COMMUNITY HEALTH WORKERS IN INTEGRATED MENTAL HEALTH CARE FOR PERINATAL DEPRESSION IN SURABAYA, INDONESIA

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Abstract

The role of community health workers (CHWs) in mental health is widely recognised and reported by many studies, including in perinatal mental health. In Indonesia, the role of CHWs in maternal health has not been implemented as yet, despite assignment of their role in identification of perinatal mental health problems in Indonesian national policy documents.

This thesis addresses these research and policy implementation gaps. A qualitative research study was conducted in Surabaya, Indonesia, a district where mental health services are provided in primary health care (PHC) and the prevalence of perinatal depression has been reported as being higher than the international average. This research examined stakeholder perspectives on the feasibility and acceptability of the role for CHWs in identifying perinatal depression and referring them to primary health care, and the characteristics and competencies required for this role. Sixty-two individual interviews were conducted to explore the perspectives of four PHC stakeholder groups for maternal care: program managers at the health office and at villages, health workers at PHC centres, community health workers, pregnant women and postpartum mothers, and mental health specialists. Interview data was analysed using framework analysis.

Results show that mobilising CHWs to integrate mental health into perinatal care was generally considered by PHC stakeholders as feasible in the Surabaya health system. Factors contributing to feasibility included: i) recent mental health policies, strategic planning on training in mental health to health workers including CHWs, and
supervision, ii) potential to allocate budget to support this role and to support a data
information system, iii) existing organisational structure and provision of the
workforce, iv) a common strategy of service delivery, and v) the possibility of
developing a screening tool to facilitate identification of perinatal depression. Practical
guidelines, workforce quality issues, and insufficient data about this specific health
issue are among the challenges in developing this CHW role.

Results also show that role of CHWs in perinatal mental health care was
acceptable by a majority of participants for reasons including benefits of mobilising the
workforce, convenience of the service, characteristics and social-cultural bonding of
CHWs with users, existence of perinatal depression cases, nature of the role as part of
CHW responsibility, and the view that the role could be scaled up. Factors contributing
to non-acceptability included stigma of mental health problems during the maternal
period, confidentiality issues, low perceived self-capacity of CHWs, lack of confidence
in CHW competencies by professional groups, and inconsistent understandings of the
objectives of mobilizing CHWs. Characteristics and competencies that may address
these limitations include using women of certain age ranges and backgrounds,
willingness to carry out the task, excellent training in knowledge around perinatal life
and depression, and communication skills.

Findings suggest that developing the role for CHWs in integrated mental health
care to identify women experiencing perinatal depression and referring them to the
health system in Surabaya is promising. The role can be inserted into existing tasks and
applied in routine maternal care.
Declaration

This is to certify that

i) the thesis comprises only my original work towards the Doctor of Philosophy, except where indicated in the preface;

ii) due acknowledgement has been made in the text to all other material used;

iii) the thesis is fewer than 100,000 words in length, exclusive of tables, maps, bibliographies and appendices

Signature

Endang R. Surjaningrum
Preface

This thesis contains three analyses of original research undertaken during my PhD candidature. I have taken primary responsibility in conducting this study including formulating the research questions, designing methodology, managing ethics applications, collecting and analysing data, and drafting the writing and submitting articles for publication. All supervisors, Dr. Ritsuko Kakuma, Associate Professor Harry Minas, and Professor Anthony F. Jorm, oversaw development of all/part of this study and provided critical comments on all chapters. Professor Jane Pirkis, as the advisor, gave insightful comments on the research. The contributions of all authors are presented below.

Chapter 4 presents results of the first sub-study, examining feasibility of the role of CHWs in integrated mental health care in Surabaya. My supervisors and I contributed to design of the study. I collected data, conducted analysis, and interpreted findings with guidance from Ritsuko Kakuma. I prepared the first draft of the paper, and all supervisors commented on and refined the draft. The paper has been submitted to the *International Journal of Mental Health Systems* and is being reviewed.

Chapter 5 comprises findings of the second sub-study which examined stakeholder perspectives regarding the acceptability of CHWs identifying and referring women with perinatal depression. Similar to the previous chapter, my supervisors and I contributed to design of the study. I collected data, conducted analysis, and interpreted findings. I prepared the first draft of the paper, and all supervisors
commented on and refined the draft. The paper has been submitted to the *International Journal of Integrated Care* and is currently under review.

Chapter 6 encompasses results of the third sub-study, which describes the characteristics and competencies considered necessary by stakeholders for CHWs to effectively detect and refer women with perinatal depression to primary care. As with the previous chapters, my supervisors and I contributed to design of the study. I collected data, conducted analysis, and interpreted findings. I prepared the first draft of the paper, and all supervisors commented on and refined the draft. The manuscript has been submitted to the *International Journal of Mental Health Systems* but is currently incomplete.
Acknowledgements

I have had great fortune to receive enormous help and support from a number of people during my PhD candidature. I would like to take this opportunity to acknowledge their practical and emotional contributions.

First and foremost, I would like to express my sincere gratitude to my supervisors, Dr. Ritsuko Kakuma, Associate Professor Harry Minas, and Professor Anthony F. Jorm. My greatest gratitude to my primary supervisor Dr. Ritsuko Kakuma, a dedicated and gentle supervisor who relentlessly motivated me and shared her expertise and networks. Her expertise in global mental health and qualitative analysis has been a valuable lesson to develop my knowledge and skills in research. Secondly, my gratitude to my co-supervisor Associate Professor Harry Minas who has wide knowledge and connections to the development of mental health systems in Indonesia. His comments and views about mental health systems worldwide have strongly contributed to the thesis and my personal confidence. I also would like to thank my other co-supervisor, Professor Anthony F. Jorm, for his critical thoughts, discipline, and meticulous attention to detail that inspired me to be a thorough researcher.

I am also grateful to Professor Jane Pirkis for her role as advisor as she guided me during the milestones and provided comments on the second sub-study.

Many thanks go to the Health Office of Surabaya, the four PHC centres and three villages in Surabaya, and the Director of Dr. Soewandhi Hospital for providing permission and technical support for conducting my research. My deepest gratitude
goes to all participants whom we interviewed for this study, particularly the community health worker/manager who distributed letters of invitation to potential participants. Thank you to Ms. Putri Maharani and Erwin Erianto in Surabaya who assisted with communication, transportation, and permit documents; and Ms. Alma Aletta, Master of Public Health in Aceh for participating in the early stage of analysis.

The most important party to whom I would like to express my ‘great greatest’ gratitude to is the Government of Republic Indonesia, through the Directorate General of Higher Education, now called the Ministry of Research, Technology, and Higher Education that provided financial support for undertaking this doctoral study. I owe my country and will repay it through contributions and dedication.

I am also thankful to my institution in Indonesia, Airlangga University, and my colleagues in the Faculty of Psychology who provided permission, discussion, and warm friendship. To the faculty that also provided tangible support for data collection and conferences.

I am immensely grateful to my parents who give me unconditional love and support at all times. My husband and sons have given me great motivation to keep going to the end of candidature and made my life balanced and full of happiness. Being a student, a wife, and a mother made my life wonderful. I am most thankful to my husband for always motivating me and supporting me during his own life as a PhD student at the same time. We are destined to always be together, in love, sadness, and happiness. Thank you God for uniting us.
Finally, I would like to dedicate this thesis to my sons, Khalid and Haykal, who may be inspired from this journey. Make your life a meaningful one, for yourself and for others, anywhere, anytime.
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<td>Behavior Symptom Identification Scale-24</td>
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<td>BDI</td>
<td>Beck Depression Inventory</td>
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<tr>
<td>CBT</td>
<td>Cognitive Behavior Therapy</td>
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<tr>
<td>CHWs</td>
<td>Community health workers</td>
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<td>CHWs\textsuperscript{MCH}</td>
<td>Community health workers for maternal and child health</td>
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<td>CHWs\textsuperscript{pregnancy}</td>
<td>Community health workers for pregnant women</td>
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<td>CMD</td>
<td>Common Mental Disorders</td>
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<td>CMHN</td>
<td>Community Mental Health Nursing</td>
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<td>CPM</td>
<td>Community Program Manager</td>
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<td>DIT</td>
<td>Dynamic Interpersonal Therapy</td>
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<td>DPM</td>
<td>District Program Manager</td>
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<td>DSM-IV</td>
<td>Diagnostic and Statistical Manual version IV</td>
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<td>EPDS</td>
<td>Edinburgh Postnatal Depression Scale</td>
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<td>FWM</td>
<td>Family Welfare Movement</td>
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<td>GP</td>
<td>General Practitioner</td>
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<td>ICD-10</td>
<td>International Category of Diseases version 10</td>
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<td>IDHS</td>
<td>Indonesia Demographic and Health Survey</td>
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<td>IPT</td>
<td>Interpersonal Therapy</td>
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<td>ISPs</td>
<td>Integrated health service posts</td>
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<td>LHWs</td>
<td>Lady Health Workers</td>
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<td>LICs</td>
<td>Low Income Countries</td>
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<td>LMICs</td>
<td>Low and Middle Income Countries</td>
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<td>MANAS</td>
<td>\textit{MANashanti Sudhar Shodh} = &quot;project to promote mental health&quot;</td>
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<td>MCH</td>
<td>Maternal and Child Health</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MG</td>
<td>Multigravida</td>
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<td>mhGAP-IG</td>
<td>mental health Gap Action Programme-Intervention Guide</td>
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<td>MNS</td>
<td>Mental, neurological, and substance use</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<td>MoHA</td>
<td>Ministry of Home Affairs</td>
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<td>Multipara</td>
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<td>NGO</td>
<td>Non-Government Organisation</td>
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<td>Primigravida</td>
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<td>PHC</td>
<td>Primary health care</td>
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<td>Polindes</td>
<td>\textit{Pos bersalin desa}</td>
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<td>Poskesdes</td>
<td>\textit{Pos kesehatan desa}</td>
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<td>PP</td>
<td>Primipara</td>
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<tr>
<td>Puskesmas</td>
<td>\textit{Pusat kesehatan masyarakat}</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>RCT</td>
<td>Randomized Controlled Trial</td>
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<td>RFA</td>
<td>Risk Factor Assessment</td>
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<td>Riskesdas</td>
<td>Riset Kesehatan Dasar</td>
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<td>SCID</td>
<td>Structured Clinical Interview for DSM-IV</td>
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<td>SCID-PND</td>
<td>SCID for perinatal depression</td>
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<td>TB</td>
<td>Tuberculosis</td>
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<td>TBA</td>
<td>Traditional Birth Attendant</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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CHAPTER 1: Introduction

1.1 Background

Prevalence of common perinatal mental disorders, including depression and anxiety, is estimated to be two to three times higher among women in resource-constrained countries than in wealthy countries [1, 2]. Depression in women during pregnancy and the post-partum period is associated with poor nutrition of the mother, premature delivery that leads to low birth weight, and earlier cessation of breastfeeding [3]. The potential impacts of perinatal depression on babies include cognitive and emotional developmental delays [4], malnutrition, incomplete immunisation, stunting in babies and diarrheal episodes [5].

Identification and treatment of perinatal depression can reduce and/or prevent these negative impacts. A study in Pakistan reported that babies of mothers who were identified depression and received a treatment had better outcomes for several indicators, e.g. increased coverage of vaccination, fewer episodes of diarrhoea, good participation in play activities by both parents [6]. Although there is evidence of high prevalence of perinatal depression in primary health care (PHC) of between 15% and 40% in low- and lower-middle-income countries (LICs and LMICs) [2, 7], mental health services for perinatal depression are not available in most developing countries, including Indonesia.

In resource-constrained countries where depression may be understood differently, local and culturally appropriate methods for screening that can be performed by non-mental health specialists should be implemented as part of
integrating mental health into the broader health care system [8]. Moreover, effective
treatment of perinatal depression in primary care is possible and lay community
volunteers, known as community health workers (CHWs) can play a role in service
delivery [6, 9, 10].

In Indonesia, involvement of the community in PHC is formally constructed
through establishment of integrated health service posts (ISPs or posyandu) in almost
every village that provides services for maternal and child health (MCH) at a
community level [11]. Community volunteers, or CHWs, play an important role in the
sustainability of ISPs as a complement to PHC. Together with formal health workers,
CHWs provide services including antenatal and postnatal care, family planning,
immunisation and diarrhoea control. This demonstrates the potential role of CHWs in
identification and referral of women at risk of or experiencing perinatal depression in
primary care to receive appropriate assessment and care. To demonstrate the
acceptability and feasibility of this role to the health system and community, an initial
exploration of the potential role is essential. Exploration begin from a place where
integrated mental health care in PHC currently exists, such as in Surabaya where
mental health counsellors are employed in PHC.

Indonesia is an archipelago country with a total population in 2015 of 255.4
million with half the population living in urban areas [12]. The country is classified as a
lower middle income country (using World Bank Classification) [13] with per capita
GDP around USD $3,603 [14]. It has a democratic government and is divided
administratively into 34 provinces. Each province is subdivided into districts and
municipalities, with the next lower administrative units being subdistricts and villages. Each village is classified as urban (called *kelurahan*) or rural [15]. In 1999, districts were given full autonomy, making them responsible for all decentralized government ministries at province and district levels [14].

As reported in the Indonesia Demographic and Health Survey (IDHS) 2012 [14], over 90% of Indonesian people are literate, with the rate in rural areas slightly below that in urban areas, at 91% and 96%, respectively. Education among females has increased significantly since the 1970s, with only 58% of females attending school in 1971 and 98% in 2011. The level of education among females is associated with higher age at first marriage. The median age at first marriage among Indonesian women is 20.4 years overall, but the median age is older for those who completed secondary education (22.9 years) compared to those who did not (17.2 years). Age at first marriage is an important indicator of fertility in a society and is likely to be associated with initiation of sexual intercourse and exposure to risk of pregnancy. Total fertility rate of women aged 15-49 years of age was 2.6, while the percentage of pregnant women in that age range was 4%.

Fertility level is also determined by average age at first birth, in which earlier age is often associated with increased health risks for mother and child. The median age at first birth among Indonesian women aged 15-49 is 22.0 years. Age at first birth is associated with whether women live in an urban or rural area, level of education, and level of wealth. Those who live in urban areas have higher education, are wealthier and are more likely to begin childbearing at a later age than others.
Another issue in motherhood and pregnancy that is associated with morbidity and mortality for both mother and child is teenage pregnancy, which is also one of the risk factors for perinatal depression. IDHS 2012 showed that 10% of adolescents have started childbearing. Similar to the trend of first birthing, the percentage of teenage pregnancy was higher among teenagers living in rural areas, with lower level of education, and from low income households. Yet, the most surprising feature was the trend of maternal mortality ratio (MMRatio) in Indonesia, which increased sharply from 228 deaths per 100,000 births in 2007 to 359 in 2012. The number is far higher than the country’s target in 2015, which was 102. While no specific explanation for the increasing maternal mortality ratios has been found, major causes of maternal death in Indonesia have included excessive bleeding, eclampsia, and infections which were worsened by late referrals and emergency treatment [16].

These figures relating to women in Indonesia demonstrate that despite high rate of literacy and education among women, there are still quite significant issues regarding perinatal health. Health of women during the perinatal and childbearing period needs to include both physical and mental health, because mental health during pregnancy and the postpartum period is associated with the health of mothers and their young children [17].

1.2 Thesis outline

This thesis comprises seven chapters. Chapter 2 is a review of the literature that summarises the theoretical background, previous research, facts and figures, and policy documents related to depression during maternal life; the health care system,
including maternal and mental health care in the primary health care system, and their human resources; and particularly those related to the role of CHWs. These include studies from Indonesia and other countries. The chapter concludes with a presentation of conceptual frameworks for the study. Chapter 3 presents research design, including the aims and objectives of the study and details of research methods. Chapters 4 to 6 present results of the study and focus on the feasibility, acceptability, and competencies required in mobilising CHWs for the identification and referral of women experiencing perinatal depression, respectively. Each of these three chapters represents separate manuscripts that have been submitted for publication in peer-reviewed journals. Finally, Chapter 7 provides a summary of the main findings and discusses interpretation of the findings and how they compare to previous studies regarding the role of CHWs in integrated maternal mental health care. This chapter also discusses implications of the findings for theoretical development in global mental health, and for policy development in integrated maternal mental health care in Indonesia. Strengths and limitations of the study are stated and suggestions for future research are made.
CHAPTER 2: Review of Literature

This chapter summarizes five main areas related to the research topic: 1) perinatal depression; 2) detection, assessment, and treatment for perinatal depression; 3) service delivery and pathways for perinatal depression; 4) human resources for perinatal depression; and 5) CHWs in integrated mental health within perinatal care.

2.1 Perinatal depression

2.1.1 Definition, clinical features and prevalence

Perinatal depression is an episode of depression that occurs around the time of childbearing [5]. While antenatal depression refers to state of depression during pregnancy, the Diagnostic and Statistical Manual fourth edition (DSM-IV) defines postpartum depression as depression that begins within the first four weeks after the baby is born [18]. According to Paschetta, Berrisford [19], on the other hand, perinatal depression can occur either during pregnancy or within the first 12 months after delivery. Being pregnant and having a newborn are positive experiences for many women, nevertheless there are a significant number of women who experience negative emotions.

The clinical features of perinatal depression are similar to other forms of depression, but it is specified by the mother-infant relation. It is characterized by excessive worry about infant safety and perinatal caretaking ability and the impact on pregnancy, foetal, and infant outcomes [5]. Mothers describe their experience as “vague fears that something bad would happen to the baby” and report symptoms
including tiredness, loneliness, crying, bad temper, sleep and appetite problems [20].

Other symptoms are depressed mood and loss of interest or pleasure in three activities: (i) spending time with family and friends, (ii) emotional and sexual relationships with partners, (iii) taking part in specific social activities, as well as suicide ideation and/or attempts that reflect a strong sense of hopelessness; sleep disturbance due to interference by thoughts and worries; concentration difficulties such as forgetfulness, and feeling worthless [21]. The spectrum of depressive symptoms in the postpartum period ranges from ‘maternity blues’ to postpartum depression and postpartum psychosis [22]. The blues affects 50%-80% of new mothers and occurs during the first few days after delivery. The peak of major postpartum depression happens six weeks after delivery, while the peak of minor depression occurs two to three months after the baby is born. Another peak of depression happens six months after the birth of a baby. However, many women do not understand postpartum depression and are not aware they are experiencing a mental disorder or think the symptoms are normal responses during pregnancy or postpartum [23, 24].

A study on emotional experience during the third trimester of pregnancy and up to six months postpartum was conducted in Indonesia [25]. Pregnant women in this study described their feelings as anxiety, worried, afraid, scared and confused, sad, personal and economic inadequacy, and self-pity. On the other hand, postpartum women described their experience in complex emotional words that were related to complex life circumstances. Those expressions were inadequate economic life, self-
pity, worrisome, emotionally repressed, confused, regretful, overwhelmed, and mental crisis.

The prevalence of perinatal depression globally in general is about 12% [26]. A review reported that the prevalence of common perinatal mental disorders in low- and lower-middle-income countries is estimated to be between 5.23% and 32.96% during pregnancy and between 4.93% and 59.49% for postpartum, respectively, mostly in the form of depression and anxiety [2]. A review on Asian women reported that the rate of perinatal depression was 17% overall, with variation across trimesters (22.2%, 13.5%, and 17.2% for first, second, and third trimester, respectively) [27]. Yet a systematic review of studies predominantly in developed countries estimated prevalence during pregnancy is 18.4% and three months after delivery is 19.2%. The review also reported point prevalence at 11% in the first trimester and 8.5% in the second and third trimesters of pregnancy, and at 12.9% in the third month after delivery [28]. A comparison of prevalence of postpartum depression between rural women in developed and developing countries estimated combined prevalence at 21.5% and 31.3%, respectively [29]. Further, an epidemiological study among 434 postpartum mothers in Indonesia using the Edinburgh Postnatal Depression Scale (EPDS) reported prevalence at 22.35% (cut off point >10) [30].

2.2 Burden and consequences of perinatal depression

The impact of perinatal depression can be experienced by both the mother and infant. Among the impacts on mothers are breastfeeding less often or stopping breastfeeding, difficulty in perceiving infant emotional expressions accurately,
perceiving children as difficult or herself as an incompetent mother [5], decrease in the likelihood of seeking out care for physical illness and family planning [31]. The women are more disabled and less likely to care for their own needs [32]. Depressed pregnant women are more likely to have poor nutrition due to lack of appetite, increased risk of intrauterine growth retardation, perinatal pre-eclampsia, and increased risk of premature delivery [3]. Depression also increases suicide risk, particularly for young women who experience stress and abuse, such as those who experience an unwanted pregnancy [33].

The potential impact on infants include low birth weight, short length of gestation, smaller head circumference, eating and sleeping difficulty, the possibility of being more withdrawn, less excitable, less oriented and not engaging with visual or vocal stimuli [4, 5]. Depression in mothers in South Asia is associated with under-nutrition and stunting in babies, low birth weight, ceasing breastfeeding, incomplete immunisation, and diarrheal episodes [32, 33] which are risk factors for child mortality.

2.2.1 Risk factors

The serious impact of perinatal depression on mothers and infants has led to recommendations for screening at an early stage, during pregnancy and after the baby is born. To do so, knowledge of personal, epidemiological, and social-cultural factors that increase the risk of depression, as well as of protective factors that reduce the risk, is needed. Understanding risk and protective factors helps detect depression in pregnant women and postpartum mothers early. Howard classified depression risk factors into three categories: social, psychological, and biological risk factors [34].
2.2.2 Social factors

Domestic violence and abuse are identified as having strong association with perinatal depression, both antenatally and postpartum [34, 35], and childhood abuse is a risk factor for development of depressive symptoms during the antenatal period [36]. Additionally, emotional abuse during pregnancy, past sexual abuse and intimate partner violence before and during pregnancy are strong predictors for postpartum depression [2, 29, 35]. In regard to marital relationship, marital conflict is also identified as strong risk factor for perinatal depression among women in Asia [27] and Africa [37]. However, another review found domestic violence as having small to medium associations with depression during pregnancy [38].

Exposure to stressful life events is characterised as a medium to strong risk factor for maternal depression [34]. Both daily hassles, such as work and time pressure, and life events, such as divorce and death in the family, have medium associations with symptoms of depression during pregnancy and postpartum [38]. On the other hand, more serious life events, such as death of a loved one, divorce or relationship breakdown, job loss, and moving home, have a strong association with postpartum depression (d = 0.61) [39]. This strong association is particularly true for studies reported from Britain and North America, but is not the case for those conducted in Asia.

Despite being characterised as a medium risk factor for antepartum and postpartum depression in several reports [34, 37, 38], poor social support is identified as a strong risk factor in other reports. Perceived social isolation during pregnancy is a
strong risk factor for postpartum depression [39, 40], particularly when support from a partner is absent [38]. Women from both developed and developing countries are negatively affected by the absence of support, while support from in-laws can become a source of conflict for Asian women when in-laws interfere with child nurturing [27].

Reproductive intention is classified as a medium risk factor for antenatal depression [2, 34, 38], especially in premarital women in Asia [27]. Reproductive intention refers to whether a pregnancy is prearranged. Unplanned or unwanted pregnancy is a low risk factor for development of depression symptoms during the postpartum period [39], however findings regarding magnitude of this association have been equivocal.

Another social risk factor that has various levels of association is low socioeconomic status [34]. Moreover, response to baby gender (mostly to baby girls) has a medium association with postpartum depression among women in India and China, but not in Western countries [39]. Being single is also a strong risk factor [2]. A review found infant-related factors such as the infant health problems, stress with childcare, and exhaustion after childbirth were risk factors for development of postpartum depression [27].

2.2.2.1 Psychological factors

Personal history of psychopathology, including depression and anxiety during pregnancy and history of psychiatric illness, are consistently found to be predictive of postpartum depression [29, 34, 37, 39]. Using Cohen’s classification of effect size, which are small (d < 0.2), medium (d = 0.2 – 0.5), and large (d > 0.5) [41], it is reported
that history of psychopathology has effect sizes ranging between 0.58 and 0.75 [39].

Women who have history of postpartum depression or maternity blues have a higher risk of experiencing antenatal and postpartum depression in subsequent pregnancies [3]. However, family history of psychiatric illness is a small risk factor for perinatal depression [39].

Personality traits are a medium risk factor for postpartum depression. This includes neuroticism, which has a small to moderate association with postpartum depression (d = 0.39), and negative attribution styles such as pessimism, anger, and ruminations [39]. A review reported poor body self-image (weight consciousness) and personality disorders, such as avoidant, dependent, and obsessive-compulsive, as having associations with development of postpartum depression [27].

2.2.2.2 Biological factors

Biological factors that influence risk of maternal depression consist of age, genetic and hormonal susceptibility, chronic diseases, medical illness, and pregnancy complications. Several factors, such as having an illness, have different magnitudes of association with depression during pregnancy (antenatal depression) compared to the postpartum period.

Being young and earlier age of pregnancy are among biological factors associated with both antenatal and postpartum depression [2, 27, 34, 37]. Additionally, having health problems, such as chronic illness and medical illness and multiple births, are medium risk factors for development of depression symptoms after birthing [34].
In studies conducted in Indonesia, risk factors for antenatal and postpartum depression have included history of depressive episode, marital adjustment, financial constraints, being unemployed after deciding to resign because of pregnancy, having a husband who is unemployed, unplanned pregnancy due to a premarital sexual relationship, and stressful life events, such as husband’s physical or mental illness [25, 42].

2.2.3 Detection, assessment and treatment for perinatal depression

Screening for perinatal depression can be conducted by a range of people, from non-specialists to mental health professionals, with appropriate training. It is suggested that practitioners ask the woman whether she feels let down and unloved, feels tense from arguing, or has frequent unpleasant and distressing social interactions [43]. A case-finding approach consisting of two Yes-No questions was introduced by the National Institute for Health and Clinical Excellence (NIHCE) in primary care samples in the UK [44, 45] and in the identification of perinatal depression in literate women in urban and suburban areas in the US [46]. This approach had high and acceptable sensitivity of 100% (95% confidence interval [CI] 77%-100%), specificity of 68% (95% CI 58%-76%), and positive likelihood ratios of 3.03 (95% CI 2.28-4.02)) [47].

Those questions are:

Over the past two weeks:

1. Have you ever felt down, depressed, or hopeless?
2. Have you felt little interest or pleasure in doing things?
A third question is considered if a woman answers Yes to either of the initial screening questions: Is this something you feel you need or want help with?

A more in-depth screening tool that leads to diagnosis may be used following a positive finding. The most frequently used tools for perinatal depression screening are the Beck Depression Inventory (BDI) and the Edinburgh Postnatal Depression Scale (EPDS). The latter has been reported as having higher sensitivity [48]. The Edinburgh Scale is a simple 10-question screen that asks about depression and anxiety-related symptoms over the past seven days [49]. Completed by mothers, scores of this scale range from 0-30 and a cut-off score of ≥10 is an indication of depression. An evaluation of this scale for antenatal screening in the UK found a sensitivity of 100% and a specificity of 68%. Whereas, use of the scale for postpartum screening found a sensitivity of 100% and a specificity of 65% [47]. Similar results were found in a review study of African populations, in which the author reported sensitivity as 94% and specificity as 77% [50]. An affirmative response on question 10 (a suicidality indicator) also constitutes a positive screen result [22].

Potential harm in regard to screening is possible if a clinical decision about a mental disorder is made only on the basis of a screening result (i.e. misdiagnosis, labelling and stigma) [34]. Screening techniques are not designed to diagnose mental disorders, but rather are tools to identify women likely to be experiencing mental illness and for whom further comprehensive psychosocial and clinical assessments are needed to determine diagnosis.
When more in-depth understanding of depression symptoms is required, continuing assessment to determine severity of symptoms and general functioning can be carried out using BASIS-24 [3]. This 24-item scale measures symptoms and general functioning in six major areas: depression/functioning, relationships, self-harm, emotional lability, psychosis, and substance abuse. Furthermore, an interview that addresses duration of symptoms, degree of impairment, or comorbid psychiatric disorders is required to meet the DSM-IV diagnostic criteria for depression [3], using Structured Clinical Interview for DSM-IV (SCID) or the one specifically for perinatal depression (SCID-PND) adapted by Gorman et al. [51]. Although such interviews are generally conducted by mental health specialists, a cluster randomised controlled trial study in India showed that, with training and supervision by specialists, lay people can effectively use the tools [52].

Screening for perinatal depression does not improve depression outcomes unless there is systematic follow-up, involving treatment of the disorder using a comprehensive approach. Treatment of perinatal depression not only decreases depression symptoms, but has a positive impact on the physical health of mother and infant, quality of the mother-child interaction, infant weight and height, and child development [53]. Earls [22] further suggests that treatment must address the mother-child dyad relationship.

Treatment of perinatal depression using psychotropic medicines is less likely to be an option because of possible effects for the foetus through the placenta or to the infant through breast milk, despite limited evidence for such effects [3]. On the other
hand, psychotherapy is an option [23, 24], with a number of studies both from high-income and low- and middle-income countries demonstrating effectiveness, both as a sole approach and in conjunction with pharmacotherapy. Several evidence-based treatments have also been investigated, such as interpersonal psychotherapy (IPT) and cognitive behaviour therapy (CBT). IPT addresses the elicitation of social support, interpersonal conflicts, role transitions, and unresolved grief that can improve symptoms and social functioning. In Australia, a trial on group IPT for postnatal depression found it was effective in reducing depression symptom scores right after the treatment and continuing to three months later, and showed improvement in interpersonal relationships with partner, infant, and social support network [54].

In contrast to IPT, CBT targets negative thinking and behaviours regarding unrealistic expectations to be a ‘perfect’ mother or sense of shame at not being overjoyed with their infant, and engagement in pleasurable and rewarding activities [3]. The effectiveness of CBT among pregnant women followed up nine months postpartum has been reported from Pakistan [6]. The Thinking Healthy Programme increased the mother-baby interaction, rate of immunization and family planning. Likewise, individual modified-CBT for low-income women in developed countries was reported to be feasible and acceptable [55].

A study using an eclectic approach have demonstrated positive results in reducing symptoms of depression around childbearing time [10]. This study found that treatment using a multicomponent intervention consisting mostly of psycho-education combined with structured pharmacotherapy when needed was effective in improving
the health status of mothers with postnatal depression up to three months following the treatment. The psycho-education approach in this trial combined information about symptom recognition and management, problem-solving and simple behavioural activation, and cognitive techniques.

Another type of treatment involves focusing on the relationship between mind and body. Progressive muscle relaxation, yoga, and awareness-enhancing meditation are modalities that have also been reported to be effective [3].

2.2.4 Integrated care for perinatal depression

Several guidelines for treatment of depression, including perinatal depression, employ a stepped care model of care and an integrated care pathway, especially for primary mental health care services. Stepped care offers intervention that matches level of need and individual preference. The clinician makes a judgment to determine what would deliver the best, sustained health outcomes. Therefore, treatments should be changed following patient progress, expectations, confidence in the therapist, and suitability of the treatment. The patient care plan is constantly reviewed through active case management. For depression, NICE (National Institute for Clinical Excellence) in the UK suggests a broad range of treatments, including CBT, IPT, Brief Dynamic Interpersonal Therapy (DIT), Couple Therapy for Depression, and Counselling Depression [56]. The stepped care model of care adopted by NICE consists of several steps, below:
1. Step one includes supported self-management of psychological and emotional wellbeing, social prescribing, peer experts and mentors, health trainers, and access to e-mental health services.

2. Step two comprises co-ordinated care involving the primary care team, and includes provision of low intensity therapy and links to social support services.

3. Step three comprises high intensity psychological therapies and/or medication for people with more complex needs who may need collaborative care.

4. Step four comprises specialist mental health care, including extended and intensive therapies.

In Australia, a national initiative addressing depression, beyondblue, suggests guidelines for effective mental health care in the perinatal period that consists of: 1) routine antenatal and postnatal care, 2) care of women experiencing psychosocial factors and/or symptoms, and 3) care of women experiencing depression or related disorders [57]. First, routine antenatal and postnatal care consists of information, assessment of psychosocial factors, identification of an appropriate health professional to provide follow-up care, and administration of the Edinburgh Postnatal Depression Scale (EPDS). The second type of care focuses on prevention and comprises the following activities: a) triaging to determine severity of psychosocial factors and/or symptoms, b) collaborative decision-making on psychosocial support, and c) on-going monitoring. The management of depression and related disorders has four actions: a) triaging to determine severity of disorder, b) possible referral to a psychiatrist, c)
collaborative decision-making on psychosocial/psychological intervention and/or pharmacological treatment, and d) ongoing monitoring.

The World Health Organization published a manual for psychosocial management of perinatal depression, called ‘Thinking Healthy’, as a supplement to the mental health Gap Action Programme-Intervention Guide (mhGAP-IG) [58, 59]. The manual is intended for use by non-specialist workers, including CHWs, especially in resource-constrained settings. It uses CBT principles and is enriched with culturally appropriate illustrations broken down into three steps: 1) step one is learning to identify unhealthy thinking, in which mothers are educated about unhealthy thinking styles and learn to identify them; 2) step two is learning to replace unhealthy thinking with helpful thinking that helps mothers question the accuracy of unhealthy thoughts and suggests alternative thoughts that are more helpful; and 3) step three is practicing what called ‘Thinking and Acting Healthy’. This step suggests activities to help mothers practicing helpful thinking and more helpful behaviour, and is assisted by a tool called Health Calendar that consists of a pictorial and verbal key messages.

2.3 Service delivery, pathway, and governance for perinatal depression

Service delivery for perinatal depression in Indonesia should involve integration of maternal care and mental health care. For treatment to be attained for all women, an understanding of the primary health care system, maternal care, as well as the mental health care system is required. These three systems are explained in this section.
2.3.1 Primary health care

Primary health care (PHC) is the first-line health service which, according to the Institute of Medicine, is an integrated, accessible service addressing a majority of personal health care needs in a sustained partnership with patients, and practicing in the context of family and community [60]. Primary care is first-contact, continuous, comprehensive, and coordinated care provided to populations undifferentiated by gender, disease, or organ system [61]. It is a central level of a health system with which other levels of care (secondary and tertiary) need to integrate. There are five principles of PHC: equity, prevention, appropriate technology, intersectoral action, and community participation [62].

The health system of Indonesia adopts decentralized governance in which organisation of the health service occurs under two key actors, the Ministry of Health (MoH) and the Ministry of Home Affairs (MoHA) [63]. In the public sector, tasks and responsibilities are shared on a concurrent basis between central, provincial, and district/municipality levels of government. Public primary health care is the responsibility of local government, particularly for provision of physical and social health services, but finance is managed together with the central government (MoH).

The PHC policy model in Indonesia consists of five levels of care: 1) home; 2) community; 3) basic professional; 4) first referral; and 5) higher referral [62] (Table 2.1). PHC centres deliver 13 programs, including maternal and child health (MCH), family planning, midwifery, nutrition, health education, laboratory, hygiene and sanitation, communicable disease control, health nursing, prevention and treatment of
common diseases, dental, optical, and administration. PHC centres provide daily services and the workload of health personnel is heavy. To illustrate, the ratio between number of health workers in a PHC centre and population in the coverage area is 23-25 workers for 30,000 people [64], meaning that, on average, a health worker provides services to 240 people a day.

Individuals and families are responsible for health care at home. At the community level, health care is provided by community self-reliant activities, i.e. posyandu (integrated health services post or ISP) and Dasa Wisma (ten-household unit, the smallest aggregate in a village consists of ten households).

Table 2.1 Primary Health Care Policy Model

<table>
<thead>
<tr>
<th>Hierarchy</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home level</td>
<td>Individual and family</td>
</tr>
<tr>
<td>Community level</td>
<td>Community self-reliant activities, e.g., Posyandu (Integrated health services post or ISP) and Dasa Wisma (Ten Household Unit)</td>
</tr>
<tr>
<td>Basic professional level</td>
<td>PHC centre (puskesmas), PHC sub clinic, mobile health clinic, village health post (VHP), village maternity house (VMH)</td>
</tr>
<tr>
<td>First referral level</td>
<td>District hospitals and other service units</td>
</tr>
<tr>
<td>Higher referral level</td>
<td>High-technology-based hospitals and other health service organisations</td>
</tr>
</tbody>
</table>

Adapted from Hunter [62]

At the core of PHC is the PHC centre, called puskesmas, an operational service delivery of the district health department for integrated health care that provides primary care and is a driver for community participation [65]. These sub-district level centres are managed by professional health workers hired by the government. To increase service coverage PHC centres are supported by sub-clinics, called puskesmas
pembantu (pustu, PHC sub-clinic), and puskesmas keliling (mobile health clinic). At the village level, PHC centres or PHC sub-clinics are supported by a village health post or Poskesdes (Pos Kesehatan desa) and village maternity houses or Polindes (Pondok bersalin desa).

An ISP represents intersectoral cooperation between the Ministry of Health and the Ministry of Home Affairs at the village level [62]. The Ministry of Home Affairs establishes ‘national working groups of ISP’ to guide operationalisation of ISPs. Working groups are established at all levels of government: national, province, district, sub-district, and village level [66]. An ISP is established by the village head based on recommendations of the village level working group when there are at least 68 children under five years of age [67] and organised monthly in an administrative ward of the village [11, 66]. Even though ISPs are run by the community, PHC centres have a responsibility to ensure there are ISPs in their coverage area. PHC centres must supervise ISPs and have their health workers present when an ISP holds monthly activities, mostly represented by midwives and auxiliary nurses. Centre managers are encouraged to motivate and provide training to health workers working in the community. It provides a basic health program whose main goals are to reduce infant mortality and improve the health and nutritional status of children under five years old and that of pregnant and breastfeeding mothers [68]. To achieve these goals, five main services are provided: MCH, family planning, immunisation, nutrition, and diarrhoeal control. Additional services are provided when the community demands [11]. Figure 2.1 displays the primary health care system and networks up to level four hierarchies.
2.3.2 Maternal care in Indonesia

Maternal care is provided at all levels of health care, from ISPs to hospitals (public and private). Care includes antenatal, delivery, postnatal, and infant care [65].

2.3.2.1 Antenatal care

Basic maternal care in Indonesia is covered in the policy regarding maternal and newborn health and includes antenatal, birth, and postnatal care. In line with the Millennium Development Goals (MDGs), the aim of this care is to reduce maternal and newborn mortality. Antenatal services have the objective of attaining healthy mothers...
and babies by identifying complications associated with pregnancy or diseases that may adversely affect pregnancy [65]. At the district level, health care is required to provide interventions that meet the Standard for Minimum Care, including weighing, measuring blood pressure, measuring fundus uteri, provision of iron/folic acid supplements, tetanus toxoid vaccinations, interpersonal communication and counselling, and blood and urinate examination.

Pregnant women in Indonesia are recommended to visit a health facility during the first trimester (K1) and have at least four antenatal care checks (K4), one in the first trimester, one in the second trimester, and two in the third trimester. A national health survey, called the Primary Health Survey (Risksdas) 2013, reported that almost all pregnant women get K1 service (95.4%), while coverage for K4 was 70.4% [69]. The most preferred health facilities for antenatal care were midwives’ clinics (52.5%), PHC centres (16.6%), ISPs (10%), and hospitals and village maternity houses (6.5% and 6%, respectively).

2.3.2.2 Delivery care

Safe delivery is an important step in reducing health risks for mothers and children. The maternal health program emphasizes that delivery should be assisted by trained health workers (GPs, specialists, and midwives) in a health facility. To meet the target, Indonesia has trained midwives and posted them in villages as village midwives who help the birthing process [70] and has built village maternity houses (Polindes) and village health posts (Poskesdes) that are supplemented by a house for village midwives [64].
Riskesdas 2013 reported that 70% of deliveries took place in a health facility, while the remaining 30% happened at home or elsewhere. In addition, the most preferred health workers to assist with delivery were midwives (70%), followed by specialists (18%), and traditional birth attendants (TBAs, 11%) [71]. Despite prohibition on having TBAs assist for in the delivery process [72], a significant number of women use their services because of financial constraints, beliefs that TBAs come from and share the same culture, difficult access, social distance between the community and village midwife, as well as domestic responsibilities [73].

2.3.2.3 Postnatal care

Postnatal care aims to identify and treat complications arising from delivery and provide an opportunity to support the mother with important information on taking care of herself and the baby. Since 2008, the recommended frequency of postnatal care is at least three times: twice in the first week (aged 6-48 hours (KF1) and aged 3-7 days (KF2)) and when the baby is aged between eight and 28 days (KF3) [64]. Services during this period include examination of: 1) blood pressure, pulse, temperature, and respiration; 2) fundus uteri; 3) lochia and vaginuum; 4) breast feeding initiation; 5) distribution of vitamin A; and 6) family planning service. Postnatal care can be provided in a PHC centre, a private clinic, or an ISP, and those who can provide this care are GPs, specialists, midwives, and nurses. Riskesdas 2013 reported that coverage of postnatal care was 82%, 52%, and 43% for KF1, KF2, and KF3, respectively. However, only one third of postnatal women completed postnatal care [69].
2.3.2.4 Pathway of maternal care in primary health care

PHC provides integrated antenatal care, which is supported by GPs, nurses, midwives, and pharmacists. Maternal care in PHC adopts integrated care and is comprehensive, meaning that it provides care for other diseases or unique conditions that arise during pregnancy. Included in these conditions are complications, communicable and non-communicable diseases, and mental health problems. Figure 2.2 displays the conceptual framework for this care as presented in the guideline book for integrated antenatal care [72].
2.3.3 Mental health care in Indonesia

The mental health care system in Indonesia operates based on the Mental Health Law published in 1966 and Health Law (Law Number 36/2009) [74]. A new Mental Health Law was legalised recently at legislative level in August 2014 (Law number 18/2014) [75]. The new law is more detailed and comprehensive than the previous one, comprising of ten chapters and 91 articles compared to seven chapters and 14 articles in the previous law. Previously, mental health care was governed by the central government, i.e. the Minister of Health, and focused mostly on cure of people.
suffering from mental illness which placed patients as passive agents within the patient-professional relationship. On the other hand, the new law addresses mental health care on the basis of rights of general population and those who have mental health issues receive care that is promotive, preventive, curative, and rehabilitative.

According to the new law, mental health care is the responsibility of three parties: central government (President), local government, and the community [76, 77]. This is consistent with Health Law No. 36/2009 that places mental health as the responsibility of central government, region, and community [74]. Twenty-six of 34 provinces throughout the country have state mental hospitals and in total there are 48 mental hospitals (state or private) across the country [78]. The new law explicitly states mental health services in the public service are integrated with primary health care, i.e. at PHC centre and networks, and referral system [75]. Community-based organisations and institutions can also be involved with mental health service provision in advocacy, promotion, prevention, treatment, and rehabilitation.

2.3.3.1 Population data on mental health and system of care

Population data on mental health in Indonesia is documented in several studies and a national survey. The World Health Organization (WHO) Atlas 2005 presented prevalence of mental disorders in adults in 11 Indonesian cities which was estimated at 18.5%. The figure was based on a mental health household survey conducted by the Indonesian Psychiatric Epidemiologic Network [79]. Primary Health Research (Riskesdas), a national health survey, reported prevalence of mental disorders using household data sources. The survey is conducted every five years, and in the mental
health area focuses mostly on common mental and emotional disorders, but in the most recent survey in 2013 it also included severe mental disorders (psychosis).

National prevalence of mental and emotional disorders among people aged ≥15 years was estimated at 6.0% of the Indonesian population, dropping from 11.6% in similar research in 2007. The assessment used a Self Reporting Questionnaire developed by WHO, a scale that contains 20 Yes/No questions and data was analysed based on individual responses (N=1,027,763). The questions asked about emotional experiences over the last 30 days and score ≥6 was classified as having mental or emotional disorder [69]. Mental and emotional disorders, also known as psychological distress or emotional distress, involve situations where an individual experiences emotional changes that may develop into a pathological state [80]. The survey indicated that women suffer from these disorders at a higher rate than men and prevalence in urban areas was higher than in rural areas.

The national prevalence of severe mental disorders was estimated to be 1.7 per million or 0.17% of the population [69]. Severe mental disorder was assessed by asking about the number of family members who suffer mental illness. It is assumed that the exact numbers may differ from the survey, considering that results were based on participant reports without involvement of mental health professionals.

In East Java province, the prevalence of mental and emotional disorder is estimated to be 6.5%, slightly higher than the national figure [71]. The unemployed and housewives are the occupational groups with the first and second highest prevalence rates, respectively, of people with mental emotional disorders [81].
Analysis of the symptoms of mental and emotional disorders showed that somatic complaints dominate other symptoms (emotional and interest) [80]. Riskesdas 2013 reported that, while 61.8% of people with severe mental disorders received mental health services at least once during their illness, only 26.6% of those with common mental disorders received services [69]. The data indicates that people in the community are more likely to be aware of severe mental disorders and the need to seek help, as compared to mental emotional disorders. These findings suggest that: (1) people with mental emotional disorders are not aware of their mental illness due to the dominant somatic nature of their symptoms, and (2) this may hinder them from seeking help.

The Riskesdas 2013 report indicates a significant number of mental health problems in the community, especially for mental and emotional disorders. Women, the unemployed, and the less-educated are more likely to suffer from these disorders. It is possible that among these women are pregnant women and postpartum mothers. However, there is no data to confirm this assumption. Help seeking behaviour for this disorder is low and the treatment gap is unknown. In addition, there is not enough information on the ability of health workers to identify mental health-related somatic complaints.

2.3.3.2 Integrated mental health in the primary health care system

In Indonesia, an integrated mental health care model was initiated in 1976 and developed accordingly. The integration model began with regular visits of mental health specialists from mental hospitals to PHC. It changed to a model of upgrading
skills for health workers in PHC and general hospitals by training health workers in PHC centres to conduct early detection and diagnosis of mental disorders and provide treatment [77]. Because the coverage of these services was low due to a lack of support from the health department at district level, mental health services have since become district level responsibility under Ministry of Health Decree No. 1457/Menkes/SK/X/2003 [82]. Thus, PHC centres have become the first line of service, while mental hospitals became the referral endpoint. To support service delivery, official guidelines on management and treatment of mental disorders and referral procedures to and from secondary/tertiary care were distributed to, and available in, a majority of primary health care clinics [83].

The 2004 tsunami in Aceh prompted development of a new model of integration that involves lay people in the local community (cadres or CHWs). Mental health cadres at the village level were trained to work with nurses to identify villagers in need of mental healthcare and treatment, raise awareness and reduce stigma about mental illness, provide referrals to mental health services, and conduct home visitation and outreach to families that require extra support [84]. In the pilot project called Mental Health Alert Village, the mental health care system integrated three levels of services: at village level through mental health cadres, at sub-district level represented by puskesmas (PHC centres), and at district level by hospitals. Village cadres were trained to work with community mental health nurses (CMHNs) from PHC centres and acted as a bridge between sub-district and village levels of care by allowing CMHNs to access communities. The pathway of mental health care began with cadres in the village who identified cases and referred them to the CMHN. Referral was followed-up
by home visitation to care for the patient, coordinated by PHC centre and district hospital, while home visitation continued through CHWs and CMHNs. This model was effective in increasing awareness of mental illness and treating those with mental disorders. Mental health patients and caregivers reported improvement in patient mental health, measured using a 5-point Likert scale (where 1=the worst problem that they had ever experienced and 5=no problem at all). Patients showed significant improvement in scores from 1.40 (baseline) to 3.31, while caregivers reported increased scores from 1.40 to 3.23 (p<0.0001 for both groups).

A different model of integration has been practiced in Jogjakarta, where mental health services have been provided by psychologists in PHC centres since 2010. Patients who come to a PHC centre can receive psychological services for less than US $1 [85]. Services provided include psychological assessment, detection of psychotic cases, consultation, psychoeducation to patients with psychosis and their caregivers, and monitoring of medication adherence [86]. A model of mental health services in PHC centres has also been implemented in Surabaya [87, 88] and is currently being developed in Jakarta [89].

These findings demonstrate that the policy of integrated mental health care in PHC exists, but implementation is diverse across settings. Policy implementation in Aceh and Jogjakarta demonstrates a diverse model, which could be applied in other places.
2.3.4 Integrated mental health within maternal health care: the gap and areas for improvement

In regard to mental health care in maternal care, integrated antenatal care indicates possibility for identification of mental health problems in pregnant women (see Figure 2.2 Conceptual framework of comprehensive and integrated antenatal care). As stated in guidelines for integrated antenatal care [72], examination of mental health is conducted by asking relevant questions on signs of emotion and behaviour, such as abrupt changes in behaviour, worries, withdrawal, self-talk, and inadequate self-care (not taking bath). Information can be gathered from women, husbands, relatives, CHWs, or other significant sources [72]. If the problem is persistent and may be disruptive to the mother and infant, referral to a psychiatrist follows.

Despite available policy and guidelines, data supporting implementation of this conceptual model is scarce. Neither health surveys nor Indonesia Health Profiles present information regarding maternal mental health in particular. Only a small number of surveys in maternal mental health have been conducted [30].

Data on the prevalence of perinatal depression [30] and availability of guidelines for integrated mental health within maternal care [72, 77] are important foundations for development of integrated mental health in maternal care. In addition, availability of ISPs for maternal care in the community provides an opportunity for early identification of mental health concerns during pregnancy and postpartum. If identification of perinatal depression in primary care is difficult for formal health workers to carry out due to time constraints, as is the case in other countries [90],
identification during ISP may address that barrier. Further, lessons learnt from Aceh could be used to initiate an integration model of mental health in maternal care at community level in ISPs.

2.4 Human resources for maternal mental health

2.4.1 Specialists (psychiatrists, psychologists, obstetricians and gynaecologists, midwives)

In 2008, the Indonesian Ministry of Health set a target of 90% of births to be assisted by medical staff by 2015 [14]. The standard of midwifery service delivery stated that antenatal care should be provided by specialist doctors in obstetrics and gynaecology (obstetricians), general practitioners (GPs), midwives, and nurses [69]. Riskesdas reported that the most preferred health providers of antenatal care and birthing is midwives (68.6%), followed by obstetricians (18.0%), GPs (0.5%), and nurses (0.3%) [69]. Those who choose midwives mostly are from rural areas, have low educational background, and are of the lowest quintile of wealth level; while urban women and wealthy women tend to go to obstetricians.

The number of midwives in Indonesia in 2012 was 111,736 and this health profession makes up the highest proportion of professionals in PHC centres (30.67%) [78]. The minimum number of midwives at an outpatient health centre is four, and for inpatient services is seven. This standard number of midwives was exceeded by 56% of health centres, and 37.6% had fewer than the standard number. In addition, there are more than 3,000 registered obstetricians and gynaecologists, but they do not work in PHC centres [64].
In the area of mental health, data released in 2011 indicates that human resources for mental health care in Indonesia mostly rely on psychiatrists [83]. However, the number of these professionals is very low, at 0.0001 per thousand population (this figure was 0.0021 in a 2005 report) or only 600 psychiatrists [91] in the country. The new Mental Health Law in 2014 declared human resources in mental health care consist of: (1) mental health specialists, (2) non-specialist health professionals, and (3) other workers trained in mental health [75]. Consistent with policy, Law Number 36 Year 2014 about Health Personnel refers to clinical psychologists as health workers [92] and Health Profile 2016 recorded their number at 1,192 [78]. There is no available data on the number of other health workers expected to participate in mental health, such as neurosurgeons, psychiatric nurses, neurologists, social workers, occupational therapists, and medical doctors [83]. Midwives are another group of health professionals expected to provide mental health care in primary care [77], but their role is not clear. Guidelines for mental health services in primary care state that mental health specialists act as advisors, consultants, and trainers, and that they supervise non-specialists [77].

Limited data on human resources in mental health and unclear responsibility for detection and treatment indicate the low priority of mental health in the health care system. This low priority is also evident in expenditure on mental health which is very low, at only 1% of the total national health budget [76]. In addition, unavailability of data, despite acknowledgement of the wide range of health workers in the area and availability of training facilities, may be an indication of low priority or low capacity. This shortage in human resources in mental health leads to calls on non-specialist
health workers and informal sources, particularly from the community, to participate in mental health care. Projects in Aceh, Indonesia, and other countries have shown that GPs with mental health training (GP+), CMHNs, and cadres or CHWs can take on such a role [84, 93].

2.4.2 Non-specialist health workers (GPs, nurses)

As presented in Riskesdas 2013, doctors (or GPs) and nurses are non-specialist health workers providing maternal care services. The ratio of GPs in PHC centres in Indonesia is 16.06 per 100,000 population, while the ratio for nurses is 87.65 per 100,000 population. On average, there are 1.87 GPs and 11-12 nurses per PHC centre [64]. In maternal care and delivery, they make up less than 1% of health workers providing the care [69].

In mental health, GPs in PHC centres are the only health workers in primary care with authority to prescribe or continue prescription of psychotropic medicines. According to the Mental Health Law (Law Number 18 Year 2014), GPs are mandated to diagnose mental illness [75], and the WHO Mental Health Atlas 2011 country report for Indonesia stated that nurses are not allowed to diagnose and provide treatment for mental illness in primary care [83]. On the other hand, guidelines for mental health services in primary care published by the Ministry of Health in 2010 stated that GPs, nurses, and midwives in PHC centres are expected to carry out early detection and treatment [77].

To improve capacity to provide mental health care, training in mental health could be provided for non-specialist health workers. A review suggested that non-
mental health specialists, including GPs, nurses, and midwives, could deliver psychosocial interventions for common mental disorders [94]. Training for health workers in PHC and general hospitals in Indonesia was conducted regularly between 2003 and 2006. For example, 300 people were trained during 2003-2005 [79], and GP+ (GPs in PHC with four-day training in primary care psychiatry) and community mental health nurses (CMHNs, nurses with training in psychiatric nursing intervention and diagnosis and management of common mental disorders) were trained in Aceh following the tsunami [93]. To support training programs for non-specialists, the Ministry of Health published a training curriculum on mental health counselling [95], which complements modules produced during the Aceh program. Unfortunately, there was no such training between 2006 to 2011 [83].

2.4.3 Informal workers (Community Health Workers)

2.4.3.1 Definition

Community Health Workers (CHWs) have been defined by the WHO Study Group as “…members of communities they work,…selected by the communities,…answerable to the communities for their activities, …supported by the health system but not necessarily a part of its organization,…have shorter training than professional worker” (page 3) [96]. There are many different titles of CHWs used in different countries and they are diverse in terms of gender, age and status. Despite this diversity, there is agreement in regard to two factors: (1) they come from the communities they serve and (2) they have little or no secondary or tertiary education. There is no gender specifically attached to this type of worker, but available evidence
suggests that female CHWs dominate. Moreover, traditional healers are not covered by this definition unless they are specifically trained as part of a CHW program [97].

The role of CHWs has changed since the concept was introduced in the mid-1950s. At first, they served as health care providers and advocates for the community and agents of social change. In the 1980s, they acted as a bridge between community and formal health services to increase effectiveness of curative and preventive services, while in the millennium era they primarily focused on recognition of service needs met by existing health services [98]. The current role is rooted in the need to deliver PHC at the community level even in a setting where facilities are not present [99], as CHWs are able to provide services in households when access to the formal PHC system is limited.

2.4.3.2 The role of community health workers internationally

2.4.3.2.1 Community health workers in health area

CHWs are classified as generalist or specialist based on the work they perform. Generalist refers to CHWs who are “expected to perform a wide range of functions, include home visits, environmental sanitation, provision of water supply, first aid and treatment of simple and common ailments, health education, nutrition and surveillance, perinatal and child health and family planning activities, communicable disease control, community development activities, referrals, record-keeping, and collection of data on vital events” (page 8) [96]. On the other hand, specialist CHWs undertake tasks in a specific health area, for example perinatal and child health [100], diabetes [101, 102], malaria control, HIV/AIDS care, or the elderly [31].
Despite the existence of specialist CHWs, most CHWs were trained and deployed as perinatal and child health care providers and reproductive health workers such in antenatal, intra-partum and postnatal care, exclusive breastfeeding, perinatal and child nutrition, immunizations and family planning and were involved in the preventive and therapeutic perinatal, newborn and childhood illnesses intervention [31]. Almost all CHWs driven interventional studies examined in this review showed a significant impact on the reduction of maternal, perinatal and neonatal mortality and improvement in perinatal and postpartum service utilization indicators.

2.4.3.2.2 Community health workers for mental health care

Recently, CHWs have also worked in the mental health area [103, 104], including as counsellors and psycho-educators using complex treatments [6, 52, 105, 106]. A range of high-quality randomized control trials (RCTs) have demonstrated the possibility of enhancing the skills of CHWs in mental health work. After receiving four days of training in mental health literacy, CHWs with no tertiary education showed the ability to identify symptoms of depression and psychosis in vignettes [107]. The ability to recognize psychosis remained at follow up, while recognition of depression was not maintained. Using vignettes, CHWs were reported as being able to identify symptoms of mental illness and determine appropriate elements of intervention which are culturally-accepted, including psychoeducation, cognitive restructuring, and imaginal exposure [108]. Characteristics of CHWs in this study were nurses and lay people interested in counselling and had strong interpersonal skills.
RCTs in the community have also demonstrated the ability of CHWs to screen and provide interventions for people with mental disorders. CHWs in India conducted screening and assessment using a clinical interview for common mental disorders [52]. In this project, CHWs who had no mental health background were trained for two months to provide psychological interventions, from psychoeducation to interpersonal psychotherapy and referral to mental health specialists, while the control intervention was treatment given by primary care GPs based on a treatment manual. Recently, CHWs who finished 10 years of schooling and had interpersonal skills were selected to get six weeks of training to deliver psychoeducation to people with schizophrenia [105]. The CHWs delivered intervention in the community based on a structured manual, while the control intervention was usual care provided by mental health specialist practitioners at a health facility [103]. Implementation of the project in collaborative community-based facilities, compared to facility-based care found no statistically significant differences between those settings in terms of disabilities related to schizophrenia, adherence with prescribed drugs and severity of symptoms. However, there was improvement in those three indicators in the collaborative community-based intervention group which included supervised CHWs [105]. It is clear from these studies that CHWs could take part in detection of mental health problems and provide treatment under supervision of mental health specialists. Yet, continuous and structured supervision is among the barriers to mobilising non-specialists to provide mental health treatment [109]. The use of conventional face-to-face training and supervision, and compensation mechanisms to motivate and sustain the informal workers are other factors that could inhibit scaling-up of the approach.
2.4.3.2.3 Community health workers for maternal mental health care

In maternal mental health, the role of CHWs is promising. In a study in Pakistan, CHWs were trained to provide intervention using a cognitive behaviour therapy (CBT) approach for clients with sub-syndromal depression [6]. Using an RCT design to compare CBT-contained visitations from trained CHWs to a similar number of visitations by routinely trained CHWs, they found that depression of the mother decreased and the mother had better overall functioning and perception of social support, had a higher rate of use of contraceptives, spent more time playing with the infant, and infants had less diarrhoea and were more likely to be immunised. This trial integrated intervention into CHW routine activity.

A decrease in depressive symptoms among mothers after 30 months delivery was more likely a result of combination of counselling and psychosocial support delivered by CHWs in a quasi-experimental study [9]. Counselling was carried out during CHW visitation to monitor the growth and development of the child and to teach healthy child-rearing practices to the mother. Intervention by trained CHWs to encourage sensitive and responsive interaction between mother and newborn results in lower depressive symptoms scores up to six months, compared to a control group who received routine postnatal care [110]. They also found a difference in infant secure attachment between both groups (116/156 vs 102/162, p=0.029).

The above studies demonstrate the possibility of task shifting of lay people in maternal mental health. In most studies, home-based intervention was applied, meaning trained CHWs visit the mother at a convenient time. In addition, maternal
health may be better achieved when mental health is integrated in perinatal and child healthcare services. Learning from these examples, this proposed study investigates a care model which involves CHWs in integrated mental health in primary health care in Surabaya, Indonesia. As CHWs in Surabaya are involved mostly in maternal and child health [31, 62], which is common in Indonesia [11], this study investigates the possibility of an integrated perinatal care model, which involves CHWs contributing to detection and referral of perinatal depression in primary health care in Surabaya.

2.4.3.3 Community health workers in Indonesia

CHWs in Indonesia are called cadres, and defined by the Ministry of Health as members of the community who are willing, able, and have time to run an ISP voluntarily [11]. They receive basic training in PHC, consisting of two stages of training: acceleration stage and escalation phase that consists of instruction for management and leadership [62]. Some villagers receive training in health and family nutrition improvement programs and assist in ISP programs. These are the CHWs of interest in this research. In 2012, there were 381,734 CHWs in Indonesia who serve 276,392 ISPs.

In performing their work in an ISP, CHWs are responsible for management of basic health services, such as completing paperwork, and updating data on the number of pregnant women, postnatal and breastfeeding mothers, and children under five years old in the community, and to encourage them to come to an ISP. During ISP monthly activity, CHWs educate visitors, provide maternal care, infant and child health, immunization, family planning, nutrition, and diarrheal disease control [11].
In regard to maternal care, *Risks* 2013 reported that 10% of women received this care in ISPs [69], indicating these women may receive care from CHWs and midwives or nurses from a local PHC centre. There are recommendations regarding the CHW role in maternal care. For pregnant women, CHWs are required to educate the community on family planning, antenatal care, nutrition, healthy lifestyle, and warning signs for pregnant women. CHWs are also required to organise maternal classes, which are delivered by midwives [11]. For mothers in the delivery process, CHWs should motivate them to go to midwives or doctors, and help them understand birthing signs and warning signs. Lastly, CHWs also educate postnatal mothers to initiate and maintain breastfeeding, on healthy life and nutrition, to go to health facilities for postnatal care, and understand warning signs and the importance of family planning. All of these tasks are in the manual for CHWs [111].

In the task manual, CHWs are recommended to recognise warning signs indicating mothers may be experiencing mental disorders during pregnancy and postpartum [111]. However, there is neither further explanation on this topic nor a link provided to access further information. In fact, CHWs in Aceh need to have training on identification of mental disorders to identify people experiencing mental health issues in the community and help them through facilitating access of nurses to the community [84]. In that project, CHWs were provided with training and skills to identify mental disorders, provide referrals, visit at home and outreach to the family, and raise awareness about mental illness. They were not trained to provide treatment, but rather were instructed to refer people experiencing mental health issues to a CMHN or other health worker. The project resulted in 70% of CHWs engaging in
routine home visits and awareness-raising. This success was presumably an indication of mutual benefits of the role sharing between CHWs and health workers: CHWs allow health workers to have access to the community who otherwise might consider CMHN as outsiders, whereas the role of CMHN in providing continuous care adds credibility to the work of CHWs. Based on this project, it is assumed that CHWs in other districts in Indonesia, especially in an urban area such as Surabaya, could be trained to take on a similar role as in Aceh. However, whether this idea is feasible and acceptable needs to be explored.

2.5 CHWs in integrated mental health within maternal health care

2.5.1 International evidence

A model of integrated mental health in primary care, including perinatal care, has been implemented in several low and middle-income countries (LMICs). The Perinatal Mental Health Project in South Africa was developed to integrate mental health screening and treatment in perinatal health services in a primary care setting [112]. This project involved training midwives to screen women for perinatal mood disorders during antenatal visits. The training comprised basic knowledge on perinatal mental health, basic counselling skills, mental health screening procedures, and strategies for referrals. All women visiting for antenatal care were offered screening by nurses and midwives, using Edinburgh Postnatal Depression Scale (EPDS) and RFA (risk factor assessment, a yes/no tick-form consisting of 11 risk factors for mental distress to augment the sensitivity of EPDS in local context). Those who screened positive were referred to an on-site counsellor and an on-site psychiatrist. Results of this project
suggested that the task shifting approach with on-going supervision and support improved capability to identify women’s mental health problems. A majority (87.8%) of women referred to mental health services reported an improvement in their presenting problem and almost 75% reported positive moods.

The Healthy Living Project in Pakistan [6] employed stepped-up care and task shifting. The CHWs, called Lady Health Workers (LHWs), in rural areas were trained to provide cognitive-behaviour-based therapy to mothers with depression. The trained LHWs provided weekly intervention to depressed mothers, while mothers in the control group received weekly intervention by routinely trained LHWs. Results demonstrated lower depression scores and disability scores, better overall functioning and perception of social support of mothers in the intervention group. In addition, infants in the intervention group were less likely to have had a diarrhoeal episode.

2.5.2 Knowledge gap in the Indonesian context

Evidence of effective involvement of lay people in integrated primary mental health care has been widely demonstrated as acceptable. In order for task shifting to be effective and not result in undesired problems, it requires availability of mental health specialists to assist and be available for referrals. In Indonesia, a similar approach to that implemented in Aceh has not been implemented in other provinces, especially in relation to perinatal depression.

Learning from integrated primary health care in South Africa, Pakistan, and India, action is needed to initiate integrated perinatal depression care in Surabaya. A
survey in Surabaya found that prevalence of perinatal depression was estimated to be between 16% and 22% [25, 30]. Therefore, it is necessary to improve the health of mother and her children, which can be achieved by early detection of the problem.

Policy and practices regarding involvement of CHWs in service delivery in primary care are also available in the context of maternal care in ISPs. This is parallel to the 2001 WHO report [113] which suggested that the reach of care involving integration of mental health into primary care should be dependent on available resources. Policy in maternal care provides the opportunity for CHWs to participate in mental health care. There are two factors that support this argument. First, responsibility charged to CHWs recognising mothers who may experience mental illness requires competencies in understanding the nature of perinatal depression. Second, CHWs are main agents in preserving the sustainability of maternal care in ISPs, whose position stands between community and primary health care system. This responsibility allows CHWs to become involved in task shifting of maternal mental health care in PHC. However, whether the idea is feasible and acceptable to the health care system and the community (pregnant and postpartum mothers) and CHWs themselves is unknown. A study that explores this issue and prepares stakeholders is required. Such study would benefit implementation of a proposed model.

2.5.3 Acceptability and feasibility of CHWs in maternal mental health care in Indonesia

A review of studies on the feasibility and acceptability of task shifting identified several factors that affect acceptability and feasibility [114]. In order for task shifting to
be accepted by service users it requires (1) satisfaction with services and of needs, specifically the realisation that CHWs were from the local community; and (2) personal characteristics of CHWs, such as personality, educational background, experience or knowledge, and gender (female). If CHWs are included in a service delivery model, they need support and supervision, the perception that mental health services are a priority and their involvement is part of a team in PHC. PHC staff may not accept task shifting as it may have a demoralizing effect if referrals increase their workload. In addition, mental health specialists may be concerned about the standard of care delivered by CHWs.

Feasibility of task shifting implementation requires consideration of logistical challenges, such as funding for transport and training, and infrastructure to deliver intervention; availability of CHWs with basic capabilities, such as literacy and sufficient income, and are free of family responsibilities. Other themes are self-perceived competency in delivering services, which also relates to the need for training and supervision, perception of workload, and strategies to overcome the burden of providing psychological intervention as additional task.

Another exploration of the acceptability and feasibility of task shifting [115] found that acceptability is generated by benefits of the approach, attitude towards mental health and people with mental illness, access to medication or treatment, type of services carried out for task shifting, and the contextually-accepted approach, such as involvement of local leaders, faith healers, and traditional healers. Themes raised for feasibility include logistic challenges, such as overburdened staff workload, facilities
to deliver mental health care, availability and competency of persons to carry out task shifting, training and supervision, and compensation.

An evaluation of the feasibility of CHWs being involved in implementing Millennium Development Goals intervention was carried out in Kenya [116]. Information was collected from CHWs, CHW supervisors, community committees, and officers from the Ministry of Health. In general, themes of feasibility are similar to previous studies [114, 115], namely: 1) characteristics required for CHWs to carry out the role; 2) clarity on CHW role; 3) remuneration and motivation; 4) workload; 5) training required; and 6) management and supervision. Furthermore, the study found characteristics of CHWs that need to be addressed for recruitment, including capacity to look after the community, dedication to work without payment, empathy and concern for the sick, general self-discipline, basic literacy, ability to speak in local and national language, and come from the local village and having lived there within the past two years. CHWs raised a need for financial incentives to take on these tasks in conjunction with social recognition. They also identified the need for clarity regarding workload, as part-time work is preferred. An appreciation for training was emphasized because it facilitates the referral process. In addition, coordinated and standardized training with refresher sessions that also target soft skills, such as counselling, are required. Finally, supervision was another important issue raised by CHWs and program managers. Issues regarding supervision include financial burden, clarity of supervision area, and facilities.
Results from the above-mentioned studies were used to build a conceptual framework regarding acceptability and feasibility of task shifting by CHWs in this research. The framework was used to generate research questions and study method design. The themes extracted from those studies in sum comprise: policy; service delivery; workforce or human resources that include availability, characteristics and competencies, training and supervision; facilities and/or infrastructure; and financing. These are among the elements of a health system defined by the WHO Health System Framework, i.e. the Six Building Blocks of Health Systems. These six building blocks are: service delivery; health workforce; information; medical products, vaccines and technologies; financing; and leadership and governance (stewardship) (see Figure 2.3). The WHO Health System Framework is a helpful means to describe, classify and locate health system constraints, to identify where and why investments are needed, and to explain what will happen as a result and by what means the change can be monitored [117]. Thereby it is a sound means to examine the feasibility of involving CHWs in service delivery in primary care in Surabaya.

Moreover, acceptability is influenced not only by the system but also by personal factors, such as perceptions towards benefits, and attitude towards mental health and people with mental illness, and social-cultural factors [115]. It is assumed that health system, social and cultural background, facilities and infrastructure influence perceptions of stakeholders in maternal mental health in Indonesia, which may be different to other countries. Whether task shifting by CHWs is acceptable and/or feasible for perinatal depression in the Indonesian context needs to be answered through a thorough study involving all stakeholders in service delivery care,
namely service providers, service users, and program managers responsible for relevant policy.

### THE WHO HEALTH SYSTEM FRAMEWORK

<table>
<thead>
<tr>
<th>SYSTEM BUILDING BLOCKS</th>
<th>OVERALL GOALS/OUTCOMES</th>
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<tbody>
<tr>
<td>SERVICE DELIVERY</td>
<td>IMPROVED HEALTH (LEVEL AND EQUITY)</td>
</tr>
<tr>
<td>INFORMATION</td>
<td>RESPONSIVENESS</td>
</tr>
<tr>
<td>HEALTH WORKFORCE</td>
<td>SOCIAL AND FINANCIAL RISK PROTECTION</td>
</tr>
<tr>
<td>MEDICAL PRODUCTS &amp; TECHNOLOGIES</td>
<td>IMPROVED EFFICIENCY</td>
</tr>
<tr>
<td>FINANCING</td>
<td></td>
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<tr>
<td>LEADERSHIP / GOVERNANCE</td>
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**Figure 2.3** The WHO’s Six Building Blocks of a Health System [117]
CHAPTER 3: Study Design and Methods

3.1 Aim/Research Question

This PhD study aimed to investigate possible roles of CHWs to identify and refer women experiencing antenatal and/or postpartum depression. This was achieved by examining stakeholder perceptions of: 1) feasibility of CHWs taking on these roles, 2) acceptability of CHWs taking on these roles, and 3) personal characteristics and competencies required for these roles. The stakeholders, whose opinions were sought to answer these questions, included:

1. Service users: pregnant women and up to one-year postpartum mothers receiving perinatal health care;
2. Service providers in primary health care (PHC):
   i. Doctors, nurses, midwives, and counsellors from PHC centres, and
   ii. CHWs;
3. Mental health specialists; and
4. District and community program managers.

3.2 Methodological approach

This qualitative study used framework analysis to answer the research questions. The framework was developed for applied research, particularly social and public policy, and addressed specific information needs and sought information with potential for actionable outcomes [118]. The research question of this study was primarily based on policy documents and the objective to understand public and
stakeholder perceptions regarding policy implementation, and specific information about requirements were clearly set from the beginning. Perceptions going to be gathered from research participants are already framed in these research objectives but are expected to get broader understanding towards the issues. A thematic framework was developed a priori based on literature reviews with broad themes of feasibility, acceptability, and characteristics and competencies required for task-shifting, which were then formulated into health systems framework and were integrated into the framework approach explained in data analysis subsection. In addition, using the framework approach, qualitative data was managed and analysed systematically by exploring data in depth while simultaneously maintaining an effective and transparent audit trail, which enhanced rigour of analytical processes and credibility of findings [119]. The analytical process involved a number of distinct, but interconnected, stages that emphasize transparency in data analysis and links between stages of analysis [118]. This systematic and disciplined process required in-depth analysis of each line, phrase or paragraph of interview transcripts, providing spaces for highlights and comments, and a coding index that enabled changes to be tracked and progress to be recorded. This approach has been used in similar studies addressing acceptability and feasibility of task-shifting for mental health care in low- and middle-income countries [115].

3.3 Research site

Data collection took place at PHC centres in Surabaya that provide psychological services, several ISPs managed by that PHC centre and a district hospital
in Surabaya, and the District Health Office (see Figure 2.1 that shows organizational structure of the primary health care system). There are 62 PHC centres in Surabaya, of which some provide psychological services [87]. The number of ISPs in each catchment area ranges from 8 to 95, depending on the number of children under five years old in the catchment area. Each ISP has five CHWs, of whom one takes on the management role for the ISP (personal communication with Health Department of Surabaya, November 10, 2014, see Appendix 1).

Three PHC centres, Tambakrejo, Dupak, and Jagir, were selected as study sites based on consultation with the District Health Office. The numbers of ISPs in these three centres were 60, 39, and 80, respectively (see Appendix 2). Another centre, Rangkah, was selected for a pilot study. Maps showing the research sites are presented in Figure 3.1 and Figure 3.2.

![Figure 3.1 Location of Surabaya, Indonesia](image-url)
The three PHC centres were selected to recruit health workers and one among them, Jagir, was selected to also recruit CHWs, community program managers and service users from selected ISPs. PHC Jagir was selected because it has the highest number of pregnant women, and higher numbers of ISPs and CHWs compared to other PHCs. In PHC Jagir, ISPs were selected based on representation of diverse settings, such as population density, economic context, and social-cultural context. As the most common ethnic backgrounds represented in Surabaya are Javanese and Madurese, ISPs were selected from areas where these ethnic backgrounds are present and have diverse socio-economic levels. Through consultation with the PHC manager, ISPs from three kelurahans were selected, those are: 1) Kelurahan Darmo that represents Javanese, 2) Kelurahan Sawunggaling that represents Madurese, and 3) Kelurahan Jagir
that represents the non-slum area. Figure 3.3 presents the source and number of participants at the research sites.

![Figure 3.3 Research site, and source and number of participants](image)

### 3.4 Study participants and the recruitment

Five groups of stakeholders, program managers, health workers, CHWs, mental health specialists and service users, were invited to participate in this study and purposive sampling was used to identify potential participants. A different recruitment
approach was applied for each group of participants. Below are details of recruitment methods for each stakeholder group:

3.4.1 Program managers

Program managers are those responsible for health care service delivery. There were two groups of program managers: program managers from the District Health Office of Surabaya (district program manager or DPM) and program managers from kelurahan who are responsible for health care in ISPs (community program manager or CPM). District program managers in the health office were: 1) Head Section of Primary Care Service Delivery that manages maternal care; and 2) Head Section of Special Care Service Delivery that manages mental health care. They were approached directly after permit to interview was released.

Community program managers are coordinators of working group IV in Family Welfare Movement or FWM in kelurahan which is responsible for health, and the sustainability of health planning and environment, including revitalization of ISP. The head of working group IV from three kelurahans, i.e. Darmo, Jagir, and Sawunggaling, were recruited. In total, five people participated as program managers.

3.4.2 Health workers

To obtain a diversity of responses, health workers were recruited from the three PHC centres. They were PHC centre managers, mental health counsellors, midwives, and nurses. The PHC centre managers provided recommendation which workers could participate and the approach method to be employed. The number of health workers recruited from the three centres was: i) PHC managers (n=3); ii) mental
health counsellors (n=3); and iii) midwives and nurses (n=3-6). Twelve health workers from three PHC centres participated. They were contacted after assigning by centre managers and interviews were arranged privately between researcher and participants.

3.4.3 Community Health Workers

CHWs were recruited from six ISPs in PHC Jagir. Each ISP typically has five CHWs and two were recruited: the leader or CHW manager as the first contact person of a centre and advised by the village midwife, and a member (CHW member) recommended by the leader. In total, twelve CHWs were interviewed.

3.4.4 Mental health specialists

Mental health specialists included a psychologist and psychiatrist at the district hospital, Dr. Soewandhi Hospital. To gather a diverse perspective from mental health specialists, two other psychologists were recruited from two PHC centres in Jogjakarta that have a long history of providing mental health services in primary care settings. Another participating psychiatrist was Chief of the Indonesian Psychiatrist Association Board of Surabaya. In total, five mental health specialists participated in the study.

3.4.5 Service users: pregnant women and one-year postpartum mothers

Pregnant women at any stage of pregnancy who had K1, and one-year postpartum mothers living in selected coverage areas, were invited to participate. There were two categories of pregnant women: (1) primigravida (PG), i.e. women who are pregnant for the first time, and (2) multigravida (MG), i.e. women who have been pregnant more than one time. Similarly, there were two categories of one-year
postpartum mothers: mothers with their first baby (primipara/PP) and mothers whose baby was not the first (multipara/MP). All potential women from six ISPs were invited to participate and those who agreed to participate were contacted by the student researcher to arrange an interview. Two to three women were recruited from each category, which is as expected, as an IDHS survey estimated that the percentage of pregnancy among women aged 15-49 is 4% [14], which means that there are, on average, two pregnant women and four mothers up to one-year postpartum per ISP (one ISP covers 50 households).

The recruitment method for service users was determined in consultation with centre managers and the CHW manager. Midwives from three kelurahans, as representatives of the centre, connected the researcher with the CHW manager, who then supported the recruitment process without the involvement of the centre.

Envelopes with an information sheet and an invitation to participate in the study with contact details were distributed to pregnant women and one-year postpartum mothers by CHWs during regular ISP activities and at home. A week later, responses were collected from CHWs and the researcher contacted the women to ensure they agreed to participate and an interview was arranged. One primigravida from Sawunggaling who was contacted and had agreed to participate declined participation at a later stage, and therefore only two of them were interviewed. On the other hand, one multigravida from the same site volunteered to participate, even though the expected number of participants had been reached. In total, 28 pregnant
women and one-year postpartum mothers were interviewed. Table 3.1 describes the composition of service user participants.

Table 3.1 Number of primigravida, multigravida, primipara, and multipara women by catchment area

<table>
<thead>
<tr>
<th>Kelurahan</th>
<th>primigravida</th>
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<td>9</td>
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<tr>
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<td>11</td>
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<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>28</td>
</tr>
</tbody>
</table>

3.5 Data collection

3.5.1 Interview guide

Data was collected using semi-structured interviews. Core questions covered the following domains: 1) demographic information; 2) emotional experience of women during pregnancy and postpartum using two items of a case-finding approach; 3) acceptability; 4) feasibility; 5) skills required; 6) personal characteristics of CHWs; 7) integration to perinatal care in PHC; and 8) attitude to mental health. Questions were adapted according to the four stakeholder groups. For example, questions regarding the emotional experience of women during pregnancy and post-partum were only asked to service users. The interview guide was developed based on the framework for acceptability and feasibility of CHWs in integrated mental health care into maternal care.
3.5.2 Pilot testing of interview guides

Pilot testing of the interview guides included two stages: 1) in Melbourne, Australia before fieldwork in Surabaya; and 2) in Surabaya prior to fieldwork. In Melbourne, the interview guides were pilot tested with an Indonesian postpartum mother who had recently moved to Australia and an Indonesian nurse working in a PHC who had also recently relocated to Australia. Minor changes were made based on the pilot study. The four interview guides are presented in Appendix 3 and Appendix 4.

Once in Surabaya, pilot testing of interview guides was conducted with a CHW and two health providers (GP and midwife) from Centre Rangkah. Those recruited for pilot interviews were informed that the interviews were a pilot and at the end of interviews were asked to provide feedback on the interview process and interview guide content. No changes made to the interview guide as a result of the second stage of pilot testing.

3.5.3 Interview settings and process

Interviews were conducted by the researcher, who is a psychologist and lives in Surabaya. Interviews were conducted in private spaces, such as home (e.g. CHW, pregnant women and postpartum mothers), or workplace (e.g. health workers and program managers). Before the interview, participants again provided an explanation about the research and asked for informed consent. Audio recording and note-taking were used during interviews with permission of participants. The duration of interviews ranged from seven to 75 minutes and most were carried out in Bahasa Indonesia combined with local language (Javanese). The researcher is fluent in both
Bahasa Indonesia and Javanese. Two participants combined Bahasa Indonesia with some Madurese which was translated by themselves. All interviews were carried out between early June and mid-August 2015.

3.6 Data analysis

Transcription and analysis of data were undertaken in Bahasa Indonesia. The framework analysis approach [120] was used to examine major themes that emerged around acceptability, feasibility, and required personal characteristics and competencies for integrating specific mental health services into perinatal care. Framework analysis has five key stages [118, 121] and the general flow is presented in Figure 3.4, and described below.

1) Familiarization: process during which the researcher becomes familiar with the data;
2) Identification of thematic framework: process of recognizing emerging themes, issues and concepts (codes) and developing a working analytical framework from codes of two to three transcripts;
3) Indexing: process of applying the framework to all transcripts until all data is coded.;
4) Charting: process of lifting data from original context and re-arranging into framework matrix; and
5) Mapping and interpretation: process of interpreting data presented in charts through several strategies, such as mapping connections, interrogating theoretical concepts, creating typologies or patterning responses.
The first step of analysis involved identifying thematic frameworks. This step was carried out using pilot project data by the researcher and a scholar from Indonesia who graduated from Master of Population Health from the University of Melbourne. Codes were combined and compared to develop working analytical frameworks which were presented in English and validated by the research team (supervisors) until a developing framework was agreed to be applied.

The next step was indexing themes from transcripts to the emerging working frameworks. This step was conducted from Indonesian transcripts to prevent loss of meaning. Some transcripts were translated into English and analysis was evaluated by a supervisor, however back translation checks were not carried out. Codes were then put into a matrix based on the next level of interpretation to examine feasibility, acceptability, and characteristics and competencies. The matrices were translated into English in this step to allow supervisors and others to check credibility and validity of analysis and interpretation. NVivo version 11 was used throughout the steps and frequent discussions with supervisors took place throughout the data analysis phase. Different steps of data analysis were applied to answer the three research questions. More details of data analysis are presented in the related chapters.
3.7 Ethics Approval

Ethics approval (No. 1543833) was obtained from the University of Melbourne on May 20th, 2015 (see Appendix 5). The study was not reviewed by an Indonesian ethics committee, however a team from the Health Office of Surabaya examined the protocol before providing permission to continue the research at the study site.
CHAPTER 4: Feasibility for community health workers (CHWs) to identify and refer women experiencing perinatal depression

This chapter presents findings on stakeholder perspectives about the feasibility of CHWs identifying and referring women with perinatal depression. Results suggest that mobilising CHWs for this role is generally feasible within the health system of Surabaya. Feasibility was determined based on the WHO six building blocks of health systems.

This chapter contains the background and aims of the study, methodology and results, discussion, and conclusion. While the methods used in this sub-study were presented in the previous chapter (sections 3.2 – 3.6), more detail on data analysis applied for this sub-study is presented in this chapter. This chapter was published as an article in the International Journal of Mental Health System Vol 12:27 [122] (see Appendix 6).

4.1 Background

Maternal care in primary health care (PHC) in Indonesia provides comprehensive care for various health issues and diseases that arise during pregnancy, including mental health issues, and is delivered as integrative care by several professionals. This framework is presented in the 2010 ‘the Guidance of Integrated Antenatal Care’ by the Indonesian Ministry of Health [72]. In regard to mental health, the guideline states that health workers have to identify potential mental health problems among pregnant women. It states that an examination for mental health is conducted by asking relevant questions regarding signs of emotion and behaviour,
such as abrupt changes in behaviour, worries, withdrawal, self-talk, and inadequate self-care (e.g. not taking a bath). Information can be gathered from the women, husbands, relatives, community health workers (CHWs) or other significant sources [72]. If the problem is persistent and disruptive to the mother and infant, referral to a psychiatrist occurs.

The role of CHWs as a source of information regarding mental health status is not only for pregnant women, but also for postpartum mothers [111]. In a section of the guideline on postnatal care, CHWs are recommended to recognize warning signs of a mother possibly experiencing a mental disorder. These documents state explicitly that the role of CHWs is to identify maternal mental health problems. Nevertheless, despite policy and guidelines available, there is little data to indicate that this concept is being implemented.

The prevalence of maternal mental health problems in Indonesia is under-recorded. Neither the national health survey conducted regularly every five years nor the annual Indonesia Health Profiles [69] present specific information regarding maternal mental health. Only a small number of epidemiologic studies on maternal mental health have been conducted, including one in Surabaya [30]. This survey was conducted among 434 postpartum mothers in Surabaya using the Edinburgh Postnatal Depression Scale (EPDS). With a cut-off point >10, it was estimated that the prevalence of perinatal depression was 22% [25, 30], far higher than the reported global prevalence of 12% [2, 26]. Both the lack of information regarding implementation of policies on maternal mental health and the high prevalence of
depression are reasons to initiate mental health care as part of maternal care in
Surabaya, particularly identification of perinatal depression. Under the guidelines on
integrated mental health in PHC [77], integrated mental health care can be developed.
Within PHC governance, there are integrated health service posts (ISPs) where CHWs
work for maternal care in the community. This provides an opportunity for task-
sharing, i.e. CHWs can identify mental health problems in women during pregnancy
and the postpartum period. Task-sharing is also congruent with mental health care
reform, called TPKJM (the Community Mental Health Action Team), that shifted
hospital-based mental health care to community-based, establishing a strong basis for
involvement of CHWs in many aspects of mental health care, including early detection
and intervention for perinatal depression. This regulation was declared in 2002 [123],
however not all administrative governments have implemented the decree [124].

Various task-sharing in mental health care by CHWs has been previously
reported. For general mental health, lessons learnt from Aceh [84] and other countries
[52, 105] could be used to initiate an integrated model. Studies in other countries have
also reported task-sharing in maternal mental health care [6, 110, 125]. In Surabaya,
mental health care has been integrated into PHC centres, called puskesmas, for several
years and provides psychological services to those in need [85, 86, 88]. This is
important for initiation of mental health care in support of task-sharing [6, 126, 127].

While task-sharing in maternal mental health care has a legal policy foundation,
it is not known whether this is feasible and acceptable within the health system in
Surabaya. This article reports on a feasibility study based on perceptions of health system stakeholders.

4.1.1 Role of CHWs within health system

The health system in Indonesia is administered in line with decentralization of the government system, such that services are decentralized to provincial and district governments under the Ministry of Home Affairs (MoHA) [63]. District/municipality governments (the word ‘district’ is used to refer to both) own district hospitals and organize health services through district health offices. These health offices operate health services provided through primary health care (PHC) centres, called puskesmas, which typically reside in a sub-district. These centres supervise and support a wide network of primary care services that extend to the village level. Included among these are community-based integrated health service posts (ISPs), known as posyandu, and village midwives. Figure 2.1 in Chapter 2 describes a typical PHC system and networks in a district.

An ISP involves intersectoral cooperation between the Ministry of Health and the MoHA at the village level [62]. It is established by the head of a village based on the recommendation of ‘the working group of the ISP’ at village level for specific reasons, for example when there are a certain number of children under five in a neighbourhood [67]. This working group should also ensure operationalization of ISPs, including providing facilities and human resources to run a monthly schedule of activity [66]. To do so, it coordinates with a women’s agency of the MoHA, called the Family Welfare Movement (FWM), at the village level. The FWM recruits volunteers from the
community, known as community health workers (CHWs) or health cadres, manage them and allocate tasks. An ISP provides a basic health program, the main goals of which are to reduce infant mortality and improve the health and nutritional status of children under five years of age and pregnant and breastfeeding mothers through five main services [11, 68, 128]. Therefore, the FWM should ensure that there are at least five people to run an ISP. CHWs who specialize in this task are called CHWs^{MCH} in this article.

Most ISPs run on a monthly schedule in an administrative ward of the village [66] and are supervised by PHC centres. To equip CHWs with skills in health care and ensure that they are able to run ISPs, they are trained in health-related areas by the health office, mainly in maternal and child health [11], but also in other health areas. CHWs provide a range of maternal care during an ISP monthly activity schedule and through home visits, from antenatal to postnatal care. In an ISP, CHWs educate clients, provide maternal care, infant and child health care, immunization, family planning, nutrition advice, and diarrheal disease control. For pregnant women, CHWs are required to educate the community on family planning, antenatal care, nutrition, healthy lifestyle, warning signs of health problems in pregnant women, and organize maternal classes [11]. For women about to give birth, CHWs should motivate them to go to midwives or doctors, and help them understand birthing signs and warning signs of health problems. In addition, CHWs encourage postnatal mothers to breastfeed, to have a healthy lifestyle and nutrition, to go to health facilities for postnatal care, to recognize warning signs, and to be aware of the importance of family planning. They are also required to visit mothers and/or children at home when they do not come to
the ISP if further treatments are needed. Outside the ISP, CHWs also provide data for the maternal and child health (MCH)-related information system.

In certain circumstances, the role of ISPs extends to other health areas or areas other than health, such as social services and family welfare [129]. For instance, in the health area, an ISP may also address communicable or non-communicable diseases, health of seniors, or reproductive health for teenagers [11, 129]. A decision to establish and improve the function of an ISP is made by the working group together with the PHC centre. For an extended ISP, the FWM must ensure availability of CHWs to run the program. When there are no people who have agreed to work voluntarily, a CHW\textsuperscript{MCH} may also be co-opted for this purpose, resulting in multiple roles for one CHW [129]. In fact, health is only one of four areas to be organized by the FWM [62]. Therefore, besides assisting health care in ISPs, a CHW may also carry out other tasks, such as population and civil administration-related services [130], environmental programs, and other multisectoral programs.

Operationalization of ISPs in the health service is managed, supervised, and facilitated by PHC centres [11]. During an ISP activity, health workers from the PHC centre attend, provide health care, and supervise CHWs running the ISP. At a minimum, a village midwife, who is a mediator between the PHC centre and the village community, should be available. This midwife is the formal health worker from the centre who communicates and collaborates with CHWs. CHWs assist midwives and the centre to deliver health care in an ISP. In addition, the health office of a PHC centre provides incentives to CHWs and assigns health-related tasks. The relationship and
roles of the PHC centre, FWM, and ISP working group in relation to the ISP and CHWs are presented in Figure 4.1.

Health services in Surabaya are supported by 62 PHC centres, and each centre facilitates a number of ISPs, ranging from 8 to 95 (personal communication with Health Office of Surabaya, November 10th, 2014). Almost half of the PHC centres offer mental health services provided by a psychologist. There are two district-level hospitals owned by the municipal government amongst a total of 37 state and private hospitals [131]. In addition to district resources, a provincial mental hospital is located in Surabaya. To obtain care, a patient may visit a PHC centre by appointment or a family doctor without an appointment. Patients who need more complex and comprehensive care are referred to district hospitals and other service units [63] through a referral letter.

Figure 4.1 Relationship among ISP, CHWs, and PHC centre
4.1.2 Aim of the study

The current study aimed to examine the feasibility of task-sharing of perinatal depression care in the health system in Surabaya. The aim was achieved through interviews to obtain perspectives of four types of stakeholders in the health system: 1) program managers, 2) health workers, including CHWs, 3) mental health specialists, and 4) service users.

4.2 Methods

4.2.1 Setting

Data collection took place at PHC centres in Surabaya that provide a psychological service, several ISPs managed by that PHC centre and a district hospital in Surabaya, and the District Health Office. There are 62 PHC centres in Surabaya and some provide psychological services.

Three PHC centres were selected as study sites based on consultation with the health office: Centres A, B, and C. The number of ISPs in these three centres were 60, 39, and 80, respectively. Another centre, Centre D, was selected for a pilot study. The specific ISPs where the study was conducted were selected to represent a diversity of settings, taking account of population density, economic context, and social-cultural context. The ISPs were selected through consultation with the centre manager. As the most common ethnic backgrounds represented in Surabaya are Javanese and Madurese, ISPs were selected from areas where these ethnic backgrounds are present and have diverse socio-economic levels. ISPs were selected from only one of the three
centres, Centre C, which has the highest number of pregnant women, and higher numbers of ISPs and CHWs. ISPs were selected based on the centre’s advice.

4.2.2 Participants and inclusion criteria

Participants in the study were recruited from four stakeholder groups: program managers, health workers, mental health specialists, and service users. Program managers consisted of two participants from the health office, called district program managers, and three participants in total from three villages -one from each village-, called community program managers. District program managers were recruited based on their position: two heads of section were the Head of the Section of Primary Care Service Delivery in charge of maternal care and the Head of the Section of Special Health Care responsible for mental health care. The three community program managers were members of an ISP working group from three villages which are responsible for organizing CHWs\textsuperscript{MCH} in selected ISPs, viz. an ISP from Centre C with a high population of Madurese (ISP CM), one populated by Javanese (ISP CJ), and one from a non-slum area (ISP CN).

Health workers comprised formal health workers and CHWs. Formal health workers were recruited from three centres, with each centre consisting of the centre manager who is a GP, a mental health counsellor who is a psychologist or Bachelor of Psychology, a midwife, and a nurse. CHWs were recruited from six ISPs within Centre C. Each ISP typically has five CHWs and two were recruited: one is the leader (CHW-manager) and the other is a member (CHW member) recommended by the leader.
Mental health specialists were a psychologist and psychiatrist at the district hospital (Dr. Soewandhi Hospital). Two other psychologists were recruited from two PHC centres in Jogjakarta which has a long history of providing mental health services in a PHC setting. Another psychiatrist from the Indonesian Psychiatrist Association Board of Surabaya also participated in the study.

Service users were pregnant women and one-year postpartum mothers (who will be called ‘women’ and/or ‘mothers’ interchangeably). Pregnant women were in their first pregnancy (primigravida) or subsequent pregnancy (multigravida) at any stage of pregnancy and had visited a health facility at least once. Postpartum mothers were mothers of a first child (primipara) or mothers of subsequent children (multipara). Two to three women were recruited from each ISP with the assistance of CHW managers. Based on the percentage of pregnancy among women aged 15-49 [14], two to three women were recruited from each category. The research setting and participants are summarized in Figure 3.3 (refer to Chapter 3).

4.2.3 Data collection

Semi-structured interviews were conducted by the researcher, who is a psychologist and researcher living in Surabaya, and understands the social context of the research setting. Interviews consisted of questions on: a) demographic information; b) knowledge and attitude to mental health of mothers; c) two vignettes about perinatal depression cases; and d) feasibility of task-sharing. Four different vignettes about perinatal depression cases were developed, two of which were presented to each participant according to their stakeholder group. The vignettes were
presented before questions on whether participants have experienced a similar situation (for service users) or have dealt with similar clients (for service providers and community program managers), and on participant perceptions regarding the importance of maternal mental health, and their views on the feasibility of task-sharing. Data collection was pilot tested in Centre D to ensure appropriateness of the interview guides and process. Interviews were conducted individually in private settings, such as at home (for CHWs, pregnant women and postpartum mothers), or at the workplace (for health workers and program managers). An audio recorder and notes were used during interviews with the agreement of participants, who were provided with assurance of confidentiality. Most interviews were conducted in Indonesian, but some were in combination with the participant’s local language (Javanese or Madurese). The researcher was fluent in all of these languages. All interviews were transcribed in Indonesian.

4.2.4 Data analysis

Data analysis was carried out using a framework analysis (FA) approach in the local language (Indonesian) using MS Word and the NVivo software program. Framework analysis has five key steps [132, 133]: 1) coding (indexing), 2) developing a working analytical framework, 3) applying the analytical framework, 4) charting data into the framework matrix, and 5) mapping and interpreting the data. The WHO Health Systems Framework was applied to direct analysis. This framework suggests that a health system consists of six building blocks: health service delivery, leadership and governance, health workforce, health information system, medical products and technologies, and a health financing system [117]. Using MS Word, the researcher (ES)
and an independent analyst, who is an Indonesian researcher holding a Masters degree from the University of Melbourne, read a set of transcripts from pilot interviews to identify emerging themes and to initiate development of a thematic framework. The framework, which was presented in English, was then validated by the research team until a developing framework was agreed on for application. The next step was indexing, which applied the framework to all transcripts using NVivo 11. Frequent discussions between the research team took place throughout the data analysis phase, for which some transcripts were translated into English, to ensure that interpretations were credible, valid, and shared.

4.3 Results

4.3.1 Participants

Recruitment of participants and interviews were carried out simultaneously from June to August 2015. In total, 62 participants from four groups of stakeholders were interviewed. All interviews were conducted and transcribed by ES.

Table 4.1 presents a breakdown of the 62 participants according to type of stakeholder and site. The distribution of participants was as planned, but some adjustment was needed for the service user group. There was one pregnant woman from Village CM who agreed to be interviewed, but later declined interview, whereas another pregnant woman from the same village agreed to participate in the study to enrich the voices of Madurese.
Table 4.2 presents the demographic summary of participants from all stakeholder groups, with CHWs presented separately from health workers. Only four participants were male: three were specialists and the other was a health worker. The ethnic background of the majority of participants was Javanese, with slightly more than 10% being Madurese, and other ethnic groups comprising less than 2%. The age of participants varied, but was above 25 years of age for all groups other than service users. All CHWs and community program managers were in their 40s or above, had finished high school (junior and senior), but had no formal employment. Half of the service users were in their 20s and only ten percent were under 20 years. More than three-quarters of service users had finished high school. Fewer than one-fifth of service users had formal employment, while the rest identified themselves as either unemployed or self-employed. Around 20% were primigravida, almost 70% had one or two children, and about ten percent had three or more children.
Table 4.1 Composition of participants by site and type of stakeholder

<table>
<thead>
<tr>
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<th>Service users</th>
<th>Service providers</th>
<th>Mental health specialists</th>
<th>Program managers</th>
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<td>Service providers</td>
<td>Mental health specialists</td>
<td>Program managers</td>
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<td>13 (21)</td>
<td>12 (19)</td>
<td>5 (8)</td>
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Table 4.2 Demographic summary of participants by type of stakeholder

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<th>Mental health specialists (n=5)</th>
<th>Program managers (n=5)</th>
<th>Pregnant women (n=15)</th>
<th>Postpartum mothers (n=13)</th>
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%
4.3.2 Feasibility of extending CHWs’ role within the health system

There were many shared views among stakeholders on factors that enable or hinder feasibility of extending the CHW role in the health system, as shown in Figure 4.2.

4.3.2.1 Leadership and governance

Perceptions of feasibility based on leadership and governance factors were reported by program managers, a centre manager and a specialist. These participants described feasibility in these areas as being related to the availability of strategic and technical policies at national and district level, intersectional collaboration between the general health service delivery sector and the special health care sector, and the autonomy of PHC centres to design context-specific programs.

4.3.2.1.1 The provision of national mental health policies

One factor that enables the feasibility of task-sharing in perinatal depression is the availability of two national policies on mental health. The first one is a national policy that shifted mental health care from hospital to community-based, called Community Mental Health Action Team (also known as *Tim Pelaksana Kesehatan Jiwa Masyarakat* or TPKJM), adopted in 2002. The second policy is the current national strategic policy “*Indonesia bebas Pasung* (Indonesia Free from Shackles) by 2015”. A program manager stated that the latter policy has become the pivotal point and timeframe for mental health action, such as training on mental health detection to general practitioners and nurses in the centres, and outreach activities to identify
mental health cases in the community. These policies do not refer to maternal mental health directly; however, they have brought about establishment of mental health service units in several centres. The program manager for specialist care described how the policies have guided the formation of an outreach team involving CHWs to identify out people with mental health problems who live shackled. The significant number of cases found by the team generated attention on the importance of mental health issues and led to establishment of mental health service units in several centres.

She said:

“Mental health is not a primary program, but an extended program. It has not got attention until during the outreach program –visiting patients at their original places- we found a lot of cases. Finally, the head office said ‘let’s develop your mental health unit’…. Because it should be free from pasung [shackle] by 2015, isn’t it?” (DPM 2)

The program manager added that two centres have established a mental health unit and another is under preparation. Moreover, the Community Mental Health Action Team policy led to the formation of a collaborative team across sectors to identify and address mental health cases in the community based on their needs. Subsequently, the program manager explained that the team works regularly and is monitored directly by the Mayor.

“...Tim Pelaksana Kesehatan Jiwa Masyarakat [Community Mental Health Action Team], TPKJM. Yes, we haven’t formed the structure, but I think... The team has not been structured, yet coordination among sectors has worked. Structurally it has not formed yet but the coordination has worked.... Usually each sector sends a letter to the Mayor and then the Office of Human Welfare would organize a meeting. These are from the Office of Social Affairs, of Health, of Housing...” (DPM 2)
Figure 4.2 Factors contributing to feasibility of CHWs taking a role in integrated mental health care in Surabaya
4.3.2.1.2 Health leader role

The involvement of the Mayor in coordinating the community mental health team was perceived as giving support and attention to mental health care in the city. A specialist reported how he was impressed by the Mayor:

“The Mayor, indeed, believes in two principles, first there is no child in Surabaya who does not go to school, and second no sick people in Surabaya are neglected, including people with mental health problems....”
(Sp 1)

4.3.2.1.3 Coordination between sections in the district

Beside intersectoral collaboration conducted by the community mental health team, coordination between sections in the health office has worked well. The head of the section of general service delivery that organises maternal care felt confident that mental health care could be facilitated within maternal care. She said that integrated antenatal care is an obligation and integrated care for mental health has been implemented by referring pregnant/postpartum mothers to the psychologist in the centre. She described:

“It actually can be done, if the mental health [section] wants. Even though I am from maternal and child health I facilitate this... Those are compulsory, whether a mother is sick or not. An example of this is HIV assessment, it is compulsory... like that. When there is a complaint... yeah... it can be referred to the expert. You may have known that there are psychologists in several centres, so when there is a complaint or as a result of assessment by a GP or midwife, the patient would be referred to the psychologist... if there is no one in the centre, she may be referred to a psychologist at the closest centre.” (DPM 1)

4.3.2.1.4 Policy on training of CHWs

Strategic policy at the district level on mental health training for CHWs is another factor that enables feasibility. The training program for CHWs has been placed
into strategic planning for the following year, focusing on early detection and referral. The training was designed as an extension of that provided for doctors and nurses. The program manager explained:

“We have run training on early detection of mental health cases for health workers, and we plan to do so for CHWs this year....and in 2016 they will be trained in the basic knowledge of early detection and referral. That's what we want to do.” (DPM2)

Training at district level is more likely to be followed by centres because they have autonomy to establish MCH-related training for CHWs in their area, allowing inclusion of mental health in the program. Again, the manager emphasized:

“It is the autonomy of the PHC to set up training materials for CHWs, not only about the health of children under five but anything that supports the health of those children.” (DPM 1)

4.3.2.1.5 Challenges in implementation

In contrast to policy and planning that supports feasibility, several factors were viewed as challenges to feasibility. First, practical guidelines are required before task-sharing can be implemented in the community. A program manager made the point that even though a guideline has been regulated in the policy document, it may take several years until the guideline results in direct action. Second, there are practical problems with shared responsibility between centres and the Family Welfare Movement (FWM) in the village. Recruitment of CHWs should be a FWM task; however, a community program manager complained that the PHC centre took over the task. Third, a centre manager was concerned about financial issues versus the autonomy of a centre to arrange particular training for CHWs. Running a local program which is centre specific even though it is not part of a national or district priority is
allowed, however the centre is responsible for financial arrangements and justification. Centres can often find the money itself either from within its own resources or other funding sources, however it must be able to justify the spending. Rules and procedures are quite rigid and complex, which can require more effort on justifying the expense rather than running the program.

4.3.2.2 Service delivery

4.3.2.2.1 Identification at an ISP is not feasible

This study assesses the feasibility of task-sharing to be carried out by CHWs in their place of work, which is in an ISP. Stakeholders perceived that carrying out the task in an ISP is not feasible. Health workers stated that there are many tasks to be accomplished by CHWs and that they are unable to also carry out task-sharing within the time available. In addition, the ISP was seen by mothers as a place for the health of children under five. Therefore, with many adults and children around there is a lack of sufficient space for privacy. A mother said:

“Prefer during home visit. It is impossible to talk about my personal situation because the ISP is for children’s health...it’s better to visit home for that issue.” (Ppt A3)

4.3.2.2.2 Service through home visit

In contrast to the ISP, carrying out task-sharing through a home visit was viewed as feasible. Home visits were expected, both culturally and officially. A community program manager said that it is culturally accepted in the community to visit a mother who has just delivered a baby. She also stated that CHWs must carry out home visits when required, as part of a government program. A nurse emphasized that
home visits are conducted by CHWs\textsuperscript{MCH} to regularly monitor all aspects of the health of mothers and during these visits CHWs sometimes encounter women with mental health problems. For example, CHWs reported typical behaviors suggestive of a mental health problem, including isolation at home and missing check-ups during pregnancy.

Some CHWs viewed home visits as convenient, as they live close to service users and the cost of transportation is minimal. Home visits also allow CHWs to gather more information from mothers, and enable them to approach women in more acceptable ways. A CHW explained:

\begin{quote}
“I usually spend time to visit occasionally, during a spare time. So, it is not in a particular time, because it would be seen as a serious matter. Just pop in, have a chat, sharing as a neighbour friend.” (CHW J4)
\end{quote}

4.3.2.2.3 Referral

There are two types of referrals, internal and external, and CHWs could be involved in the former. Internal referrals are those that occur among professionals within a PHC centre. These procedures were illustrated by all program managers, some health workers, and by CHWs. They explained that CHWs could refer depression cases in three formats: a verbal report directly or via telephone, a written report within a monthly report, and a written note in a communication book that delivers messages between CHWs and midwives at a PHC. The basic pathway for either format is from CHWs to village midwife to PHC centre midwife to counsellor at the centre (CHW\rightarrow village midwife\rightarrow centre midwife\rightarrow counsellor). Sometimes a CHW and a village midwife together report a case, as one CHW described:

\begin{quote}
“Two of us. Together. When we cannot handle it, we have a midwife coordinator and the coordinator will report to bu NI [the centre manager].
\end{quote}
If we cannot handle it, for example [because of] a psychological thing or need for a mental health consultation, we will go to Lk [the counsellor] ....” (Mw 3)

CHWs may accompany mothers to the PHC centre when required. For other cases, the village or centre midwife and counsellor visit the mother, either with or without a CHW. However, a centre manager was concerned about the lack of a referral book or note that provides details of the problem. Other health workers perceived that referral guidelines which describe the pathways and tasks of each professional are also needed.

External referrals send patients from the PHC to higher-level facilities. These referrals occur when professionals at the centre cannot handle a health issue, such as when a counsellor cannot handle a mental health case. A specialist and program manager at the health office explained that an external referral can only be made by a doctor in the centre and is directed to the district hospital. A specialist explained that even though a patient was being handled by a counsellor, the referral letter must be sent by a doctor.

4.3.2.3 Workforce

Study participants raised numerous issues related to human resources. Concern was expressed about recruiting a CHW workforce of the quality required for work on perinatal depression. However, participants also perceived that the health system has training and supervision programs which could enhance skills and minimize such issues.
4.3.2.3.1 Availability and recruitment

The primary concern regarding workforce was the shortage of existing CHWs who qualify as suitable for task-sharing. Even for the general/current role, CHW performance was often seen as inadequate, due to often being sick, being too old or their workload simply being too high. Program managers and health workers identified that most CHW managers have multiple tasks related to their role in health assistance, i.e. in MCH, aged care, tuberculosis (TB), dengue prevention, etc. A centre manager stated:

“I have a lot of CHWs: CHW<sub>palliative</sub>, I have a CHW<sub>HIV</sub> who handles HIV and IMS [sexually transmitted disease], I have CHW<sub>TB</sub> leprosy and basically those for communicable diseases, and then CHW<sub>nutrition</sub> called CFC [Community Feeding Centre] which are based at ISPs that handle malnourished-children. Sometimes only one person handles all of these because it is hard to recruit. But we think the person is able to handle all those roles.” (GP 3)

Despite the recognition of high workload due to multiple tasks, some health workers perceived CHWs as having the capability to handle those tasks. A program manager in the community suggested that CHWs could carry out several tasks at a time, referring to a strategy to manage tasks. This view underlined feasibility in terms of human resources.

Gaining new recruits may be an ideal solution to ease overburdened CHWs and overcome the performance quality issue. However, there are some issues involved in getting new people. Firstly, because CHWs are lay community members volunteering their time to contribute to their community, other commitments such as work and domestic responsibilities were among the difficulties in recruiting new CHWs, as described by some CHWs. A community program manager listed social relationships as
a second issue, when existing CHWs were seen as an obstacle to attracting and keeping new and younger CHWs. She illustrated this with the example of a potential woman who agreed to be recruited only if a particular CHW was not active in the workforce anymore; and another case in which a newly-recruited CHW ceased the role because she was treated badly by a current CHW. Additionally, cultural and demographic issues, such as ethnicity and literacy, came up when a CHW described difficulty in engaging with women from a particular ethnic background because of their cultural beliefs and/or low level of education.

Recently, a new group of CHWs, called CHWs\textsuperscript{pregnancy}, was established to work for a PHC centre and the Family Welfare Movement (FWM) at the district level, which could also be considered supportive of the feasibility of task-sharing and as an enrichment of the workforce. These particular CHWs have several tasks, including finding pregnant and postpartum women in the village and monitoring their health status through home visits, taking their pictures regularly to be documented, and completing health records on monthly basis. The existence of CHWs\textsuperscript{pregnancy} and their tasks was described by a community manager:

"Now we have what we call CHWs\textsuperscript{pregnancy}. Here we have Wi, while Wa is from the next neighbourhood. One CHW would work for 2-3 neighbourhoods. They record pregnant women: how is their health status, the risks, including depression, and others. The CHWs monitor them until they give birth. To do so, the CHWs come to FWM representation at 'dasawisma' [smallest aggregate of neighbourhood] to collect the data on pregnant women in the area and then they visit the women at home. The community health centre also guides them. There are some in every village, for example this village has 6 CHWs\textsuperscript{pregnancy.}" (CPM 1)
4.3.2.3.2 Training and supervision

Training and supervision were perceived as potential mechanisms for quality improvement available in the system. Counsellors from three centres reinforced the previous statement from a program manager that mental health training for CHWs and health workers has been carried out in the previous year. Unfortunately, follow-up training was challenged by staff rotation when trained staff moved to a different centre, resulting in the program ceasing. While concerns were raised regarding the adequacy of training, the current strategic plan for training seems to be trying to address this issue. A counsellor said: *The health office has provided training for CHWs*. *But I think mere training is not enough; it needs to be continued with follow-up programs*” (Cs 3). A district program manager expected that an already established strategic plan for future training for CHWs would allow continuous training and sustainability of implementation:

“That will be for next year. We will train them. For all centres. The previous one took only one day...therefore we will run the socialization so [the implementation] will not ‘come and go’ anymore.” (DPM 2)

In addition, there is an opportunity for all centres to support the program and to provide supervision sessions for CHWs in the form of a monthly refresher program between health workers and CHWs. As well as supervision, the session is also used for professional development when new and high-priority material needs to be introduced to CHWs. Such a session could be used if mental health needed to become a topic area. Even better for feasibility is the fact that these regular sessions are financially supported by the health office.
4.3.2.4 Information

Information systems that generate data about perinatal depression are almost non-existent, at national, provincial or district level. Midwives and a district manager clarified that data on pregnancy and childbirth and mental health together is available, but there is no option to include information about mental health during pregnancy or across age. Health workers suggested several potential ways of gathering data on perinatal depression through home visits or approaching pregnant and postpartum mothers directly and recording information in a specific form. A nurse strongly suggested that the psychology unit could develop a form that could be completed by CHWs:

“...[CHWs] are still working right now and they have to send a report, so it would be better if psychology can provide the sheet. But we may not find, I mean cases are not always found. So, when there are no cases they cannot just leave it blank, rather they still have to write a report, just write ‘nil’ for example.” (Nr 1)

Another way was suggested by a CPM and CHW manager from three ISPs. They recommended that CHWs compile mental health information qualitatively, together with other health data for which they are responsible. Either way, the existence of CHWs was considered an opportunity for data collection on perinatal depression.

At present, a CHW reports data to the centre through village midwives and to the FWM at district level. While PHC centres use the data to determine service delivery to a mother, most CHWs and nurses did not know how the FWM uses this data.
“There are CHWs for high risk of pregnancy; there are two of them: one is assigned by FWM at district level, and the other is assigned by the centre. In fact, they are similar in their role and responsibility... The one assigned by the centre will provide a report to us [village midwife] from which the report will be compiled into the MCH unit. The one assigned by FWM will send the report to the FWM at district level.” (Nr 1)

4.3.2.5 Financing

The financial feasibility of task-sharing is indicated by the availability of incentives for CHWs as compensation for undertaking voluntary tasks, budgeting policy to assign funding to support mental health screening during pregnancy and one year postpartum, and the possibility for other funding sources. Currently, CHWs receive transport compensation for their role in each area they undertake (e.g. MCH, elderly, dengue) and, according to a district manager, they will also receive funding from the mental health program when it is set up. CHWs also receive incentives from the FWM or health office, depending on whom they work with. This district manager emphasized that while the amount may be minimal, it shows the recognition of their roles. Another manager described the financial system assigned for PHCs through universal health coverage (capitation fund) which could potentially be allocated to support depression identification in maternal care:

“There is a solution to do so, using the capitation fund from universal health coverage. Here in Surabaya, which may be different from other districts, there is 60% from the operational budget to be addressed to services’ fee and 40% for others. The 40% will be divided into 30% for medicine and 10% for operational. One third of the 10% operational budget is targeted for health promotion programs which can be arranged for any required actions such as a goodie bag, leaflet, and so on. So, if mental health..., would possibly be printing a screening tool....” (DPM 1)

A similar approach has been adopted to support supervision during the monthly refresher session. The manager added that funds from other sources are also...
accepted, such as from NGOs or the community. For example, there is an ISP in an exclusive residential area whose activities are fully funded independently by community members.

4.3.2.6 Medical products & technologies

Medical products and technologies needed for depression identification by CHWs are related to production of screening tools, and technologies for communication and transportation. There was disagreement between two specialists on how depression identification should be acted upon. One suggested two steps, starting with an interview and then following up with a scale. The other disagreed with CHWs identifying depression through an interview, as he believed that this requires a high level of knowledge and skill and therefore requires long-term training. He thought that a simple scale was preferable and highlighted that tools for assessment of depression already exist and a simple one is quite easy to find.

“For identification, it must use a tool that is internationally recognized, so using a depression rating scale is very simple...that is easy and the depression tools are not only one [type], from the simplest to the complex. It is so easy; indeed the tool to detect depression is easy so that we can teach CHWs. Identification using interview is more difficult, it needs a long time to educate CHWs.” (Sp 2)

Means of communication and transportation are not necessary, as CHWs live close by the mothers and the village midwife is not far away. However, health workers and CHWs expressed concerns about the cost involved in taking mothers to the centre or if mothers live far away.

“Because it is around the area, therefore transportation is not a problem. I would think twice if it is far away because I cannot ride a motorcycle and automatically I need to ask others to take me there.” (CHW J4)
4.4 Discussion

This study aimed to examine the feasibility of task-sharing in the identification of perinatal depression within the health system of the city of Surabaya, from the perspective of health system stakeholders. Policy documents state that CHWs can carry out this role [72, 111]. Results indicate that the proposed task is feasible to be implemented within the health system of Surabaya, from the perspectives of leadership and governance, home-based service delivery and internal referrals, training and supervision, financing, and technologies. Information systems and other areas need to be improved, including the ISP-based service, operational regulation, and volunteer workload.

Leadership and governance showed strong support for the involvement of CHWs in identification of depression. The vision of both district government and the province as seen in mental health policy clearly indicates the potential for development of practice in this area. Indeed, mental health policy at the national level has had significant development in the last two decades, and the lessons learnt can be useful in thinking about mental health policy for women and children. Perinatal mental health is an important component of mental health overall (with implications for both the mother and child) and must be a priority within mental health. The recent development of mental health policies, such as the Mental Health Law and the Law of Persons with Disability, is progressive which gives hope for development of policies on women and children. This was seen when a new mental health law was approved by the House of Representatives in 2014 (Law Number 18 Year 2014), replacing the
previous law that had been used for about five decades (the first Mental Health Law was sanctioned in 1966). Not long after its release, another related law, the Law of Persons with Disability, was authorized in 2016 (Law Number 8 Year 2016) as a result of the ratification of the United Nation Convention on the Rights of Persons with Disabilities (UNCRPD). For a specific population, those affected by a disaster, the Disaster Mental Health Policy was developed in 2003 [134], while for those who have severe psychosocial disabilities living in physical restraint, an initiative from Aceh has been applied as a national program [135, 136]. These other laws/policies/initiatives can be used to advocate for high quality health and mental health care during the perinatal period.

Regarding the role of CHWs in mental health care, establishment of the TPKJM or Community Mental Health Action Team in the district, whose performance is monitored by the Mayor, is another promising step for implementation of policy documents in task-sharing for perinatal depression. The fact that East Java is among the provinces that have established initiatives to implement TPKJM [137] is a good support for districts within the province, such as Surabaya. The regulation is also reinforced by the policy on ‘Indonesia Free from Pasung (shackle)’ launched in 2010, that was aimed to be achieved by 2014 (it has since been extended to 2019) [136]. These two national programs and commitment of leaders to them are evidence of a good foundation of health leadership and governance, and are most likely to support task-sharing in the mental health area. In particular, policies with a timeline, such as the free from shackle policy, seem to be having a greater impact, because the government is putting in greater effort to meet the goal within a stated time frame.
This phenomenon accentuates the WHO suggestion that a policy maker should have a timeline in mind when developing a mental health policy [138].

The policy emphasizes that task-sharing were also strengthened by organisational structure in the health office. The existence of mental health within the Special Care Section provides opportunities for mobilization of resources in the health system. This is evident from its roles in: facilitating establishment of centres with mental health units; putting in place a strategic plan for mental health training, including training of CHWs; assigning a source of funding for depression identification; and organizing multisectoral collaboration that could support resource management, including application of integrated antenatal care. Not all these efforts are currently directed specifically to the mental health of mothers; however, there is potential within the sector for commencing subsequent steps to realise this vision.

According to stakeholders, home visits are a possible avenue for the service delivery model for CHWs to carry out depression identification. As a model of care, this approach is not novel within the national health system, particularly for CHWs\textsuperscript{MCH}. Several documents openly regulate this responsibility and provide structured guidance on how to conduct home visits [11, 111], even though not specifically for mental health care. For example, home visits are directed for mothers whose children under five years old who did not attend an ISP activity, and those of malnourished children, among others. The home visit approach is also used by CHWs\textsuperscript{pregnancy}, many of whom are also CHW\textsuperscript{MCH} (mostly managers). At a practical level, there is agreement among stakeholders that a home-based approach is the best option to overcome the space
limitation issue, difficulties of accessing primigravida, and time constraints which result from many services being provided during an ISP activity and the unsuitability of this schedule for working mothers. This approach allows for flexible scheduling, as stated by CHWs and users, and is consistent with findings from another study [139].

Service delivery should also be connected to infrastructure and resources in the health system to make it feasible for task-sharing. Resources could provide a wider opportunity to assure that service users receive continuity of care after being identified by CHWs, e.g. infrastructure for referrals. It means task-sharing is supported by relevant continuous care so care does not end with CHWs or village midwives. Continuity of care could also be understood in terms of protecting the rights of service users to receive treatment. The complete resources available for mental health care are: (1) provision of mental health care by a counsellor in a PHC centre, (2) availability of two district hospitals that provide mental health services by both psychiatrists and psychologists, and (3) a provincial mental hospital located in the city. With these resources, community-based mental health care fits within the national health system. Lack of continuous care was a concern for women who were reluctant to disclose their feelings during a mental health assessment [140]. Findings from another study suggested that mental health screening as part of integrated routine maternity care is a possible intervention pathway [47] which would involve less stigma. Participants in that study emphasized unease and feeling of shame from talking about their experience of depression with multiple professionals in a fragmented care system, something not required in integrated care. In addition, continuity of care is supported by the financing system of universal health coverage. The economic cost of perinatal
depression is high for both individuals (mothers and family) and the public sector [141], therefore the health coverage scheme needs to make service delivery and referral procedures easy and accessible. Connection with other health systems, such as PHC and social welfare system, is also needed for well-functioning mental health care.

The financial source and policy in financing support task-sharing are congruent with arguments related to service delivery and continuity of care. How the capitation budget could be allocated so a specific amount could be used to establish a depression screening tool was clearly explained by a district manager. This financial policy would open several possibilities for further steps, for example to identify and validate a simple and locally-acceptable screening tool. Studies from a variety of settings suggest several possible perinatal depression screening tools that can be accessed worldwide and have good psychometric properties [142-144], however adaptation to a new context is required. Several studies in Indonesia have reported on use of some of these tools (e.g. the Edinburgh Postnatal Depression Scale) [25, 30, 42]. Nevertheless, there is a need to examine whether similar tools can be administered by CHWs. Specialists in this study also emphasized the use of simple tools and stated that CHWs are able to administer them. Health workers suggested using a symptom list which is simple to administer and similar to a pregnancy risk scale with which CHWs are familiar. Another method is using a structured interview, but this was debated amongst specialists, as it requires a high level of competence. Furthermore, a specialist strongly suggested not using the word ‘depression’ to avoid stigma, with the term ‘mood changes’ being preferable instead. This suggestion is in line with previous findings in which the experience of depression was expressed in many forms and terms by Javanese [145].
This means that an understanding of personal and cultural terms should also be considered in choosing or adapting an identification tool. Possible bias in interpreting a woman’s mental health state resulting from unfamiliar terms requires attention, considering level of education, language and ethnicity of both CHWs and service users.

In regards to human resources, findings on workload, scarcity, and personal barriers are consistent with feasibility issues reported in previous studies [114, 115]. These issues may result from the role of CHWs as a frontline workforce for many governmental sectors, including health and home affairs, education and social services [129]. At least 12 roles for CHWs have been listed in health-related areas [11], not including others in civil services [130]. Management of CHWs by the FWM is intended to enable organization and monitoring of the availability, distribution, and performance of CHWs. However, it seems that the FWM, even at the national level, does not have a strong bargaining position in the governance of a village when a new task for CHWs is released. In fact, findings about social relationships as a recruitment issue suggest that the FWM is the agency that best understands the social boundaries and cultural life of the community and so is best placed to map human resources in the area. Several concerns should be addressed to improve workforce management and quality, such as regulation of skills and characteristics required, the need for a working contract that regulates length of employment and a procedure for terminating the role, training required, and a means of distributing tasks. Well-distributed tasks may prevent duplication, so that new and existing CHWs, for instance, could monitor pregnancy, physical and mental health efficiently. Even though CHWs are volunteers, having professional management of their tasks would maintain their participation sustainably.
There is promise for developing and improving CHW skills and competencies in task-sharing. This could be achieved through availability of mental health counsellors at centres and the health office, and mental health specialists at district hospitals. Skills enhancement programs are an opportunity for quality assurance in service delivery. Components of mental health training for CHWs are found in several studies [84, 137] that could be a source to learn from, including those addressing perinatal mental health [53, 95]. Nevertheless, as task-sharing in maternal mental health care has not yet been initiated, the specific skills and competencies, and training that fit the local context need to be examined.

4.4.1 Challenges and recommendations

The findings indicated three main challenges to feasibility. These are: (1) inconsistency between policy and practices, (2) an inadequate support system for data management and technologies, and (3) unsupported means for implementation. Gaps between policy and action are revealed in shortcut practices in recruiting CHWs by the centre instead of by the FWM. Several approaches may alleviate these challenges, such as inviting all parties (FWM and PHC centres) to review the policies, or hearing about the best possible strategies for a collaboration process before a proposed program is released. However, this study did not explore this further. The fact that there were gaps between written regulations and reality generates a concern: even if stakeholder perceptions lead to the conclusion that the health system can feasibly accommodate task-sharing in integrated mental health, personal views on participation may be different. Buist, O'Mahen [146] reported a mixed attitude to acceptability of perinatal depression detection among women and health providers. Therefore, it is necessary to
understand the personal views of stakeholders about the acceptability of their involvement in task-sharing.

Other issues are logistical support and an information system on perinatal depression. While transportation is not a significant barrier, because the task is within walking distance, findings imply a need to use telecommunication devices for doing the job. Lack of financial support for communication and transportation is an issue for task-sharing in another area [84] and a similar problem is anticipated by CHWs in this study. In addition, the lack of an adequate data reporting system on perinatal depression could be resolved through use of qualitative reports from CHWs to village midwives to the centre. In an annual report, the health office presents data on mental health cases, other than maternal cases [147], suggesting an opportunity to do the same for maternal mental health data. This possibility is suggested by existence of a mental health qualitative report shown by a district program manager during an interview while describing how data was collected. Moreover, a study on maternal mortality suggested the important role of village midwives and local registers (volunteers) in gathering and reporting valid data [148]. The study highlights the opportunity to integrate mental health as a component of health data collected by CHWspregnancy.

Finally, the lack of practical regulation for task-sharing and need for practical guidelines and pathways for identification and referral were anticipated as potential issues for implementing task-sharing. The health office should prepare staff to manage practices and roles of each actor. Another challenge for implementation is financial
barriers faced by a centre with the will to initiate a program. The centre needs to allocate a budget or find funding from other sources and justify expenditure in a way that is acceptable within the health financing system. The procedure is perceived as a significant difficulty by centre managers. Figure 4.3 presents a summary of challenges and recommendations.

Figure 4.3 Challenges and recommendations of CHWs playing a role in task-sharing in mental health care in Surabaya

4.5 Conclusion

This study found that the health system and resources in Surabaya are sufficient for feasibility of task-sharing in integrated maternal mental health to detect
perinatal depression. Most health system areas support or provide an opportunity for this concept, with there being a strong basis in governance and resources. Decentralised governance of the health system allows contextualisation of a national policy. The role of CHWs also demonstrates the potential for filling the gap that exists in the data information system. Further studies are necessary before the idea can be prepared for implementation, including but not limited to, exploring the acceptability of task-sharing and the characteristics of CHWs required for this purpose. Practical guidelines, logistical support and tools that enable CHWs to play a role in screening and referral are other areas to be prepared.
CHAPTER 5:  Acceptability for community health workers (CHWs) to identify and refer women experiencing perinatal depression

This chapter presents findings of the second sub-study, which focused on stakeholder perspectives on the acceptability for CHWs to identify and refer women with perinatal depression. Results suggest the role for community health workers (CHWs) to identify and refer women experiencing perinatal depression is acceptable by stakeholders of primary health care in Surabaya, Indonesia.

Findings have been written as a publication article and submitted to the International Journal of Integrated Care on 6th December 2017, and at the time of thesis submission, the article was under review (see Appendix 6, A6.2.1 and A6.2.2). This chapter contains background and aims of the study, methodology and results, discussion, and conclusion. The methods are similar to Chapter 3, but further data analysis was applied, the details of which are described in this chapter. Elements of the health system that contribute to acceptability are discussed.

5.1 Introduction

Worldwide, depression occurs in 12% of women in the perinatal period [26]. The prevalence of perinatal depression among women from low- and lower-middle-income countries has been reported as 5-33% during pregnancy and 5-60% postpartum [2]. A survey among postpartum mothers in Surabaya, Indonesia, found prevalence of depression was 22% [30]. Perinatal depression has an impact on mother and infant, affecting the mother-infant relationship, and resulting in reduction of breastfeeding, poor nutrition of mothers, and reduction in self-care among depressed
Depression during pregnancy may increase risk of intrauterine growth retardation, pre-eclampsia and rates of premature delivery [3].

Despite the prevalence and impact of perinatal depression, screening for perinatal depression in routine care is not always available in low- and lower-middle-income countries, including in Indonesia. Nevertheless, antenatal care policies have adopted an integrated approach to enable depression to be identified and treated within primary health care (PHC). Such policies provide an opportunity for non-specialist workers, e.g. community health workers (CHWs), to play an important role in identification of depression among pregnant women and postpartum mothers, an example of task-sharing [72, 111].

In the Indonesian health system, CHWs are volunteers recruited from the community, who provide community-based maternal and child health services in integrated health service posts (ISPs) through an ISP monthly schedule of activity and home visits [11]. The ISP is a component of the primary health care network established in a village under the supervision of a PHC centre at the sub-district level. It provides a basic health program, the main goal of which is to reduce infant mortality and improve the health and nutritional status of children under five years of age and pregnant and breastfeeding mothers [11, 68, 128]. A CHW may carry out other tasks, including population and civil administration-related services [130], and environmental programs [129].
5.1.1 Acceptability of task-sharing in mental health care

Padmanathan and De Silva [114] found that health service needs of the community and satisfaction with services contribute to acceptability of task-sharing in mental health care. Studies conducted in several countries found acceptability of task-sharing in mental health care is supported by perceived benefits such as accessibility, saving of time and money, and less stigma [115, 149]. Personal attributes of CHWs, such as gender, educational background, experience and knowledge, together with personal qualities (personality, being polite and friendly) also contribute to acceptability [114, 149]. Proximity of non-specialist health workers to service users, and community endorsement of their role, support community acceptability [149], whereas level of training, support and supervision are significant factors affecting acceptability among professionals [115]. From a health system perspective, acceptability is influenced by availability of appropriate infrastructure, workload, and issues such as assurance of confidentiality [114]. Others report that perception of CHWs as trustworthy and respected members of the community, and their links with the local health system, support acceptability of task-sharing in maternal mental health [149].

There is very little research examining the acceptability of task-sharing in identification of perinatal depression using the World Health Organization (WHO) health systems framework. The framework considers the health system to be composed of six ‘building blocks’: service delivery; health workforce; information; medical products, vaccines and technologies; financing; and leadership and governance (stewardship) [117]. A report on the health system of Surabaya found that
health system stakeholders consider task-sharing, specifically identification of perinatal depression by CHWs, to be feasible in this context [122]. The goal of the present study is to examine whether PHC stakeholders in Surabaya consider task-sharing in identification of perinatal depression as acceptable, using the WHO health system building blocks as an analytical framework.

5.2 Methods

5.2.1 Data collection

Participant views on acceptability were collected through individual interviews conducted by the first author (ES). Interviews were conducted in Indonesian and, with permission of participants, were audio-recorded. Participants were interviewed regarding their knowledge about and attitudes to mental health of mothers, attitude to task-sharing in identification of perinatal depression, and views concerning acceptability of this role for CHWs. Participants were asked to consider two vignettes briefly describing cases of perinatal depression as part of the interview focusing on participant attitudes and the acceptability of a CHW role in the identification of perinatal depression. Participants were also informed about relevant policy statements [111] concerning the role of CHWs in identification of perinatal depression prior to exploration of their attitudes concerning these statements.

5.2.2 Data analysis

Interview data (interview transcripts) were managed using NVivo 11 and analysed using framework analysis [132, 133]. To improve rigour of data analysis and prevent loss of meaning, data were analysed from the original language (Indonesian)
which is the language of the analyser, and were translated into English when the analysis process moved to mapping and interpretation.

Two steps of data analysis were carried out. First, participants were categorised based on level of acceptance to determine distribution of responses among participants. Responses were categorised on the basis of two criteria: (i) acceptance of CHWs as non-mental health or non-health care professionals to carry out detection of depression and referral, and (ii) acceptance that CHWs would carry on depression identification in or during ISPs activity. The four levels of acceptance were: 1) Acceptance, which refers to those who accepted both criteria; 2) Conditional Acceptance refers to participants who accepted both criteria but raised one or more requirements; 3) Non-acceptance refers to those who accepted neither the service delivery model nor CHWs as service providers; and 4) Uncertain, which is a classification for participants who were uncertain or did not state a clear view. Once responses were categorised into these four groups, transcripts were coded and charted using the WHO health system framework to explore reasons behind acceptance/non-acceptance. Figure 5.1 illustrates the process of data analysis.
5.3 Results

5.3.1 Level of acceptance for CHWs to identify and refer women with perinatal depression

Almost three-quarters of participants (n=45) accepted the role of CHWs to identify and refer women with perinatal depression, while nearly one-fifth (n=12) conditionally accepted the idea. Only 5% of participants (n=3) were opposed and the remainder (n=2) did not state a clear view. Of those who accepted, 42% (n=26) were service users and 23% (n=14) were service providers. Most conditional acceptance (n=11) came from professionals, i.e. service providers, specialists, and program managers, with only one service user in this category. Opposition came from two
CHWs and a service user, with a strong voice of opposition from a CHW from a Madurese slum area. Figure 5.2 presents the proportion of stakeholders indicating acceptability. From the service providers group, about 60% (n=14) accepted the idea, nearly 30% (n=7) conditionally accepted, and two people (8%) were opposed. One counsellor did not state her attitude clearly. Program managers were divided between the categories of acceptance (60%, n=3) and conditional acceptance (40%, n=2). For specialists, the breakdown was: acceptance 40% (n=2), conditional acceptance 40% (n=2), and uncertain 20% (n=1). Service users overwhelmingly indicated acceptance (90%, n=26), with one person indicating conditional acceptance and one indicating non-acceptance.
Figure 5.2 Proportion of participants' level of acceptance by groups of stakeholders
5.3.2 Factors contributing to acceptability of task-sharing in perinatal depression

There were several shared views among groups of stakeholders regarding what makes task-sharing in perinatal depression identification acceptable or unacceptable, based on health system frameworks. Groups of participants have different views related to several health system areas, including service delivery, workforce, leadership/governance, and information systems, which contribute to acceptability. In contrast, privacy issues, stigma, and competencies of workforce were among obstacles to task-sharing. Information systems, financing and perceptions related to leadership and governance also limited acceptability. There were no views related to medical products and technologies. Figure 5.3 presents a summary of study findings in the form of a health system matrix.
Figure 5.3 Summary of contributing factors to acceptability
5.3.2.1 Service delivery

Service delivery in depression identification by CHWs was acceptable based on benefits of care and convenience. However, stigma and privacy issues impede acceptability. Women/mothers and CHWs perceived task-sharing as providing benefits to the health of mothers, and physical and developmental health of infants. Beyond the role of CHWs, depression identification among pregnant women and postpartum mothers could provide benefits to mental health of mothers and infants. Mothers and CHWs stated that mentally healthy mothers benefit development of the infant during pregnancy and the relationship between mothers and infants. In turn, this prevents disruption to infant development, as the quote below highlights:

“it is important because mental health of mothers will influence the relationship between mothers and the baby” (Ppt E2)

Depression identification could improve mental health of mothers in several ways: a more serious stage of depression could be prevented, and mothers feel their important role in raising children is recognized and appreciated. A mother of a seven-month old baby described:

“the service is important because the health of both mother and child needs recognition. The mother who has maintained the health of the infant for nine months and then delivering it needs attention. But mostly, the attention is given only to the baby but not the mother. In fact, mothers need it, even though only in the way of asking a question about her feeling or situation, or a praise” (Ppt A2)

For young women in their first pregnancy, services provided by CHWs enrich them with meaningful knowledge about the emotional life of mothers during pregnancy. A young woman in her first pregnancy said:
“Sure, the mental health state of pregnant women is important. Sometimes a pregnant woman cries without reason but is indeed questioning whether [the mood] will influence the infant inside, and at the end just try to ignore it... ‘I don’t care’. That sometimes happens.” (Pr E2)

In addition, information provided by CHWs may reduce anxiety regarding the delivery process. A young woman shared her story:

“...that would be good. It must be like that, indeed. There are pregnant women who are worried, feeling distress because they are afraid of delivering the baby and other causes. When I was in RKZ [hospital], a lot of young women shared such a story.” (Pr C6)

Mothers also stated that the service has a good objective of helping women/mothers. The service could relieve the burden on a depressed mother or be a first step towards getting other help, either from CHWs or others.

As well as for service users, task-sharing could also provide benefits for CHWs, e.g. improving CHW knowledge and extending their skills regarding maternal and child health services. In addition, it could be of personal value to both CHWs and women/mothers. Mothers were happy for the chance to share their feelings, whereas CHWs viewed the new role as an opportunity to contribute to another social activity they feel passionate about. One CHW stated:

“I like to be involved in those sort of things..., assisting social work is one of my enjoyments.” (CHW J4)

5.3.2.1.1 Convenience of the service

Task-sharing was considered as convenient. The service is provided by CHWs who live in the same area as users, and CHWs are known to users. Health workers stated that living the same social and cultural life allows a strong social bond that results in mutual caring. In this way, they perceived that CHWs have cultural sensitivity
that facilitates approaching mothers in a more acceptable way compared to formal health workers, as the quote below shows:

“Because a CHW may already be known by the community, then her way to communicate, to be more open to the community is more acceptable than those of the formal health workers.” (Mw 1)

Regular interaction enables CHWs to be aware of the daily life of women in their area. Therefore, they could potentially recognize a mental health issue early if such a problem emerges:

“There is a CHW in every RT [an aggregate of a neighbourhood], therefore they will know things early” (Mw 3)

5.3.2.1.2 Privacy issues and stigma towards mental health

Privacy was a major concern in regard to the acceptable place where CHWs could conduct mental health assessment, whether at home through home visits or at an ISP during monthly maternal and child health services. Some women were worried about the presence of other family members if care was provided at home, whereas other women felt uncomfortable if topics related to mental health or emotions were explored during an ISP activity. The ISP was seen as a place to talk about children’s health rather than health of mothers. It is also a crowded place where children, mothers and other women are present. On the other hand, a CHW may be reluctant to carry out the task at home because the ‘home’ is in fact a single room. This debate is evident in participant comments:

“Prefer during home visit. It is impossible to talk about my personal situation because the ISP is for children’s health...it’s better to visit home for that issue.” (Ppt A3)

“Actually for CHWs it would be easier [to come] directly to the home. But for me, it is not comfortable [if it is conducted at home]” (Ppt C5)
“Can be approached during the ISP activity, because I cannot let myself enter her home, they rent only a small room for a whole family and the children behave” (CHW J3)

Stigma also impeded acceptability of task-sharing. Public stigma was raised by CHWs who described an existing view in the community that issues within a family should be kept within the family. These issues are not only about mental health, but also more general issues, such as lack of food, resulting in hiding of mental health and other issues. Many pregnant or postpartum women prefer to share personal problems with family members or go to professionals rather than to CHWs. A CHW stated:

“The demographic [structure] of the community make them think that [services provided by CHWs] are not important, that is how people here look at it. They also think that whether we have something to eat or not is our personal problem, let alone for mental health issues” (CHW M4)

Public stigma leads to self-stigma because of which some women were reluctant to share their feelings with CHWs, as disclosure could generate negative feelings, such as insecurity and shame:

“knowing each other [between users and CHWs] and disclosure of personal problems to neighbours generates insecurity and unease” (Ppt A2)

5.3.2.2 Information systems

Acceptability of an information system relies on the personal meaning of the role for CHWs as a connector between medical facilities and the community. Some participants supported the additional task, but one CHW strongly refused.

An information system regarding maternal health in general already exists in a conventional, paper-based format. CHWs record health status of pregnant mothers every month and send reports to the health centre and FWM at district level.
A community program manager described that these CHWs first identify pregnant and postpartum mothers based on data obtained from the local FWM, and then monitor their health status including mood states, the delivery risk, and other measures over the perinatal period, up to three months postpartum. A report is sent to the health centre through village midwife and another copy is delivered to FWM at district level. A midwife at the village or health centre would follow up the report by visiting mothers at home when proper examination is required and referring them to get further treatments. A CHW and a mother expressed their approval of this mechanism:

“Yes, I said agree [CHW to identify depression] because of our role to connect to medical facilities and to explain the importance of things [mental health of mothers] as you said. If we approach mothers regularly, they will tell us when they experience an issue. From that complaint, we would link them to the psychologist at the centre if she wanted, or we would invite the psychologist to visit her.” (CHW M3)

“It is acceptable if a CHW can treat the [possible depressed] mother, but if she cannot handle the mother supposed to be referred or suggested to go to the health centre” (Pr E2)

However, not all CHWs and mothers supported this mechanism. A CHW strongly refused to connect mothers to psychologists at the health centre, and instead suggested this role be carried out by a specific CHW for mental health.

“We object for the role to connect to psychologists. We are responsible only for mothers and child health, not connecting to psychologist. It supposed to be a specific CHW [to carry out the task].” (CHW M1)

5.3.2.3 Health workforce

In terms of health workforce, a role for CHWs was acceptable regarding personal characteristics and attributes of workforce, but their capability was questioned.
5.3.2.3.1 Personal characteristics and attributes of workforce

The concept of CHWs being the main workers in identifying and referring women with perinatal depression was seen in different ways by various groups of stakeholders. Mothers or women stressed personal qualities of CHWs they worked with as a contributor. For example, a woman described a CHW as a kind and nice friend to talk to:

“De ST is kind and nice as a friend to talk to, so it is okay” (Ppt A5)

Another service user illustrated this point stating that CHWs are proactive people who usually show sensitivity to mothers’ needs by proactively approaching mothers and stimulating discussion about health. This strategy was responded to positively by mothers when they shared their stories.

In addition to personal qualities, CHWs were perceived as having competencies to carry out the task because they have knowledge about and experience dealing with mental health issues. A CHW stated they had experience handling cases of depression and other mental health problems among pregnant and postpartum mothers. This was supported by specialists and counsellors who explained that CHWs have been trained in mental health:

“The health office has provided training for CHWs for mental health. However, I think mere training is not enough; it needs to be continued with follow-up programs.” (Cs 3)

5.3.2.3.2 Distrust of CHW competencies

In contrast to personal characteristics, the quality and competencies of CHWs in carrying out the task were questioned. Distrust of CHW competency in identifying
depression was raised by professional groups, viz. specialists, district program managers, and health workers. Identifying a depression case is difficult even for health professionals in a PHC centre, implying that a certain level of knowledge and skill is required. A district manager perceived CHWs as having limited capability and should only provide early detection and then refer the woman to a midwife. Specialists also questioned CHW competence in identifying depression symptoms. Even if CHWs agree to carry out the task, it should be adjusted to their capability, e.g. not making a judgement or diagnosis about the mental health status of a woman. A specialist said:

“For early screening they need to be taught with the signs of depressed mothers in terms of physical, behaviour, and social [signs], but for confirming the diagnosis they have to refer them to professionals” (SP 5)

Health workers stressed the scarcity of CHWs who understand the signs of depression and could perform the task. They compared it to CHW performance in administering a risk pregnancy scale, which not all CHWs are able to do. Parallel to perceptions of professionals, some CHWs also perceived themselves as incapable in this role and preferred to not take on the task. This lack of self-confidence was mostly disclosed by CHW members and one admitted that she does not know the signs that a pregnant woman is experiencing stress, indicating that she should not be assigned to this role.

Besides the issue of competency in identification, some mothers raised distrust in the capability of CHWs to maintain confidentiality. A mother explained:

“I am afraid that when I talk to someone [a CHW] about me, then she may talk to others. I would be ashamed” (Ppt A5)
5.3.2.4 Financing

Insufficient compensation was a reason for unacceptability. Despite the role of CHWs as volunteers, their role has been recognised and rewarded with financial compensation. CHWs are provided with transport compensation to support their activities, including home visits. Nevertheless, for CHWs, rewards are very small and not equal to its burden and risks:

“[The task] is not hard, but please remember that working with the community needs financial support for transportation, and the amount [CHWs get] is not significant” (Cs 3)

5.3.2.5 Leadership/governance

In the area of governance, acceptability is influenced by perception about responsibility and objectives, beliefs about the task, and potential coalition. There were differences in opinion about whether depression identification is within CHW responsibilities in maternal and child health care.

5.3.2.5.1 Clarity of CHW responsibility

Acceptability of task-sharing was influenced by clarity of CHWs’ role, i.e. whether the role of depression identification is part of CHWs’ responsibility as stated in a policy document. For example, a CHW straightforwardly stated the task is within their responsibility:

“It is indeed our task” (CHW J1)

In addition, service users accepted the role, since it is the service they expected from CHWs, without considering the appropriateness of it. A woman expected that:
“It is the help that they should give anyway” (Pr C5)

In contrast, health workers and some other CHWs consider the task was not the responsibility of CHWs for maternal and child health. Some health workers support the role as long as the responsibility is restricted only to detection, but not other tasks such as recording, making reports, conducting formal assessments, and providing intervention. The task should also be embedded within their existing tasks, not be provided as a new and sole task. A counsellor said:

“If they have to do reporting and filling in checklists it would be burdensome” (Cs3)

“Either the task: mental health, risk alert, infants and children’s health, they [should] only report cases, not intervene” (Mw2)

Restriction of the task was supported by some CHWs, who otherwise did not agree to take on the role since it is perceived as a risky task when they must deal with family issues of mothers. Depression among mothers may be caused by other family problems, such as domestic violence, in which a CHW feels insecure about becoming involved:

“If we are asked to explore deeper I don’t agree [to do the task] because it is too hard and risky, it is a personal matter and they may think that we want to get involved in. If it is a health issue, then they can go to the PHC centre” (CHW M1)

5.3.2.5.2 Unclear objectives

Pregnant women and mothers were reluctant to accept the CHW’s role when there is no clarity about whether CHWs could undertake follow-up after identifying mothers who may be experiencing depression. For one mother, talking about her emotional problems with a professional such as a general practitioner or gynaecologist
was more meaningful, as these professionals need to know about infant development and the mother’s health, which CHWs are unable to undertake. In other words, to accept CHWs to identify depression, women need to know the purpose of task-sharing that would make them use the service. A mother said:

“We feel reluctant because the objective is not clear. If it is a GP or a gynaecologist, they need to know the infant’s development or the health status of mothers; while if CHWs know [the status] in detail they cannot do anything” (Ppt A2)

A legal foundation that states the objective was raised by a GP as a prerequisite for agreeing:

“CHWs will fill in the sheet by asking questions, indeed they need a legal foundation to ask them. [Other program] is set up to assess the risk of the delivery process; I want to know what this program will go for?” (GP1)

5.3.2.5.3 Coalition

Moreover, a coalition between service delivery sections in the health office was another reason for accepting the role. Only if the mental health section initiates the role would the general service delivery section support it:

“It can be implemented if the mental (health section) will to. Even though I’m from maternal and child health, but I can facilitate things” (DKK 1)

5.4 Discussion

This study examined acceptability of task-sharing by CHWs in identification of perinatal depression from the perspectives of various health system stakeholders. Findings suggest that service users had the highest percentage of acceptance (>90%), yet this group also includes some who reject depression identification by CHWs. Within the service provider group, CHWs and health workers had a variety of positions,
including those who accept, those who conditionally accept and those who strongly oppose this role for CHWs. Stakeholder perspectives show acceptability of task-sharing in the city of Surabaya is consistent with feasibility results [122].

Acceptability among stakeholders was viewed from the perspective of benefits to mothers or women, and convenience of service delivery. Participant views on the quality or competence of CHWs indicated a debate that brings to light some issues with recruitment and training. Stigma and privacy issues are among the challenges for users and CHWs that need to be addressed. These issues are common to other areas of the health system, as are engagement with services, perception of tasks, and increasing workforce competence.

Perception of benefits gained from task-sharing contributes significantly toward acceptability. In this study, formal workers and CHWs perceived that many different benefits would be gained when CHWs talk about depression to mothers/women. CHWs expect to obtain knowledge through training before carrying out the task. This knowledge would be beneficial to establishment of a more accountable method to identify help needed by women so early measures can be provided, such as proper assessment and treatment from a specialist. Better mental health status of mothers would also benefit health of infants. In addition to their professional life, knowledge that CHWs gain about perinatal depression can also be applied to their personal life, such as caring for the family. A similar finding related to benefits of being a CHW has been reported by others [150]. This current finding calls for training of CHWs prior to carrying out depression identification, including selection of training materials.
Mothers indicated that most attention regarding maternal care in existing services concerns only infants. Mothers perceived that their emotional needs during the maternal period have been neglected. A similar perception is also reported by women in high-income countries [140]. This shows the underlying need to focus on women’s mental health. It is recommended that CHWs acknowledge this focus and be equipped with a specific approach, for example by recognising and valuing the women’s sacrifice for their maternal role.

Unlike professionals who have the knowledge to identify subtle behaviours that indicate symptoms of depression, CHWs are unsure about whether certain symptoms can be categorised as indicators of depression. CHWs lack competence in understanding the signs and symptoms of depression and recognising women who develop the disorder. Identifying signs and symptoms of depression is not an easy task, even for health staff [144]. Nevertheless, not all CHWs may agree to participate in training even though improving knowledge could boost CHWs’ confidence in taking on the role [115]. As well as being due to a lack of knowledge, CHW lack of competence may be associated with a belief that depression is ‘normal’ in pregnancy, as reported by a study participant. This assumption is supported by findings from an Australian community [151], but needs to be examined within the Surabaya context. To improve CHW competence and acceptability of task-sharing, training on perinatal depression for CHWs is required.

Stakeholders discussed CHW competence in maintaining confidentiality and insecurities about recording and sharing data on depressed mothers. On one hand,
women are afraid to disclose personal problems to CHWs as they do not trust CHWs to maintain confidentiality. On the other hand, CHWs may prefer not to know about women’s mental health problems as this could put them at risk of assault from a woman’s family if they help solve these problems. The situation is more complicated as CHWs are assigned to record data about women and households and share this data for other purposes at the village level, such as for population and demographic measurement [129]. On the one hand, this complex role of CHWs puts them in a trusted position, but on the other hand their role as an agent of the village in collecting, keeping, and sharing data is a threat to data privacy. A review suggested that the acceptance of the use of data for research is conditional on confidentiality [152], which cannot be ensured through anonymity. Primary health care providers, particularly those familiar to the community, not including volunteers, have high levels of public trust. This debate implies a need to clarify the data owner: health sector or village. Data governance and a data sharing agreement should consider limited, de-identified, and sensitive data [153]. In regards to task-sharing in this current study, there is a need to train CHWs in the important aspects of data collection, including confidentiality and security of data, and to make explicit the relationship between data owners (service users) and collectors (CHWs).

Stigma is a common issue related to mental health services. Task-sharing in mental health is generally challenged by public stigma that prevents people from seeking help [115, 154]. Stigma has also been reported as a problem by postpartum mothers [144] and a barrier to perinatal mental health care [140, 155]. Findings of this study suggest that public stigma is based on community perceptions that mental
health is a family issue that should not be disclosed to others, including CHWs. A similar finding on reluctance to discuss mental health issues because of family perceptions was reported for low income women in a large urban city in the USA [156]. The danger of stigmatizing community perceptions is internalization of public stigma as self-stigma when people agree with the perceptions and apply it to themselves [157].

In this study, women/mothers internalise public perceptions by keeping personal problems to themselves or sharing only with family members. These women/mothers also felt discomfort, shame and insecurity about disclosing personal problems to CHWs. It is pertinent that CHWs also indicate stigmatizing attitudes by perceiving the role of task-sharing as high-risk, in which they indicate a reluctance to participate because it could increase tension between themselves and the mother/women’s family. Uncertainty and fear of the response from family, friends, and health professionals are also among concerns about CHWs competence to ensure confidentiality.

The findings also suggest the importance of role delineation that otherwise could cause tension. The different perception among CHWs on whether the new role in depression identification part of maternal and child health responsibility would be indicate the need for a clear role distinction of each type of CHWs. It is particularly because there are many types of CHWs and not everyone agrees to carry on many tasks. In regard to maternal and child health, task description for mental health could be consulted to existing documents and inform all related groups in PHC, i.e. CHWs, health workers, centre managers, and program managers at health office and village.
5.5 Conclusion

Findings on acceptability of CHW task-sharing in integrated care for perinatal depression indicate a need to improve CHWs knowledge and competencies in several aspects of mental health care. These are knowledge about perinatal depression, including symptoms, public perceptions of mental health, stigma, and confidentiality. These factors refer to elements of mental health literacy and indicate the need to educate CHWs about perinatal depression. Training CHWs in mental health could potentially improve their ability to recognise mental health problems [108, 158], decrease stigmatising attitudes, and increase confidence in providing help [159]. Similar training programs to those in other contexts are suggested for improving helping behaviour and help-seeking behaviour [160]. These connections lead to a recommendation to provide mental health literacy education about perinatal depression to CHWs, mothers, and related people in the community in Surabaya. Moreover, even though CHWs are not health professionals subject to professional ethics, educating them about confidentiality would protect CHWs as volunteers and mothers/women as health care users, and could improve acceptability of task-sharing.
CHAPTER 6: Personal attributes and competencies required by community health workers for a role in integrated mental health care for perinatal depression

This chapter presents findings of the third and fourth research questions about personal characteristics and competencies required for CHWs to carry out identification and referral of perinatal depression in Surabaya, Indonesia. This chapter was submitted for publication to the International Journal of Mental Health Systems on 9 February 2018 and acceptance letter has been released on 30 July 2018 (see Appendix 6, A6.3.1). This chapter contains background and aims of the study, methods, results, and discussion.

6.1 Background

Community health workers (CHWs) play an important role in health care in Indonesia. CHWs provide informal community care and are recruited based on willingness, ability, and availability to run a community-based health service voluntarily. To equip CHWs with skills in health care and ensure capability, they are trained in health-related areas, mainly in maternal and child health [11], and in other health areas as required. CHWs are also increasingly becoming important in mental health care. For instance, CHWs are currently expected to be part of a national community mental health action team at the primary health care level [123], and to play a role in identification of depression among pregnant and postpartum women [72, 111].
Community health workers have a role in mental health care in many developing countries [161] as an approach to alleviating shortages in the mental health workforce [162]. Depending on local needs, CHWs are trained to contribute to a range of tasks, such as detection, diagnosis, treatment, and prevention of mental health disorders [103, 104, 162]. Studies in India, Pakistan and South Africa have shown that CHWs have effectively filled roles as counsellors and psycho-educators using complex treatment [6, 52, 105, 106], including screening and providing interventions to patients with common mental disorders [52]. Intervention studies in Pakistan and South Africa have found that CHWs can be trained to identify and provide intervention for maternal depression [6, 9, 110]. CHWs in these studies completed secondary school and were trained in communication skills, psychoeducation on perinatal depression, and intervention techniques using stress/anger management [9] and/or Cognitive Behaviour Therapy [58]. However, very few studies have investigated the personal characteristics and competencies required for CHWs to carry out these tasks [163, 164]. Those studies reported that knowledge related to specific mental health issues, such as child mental health and perinatal depression, is required to improve competencies in case identification and communication skills to deliver support.

Communication is the most frequently suggested skill for workers dealing with mental health-related issues [58, 164]. The importance of communication skills is demonstrated in the World Health Organization (WHO) Mental Health Gap Action Programme Intervention Guide (mhGAP-IG) on non-specialized health settings, which offers guidelines for mental health actions in developing countries. This document suggests effective communication skills as a general principle of essential care, along
with respect and dignity. Description of these skills include preparing an environment that facilitates open communication; being friendly, respectful and non-judgmental; using good verbal communication skills; and being sensitive towards difficult experiences [165].

Effective communication skills in isolation are not sufficient for CHWs to be competent in their roles. The WHO defines competence as “a level of performance demonstrating the effective application of knowledge, skill and management” (p.33) [166]. Competencies reflect three elements: 1) knowledge, understanding and judgment; 2) cognitive, technical and interpersonal skills; and 3) a range of personal attributes and attitudes. This competencies framework suggests three areas of competency for informal CHWs: (1) basic understanding of mental disorders, including understanding symptoms of mental disorders; (2) basic counselling competencies, including listening and communication skills, especially empathic listening; and (3) advocacy.

In a recent qualitative study in Indonesia investigating feasibility and acceptability of mobilizing CHWs to contribute to identification and referral of women with perinatal depression, it was found that not all CHWs currently working in maternal and child health care are perceived capable of carrying out this task [122]. The findings highlighted a clear need to define CHW characteristics and competencies in order to recruit and train CHWs who may contribute to perinatal mental health care. Therefore, the aim of this study was to explore the characteristics and competencies
required for CHWs to effectively identify and refer women with perinatal depression in Indonesia by examining perceptions of key stakeholders.

6.2 Methods

6.2.1 Research setting and participants

This article reports on part of a broader study conducted in Surabaya, Indonesia, to investigate feasibility and acceptability of mobilising CHWs for perinatal mental health care. Four stakeholder groups in primary health care (PHC) participated: 1) program managers from the district health office and primary health care services (integrated health service posts) in villages, 2) health workers, i.e. primary care doctors (GPs), nurses, midwives and counsellors in PHC centres, and CHWs from three villages, 3) mental health specialists, and 4) service users, i.e. pregnant and up to one-year postpartum women.

Program managers were selected from the district health office and three villages. Health workers were recruited from each of the three PHC centres at sub-district level recommended by the health office. Within the catchment area of one of three PHC centres, three villages were randomly selected to recruit community program managers. From each of these villages, two community-based integrated health service posts were identified from which CHWs and service users were recruited. Mental health specialists were recruited from one district hospital. Further details regarding participants are described in Chapter 3.
6.2.2 Data collection

Participant views on CHW required competencies were collected through face-to-face semi-structured interviews. Participants were interviewed about their perceptions on attributes and competencies for CHWs involved in identification of perinatal depression, and more specifically about personality, educational background, gender, experience, and other factors suggested by participants. Views on training needs of CHWs were also gathered, including whether they could be trained and content of training required. The first author (ES) carried out interviews in Indonesian with all participants. Interviews were audio-recorded with participant permission and subsequently transcribed.

6.2.3 Data analysis

Interview data (interview transcriptions) were managed using NVivo 11. Data analysis was conducted using framework analysis [132, 133]. Elements of competencies, as defined by WHO [167], were used as a coding framework which covered knowledge, a range of skills (cognitive, technical, and interpersonal), and a range of personal attributes (age, gender, education, and personality). Data analysis was conducted in Indonesian to prevent potential loss of meaning through translation. Transcriptions were translated into English when the analysis process moved to mapping and interpretation. This approach was applied to ensure interpretation was credible by allowing English-speaking collaborators to check and discuss the data.
6.3 Results

6.3.1 Characteristics and competencies

Competencies required for CHWs to carry out perinatal depression identification include knowledge required, skills, personal qualities, and personal attributes. Participants advised a range of skills (cognitive, technical, and interpersonal), and a range of personal attributes, such as age, gender, education, personality, motivation, and experience.

6.3.1.1 Knowledge and understanding

Participants shared their perspectives on the types of knowledge or understandings required by CHWs for identifying perinatal depression. In general, CHWs require basic knowledge about pregnancy, maternal life, child development, perinatal depression, communication techniques, and specific knowledge, such as how to change attitudes, and risk factors.

Knowledge about pregnancy and physical and psychological development during pregnancy was recommended by service providers (e.g. midwives and CHWs), mental health specialists, and service users. These groups stated that CHWs should be informed about the physical and hormonal changes of pregnant women that may result in psychological changes. These changes may affect health of mothers and their relationship with the infant and other people in their life. Some women or mothers in a good psychological state may adjust to changes and are more likely to take care of themselves during pregnancy, but other women may need help. CHWs who
understand that pregnancy is not always associated with happiness may have better ways of approaching mothers. A specialist stated:

“People think that pregnancy is a happiness event, however not all people are happy when they are pregnant. ...When a CHW meets pregnant women and finds changes, she needs to know [whether a woman needs help]” (Sp 4)

Another important area of knowledge is behavioural signs of mothers and/or their children that indicate depression. Health workers suggested that presentation of depression during pregnancy may be different to that after giving birth. Therefore, understanding the signs and symptoms is necessary. CHWs and service users suggested CHWs should understand detection methods, including how to use a screening tool.

A specialist suggested that CHWs need to have positive attitudes towards mental health of pregnant women. This specialist stated that it is important to build a paradigm and understanding that what CHWs are doing is important as an investment in the future generation.

6.3.2 Skills and personal qualities

6.3.2.1 Communication skills

Participants emphasized the importance of personal qualities and skills. For those who work with mental, neurological and substance use disorders in non-specialized settings, WHO suggests effective communication skills and promoting respect and dignity are general principles [165]. These principles were also reported as necessary skills by study participants from all stakeholder groups.
Knowledge about communication techniques is necessary. Health providers and specialists discussed a need for communication techniques that do not offend mothers, including verbal techniques, such as way of talking, tone, and language used, and non-verbal methods, such as body language, and interview techniques. Mothers recommended that information be provided to CHWs on strategies regarding asking questions that reduce the risk of mothers/women feeling scared or reluctant when gathering information from people less involved in the rest of community (e.g. migrant workers), and when suggesting solutions.

Service users and CHWs listed in detail communication skills they expected, such as manner of communicating with others, talking softly, rather than being reactive or directive, to create comfort, not using medical terminology, and having a non-judgmental attitude. CHWs perceived willingness to listen to others as an important skill in communication:

“Those who will to listen, people who can talk smartly, finding opportunities among words. Yes, I think those things” (CHW J4)

Some participants highlighted the importance of people who can maintain confidentiality. In contrast, a communication style that is directive, straightforward, involving a superior tone, and less empathetic, referred to in a local terms as ‘judes’ (salty), is undesirable. However, a mother stated that CHWs do not need to improve communication skills because, as village people living in the same area as users, they know how to talk to neighbours. Indeed, a CHW explained that a person is assigned as a CHW because she is articulate, and able to persuade and educate others. Thus, CHWs have good communication skills with people in the village:
“[the centre] selects CHWs: this person is smart and able to persuade others, is articulate, can provide counselling and broader perspectives. Then that person would be selected to be a CHW and [get trainings]” (CHW NS3)

6.3.2.2 Social skills

All stakeholder groups stated that CHWs in this role should have social competencies. These skills refer to the ability to socialise well with others and to participate in social activities. Being a CHW for some time is regarded as preferable, even though new CHWs receive training before carrying out tasks, as being used to dealing with the community is helpful when encountering women with emotional problems such as depression. In addition, CHWs are expected to have sensitivity to, and awareness of, community needs, and those who have already participated in the CHW role are thought to be more likely to have this quality:

“CHWs work on several tasks, but for this task I recommend those who are active and have concerns [about issues in the community]” (Nr 3)

6.3.2.3 Personality and problem-solving skills

Several personal qualities are expected of CHWs, such as being broad-minded and having problem-solving skills. Specialists proposed problem-solving skills as a competency that enables CHWs to provide feedback or offer solutions to users. In addition, perinatal depression may be caused by social and cultural factors. Therefore, taking care of such women requires CHWs with open views about social and cultural life. This quality is associated with level of education. A mother stated:

“If she [a CHW] has higher education she would have broader experience, is accurate, and can offer solutions because she has learnt more. Those [CHWs] who are less educated but have more experience may also [provide solutions], just like most CHWs in our community” (Pr C1)
Dealing with women in different emotional situations requires patience, attentiveness, and care. These needs were expressed by a pregnant woman who perceived the necessity of being patient and talking softly to women:

“...be patient, able to offer solutions, talk in good manner and soft, because she will talk to people who may have problems...” (Pr E4)

For service providers, it is necessary to have CHWs who are loyal and committed to assist the community under supervision of the PHC centre.

6.3.3 Personal attributes

6.3.3.1 Age

As described by research participants, the desirable age of CHWs to participate in this role is between the 30s to 50s years of age (Figure 6.1), with the most preferable age range being the 30s to 40s. However, service users and CHWs perceived that personal characteristics, availability, and competencies are more important than a person’s age and that the preferred age range correlates with certain competencies. For example, an older CHW is expected to have experience of pregnancy and better communication skills, which is less likely in someone in her 30s. Similar expectations applied to other characteristics, such as responsiveness to user needs, commitment to tasks, and maturity. A CHW stated:

“The [existing] CHWs are already old. I reckon it is better to choose those in their 30s because they are more experienced. If they are below 30, they cannot communicate well and cannot approach well to the community” (CHW M1)
In addition, people in their 30s and 40s were considered to have fewer domestic responsibilities. Most women in Indonesia marry and have children in their 20s and therefore have fewer domestic tasks in their 30s and 40s.

Service providers had a preference for CHWs in their 50s as they perceived people in this age group are more motivated by personal benefits gained from taking on this role, e.g. gaining knowledge about perinatal mental health that can be transferred to their own family.

People below 30 and above 60 years of age were less preferred to be a CHW involved in the task of depression identification, for reasons that varied among groups of stakeholders. Service users referred to personal feelings that influence age preference. For example, they preferred not to see CHWs below age 30 or of the same age as themselves, because it may generate feelings of shame from sharing psychological experiences and because the relationship would seem “just like talking to one’s own friends”. In agreement with service users, CHWs stated that this age group is less likely to be respected and trusted, and consequently service users may not listen to them. In addition, young people are busy with paid employment and may not be available to take on the role. On the other hand, people over 60 years of age were seen as too old, less productive, and reluctant to connect to the PHC centre, with many having responsibility for taking care of grandchildren. Persons of this age were also seen as sometimes having bad communication skills because they may talk in a directive way and with a lack of empathy. One participant stated:
“If they are too old, they are reluctant to come to PHC centre, sometimes they also have responsibility such as taking care grandchildren. Therefore, it is better neither too young nor too old...at about 30 to 50 years old. That’s the range” (Cs 3)
Figure 6.1 Desirable CHW characteristics and reasons for age preference

* More experience
* Better communication skills
† Fewer domestic responsibilities
† More Passionate

† Have strong commitment
# Motivated by personal benefits

* Create feeling of shame in users
* Seen as friends by users
† May not be trusted by users
† Poor communication skills
# Unwilling because of commitment to paid work

† Physically weak & slow
# Low motivation
# Have domestic responsibilities at later age

Perceptions from: * Service users; † CHWs; # Service providers; ‡ Program managers
6.3.3.2 Education

Many participants stated that level of education is not a principal requirement for CHWs to undertake a depression identification role. For CHWs, basic competence in reading and writing is sufficient as CHWs receive training in related services. Participants also perceived that some people may have a low level of education because of financial constraints rather than inability to learn, and that they may have other relevant qualities, such as social skills and work skills. Specialists were concerned about difficulty finding people for this task if a higher level of education were a requirement:

“...if we set a specific level of education, we will face problem in finding the CHWs. So we focus on people who are active and able to work together. To be honest, it will be better if we consider education because understanding about depression requires higher knowledge which is identical to higher level of education. However, practically we won’t get them” (Sp 1)

Rather than education as a CHW criterion, program managers perceived willingness as the important requirement for a CHW once a basic literacy level was met:

“Usually for CHWs we do not see their education level, because the principle is she will to take the tasks. If we consider their education, then no one may to join” (CPM 3)

Service users stated that being smart is not always related to educational background. This group emphasized experience, willingness, and personal characteristics as essential criteria. A person who is attentive and can make others feel comfortable to talk was seen as more important than having a particular educational level. A woman said:
“If someone has a bachelor degree but she is not willing to be a CHW, cannot get along with others, talks to others in bad way, then I will not feel comfortable talking to her. So, the more important thing is personal characteristics of the person, not the level of education” (Ppt A5)

Although many participants considered literacy is more important than a certain level of education, most participants recommended people with either a junior or senior high school background as sufficient if a specific level of education were to be required. This level of education is associated with acceptable communication skills, and people with this background are not difficult to find in the community. CHWs with a primary school background are less preferred, as their communication skills are considered poorer.

Some specialists and service users stated that a tertiary level education would be better for the CHW role, because CHWs with a degree are more open-minded, have better knowledge in general and about depression specifically, and have better problem-solving skills. However, finding people to perform the role of a CHW with this educational level is not easy and, even if available, they are not always able to communicate and socialize in an appropriate manner with service users.

6.3.3.3 Sex/gender

A majority of participants suggested that women should carry out the CHW role. Most service users stated women promote comfort and less shameful feelings for service users, and generally have gender-based sensitivity regarding women’s feelings and experience in pregnancy and caring for infants. Women are also likely to have more time to commit to the role, as most men have work obligations. Service users raised concerns regarding relationship issues that may occur if CHWs were men, e.g.
male CHWs may aggravate marital problems of service users. A program manager preferred women simply because of the reality that most CHWs in her area are women. A pregnant woman said:

“I prefer to have women because they have experience being pregnant. If they are men I will be reluctant and hesitate, even with our own husbands sometimes we do not disclose... Men cannot feel what women do, how pregnancy feels like. Men can talk only” (Pr C5)

6.3.3.4 Motivation

Service providers and community program managers focused more on willingness to take on the CHW role as an important criterion. Motivation as a criterion aligns with general requirements stated in the national guideline on management of ISPs [11]. Willingness means that the person wants to carry out the task voluntarily, and not be driven by financial considerations. Rather than tangible benefits, some CHWs were motivated by an Islamic-related value called ‘ikhlas’, a belief that people receive intangible reward indirectly from God. This term is common among CHWs as it is a motivation to remain in this voluntary role without expecting a salary:

“a CHW has to be ready to social work, has to have KMS [card to go to heaven], ikhlas…” (CHW NS3)

6.3.3.5 Experience

In addition to competencies, stakeholders highlighted the importance of experience. Several forms of experience were proposed by different stakeholder groups, e.g. service users preferred people who have had experience of marriage and pregnancy:

“Certainly those who already have experience in giving birth, being pregnant, having children. Because experience is important, so before
helping others she has experienced those situations. At least we can share” (Ppt E4)

Experience as a CHW who has worked with women and mothers is strongly recommended by service users. This suggests that recruitment of CHWs for depression identification should be from among existing CHWs. A mother said:

“New persons have less experience. It’s better if the existing ones are recruited and then be trained, [because] they already have experience. While the new ones need to be guided” (Ppt A4)

6.4 Discussion

This study investigated characteristics and competencies that CHWs require to participate in integrated mental healthcare for perinatal depression identification, including knowledge, skills and personal qualities, and personal attributes or characteristics. Findings show CHWs require knowledge about pregnancy and maternal life, child development, and perinatal depression. Knowledge about depression is expected to assist CHWs to identify signs and symptoms of depression. It is also suggested to train CHWs to use a screening tool for perinatal depression. The most recommended skills for CHWs in this task are communication and social skills. Other characteristics required for these CHWs are motivation, such as willingness and availability, basic literacy, and women who have experienced pregnancy and are in a certain age range. These findings add information from previous studies and available guidelines about CHWs working in general care and specifically for maternal mental health care. The findings could also become a foundation to develop particular guidelines for recruitment and training of the workforce.
The finding that CHWs require knowledge about pregnancy and maternal life, child development, and perinatal depression is consistent with previous studies where CHWs were provided psycho-education about pregnancy, child development and maternal depression in order to identify and treat mothers with depression [6, 9, 110, 164]. Studies on the role of CHWs in mental health care also reported that CHWs were able to identify a certain mental disorder after being educated about the disorder [52, 105, 108, 168], reinforcing the role of specific mental health-related knowledge as competencies required for the role of CHWs in mental health identification. Knowledge regarding perinatal depression and anxiety are within training modules addressing maternal depression, i.e. the Thinking Healthy, a manual for management of perinatal depression published by WHO [58]. Consistency with previous studies and international guidelines underscores the knowledge element of competencies for CHWs to carry out perinatal depression identification.

The findings that communication, social, and problem solving skills are expected for the CHW role by most stakeholders have been reported in previous studies [58, 103, 169]. Several studies emphasize that communication is a basic skill that required by CHWs working in the mental health area in diverse contexts [58, 103, 169]. This skill is a core competency for human resources in the mental health area [167]. More specific behaviours reported in this study, such as attentiveness and empathy, listening, and asking questions, are also listed as among behaviours and attitudes within communication skills recommended by mhGAP-IG [165]. In addition, social skills are important due to CHW involvement with the community they serve. Social skills were perceived by participants as understanding of social context, being
socially active, and/or being aware of community needs. Having these skills means that CHWs have a strong bond with, and social-cultural understanding of, the community. Involvement in the community through social activities is part of ‘previous experience’ required in CHW recruitment [170] and CHWs should be chosen from and by the community they serve [31]. In the context of this study, internal recruitment of CHWs in maternal mental health should be selected from existing CHWs as their on-going community participation indicates their social skills and sensitivity to, and awareness of, community needs. Thus, existing CHWs are more appropriate in the role of identifying mental illnesses in the community [171]. For Surabaya, CHWs^{MCH} (CHWs working on maternal and child health whom the study addresses) who are known to pregnant and postpartum mothers are the most suitable group of CHWs from which to source CHWs for depression identification. More specifically, selection of CHWs for maternal mental health identification and referral should be from amongst CHWs^{pregnancy}, who are mostly CHWs^{MCH} who have been assigned to regularly monitor the health and pregnancy risk of pregnant and postpartum mothers [122]. Appointing the role to CHWs^{pregnancy} means the new task accompanies existing tasks and therefore will not be an extra burden and could increase productivity [172, 173]. Indeed, these skills refer to emotional resilience [174] that could empower CHWs to work with different groups of people in the community in a sensitive area such as mental health. Although this attribute was not explored in the interviews, the communication, social, and problem solving skills required are characteristics associated with emotional resilience in regards to working in social services.
Findings of this study about CHW attributes/characteristics are consistent with characteristics required for CHWs in general, and in the mental health area. However, attributes such as gender, age, education and experience are very much associated with women’s health. Findings on the preference for female CHWs to carry out this role is very specific in the context of maternal depression as a women’s health issue. This is also evident in early development of the role of CHWs in maternal and child health where women were most preferred \([31, 96]\). The same argument also applies to the requirement for CHWs to have had experience in pregnancy, mainly by service users, as also highlighted in studies about CHWs working in different health areas \([31]\). On the other hand, characteristics such as willingness, ability, and availability are widely reported as general criteria in recruiting CHWs \([31]\). Indonesian guidelines about integrated health service posts, which CHWs work within, requires these three elements as basic criteria in selecting CHWs \([11]\).

All CHW required competencies build the trustworthiness of CHWs in carrying out a role in maternal mental health. Knowledge about mental health of mothers and brief intervention or problem solving skills enhances ability of CHWs to identify women with depression and take necessary action, such as referral to relevant services. This action requires motivation or willingness to help others \([173]\). To do so, being aware of others’ feelings and building trust with service users, health services, and the community are necessary and may be associated with maturity that is related to age and level of education. This argument suggests the need for a higher level of education rather than basic literacy, consistent with a previous report \([31]\).
Findings of this study have implications for preparing CHWs to undertake a role in perinatal depression identification as part of integrated antenatal care [72, 111]. Guidance on selection and a training curriculum for CHWs in this role would add to general requirements of CHWs working in community-based health service posts [11]. Figure 6.2 presents a summary of findings arranged hierarchically, starting from general requirements and moving to more specific and advanced requirements that can only be acquired by CHWs through additional training. The characteristics, motivation, and attributes provide guidance on recruitment (left side), while the remainder (right side) provide guidance on development of a training curriculum. In addition, study findings fill gaps in information about competencies required for CHWs in health services. Recruitment criteria for health-related roles, such as level of education, pre-existing experience and demographic characteristics related to place-based, i.e. that CHWs are from the same community as service users, were often presented without enough information about the reasons for determining the criteria [170].

Nevertheless, tensions around financial motivation versus religious matters, and age and experience criteria mediated by role territoriality emerged. The expectation that CHWs should not be driven by financial motivation and should value their work on religious grounds could potentially cause tensions since CHWs feel that they have spent their time to provide services rather than earning money. Studies suggested that volunteers participating in task shifting felt higher workload despite being inadequately paid and not having the opportunity for career planning [150, 175]. CHWs’ internalisation of their reward in terms of religious value is a sign of
powerlessness mixed with sense of hope and a way to reduce tension with health
workers who to some extent rely on their participation and with mothers who have a
demand for their services. Moreover, tensions could also occur among CHWs from
different age groups and experience. The proposed role was suggested as being best
suited for women in their mid- to late-thirties, forties and fifties because they may feel
more mature and have more experience than younger CHWs/new recruits, and be
more productive than older CHWs [122]. Older CHWs may feel be abandoned after
their productive time was over. Some existing CHWs expect new recruits to learn fast
and take over their responsibilities, however they are often not ready. Consequently,
the younger CHWs may expect the more experienced to continue leading them, which
the existing CHWs may perceive as unwillingness. Such misconceptions may result in
tensions. A constitution on certain responsibilities across age may reduce potential
tension.

There is a need for further exploration about the level of knowledge that can
be transferred to CHWs, the depth of communication skills that CHWs can attain
through training, and training methods that fit with their capability. CHWs are a good
source of information in development of a training curriculum, as they have good
understanding of cultural and interpersonal relations with the community, including
acceptable communication and manner in approaching service users.
Figure 6.2 Characteristics and competencies required for CHW recruitment and training needs
6.5 Conclusion

This study provides detailed information about competencies required by CHWs carrying out perinatal depression identification and referral. Many studies examining the role of CHWs in the mental health area have not been based on community voices, despite a common agreement that CHWs are selected from and based on criteria set by the community they serve. This study fills this gap in knowledge and provides a rationale for criteria for CHW recruitment [170] in the specific context of maternal mental health care in Surabaya, Indonesia. Study findings show consistency with criteria being used in selecting CHWs in many studies, and with guidelines on recruiting CHWs in general and CHWs in mental health specifically. Elements such as knowledge and skills are also consistent with those stated in international guidelines for informal workers working in mental health published by WHO. Thus, generalisation of these findings to management of CHWs carrying out a role for perinatal depression identification in other contexts may be possible.
CHAPTER 7: Discussion and Conclusions

This chapter presents a summary of main findings regarding the potential for community health workers (CHWs) to identify and refer women experiencing antenatal and/or postpartum depression. This is followed by discussion of key findings in the context of previous research, policy and development of perinatal mental health; implications and recommendations and future research; a description of strengths and limitations of this study; and study conclusions.

7.1 Summary of findings

This thesis comprises three main findings which answer four aggregate research questions to achieve the research aim. The first finding was that it is feasible to mobilize CHWs to identify and refer women experiencing antenatal and/or postpartum depression, which answers the first research question. The second finding was that it is acceptable for CHWs to undertake this role, which addresses the second research question. The third finding was that there are important characteristics and competencies, such as willingness, basic literacy, experience in pregnancy, communication and social skills, and knowledge about perinatal depression, required for CHWs to undertake the role. This finding addresses the third and fourth research questions on characteristics and competencies required for CHWs to identify and refer women experiencing antenatal and/or postpartum depression.

In this study, 62 participants were recruited from four groups of primary health care (PHC) stakeholders in Surabaya, Indonesia, i.e. program managers, health workers
including community health workers, mental health specialists, and service users who are pregnant or up to one year postpartum. Participants were recruited from the highest to lowest tiers of the PHC system, including district health office, district hospital, PHC centres at sub-district level, and community-based health services at village level called integrated health service posts (ISPs), health program managers at village level, and service users of maternal health care. Four of 62 PHC centres where provision of mental health services exists participated in the study. Participants were diverse in terms of economic and cultural background.

As briefly described above, study findings show that the role of CHWs in identifying depression during pregnancy and postpartum and making referrals to mental health services was feasible for the health system of Surabaya. This feasibility was supported by all elements of the health system based on the World Health Organization (WHO) health systems framework: leadership and governance, service delivery, health workforce, health financing, medical products and technologies, and information system. National mental health policies that include community mental health service delivery called ‘community mental health action team’ or Tim Pelaksana Kesehatan Jiwa Masyarakat (TPKJM) and timeline of the policy ‘Indonesia free from shackles’ (or Indonesia Bebas Pasung) provided strong foundations for CHWs undertaking this role. Existing organisational management of mental health services enables integration of mental health care within existing roles of CHWs in mental health identification and referral procedures and development of training and supervision for CHWs undertaking this role. In addition, findings show that the financial system allows budget allocation to support mobilization of CHWs for
integrated perinatal mental health care. Moreover, the role was perceived as feasible when incorporating a simple mental health screening tool. Involvement of CHWs in maternal mental health may facilitate monitoring of maternal depression in the data recording system. However, feasibility was challenged by (1) lack of practical guidelines for CHWs to carry out the role, (2) poor collaborative management of CHWs between the village and PHC centres, and (3) lack of guidelines and pathways of service delivery, and database system for mental health disorders.

After confirming the role of CHWs in identifying depression during pregnancy and postpartum and making referrals to mental health services was feasible for the health system of Surabaya, this proposed role for CHWs was found to be acceptable to all stakeholder groups. About three-quarters of participants fully accepted this role for CHWs in integrated care for perinatal depression. One-fifth of participants conditionally accepted, and a minority (5%) were opposed to this proposed role for CHWs. Acceptability was determined considering several elements of the health system. For the service delivery area, factors that contributed to acceptability included (1) perceptions of benefits of this role to health improvement of mothers and infants, recognition of mental health of mothers, and improvement of CHW knowledge and skills; (2) convenience of the service model as CHWs live close to service users, and (3) value of the service to CHWs and users personally. Personal qualities of CHWs, who are perceived as friendly, nice, and are aware of user needs, was another factor of acceptability. The role of CHWs to link health facilities to the community became a strong support to acceptability in dealing with data and communication systems. Generally, there was high acceptability but there were some who did not accept. Some
of the reasons for this included: (1) CHWs being perceived as having poor competencies, including by CHWs themselves who felt unconfident and incapable to take on this role due to lacking of knowledge about perinatal depression (2) confidentiality concerns, (3) insufficient compensation, (4) the view that task of depression identification was as outside CHW responsibility in maternal and child health, and (5) lack of clear objectives. Stigma of mental health as family business was other obstacle to acceptability. Yet, some CHWs even strongly rejected being involved in the role, and rather they suggested assigning specific CHWs for this purpose. However, only a small number of participants had low acceptability and most participants were in favour of mobilising CHWs for this purpose.

Findings concerning feasibility and acceptability lead to the need to explore characteristics and competencies required for CHWs in identifying and referring depression during pregnancy and postpartum, which could improve feasibility and acceptability. This study identified three required competencies: knowledge, and skills and personal qualities. First, for this role CHWs were expected to have knowledge about pregnancy and maternal life, child development, perinatal depression and its presentations. Second, skills required were: (1) communication skills including verbal and non-verbal communication, listening skills, ability to ask questions, a non-judgmental attitude, and maintaining confidentiality; (2) social skills, including active participation in the community, and sensitivity to, and awareness of, community needs; and (3) basic problem-solving skills. In addition to these skills, for this role CHWs were expected to be patient, attentive, and care for others. The third element, attributes and characteristics, includes age, gender, level of education, motivation, and
experience. Preferred attributes for CHWs in this role were women of the age range between 30 and 60 years, with personal experience of marriage and pregnancy. Also, those with high school background were preferable and motivation was a basic requirement for these CHWs, represented by willingness to spend time and carry out the role.

7.2 Discussion

This study underscores previous research on feasibility of including a role in mental health identification and intervention in the community work of CHWs, including in perinatal mental health care. Randomized controlled trials on the effectiveness of CHWs for mental health identification and intervention have been conducted in diverse settings, mostly in low- and middle-income countries (LAMICs). For example, in India, CHWs were found to effectively have a role in providing collaborative care intervention that improved recovery among patients with common mental disorders (CMD) [52, 176], and community-based care for persons with schizophrenia and their caregivers [105]. In South Africa, CHWs were shown to effectively provide treatment for depression [106]; and in Indonesia, CHWs were found to be able to identify mental disorder cases in the community and to connect people to primary health care [84]. The contribution of CHWs in mental health care was also reported as feasible and acceptable in five countries: Ethiopia, India, Nepal, South Africa, Uganda [115].

In maternal mental health, CHWs undertaking identification and providing intervention for depression and anxiety in mothers have been reported in several
countries. Studies from Pakistan show CHWs provided cognitive behaviour therapy for mothers with depression [6], and screen and provide regular anxiety/depression counselling for mothers [9], and in South Africa group-based Interpersonal Therapy (IPT) reduced depressive symptoms [106]. Despite evidence showing that CHWs can provide intervention to reduce depression during the perinatal period, routine identification of perinatal depression by CHWs is a challenge [177].

Depression identification is the first step that allows data recording about existence of perinatal depression and other forms of mental health disorder during the perinatal period, such as common perinatal mental disorders or psychosis. This study found the undeveloped health information system is a weakness of the health system in Surabaya as records of mental health data during the perinatal period was scarce. Without data there is no clear rationale to develop or improve the maternal mental health system and mental disorders during perinatal period are likely to remain undetected and untreated, resulting in extended physical, psychological, and social impairment [17, 178, 179].

Results of this study indicate that developing a new role for CHWs in identification of perinatal depression in Surabaya is promising. Involvement of non-specialist workers in mental health is required because of the dearth of mental health specialists that results in under-diagnoses and neglect of mental health problems, including during the perinatal period. With high prevalence of perinatal depression reported by a study in urban Surabaya [30], it is predicted that prevalence of cases in underprivileged communities is high, considering that identification of this problem is
currently not available in routine primary health care services. A study in routine clinical practice from an urban city in the US suggested that only 40% of all cases of perinatal depression are detected [180]. In addition, mental health specialists are not common in primary health care centres in Indonesia due to being mostly based in hospitals. [181]. Availability of human resources is a crucial element in developing mental health care, including maternal mental health care. Despite limited provision of mental health workers in Indonesia (3.1 per 100,000 population) [182], Surabaya has dedicated resources to employ mental health specialists (psychologists or counsellors) in most PHC centres and district hospitals. This is a result of decentralisation of health system governance that enables autonomy to design health service delivery that utilises local resources. Provision of mental health specialists is important to support supervision and refresher training to CHWs and ensure referral mechanisms are in place.

Results of the final sub-study regarding characteristics and competencies required for CHWs to carry out a role in maternal mental health have important implications in developing this non-specialist workforce within the existing health system. Findings were consistent with previous reports, including Indonesian guideline about CHW role in integrated health service posts [11] (ISPs), and international guidelines, such as mental health Gap Action Programme-Intervention Guide (mhGAP-IG) [59] and a manual for psychosocial management of perinatal depression called Thinking Healthy [58]. Findings of this study provide guidance for recruitment and, more specifically, indicate that a training curriculum for human resources in perinatal mental health care drawn from other contexts can be applicable for CHWs and other
primary health care workers. As in integrated care, training for health workers should include a supportive supervision program and referral system. In development of maternal mental health care in South Africa, a training program was targeted to all health workers working in this role, including midwives, nursing staff, and counsellors, to prepare them with the service delivery environment to integrate maternal mental health care into routine practice [183]. Health care provider knowledge and skill needs in perinatal mental health are also reported in the literature [184]. Training components include knowledge on maternal mental health, basic counselling skills, mental health training procedures, and strategies for maximizing success of referrals [112]. Based on the literature and findings of this study, training could strengthen knowledge about pregnancy and perinatal depression, basic communication skills, counselling skills (for counsellors), identification and/or screening procedures, referral procedures, data recording, and problem solving skills. In addition, as data recording is necessary to address gaps in the information system, training in data collection and management is required. Even though a small group of health worker participants in this study did not support CHWs carrying out recording to prevent more burden, other participants, such as midwives, expected CHWs to take on the task and stated their ability to do so. A simple recording sheet for CHWs complemented by a more complex protocol to be completed by formal health workers, such as midwives and counsellors, is recommended to reduce workload burden on CHWs.

In addition to workforce development, the role of CHWs in Indonesia is facilitated by mental health policies. The CHW role in mental health care in general is legitimated by the current mental health reform called “community mental health
action team” or Tim Pelaksana Kesehatan Jiwa Masyarakat (TPKJM) [123]. The reform concerns shifting the role of mental health care from mental hospitals to community care and addresses integrative and comprehensive health service delivery, defined as services of promotion, prevention, curation, and rehabilitation that involve community participation. This policy is supported by the recent Mental Health Law (Law number 18/2014) that proposes mental health care be integrative and comprehensive across life stages. Complementary to these policies is that of maternal care, which this study was addressed, i.e. the role of CHWs in identification of depression among pregnant women and postpartum mothers [72, 111]. These policies show strong legal foundation to develop the role of CHWs and development of a mental health action plan at the district level is likely. However, further studies are required to examine strategies and procedures of implementation and feasibility.

Alongside foundation policies, findings of this study may inform development of integrated maternal mental health care. Mental health care is regulated in integrated antenatal care with a referral model to mental health specialists (see Figure 2.2 pathway of antenatal care) [72]. Integrating or inserting the role of CHWs in this pathway would allow identification of perinatal mental health problems in routine maternal care (antenatal and postnatal). This argument is informed by a previous program in Zimbabwe where CHWs provided problem-solving therapy in their routine role within primary health care [185]. Existence of CHWs in Indonesia, providing frontline community-based maternal and child health care as part of the primary health care system, makes integrated care for mental health feasible. Embedding mental health tasks into the work of CHWs preg (i.e. CHWs assigned to regularly
monitor health and pregnancy risk of pregnant and postpartum mothers) leads to
efficient human resource utilization and task management. This approach places
mental health as part of the holistic definition of health by WHO: a state of complete
physical, mental and social well-being. Moreover, depression identification by CHWs in
their routine role has common elements that make integration amenable: (1)
avoidance of stigmatisation because the task is part of comprehensive maternal care,
(2) it is woven into routine work of CHWs so is not considered an extra burden, and (3)
the service is culturally appropriate as CHWs are local people who share social and
cultural understanding with the community being served [186]. Evidence and
experience indicate that stand-alone training of PHC workers in mental health care is
not sufficient to guarantee delivery [187]. Thus, further research addressing such a role
in a pragmatic trial is necessary.

A significant finding of this study was community social-cultural context which
may affect integrated maternal mental health care. This study identified stigmatising
attitudes due to maternal mental health and issues around pregnancy being
considered family matters and subject matter avoided by mothers. A previous study of
perinatal depression in Surabaya attributed not only emotional or physical states as is
the case in Western biomedical discourse, but also to social (lack support from
partners and social networks, poor marital relationships) and economic (poverty and
unemployment) factors [25]. Most pregnant and postpartum women with symptoms
of depression in that study referred to their emotional experiences in the context of
life adversities and did not perceive their situations as medical issues. This attitude
among the community and mothers is a potential obstacle preventing mothers from
accessing maternal mental health services and may hinder CHWs to carry out tasks related to maternal mental health, including depression identification. Consequently, stigmatising attitudes to maternal mental health could reduce opportunity for women with maternal mental disorders to be detected and receive primary level mental health care. Therefore, education about maternal mental health care among health workers and the community is necessary to improve awareness of this issue and sensitivity or responsiveness of (i) health workers to recognise signs of mental health problems among mothers, and (ii) mothers and family to seek help. In addition to addressing stigmatising attitudes, there is a need for mothers to understand and pay attention to their mental health, which indicates a strong need of maternal mental health care. Yet, a significant challenge is mobility of some service users as a characteristic of the urban population. This study identified challenges in approaching migrant women workers from nearby towns or villages who are likely to return to their hometown during late pregnancy and the postpartum period or move to another community.

In summary, this study supports the global mental health agenda that outlined significant challenges in integrating care for mental, neurological, and substance use (MNS) disorders. Integrating maternal mental health into maternal and child health programs is a challenge in this framework. With the existing maternal and child health care in primary health care system in Indonesia in general, and Surabaya in particular, involvement of CHWs is likely to initiate integrated care.
7.3 Implications and recommendations and future research

There is significant high-quality research available that has examined the role of CHWs in maternal mental health care with the respect to intervention for perinatal depression or common perinatal mental health disorders. This study contributes to the literature base by exploring the role of CHWs in identification of perinatal depression, integrated in routine maternal care, within the Indonesian health system. Further, finding of this study contribute to, and have implications for, global mental health knowledge.

Findings of this study are consistent with a theme of grand challenge in the global mental health agenda that suggests to use system-wide approaches [188]. Health-system-wide changes are crucial, and research into system interventions could transform health services. As a step towards developing integrated care for mental health in primary care, this study shows the readiness of Indonesia’s social policy system to meet the challenge. Indeed, this study also enriches the research area on use of non-specialist mental health-care providers in low- and middle-income countries that engage a wide set of stakeholders [189].

While research on efficacy of the role for non-specialists in mental health for maternal health care has been reported for several LMICs, this study contributes information from Indonesia, which has social, cultural and health system particularities. All care and treatment interventions should have an evidence base to provide program planners, clinicians and policy makers with effective care packages [188]. With organizational management of CHWs in Indonesia which may be both
similar and distinct from other contexts, this study opens opportunity of further exploration in this research area in more various methodological approaches. Research that examines WHO packages for non-specialists is an example of possible future research.

For Indonesia, this study has implications for policy, clinical practice, and public health programs which aim to improve health of women during pregnancy and one year postpartum. Data from this study provides support to program managers in the district health office of Surabaya to develop a perinatal mental health care system embedded within the district health system by preparing CHWs to carry out perinatal depression identification in their routine role in maternal (and child) health care. The program manager of the special health care section in the district health office may continue strategic planning regarding mental health training for CHWs, and include maternal mental health. A collaborative program between special health service delivery section and the general health service delivery section responsible for maternal care would form a strong foundation in developing this care, including establishing financial allocation and other facilities, such as protocol sheets to support screening, recording and reporting, and referral mechanisms. A specific guideline for integrated mental health into maternal health care involving CHWs could be developed to supplement the pathway in integrated maternal health [72], see Figure 2.2, and includes data and information systems. This guideline may identify roles to be carried out by each health service providers and could be a legal basis for actions.
The study provides robust information for program managers at village level and PHC centres to prepare CHWs assigned to carry out the task of maternal mental health care. Program managers at village level responsible to recruit and deploy CHWs may learn from the characteristics and competencies required for CHWs carrying out this role. Together with PHC centres, these managers may discuss the most feasible and acceptable strategy that connects community needs with mental health of mothers, CHW aspirations, and the health system agenda. This includes training and supervision sessions, home visits, and data recording. Program managers at village level which also represent the Family Welfare Movement may also coordinate with the head of this agency at the district level.

In addition to a need for the district health office to establish maternal mental health training for CHWs, this study also indicates a need to promote community education about mental health and its impacts for women during pregnancy and one year postpartum. This may include knowledge enhancement and skills to improve community awareness and minimize/reduce stigma associated with maternal mental health, and target PHC health workers, program managers, CHWs, pregnant and postpartum mothers, women in general, and the community. There is also a need to explore who is responsible for such an education program, such as health office, district government, PHC centres, the village, and FWM at all levels. Thus, a small pilot study is necessary to examine feasibility of specific approaches to education prior to implementation.
Findings of this study also have implications for development of training materials regarding perinatal depression, identification, and intervention required for CHWs and other health workers in general. Within integrated maternal mental health care involving CHWs, all health care providers and caregivers, including those subject to referrals and those providing supervision, should receive similar training [184]. A training curriculum that incorporates socially and culturally appropriate content and methods for each type of worker should be developed by mental health specialists and researchers in mental health. These professionals may also develop materials for public education and stigma reduction. A model called the role-outcomes linkages evaluation (ROLE) model for CHWs that provides pathways in developing CHWs from selection, training, role enactment, and program outcomes can be used as a guide for development of mental health training materials [190].

The findings identified potential tools for depression identification, nevertheless it was not clear which tools and strategies are appropriate for the study context. Studies to develop this tool should be arranged involving all mental and maternal health care elements such as mental health specialists, district and community program managers, health centre managers, counsellors at health centre, midwives, and CHWs. In addition, there was a tendency to direct CHWs\textsuperscript{pregnancy} as the most suitable cadre to carry out the role. Specific psychological questions or scale may be inserted into the regular monitoring sheet that has been used to monitor pregnancy and postnatal by this CHW.
This study makes significant contribution to the body of knowledge of global mental health, particularly in regards to feasibility of task-shifting in mental health care. Perspectives from PHC stakeholders highlight how to design an implementation study. While previous studies have reported on feasibility of task-shifting in intervention, this study emphasizes the role through the lenses of those affected by this approach, i.e. program managers, health care providers, and health service users.

This study also highlights a need for further research. Recommendations for future research and actions in Indonesia, and particularly Surabaya, involve addressing the following research questions:

1. To what extent do training materials and approach fit with knowledge and skills (e.g. identification, referral, basic support, and supervision) needs of health providers, i.e. CHWs, village midwives, midwives at PHC centre, psychologists/counsellors at PHC centre?

2. To what extent are depression scales or scale items acceptable, feasible, have strong psychometric value, and are culturally relevant for perinatal depression identification by CHWs in the Indonesian context?

3. To what extent can a recording and reporting sheet for perinatal depression be used effectively by CHWs and examined by formal health workers, i.e. village midwives, midwives at PHC centre, psychologists/counsellors at PHC centre, to improve monitoring of cases?
4. To what extent is depression identification, referral pathway and guidelines effective for integrated mental health care within maternal care?

5. What public awareness towards perinatal mental health currently exists in the community, and who and what areas need to be targeted?

With regards to policy and practice actions in Indonesia, several recommendations may be noted as follows:

1. Developing advocacy programs on the importance of integrated mental health in maternal health care, and the involvement of CHWs in this effort. Advocacy should be targeted to district health offices, heads of villages and community program managers, Family Welfare Movement (FWM) at district level, and health centre managers. The goal is to consult potential further actions in implementing the documents about the role for CHWs to recognise mental health problems of pregnant and postpartum mothers in conjunction with integrated mental health in primary care. Advocacy could be facilitated by a panel of experts and agencies in the district or at national level.

2. Planning public education about the importance of mental health of mothers during pregnancy and postpartum and the benefits of having mental health care for mothers. The objective is to raise awareness of mental health of mothers and explore the needs of mothers on the services that improve their health status. Public education should target mothers, CHWs, midwives, and counsellors/psychologists.
3. With regards to more long-term plans, designing a training programme on perinatal depression for frontline health service providers related to mental and maternal healthcare. The target audience are CHWs, village midwives, and midwives and counsellors at PHC.

7.4 Strengths and limitations of the study

7.4.1 Strengths

This study had several strengths. First, while maternal health care in Indonesia is available in all PHCs, the study was conducted at sites where infrastructure for the proposed role of CHWs in maternal mental health is available, i.e. availability of mental health care by specialists such as a psychologists or counsellors (Bachelor of Psychology) in primary health care. While less than ten PHC centres in study area provided mental health services at the time of study commencement, selecting these sites enabled the design of a research project that addresses a health system where integrated mental health into primary care is already applied – a pre-requisite for even considering integrating mental health into maternal care. In addition to provision of mental health workers, this study area allowed referral to be conducted within primary health care.

Second, study participants represented all tiers of the primary health care system related to the role of CHWs in maternal and mental health care. The research design employed a recruitment strategy that accounted for socio-economic and cultural diversity of the city, and considered number facilities, health workers, and service users. Surabaya’s health profile, and demographic features at national and
district levels, were used to determine the research site and number of participants for each group of stakeholders. The rationale and strategy to determine participants as representative of stakeholders can also be considered a triangulation strategy, and together with recruitment strategies, help ensure credibility of research methods.

Third, this study employed qualitative design as an appropriate approach in collecting stakeholder perceptions on a proposed program. As documents related to integrated maternal mental health were available, understanding the perceptions of those directly affected by policies and guidelines is important in planning for effective implementation, specifically policy that explicitly states a role for non-specialist workers, such as CHWs, in integrated maternal mental health. Mental health policy is not always followed by implementation, nor does existence of policy necessarily include maternal mental health as a special focus [191].

This study applied well-structured qualitative analysis for policy research, namely Framework Analysis. This approach was developed for applied research to gather information with potential to inform implementation of social and public policy, and therefore fits with the objectives of this study. Using this approach enables information gathering from specific participants that could improve policy implementation. In addition, this approach enabled data to be managed and analysed systematically, and an audit trail of analytical processes that opens possible discussion with other research team members to improve validity and relevance of qualitative analysis.
7.4.2 Limitations

There were five factors that may be considered limitations of this study. First, the study focused on perceptions of participants with no other data sources to support information obtained through interviews. Therefore, findings may not represent actual mechanisms and procedures in the health system. Being informed by participants could produce unrealistically sound findings that do not fully identify challenges in the financial area, which is a typical obstacle in other qualitative studies. In addition, this study did not use observational data or documents in the health system. While some supporting documents were presented during interviews, they were not included as part of formal data collection and analysis. As the aim of the research was to obtain stakeholder perspectives, research objectives were attained, and credibility of research methods and findings was not reduced.

Second, the number of areas sampled to represent PHC centres was small compared to the total number of centres in Surabaya, even though it was sample size large in the context of a qualitative study using interviews. However, this limitation was alleviated through the recruitment strategy of research sites which took account of socio-economic and cultural diversity of the city, and proportion of participants from each group of stakeholders.

Third, study participants were stakeholders of health system tiers and other agencies that have worked collaboratively in maternal care for a long time, i.e. Family Welfare Movement/FWM at village level. Health system governance is by both health and home affairs, but participants from the home affairs sector were only recruited at
village level and not extended to upper levels. Findings indicate new issues related to the role of other agencies and that of upper levels, e.g. FWM at district level and CHW\textsuperscript{pregnancy} under FWM, which need to be followed up if a program is to be implemented. This strategy leaves several unanswered questions, such as management of data by the FWM, the role of CHW\textsuperscript{pregnancy}, and potential roles of FWM in public awareness.

Fourth, unlike other areas of diversity, such as ethnicity and social-economic, that were addressed and became a prominent feature in the data, the study did not consider religious diversity of the participants even though Indonesia acknowledges five religions by law, i.e. Islam, Christianity, Catholicism, Buddhism, and Hinduism. This leaves a potential information gap that remains missing. Nevertheless, whether or not religious composition will change the findings is unknown. Moreover, even though it was not asked during the interviews, participants would have raised religious as an issue or as an important characteristic when recruiting CHWs. Since this did not come up, religious may not be considered to be problematic in this regard.

Fifth, the study was conducted in one district under decentralized governance, therefore extrapolation of results to other contexts is limited, but possible. This limitation is a result of health system governance and health service delivery in Indonesia that is managed and determined by district governments which vary between district areas. Planning processes combine top-down direction with bottom-up participation from communities and local agencies [63], a strategy that allows variation of health service management based on local community and/or government
needs. As a consequence, it is highly unlikely to simply transfer findings of this study to other district governments in Indonesia without adjustment. Nevertheless, findings could be relevant to other districts with similar resources, e.g. provision of mental health specialists at district level, even though those specialists are not available at every PHC centre.

Finally, the study was a preliminary study to explore the possibility of implementing maternal mental health care in Indonesia, and was motivated by existing policy documents as the foundation for its development. Further research is required to assess implementation strategy and provide further clarification, meaning implementation is more likely to occur in the long term, rather than in the short to medium term.

7.5 Conclusions

This research shows that mobilizing CHWs in perinatal depression identification is feasible and acceptable to the PHC system in Surabaya and stakeholders involved. This thesis emphasized the role of non-specialist health workers in maternal mental health care, integrated in routine primary health care. The proposed role of CHWs in mental health care in LAMICs is widely recognised and this research adds significant information from an LAMIC in South East Asia that is less frequently reported. This proposed role could potentially enhance mental health needs of mothers in the population through setting an agenda for early identification of mood disorders to reduce the number of undetected and untreated mothers with mental health problems, and improve the quality of life of mothers and children. Studies suggest that
depressed mood during pregnancy and postnatal associate with poor attendance at antenatal clinics, low birth weight of baby, infant mortality, and quality of parenting, which could indirectly impact on the health of the next generation.

This study identified several areas of the health system perceived as appropriate, and other areas that need to be improved, to make maternal mental health care, supported by CHWs, feasible. It is expected that findings will be considered by the District Health Office of Surabaya and some recommendations from this study may be implemented. Addressing knowledge and competencies of CHWs is a fundamental area requiring attention.

This research provides a first step in raising awareness about maternal mental health services in PHC, and advocates for appropriate and adequate training and support for service providers, particularly CHWs, in providing mental health services as part of antenatal and postnatal care. It is anticipated that this study will also raise awareness about mental health issues in women during maternal life in communities, and encourage individuals to seek help from relevant services if they think they might have a mental health problem.
References


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Appendices

Appendix 1 Personal communication to District Health Office of Surabaya

Permohonan data dan ijin penelitian

Dinkes Surabaya <dinkes.surabaya@gmail.com>

To: Endang Retno Surjaningrum <esurjaningru@student.unimelb.edu.au>

Yth. Ibu Endang Retno

Berikut disampaikan data ibu hamil berdasarkan data proyeksi BPS, serta jumlah Posyandu dan jumlah ikadernya (terlampir).
Mengenai Puskesmas yang akan dijadikan tempat penelitian (memiliki bayangan Psikologi), dapat dilakukan di 3 Puskesmas yaitu Puskesmas Tambakrejo, Puskesmas Dusun dan Puskesmas Japir.

Untuk surat pengantar ke Puskesmas, dapat langsung menghubungi Ibu Retno bidang PSDM di Dinkes Surabaya.

Demikian informasi dari kami.

Terima kasih

[signature]

[Proyek Jumlah Bumi 2013-2014.xls]

[11/12/2014]
Dear Mrs. Endang Retno,

Enclosed is data about the number of pregnant women per Statistics Surabaya’s forecast, and the numbers of Integrated Service Posts (Posyandu) and their community health workers (CHWs) (attached).

In regard to PHC centres (puskesmas), the study could be conducted in three PHC centres, i.e. PHC Tambakrejo, PHC Dupak, and PHC Jagir. Letters and documents to be delivered to the centres should be managed through Ms. Retno in PSDM sub-section in the Health Office of Surabaya.

Thank you
Appended 2 Number of pregnant women in Surabaya

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<th>NAMA PUSKESMAS (PHC clinic)</th>
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<th>Jumlah Kader Posyandu Balita (Number of CHWs)</th>
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<td>Jemursari</td>
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<td>272</td>
<td>362</td>
<td>322</td>
<td>18</td>
</tr>
<tr>
<td>62</td>
<td>Jambangan</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

LUAR WILAYAH PUSKESMAS (DALAM KOTA SURABAYA)

| JUMLAH KABUPATEN/KOTA (Total) | 41,121 | 48,507 | 47,567 | 2,820 | 14,100 |

Sumber: (Source)
- Data ibu hamil merupakan proyeksi dari BPS Propinsi Jatim
(number of pregnant mothers as estimated by Statistics Indonesia in East Java)
Appendix 3 Master interview guide for all participant groups

Interview guide for all participants

Introduction 1 (program managers)

It is estimated that almost one in five pregnant women and several months after giving birth suffered from depression, in any level from mild to moderate to severe. However, many of them either do not recognize or be recognized by people surrounding. This lead to the hinder from getting help. In fact, this problem affects to both mother and the baby if it remains untreated.

To overcome the problem, detection of women who show signs of depression is important as an early step and continued by providing help to them. This effort could be carried out in the community where the women live. A potential people to perform are CHWs through their roles in ISP. Their interaction with women in daily life is a positive resource in identify women in need for help.

The purpose of this study is to know the opinion and perception of community member, health workers and policy maker on the acceptability and feasibility of the provision of mental health care within maternal care at the community. The information will be used to develop mental health care within maternal care in ISP.

Present vignette of perinatal depression

“Marta is 25-year-old woman. She presents to her general practitioner 6 weeks after the birth of her first baby. She is finding it difficult to cope with the new baby and feels empty of all emotion. When asked, she says she has been feeling low in mood for the last 3 weeks and that it is getting worse. She has no appetite and even when the baby is sleeping, she wakes early in the morning and is unable to get back to sleep. She feels anxious and is often agitated. She lacks concentration, has reduced self-esteem, and is avoiding contact with her family and friends. She admits to difficulty bonding with the baby and is very concerned that she feels no strong emotion for him.”

“Berta delivered her fourth child 6 weeks ago. She is coming to (ISP/clinic) today for the baby’s immunisations. You notice the baby is not growing well. The baby is crying and Berta makes no effort to try to soothe him.”
As a person with expertise and experience in the area of health service planning/delivery (OR establishing ISP), we are interested to know about your views on the issue above.

Thank you for agreeing to participate and giving your time.

**Introduction 2 (CHWs & Health workers)**

It is estimated that almost one in five pregnant women and several months after giving birth suffered from depression, in any level from mild to moderate to severe. However, many of them either do not recognize or be recognized by people surrounding. This lead to the hinder from getting help. In fact, this problem affects to both mother and the baby if it remains untreated.

To overcome the problem, detection of women who show signs of depression is important as an early step and continued by providing help to them. This effort could be carried out in the community where the women live. A potential people to perform are CHWs through their roles in ISP. Their interaction with women in daily life is a positive resource in identify women in need for help.

The purpose of this study is to know the opinion and perception of community member, health workers and policy maker on the acceptability and feasibility of the provision of mental health care within maternal care at the community. The information will be used to develop mental health care within maternal care in ISP.

**Present vignette of perinatal depression**

“Wati delivered her fourth child 6 weeks ago. She is coming to (ISP/clinic) today for the baby’s immunisations. You notice the baby is not growing well. The baby is crying and Wati makes no effort to try to soothe him.”

“Priska is a 26-year old married woman with 2 children. She arrives late for her antenatal check-up. She is impatient and keeps complaining loudly and aggressively about having to wait. She has scars on her face and some fresh bruises around her neck. She demands that you tell her if the baby is OK.”

“Tania is a 16-year old girl living with her mother and older siblings. She is 36 weeks pregnant and has only attended for one antenatal visit as she has defaulted on many occasions. She appears sulky and hardly speaks when you talk to her.”

As a person with experience working in the primary health care setting, we would like to ask you about how this plan could work in practice, and your views on the issue above.
Thank you for agreeing to participate and giving your time.

**INTRODUCTION 3 (service users)**

It is estimated that almost one in five pregnant women and several months after giving birth suffered from depression, in any level from mild to moderate to severe. However, many of them either do not recognize or be recognized by people surrounding. This lead to the hinder from getting help. In fact, this problem affects to both mother and the baby if it remains untreated.

To overcome the problem, detection of women who show signs of depression is important as an early step and continued by providing help to them. This effort could be carried out in the community where the women live. A potential people to perform are CHWs through their roles in ISP. Their interaction with women in daily life is a positive resource in identify women in need for help.

The purpose of this study is to know the opinion and perception of community member, health workers and policy maker on the acceptability and feasibility of the provision of mental health care within maternal care at the community. The information will be used to develop mental health care within maternal care in ISP.

As a person uses service of maternal care in ISP, we would like to ask you about how this plan could work in practice, and your views on the issue above.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Framework</th>
<th>Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Awareness</strong></td>
<td>O A F C S</td>
<td>WM CHW HW PM</td>
</tr>
<tr>
<td>1. Over the past 2 weeks:</td>
<td></td>
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</tr>
<tr>
<td>Have you ever felt down, depressed, or hopeless?</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Have you felt little interest or pleasure in doing things?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you ever felt down, depressed, or hopeless when you were pregnant?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felt little interest or pleasure in doing things?</td>
<td></td>
<td></td>
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<tr>
<td>What did you do?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you seek help from others?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did others offer help to you?</td>
<td>What about CHWs in ISP?</td>
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<td>-------------------------------</td>
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</tr>
</tbody>
</table>

**Attitude to mental health**

2. Could you please tell me something about mental health situation in the community/district?  
   ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]

Do you think mental health is important for mothers who are pregnant or postpartum?  
   ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]
   If you think it is important what you might do to help?

**Detection/identification**

3. People in the vignettes are suffering from postpartum depression. In the guidelines book for CHWs, a postnatal mother may experience mental health problems and CHWs are encouraged to recognize it.  
   What do you think that CHWs would ask to identify depression on pregnant women and postpartum mothers as part of their tasks in ISP?  
   How acceptable would it be to CHWs?  
   Willingness of CHWs to take on extra tasks?  
   [How acceptable would it be to pregnant women and postpartum mothers with depression?]  
   [How acceptable would it be to health workers, manager of PHC clinic, specialists, program managers?]  
   What type of activities could be done by CHWs?  
   Where in the community?  
   What strategies to apply?  
   How could they integrate identification and detection work within their day-to-day activities and responsibilities?  
   ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]

4. What are key challenges and opportunities in CHWs to detect depression on pregnant women and postpartum mothers?  
   ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]  ![Checkmark]
(Ask specifically about distance, cost, facilities, strategy of approaching, differing cultural beliefs, workload, personal matters: income, domestic responsibilities; concern about quality of care in PHC)
How can we overcome the barriers?

### Access to wide community

5. Do you think detection could be more difficult for some groups? For example, women from particular background: age, education, economic status, culture, others?
   - In what way?
   - How could this be overcome?
   - How can we ensure that pregnant women and postpartum mothers from the most dis-advantaged in need of mental health care are adequately identified?

### Characteristics and skills

6. Who in the CHWs could like to be involved in the identification of pregnant women and postpartum mothers who suffer from depression?
   - (Ask specifically about: personality, educational background, gender, experience, and others they may suggest)

7. Do you think CHWs can be trained to help in the identification of pregnant women and postpartum mothers who suffer from depression?
   - What training do you think CHWs would need before they could identify and referral for depression on pregnant women and postpartum mothers?
   - How much training, how long?
   - What methods of training?
   - How could we assess whether they have the necessary skills?
   - Who should provide the training?
   - What resources and methods are required to sustain the training?

### Integrated system

8. How do you think CHWs’ work in finding cases of pregnant women or postpartum mothers with mental health problem (depression) in the community can be integrated with perinatal care in PHC?
How can it be done?
(Explore on the provision of services in PHC clinic, how to do referral)

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<tbody>
<tr>
<td>9. What limitation does this approach (task sharing method) have?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Is there an alternative?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

O: Orientation; A: Acceptability; F: Feasibility; C: Characteristics; S: Skills
W&M: pregnant women & postpartum mothers; CHWs: community health workers; HW: Health Workers; PM: Program Managers
Appendix 4 Interview guides for each participant group

INTERVIEW GUIDELINE FOR PREGNANT WOMEN & POSTPARTUM MOTHERS

I. Introduction

It is estimated that almost one in five pregnant women and several months after giving birth suffered from depression, in any level from mild to moderate to severe. However, many of them either do not recognize or be recognized by people surrounding. This leads to the hinder from getting help. In fact, this problem affects to both mother and the baby if it remains untreated.

To overcome the problem, detection of women who show signs of depression is important as an early step and continued by providing help to them. This effort could be carried out in the community where the women live. A potential people to perform are CHWs through their roles in ISP. Their interaction with women in daily life is a positive resource in identify women in need for help.

The purpose of this study is to know the opinion and perception of community member, health workers and policy maker on the acceptability and feasibility of the provision of mental health care within maternal care at the community. The information will be used to develop mental health care within maternal care in ISP.

As a person uses service of maternal care in ISP, we would like to ask you about how this plan could work in practice, and your views on the issue above.

II. Demographic data

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<th>2. Number of child(ren): ________</th>
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<td>□ 2</td>
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<td>□ 3</td>
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<td>□ 35-39</td>
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<td>□ 45-49</td>
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<table>
<thead>
<tr>
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<th>4. Age of newborn:</th>
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<tr>
<td>□ Second</td>
<td>□ 2-4 months</td>
</tr>
<tr>
<td>□ Third, etc</td>
<td>□ 5-8 months</td>
</tr>
<tr>
<td>□ 0-12 weeks</td>
<td>□ 9-12 months</td>
</tr>
<tr>
<td>□ 13-24 weeks</td>
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<tr>
<td>□ 25-36 weeks</td>
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<table>
<thead>
<tr>
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<th>6. Educational background</th>
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<td>□ Not finished primary school</td>
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<tr>
<td>□ Female</td>
<td>□ PS (finish)</td>
</tr>
<tr>
<td></td>
<td>□ Secondary (Junior)</td>
</tr>
<tr>
<td></td>
<td>□ Secondary (Senior)</td>
</tr>
</tbody>
</table>
III. Main Questions

1. Over the past 2 weeks:
   - Have you ever felt down, depressed, or hopeless?
   - Have you felt little interest or pleasure in doing things?

   Have you ever felt down, depressed, or hopeless when you were pregnant?
   - Felt little interest or pleasure in doing things?
   - What did you do?
   - Did you seek help from others?
   - Did others offer help to you?
   - What about CHWs in ISP?

Vignette:
"Marta is 25-year-old woman. She presents to her general practitioner 6 weeks after the birth of her first baby. She is finding it difficult to cope with the new baby and feels empty of all emotion. When asked, she says she has been feeling low in mood for the last 3 weeks and that it is getting worse. She has no appetite and even when the baby is sleeping, she wakes early in the morning and is unable to get back to sleep. She feels anxious and is often agitated. She lacks concentration, has reduced self-esteem, and is avoiding contact with her family and friends. She admits to difficulty bonding with the baby and is very concerned that she feels no strong emotion for him."

2. Do you think mental health is important for mothers who are pregnant or postpartum?
   - If you think it is important what you might do to help?

3. People in the vignettes are suffering from postpartum depression. In the guidelines book for CHWs, a postnatal mother may experience mental health problems and CHWs are encouraged to recognize it.
   - What do you think that CHWs would ask to identify depression on pregnant women and postpartum mothers as part of their tasks in ISP?
     - How acceptable would it be to CHWs?
     - Willingness of CHWs to take on extra tasks?
     - [How acceptable would it be to pregnant women and postpartum mothers with depression?]
     - [How acceptable would it be to: health workers, manager of PHC clinic, specialists, decision makers?]
     - What type of activities could be done by CHWs?
     - Where in the community?
• What strategies to apply?
• How could they integrate identification and detection work within their day-to-day activities and responsibilities?

4. What are key challenges and opportunities in CHWs to detect depression on pregnant women and postpartum mothers?
   (Ask specifically about distance, cost, facilities, strategy of approaching, differing cultural beliefs, workload, personal matters: income, domestic responsibilities; concern about quality of care in PHC)
   • How can we overcome the barriers?

5. Do you think detection could be more difficult for some groups? For example, women from particular background: age, education, economic status, culture, others?
   • In what way?
   • How could this be overcome?
   How can we ensure that pregnant women and postpartum mothers from the most disadvantaged in need of mental health care are adequately identified?

6. Who in the CHWs could like to be involved in the identification of pregnant women and postpartum mothers who suffer from depression?
   (Ask specifically about: personality, educational background, gender, experience, and others they may suggest)

7. How do you think CHWs’ work in finding cases of pregnant women or postpartum mothers with mental health problem (depression) in the community can be integrated with perinatal care in PHC?
   How can it be done?
   (Explore on the provision of services in PHC clinic, how to do referral)

8. What limitation does this approach (task sharing method) have?
   Is there an alternative?
INTERVIEW GUIDELINE FOR SERVICE PROVIDERS

I. Introduction

It is estimated that almost one in five pregnant women and several months after giving birth suffered from depression, in any level from mild to moderate to severe. However, many of them either do not recognize or be recognized by people surrounding. This leads to the hinder from getting help. In fact, this problem affects to both mother and the baby if it remains untreated.

To overcome the problem, detection of women who show signs of depression is important as an early step and continued by providing help to them. This effort could be carried out in the community where the women live. A potential people to perform are CHWs through their roles in ISP. Their interaction with women in daily life is a positive resource in identify women in need for help.

The purpose of this study is to know the opinion and perception of community member, health workers and policy maker on the acceptability and feasibility of the provision of mental health care within maternal care at the community. The information will be used to develop mental health care within maternal care in ISP.

II. Present vignette of perinatal depression

“Wati delivered her fourth child 6 weeks ago. She is coming to (ISP/clinic) today for the baby’s immunisations. You notice the baby is not growing well. The baby is crying and Wati makes no effort to try to soothe him.”

“Priska is a 26-year old married woman with 2 children. She arrives late for her antenatal check-up. She is impatient and keeps complaining loudly and aggressively about having to wait. She has scars on her face and some fresh bruises around her neck. She demands that you tell her if the baby is OK.”

“Tania is a 16-year old girl living with her mother and older siblings. She is 36 weeks pregnant and has only attended for one antenatal visit as she has defaulted on many occasions. She appears sulky and hardly speaks when you talk to her.”

As a person with experience working in the primary health care setting, we would like to ask you about how this plan could work in practice, and your views on the issue above.

Thank you for agreeing to participate and giving your time.

III. Demographic data

<table>
<thead>
<tr>
<th>I. Age: ____ years</th>
<th>2. Length to be CHWs or Health Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 15-19</td>
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</tr>
<tr>
<td>□ 20-24</td>
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<td>□ 25-29</td>
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<td>□ &gt; 20 years</td>
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<td>□ 40-44</td>
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<tr>
<td>□ 45-49</td>
<td></td>
</tr>
</tbody>
</table>
IV. Main Questions

1. Could you please tell me something about mental health situation in the community/district?
   Do you think mental health is important for mothers who are pregnant or postpartum?
   If you think it is important what you might do to help?

2. People in the vignettes are suffering from postpartum depression. In the guidelines book for CHWs, a postnatal mother may experience mental health problems and CHWs are encouraged to recognize it.
   What do you think that CHWs would ask to identify depression on pregnant women and postpartum mothers as part of their tasks in ISP?
   • How acceptable would it be to CHWs?
   • Willingness of CHWs to take on extra tasks?
   • [How acceptable would it be to pregnant women and postpartum mothers with depression?]
   • [How acceptable would it be to: health workers, manager of PHC clinic, specialists, decision makers?]
   • What type of activities could be done by CHWs?
   • Where in the community?
   • What strategies to apply?
   • How could they integrate identification and detection work within their day-to-day activities and responsibilities?

3. What are key challenges and opportunities in CHWs to detect depression on pregnant women and postpartum mothers?
   (Ask specifically about distance, cost, facilities, strategy of approaching, differing cultural beliefs, workload, personal matters: income, domestic responsibilities; concern about quality of care in PHC)
   • How can we overcome the barriers?

4. Do you think detection could be more difficult for some groups? For example, women from particular background: age, education, economic status, culture, others?
In what way?
How could this be overcome?
How can we ensure that pregnant women and postpartum mothers from the most disadvantaged in need of mental health care are adequately identified?

5. Who in the CHWs could like to be involved in the identification of pregnant women and postpartum mothers who suffer from depression?
(Ask specifically about: personality, educational background, gender, experience, and others they may suggest)

6. Do you think CHWs can be trained to help in the identification of pregnant women and postpartum mothers who suffer from depression?
What training do you think CHWs would need before they could identify and referral for depression on pregnant women and postpartum mothers?
- How much training, how long?
- What methods of training?
- How could we assess whether they have the necessary skills?
- Who should provide the training?
- What resources and methods are required to sustain the training?

7. How do you think CHWs’ work in finding cases of pregnant women or postpartum mothers with mental health problem (depression) in the community can be integrated with perinatal care in PHC?
How can it be done?
(Explore on the provision of services in PHC clinic, how to do referral)

8. What limitation does this approach (task sharing method) have?
Is there an alternative?
INTERVIEW GUIDELINE FOR PROGRAM MANAGERS

I. Introduction
It is estimated that almost one in five pregnant women and several months after giving birth suffered from depression, in any level from mild to moderate to severe. However, many of them either do not recognize or be recognized by people surrounding. This leads to the hinder from getting help. In fact, this problem affects to both mother and the baby if it remains untreated.

To overcome the problem, detection of women who show signs of depression is important as an early step and continued by providing help to them. This effort could be carried out in the community where the women live. A potential people to perform are CHWs through their roles in ISP. Their interaction with women in daily life is a positive resource in identify women in need for help.

The purpose of this study is to know the opinion and perception of community member, health workers and policy maker on the acceptability and feasibility of the provision of mental health care within maternal care at the community. The information will be used to develop mental health care within maternal care in ISP.

II. Present vignette of perinatal depression

“Marta is 25-year-old woman. She presents to her general practitioner 6 weeks after the birth of her first baby. She is finding it difficult to cope with the new baby and feels empty of all emotion. When asked, she says she has been feeling low in mood for the last 3 weeks and that it is getting worse. She has no appetite and even when the baby is sleeping, she wakes early in the morning and is unable to get back to sleep. She feels anxious and is often agitated. She lacks concentration, has reduced self-esteem, and is avoiding contact with her family and friends. She admits to difficulty bonding with the baby and is very concerned that she feels no strong emotion for him.”

“Berta delivered her fourth child 6 weeks ago. She is coming to (ISP/clinic) today for the baby’s immunisations. You notice the baby is not growing well. The baby is crying and Berta makes no effort to try to soothe him.”

As a person with expertise and experience in the area of health service planning /delivery (OR establishing ISP), we are interested to know about your views on the issue above.

Thank you for agreeing to participate and giving your time.
### III. Demographic data

1. Age: _____ years
   - 15-19
   - 20-24
   - 25-29
   - 30-34
   - 35-39
   - 40-44
   - 45-49
   - > 50

2. Position: (please state) ...........................................

3. Gender
   - Male
   - Female

4. Educational background
   - Not finished primary school
   - PS (finish)
   - Secondary (Junior)
   - Secondary (Senior)
   - Tertiary, please state
IV. Main Questions

1. Could you please tell me something about mental health situation in the community/district?
   Do you think mental health is important for mothers who are pregnant or postpartum?
   If you think it is important what you might do to help?

2. People in the vignettes are suffering from postpartum depression. In the guidelines book for CHWs, a postnatal mother may experience mental health problems and CHWs are encouraged to recognize it.
   What do you think that CHWs would ask to identify depression on pregnant women and postpartum mothers as part of their tasks in ISP?
   - How acceptable would it be to CHWs?
   - Willingness of CHWs to take on extra tasks?
   - [How acceptable would it be to pregnant women and postpartum mothers with depression?]
   - [How acceptable would it be to: health workers, manager of PHC clinic, specialists, program managers?]
   - What type of activities could be done by CHWs?
   - Where in the community?
   - What strategies to apply?
   - How could they integrate identification and detection work within their day-to-day activities and responsibilities?

3. What are key challenges and opportunities in CHWs to detect depression on pregnant women and postpartum mothers?
   (Ask specifically about distance, cost, facilities, strategy of approaching, differing cultural beliefs, workload, personal matters: income, domestic responsibilities; concern about quality of care in PHC)
   - How can we overcome the barriers?

4. Do you think detection could be more difficult for some groups? For example, women from particular background: age, education, economic status, culture, others?
   - In what way?
   - How could this be overcome?
   How can we ensure that pregnant women and postpartum mothers from the most dis-advantaged in need of mental health care are adequately identified?

5. Who in the CHWs could like to be involved in the identification of pregnant women and postpartum mothers who suffer from depression?
   (Ask specifically about: personality, educational background, gender, experience, and others they may suggest)
6. Do you think CHWs can be trained to help in the identification of pregnant women and postpartum mothers who suffer from depression? What training do you think CHWs would need before they could identify and referral for depression on pregnant women and postpartum mothers?
   - How much training, how long?
   - What methods of training?
   - How could we assess whether they have the necessary skills?
   - Who should provide the training?
   - What resources and methods are required to sustain the training?

7. How do you think CHWs’ work in finding cases of pregnant women or postpartum mothers with mental health problem (depression) in the community can be integrated with perinatal care in PHC? How can it be done? (Explore on the provision of services in PHC clinic, how to do referral)

8. What limitation does this approach (task sharing method) have? Is there an alternative?
Appendix 5 Ethics approval

20 May 2015

Dr R Kasauma
Melbourne School of Population and Global Health
The University of Melbourne

Dear Dr Kasauma,

I am pleased to advise that the Health Sciences Human Ethics Sub-Committee has approved the following Project:

**PROJECT TITLE:** Community Health Workers in Integrated Mental Health Care for Perinatal Depression in Surabaya, Indonesia

**Researchers:** Prof A P Jones, Dr R Kasauma, A/Prof I H Minas, E Surjaningrum

**Ethic ID:** 156.8882

The Project has been approved for the period: 20-May-2015 to 31-Dec-2015

It is your responsibility to ensure that all people associated with the Project are made aware of what has actually been approved.

Research projects are normally approved to 31 December of the year of approval. Projects may be renewed yearly for up to a total of five years upon receipt of a satisfactory annual report. If a project is to continue beyond five years a new application will normally need to be submitted.

Please note that the following conditions apply to your approval. Failure to observe these conditions may result in suspension or discontinuation of approval and/or disciplinary action.

(a) **Limit of Approval:** Approval is limited strictly to the research as submitted in your Project application.

(b) **Variation to Projects:** Any subsequent variation or modifications you might wish to make to the project must be notified formally to the Human Ethics Sub-Committee for further consideration and approval. If the sub-committee considers that the proposed changes are significant, you may be required to submit a new application for approval of the revised project.

(c) **Incidents or Adverse Effects:** Researchers must report immediately to the Sub-Committee anything which might affect the ethical acceptance of the protocol including adverse effects on participants or unforeseen events that might affect continued ethical acceptability of the Project. Failure to do so may result in suspension or cancellation of approval.

(d) **Monitoring:** All projects are subject to monitoring at any time by the Human Research Ethics Committee.

(e) **Annual Reports:** Please be aware that the Human Research Ethics Committee requires that researchers submit an annual report on each of their projects at the end of the year, or at the conclusion of a project if it continues for less than this time. Failure to submit an annual report will mean that ethics approval will lapse.

(f) **Auditing:** All projects may be subject to an audit by members of the Sub-Committee.

If you have any queries on these matters, or require additional information, please contact me using the details below.

Please quote the ethics registration number and the title of the Project in any future correspondence.

On behalf of the Sub-Committee I wish you well in your research.

Yours sincerely,

[Signature]

Dr Jennifer Hassell
Health Sciences HEC, Secretary
Email: keena@email.unimelb.edu.au
Appendix 6 Published article

A6.1. ‘The feasibility of a role for community health workers in integrated mental health care for perinatal depression: a qualitative study from Surabaya, Indonesia’
RESEARCH

The feasibility of a role for community health workers in integrated mental health care for perinatal depression: a qualitative study from Surabaya, Indonesia

Endang R. Surjaningrum, Harry Minas, Anthony F. Jorm and Ritsuko Kakuma

Abstract

Background: Indonesian maternal health policies state that community health workers (CHWs) are responsible for detection and referral of pregnant women and postpartum mothers who might suffer from mental health problems (task-sharing). The documents have been published for a while, however reports on the implementation are hardly found which possibly resulted from feasibility issue within the health system.

Aims: To examine the feasibility of task-sharing in integrated mental health care to identify perinatal depression in Surabaya, Indonesia.

Methods: Semi-structured interviews were conducted with 62 participants representing four stakeholder groups in primary health care: program managers from the health office and the community, health workers and CHWs, mental health specialists, and service users. Questions on the feasibility were supported by vignettes about perinatal depression. WHO’s health systems framework was applied to analyse the data using framework analysis.

Results: Findings indicated the policy initiative is feasible to the district health system. A strong basis within the health system for task-sharing in maternal mental health rests on health leadership and governance that open an opportunity for training and supervision, financing, and intersectoral collaboration. The infrastructure and resources in the city provide potential for a continuity of care. Nevertheless, feasibility is challenged by gaps between policy and practices, inadequate support system in technologies and information system, assigning the workforce and strategies to be applied, and the lack of practical guidelines to guide the implementation.

Conclusion: The health system and resources in Surabaya provide opportunities for task-sharing to detect and refer cases of perinatal depression in an integrated mental health care system. Participation of informal workforce might facilitate in closing the gap in the provision of information on perinatal mental health.

Keywords: Community health workers, Integrated mental health, Perinatal depression, Health system framework, Indonesia, Primary health care

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Background

Community health workers (CHWs) in Indonesia are encouraged to be able to examine mental health problems experienced by pregnant women and postpartum mothers, which are stated in two policy documents: "the Guidance of Integrated Antenatal Care" [1] and manual for CHWs [2]. Nevertheless, despite policy and guidelines available, there is little data to indicate that this concept is being implemented.

The prevalence of maternal mental health problems in Indonesia is under-recorded. Neither the national health survey conducted regularly every 5 years nor the annual Indonesia health profiles [3] present specific information regarding maternal mental health. Only a small number of epidemiologic studies on maternal mental health have been conducted, including one in Surabaya [4], that found the prevalence of perinatal depression was 22% [4, 5] (based on a cut-off point > 10 of Edinburgh Postnatal Depression Scale (EPDS), far higher than the reported global prevalence of 12% [6, 7]. Both the lack of information regarding implementation of policies on maternal mental health and the high prevalence of depression are reasons to initiate mental health care as part of maternal care in Surabaya, particularly identification of perinatal depression. Under the guidelines on integrated mental health in PHC [8], integrated mental health care could be developed. Within PHC system, there are integrated health service posts (ISPs) where CHWs work for maternal care in the community (see Fig. 1). A recent mental health policy accommodates the role of CHWs in mental health areas [9], even though not all administrative governments have implemented the decree. This policy provides an opportunity for task-sharing, i.e. CHWs to identify

Fig. 1 PHC system and networks

Ministry of Home Affairs

ISP working group at central govt

ISP working group at Province

ISP working group at District

ISP working group at Sub-district

Village

ISP working group at village

ISP with ± 5 CHWs

household

50 households = 65 children <5

ISP centre (n=62)
Each provide services for ± 30,000 population

Vlg Health Post

Vlg maternity house

Direction/facilitation

Partnership

Coordination/facilitation

Coordination/Referral

ISP : Integrated health service post
PHC : Primary Health Care
Vlg : Village
CHWs: community health workers
mental health problems in women during pregnancy and the postpartum period.

Task-sharing in general mental health care has been reported in other district in Indonesia [10] and other countries [11, 12]. This approach has also been applied for maternal mental health care [13–15]. In Surabaya, mental health care has been integrated into primary health care (PHC) centres, for several years [16–18], providing a basis for initiation of mental health care by CHWs [15, 19, 20].

While task-sharing in mental health care has a legal policy foundation, annual reports indicated that it has neither been implemented in Surabaya nor known whether this is feasible and acceptable within this district health system [21–23]. To fill this knowledge gap, a comprehensive qualitative study was conducted to examine the feasibility and acceptability of task-sharing for perinatal depression, as well as the skills and competencies of CHWs to carry out the role. This article reports on a feasibility study based on perceptions of health system stakeholders.

Role of CHWs within health system
The health system in Indonesia is administered in line with decentralization of the government system, such that services are decentralized to provincial and district governments under the Ministry of Home Affairs (MoHA) [24]. District governments operate health services provided through PHC centres called puskesmas, which typically reside in a sub-district. These centres supervise and support a wide network in the village level, including integrated health service posts (ISPs) known as posyandu, and village midwives (see Fig. 1).

An ISP involves intersectoral cooperation between the Ministry of Health and the MoHA at the village level [25], through a body called ‘ISP working group’ [26]. This working group coordinates with women’s agency of the MoHA called the family welfare movement (FWM) to run an ISP monthly activity [27] whose operationalization is managed by a PHC centre [28]. The FWM recruits CHWs who are volunteers from local community and allocate tasks for them. There are five main services of maternal and child health care at an ISP [28–30], therefore the FWM should ensure that there are at least five people to run an ISP. CHWs who specialize in this task are called CHWsMCH in this article.

CHWs are responsible to assist health workers (e.g. village midwives) in maternal and child health care, nutrition advice and family planning during ISP activity; assist in antenatal care such as organizing maternal classes; and undertake home visits for perinatal care [30]. Before taking the role, CHWs are trained in health-related areas by the health office, mainly in maternal and child health [30, 31], but also in other health areas. The relationship and roles of the PHC centre, FWM, and ISP working group in relation to the ISP and CHWs are presented in Fig. 2.

In certain circumstances, the role of ISPs extends to other health areas or areas other than health, such as social services and family welfare [30, 32]. When there are no people who have agreed to work voluntarily, a CHW(MCH) may also be co-opted for this purpose, resulting in multiple roles for one CHW [32] including population and civil administration-related services [30].

Aim of the study
The current study aimed to examine the feasibility of task-sharing of perinatal depression care in the health system in Surabaya. The aim was achieved through interviews to obtain perspectives of four types of stakeholders in the health system: (1) program managers, (2) health workers, including CHWs, (3) mental health specialists, and (4) service users.

Methods
Setting
The research took place at PHC centres in Surabaya that provide a psychological service, several ISPs managed by that PHC centre and a district hospital in Surabaya, and the District Health Office. There are 62 PHC centres in Surabaya and some of them provide psychological services. Three PHC centres were selected as the study sites:
Centres A, B, and C, whereas Centre D was selected for a primary care trial because it has the highest number of pregnant women, ISPs, and CHWs. ISPs were selected based on the centre’s advice.

**Participants and inclusion criteria**

Participants in the study were recruited from four groups of stakeholders: program managers, health workers, mental health specialists, and service users. Program managers consisted of two participants from the health office (district program managers) and three participants from three villages (community program managers). District program managers were the Head of the section of primary care service delivery that is in charge of maternal care and the head of the section of specialist health care that is responsible for mental health care. The three community program managers were members of an ISP working group from three villages which are responsible for organizing CHWs in the selected ISPs, viz. an ISP from Centre C with a high population of Madurese (ISP CM), one populated by Javanese (ISP CJ), and one from a non-slum area (ISP CN). Health workers comprised 12 formal health workers from three centres and 12 CHWs. Health workers were the centre managers, (mental health) counsellors, midwives, and nurses. CHWs were recruited from six ISPs, each of which typically has five CHWs and two of them were recruited: one leader (CHW-manager) and one member (CHW-member). Mental health specialists were a psychologist and a psychiatrist at the district hospital (Dr. Soewandhi Hospital). Two other psychologists and one psychiatrist were recruited from other places. Service users were 15 pregnant women and 13 one-year postpartum mothers (they will be called ‘women’ and/or ‘mothers’ interchangeably). Pregnant women were in their first pregnancy (primigravida) or subsequent pregnancy (multigravida) at any stage of pregnancy and had visited a health facility at least once. Postpartum mothers were mothers of a first child (primipara) or mothers of subsequent children (multipara). Two to three women were recruited from each ISP based on the percentage of pregnancy among women aged 15–49 [33]. The research setting and the participants are summarized in Fig. 3.

**Data collection**

Semi-structured interviews were conducted individually by ES. The interviews consisted of questions on: (a) demographic information; (b) knowledge and attitude to mental health of mothers; (c) two vignettes about perinatal depression cases; and (d) the feasibility. Four different vignettes about perinatal depression cases were developed, two of which were presented to each participant according to their stakeholder group. The vignettes were presented before questions on whether participants have experienced a similar situation (for service users) or have dealt with similar clients (for service providers and community program managers), their perception of the importance of maternal mental health, and their views on the feasibility of task-sharing. Data collection was pilot tested in Centre D. All interviews were carried out in private settings, such as at home (for CHWs, pregnant women and postpartum mothers), or at their workplace (for health workers and program managers) and transcribed in Indonesian.

**Data analysis**

Analysis of the data was carried out deductively with a framework analysis (FA) approach in the local language (Indonesian) using MS Word and the NVivo software program. Framework analysis has five key steps [34, 35]: (1) coding (indexing), (2) developing a working analytical framework, (3) applying the analytical framework, (4) charting data into the framework matrix, and (5) mapping and interpreting the data. WHO’s health systems framework was applied to direct the analysis. This framework suggests that a health system consists of six building blocks: health service delivery, leadership and governance, health workforce, health information system, medical products and technologies, and a health financing system [36]. Using MS Word, the researcher (ES) and an independent analyst, who is an Indonesian researcher holding a Masters degree from the University of Melbourne, read a set of transcripts from pilot interviews to identify emerging themes and to initiate the development of a thematic framework. The framework, which was presented in English, was then validated by the research team until a developing framework was agreed to be applied. The next step was indexing, which applied the framework to all the transcripts using NVivo 11. Frequent discussions with the whole research team took place throughout the data analysis phase, for which some transcripts were translated into English and analysis was evaluated by research team (RK), to ensure that interpretations were credible, valid, and shared.

**Ethics approval**

Ethics approval for the study was obtained from the University of Melbourne (No. 1543833). A research permit was given by the Health Office of Surabaya. Informed consent was obtained from all participants prior to data collection.
Results

Participants

Recruitment of participants and interviews were carried out simultaneously from June to August 2015. In total, 62 participants from four groups of stakeholders were interviewed. The distribution of participants was as planned, but some adjustment was needed for the service users group. There was one pregnant woman from village CM who agreed to be interviewed but at the end refused to do so, whereas another pregnant woman from the same village agreed to participate in the study to enrich the voices of Madurese.

The demographic composition of the participants is as follows. Only four participants were male; three were specialists and the other one was a health worker. The ethnic background of the majority of participants was Javanese, with slightly more than ten percent being Madurese, and other ethnic groups comprising less than two percent. The age of participants varied, but was above 25 years of age for all groups other than service users.
the centres, and out-reach activity to find mental health cases in the community. These policies do not refer to maternal mental health directly, however, they have brought about the establishment of mental health service units in several centres. The program manager for specialist care described how the policies have guided the formation of an out-reach team involving CHWs to find out people with mental health problems who live shackled. The significant number of cases found by the team generated attention to the importance of mental health issues and led to the establishment of mental health service units in several centres. She said:

"Mental health is not a primary program, but an extended program. It has not got attention until during the outreach program—visiting patients at their original places—we found a lot of cases. Finally, the head office said 'let's develop your mental health unit!'... Because it should be free from pasung [shackle] by 2015, isn't it?" (DPM 2)

The manager added that two centres have established a mental health unit and another one is under preparation. Moreover, the community mental health action team policy led to the formation of a collaborative team across sectors to find and tackle mental health cases in the community based on their needs. Subsequently, the program manager explained that the team works regularly and is monitored directly by the Mayor.

"...Tim Pelaksana Kesehatan Jiwa Masyarakat [Community Mental Health Action Team], TPKM. Yes, we haven't formed the structure, but I think... The team has not been structured, yet coordination among sectors has worked. Structurally it has not formed yet but the coordination has worked... Usually each sector sends a letter to the Mayor and then the Office of Human Welfare would organize a meeting. These are from the Office of Social Affairs, of Health, of Housing..." (DPM 2)

**Health leader role**

The involvement of the Mayor in coordinating the community mental health team was perceived as giving support and attention to mental health care in the city. A specialist reported how he was impressed by the Mayor:

"The Mayor, indeed, believes in two principles, first there is no child in Surabaya who does not go to school, and second no sick people in Surabaya are neglected, including people with mental health problems..." (Sp 1)

**Coordination between sections in the district**

Beside intersectoral collaboration conducted by the community mental health team, coordination between sections in the health office has worked well. The head of the section of general service delivery that organises maternal care felt sure that mental health care could be facilitated within maternal care. She said that integrated antenatal care is an obligation and the integrated care for mental health has been implemented by referring pregnant/postpartum mothers to the psychologist in the centre. She described:

"It actually can be done, if the mental health [section] wants. Even though I am from maternal and child health I facilitate this...those are compulsory, whether a mother is sick or not. An example of this is HIV assessment, it is compulsory...like that. When there is a complaint...yeah, it can be referred to the expert. You may have known that there are psychologists in several centres, so when there is a complaint or as a result of assessment by a GP or midwife, the patient would be referred to the psychologist... if there is no one in the centre, she may be referred to a psychologist at the closest centre." (DPM 1)

**Policy on training of CHWs**

Strategic policy at the district level on mental health training for CHWs is another factor to enabling feasibility. The training program for CHWs has been placed into the strategic planning for the following year, focusing on early detection and referral. The training was designed as an extension of the one provided for doctors and nurses. The program manager explained:

"We have run training on early detection of mental health cases for health workers, and we plan to do so for CHWs this year...and in 2016 they will be trained in the basic knowledge of early detection and referral. That's what we want to do." (DPM 2)

The training at district level is more likely to be followed by centres because they have the autonomy to set up MCH-related training for CHWs in their area, allowing the inclusion of mental health in the program. Again, the manager emphasized:

"It is the autonomy of the PHC to set up training materials for CHWs, not only about the health of children under five but anything that supports the health of those children." (DPM 1)
Challenges in implementation

In contrast to policy and planning that supports feasibility, several factors were viewed as challenges to feasibility. First, practical guidelines are required before task-sharing can be implemented in the community. A program manager made the point that even though a guideline has been regulated in the policy document, it may take several years until the guideline results in direct action. Second, there are practical problems with the shared responsibility between centres and the family welfare movement (FWM) in the village. Recruitment of CHWs is supposed to be a FWM task; however, a community program manager complained that in fact the PHC centre took over the task. Third, a centre manager was concerned about financial issues with the autonomy of a centre to arrange particular training for CHWs. Running a local program, which is centre specific is allowed, even though it is not part of a national or district priority, however the centre is responsible for the financial arrangement and the justification. The centre should find the money either from within its own or other funding sources and be able to justify the spending.

Service delivery

Identification at an ISP is not feasible

This study was to assess the feasibility of task-sharing to be carried out by CHWs in their place of work, which is in an ISP. Nevertheless, stakeholders perceived that carrying out the task in an ISP is not feasible. Health workers stated that there are a lot of tasks to be accomplished by CHWs and that they are unable to also carry out task-sharing within the time available. In addition, the ISP was seen by mothers as a place for the health of children under five. Therefore, a lot of adults and children are around, resulting in a lack of sufficient space for privacy. A mother said:

"I usually spend time to visit occasionally, during a spare time. So, it is not in a particular time, because it would be seen as a serious matter. Just pop in, have a chat, sharing as a neighbor friend." (CHW J)

Referral

There are two types of referrals, internal and external, and CHWs could be involved in the former. Internal referrals are those that occur among professionals within a PHC centre. These procedures were illustrated by all program managers, some health workers, and by the CHWs. They explained that CHWs could refer depression cases in three formats: a verbal report directly or via telephone, a written report within a monthly report, and a written note in a communication book that delivers messages between CHWs and midwives at a PHC. The basic pathway for either format is from CHWs to village midwife to PHC centre midwife to counselor at the centre (CHW → village midwife → centre midwife → counselor). Sometimes a CHW and a village midwife go together to report a case, as one CHW described:

"Two of us. Together. When we cannot handle it, we have a midwife coordinator and the coordinator will report to the NP [the centre manager]. If we cannot handle it, for example [because of] a psychological thing or need for a mental health consultation, we will go to Lk [the counselor] ..." (Mw 3)

CHWs might accompany mothers to the PHC centre when required. For other cases, the village or centre midwife and the counselor come and visit the mother, either with or without a CHW. However, a centre manager was concerned about the lack of a referral book or note that provide details of the problem. Other health workers perceived that referral guidelines which describe the pathways and tasks of each professional are also needed.

External referrals send patients from the PHC to higher-level facilities. These referrals can occur when professionals at the centre cannot handle a health issue anymore, such as when a counselor cannot handle a mental health case. A specialist and program manager at the health office explained that an external referral can
only be made by a doctor in the centre and is directed to the district hospital. A specialist explained that even though a patient was being handled by a counsellor, the referral letter must be sent by a doctor.

Workforce
The study participants raised numerous issues related to human resources. Concern was expressed about recruiting a CHW workforce of the quality required for work on perinatal depression. However, participants also perceived that the health system has training and supervision programs which could enhance skills and minimize such issues.

Availability and recruitment
The primary concern about workforce was the shortage of existing CHWs who qualify as suitable for task-sharing. Even for the general/current role, CHWs’ performance was often seen as being inadequate, due to their often being sick, being too old or their workload simply being too high. Program managers and health workers identified that most CHW-managers have multiple tasks related to their role in health assistance, i.e. in MCH, aged care, TB, dengue prevention, etc. A centre manager stated:

“I have a lot of CHWs: CHWs [colleagues], I have a CHW [who handles HIV and IMS] sexually transmitted diseases, I have CHWs [lupus, leprosy and basically those for communicable diseases, and then CHW for nutrition called CFC [Community Feeding Centre] which are at ISPs that handle malnourished children. Sometimes only one person handles all of these because it is hard to recruit. But we think the person is able to handle all those roles.” (GP 3)

Despite the recognition of high workload from multiple tasks, some health workers perceived CHWs as having the capability to handle those tasks. A program manager in the community suggested that CHWs could carry on several tasks in one go, referring to a strategy to manage tasks. This view underlined the feasibility in terms of human resources.

Having new recruits might be seen as an ideal solution to ease the overburdened CHWs and overcome the quality issue. However, there were some issues involved in getting new people. Firstly, because CHWs are lay community members volunteering their time to contribute to their community, other commitments such as work and domestic responsibilities were among the difficulties in recruiting new CHWs, as was described by some CHWs. A CPM listed social relationships as a second issue, when existing CHWs were seen as an obstacle to attracting and keeping new and younger CHWs. She illustrated this with the example of a potential woman who agreed to be recruited only if a particular CHW was not active in the taskforce anymore; and by another case in which a newly-recruited CHW stopped the role because she was treated badly by a current CHW. Additionally, cultural and demographic issues, such as ethnicity and literacy, came up when a CHW described a difficulty in engaging with women from a particular ethnic background because of their cultural beliefs and/or of low level of education.

Recently, a new group of CHWs, called CHWs [pregnancy], was established to work for a PHC centre and the Family Welfare Movement (FWM) at the district level, which could also be seen as supportive of the feasibility of task-sharing and as an enrichment of the workforce. These particular CHWs have several tasks, including finding pregnant and postpartum women in the village and monitoring their health status through home visits, taking their pictures regularly to be documented, and making health record on monthly basis. The existence of CHWs [pregnancy] and their tasks was described by a community manager:

“Now we have what we call CHW [pregnancy]. Here we have Wi, while Wi is from the next neighbourhood. One CHW would work for 2-3 neighbourhoods. They record pregnant women: how is their health status, the risks, including depression, and others. The CHWs monitor them until they give birth. To do so, the CHWs come to FWM representation at ‘dasawisma’ [smallest aggregate of neighbourhood] to collect the data on pregnant women in the area and then they visit the women at home. The community health centre also guides them. There are some in every village, for example this village has 6 CHW [pregnancy].” (CPM 1)

Training and supervision
Training and supervision were perceived as other solutions for quality improvement that were available in the system. Counsellors from three centres reinforced the previous statement from a program manager that mental health training for CHWs and health workers has been carried out in the previous year. Unfortunately, follow-up of the training was challenged by staff rotation when the trained staff moved to a different centre, resulting in the program ceasing. While concerns were raised regarding the adequacy of training, the current strategic plan for training seems to be trying to address this issue. A counsellor said: “The health office has provided training for CHW mental health. But I think more training is not enough; it needs to be continued with follow-up programs” (CS 3). A district program manager expected that an
already established strategic plan for future training for CHWs mental health from all centres would allow continuous training and sustainability of implementation.

“That will be for next year. We will train them. For all centres. The previous one took only one day... therefore we will run the socialization so [the implementation] will not ‘come and go’ anymore.” (DPM 2)

In addition, there is an opportunity for all centres to support the program and to provide supervision sessions for CHWs in the form of a monthly refresher program between health workers and CHWs. As well as supervision, the session is in fact also used for professional development when new and high-priority material needs to be introduced to the CHWs. Such a session could be used if mental health needed to become a topic area. Even better for feasibility is the fact that these regular sessions are financially supported by the health office.

Information
Information systems that generate data about perinatal depression hardly exist, at either national, provincial or district level. Midwives and a district manager clarified that data on pregnancy and childbirth and mental health together is available, but there is no option to include information about mental health during pregnancy or across age. A CHW explained that a special case would be reported in a descriptive note within the regular maternal and child health recording sheet. Health workers suggested several potential ways of producing data on perinatal depression, basically through home visits or approaching pregnant and postpartum mothers directly and recording the information in a specific form. A nurse strongly suggested that the psychology unit could develop a form that could be completed by CHWs pregancy.

“...[CHW with pregnancy] are still working right now and they have to send a report, so it would be better if psychology can provide the sheet. But we may not find, I mean cases are not always found. So, when there are no cases they cannot just leave it blank, rather they still have to write a report, just write ‘nil’ for example.” (Nir 1)

Another way was suggested by a CPM and CHWs manager from three ISPs. They recommended that CHWs pregancy compile mental health information qualitatively, together with other health data for which they are responsible. Either way, the existence of CHW pregancy was considered an opportunity for data collection on perinatal depression.

At present, a CHW pregancy reports data to the centre through village midwives and to the FWM at District level. While PHC centres use the data to determine service delivery to a mother, most CHWs and nurses did not know how the FWM uses this data.

“There are CHWs for high risk of pregnancy; there are two of them; one is assigned by FWM at district level, and the other is assigned by the centre. In fact, they are similar in their role and responsibility... The one assigned by the centre will provide a report to us [village midwife] from which the report will be compiled into the MCH unit. The one assigned by FWM will send the report to the FWM at district level.” (Nir 1)

Financing
The financial feasibility of task-sharing is indicated by the availability of incentives for CHWs as compensation for taking the voluntary tasks, the budgeting policy to assign funding to support mental health screening during the pregnancy and 1-year postpartum period, and the open possibility for other funding sources. Currently, CHWs receive transport compensation for their role in each area they undertake (e.g. MCH, elderly, dengue) and, according to a district manager, they will also receive funding from the mental health program when it is set up. CHW pregancy also receive incentives from the FWM or health office, depending on whom they work with. She emphasized that while the amount may be minimal, it shows the recognition of their roles. The other manager described the financial system assigned for PHCs through universal health coverage (the capitation fund) which could potentially be allocated to support depression identification in maternal care:

“There is a solution to do so, using the capitation fund from universal health coverage. Here in Sara-baya, which may be different from other districts, there is 60% from the operational budget to be addressed to services’ fee and 40% for others. The 40% will be divided into 30% for medicine and 10% for operational. One third of the 10% operational budget is targeted for health promotion programs which can be arranged for any required actions such as a goodie bag, leaflet, and so on. So, if mental health... would possibly be printing a screening tool...” (DPM 1)

A similar approach has been adopted to support supervision during the monthly refresher session. The manager added that funds from other sources are also accepted, such as from NGOs or the community. For example, there is an ISP in an exclusive residential area whose activities are fully funded independently by community members.
Medical products and technologies

Medical products and technologies needed for depression identification by CHWs are basically related to the production of screening tools, and technologies for communication and transportation. CHWs currently detect mothers’ mental health in a common way using observation and then record the case as a note in the regular maternal and child health recording sheet.

“They [CHWs] detected them in a common way: when a person isolates herself and never out from home and do not go for pregnant examination.” (Nr 2)

There was a disagreement between two specialists on how the identification should be acted upon. One suggested two steps, starting with an interview and then following up with a scale. The other completely disagreed with CHWs identifying depression through an interview, as he believed that this requires a high level of knowledge and skill and therefore requires long-term training. He thought that a simple scale was preferable and he highlighted that tools for assessment of depression already exist and a simple one is quite easy to find.

“For identification, it must use a tool that is internationally recognized, so using a depression rating scale is very simple...that is easy and the depression tools are not only one [type], from the simplest to the complex. It is so easy; indeed the tool to detect depression is easy so that we can teach CHWs. Identification using interview is more difficult, it needs a long time to educate CHWs.” (Sp 2)

Means of communication and transportation are not necessary, as CHWs live close by the mothers and the village midwife is not far away. However, health workers and CHWs expressed concerns about the cost involved in taking mothers to the centre or if mothers live far away.

“Because it is around the area, therefore transportation is not a problem. I would think twice if it is far away because I cannot ride a motorcycle and automatically I need to ask others to take me there.” (CHW H4)

Discussion

This study aimed to examine the feasibility of task-sharing in the identification of perinatal depression within the health system of the City of Surabaya, from the perspective of the health system’s stakeholders. Policy documents stated that CHWs can carry out this role [1, 2]. Results indicate that the proposed task is feasible to be implemented within the health system of Surabaya, from the perspectives of leadership and governance, home-based service delivery and internal referrals, training and supervision, financing, and technologies. Information systems and other areas need to be improved somewhat, including the ISP-based service, operational regulation, and workload of the volunteers.

Leadership and governance is a strong support for the involvement of CHWs in the identification of depression. The vision of both district government and the province as seen in mental health policy clearly indicates the potential for development of practice in this area. Indeed, mental health policy at the national level has had a significant development in the last two decades, and the lessons learnt can be useful in thinking about mental health policy for women and children. Perinatal mental health is an important component of mental health overall (with implications for both the mother and the child) and must be in one of the priorities within mental health. The recent development of mental health policies such as the mental health law and the law of persons with disability is progressive, which gives hope for the development of policies on women and children. This was seen when a new mental health law was approved by the house of representatives in 2014 (law number 18 year 2014), replacing the previous one that had been used for about five decades (the first mental health law was sanctioned in 1966). Not long after its release, another related law, the law of persons with disability, was authorized in 2016 (law number 8 year 2016) as a result of the ratification of the United Nation convention on the rights of persons with disabilities (UNCRPD). For a specific population, those affected by a disaster, the disaster mental health policy was developed in 2003 [37], while for those who have severe psychosocial disabilities living in physical restraint, an initiative from Aceh has been applied as a national program [38, 39]. These other laws/policies/initiatives can be used to advocate for high quality health and mental health care during the perinatal period.

Regarding the role CHWs in mental health care, the establishment of the TPKJM or community mental health action team in the district, whose performance is monitored by the Mayor, is another promising step for implementation of policy documents in task-sharing for perinatal depression. The fact that East Java is among the provinces that have established initiatives to implement TPKJM [40] is a good support for districts within the province such as Surabaya. The regulation is also reinforced by the policy on “Indonesia Free from Pasung (shackle)” launched in 2010, that was aimed to be achieved by 2014 (it has since been extended to 2019) [39]. These two national programs and the commitment of the leaders to them are evidence of a good foundation of health leadership and governance, and are most
likely to support task-sharing in the mental health area. In particular, policies with a timeline, such as the free from shackle policy, seem to be having a greater impact, because the government is putting in greater effort to meet the goal within the schedule. This phenomenon accentuates WHO’s suggestion that a policy maker should have a timeline in mind when developing a mental health policy [41].

The policy emphasis that facilitate task-sharing were also strengthened by organisational management in the health office. The existence of mental health within the special care section provides open opportunities for the mobilization of more resources in the health system. This can be seen from its roles in: facilitating the establishment of centres with mental health units; in putting in place a strategic plan for mental health training, including the training of CHWs; assigning a source of funding for depression identification; and organizing multisectoral collaboration that could support resource management, including the application of integrated antenatal care. Not all these efforts are right now directed specifically to the mental health of mothers; however, there is potential within the section for commencing subsequent steps to realise the vision.

According to stakeholders, home visits are the possible answer for the service delivery model for CHWs in carrying out the task of depression identification. As a model of care, this approach is not a novel one within the national health system, particularly for CHWs [30], [44]. Several documents openly regulate this responsibility and provide structured guidance on what and how to conduct home visits [2, 30], even though not specifically for mental health care. For example, home visits are directed for mothers whose children under five did not attend an ISP activity, and those of malarious children, among others. The home visit approach is also used by CHW [30], many of whom are also CHW [30], [44] (mostly the managers). At a practical level, there is agreement among stakeholders that a home-based approach is the best option to overcome the space limitation issue, the difficulties of accessing primigravida, and time constraints which resulted from many services being provided during an ISP activity and the unsuitability of this schedule for working mothers. This approach allows for flexible scheduling, as has been stated by CHWs and users, and is consistent with findings from another study [42].

Service delivery should also be connected to infrastructure and resources in the health system to make it feasible for task-sharing. Resources could provide a wider opportunity to assure that users get continuity of care after being identified by CHWs, e.g. infrastructure for referrals. It means task-sharing is supported by relevant continuous care so that the care does not end with the CHWs or village midwives. Continuity of care could also be understood in terms of protecting the rights of users to get treatment. The complete resources available for mental health care are: (1) the provision of mental health care by a counsellor in a PHC centre, (2) the availability of two district hospitals that provide mental health services by both psychiatrists and psychologists, and (3) the provincial mental hospital that is located in the city. With these resources, community-based mental health care fits within the national health system. Lack of continuous care was a concern for women who were reluctant to disclose their feelings during a mental health assessment [43]. Findings from another study have suggested that mental health screening as part of integrated routine maternity care would be a possible intervention pathway [44] which would involve less stigma. Participants in that study emphasized the unease and feeling of shame from talking about their experience of depression with multiple professionals in a fragmented care system, something that is not required in integrated care. In addition, continuity of care is supported by the financing system of universal health coverage. The economic cost of perinatal depression is high for both individuals (mothers and the family) and the public sector [45], therefore the health coverage scheme needs to make service delivery and referral procedures easy and accessible. The connection with other health systems, such as the PHC and the social welfare system, is also needed for well-functioning mental health care.

The financial source and policy in financing both support task-sharing, congruent with the arguments related to service delivery and continuity of care. How the capitalization budget could be allocated so that a specific amount could be used to establish a depression screening tool was clearly explained by a district manager. This financial policy would open several possibilities for further steps, for example to identify and validate a simple and locally-acceptable screening tool. Studies from a variety of settings suggest several possible perinatal depression screening tools that can be accessed worldwide and have good psychometric properties [46–48], however adaptation in the new context is required. Several studies in Indonesia have reported the use of some of these tools (e.g. the Edinburgh Postnatal Depression Scale) [4, 5, 49], nevertheless there is a need to examine whether similar tools can be administered by CHWs. Specialists in this study also emphasized the use of simple tools and believed that CHWs are able to administer them. Health workers suggested using a symptom list which is simple to administer and quite similar to a pregnancy risk scale with which CHWs are familiar. Another method is using a structured interview, but this was debated among
specialists, since it requires a high level of competence. Furthermore, a specialist strongly suggested not using the word ‘depression’ to avoid stigma, with the term ‘mood changes’ being preferable instead. This suggestion is in line with previous findings in which the experience of depression was expressed in many forms and terms by Javanese [50]. This means that an understanding of the personal and cultural terms should also be considered in choosing or adapting an identification tool. Possible bias in interpreting a woman’s mental health state resulting from unfamiliar terms requires attention, considering the level of education, language and ethnicity of both the CHWs and users.

In regard to human resources, the findings on workload, scarcity, and personal barriers are consistent with feasibility issues reported by previous studies [51, 52]. These issues may result from the role of CHWs as the frontline workforce for many governmental sectors, not only health and home affairs, but also others such as education and social services [32]. At least 12 roles for CHWs have been listed in health-related areas [30], not including others in civil services [53]. Management of CHWs by the FWM is supposed to enable organization and monitoring of the availability, distribution, and performance of CHWs. However, it seems that the FWM, even at the national level, does not have a strong bargaining position in the governance of a village when a new task for CHWs is released. In fact, the findings about social relationships as one recruitment issue suggest that the FWM is the agency that best understands the social boundaries and cultural life of the community and so is best placed to map human resources in the area. Several concerns should be addressed to improve workforce management and quality, such as regulation of skills and characteristics required, the need for a working contract that regulates the length of employment and a procedure for terminating the role, the training required, and a means of distributing tasks. Well-distributed tasks may prevent duplication, so that new and existing CHWs (pregnancy, for instance, could monitor not only physical but also mental health efficiently. Even though CHWs are volunteers, having professional management of their tasks would maintain their participation sustainably.

There is promise for developing and improving CHWs’ skills and competencies in task-sharing. This could be achieved through the availability of mental health counsellors at centres and the health office, and mental health specialists at district hospital. Skills enhancement programs are an opportunity for quality assurance in service delivery. Components of mental health training for CHWs are found in several studies [10, 40] that could be a source to learn from, including those addressing perinatal mental health [54, 55]. Nevertheless, since task-sharing in maternal mental health care has not yet started, the specific skills and competencies, as well as training, that fit the local context need to be examined.

Challenges and recommendations
The findings indicated three main challenges to feasibility. These are: (1) inconsistency between policy and practices, (2) an inadequate support system for data management and technologies, and (3) unsupported means for implementation. Gaps between policy and action are revealed from the shortcut practices in recruiting CHWs by the centre instead of by the FWM. Several approaches may alleviate these challenges, such as inviting all parties (FWM and PHC centres) to sit together and review the policies, or hearing about the best possible strategies for a collaboration process before a proposed program is released. However, this study did not explore this possibility further. The fact that there were gaps between written regulations and the reality generates a concern: even if stakeholders’ perceptions lead to the conclusion that the health system can feasibly accommodate task-sharing in integrated mental health, personal views on participation may be different. Buist, O’Mahen [56] reported a mixed attitude to the acceptability of perinatal depression detection among women and health providers. Therefore, it is necessary to understand the personal views of stakeholders about the acceptability of their involvement in task-sharing.

Other issues are logistical support and an information system on perinatal depression. While transportation is not a significant barrier, because the task is within walking distance, the findings imply a need to use telecommunication devices in doing the job. Lack of financial support for communication and transportation is an issue for task-sharing in another area [10] and a similar problem is anticipated by CHWs in this study. In addition, the lack of an adequate data reporting system on perinatal depression could be solved through the use of qualitative reports from CHWs to village midwives to the centre. In an annual report, the health office presents data on mental health cases other than maternal ones [23], suggesting an opportunity to do the same for maternal mental health data. This possibility is suggested by the existence of a mental health qualitative report shown by a district program manager during an interview when describing how the data were collected. Moreover, a study on maternal mortality calculation suggested the important role of village midwives and local registers (volunteers) in gathering and reporting valid data [57]. The study highlights the opportunity to integrate mental health as a component of health data collected by CHWs (pregnancy).

Finally, the lack of practical regulation for task-sharing and the need for practical guidelines and pathways for
Conclusion

It can be concluded from this study that the health system and resources in Surabaya are sufficient for the feasibility of task-sharing in integrated maternal mental health to detect perinatal depression. Most health system areas support or provide an opportunity for this concept, with there being a strong basis in governance and resources. The decentralized governance of the health system allows contextualization of a national policy. The role of CHWs also demonstrates their potential for filling the gap that exists in the data information system. Further studies are necessary before the idea can be prepared for implementation, including, but not limited to, exploring the acceptability of task-sharing and the characteristics of CHWs required for this purpose.

Abbreviations

CHW, community health workers; CHW-M, community health workers working for maternal and child health; CHWPM, community health workers working for pregnant mothers; CM, CL, and CN sites for majority population groups within Cirebon; CM for Madurese; CI for Jawanese; CN for non-slum area; EPDS: Edinburgh Postnatal Depression Scale; FWM: family welfare movement; GP: general practitioner; HIV: human immunodeficiency virus; SHSP: Integrated health service posts; MCH: maternal and child health; MoH: Ministry of Home Affairs; NGO: non-governmental organization; PHC: primary health care; TPJM: Community Mental Health Action Team; WHO: World Health Organization.

Authors’ contributions

ES conceived of the study, participated in its design and coordination, carried out the interviews and drafted the manuscript. RK, HMA, and AI guided ES in the conception and design of the study and supervised her work. RK also provided guidance on analysis and interpretation of the material. All authors read and approved the final manuscript.

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Declaration

The authors declare that the content of the manuscript has not been published, or submitted for publication elsewhere.

Competing interests

The authors declare that they have no competing interests.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on request.

Consent for publication

Not applicable.

Ethics approval and consent to participate

Ethical approval for the study was obtained from the University of Melbourne in the Document No. 154383. A research permit was released by Health Office of Surabaya. Informed consent was obtained from all participants prior to data collection.

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A6.2. Evidences of submission of article ‘Acceptability of a role for community health workers in integrated mental health care for perinatal depression: a qualitative study from Surabaya, Indonesia’

A6.2.1. Email confirming submission to International Journal of Integrated Care

Dear Endang Surjaningrum,

Thank you for submitting the manuscript, "Acceptability of a role for community health workers in integrated mental health care for perinatal depression: a qualitative study from Surabaya, Indonesia" to International Journal of Integrated Care. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site.

Your submission will be considered by our Editors. Research papers deemed appropriate for the journal will proceed directly to peer review, which generally takes 4-6 weeks to be completed. Non research papers will undergo a full Editorial review process, which will take 2-3 weeks. Following the completion of the review, you will be contacted by journal staff with review feedback.

Thank you for considering this journal as a venue for your work.

Kind regards,

— International Journal of Integrated Care editorial team.
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Dear Endang,

Thanks again for your submission.

I am pleased to let you know that our editors have accepted your paper for peer review.

Could you please send me a list of possible reviewers (from both in- and outside Australia) and their e-mail addresses. These people should not be involved with the article and please do not contact them yourself.

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Susan

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A6.3. Evidences of acceptance of article ‘Personal attributes and competencies required by community health workers for a role in integrated mental health care for perinatal depression: voices of primary health care stakeholders from Surabaya, Indonesia’

A6.3.1. Email of acceptance of the article

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Decision has been reached on your submission to International Journal of Mental Health Systems

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Reply-To: International Journal of Mental Health Systems Editorial Office <irishavairamani@springer.com>
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JMH-D-18-00032R1

Personal attributes and competencies required by community health workers for a role in integrated mental health care for perinatal depression: voices of primary health care stakeholders from Surabaya, Indonesia

Endang Surjiningrum; Harry Minas; Anthony Jorm; Ritsuko Kakuma
International Journal of Mental Health Systems

Dear Ms Surjiningrum,

I am pleased to inform you that your manuscript “Personal attributes and competencies required by community health workers for a role in integrated mental health care for perinatal depression: voices of primary health care stakeholders from Surabaya, Indonesia” (JMH-D-18-00032R1) has been accepted for publication in International Journal of Mental Health Systems.

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Best wishes,

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Comments:

Reviewer #1: I would thank the authors for addressing all my queries. I have no further comments.

Reviewer #2: The revised manuscript has appropriately addressed my comments. I enjoyed reading it. The authors may want to check the writing style to make sure it is accurate. For example, this sentence in lines 429-430 lacks a main verb and thus needs revision: “However, this possible issue may not the case in this context from the catchment area and work environment point of view”.

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