A Sudanese Perinatal Mental Health Support Group:
12-month Evaluation Report

WA Perinatal Mental Health Unit
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Acknowledgments
This report is the culmination of many months of effort by a diverse team of dedicated and generous people, and their organisations. The WA Perinatal Mental Health Unit expresses sincere thanks to all involved, as without their support and help this 12-month Evaluation would not have been possible.

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Executive Summary

Immigrant and refugee status has been identified as a risk factor for mental illness during the perinatal period, with numerous factors postulated that may predispose these women to suffer from mental health problems, including social isolation, separation from family, financial difficulties, experiences of discrimination, and a lack of familiarity with health care practices in the host country. For women migrating from Sudan to Australia, exposure to violence or trauma in Sudan, prior to migration, may also increase risk of mental health problems during the perinatal period.

Acknowledging these issues, the WA Perinatal Mental Health Unit (WAPMHU) and State Perinatal Mental Health Reference Group (SPMHRG) endorsed the provision of funding to establish and trial a support group for Sudanese women in the perinatal period based on a psycho-educational group format. In May 2008 a Service Agreement was made between the Women and Newborn Health Service, Department of Health and Ishar Multicultural Women’s Health Centre Inc. to carry out this project. This report presents the evaluation framework and results of the first 12-months of data collection and analyses conducted under the auspices of that framework by Ishar and WAPMHU.

Evaluation is based on a pre and post group design using both quantitative and qualitative data collection methods. Fourteen Sudanese mothers completed pre-group assessments, including an interview, a demographic questionnaire and an Edinburgh Postnatal Depression Scale (EPDS). Ten of these women completed post-group assessments and were thus included in data analyses.

Quantitative data collected via the EPDS was used to assess changes in depressive symptomatology over the course of the 8-week group term. Interview transcripts were thematically content analysed in nine sections - corresponding to the questions posed during the interviews. This resulted in the generation of 51 themes in total, 23 pre-group and 28 post-group themes.

Eligibility for participation in the perinatal mental health support group was based upon Sudanese ethnicity and motherhood status, irrespective of the presence or absence of depressive symptomatology. In light of this,
the level of depressive symptomatology found pre and post-group in this sample of Sudanese mothers is concerning. Ninety percent of the Sudanese women participating in the support group scored above cut-off (≥10) on the EPDS pre-group, decreasing to 70% post-group, suggesting that the prevalence of perinatal depression may be significantly higher in this population of childbearing women than general community samples.

Overall, the evaluation results indicate that the key performance indicators are being met. Local Sudanese women are attending the support groups and there appears to be an increase in level of perceived psychosocial support by the participants, with support networks expanding from family and friends to incorporate health professionals and community services. The participants’ awareness of perinatal mental health issues improved post-group and the importance of accessing services if/when needed was apparent. Moreover, the participants indicated that they would be more comfortable asking for help from a range of health professionals post-group.

Given the histories of the women participating in the perinatal mental health support group and the complexity of their current living arrangements it was not expected that an 8-week term would be sufficient for long-term and significant changes in mental health status. Nevertheless, the social support, information and exposure to community services afforded by this group appear to have had positive effects and can be built upon for future and extended benefits.
**Introduction**

Pregnancy and the postpartum period (i.e., up to 12 months after delivery) are referred to as the 'perinatal period'. For women the perinatal period is associated with major biological and psychosocial changes. Subsequently, it comes as no surprise that major depression in women has been found to peak in onset during the childbearing years (Weissman & Olfson, 1995) and there is now increasing evidence that anxiety may be just as prevalent (Austin, 2004).

Postnatal depression (PND) affects approximately 13% of women who give birth (O'Hara & Swain, 1996), and many women may also be depressed during their pregnancy (Brooks, et al., 2009). Research has linked depression during pregnancy and postpartum to chronic depression, marital difficulties and behavioural and cognitive delays in children (Pope, Watts, Evans, McDonald, & Henderson, 2000), yet despite the prevalence and consequences, many women living in Australia still remain unidentified and untreated.

Women from culturally and linguistically diverse (CALD) backgrounds (i.e., non-English speaking background and born overseas or with at least one parent born overseas) make up 12% of the Australian female population, and Australia’s shifting immigration policies are leading to greater inflows of women (Gwatirisa, 2009). The acculturation or resettlement experiences of immigrant and refugee women are often compounded by their pre-migration experiences and for refugees in particular, their harsh pre-migration experiences often makes the transition difficult (Gwatirisa, 2009). Elevated rates of mental distress and mental disorders are observed in refugee populations compared with the general population (e.g., Boehnlein, 1987; Lin, 1986; Westermeyer, 1986), particularly for those who have experienced war/conflict (Roberts, Damundu, Lomoro, & Sondorp, 2009).

The civil conflict in Sudan, between the Government of Sudan in the north and rebels in southern Sudan, lasted over 20 years, ending with the signing of the Comprehensive Peace Agreement in January 2005. During this conflict approximately 1.9 million people were killed by violence, disease and starvation, up to 4 million people were forcibly displaced from their homes (as internally displaced persons), and there were up to 1 million
refugees living in countries throughout the world, including Australia (Roberts, et al., 2009).

The most commonly researched mental disorders in refugee and conflict affected populations appear to be post-traumatic stress disorder (PTSD) and depression (de Jong, Komproe, & Van Ommeren, 2003; de Jong, et al., 2001). Although mental health research with Sudanese populations is scarce, PTSD rates of 46% have been recorded amongst Sudanese refugees living in Uganda during the conflict (Karunakara, et al., 2004). In post-war Southern Sudan 36.2% prevalence rates of PTSD and 49.9% prevalence rates of depression have been reported (Roberts, et al., 2009).

Immigrant and refugee status has been identified as a risk factor for depression during pregnancy and in the postpartum period (Dankner, Goldberg, Fisch, & Crum, 2000; Glasser, et al., 1998; Onozawa, Kumar, Adams, Dore, & Glover, 2003; Small, Lumley, & Yelland, 2003; Goyal, Murphy, & Cohen, 2006; Rubertsson, Wickberg, Gustavsson, & Radestad, 2005; Zelkowitz, et al., 2008). Numerous factors have been postulated that may predispose immigrant and refugee women to suffer from mental health problems, including social isolation, separation from family, financial difficulties, experiences of discrimination, and a lack of familiarity with health care practices in the host country (Mulvihill, Mailloux, & Atkin, 2001).

For women migrating from Sudan to Australia, exposure to violence or trauma in Sudan, prior to migration, may also increase risk of mental health problems during the perinatal period. Results of recent research conducted in post-war Sudan reported that 44% of female respondents had witnessed the murder of family or friends, 48% had directly experienced a combat situation, 22% had been forcefully separated from family and friends, 15% beaten or tortured, 10% imprisoned, and 8% raped (Roberts, et al., 2009). This same study found a PTSD rate of 42.5% and a depression rate of 58.7% amongst female respondents (Roberts, et al., 2009).

So, although research into the perinatal mental health status of Sudanese women is unavailable at this time, statistics such as these, together with the extensive knowledge regarding the risks of psychological distress during the perinatal period for the general population, leave no
question that Sudanese women can be regarded as a high-risk population in need of culturally appropriate support during the transition to Australia and motherhood.
Background

In 2004, a state-wide mapping of perinatal mental health services was conducted and consultations with a range of community health workers undertaken. The resulting report (State Perinatal Mental Health Reference Group, 2005) highlighted significant gaps in health professionals' cultural awareness when addressing the perinatal mental health needs of women from culturally and linguistically diverse (CALD) backgrounds. Adding to the difficulties was a lack of culturally or linguistically appropriate perinatal mental health resources.

Subsequent to this report, a series of focus groups were conducted with women from Iraq, Sudan and Ethiopia, with the objective of gathering information on their experiences and thus mental health requirements during the perinatal period. The selection of these three CALD communities was based on a number of factors, including population size, percentage of child-bearing women, family size, and levels of education and literacy.

The results of the focus groups, as well as a literature review, are presented in “Social and emotional experience of the perinatal period for women from three culturally and linguistically diverse (CALD) communities” (State Perinatal Mental Health Reference Group, 2008). Recommendations from this report highlighted the importance of linking together pregnant women and new mothers within the community. It was proposed that ethnic-specific cultural liaison workers could co-ordinate self-help or support groups from within the community. It was envisaged that these groups could be used as forums for women to share their experiences and develop culturally appropriate coping strategies.

On the basis of these results, the State Perinatal Mental Health Reference Group (SPMHRG) endorsed the provision of funding to establish and trial a support group for Sudanese women in the perinatal period based on a psycho-educational group format. In May 2008 a Service Agreement was made between the Women and Newborn Health Service (WNHS), Department of Health and Ishar Multicultural Women’s Health Centre Inc. to carry out this project.
This report presents the evaluation framework and results of the first 12-months of data collection and analyses conducted under the auspices of that framework.

**Expected Outcomes**

It is hoped that as a result of attending the support group Sudanese women living in the Perth metropolitan area will become more comfortable engaging with community and mental health services. Subsequently, the level of psychosocial support perceived by Sudanese women is expected to increase. A raised awareness of perinatal mental health issues within the Perth Sudanese community and increased perinatal specific knowledge by local service providers are also objectives of the project. These outcomes are then expected to assist in facilitating early identification and intervention for women at high psychological risk and a subsequent increase in engagement with mental health and community services may occur.

**Key Performance Indicators (KPI)**

1. Participation in support groups by local Sudanese women (i.e. interest and attendance)
2. Increase in level of perceived psychosocial support by Sudanese women in the local area
3. Decrease in depressive symptomatology, as assessed by the Edinburgh Postnatal Depression Scale
4. Increased perinatal specific knowledge by participants and local service providers
5. Increase in reported levels of ‘comfort’ during engagement with obstetric services during pregnancy by local Sudanese women
6. Increase in reported levels of ‘comfort’ during engagement with community services during pregnancy and postpartum by local Sudanese women
7. Increase in reported levels of ‘comfort’ during engagement with mental health services in pregnancy and postpartum by local Sudanese women

8. Increased capacity with local communities for bicultural community worker to facilitate support groups (independent of original facilitator)
Evaluation Framework/Research Design

Evaluation is based on a pre and post group design using both quantitative and qualitative data collection methods. However, awareness of cultural sensitivity and literacy issues led to greater emphasis placed upon collection of qualitative data.

There is a vast array of paradigms available to qualitative researchers, each with diverse views of what is real, what can be known, and how these social facts can be faithfully rendered. Guba and Lincoln (Guba & Lincoln, 1989) hold that socially constructed realities are governed by laws, natural or otherwise and that these constructions are devised by individuals as they make sense of their experiences. The task of the qualitative researcher is therefore to simply reflect and interpret these constructions as accurately as possible without any commitment to assuming an underlying and shared reality or indisputable facts (Gibbs, 2002).

Specifically designed semi-structured interviews were employed to collect the qualitative data for this evaluation. The research interview is one form of a conversational approach to qualitative analysis (Kvale, 1996). The interview allows the researcher to gather vast amounts of data and to use that data to understand the experiences of the participants and the meaning they make of their experiences. Interviewing provides a powerful and flexible way to gain insight into people’s experiences and allows unanticipated responses to be expressed and analysed. With an exploratory semi-structured interview technique employed, a framework within which respondents could express their own personal perspectives was provided. The interview questions served as a checklist to ensure all pertinent issues were raised but allowed for unexpected lines of enquiry to emerge and be pursued.

Rigour

Five main, somewhat overlapping issues have been addressed in the design, implementation and analysis of the present study to obtain the highest quality conclusions: (1) Objectivity/Confirmability, (2) Reliability/Transferability, (3) Internal Validity/Credibility, (4) External Validity/Credibility, and (5) Utilization/Application.
Objectivity/Confirmability.
The question of whether conclusions depend on the subjects and conditions of the enquiry rather than on the inquirer (Guba & Lincoln, 1989) is sometimes labeled as ‘external reliability’ with emphasis on the replicability of the study by others (Le-Comte & Goetz, 1982). Objectivity or confirmability of the current findings was strengthened by numerous strategies, including: methods and procedures are described in detail and presented explicitly, the actual sequence of data collection and analyses that lead to the conclusions can be followed, conclusions are explicitly linked with exhibits of condensed/displayed data, and study data has been retained and is available for reanalysis by others (Miles & Huberman, 1994).

Reflexivity was used to identify areas of potential bias. The researcher’s personal assumptions, values, and biases as a result of her social identity and background are presented as an Appendix and ‘reflexive bracketing’ techniques (Ahern, 1999) were applied. “The ability to put aside personal feelings and preconceptions is more a function of how reflexive one is than how objective one is because it is not possible to set aside things about which they are not aware” (p. 408, Ahern, 1999).

Reliability/Transferability.
Reliability or transferability, that is, stability of observations over time and across researchers and methods was sought through: the development of clear key performance indicators (KPIs) and congruence between these KPIs and the evaluation design.

The researcher’s role within the research context was explicitly described, and a ‘meaningful parallelism’ was sought across data sources by maintaining parameters with respect to participants, contexts and times (Miles & Huberman, 1994). That is, one researcher conducted all pre and post interviews in the participant’s homes and this same researcher was responsible for transcribing all interviews, and then a second researcher was allocated to the collation and analysis of the data.

Internal validity/Credibility.
Unlike the classic, measurement-oriented view which differentiates face, content, convergent, discriminant, and predictive validity,
for the purposes of the current study a more qualitative approach was taken, thus the inclusion of the term ‘credibility’. Maxwell (1992) distinguishes among the types of understanding that may emerge from a qualitative study: descriptive (what happened in specific situations); interpretive (what it meant to the people involved); theoretical (concepts, and their relationships, used to explain actions and meanings); and evaluative (judgments of the worth or value of actions and meanings). Warner (1991) also refers to ‘natural’ validity – the idea that the events and settings studied are not modified by the researcher’s presence and behaviors. To this end, interviews were conducted by a person familiar to the participant in the participant’s home.

Triangulation of data sources (i.e., Edinburgh Postnatal Depression Scale, interviews and research literature) were also used in an effort to produce converging conclusions and give support for adequate validity/credibility within the present study.

External validity/Credibility.

Maxwell (1992) speaks of ‘theoretical’ validity, the presence of a more abstract explanation of described actions and interpreted meanings. Maxwell suggests that generalisability requires connections to be made, either to unstudied parts of the original case or to other cases. Although such an explanation could be considered as ‘internal’ validity, it gains added power if connected to theoretical networks beyond the immediate study. With this in mind the present evaluation employed ‘multiple case sampling’ (Miles & Huberman, 1994), that is, 14 Sudanese mothers living in the Perth metropolitan area and attending the perinatal support group were interviewed prior to group commencement. A literature review was then used to ‘connect’ the conclusions to existing theory. The characteristics of the current sample of mothers are described in enough detail to permit adequate comparisons with future samples and the boundaries and limitations of this sample are also discussed.

Utilisation/Application.

‘Pragmatic validity’ (Kvale, 1996) is an essential addition to more traditional views of ‘goodness’. In addition to informing future funding
decisions, the present study ultimately aimed to provide useful information
to people working with and providing support and information to Sudanese
mothers living in Australia. Whether those people were health professionals,
policy makers or volunteer mothers working within organisations concerned
with providing services to CALD mothers was unimportant. What was
important was the identification of positive strategies, techniques and
information that could be passed on to expectant or new mothers to ease
their transition and enhance their parenting experience.

**Instruments**

The evaluation instruments included the Edinburgh Postnatal
Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987), an interview
schedule and a demographic questionnaire.

**Interview schedule**

A semi-structured interview schedule was developed by the
WAPMHU Project Officer, in consultation with the WAPMHU Research
Officer, to guide the face-to-face interviews with participants. Questions
included in the interview schedule were guided by the KPIs, that is,
questions were included to illicit discussion of perinatal mental health
issues, ascertain current levels of support and assess comfort levels whilst
engaging with available services.

The establishment of rapport, cultural sensitivity and flexibility were
considered in the design of the schedule.

The following nine questions were included in the interview schedule
and prompts were suggested for use as required to elicit elaboration and/or
clarification:

1. How do you feel about the amount of support you have at the
   moment?
2. Can you tell me what you know about a woman’s emotional health
   when she becomes a mother?
3. Can you think of any emotional problems a mother might experience
   while she is pregnant or after she’s given birth?
4. For a woman who may be pregnant, or has a baby, what kinds of
   things do you think are helpful to ensure good emotional health?
5. What kinds of services have you visited during your pregnancy or since you’ve had the baby?
6. How do you feel about these services?
7. Where would you go to get help if you felt overwhelmed? Like you’re not coping? Like you’re not emotionally healthy?
8. How would you feel about asking for this kind of help?
9. How would you feel about using /visiting/going to a mental health service?

*Demographic Questionnaire*

The demographic questionnaire was purpose designed for this evaluation to gather information on basic demographic variables. It was a structured questionnaire containing 10 questions to be completed by the interviewer at the time of interviewing the participant. These questions provided information on the participant’s age, parity, number of children, woman’s country of origin, whether the children were born in Australia, marital status, primary spoken language, other language/s, EPDS version used, and whether the EPDS and interview were completed with the assistance of an interpreter. There were also spaces provided to record the total EPDS score before the group began and at the end of the 8-week term.

*Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden & Sagovsky, 1987)*

The EPDS was used to measure depressive symptomatology. This 10-item screening questionnaire takes about 5 minutes to complete and pertains to the women’s feelings during the past 7 days. The items refer to depressed mood, anhedonia, guilt, anxiety, and thoughts of self harm.

The EPDS has been widely used in cross-cultural work to measure depressive symptoms during the perinatal period and appears to be a reliable measure for both immigrant and non-immigrant respondents (Small, Lumley, Yelland, & Brown, 2007). The EPDS has been translated into many languages and validated in many countries, including Africa.

In the present study, an EPDS score of 10 or more was considered ‘high risk’ or indicative of depressive symptomatology, as recommended for
use when screening migrant women during the antenatal and postnatal period in Western Australia (Department of Health, 2006).

**Procedure**

Eligibility for participation in the perinatal mental health support group was based upon Sudanese ethnicity and motherhood status, irrespective of the presence or absence of depressive symptomatology. As such, group participants varied in terms of current mental health status/psychosocial well-being, as well as age, education, whether English was spoken, occupation, marital status, and parity.

Once informed consent was obtained from group participants (i.e., to use de-identified data for evaluation purposes), the Project Coordinator, employed by Ishar, administered an EPDS, completed the demographic questionnaire, and conducted a semi-structured interview with each participant prior to commencement of the group.

Interviews and questionnaire completion took place in the women’s homes. After introductions and cultural formalities the interviews took place in an area in the home where the women felt comfortable (e.g., bedroom, kitchen or lounge room). An explanation was given to the women for the reason for the interviews and a written program outline was given to them. It was made clear to the women that the information was confidential and would not be identifiable when analysed/evaluated.

Depending on the woman’s level of English and feelings of competence either she would be asked the interview questions in English or through an interpreter. Probes and prompts were used when required to assist the women in understanding the questions, especially because of the language barrier. The questions were asked and their answers written as closely as possible to verbatim by the interviewer at the time of interview in the woman’s home. The answers were interpreted back into English if required by the interpreter present at the interview. Each interview took between 60 and 120 minutes to complete.

The typing of the handwritten answers to the interview questions was done by the Project Coordinator, who had also conducted the interviews.
This de-identified pre-group data was then submitted to the WAPMHU Research Officer in hard copy and electronic format.

Post-group evaluation data, was collected via the same process and using the same questionnaires, at the completion of the 8-week support group term by the Project Coordinator. This data was also de-identified and submitted in hard copy and electronic format to the WAPMHU Research Officer.

The WAPMHU Research Officer was responsible for collating and analysing pre and post-group data and preparing this evaluation report in consultation with the Project Coordinator.

Appropriate ethical clearance, and registration, for this Quality Improvement activity was obtained from the King Edward Memorial Hospital for Women Ethics Committee.

Participants

Participants were females born in Sudan and now living in the Perth metropolitan area, who had been referred to Ishar, were pregnant or had given birth in the last 36 months, and were subsequently attending the first perinatal mental health support group being run by Ishar (Table 1). Although 14 women in total were interviewed and completed questionnaires pre-group, 10 women attended for the entirety of the 8-week term and were thus interviewed again post-group and included in the pre-group post-group analysis.

Mothers’ ages ranged from 17 to 31, with a mean age of 22. Three of the women were primiparous and six of the women had an infant less than 1 month of age at the commencement of the group. Six of the women attending the group were unmarried.

Developed as a ‘universal’ service, that is, by recognising that all women born in Sudan and currently in the perinatal period could potentially benefit from the support group (Williams & Berry, 1991), mothers who scored above or below the recommended cut-off on the EPDS (i.e., $\geq 10$; Department of Health, 2006) were eligible for group attendance and were thus included in this evaluation sample.
Table 1
Profile of Participants

<table>
<thead>
<tr>
<th>Code</th>
<th>Age</th>
<th>Parity</th>
<th>Infants age (months)</th>
<th>Marital status</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1.1</td>
<td>17</td>
<td>Primiparous</td>
<td>1</td>
<td>Traditional marriage</td>
</tr>
<tr>
<td>S1.2</td>
<td>23</td>
<td>Primiparous</td>
<td>15</td>
<td>Unmarried</td>
</tr>
<tr>
<td>S1.3</td>
<td>17</td>
<td>Multiparous (2)</td>
<td>2</td>
<td>Unmarried</td>
</tr>
<tr>
<td>S1.4</td>
<td>18</td>
<td>Primiparous</td>
<td>1</td>
<td>Unmarried</td>
</tr>
<tr>
<td>S1.6</td>
<td>20</td>
<td>Primiparous</td>
<td>0.5</td>
<td>Traditional marriage</td>
</tr>
<tr>
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<td>Primiparous</td>
<td>0.5</td>
<td>Unmarried</td>
</tr>
<tr>
<td>S1.9</td>
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<td>0</td>
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</tr>
<tr>
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</tr>
<tr>
<td>S1.13</td>
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<td>Multiparous (4)</td>
<td>15</td>
<td>Married</td>
</tr>
<tr>
<td>S1.14</td>
<td>27</td>
<td>Multiparous (4)</td>
<td>3</td>
<td>Married</td>
</tr>
</tbody>
</table>

Attrition of participants

A total of four women who were interviewed pre-group did not complete the 8-week term and did not complete post-group interviews. One of these women decided not to attend the group prior to session one, whilst the remaining three women had attended a number of sessions but had then ceased attending prior to end of term. Reasons for non-attendance were not sought from two of these three group members. Due to unfortunate personal circumstances, the third mother was unable to complete the group (despite regular attendance for most of the term), and it was deemed inappropriate for her to be interviewed post-group.
Analysis

Interview Data

Thematic content analysis of the qualitative interview data involved three phases: coding, pattern coding, and reporting of findings and interpretations.

Coding

The initial coding phase involved the development of a question-ordered matrix using Microsoft Excel for the participants’ responses to each of the interview questions. Each transcript was divided into nine sections, according to the participants’ responses to the nine interview questions. The sections were then read and speech units of varying lengths, typically 7 to 10 words, were coded and transferred into the matrix.

Pattern Coding

Pattern coding is a method for grouping initial codes into a smaller number of themes, sets or constructs (Miles and Huberman, 1994). To facilitate pattern coding and enhance transparency of the process, a new matrix was constructed for each of the interview questions: 1) current support, 2) importance of emotional health, 3) knowledge of depression and anxiety, 4) helpful ideas, 5) service usage, 6) service comfort, 7) future service seeking, 8) comfort asking for help, and 9) mental health service comfort. Coded text was transferred from the question ordered matrix to the corresponding new matrix and then searched for key words/phrases, which were entered into two separate columns – one for pre-group and one for post-group responses.

The number of times each of the key words/phrases was repeated across cases/participants was then counted and entered into the matrix, maintaining separate columns for pre and post-group data. This process was repeated within each of the 9 matrices, identifying the most common responses to each of the focus group questions.

With the repetition of key words/phrases across cases clearly displayed within each matrix, the most ‘dominant’ or ‘prevalent’ patterns could be identified – and analysis of pre-group and post-group themes was facilitated. Colour coding was then applied to identify similarities and
differences between key words/phrases and as a result themes emerged. Development and revision of themes took necessary precautions (i.e., ensuring all themes were distinct from each other in meaningful ways and keeping themes semantically close to the terms they represent) as recommended by Miles and Huberman (1994).

The use of matrices and their inclusion as appendices to this report facilitates transparency of the research methodology – from initial coded data to themes, strengthening objectivity or confirmability of the current findings (Miles & Huberman, 1994). The participants own words were used within matrices and refinement (i.e., development of themes) was made explicit, leaving a clear ‘audit trail’ so that ‘lower levels’ of analysis could be referred to easily.

**EPDS Data**

Data was coded and entered into SPSS version 16.0 for data analyses. Frequency distributions, graphs and descriptive statistics were generated for initial data exploration. Four participants were removed from the sample for statistical analysis as they did not complete the term, and thus did not participate in post-group interviews. This left a total of 10 women in the sample for pre to post-group analysis.

The researcher was interested in any change in levels of depressive symptomatology for Sudanese mothers attending the support group, that is, from pre to post-group. A paired samples $t$-test was used to investigate these changes. A score of 10 or higher was used as the cut-off score to indicate the presence of depressive symptoms in this population of migrant women, as recommended by the Department of Health, Government of Western Australia (2006).

Any further statistical analysis was not possible at this time due to the small sample size, but it is expected that greater quantitative analysis will be possible for the final evaluation (i.e., after 2-years of service provision).
Results

The results of analysis are presented in two sections: qualitative and quantitative. The qualitative section is divided into nine sections, corresponding to the questions posed during the interviews. Each of these ‘qualitative’ sections begins with a diagrammatic presentation of themes generated from the responses to that question and the text that epitomised these themes (in *italics*) is then discussed.

**Qualitative Results - Interview Data**

*Question 1: How do you feel about the amount of support you have at the moment?*

*Figure 1. Themes generated pre-group from question 1: Current support*

*Figure 2. Themes generated post-group from question 1: Current support*
Three themes emerged in response to this first question regarding the level of support the women believed they had before the group began. These three pre-group themes: ‘Insufficient support’ and ‘Support from family and friends’ remained post-group, but ‘Adequate support’ improved to become ‘Good level of support’. For example, S1.8 pre-group said “I live with my brother and sister in law and their children. They support sometimes”. S1.8 post-group then said “It is good. I am getting support from Ishar and I am getting support from Anglicare and from family and friends and the community.”

In addition to the three pre-group themes, two new themes emerged post-group: ‘Improving’ and ‘Community and group support’, both conveying a positive shift in support networks available to participants. These themes were built from women talking about the support they felt from participating in the group, as well as from information they had gained about other community supports they could utilise. For instance S1.2 spoke about the group itself: “I am very happy about the amount of support, for example the program that has been running here every Friday has been very helpful for me”, whilst S1.10 spoke about the information she had received via the group: “I feel good at the moment, because I know where to go and there are many people who support me on what I don’t know. Yes.”

The knowledge gained from attending the group was also stated by S1.1: “The support was really good because we learn a lot of things about babies and myself; and how to manage things for the family. I also learnt what to do when my baby is sick.”

Interestingly, the interview transcripts indicated that more support was needed by the women whose English was limited (i.e., the women who had required an interpreter for the interviews). These women appeared to be the group members who had not made such a noticeable positive shift post-group with regard to accessing support in the community.

For example S1.3 said pre-group: “I am missing my mother a lot who is back in Sudan. I live with my brother and my sister in law and their children. I don’t speak English so find it very difficult. All my other family is back in Sudan. I have no friends here.” Post-group she still spoke of feeling lonely: “I have a bit of support at home, but I feel very alone outside the house”. Given this woman has left her family behind in Sudan, has moved to
a country where she can not speak the language, and has given birth to an infant by caesarean section 6-weeks prior to beginning the group, it is not surprising that she may be struggling emotionally or that it may take longer than 8-weeks for positive changes to occur.

Nevertheless, for those women whose English is limited, attending the group has given them a much-needed opportunity to connect with a community service and other Sudanese speaking women that would not otherwise have been available. Their willingness to make this connection and attend the group can thus be seen as an important step in the right direction.

Question 2: Can you tell me what you know about a woman’s emotional health when she becomes a mother?

![Figure 3. Themes generated pre-group from question 2: Emotional health](image)

![Figure 4. Themes generated post-group from question 2: Emotional health](image)

Two strong themes emerged from analyses of the pre-group transcripts: ‘Don’t know’ and ‘Yes, for baby’. Both of these themes indicated
that the women were largely unaware of the many psychosocial and biological changes that occur during the perinatal period and how these changes can affect them emotionally. S1.1: "I don't really know…"

For those women who did acknowledge that emotional health is important, the pre-group discussion was very limited, with the focus being placed solely upon the woman’s role as the carer for the infant rather than as an individual with her own needs for emotional health and well-being. For example S1.8 pre-group said: “Yes, because she is a mother.” And S1.14 pre-group said: "Yes, because she has to look after her children."

Whilst the ‘Yes, for baby’ theme persisted post-group it was counter-balanced with a new second theme: ‘Yes, for self’. The replacement of the ‘Don’t know’ theme with this new theme indicated that more of the women were aware post-group of the importance of not only being able to care for their child/ren but for themselves also. An example of this positive shift pre to post-group can be seen in the responses of participant S1.2, who pre-group was not able to answer this question and then post-group answered: “Yes, because when you become a mother you have a lot of responsibility such as taking care of yourself and your baby.”

Question 3: Can you think of any emotional problems a mother might experience while she is pregnant or after she’s given birth?

Figure 5. Themes generated pre-group from question 3: Perinatal mental health knowledge
In contrast to the previous questions, completely different themes emerged pre to post-group in response to this question regarding participants’ knowledge of perinatal mental health. Pre-group themes included: ‘Don’t know’, ‘Sad’ and ‘Lonely’, indicating either no understanding of this topic or limited knowledge. For example S1.5 pre-group answered this question with: “When you are not with your family and they are not happy with you it makes me feel sad.”

The shift in post-group themes reflected a greater level of understanding, with discussion of the causes of maternal mental illness and how they may present. For example, pre-group S1.1 said: “I think a mother might be sad and feel lonely. I don’t know what depression is.”, whilst post-group this same participant described some of the possible causes of postnatal depression.

Although levels of understanding of this complex topic remained basic and at times confused post-group, overall there appeared to be an increase in awareness that women during the perinatal period may experience various forms of mental illness. This positive change was illustrated by participant S1.2 who pre-group did not answer this question and post-group responded: “A mother might experience being stressed, depressed and even be depressed when she is pregnant.”
Moreover, there appeared to be an important post-group realisation by numerous participants that mothers could become depressed. For instance, despite one of the participant’s brother’s apparently suffering from depression in Sudan, S1.6 stated pre-group: “I haven’t heard about mothers who have depression”. In contrast, S1.6 spoke at length post-group about what she believed could be causes and symptoms of maternal depression and anxiety.

*Question 4: For a woman who may be pregnant, or has a baby, what kinds of things do you think are helpful to ensure good emotional health?*

*Figure 7. Themes generated pre-group from question 4: Helpful ideas*

The pre-group responses to this question, which asked for suggestions to help a mother achieve and maintain positive emotional health, were limited to one major theme: ‘Talking’. As beneficial as talking
can be, this result did indicate a very limited awareness of the variety of support services, medical and non-medical treatments, and self-help strategies available to help women during this challenging time of their lives.

The variety and depth of responses increased post-group, the outcome of which was four themes: ‘Talk – to family and friends’, ‘Talk – to health professionals’, ‘Importance of support’, and ‘Physical health care’. The increase in awareness of options was illustrated well by participant S1.6 who only spoke of the bible pre-group, but post-group said: “She should go to a Counsellor or a friend of hers to counsel her or she could go out for a walk or watch TV or read the bible...She can see community nurses or her doctor.”

Although talking still featured heavily post-group, the introduction of health professionals as an alternative person to talk to indicated that the participants were now aware of this option and its benefits. For example, although pre-group S1.8 spoke of visiting friends or speaking to her mother, post-group she also spoke of accessing community supports: “The things that are important are getting support from different people. When I feel I am not coping I will communicate with Ishar or the Child Health Nurse”.

**Question 5: What kinds of services have you visited during your pregnancy or since you’ve had the baby?**

*Figure 9. Themes generated pre-group from question 5: Service usage*
The major services accessed by participants did not change significantly from pre to post-group. Princess Margaret Hospital (PMH) was added post-group to the obstetric hospitals, King Edward Memorial Hospital and Osborne Park Hospital. The only other minor change was that reference to Ishar expanded from the midwife pre-group to the service as a whole post-group.

*Question 6: How do you feel about these services (those visited in question 5)?*
Similar to the findings of the previous question, no significant changes were noted pre to post-group in regard to comfort levels whilst accessing services. But, as the majority of participants stated that they were already comfortable utilising these services pre-group, there was not much room for improvement. Subsequently, the only shift observed was the addition of “Very” in front of “Comfortable”. That is, from stating that they were “Comfortable” pre-group to “Very comfortable” post-group.

Question 7: Where would you go to get help if you felt overwhelmed? Like you’re not coping? Like you’re not emotionally healthy?

Figure 13. Themes generated pre-group from question 1: Future service seeking
Pre-group responses to this question indicated that help would only be sought from ‘Family’ or ‘Friends’ or the ‘Midwife at Ishar’, whom had referred many of the participants to the group. In contrast, post-group themes indicated that participants would also now consult their ‘Doctor’ (i.e., GP), ‘Child Health Nurse’ or a ‘Counselor/Social Worker’. This expansion in awareness of possible sources of support/help and apparent willingness to access such services if the need arose can be seen as one of numerous positive outcomes of the group.

This small but positive shift is demonstrated by participant S1.3 who pre-group responded: “I don’t have anywhere to go. I don’t know anyone from my community. I only have my brother and sister in law here who don’t speak English.” and then post-group responded: “I found out through the program that I could ask for help from Ishar.”

Figure 14. Themes generated post-group from question 1: Future service seeking
Question 8: How would you feel about asking for help?

Figure 15. Themes generated pre-group from question 8: Comfort asking for help

Figure 16. Themes generated post-group from question 8: Comfort asking for help

When questioned how they would feel about asking for help before the group began, the majority of participants stated that they would be ‘Comfortable’. Nevertheless, there were also pre-group responses indicating a level of discomfort with the prospect of asking for help from people they did not know. For example, participant S1.13 said “I wouldn’t feel comfortable asking someone for help if I didn’t know them”.

However, the ‘Uncomfortable’ theme did not emerge post-group, indicating a positive shift for those women who had expressed discomfort pre-group. For example, post-group participant S1.13 said that she would now feel comfortable asking for help: “I would feel comfortable”.
The new theme ‘Specific Health Professionals’ that emerged post-group was due to many of the participants mentioning the health professionals that they would go to for help (which they had not done pre-group). The professionals included their GP, Child Health Nurse, Ishar and a Counsellor.

*Question 9: How would you feel about using/visiting/going to a mental health service?*

*Figure 17. Themes generated pre-group from question 9: Mental health service comfort*

<table>
<thead>
<tr>
<th>Comfortable</th>
<th>MH SERVICE COMFORT</th>
<th>Very comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncomfortable</td>
<td>Unknown</td>
<td>Benefits</td>
</tr>
</tbody>
</table>

*Figure 18. Themes generated post-group from question 9: Mental health service comfort*

There was a noticeable positive change in responses to this question from pre to post-group, with the pre-group themes ‘Uncomfortable’ and ‘Unknown’ not present post-group, and the new theme ‘Benefits’ emerging post-group.
The observed increased level of comfort when presented with the idea of accessing mental health services was illustrated well by participant S1.1 who said pre-group: “I don’t think I would feel comfortable because I don’t know what they do.” The response of participant S1.1 post-group included possible benefits of going to a mental health service “It is ok to use counselling services because they help you when you feel sad. They will talk with you what to do for yourself.”

**Quantitative Results - EPDS Data**

On average, participants in the group did not report a significant reduction in depressive symptomatology from pre-group ($M = 14.30, SE = 1.41$) to post-group ($M = 10.50, SE = 1.64, t(9) = 1.64, p > 0.05$). Nine women (90%) in this sample of ten scored above cut-off ($\geq 10$) on the EPDS before the group began, indicating presence of depressive symptomatology, decreasing to seven women (70%) scoring 10 or more at the end of the 8-week term.
Discussion

The concept of acculturation is widely used, and refers to the changes that an individual undergoes when they come into contact with another culture, such as when migrating to a new country. This acculturation entails numerous psychological changes, including adjustments in behaviour, values, attitudes and identity (Williams & Berry, 1991). Despite earlier views to the contrary, acculturation does not inevitably lead to psychological distress, with the level of distress dependent upon numerous factors. One of the most influential of these factors is the presence of social and cultural groups that may provide support for the person entering into the experience of acculturation (i.e., a protective cacoon). With a lack of social support identified in ‘mainstream’ research as an important risk factor for postnatal depression (Dennis, 2004; Pope, et al., 2000; Robertson, Grace, Wallington, & Stewart, 2004) this perinatal mental health support group, facilitated by Ishar and funded by WAPMHU, was intended to provide such a ‘cacoon’ for Sudanese mothers living in the Perth metropolitan area.

Despite immigrant status being identified as a risk factor for depression during the perinatal period (Dankner, et al., 2000; Glasser, et al., 1998; Onozawa, et al., 2003; Rubertsson, et al., 2005; Small, et al., 2003; Goyal, et al., 2006), there is limited research available on specific risk factors for immigrant women. From the research available the risk factors for postpartum depression appear to include: a lack of social support, stressful life events, physical health problems, and an inability to speak the language of the host country (Small, et al., 2003; Parvin, Jones, & Hull, 2004). For example, a Quebec study that used language spoken at home as an index of acculturation, found that women who spoke neither of the ‘native’ languages (i.e., English or French) at home were at twice the risk for postnatal depression compared with those women who did (Zelkowitz & Milet, 1995). Such research findings are noteworthy given that only one of the 14 women initially participating in this support group nominated English as their primary (i.e., spoken at home) language, and 6 women required an interpreter during the evaluation assessments. Moreover, it was the women without fluent English speaking skills who did not appear to make a noticeable improvement with regard to accessing support services in the community.
Under the Government Settlement Program, any newly arrived immigrant in Australia may be eligible for a range of settlement services, such as assistance in accessing medical services (Gwatirisi, 2009). Despite this, immigrants and refugees continue to face challenges, such as health providers and other service providers’ inadequate understanding of their needs and challenges. This is particularly the case when it comes to mental health service provision, with high costs, misunderstanding, stigma and shame in addition to the cultural and language differences. An extensive body of literature can be found on the barriers to mental health care utilisation amongst refugees and immigrants (Wong, et al., 2006).

Acknowledging all these issues (e.g., immigrant status as a risk factor for depression, importance of social support to acculturation and mental well-being, barriers to accessing mental health services), qualitative techniques were applied to gather information on Sudanese mothers’ knowledge of perinatal mental health issues, the amount of support Sudanese mothers’ believe is available for them in the Perth metropolitan area, and their experiences whilst accessing services.

All Sudanese women living in the Perth metropolitan area who were pregnant or had given birth in the last 3 years were eligible to participate in the support group, being facilitated by Ishar and funded by the WAPMHU. Fourteen women completed pre-group assessments, including an interview, a demographic questionnaire and an EPDS. Ten of these women completed post-group assessments and were thus included in data analyses.

Interview transcripts were thematically content analysed in nine sections - corresponding to the questions posed during the interviews. This resulted in the generation of 51 themes in total, 23 pre-group and 28 post-group themes.

The expansion of support networks from informal sources, such as family and friends, to health professionals, was a theme repeated during interviews. Women participating in the group appeared to not only increase their knowledge regarding alternative sources of support, but also became more comfortable with the idea of accessing such supports if/when needed. Women’s responses also indicated that their knowledge of perinatal mental health issues had increased, that is, that mothers can become depressed or anxious and what may cause these feelings. Moreover, women’s responses
post-group indicated that they knew talking to others and accessing support was an important step to feeling better.

As stated previously, eligibility for participation in the perinatal mental health support group was based upon Sudanese ethnicity and motherhood status, irrespective of the presence or absence of depressive symptomatology. In light of this, the level of depressive symptomatology found pre and post-group in this sample of Sudanese mothers is concerning.

Quantitative data collected via the EPDS was used to assess changes in depressive symptomatology over the course of the 8-week group term. Ninety percent of the Sudanese women participating in the support group scored above cut-off (≥10) on the EPDS pre-group, decreasing to 70% post-group.

Compared to a prevalence rate of 13% established via a meta-analysis of 59 studies with nearly 13,000 participants (O'Hara & Swain, 1996), these results suggest that the prevalence of perinatal depression may be significantly higher in this population of childbearing women. Although prevalence estimates have varied from 3% to 30%, depending on the period of time under consideration (i.e., symptoms in the past week or past year), the length of postnatal follow-up assessments, and the type of measurement being utilised (Pope, et al., 2000) the difference with this childbearing population is still significant.

If this finding is then compared to prevalence rates obtained via research with immigrant populations, the difference is still present, although not quite as large. It appears that the majority of perinatal mental health research conducted with immigrant populations has been Canadian. For example, in a community sample of pregnant immigrant women in Canada, 42% indicated high risk of depression on the EPDS (Zelkowitz, Schinazi, Katofsky, Saucier, & Valenzuela, 2004). Furthermore, women who had lived in Canada for less than 5 years were found to be at greatest risk. In another large sample (N = 1250) of pregnant Canadian women assessed for depressive symptomatology using the EPDS, 15% of the immigrant women in the sample scored in the high risk range compared to 7% of women born in Canada (Sword, Watt, & Krueger, 2006).
Postpartum research on the mental health of immigrant women is just as scarce as that available during pregnancy, with Canada once again being the site of the majority of study. Nevertheless, as found with depression during pregnancy, women born outside of Canada or having lived in Canada for less than 5 years have been found to be at greatest risk of postnatal depression (Dennis & Ross, 2006).

A longitudinal study in Canada (Zelkowitz, et al., 2008) investigated stability and change in postnatal depression in 106 childbearing immigrant women. They reported that 37.7% of these immigrant women scored in the high risk category of the EPDS at 2 months postpartum. This result was compared to the prevalence rate of 3.4% found in a sample of over 1500 postpartum women from the same catchment area. The authors concluded that their results “provide further evidence that immigrant women are at risk for postpartum depression” (Zelkowitz, et al., 2008, p. 8).

The current findings (i.e., 90% scoring ≥10 on the EPDS) add support to the Canadian research, and indicate that Sudanese immigrant women giving birth in Australia may be at high risk of depression. Given the traumatic and complex case histories of the 14 women participating in this support group, these results are not completely unexpected.

Although only one psychological study has been conducted in post-war Southern Sudan to date (Roberts, et al., 2009), its results put the current findings into context. The objective of this collaborative study conducted by researchers from the Department of Public Health and Policy, London, and the Ministry of Health, Southern Sudan, was to measure PTSD and depression in the town of Juba, Southern Sudan and to investigate the association of demographic, displacement, and past and recent trauma exposure variables on PTSD and depression (Roberts, et al., 2009). The results showed a strong association of gender on mental distress, with women more than twice as likely as men to exhibit symptoms of PTSD (odds ratio 2.01) and depression (odds ratio 2.37). The PTSD rates were 42.5% and the depression rates were 58.7% amongst women (Roberts, et al., 2009).

With 92.4% of respondents experiencing one or more of the 16 trauma events covered in the Harvard Trauma Questionnaire used in the study, and trauma being closely associated with psychological distress, it is
not surprising that prevalence of these disorders in post-war Sudan is so high. Women and refugees were found to be two of four subgroups who were significantly more likely to have experienced eight or more traumatic events. For instance, 63% of women respondents had ever lacked food or water, 48% had been seriously ill without access to medical care, 44% had witnessed the murder of family or friends, 48% had directly experienced a combat situation, 22% had been forcefully separated from family and friends, 15% beaten or tortured, 10% imprisoned, and 8% raped.

Given the severity of these traumas, it was noteworthy that being forcefully separated from family was one of three trauma events with significant associations with PTSD and depression. For the women participating in this perinatal mental health support group, who had recently given birth and are now raising their children in a foreign land, away from family, the impact of this separation on their mental health was tangible, with almost all participants speaking of missing family and feeling lonely.

Acknowledging that there are no quick fixes that will address the level of trauma and complex life histories that these women present with, the current evaluation results do indicate that the key performance indicators are being met. Local Sudanese women are attending the support groups and there appears to be an increase in level of perceived psychosocial support by the participants, with support networks expanding from family and friends to incorporate health professional and community services. The participants’ awareness of perinatal mental health issues had improved post-group and the importance of accessing services if/when needed for the sake of themselves and their children was apparent. Moreover, the participants indicated that they would be more comfortable asking for help from a range of health professionals post-group.

Although there was a decrease in depressive symptomatology, as assessed by the EPDS, the difference was not significant. However, one 8-week term was not expected to make a significant difference, given the complex case histories of the participants. With continued group attendance and the associated improvements in mental health knowledge and awareness of support services available it is hoped that further improvements would be made by women.
Finally, an increased capacity within local communities for a bicultural community worker to facilitate support groups (independent of original facilitator) was not yet evident, but this is expected to develop as the group continues.

**Recommendations**

Given the history of the women participating in the perinatal mental health support group and the complexity of their current living arrangements it was not expected that an 8-week group would be sufficient for long-term and significant changes in mental health status. Nevertheless, the social support, information and exposure to community services afforded by this group appear to have had a positive effect and can be built upon for future and extended benefits.

Despite the non-significant decrease in depressive symptomatology from pre to post-group, the number of women reporting depressive symptomatology in the current sample is higher than both the general population and that reported in the literature for immigrant mothers, and confirms the need for perinatal mental health strategies for Sudanese mothers in WA.

Although data availability limits the conclusions that can be made at this point (i.e., only one 8-week term completed in time for analysis) the levels of depressive symptomatology present in this population together with the positive qualitative results thus far lead the WAPMHU Research Officer to recommend that the second year of funding be made available to Ishar. This second year of funding will enable groups to continue and the additional data that will be collected over this time period will allow further and more detailed analysis to be conducted.
References


non-English speaking populations in Australia. *Social Psychiatry and Psychiatric Epidemiology, 42*(1), 70-78.


Appendix - Reflexivity Exercise

As a white middle-class Australian woman, I (the WAPMHU Research Officer) have inherent biases, many of which I may not even be conscious of, those that I am aware of and believe may bias the current research are documented in the following two paragraphs:

I undertook this evaluation, in collaboration with Ishar, as the Research Officer for the WA Perinatal Mental Health Unit (WAPMHU). My responsibilities within this role include the evaluation of services, such as this, that are funded by the WAPMHU and provided by community organisations. Funding decisions for the second year of service delivery, as outlined in the Service Agreement, are based upon evaluation results. Subsequently, I attempted to remain impartial and unbiased in my dealings with both parties of the Service Agreement. Nevertheless, as an employee of WNHS, a perinatal mental health specialist, a psychologist and mother, I am aware that I bring to this work a paradigm (enquiry lens) and epistemology.

First and foremost I am aware that I want this service to succeed in its goal to support Sudanese families living in WA. However, I believe that my use of both qualitative and quantitative data, application of a critical realist paradigm, and professional integrity, ensures that I remain as fair as possible in my analysis of the data which was submitted to me for evaluation by Ishar.

My exposure to Sudanese women is very limited and although I have attempted to familiarise myself with Sudanese culture through reading and meeting the women attending the groups I admit this unfamiliarity will effect my level of understanding of some of the complex issues faced by these women and the refugee communities of WA. Nevertheless, I believe that every woman and man should be treated as equal in society regardless of age, race, ethnicity, sexual preference or socio-economic status, and fully support the provision of perinatal services to CALD women and their families.