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Improving reproductive health service utilization through social health worker empowerment for women of childbearing age in the Talang Mamak indigenous, Indragiri Hulu Regency

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Abstract

Women still face barriers to accessing services and resources related to reproductive health. These barriers remain prevalent at various stages of a woman's life, from adolescence to menopause. The presence of obstacles in providing reproductive health services can lead to serious health threats, including teenage pregnancy, abortion, sexually transmitted infections, and maternal mortality. This study employs a research method with a pre-experimental approach using a one-group pretest-posttest design. The sample was selected using systematic random sampling, consisting of 170 respondents who are women of reproductive age (WRA) between 15 and 49 years old. The respondents were indigenous Talang Mamak people residing in Rakit Kulim District. Data analysis was conducted using the Wilcoxon Signed-Rank Test with a statistical significance test at a 95% confidence interval (CI) and a significance threshold of $p < 0.05$. The social health worker empowerment intervention significantly affects the knowledge, attitudes, and behaviors of women of reproductive age (WRA) in utilizing reproductive health services, with a probability value of $p = 0.001$. A total of 75% of respondents utilized reproductive health services, with the following details: contraceptive counseling (25%), contraceptive insertion services (15%), pregnancy counseling and anemia screening (25%), postnatal visits (20%), and counseling for other reproductive health issues (15%). Empowering social health workers improves the utilization of reproductive health services among women of reproductive age.

Keywords: Behavior, Reproductive Health Services, Social Health Worker, Women of Reproductive Age.

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1. Introduction

Reproductive health is integral to overall health, meaning poor reproductive health quality can impact general health conditions. Reproductive health is a state of complete physical, mental, and social well-being, not merely the absence of disease or disability, in all matters related to the reproductive system [1, 2]. According to the World Health Organization (WHO), the scope of reproductive health encompasses maternal and child health (MCH), adolescent reproductive health (ARH), sexually transmitted infections (STIs), geriatric reproductive health, and other aspects of reproductive health [3]. Despite advancements in health and technology, women still face barriers to accessing services and resources related to reproductive health. These barriers remain evident at various stages of a woman's life, from adolescence to menopause [4]. Barriers to delivering reproductive health services can pose serious health threats, including teenage pregnancy, abortion, sexually transmitted infections, and maternal mortality [5].

Indonesia still faces significant barriers, with nearly 25% of pregnancies occurring among adolescents globally [6]. Meanwhile, data from Indonesia indicate a high adolescent birth rate, with 47.4% occurring at ages 15–19 and 16.3% at ages 20–24. Although the maternal mortality rate (MMR) has generally declined from 390 to 305 per 100,000 live births, it has not yet met the Millennium Development Goals (MDG) target of 102 per 100,000 live births by 2015 or the Sustainable Development Goals (SDGs) target of 70 maternal deaths per 100,000 live births by BPS [7]. Riau Province is among the top ten provinces in Indonesia with the highest maternal mortality rate (MMR). One of the regencies with a relatively high MMR in Riau is Indragiri Hulu, which recorded 10 cases in 2021. Within this regency, Rakit Kulim District remains one of the areas with a high MMR, with recorded cases of maternal mortality as follows: 2 cases in 2018, 1 case in 2019, 1 case in 2020, and 1 case in 2021. A preliminary survey indicates that the high MMR in this area is associated with the presence of the indigenous Talang Mamak.

The Talang Mamak ethnic group follows a matrilineal kinship system, where inheritance is passed down to female family members. At the same time, positions of customary leadership or other societal roles are transferred to the sons of a woman's brother or maternal relatives. They live in extended family groups, maintaining a close-knit communal lifestyle. Decision-making, including health-related matters, is collective, requiring family deliberation rather than individual choice.

Daily, the Talang Mamak people rely on forest resources, shifting cultivation, and, increasingly, palm oil and rubber plantations for their livelihoods. While some members have begun settling permanently, traditional practices remain deeply ingrained. Healthcare-seeking behavior is a communal affair involving consultation with family members, relatives, or respected indigenous and customary leaders.

Some pregnant women still refrain from seeking antenatal care at local midwife clinics or community health centers (Puskesmas). Instead, they may prefer to rely on traditional birth attendants (dukun bayi) for pregnancy check-ups and childbirth assistance, reflecting the persistence of traditional health practices within the indigenous community [8].

Several factors contribute to women's inability to express their concerns regarding reproductive health. One of the primary reasons is low education levels, which significantly impact their knowledge and awareness of reproductive health issues Tadesse, et al. [9]. Low socioeconomic status and insufficient income can lead to an inability to meet healthcare needs [10]. The sociocultural system in Indonesia sometimes hinders women from making independent decisions regarding their healthcare actions [11, 12]. Other studies also indicate that unmarried women face greater difficulties in accessing reproductive health services due to cultural beliefs that unmarried women should not be sexually active and, therefore, should not be provided with reproductive health information and services [13]. Other studies also indicate that gender norms and stigma influence women's behavior in seeking reproductive health services [14]. Social factors influencing reproductive health service issues include inadequate women's empowerment, family socioeconomic background, community and political environment, and government policies. Conversely, cultural factors stem from deeply rooted values and traditions within the indigenous community, guiding individuals in understanding their roles and behaviors in social interactions [15].

Understanding women's perspectives on why, when, and where they seek healthcare is crucial for enhancing health programs and services. This insight facilitates better allocation of medical resources and improves healthcare access and utilization planning. Despite the recognized importance of early intervention, healthcare access and treatment delays remain a significant public health issue in developing and underdeveloped countries. Addressing this challenge is vital, as women's health is closely linked to the well-being of their families and communities [16].

It is essential to implement interventions that empower the indigenous population. Indigenous participation can be facilitated through the role of health information disseminators, commonly known as social health workers. Approaching healthcare through these social health workers offers flexibility in service delivery, especially since they are selected from within the same population they serve. This strategy ensures cultural relevance and fosters trust, leading to more effective health interventions [17]. The Talang Mamak indigenous community strongly adheres to traditional customs and cultural practices, significantly influencing their daily behaviors. Some of these inherited sociocultural habits conflict with modern health practices. Current government programs focus primarily on medical issues, often lacking engagement with the indigenous community's unique social and cultural contexts. Therefore, innovative, indigenous-based approaches that consider the specific cultural dynamics and capabilities of the Talang Mamak are essential. This includes involving social health workers from within the indigenous population. Empowerment programs facilitated by these indigenous social health workers, focusing on awareness, knowledge, motivation, self-esteem, and self-efficacy, have enhanced women's autonomy and increased the likelihood of seeking preventive care. These factors are crucial for improving women's health and overall quality of life [18, 19]. Empowering social health workers to foster an understanding of health promotion encompasses four key components: recognizing health threats, developing problem-solving skills, engaging in educational participation, and conducting evaluations. In resource-limited settings, indigenous-level interventions present an effective strategy to address

health issues at their roots, as decisions regarding healthcare access are profoundly influenced by the prevailing sociocultural environment [20].

Training indigenous health volunteers, often called "peers," is crucial to many indigenous-based health interventions. These volunteers significantly enhance health services by providing culturally sensitive care and bridging gaps between healthcare systems and underserved populations [21]. In national health systems, indigenous empowerment encourages individuals to adopt healthy behaviors and actively participate in health initiatives. It is essential to utilize their social capital to identify and leverage the indigenous inherent potential, starting with individual and family values that align with their diverse sociocultural backgrounds and specific needs. Implementing a bottom-up approach that actively involves cultural and indigenous leaders can lead to substantial improvements in health outcomes.

This study aims to examine the enhancement of reproductive health service utilization behaviors among women of reproductive age in the Talang Mamak indigenous community, Indragiri Hulu Regency, through the empowerment of social health workers.

2. Method

This study employs a pre-experimental methodology utilizing a one-group pretest-posttest design. The sample comprises 170 women of reproductive age (15–49 years) from the Talang Mamak indigenous population residing in the Rakit Kulim sub-district. Systematic random sampling was employed to select participants, ensuring a representative sample of the target population. The selection of Rakit Kulim is deliberate, as it hosts the highest concentration of the Talang Mamak indigenous compared to other sub-districts. The study also involves 30 social health workers from 12 villages within Rakit Kulim, each contributing 2–3 social health workers. A primary criterion for social health worker selection is indigenous status within the Talang Mamak indigenous community. The research was conducted from February to June 2024. Before data collection, the social health workers underwent three training sessions at the local health center, focusing on reproductive health education.

The social health workers are responsible for visiting women of reproductive age (WRA) and are targeted for participation in weekly reproductive health counseling sessions held at the indigenous health center for over one month. Respondents complete pretest and posttest questionnaires before and after these counseling sessions, assessing their knowledge, attitudes, and practices related to reproductive health services. Data analysis is conducted to evaluate the impact of the social health worker empowerment strategy on improving WRA behaviors concerning reproductive health services. It is achieved using the Wilcoxon Signed Rank Test, with statistical significance assessed at a 95% confidence interval and a p-value threshold of less than 0.05.

3. Result

3.1. Characteristics of Social Health Worker

A total of 30 social health worker were trained, with each village having 2-3 participants who underwent three training sessions. The primary criterion for these social health workers was that they were indigenous members of the Talang Mamak tribe. Although these social health workers did not possess formal health education backgrounds, the training enhanced their knowledge and skills. This improvement better prepared them to engage with the indigenous, including conducting home visits. The prior training aimed to equip the social health worker to deliver health education to the designated respondents effectively.

Table 1.
Presents the Characteristics of 30 Social Health Worker, revealing that The Majority Are Aged between 31 and 40 years (53.3%), Possess a Secondary Education Level (63.3%), Work as Housewives (60.0%), and Have Served as Social Health Worker for ≤ 5 Years (63.3%).

Variable	Category	Frequency	Percentage (%)
Age of social health worker	20–30 years	12	40.0
	31–40 years	16	53.3
	>40 years	2	6.7
Education level	Primary education	5	16.7
	Secondary education	19	63.3
	Higher education	6	20.0
Main occupation	Housewife	18	60.0
	Private employee	7	23.3
	Entrepreneur	5	16.7
Length of service as a social health worker	≤5 years	19	63.3
	>5 years	11	36.7

3.2. Sociodemographic Characteristics of the Study Respondents

A total of 170 women of reproductive age participated in this study. The average age of respondents was 25.45 years (SD = 7.008), with more than half, 82 respondents (48.2%), falling within the 15–24 age group. The majority, 75 respondents (44.1%), had a secondary education level. Most respondents were housewives, totaling 90 individuals (52.9%). A significant portion of respondents (51.8%) had an income of less than Rp 2,000,000. Many respondents received information about reproductive health care from family or friends (40.0%), while only 23.5% obtained preconception health information from social health workers. The sociodemographic characteristics of the respondents are detailed in Table 2.

Table 2.
Sociodemographic characteristics of respondents.

Variable	Category	Frequency	Percentage (%)
	Mean age = 25.45		
	SD = 7.008		
Age of respondents	15–24 years	82	48.2
	25–34 years	77	45.3
	35–49 years	11	6.5
Education level	Low education	52	30.6
	Secondary education	75	44.1
	Higher education	43	25.3
Main occupation	Housewife	90	52.9
	Private employee	15	8.8
	Entrepreneur	65	38.2
Income	<2,000,000 Rp	105	61.8
	≥2,000,000 Rp	65	38.2
Source of Information	Social Health worker	40	23.5
	Electronic/print media	22	12.9
	Family/friends	68	40.0
	Health workers	27	15.9
	Never received information	13	7.6

Note: SD = Standard deviation

3.3. The Behavior of Respondents Before and After Intervention by Social Health Worker

The respondent's behavior was assessed by evaluating their knowledge, attitudes, and practices regarding reproductive health services before and after the empowerment of social health workers. The average pretest knowledge score was 6.42 (SD = 1.564), which increased to 8.95 (SD = 1.065) in the posttest. The average pretest attitude score was 20.98 (SD = 1.838), rising to 24.18 (SD = 1.195) posttest. Similarly, the average pretest practice score was 5.71 (SD = 1.189), which improved to 8.53 (SD = 1.320) in the posttest. These results are detailed in Table 3.

Table 3.
Mean respondent behaviors before and after social health worker empowerment intervention.

Variable	Mean ± SD	Range	95% CI
Pretest knowledge	6.42 ± 1.564	3–10	6.20–6.67
Posttest knowledge	8.95 ± 1.065	7–10	8.78–9.13
Pretest attitude	20.98 ± 1.838	17–25	20.71–21.26
Posttest attitude	24.18 ± 1.195	20–26	24.01–24.36
Pretest action	5.71 ± 1.189	3–8	5.54–5.90
Posttest action	8.52 ± 1.320	6–10	8.31–8.72

Note: SD = Standard Deviation; CI = Confidence Interval.

These results indicate improvements in respondents' knowledge, attitudes, and actions related to reproductive health services following the intervention. Subsequently, normality tests were conducted on the variables of knowledge, attitude, and practice using the Kolmogorov-Smirnov test. The results indicated that these variables were not normally distributed, each yielding a probability value of p = 0.001. The Wilcoxon Signed Rank Test assessed differences in respondents' knowledge, attitude, and practice before and after the intervention. Significant differences were found between pretest and posttest scores for knowledge (p = 0.000), attitude (p = 0.000), and practice (p = 0.000), as detailed in Table 4.

Table 4.
Differences in knowledge, attitudes, and actions of respondents before and after social health worker empowerment intervention

Variable	Mean	SD	Z	p-value
Pretest knowledge	6.42	1.564	-11.113	0.000
Posttest knowledge	8.95	1.065	-11.099	
Pretest attitude	20.98	1.838	-11.238	0.000
Posttest attitude	24.18	1.195		
Pretest action	5.71	1.189		0.000
Posttest action	8.52	1.320		

3.4. Utilization of Reproductive Health Services by Women of Childbearing Age (WUS) after Social Health Worker Empowerment Intervention

After the intervention by social health workers, the utilization of reproductive health services increased, with 75% of the 170 women of childbearing age (WUS) visiting reproductive health service facilities more frequently for health check-ups. This change can be seen in the following figure.

Based on the research findings, data was also obtained showing that the most frequently utilized reproductive health services by women of childbearing age (WUS) in the Talang Mamak ethnic group after the health education intervention by social health workers were as follows: contraception counseling 25%, contraceptive installation services 15%, pregnancy counseling and anemia screenings 25%, postpartum visits 20%, and counseling on other reproductive health issues 15%. The graph below clearly shows this.

4. Discussion

Enhancing women's knowledge about obstetric care and reducing barriers related to sociocultural beliefs are crucial for improving reproductive health services [22]. There is evidence that women are more likely to seek healthcare and diagnostic services than men; however, this pattern does not apply to managing all diseases and health conditions or using specialized care services. Worldwide, many women still do not seek timely medical care or opt for informal sources of treatment for their illnesses [16].

Inadequate knowledge and literacy significantly impact poor pregnancy outcomes [23, 24]. Women with low education, living in rural areas, and experiencing poverty are less likely to utilize reproductive health services [25]. Education level has been proven to be a determining factor in the extent of support for sexual and reproductive rights and health provided by professionals with higher education specializing in healthcare [26]. The utilization of quality services leads to better overall health outcomes [27].

Lack of information, knowledge, and adequate access to reproductive health services and facilities increases risky attitudes and behaviors, such as unplanned pregnancies, abortions, sexually transmitted infections, and other reproductive health disorders [28-30]. Efforts must be focused on women of childbearing age (WCA) by improving education, economic status, and exposure to educational media [31].

Cultural traditions in the Talang Mamak ethnic group have led women to prefer childbirth assisted by non-healthcare professionals or traditional birth attendants, resulting in higher rates of maternal mortality and childbirth complications in this indigenous population [32]. The continued practice of childbirth assisted by non-healthcare professionals, including traditional birth attendants, serves as a reminder of the urgency of reproductive health services for women, particularly those in high-risk groups [33]. Cultural backgrounds also influence individuals' beliefs, values, and habits, including their perspectives on health. Some of these customs are considered "primitive" and disregard health considerations [34]. Additionally, women who do not utilize healthcare services often do so due to a lack of knowledge, awareness, fear, and social factors related to the examinations and treatments they receive at healthcare facilities [35, 36].

Other main reasons include traditional views, religious misconceptions, poor road conditions, limited access for women in decision-making within the family, and lack of transportation to reach the nearest healthcare facilities. Additionally, the indigenous prefers home births due to a lack of knowledge and awareness about available service points, fear of an increased likelihood of cesarean sections in hospitals, and the scarcity of female doctors in healthcare facilities [37]. The influence of family on women's health status remains strong, particularly in remote rural communities in Indonesia, where the family plays a significant role in decision-making, including in childbirth and healthcare processes.

Myths and cultural beliefs, as local wisdom and intrapersonal factors, significantly influence healthcare utilization patterns [38, 39]. Women's subordinate status, influenced by culture and beliefs, is a key factor in the sexual and reproductive health services they receive [40]. The potential of indigenous -based interventions with social health worker, which are sensitive to existing cultural practices, in improving reproductive health outcomes provides valuable insights for similar interventions in other Indigenous or marginalized communities [18].

Based on the findings of another study by Brooks, et al. [41]. Women of childbearing age (WUS) who were visited by social health worker and participated in health education are more likely to utilize reproductive health services, such as contraceptive use. Social health worker bridge indigenous-based and formal healthcare services, thereby increasing access to services, especially for rural or underserved areas [42]. Home visits conducted by women's groups and social health worker play a crucial role in preventing pregnancies that may pose complications [43]. Those who receive visits during pregnancy or postpartum are better informed, which helps maintain their health [44].

The presence of established social health workers or women's groups greatly aids in identifying households to be visited. Additionally, direct education is provided during these visits, ensuring that women of childbearing age (WUS)/mothers and their families are educated about reproductive health. Home visits conducted by village midwives, women's groups, and social health workers play a key role in preventing pregnancies at risk of complications. Those who receive visits during pregnancy or postpartum are better informed, which helps maintain their health [44].

Interventions by social health workers and women's groups are more effective in changing knowledge that improves health than in altering practices. This may be due to a time gap, as changes in attitudes and behaviors may take longer to implement than changes in knowledge [45]. Every individual in the indigenous community must be truly involved in the processes and activities to create a better future for individuals and society. Therefore, participation is a crucial element of empowerment and raising awareness. The more individuals become active participants and the greater their involvement, the more ideal indigenous ownership and inclusive processes will be achieved [46]. Periodic training for social health workers and women's groups greatly enhances their knowledge and commitment, allowing them to directly apply this by providing health education to the indigenous community. Furthermore, having support from local leaders and healthcare professionals during these sessions facilitates better integration into all levels of society.

Empowered communities that are encouraged to participate and influence the functioning of the health system become true partners in accountability mechanisms and participatory processes to identify factors that affect women's health [47].

Enhancing women's empowerment in health and social status will fundamentally improve their overall healthcare utilization. Therefore, activities that expand women's rights through accessible media in the indigenous are necessary [48].

Directly involving the indigenous, especially women's groups, in practicing participatory learning and actions is a cost-effective strategy to improve maternal and infant survival in resource-limited areas [49]. Communities are empowered to participate and influence the functioning of the health system when they are involved as true partners in accountability mechanisms and participatory processes to identify factors that affect women's health [47]. Increasing women's health and social status empowerment will fundamentally improve their overall healthcare utilization. Therefore, activities are needed to expand women's rights through media that facilitate access within the indigenous [48].

Other studies also indicate that health promotion and education, along with participatory sessions led by indigenous-based facilitators, can be effective interventions to increase women's knowledge about obstetric danger signs and encourage maternal healthcare services [50].

5. Conclusion

The empowerment of social health workers impacts the utilization of reproductive health services among women of childbearing age. Trained social health workers can assist in providing education and health information, particularly in areas far from healthcare facilities. Regular home visits establish an integral relationship between the indigenous and the public health system. Furthermore, research using a mixed-methods approach is needed to further develop social health worker empowerment interventions to reach more communities in reproductive health services.

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