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RESEARCH ARTICLE

Depression in women; perceptions do matter in the development of a community-based intervention

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ABSTRACT

Depression is two times more prevalent among women; however women's access to mental health care is poor and many do not seek care even when they are referred to a mental health professional. We conducted a qualitative study to understand the perception of key stakeholders about the burden of depression in women, its risk factors and barriers to seek care, with a view to develop a community based intervention to manage depression among women. We interviewed women with depression, their family members, community volunteers, multipurpose health workers, primary care physicians (PCPs), psychiatrists, psychologists, social scientists, public health experts, gender experts, administrators and policy makers. The 49 audio-recorded in-depth interviews and one focus group discussion were transcribed, free-listed, coded and content analysis was performed. Stakeholders perceived that burden of depression was substantial; but mostly unidentified because complaints were somatic or anxiety-related and in many situations symptoms of depression remained unvoiced. The suggestions from stakeholders were consolidated as follows; community and family level interventions should address gender issues, autonomy of women, alcohol use among partner, marital conflicts, domestic violence, financial problems, and unemployment. Partners and other family members need to share the routine household responsibilities. Primary care is an ideal setting to implement a sustainable intervention for depression management, with re-orientation and training of existing health care providers. However there were explicit differences in the perceptions of women with depression and many other stakeholders regarding who should be involved to provide psycho social interventions. Many health workers, local leaders and community volunteers suggested involving local volunteers for social support; however, women and their family members preferred the multipurpose health workers. Multipurpose health workers, who carry out home visits, as part of their routine work, were the most acceptable to women with depression. Multipurpose workers can screen for depression at the field level, refer the screened positive women to primary care physicians for diagnosis and treatment and provide psychosocial support. Primary care physicians can provide the drug treatment and supervise psychosocial intervention provided by multipurpose workers or junior public health nurses. We propose a model for community based intervention, which is more relevant for settings with limited resources in mental health care.

Keywords: Depression in women, Kerala, perceived burden of depression, barriers to treatment seeking in depression, primary care physician, multipurpose health worker, community based depression intervention programme

Introduction

The prevalence of depression is high in primary care and is associated with low quality of life, impaired work performance, high suicide risk, and medical and psychiatric comorbidities. Outpatient data in primary health care setting indicates that depression is an important determinant of attempted suicide and is twice as common in women as in men[1]. However, availability of minimally adequate treatment for depression is just 23% in high-income countries and is as low as 3% in lower middle income countries[2]. The treatment gap for depressive disorders in India is very large at 82·3%[3]. This treatment gap is best bridged in primary care. Most women did not consider biomedical concepts in the aetiology of depression, however, they sought medical help for depression by reporting somatic symptoms and this provided an opportunity for the health system to plan and implement a public health intervention to manage depression[4]. Patient-centred mental health care requires conceptualisation of disorders within specific contexts[5]. In this background, we developed an ambitious plan to develop and validate a comprehensive working model to understand the burden and the correlates of depression in primary care, and to detect and treat depression in a way that would be acceptable for patients and their families as well as feasible for the healthcare system. Specifically, we sought to understand the perception of key stakeholders about the burden of depression, risk factors for depression, reasons why depression remained unidentified in primary care, and barriers to seeking care. We also aimed to identify the resources available in the community to provide psychosocial intervention to women with depression and, importantly, to generate suggestions to develop a community-based intervention program, which can be recommended to healthcare policymakers, for implementation. The development of the programme through qualitative methods and validation of the effectiveness of the programme through randomized controlled trial[6] were both part of the same research project. In this paper we present the observations of the qualitative study which aimed to understand the perception of key stakeholders about the burden of depression, its risk factors and barriers to seek care, with a view to develop a community based intervention to manage depression among women.

Methodology

The methodology, analysis and reporting were planned and implemented in accordance with the Consolidated Criteria for Reporting Qualitative research (COREQ) guidelines[7]. The design of the study was cross sectional, using qualitative techniques for data collection. The methodological orientation underpinning was that of content analysis.

Research team and reflexivity: All the in depth interviews, focus group discussion (FGD) and key informant interviews were conducted, face to face, by the first author, who is a female psychiatrist, trained in qualitative research techniques as part of MPhil (Clinical Epidemiology) programme and attended course in 'Analysis in Qualitative Research' conducted by India Clinical Epidemiology Network. She is trained in public health and epidemiology and has prior experience as investigator in the evaluation of national health programmes using qualitative techniques. The second author, who is a psychiatrist and epidemiologist, trained in qualitative techniques, was also part of most of the interviews and the FGD. During the study period, both of the researchers got re-trained in qualitative methods by participating in the workshop on 'Qualitative Research' conducted by the Indian Council of Medical Research. In most of the interviews researchers had previous interactions with the stakeholders and hence process of interviewing was smooth and natural.

Setting, participant selection, data collection and sample size: The setting of the interviews varied, depending on the category of the informant. Community level interviews were conducted mostly in the Medical College Health Unit,

Pangappara which is the Primary Health Centre attached to the Department of Community Medicine, Govt Medical College, Trivandrum, Kerala located in the southern part of India. At the community level, women with depression, their family members, self help group members of Kudumbasree, Anganwadi teachers and Accredited Social Health Activists (ASHA) were interviewed. At the Primary Health Centre (PHC) level, multipurpose health workers {Junior Public Health Nurses (JPHN) and Junior Health Inspectors (JHI)}, supervisors, medical officers and stakeholders of Local Self Government were interviewed. Participants of the focus group discussion were members of the public health wing of the primary health centre, which included multipurpose workers and their supervisors. Key informant interviews were conducted with major stakeholders at the district, state level and national level (Table 1). We included experts with an international experience to capture the global perspectives. All the stakeholders approached by the researcher agreed to participate in the study. All the interviews were conducted face to face. In depth interviews and key informant interviews were continued till there was data saturation. There were 49 interviews and one focus group discussion.

Study Instruments/ Interview guides: Schedules or interview guides for key informant and in-depth interview for each category of stakeholder were prepared by the team of researchers which included psychiatrists and experts in public health, research methodology and social science research including qualitative research. We piloted these before the actual study. The interview schedules contained open ended questions which tried to capture their perceptions regarding burden of depression among women in the community, the psychosocial stressors or factors underlying /predisposing/ contributing to depression, their current role and potential future role in management, resources available in the community and the ideal components of a community based depression intervention pogramme. Each face to face interview lasted for 45minutes on an average. Some interviews were lengthy and lasted for 90 minutes.

Table 1 Stakeholders selected for in depth interviews and key informant interviews

Level of operation	Category of stakeholders
1.Community	1. Women with depression 2. Family members of women with depression 3. Kudumbasree volunteer 4. Accredited Social Health Activist(ASHA) 5. Anganwadi worker
2.Primary Health Centre (PHC)	1. Medical Officers 2. Public Health Nurses 3. Junior Public Health Nurses 4. Junior Health Inspectors
3. District	1. District Medical Officer 2. District Program Manager 3. Nodal Officers/ Psychiatrists of District Mental Health Programme
4. State	1. Principal Secretary, Health & Family Welfare Dept, Govt of Kerala 2. Director of Health Service 3. Director of Medical Education, 4. Secretary , Kerala State Mental Health Authority 5. State Nodal Officer , Kudumbasree

Level of operation	Category of stakeholders
5. National	1. Nodal Officer, National Mental Health Programme, Government of India 2. Professors of Psychiatry and Psychology from national institutes 3. Mental health experts 4. Public health experts 5. Social scientists
6. .International	1.Mental health experts 2.Gender consultant of WHO, 3.Mental health consultant of WHO

Analysis

Most of the interviews were audio recorded with prior permission. Field notes were also taken down during the interviews. Community level interviews were in Malayalam, the regional language. Majority of the state, national and international level interviews were in English. Audio-recorded interviews were transcribed and those interviews in Malayalam were translated to English. They were then checked for grammar correction and then coded by the researcher. Content analysis was done manually. Relevant quotations are also provided along with the corresponding themes. Data from multiple sources have been triangulated.

Results

Important observations from the interviews and focus group discussion are presented as themes and subthemes (Table 2). Relevant quotations, edited for grammatical accuracy, are provided, along with the themes.

BURDEN OF DEPRESSION

The burden of depression among women was perceived to be high, but frequently unidentified and under-reported. Women did not express emotional problems; they presented with somatic symptoms and descriptions of panic attacks.

> *"Depression is very common. It is seen in association with diabetes and hypertension. Women with depression frequently come to the outpatient department (OPD) to see the same physician, even if the physical illness is under control. We [doctors]* ***unnecessarily increase the dose of drugs for physical illness because of their frequent OPD visits but, unfortunately, fail to identify and treat depression.****"* – Primary Care Physician

> *"I am convinced about the gravity of the problem. I speak from my experience of directly dealing with women patients, women caregivers and wives of patients on de-addiction treatment. I feel that depression is much more than it has been diagnosed or recorded or reported. Many a time it goes unnoticed and* ***the total number of depressed women hugely exceeds what is reported in statistics.****" – Faculty, Psychiatric Social Work*

RISK FACTORS FOR DEPRESSION

Gender related issues, lack of financial independence, intimate partner violence and domestic discord: After marriage, women commonly lived with the husband's family of origin. Mental health experts felt that strained relationships with the mother-in law was a stressor for many such women. The strained in-law relationships were associated with a lack of freedom in decision-making, marital conflict, and even domestic violence.

Many women ***did not have the financial independence, since they did not have a job.*** Women as home makers did a lot of work within their household, for which they were not paid. Even women who had good education did not pursue for a job since ***many got married before they could find a job.*** Afterwards, ***because of pregnancies, and the need to spend time in child care, many women did not get the opportunity to find a suitable job.*** Culturally also, many families did not encourage women to seek an employment; instead ***partners and family members preferred the newly married woman to be a home maker and look after the children and household responsibilities.*** Some women in their middle ages were worried about the resources needed for the marriage of their daughters, since they believed that they would need money to be given as dowry.

> *"Failure to conceive, failure to have a male child, the pressure to live like people in the neighbourhood, worries on appearances, expectations about children's education, economical problems are all stressors for women. Women are more concerned about financial problems and thus they have the tension and pressure to live up to the expectations of others." - Gender Expert*

Handling domestic chores all alone: This was an important stressor in this setting. ***Women, by tradition, were expected to be solely responsible to do the household chores such as cooking, cleaning, and washing, as well as for all activities related to child-rearing, caring for the sick and the elderly.*** Many partners did not share these responsibilities and subsequently handling the domestic responsibilities single handed turned out to be a burden for many women. For women who had a job, the pressure to take care of the household responsibilities without support from the partner, increased their stress even when they had financial independence.

> *"Women have 3 categories of stress; looking after the domestic chores, caring for children, and taking care of [their own] job responsibilities."* – State-level administrator

***Alcohol use by the partner*:** Administrators, policy makers, mental health experts and community leaders reported that alcohol use by the partner is indirectly responsible for depression through worsening the marital discord, intimate partner violence, financial difficulties, physical and psychological violence against family members, and behavioural problems in children.

> ***"I am sad because my husband drinks. There are financial problems, but*** *all financial problems can be solved if he stops drinking* ***and starts driving and earns."*** **- Woman with depression**

> *"My daughter is unwell because of* ***her husband's alcoholism, financial problems****, and stress related to taking care of the children."* - Mother of woman with depression

> ***"The most important factor leading to disharmony in the family is the [husband's] excessive alcohol use. This is related to family violence."*** – State-level administrator

BARRIERS TO TREATMENT

Time constraints and competencies: The healthcare system in India is under pressure because of large patient volumes and inadequate human resource. There are long queues for consultation in the OPDs and the time available for each patient is usually insufficient for detailed evaluation. Most doctors primarily address the physical symptoms in the busy OPDs and may not have adequate time to elicit psychological symptoms and address stressors such as ongoing gender-based violence.

> *"It is doubtful whether depression is [adequately] identified in primary care. Many women who describe symptoms of panic attacks may actually have underlying depression."* - Psychiatrist and Nodal Officer, District Mental Health Program

Complaints are somatic symptoms: Patients complain of aches and pains, weakness, fatigue, and lethargy, or somatic symptoms of anxiety; disclosing depressed mood and other emotional symptoms are considered inappropriate in a crowded OPD. Many women may also be unaware that depressed mood can be a medical symptom that the primary care physician needs to be aware of.

> *"Women do not tell anybody about their problems. The general view [in society] is that women [in such stressful circumstances] inevitably suffer; [if symptoms of depression are obvious]* ***people around the depressed women think that her behavior is 'bad'*** *[and not that she is ill]."* - Junior Public Health Nurse

Lack of awareness that depression is a treatable disorder: Women ***do not recognize that what they experience is a mood disorder*** that can be medically evaluated and ***treated*** by medical and mental health professionals.

> *"She thinks that she should conquer her problems herself. She does not recognize that she has depression that could be treated.* ***On average, it takes 6-9 months before a woman with depression is finally taken to a psychiatrist.****"*- Academic psychiatrist, national institute

Stigma: Depression and psychological symptoms are considered as ***weakness of the mind*** and are stigmatized with the label of mental illness. There are strong ***personal and social barriers to seeking*** and receiving psychiatric care. This is an important reason why depression remains untreated.

> *'If we go to hospital once for a mental health problem,* ***people will label us as mad. Even after cure, they will say she was mad long ago.****'* - Woman with depression

> *"The* ***word depression itself is associated with stigma.*** *People conceal depression and, instead, report somatic symptoms."* State-level administrator

> ***"Depression remains untreated because of stigma. It is also difficult [in terms of availability, accessibility, affordability, and acceptability] to see a psychiatrist. Instead, women with depression seek treatment through religious avenues."*** State-level administrator

REASONS FOR NON-ADHERENCE TO TREATMENT AND CONSEQUENT RELAPSE

Poor understanding about the nature of depression and its treatment: Patients and their family members are often ***inadequately informed*** about the nature of the illness and the need for treatment, and especially about the role of drugs and duration of treatment, in the management of depression.

Treatment-related costs: The treatment of depression involves direct and indirect costs that can be hard to meet. Direct costs include the cost of the prescribed medicines. Indirect costs include the cost of travel for the patient and accompanying person(s) and lost wages for the day of medical consultation.

Stigma: Even after diagnosis and initiation of treatment, stigma can be responsible for non-adherence to treatment, treatment drop out, and relapse. There are strong personal and social barriers to continuing in psychiatric care. Stigma works in different dimensions in depression. It is also the main reason behind depression remaining undiagnosed and untreated.

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> *"Many women are reluctant to complete treatment, because they* ***fear that others will look upon them as 'mental patients'*** *"- Faculty, Psychiatric Social Work*

SUGGESTIONS FOR DEVELOPMENT OF THE COMMUNITY BASED DEPRESSION INTERVENTION PROGRAMME

Multipurpose health workers can identify depression by active surveillance: In India, there is a cadre of public health staff called multipurpose workers who are involved in the field level implementation of national health programmes such as control of communicable diseases and non-communicable diseases, as well as, services for reproductive and child health care. In Kerala, they are designated as Junior Public health Nurses (JPHNs) and Junior Health Inspectors (JHIs). They conduct home visits, do active surveillance to identify communicable diseases and other health-related problems, provide field level services, and refer identified cases to primary health centres (PHCs) for further management. They also make antenatal and post natal visits, conduct outreach immunization for children, weekly clinics in the subcentres for non-communicable diseases and health education sessions in the field level. JPHNs and JHIs identify physical illness during their routine home visits. With appropriate training, they can screen for depression and refer to the primary health centre.

Active surveillance in the field by screening for depression using simple validated tools: As discussed in a previous section, JPHNs and JHIs who perform home visits can be trained to screen for depression and, when identified, to counsel and/or refer women to primary health centre for diagnosis and treatment.

> *"Actual depression cases should be* ***identified by an active surveillance mechanism*** *because it seems to be the cause* ***of attempted suicide'*** - State level administrator

> ***'JPHNs can identify depression during field visits.*** *They can also do the follow up. They can even monitor for improvement of symptoms'* – Psychiatrist, District Mental Health Programme

Strengthening competencies of primary care physicians to diagnose and manage depression: Primary care physicians can be the nodal persons to diagnose and manage depression in the primary care. This would ***reduce stigma and make services available, accessible and acceptable.*** Antidepressant drugs should be made available in the primary health centre.

> *"More patients will come to us. They will* ***come here and consult us, just as they come for fever, cough, and other complaints. If we refer them to the psychiatrist, they may not go."*** – Primary Care Physician

> *"****Primary care physicians should be able to identify depression, initiate treatment****, and* ***sustain follow up.*** *They should also empower the paramedical workers to identify depression, refer to the primary health centre, and ensure follow up. PCPs can also help to* ***build social structures such as self-help groups."*** - Public health expert

Simple protocol for drug treatment: Primary care physicians need a ***simple treatment protocol*** using antidepressant drugs that require ***minimum dose adjustments***.

> *"We need a* ***simple protocol to treat depression, similar to the Tuberculosis Control Programme where everything is clear about the drug regimen.*** *For example, if the patient is sputum-positive, we can straightaway start a specific drug combination; there is no confusion. We need a similar,*

simple, uncomplicated regimen to treat depression." – Primary care physician

ANTIDEPRESSANT OF CHOICE IN PRIMARY CARE

Most experts recommended selective serotonin reuptake inhibitors (SSRIs) such as ***sertraline or escitalopram***, as the safest and easiest drugs for primary care. The ***cost of the drugs*** was also an important consideration in making the choice.

> *'I think that most of the antidepressants have the same profile in terms of effectiveness.* ***I suggest the cheapest SSRI, sertraline.*** *SSRIs carry a low risk of side effects. There is no need to add a sedative. If we train the primary care physicians, they can prescribe antidepressants."* – Academic psychiatrist from a national institute.

Community level resources to provide psychosocial intervention: Most stakeholders suggested to invlove community level volunteers such as the Kudumbasree members, anganwadi workers and ASHA(Accredited Social health Activist) to provide psychosocial support; but there was no consensus about their specific roles. Kudumbasree is a poverty eradication and women empowerment programme implemented by the Government of Kerala and is the largest network of women self-help groups with a membership of nearly four million families. In addition to microfinancing, self-employment and capacity building, Kudumbasree also takes up activities to address important social causes, especially related to women and gender.

> *"Although there are many psychosocial issues related to depression,* ***there is no social support incorporated into the existing depression management plans.*** *We haven't developed a group in the community to support them. They also need an alternative [source of] income. So,* ***Kudumbasree may be an option to develop a support system in the community."*** – Primary Care Physician

> *"Kudumbasree can intervene in alcohol-related problems. Women have a space to come, when they feel stressed. There* ***would be 8-10 neighborhood groups in a ward [basic unit of the Local Self Govt]. Identify 2 women from each neighborhood group.*** *They would share the experiences. Avail services from the primary health centre.* ***Teach them how to recognize depression*** *and its symptoms, when to refer etc. We can also enhance their* ***skills for counseling.****"* - State level Official, Kudumbasree Mission, Local Self Government Department

Anganwadi workers are part of the Integrated Child Development Services Scheme. It has an inbuilt facility to interact with women and children. Anganwadi workers collect information regarding immunization and antenatal care and hand over the information to the Junior Public Health Nurse. Some stakeholders suggested that services of Anganwadi workers can be availed to provide support to women with depression, since there is one anganwadi for a population of thousand.

ASHA (Accredited Social health Activist)is a local health volunteer, under the National Health Mission and they support the JPHNs in activities such as maternal and child health care and immunization. ASHA s work in close liaison with the families in the implementation of health programmes especially the mother and child services. Hence involving the ASHA to provide the local support came up as a suggestion.

PERCEPTIONS DO DIFFER

Many stakeholders supported the involvement of the above volunteers, such as the Kudumbasree members, anganwadi workers and ASHA ; while, women with depression, their family members and

some public health nurses and stakeholders at the primary health care level expressed concerns regarding the involvement of local volunteers. They feared that volunteers from the neighbourhood may not be able to maintain confidentiality and they may not have the competence to deal with mental health issues. Instead, women with depression preferred the Junior Public health Nurses (JPHNs), who is an integral part of the health system, to provide the psychosocial support.

> *"We don't want people whom we know (volunteers from neighbourhood) to counsel us. We prefer to tell our problems to people from outside. JPHNs (Junior Public Health Nurses) are safer."* - Woman with depression

> *"Kudumbasree is not ideal for this [psychosocial] intervention, because they may reveal the [woman's] problems to others around."* - *Public Health Nurse*

> *"A link between the patient, the family, and the doctor is important. JPHNs have a link with the patient and the family. They can educate the patient and, if symptoms worsen, report to the doctor in a timely manner."* - State level administrator

> *"We can train health workers to identify depression during field visits, counsel women, and refer women to the* primary care physicians. *JPHNs can check whether they [women] take the [antidepressant] drugs regularly. Women can telephone the JPHN if they have problems, or suicidal thoughts, or whenever any help is required"*- Public Health Nurse

Creating systems in place to deal with psychosocial stressors such as partner's alcoholism and intimate partner violence : Psychiatrists, public health experts, and health workers felt the need to develop systems in place to deal with common stressors. These included making ***deaddiction services available at the primary health care level*** and creating one stop centres for women to reach out when they face intimate partner violence or domestic violence.

Table 2 Overview of themes and subthemes

Major themes	Common subthemes
Perceived risk factors for depression	Gender related issues, lack of financial independence, unemployment, alcohol use by partner, financial difficulties, and worries related to the marriage of daughters.
	marital discord, intimate partner violence/ domestic violence, problems with in laws
	Non-supportive partner not sharing household responsibilities
	Co–existing physical illness such as hypertension, diabetes mellitus
	Complaints are somatic symptoms

Major themes	Common subthemes
Reasons for depression remaining undiagnosed and untreated in primary care	Lack of awareness that depression is a treatable disorder
	Multipurpose health workers need training to identify depression in the field by active surveillance
	Time constraints and competencies
	Stigma
Reasons for non-adherence to treatment and subsequent relapse	Poor understanding about the nature of depression and its treatment
	Treatment-related costs
	Stigma
Suggestions for development of a community based intervention	Active surveillance in the field using simple validated screening tools
	Strengthening competencies of primary care physicians to diagnose and manage depression
	Simple protocol for drug treatment
	Antidepressants of choice in primary care
	Psychosocial interventions in the community
	Addressing common stressors such as Gender related issues , partner's alcoholism

Discussion

We report the results of a qualitative study that aimed to develop an acceptable and feasible community-based depression intervention program for the identification and management of depression in primary care. We focused on women because they are more vulnerable biologically, society is predominantly patriarchal and the mental and social health of women tends to be neglected[8]. We examined the perceived burden of depression in women, its risk factors, and barriers to treatment, and sought to develop community based depression intervention programme through a consultative process.

Although the perceived burden was high, key stakeholders recognized that depression was under-reported. Gender related issues, lack of financial independence, partners' alcohol use, marital conflicts, intimate partner violence/ domestic violence, and conflicts with in-laws were repeatedly emphasized stressors or risk factors for depression. Inadequate involvement of partner in household responsibilities, financial problems, unemployment, and lack of decision- making freedom added to the stress. Our results from this qualitative study were supported by empirical data from India; studies have reported high prevalence rates for depression as well as similar social determinants[9-13]. The prevalence of depression is higher among those with long-term medical conditions, and depression is often normalized in those who are so affected, emphasizing the need for PCPs to receive support and training to better recognize and manage depression in such patients[14-15]. This is especially important in settings where depression is a major determinant of attempted suicide, but the health systems needs strengthening to identify depression and the associated risk of suicide[1]. Primary care and

general practice are the focal points from where patients with depression commonly seek help; even when they do not report symptoms of depression explicitly[1]. Culturally acceptable and comprehensive interventions are therefore necessary in primary care[11]. Additionally, such interventions need to be integrated into existing health services, especially in community settings, with task-shifting to nonspecialist health workers[12,16].

We observed that depression remained unidentified because complaints were somatic and women did not express emotional symptoms. In remedy, evidence supports the usefulness of locally validated questionnaires. Utilizing simple abbreviated verbally administered depression screening tools such as the Primary Care Screening Questionnaire for Depression (PSQ4D), which have good reliability and validity, primary care physicians can screen for depression, even when the patients seek help for physical symptoms[17].Multipurpose workers can be trained to administer larger depression screening tools such as the Patient Health Questionnaire (PHQ-9), which has excellent reliability and validity, at the field level[16].

Literature notes that primary care providers and health visitors are aware of depression but are not in a position to offer help[18], and that some patients doubt the competence of primary care physicians[19]. Our findings, in contrast, supported the acceptability of the existing cadres of health care providers, especially the primary care physicians and the junior public health nurses, in the identification and management of depression in women in primary care. However, we also found that primary care physicians needed a simple protocol and practical hands on training to improve competencies in management.

Our consultative process strongly favoured the involvement of primary care physicians to manage depression, with regard to both providing drug treatment and supervising the psychosocial intervention. *The antidepressant of choice for primary care was an SSRI such as sertraline because of availability, cost effectiveness, safety, and ease of dose titration*. Its efficacy, cost-effectiveness and tolerability have been well established[20,21]. Family support has an important role in the management of depression[22]. We observed that intimate partner violence, marital conflicts, partner's alcoholism, and lack of a sharing attitude of the partner in carrying out the household responsibilities are important stressors. The link between social and health services is important to reduce the burden of depression. Kudumbasree, which is formed around the central theme of poverty eradication and women empowerment is an important community level resource in Kerala. Neighbourhood Group (NHG), called 'ayalkoottam' in the local language is the lowest level of the three tier structure, formed by ten to twenty women who live in nearby houses. The middle level is the Area Development Society (ADS) at the ward level and third level is the Community Development Society (CDS) at the local self government/Panchayath. Kudumbasree is unique to the social mileu of Kerala and is considered as one of the largest organised networks of women with four million women as its members. The ten to twenty members of the Neighbourhood Group (NHG) meet every Sunday on a common agenda and get engaged in social and financial activities. On a research mode attempts have been made to involve Kudumbasree in community level dietary interventions[24]. An important recommendation of stakeholders of health and social sectors, was to involve the Kudumbasree to identify depression at the community level and to provide them psychosocial support. Most stakeholders, including the women with depression and their close family members preferred the Junior Public Health Nurses to provide psychosocial intervention, because they are integral part of the health system. On the other hand, women with depression feared higher stigma and loss of confidentiality if familiar persons such as the local volunteers (Kudumbasree, Anganwadi worker, ASHA) were to be involved. There is evidence in favour of JPHNs implementing non-pharmacological interventions at the subcentre level, for other noncommunicable

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diseases such as diabetes[25]. The advantage of involving the JPHNs is that they constantly engage with the families in public health interventions such as immunization and communicable disease control. Primary care worker-led interventions show promising benefits in improving outcomes for common mental disorders[26]. PCPs in private sector also may be engaged to improve management skills[27].

It is a welcome step to integrate of mental health services into the general framework of interventions for non-communicable diseases[28]. In spite of the advances in technology and digitalization in various sectors, in mental health, there is a felt need for human contact to receive psychosocial support[29]. Global Burden of Disease study reports a 49.2% increase in the incidence of depression between 1990 and 2017[30] and furthermore, the prevalence of depression and anxiety increased by 25-27% in the first year of the COVID-19 pandemic[31]. It would be relevant to incorporate perceptions of the major stakeholders in the design and process of community level interventions in mental health

Post Script

On a research mode, major suggestions of this study have been incorporated as a package of services called Community Depression Intervention Programme (ComDIP) and its effectiveness have been evaluated in a randomized controlled trial[8]. Policy makers and administrators of the state health department collaborated with this study and the results were made available to them. As a sequel to this research work, on completion of study, the first three authors were invited to work with the team of the Kerala state health department, to develop a state wide depression intervention programme. This programme called, 'Aswasam', which literally means 'relief' in the regional language, Malayalam was a primary care based depression intervention. It was designed to be implemented through Family Health Centres as part of Ardram Mission, a flagship programme of the Government. The theme announced by the WHO for the world health day (7th April) 2017 was 'depression; let's talk'. On the very same day, Government of Kerala launched 'Aswasam' and now it is being implemented through 408 family health centres in the state. Subsequently Kerala launched primary care based perinatal mental health programme called 'Amma Manas' which means 'mother's mind' in Malayalam[32.]. Kerala has included depression screening in State Health App Initiative For Lifestyle Intervention (SHAILI App), which aims at population level screening for non-communicable diseases[33] .

Conclusions and policy implications

Our study identified psychosocial risk factors in depression and mapped the resources available to develop a robust, community-based intervention to effectively combat this public health challenge. Primary care is the first contact point available and accessible to most women in this region. Horizontal integration necessitates task shifting; however community's perceptions also need to be taken into account while framing policies. Women were comfortable with receiving services from the junior public health nurses and the primary care physicians, both of whom are integral part of the healthcare system in India. It can therefore become an available, accessible, affordable, and acceptable, low stigma public health programme that can efficiently identify and manage depression in adult women in primary care. Local adaptations and contextualized interventions can be implemented in similar settings elsewhere in the world.

Conflict of Interest:

No author has any conflict of interest in relation to the subject matter discussed in this study.

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