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ORIGINAL ARTICLE

Japanese primary care physicians' postpartum mental health care: A cross-sectional study

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Abstract

Background: Postpartum mental health care is a public health priority requiring interprofessional and interorganizational collaboration. Primary care physicians (PCPs) have the potential to play an essential role in facilitating access to health care and providing comprehensive and coordinated care for postpartum mental health problems. In Japan, however, there are no previous studies on the extent to which PCPs are involved in postpartum mental health care. Therefore, this study aimed to investigate the practices and experiences of Japanese PCPs in providing such care.

Methods: This study presents a subset of the findings from a cross-sectional study using an online questionnaire on postpartum care among Japanese PCPs. We employed descriptive analysis to examine their practices and experiences in providing general and postpartum mental health care.

Results: We received 339 valid responses from 5811 PCPs. The median proportion of the outpatients with mental health problems that PCPs regularly saw was 15%. Approximately two out of three PCPs (68.7%) reported routinely performing screening for depression and anxiety. Seventy-six percent of PCPs had the opportunity to provide care for postpartum women. Approximately one in two PCPs (47.8%) had managed cases of postpartum mental health problems and collaborated with various professionals and resources to provide care.

Conclusions: The majority of Japanese PCP participants in the study provide mental health care and have managed cases of postpartum mental health problems, collaborating with various health professionals.

KEYWORDS
mental health, perinatal, postpartum care, primary care physicians

1 | BACKGROUND

Maternal mental health difficulties during the postpartum period have a detrimental effect on partners, the mother–infant bond, and the cognitive and emotional development of infants.[1] As a serious consequence, they can increase the risk of suicide, which has been one of the leading causes of maternal mortality in recent years.[2,3] This highlights the urgent need to prioritize perinatal mental health

as a critical public health concern. It is estimated that up to 40% of women experience mental health problems at some point during or after childbirth,[4] with suicides accounting for approximately 20% of postpartum maternal deaths.[5] In Japan, the prevalence of maternal depression within the first month postpartum is remarkable, affecting approximately 14% of women,[6] and suicide is the leading cause of maternal death within the first-year postpartum, accounting for approximately 30%.[7]

Strengthening the collaboration between the perinatal care team and primary care providers is recommended to improve postnatal care quality.[8,9] Several guidelines explicitly mention primary care providers as professionals involved in the mental health care of postpartum women.[10] Additionally, ensuring continuity of care with primary care physicians (PCPs) is strongly recommended when obstetric institutions do not provide treatment for mental health conditions beyond the postpartum period.[11]

An observational study of more than 6000 women in the United States found that the vast majority of postpartum women (91%) sought medical care after routine postpartum check-ups, with the majority (81%) making at least one primary care visit.[12] Postpartum women have high expectations for primary care and desire their PCPs to inquire about the psychosocial issues that affect their daily lives.[13] Integrating PCPs into the current mental healthcare system for postpartum women has the potential to enhance treatment opportunities, as a better patient experience in primary care can facilitate the initiation and continuation of treatment of mental health problems.[14]

In Japan, obstetricians are responsible for providing routine one-month postpartum check-ups, but their involvement does not usually extend to non-obstetric/gynecologic issues, including mental health conditions, beyond this timeframe. While pediatricians provide regular immunizations and well-child visits, their approach to maternal psychological hardships is likely limited because of constrained outpatient visits and their limited training background in adult care. More importantly, it remains unclear within the Japanese healthcare system who holds the overall responsibility for the health of postpartum women and their families/partners. The same is true for the role of PCPs in postpartum mental health care.

In this context, although perinatal mental health care emphasizes seamless and effective interdisciplinary and interorganizational coordination, the reality falls short of this ideal throughout pregnancy and the postpartum period.[15–17] PCPs are trained to provide personalized care by applying primary care principles, including family-centered, coordinated, comprehensive, and longitudinal care.[18] An approach based on the primary care principles could allow PCPs to serve as a "glue" between many disciplinary teams and organizations[19] that could address the unmet needs of postpartum women in the current mental healthcare system. However, a care model for perinatal mental health advocated by the professional organizations representing obstetrics and psychiatry in Japan does not involve PCPs as the stakeholders or incorporate a concept of primary care.[20] Professionals in perinatal mental health care, including obstetricians, psychiatrists, pediatricians, and public or private sector professionals (e.g., public nurses and peer-support groups), may not fully recognize the clinical skills and experiences of PCPs in mental health care. Furthermore, no research on PCPs' engagement in this area provides a foundation for discussing the significance of PCPs in the postpartum mental healthcare system.

Therefore, this study aimed to investigate the extent to which PCPs engage in postpartum mental health care to explore their potential roles in supporting postpartum women within the current maternal mental healthcare system in Japan.

2 | METHODS

In this article, we present part of the findings from a cross-sectional study that examined the practice and attitudes of Japanese PCPs in postpartum care. The original study was approved by the Research Ethics Committee of Hamamatsu University School of Medicine (reference number 21–294) on February 2, 2022.

2.1 | Participants

The Japan Primary Care Association (JPCA) is the largest professional organization representing primary care in Japan. The JPCA has a mailing list on which 5811 physicians registered at the beginning of the study. According to the JPCA, the registered physicians had an average age of 44.6 years and an average clinical experience duration of 17.9 years, and female physicians constituted 29.8% of them. For this study, we defined PCPs as physicians registered as members of the JPCA.

We sent an invitation email via the JPCA mailing list with the online questionnaire available from March 11 to May 8, 2022. Multiple reminders were sent 2 weeks apart. Participants who consented to participate in the study completed the questionnaire online. The first 200 respondents received a 1000 Japanese yen gift certificate (approximately 10 US dollars) as a token of gratitude.

2.2 | Measures

2.2.1 | Online questionnaire

The questionnaire (Appendix S1) consisted of 28 questions that covered PCPs' demographics, practice characteristics, provision of and attitudes toward postpartum care, and previous education related to it. The questionnaire was developed by the authors, primary care physicians, to explore a total of 13 domains of postpartum care, including (1) postpartum gynecological examination, (2) postpartum physical recovery, (3) follow-up of pregnancy-related complications, (4) follow-up of non-pregnancy-related chronic

conditions, (5) breastfeeding and breast-related issues, (6) infant care, (7) sexual health issues, (8) family planning, (9) maternal mental health, (10) family member's/partner's mental health, (11) maternal healthcare maintenance, (12) intimate partner violence (IPV), and (13) support for a return to work.[8,21,22] It asked the participants to rate on a 5-point Likert scale (1: not at all, 5: always) regarding the frequency with which they addressed or provided information about the specific aspects of each domain of postnatal care, as in the previous study.[23] Additionally, the questionnaire inquired about PCPs' general practice of mental health care and their experiences with cases of postpartum mental health problems. The latter was evaluated by asking, "Have you been involved in any mental health problems of postpartum women, their partners, or family members?" Participants responded with a nominal choice (yes or no). For those who had experienced such cases, the questionnaire further inquired about the health professionals with whom they had collaborated for postpartum mental health care.

Since our primary focus was on the overall mental health conditions rather than specific psychiatric diseases, considering the nature of primary care, where PCPs address a wide range of psychosocial concerns, the questionnaire used the term "mental health problems" in a broad context.

Before distributing the questionnaire, we revised it to refine terms and questions based on feedback from 15 PCPs who had reviewed it.

2.3 | Outcomes

Primary outcomes included PCPs' practice and experience in postpartum mental health care. We defined the practice of postpartum mental health care as addressing the following domains of postnatal care: maternal mental health, family member's/partner's mental health, and IPV. Their practice was assessed from a viewpoint of its frequency using a 5-point Likert scale as previously described. We defined PCPs' experience in postpartum mental health care as having encountered any mental health problems of postpartum women, their partners, or family members. This experience was evaluated by a nominal response (yes or no). The experience also included which professionals they collaborated with to provide care for such cases.

2.4 | Analysis

We employed descriptive analysis for the primary outcomes. Categorical variables are presented as numbers and proportions. Continuous variables are described as means with standard deviation or medians with interquartile ranges according to the normality of the data. Within the domains of postpartum care, we paid particular attention to maternal mental health, family member's/partner's mental health, and IPV as components related to postpartum mental health. We assessed missing values in the data and calculated 95% confidence interval. We used IBM SPSS version 25 statistical software for the analysis.

3 | RESULTS

We obtained 339 valid responses from 5811 PCPs with no missing data (response rate 5.8%), allowing for the inclusion of all data in the analysis. Table 1 shows PCPs' demographics and practice characteristics. The median age of the respondents was 42.4 years, with males constituting 69% of them. The median duration of postgraduate clinical experience was 16.6 years. Forty-seven percent of PCPs were affiliated with community-based clinics, while 52% worked in hospital settings. Among PCPs, 19% practiced in rural areas. Approximately half of PCPs provided examinations of infants and administered immunizations to infants (48.4% and 45.1%, respectively). Most PCPs (76%) had an opportunity to see at least one postpartum woman in the past 6 months. Approximately 70% of the respondents have raised children, and 32% had encountered postnatal health problems in either themselves or their partners. Approximately three-quarters of PCPs had at least 1 month of clinical training in OB/GYN (77.6%) and psychiatry (75.8%).

In outpatient clinics outside of hospitals ($n = 160$), where human resources are typically scarcer than in hospitals, the workforce consisted mainly of nurses (94%) and assistant nurses (43%). In contrast, psychologists, public health nurses, midwives, social workers, and pediatricians, who could play a role in perinatal mental health care, represented 10%–13% of the total distribution (Figure 1).

The median proportion of outpatients with mental health problems within PCPs' patient panel was 15% (Table 1). Two hundred thirty-three PCPs (68.7%) reported that they routinely performed screening for depression and anxiety in their daily practice, a majority of whom (85.8%) used validated screening tools (Figure 2). The most commonly employed screening tools in general patient encounters were Patient Health Questionnaire-2 (PHQ-2) and Patient Health Questionnaire-9 (PHQ-9), accounting for 60.9% and 40.3% of the respondents, respectively. Edinburgh Postnatal Depression Scale and Postpartum Depression Screening Scale were utilized by 24% and 1.7% of the PCPs, respectively.

Figure 3 illustrates the frequency of PCPs' engagement in three specific domains of postpartum care: maternal mental health, family/partner's mental health, and IPV. It indicates that 58.1%, 43.1%, and 23.6% of PCPs reported their involvement in these domains at least sometimes, respectively. Overall, the proportion of PCPs practicing tended to be highest in the domain of maternal mental health, followed by family/partner's mental health, with IPV demonstrating the least prevalence of engagement.

One hundred sixty-two (47.8%) PCPs have experience in dealing with cases of mental health difficulties of postpartum women or their family/partners. They have collaborated with diverse professionals in postpartum mental health care, with nurses (73.5%), public health professionals (55.6%), public nurses (42%), psychiatrists

TABLE 1 Demographics and practice characteristics of study participants ($n = 339$).

	n (%)	95% CI
Age, years	41.0 (18)[a]	41.3–43.6
Gender		
Female	101 (29.8)	25%–35%
Male	235 (69.3)	65%–75%
Others/no answers	3 (0.9)	0.2%–2.6%
Duration of clinical experience, years	15.0 (16)[a]	15.5–17.7
Certified specialty[b]		
Family medicine[c]	121 (35.7)	30.6%–41.0%
Sogoshinryo[c]	149 (44.0)	38.6%–49.4%
Internal medicine	93 (27.4)	22.8%–32.5%
Pediatrics	15 (4.4)	2.5%–7.2%
Emergency medicine	14 (4.1)	2.3%–6.8%
Surgery	11 (3.2)	1.6%–5.7%
Obstetrics and gynecology	11 (3.2)	1.6%–5.7%
Psychiatry	5 (1.5)	0.5%–3.4%
Others	11 (3.2)	1.6%–5.7%
None	96 (28.3)	23.6%–33.4%
Average number of outpatient visits per half day		
<20	218 (64.3)	59%–69.4%
20 or more	121 (35.7)	31%–41%
Number of postpartum women examined in the past six months		
1–10	223 (65.8)	60.7%–71%
11–20	13 (3.8)	2.7%–8.5%
21 or more	22 (6.5)	5.4%–12.6%
None	81 (23.9)	19.2%–28.6%
Number of infants examined per month		
1–10	104 (30.7)	25.8%–35.9%
11–30	31 (9.1)	6.3%–12.7%
31 or more	29 (8.6)	5.8%–12.1%
None	175 (51.6)	46.2%–57.1%
Number of infants examined for Immunization per month		
1–10	107 (31.6)	26.6%–36.8%
11–30	29 (8.6)	5.8%–12.1%
31 or more	17 (5.0)	2.9%–7.9%
None	186 (54.9)	49.4%–60.2%
Percentage of patients with mental health problems in daily practice, %	15.0 (15)[a]	17.8%–21.4
Personal experience with raising children		
Yes	244 (72.0)	66.9%–76.7%
No	95 (28.0)	23.3%–33.1%
Personal experience with postnatal health problems		
Yes	109 (32.2)	27.2%–37.4%
No	157 (46.3)	40.9%–51.8%
Not applicable	73 (21.5)	17.3%–26.3%
Medical facility that PCPs mainly practice		
Community-based clinics	160 (47.2)	41.8%–52.7%
Small and medium-sized hospitals	87 (25.7)	21.1%–30.7%
Large-size hospitals	61 (18.0)	14.1%–22.5%
University-based hospital	29 (8.6)	5.8%–12.1%
Others	2 (0.6)	0.1%–2.1%
Rurality of location of medical facility		
Yes	65 (19.2)	15.1%–23.8%
No	274 (80.8)	76.2%–84.9%
Population of practice location		
<10,000	29 (8.6)	5.8%–12.1%
10,000–100,000	113 (33.3)	28.3%–38.6%
100,001–500,000	107 (31.6)	26.6%–36.8%
>500,000	90 (26.5)	21.9%–31.6%
Experience with OB/GYN training		
Yes	269 (79.4)	74.6%–83.5%
Clinical rotation[b]	263 (77.6)	
Off-the-job training[b]	27 (8.0)	
None	70 (20.6)	16.5%–25.4%
Experience with psychiatry training		
Yes	270 (79.6)	75.0%–83.8%
Clinical rotation[b]	257 (75.8)	
Off-the-job training[b]	37 (10.9)	
None	69 (20.4)	16.2%–25.0%

Note: Demographic characteristics of PCPs. PCPs were in their forties on average, with about 70% of them being male. Approximately half of PCPs reported practicing in clinics and approximately 20% practiced in rural settings. Approximately half of PCPs were involved in examining infants, and about a quarter of them had encountered postpartum women within the previous 6 months.

Abbreviations: CI, confidence interval; OB/GYN, obstetrics and gynecology; PCPs, primary care physicians.

[a]Median (interquartile range).

[b]Multiple answers allowed.

[c]Family medicine specialty has been certified by the Japan Primary Care Association since 2010. The Japanese Medical Specialty Board has replaced it with another primary care specialty, called *sogoshinryo* in Japanese, since 2018.

(38.3%), and midwives (31.5%) identified as the top five collaborative partners among PCPs (Figure 4).

4 | DISCUSSION

The study highlights that a considerable proportion of the PCP participants from the JPCA members routinely screen for depression and anxiety, and a certain proportion of the patients they see have

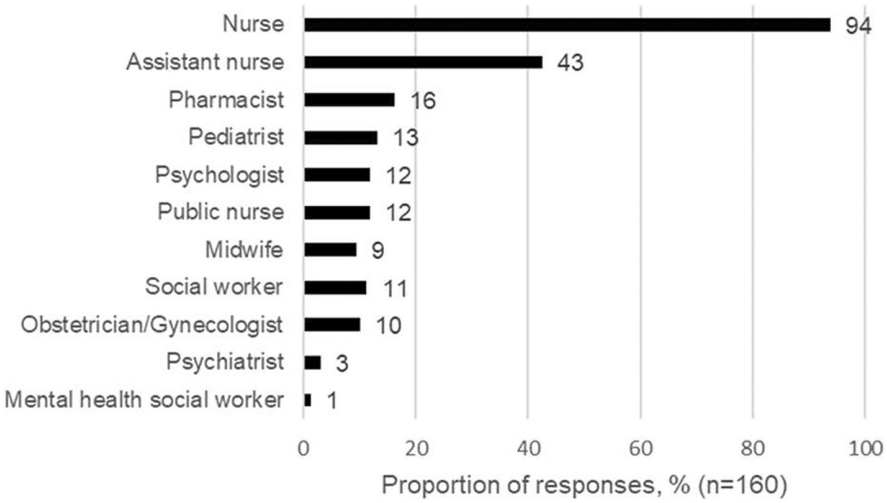

FIGURE 1 Distribution of the workforce of health professionals at PCPs' clinics ($n=160$). Figure displays the distribution of the health professional workforce at PCPs' clinics. Most clinics are staffed with nurses and assistant nurses, while psychologists, public health nurses, midwives, social workers, and pediatricians comprise 10%–13% of the clinics. Multiple answers allowed.

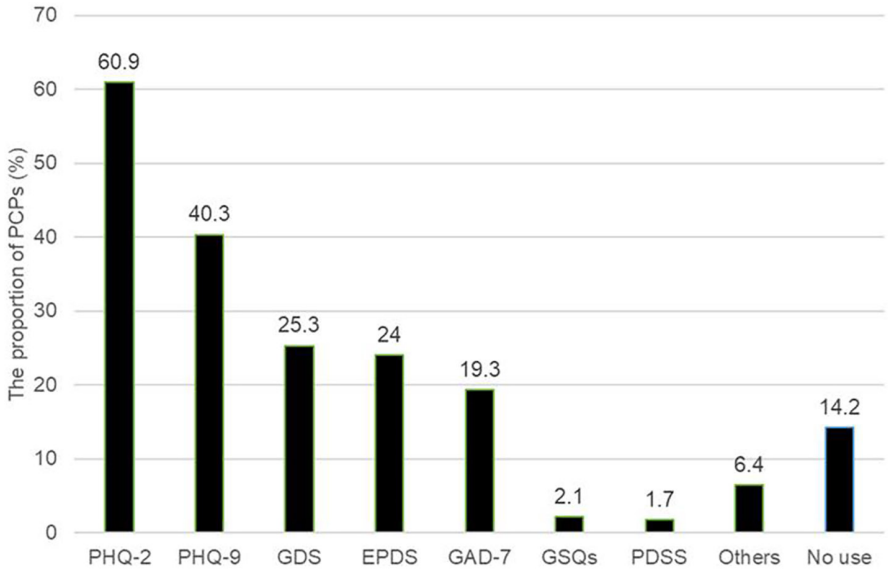

FIGURE 2 Usage of screening tools for depression and anxiety among PCPs ($n=233$). Figure displays the usage of screening tools for anxiety and depression among PCPs in daily practice. Most PCPs use PHQ-2, while a subset utilizes PHQ-9, GDS, EPDS, and GAD-7. Approximately 15% of PCPs reported not using any screening tools. EPDS, Edinburgh Postnatal Depression Scale; GAD, General Anxiety Disorder; GDS, Geriatric Depression Scale; GSQs, General Screening Questions; PDSS, Postpartum Depression Screening Scale; PHQ, Patient Health Questionnaire. Others included Severity of Dependence Scale, Self-Rating Questionnaire for Depression, Hospital Anxiety and Depression Scale, Quick Inventory of Depressive Symptomatology-Self-Report, State–Trait Anxiety Inventory, The Center for Epidemiologic Studies Depression Scale. PCPs who reported that they performed screening for anxiety and depression in their daily practice responded the questions ($n=233$). Multiple answers allowed.

mental health problems. Nearly half of the participants have handled cases involving postpartum women or their families/partners with mental health problems and have collaborated with various health professionals and community resources to provide care.

4.1 | Strengths and limitations

To our knowledge, this study is the first in Japan to investigate the involvement of PCPs in postpartum mental health care. The study findings suggest that PCPs can serve as a primary point of contact for postpartum women and their families/partners. However, the interpretation of the results needs caution because of the following limitations. First, the response rate was low. It raises the possibility of self-selection bias, as only those interested in postnatal care may have been more inclined to respond to the questionnaire, potentially leading to an overestimation of the results.[24] In other words, the proportion of PCPs with experience in postpartum mental health care might be smaller than indicated by the study findings. However, the response rate of under 20% in Internet physician surveys is not uncommon,[25] with an example of a previous web survey of JPCA physicians registered with the mailing lists reporting a response rate of 6.3%.[26] It is crucial to recognize that a limited response rate does not necessarily undermine the accuracy of study estimates, and the

response rate alone does not dictate the significance of the study findings.[26,27] In addition, our sample appears to be comparable to the JPCA registrars in terms of median age and duration of clinical experience based on information available from the JPCA, as noted earlier.

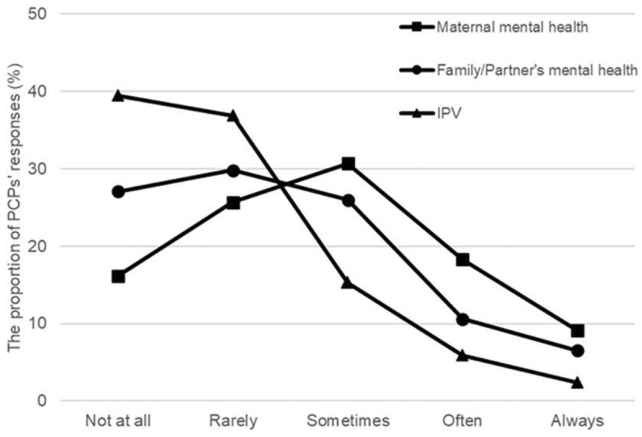

FIGURE 3 Frequency of PCPs' practice in the domains related to postpartum mental health care ($n = 339$). Figure illustrates how often PCPs address mental health issues of postpartum women, their family members or partners, and cases of intimate partner violence. A decreasing trend in PCPs' involvement was observed, with maternal mental health being addressed most frequently, followed by the mental health of family members or partners, and finally, cases of intimate partner violence. IPV, intimate partner violence; PCPs, primary care physicians.

Second, while the study revealed the proportion of the PCP participants practicing or having experience in postpartum mental health care, it did not examine the care quality provided by them or delve into their specific approaches, including diagnosis and treatment of mental health disorders and collaboration with multidisciplinary professionals for care. In this regard, we subsequently conducted case studies exploring how PCPs practiced postpartum mental health care and will report the results separately.

Despite these limitations, the engagement of PCPs in caring for postpartum women may contribute to enhancing the perinatal mental healthcare system. Existing studies that quantified the frequency of PCPs' practices in screening and managing postpartum mental health difficulties have been limited.[27,28] In the United States, approximately 70% of family physicians perform postpartum depression screenings during routine postpartum visits,[29,30] while 46% do so during well-child visits.[29] Moreover, approximately 70% of family physicians provide counseling for postpartum depression in their offices.[30] In Australia, a vast of general practitioners (97%) routinely address "mother's feelings" during the six-week postpartum check-up.[31] Our study revealed that approximately 50% of the PCP participants had encountered cases of postpartum mental health problems, which indicate there may be a considerable opportunity for Japanese PCPs to engage in postpartum mental health care. Although routine postpartum check-ups are not standard practice for Japanese PCPs, our study findings raise the possibility of PCPs' essential role as an entry point into health care for mental health problems at some point in the postpartum period.

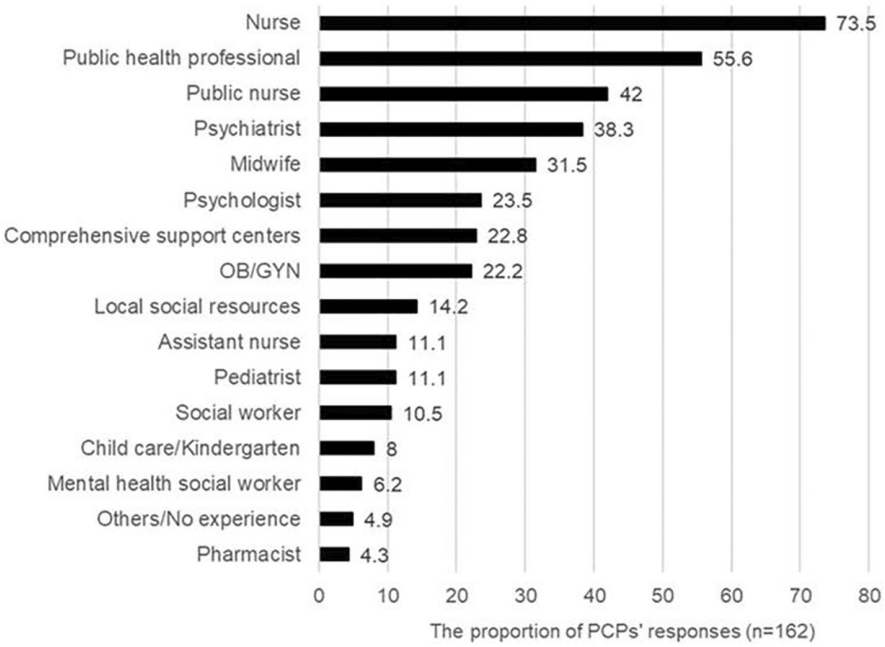

FIGURE 4 Professionals with whom PCPs have collaborated in cases of perinatal mental health ($n = 162$). Figure depicts the health professionals with whom PCPs have collaborated for cases of postpartum mental health problems. They have collaborated with various professionals, with nurses, public health professionals, public nurses, psychiatrists, and midwives identified as the top five collaborative partners. OB/GYN, Obstetricians and Gynecologists; PCPs, primary care providers. Comprehensive support centers indicated an official name of comprehensive support centers for families with children. PCPs who reported that they had been involved in cases of postpartum metal health problems of women or their families/partners responded the question ($n = 162$). Multiple answers were allowed.

The effectiveness of counseling interventions in preventing perinatal depression has been demonstrated,[32] and integration of behavioral health in primary care has an association with improvements in depressive symptoms, health-related quality of life, and remission.[33] Since our data showed that approximately 10% of the primary care clinics to which the PCP participants belonged employed professionals specializing in addressing psychosocial challenges, such as psychologists and social workers, some clinics may already provide collaborative care with behavioral health professionals. Additionally, nurses were widely employed in many clinics and a top professional that the majority of PCPs reported they had collaborated with to provide care for postpartum women with mental health issues. However, the way PCPs work together with nurses and the specific roles of nurses in caring for affected individuals within their clinics still need to be clarified in Japan. Further research is warranted to explore the collaborative practices between PCPs and other health professionals in Japanese primary care clinics as team approaches to postpartum mental health care.

The current model of maternal mental health care, advocated by professional organizations in Japan,[20] focuses primarily on obstetrics, pediatrics, and psychiatry without recognizing PCPs as the healthcare providers for maternal mental health conditions. A previous study has shown that Japanese women seek help from a variety of resources for women's health problems, including PCPs.[34] Our study findings indicate that Japanese PCPs may be one of the health resources that could serve as an entry point to care. Moreover, conceptually, they may function as a hub for integrating health information from other care resources and coordinating care[19] for a wide range of psychosocial needs of postpartum women. It is essential to acknowledge and elaborate on the discussion about the role of PCPs as part of the existing postpartum mental healthcare system.

5 | CONCLUSIONS

In the study, the majority of the PCP participants provided mental health care in their daily practice, and approximately half of them handled cases of postpartum mental health problems. This study illustrated the PCPs' potential roles in caring for women with mental health difficulties as an entry point of health care at some point in the postpartum period in primary care.

AUTHOR CONTRIBUTIONS

K.N. developed a conceptual framework and methods of the study, analyzed and interpreted the data, and wrote the manuscript. ME contributed to developing the conceptual framework and online questionnaire, interpreting the data, and writing the manuscript. M.K., T.I., and M.I. contributed to developing the conceptual framework, interpreting the data, and writing the manuscript. All authors read and approved the final manuscript.

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CONFLICT OF INTEREST STATEMENT

The authors have stated explicitly that there are no conflicts of interest in connection with this article.

DATA AVAILABILITY STATEMENT

The dataset(s) supporting the conclusions of this article is(are) included within the article.

ETHICS STATEMENT

Ethics approval statement: The study was approved (reference number 21-294) by the Clinical Research Ethics Committee of Hamamatsu University School of Medicine on February 2, 2022.

Patient consent statement: All methods were carried out in accordance with the Declaration of Helsinki.

CONSENT FOR PUBLICATION

Not applicable. All data were collected anonymously.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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