening in a majority of primary care settings remains an ever-present concern and detracts from the advantages of early treatment and contributes to the adverse outcomes of untreated PPD such as poor mother-infant bonding, child developmental delay, and inordinate healthcare costs (Slomian et al., 2019; Bauer et al., 2016).

One of the biggest challenges to proper management of PPD lies in its non-standardized screening. While both the EPDS and Patient Health Questionnaire-9 (PHQ-9) have proven effectiveness as screening tools, literature suggests that only about 50% of primary care professionals screen for PPD on a routine basis due to time constraints, competing patient priorities, and unfamiliarity with screening instruments as significant barriers (Gjerdingen & Yawn, 2007; Yawn et al., 2012). This disparity is particularly acute in resource-constrained settings, where providers have reduced exposure to training or specific guidelines on integrating screening into routine practice (Smith et al., 2019). Not only does this non-standardization decrease case detection rates but also reinforces inequities in care because women from resource-constrained or rural settings are likely to be screened less frequently than women from urban, resource-abundant populations (Nair et al., 2018). In an effort to address this, institution of standardized screening guidelines, such as mandating administration of the EPDS during the six-week postpartum visit, could significantly enhance detection rates, as Evins et al. (2000) demonstrated a 20% improvement in detection after protocol initiation. This standardization would require intervention on the policy level on multiple fronts, including integration into national health guidelines and reimbursement incentives for compliance from providers (Howard et al., 2014).

Patient-level barriers, including stigma, also complicate the detection and treatment of PPD. Women avoid reporting symptoms because they fear judgment, because of societal expectations surrounding motherhood, or because they fear being labeled as bad parents (Byatt et al., 2013). Stigma is particularly prominent among cultures that stigmatize mental illness or romanticize motherhood and is highest among underreporting among minority and immigrant women (Bina & Glasser, 2014; Hansotte et al., 2017). For example, research has found that women from collectivist cultures will subordinate family cohesion at the expense of individual health and suppress symptoms of PPD because of fear of shame or social repercussions (Kozhimannil et al., 2011).

Stigma can be reduced by patient-level interventions such as public health measures to normalize mental health terminology and culturally informed education in a way that encourages help-seeking. Family practitioners can be ideally positioned to lead on this through the establishment of an open and nonjudgmental communication within clinical consultations, as was demonstrated through their research by Morrell et al. (2009), who established that empathetic provider interactions encouraged willingness among their participants to discuss symptoms. Provider-level barriers, including a deficiency in training and confidence in treating mental health issues, also hinder optimal treatment for PPD. Multiple providers express feeling unprepared to identify symptoms of PPD or apply screening instruments, commonly due to restricted mental health training during education (Leach et al., 2017). Detection rates among screenings can be augmented by 30% through brief training programs, Morrell et al. (2009) showed. However, these effects are commonly temporary without ongoing reinforcement, as Edge (2010) explained. To overcome this, intensive training programs that include didactic education, skill-building practice (e.g., administration of the EPDS), and cultural competence are needed. Such programs must also provide training on referral system navigation, as many providers express confusion about how to connect patients with mental health providers (Glasser et al., 2016).

Cultural competence is particularly necessary, as beliefs about motherhood and mental health strongly influence symptom manifestation and acceptability of treatment. For instance, Bina and Glasser (2014) found that providers with culturally competent training were better able to work with minority women, which led to enhanced symptom revelation and utilization of treatment. Systemic barriers such as inadequate access to mental health professionals and inefficient referral processes further complicate challenges with the management of PPD. In

many primary care sites, particularly among populations with limited resources, there is no convergence between primary and mental health services such that clinicians have no established process by which patient referral can be done for specialty care (Smith et al., 2019). This is particularly notable among rural populations with limited mental health resources and among women with significant logistical challenges such as distance or child-rearing access (Nair et al., 2018).

Integrated models of practice with mental health practitioners situated within primary care sites have proven promising for resolving such disparities. Yawn et al. (2012) observed a 25% decline in symptoms of PPD among practices implementing models of integration, indicating promise for collaborative models to improve outcomes. Policy changes such as support through funding for implementing such models and compensation for mental health consultations are paramount for translating such models and ensuring such equal access across sites (Howard et al., 2014). Emerging technologies, such as telehealth, offer scalable solutions to overcome access barriers in various groups, including underserved groups. Telehealth services such as virtual counseling and distant screening have been found to be as effective as in-person intervention and hence an acceptable intervention for low-resource and rural populations (Nair et al., 2018). Telehealth systems can be used in delivering screening tools and computer-administered cognitive-behavioral therapy (CBT) from any location, reducing the need for face-to-face interaction and overcoming logistical issues (Dennis & Hodnett, 2007).

Community-based programs such as peer support interventions are equally critical in reducing stigma and increasing access among groups, such as among low-income women (Segre et al., 2011). These interventions are particularly important among social isolation experienced by women with PPD and give a sense of community and comprehension. Scalability of community-based interventions and telehealth, however, entails investment in infrastructure such as rural broadband availability and training providers in the best way of offering online services (Kozhimannil et al., 2011). The trans-national difference in postpartum depression (PPD) prevalence and practice patterns necessitates context-specific solutions. In low-and middle-income countries, with the highest PPD rates at times up to 30%, stigmatization and lack of resources are specific issues (Fisher et al., 2012). In African and Asian countries, for example, postpartum recovery beliefs may discourage women from seeking mental healthcare, necessitating culturally adapted interventionist responses (Halbreich & Koren, 2006). In contrast, high-income countries are generally faced with issues related to their health system, such as primary and mental healthcare being distinct (Wisner et al., 2013).

Cross-national studies, such as those by Munk-Olsen et al. (2016), show that countries having national screening mandates, such as Australia and the United Kingdom, are found to have greater detection rates compared to countries without national mandates, suggesting policy solutions. Future research is needed to consider how best practice worldwide could be localized, such that interventions are both appropriate and accessible in terms of resources as well as culturally appropriate. Cost-effectiveness is another critical determinant for the scaling up of PPD interventions. While screening and intervention programs have the initial costs of investment, evidence suggests that early intervention can be cost-saving in the long term through preventing chronic depression, hospitalization, and adverse child outcomes (Bauer et al., 2016). Milgrom et al. (2011) proved that early intervention for PPD reduced health service use by 15% two years later, which shows enormous economic benefits. Cost-effectiveness of new models such as telehealth and integrated intervention models, however, is unknown, particularly in resource-constrained settings. Studies should incorporate economic evaluation by using firm methods to guide policymakers on resource allocation to PPD programs (Munk-Olsen et al., 2016).

Long-term follow-up studies are also needed to assess intervention effects on long-term maternal mental health outcomes, child development, and family relationships because the majority of current evidence aims at short-term outcomes (Slomian et al., 2019). Systematic policy changes are necessary to address the system-level problems addressed by this review. Mandating PPD screening as national health policy, as proposed by Yawn et al. (2012),

would be one mechanism to facilitate homogeneous implementation throughout primary care. Investment to integrate mental health, including colocating psychologists among primary care practices, would facilitate seamless transition and improve access to treatment (Howard et al., 2014). Policies supporting reimbursement and infrastructure for telehealth would expand access to rural and underserved populations, as noted by Nair et al. (2018).

Public education campaigns reducing stigma and raising awareness about PPD are also needed, particularly among stigmatizing mental health populations (Byatt et al., 2013). The campaigns must be culturally adapted to bridge diversity and foster help-seeking behavior, as detailed by Bina and Glasser (2014). In conclusion, literature calls for sweeping reforms improving awareness and care for PPD in primary health care. Screening instruments like the EPDS work effectively, but their episodic use indicates standardization and policy support. To address patient stigma, provider training gaps, and barriers within the system, a multi-pronged approach including education, sensitivity training, and new models like integration and telehealth must be instituted. Cost-effectiveness assessments, longitudinal outcomes research, and context-specific intervention research on how best to customize and adapt care for varied populations must also be prioritized. Through these steps, primary care can be better equipped at screening and treating PPD, with the ultimate aim being improved infant and maternal outcomes and a reduction in the global burden of disease.

8. Conclusions

This review highlights the pressing need to address perinatal depression (PPD) within the Riyadh 1st Cluster primary healthcare centres (PHCs), where underdiagnosis exists despite its 10-20% prevalence. Evidence-based screening tools such as the Edinburgh Postnatal Depression Scale (EPDS) are underutilised due to cultural stigma, lack of provider training, and overarching systemic barriers. Systematic screening techniques, culturally appropriate treatments, and interprofessional models will overcome the barriers to care. The use of telehealth and community-based treatments is are scalable approaches that offer feasibility and have direct relevance to poor populations. Some necessary policy adjustments include national mandates for screening and increased funding towards mental health resources that bring urgency to the need for equality in services. Additional research is needed on cost-effective, long-term follow-up and culturally appropriate measures for PPD for developers to reach desired outcomes for global best management. Reduced morbidity of PPD, as well as improved outcomes for infants, mothers, and families, is now possible when we diminish the barriers to PPD management.

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