EFFECTIVENESS OF POEDJI ROCHJATI SCORE CARD (PRSC) FOR DETECTING HIGH RISK IN PREGNANT WOMAN AT TEGALWARU COMMUNITY HEALTH CENTER PURWAKARTA

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Abstract

Pregnancy, childbirth, postpartum, and infant care are natural physiological processes. However, there is a potential for a life-threatening situation to arise during this period, which can pose a risk to both the mother and the baby and, in severe cases, even lead to death. If we can effectively detect them, we can prevent maternal deaths. One tool to detect high-risk pregnant women is the Poedji Rochjati Score Card (PRSC). The aim of this research is to determine the effectiveness of the Poedji Rochjati Score Card (PRSC) for detecting high risk in pregnant women in the Purwakarta Community Health Center area, Purwakarta Regency. The study's research design was a retrospective cohort with secondary data. The Tegalwaru Community Health Center, Tegalwaru District, Purwakarta Regency hosted the research from December 2023 to January 2023. In 2022, all 920 pregnant women were included in this study. This study used total population techniques to sample. There were 617 respondents (67.1%) of low-risk pregnant women, 279 respondents (30.3%) with high-risk pregnancies, and 24 respondents (2.6%) with very high-risk pregnancies. Pregnant women with a score of 2 had 617 respondents (67.1%), 6 had 235 respondents (25.5%), 10 had 44 respondents (4.8%), 14 had 20 respondents (2.2%), and 18 had 4 respondents (0.4%). The Poedji Rochjati Score Card (PRSC) is effective for detecting high-risk pregnant women. Based on the results of the Chi Square test, the p value was <0.001. The Poedji Rochjati Score Card (PRSC) effectively identifies high-risk pregnancies, comprehensive care is still necessary for pregnancies without risk, as the risk of pregnancy can fluctuate throughout pregnancy and delivery.

Keywords : *Effectiveness , Poedji Rochjati Score Card (PRSC), Risk of Pregnancy.*

Introduction

Pregnancy, childbirth, postpartum, and infant care are inherent physiological processes. Nevertheless, there is a possibility of a life-threatening situation occurring during this timeframe, which might endanger both the mother and the infant and, in extreme cases, result in fatality (Neerland, 2018). Healthcare experts with proper authorization should assume the responsibility of overseeing pregnancy, labor, postpartum care, and the overall well-being of infants in order to safeguard the health and safety of both the mother and the baby (Alden et al., 2013; Lowdermilk et al., 2019). Anticipating pregnancy difficulties in advance is a difficult task. The risk assessment approach is unable to reliably predict the occurrence of problems in pregnant women throughout their pregnancy. The maternal mortality rate is the key metric for assessing the efficacy of programs aimed at improving maternal health. Maternal deaths encompass all fatalities that happen during pregnancy, delivery, and the postpartum phase, excluding

those caused by unrelated incidents or events. The mortality rate, or MMR, is the number of deaths in this specific group per 100,000 live births. The Ministry of Health is the source of this information, specifically from 2022 (Sari et al., 2024).

The global maternal mortality rate in 2020 stood at 223 deaths per 100,000 live births. To achieve a worldwide maternal mortality rate of fewer than 70 by 2030, an annual reduction rate of 11.6% will be required. It's important to note that achieving this rate at the national level has been rare. The World Health Organization (WHO) reported this in 2023 (WHO, 2024). The Ministry of Health of the Republic of Indonesia reported a decline in maternal death rates from 390 to 189 per 100,000 live births between 1991 and 2020, as per the statistics published in 2022. The national medium-term development plan, which aims to achieve a rate of 183 per 100,000 live births by 2024, closely aligns with this figure. Although there is currently a trend towards reducing maternal mortality, additional actions are required to accelerate the decline in the maternal mortality ratio (MMR) and achieve the Sustainable Development Goals (SDGs) target of 70 deaths per 100,000 live births by 2030. The text refers to the Indonesian Ministry of Health's profile for 2022 (Ministry of Health of the Republic of Indonesia, 2023).

In 2022, the number of maternal fatalities in West Java Province, as reported by district and city health profiles, was 678 instances, or 81.67 per 100,000 KH. This represents a decrease of 528 cases compared to 2021, which had 1,206 cases (West Java Provincial Health Service, 2023). Based on the Purwakarta Health Profile in 2022, the maternal mortality rate in Purwakarta Regency in 2022 was 9 per 100,000 live births (Purwakarta District Health Service, 2023). According to the Tegalwaru Community Health Center report, there were 75 cases of estimated neonatal problems and high-risk pregnant women. There was only two maternal death (Tegalwaru Health Center, 2023).

Pregnancy, childbirth, and the postpartum period are inherent stages in human life. However, it is crucial to exercise caution in the event of any potential threats to the health of both the mother and the infant, particularly for moms lacking access to healthcare professionals. Efforts to decrease the Maternal Mortality Rate (MMR) primarily involve implementing the "four pillars of safe motherhood" initiative, which includes ensuring access to neonatal care services. Ensuring mothers' safety during pregnancy, childbirth, the postpartum period, and when seeking family planning services significantly reduces the incidence of illness and death (Tulchinsky et al., 2023).

Accessing high-quality healthcare services is important, especially for pregnant women. Skilled healthcare professionals in healthcare facilities provide delivery assistance, postnatal care for both the mother and baby, and specialized care and referrals in case of any complications. Family services are also available to support the well-being of mothers and babies. We provide family planning services, which include postnatal and postpartum family planning. Midwives serve an important role in the community by serving as training personnel in the national health system. They provide services, enhance public health knowledge, and improve the referral system (Dashraath et al., 2020).

Prompt identification of maternal mortality is crucial for efficient strategizing and readiness to avert such incidents and guarantee the mother's survival. The Poedji Rochjati Score Card (PRSC) is employed as a diagnostic instrument to pinpoint pregnant individuals who are at a heightened risk. This study aims to evaluate the effectiveness of the Poedji Rochjati Score Card (PRSC) in identifying pregnant women at high risk in the Tegalwaru Community Health Center area, situated in Purwakarta Regency.

Research Method

The study research design was a retrospective cohort approach, utilizing secondary data obtained from pregnant women in the year 2022. We conducted the study from December to January 2023 in the operational region of the Tegalwaru Community Health Center, situated in the Tegalwaru District of Purwakarta Regency, West Java. In 2022, the population under investigation will include all expectant mothers. This study employed a technique known as total population sampling to select the sample. In this study, the Poedji Rochjati Score Card (PRSC) serves as the independent variable, while the detection of high risk in expectant moms is the dependent variable. The study utilized secondary data obtained from maternal cohorts, annual health center reports, and KIA books within the working area of the Tegalwaru Community Health Center. We subsequently analyzed the data to assess the initial scores of pregnant women using the Poedji Rochjati Score Card (PRSC), focusing on identifying high-risk factors during pregnancy and childbirth.

Result and Discussion

Result

General data

1) Distribution of respondents based on place of delivery

Table 1. Distribution of respondents based on place of delivery in Community Health Center Tegalwaru 2022

No	Place of delivery	N	%
1	Practicing Midwife	421	45,8%
2	Hospital	334	36,3%
3	Community Health Center	165	17,9%
	Total	920	100%

According to the provided table, that the majority of respondents, specifically 421 individuals (45.8%), delivered their babies with the assistance of midwives.

2) Distribution of respondents based on type of delivery

Table 2. Distribution of respondents based on type of delivery in Community Health Center Tegalwaru 2022

No	Type of delivery	N	%
1	Spontaneus Delivery	832	90,4%
2	*Sectio Caesarea*	77	8,4%
3	Vacuum extraction	11	1,2%
	Total	920	100%

According to the provided table, it is evident that the majority of respondents experienced spontaneous labor, specifically 832 individuals (90.4%).

3) Distribution of respondents based on birth attendants

Table 3. Distribution of respondents based on birth attendants in Community Health Center Tegalwaru 2022

No	Birth attendants	N	%
1	Midwife	798	86,7%
2	*Obstetrician/Gynaecologist*	122	13,3%
	Total	920	100%

According to the data in the table, it is evident that the majority of birth respondents, specifically 798 respondents (86.7%), received assistance from midwives.

Special Data
1) Types risk of pregnancy in pregnant women

Table 4. Distribution of respondents based on type risk of pregnancy in Community Health Center Tegalwaru 2022

No	Types Risk of Pregnancy	N	%
1	Low Risk	617	67,1%
2	High Risk	279	30,3%
3	Very High Risk	24	2,6%
	Total	920	100%

Based on the provided statistics, the majority consisted of 617 respondents (67.1%) who had low-risk pregnancies.

2) Score in pregnant women with PRSC

Table 5. Distribution of respondents based on Poedji Rochjati Score in pregnant women with PRSC in Community Health Center Tegalwaru 2022

No	Poedji Rochjati's Score	N	%
1	Score 2	617	67,1%
2	Score 6	235	25,5%
3	Score 10	44	4,8%
4	Score 14	20	2,2%
5	Score 18	4	0,4%
	Total	920	100%

According to the provided table, it is evident that the largest proportion of Poedji Rochjati's score was 2, with 617 respondents accounting for 67.1%.

3) The Effectiveness of PRSC for Detecting High Risk in Pregnant Women

Table 6. he Effectiveness of PRSC for Detecting High Risk in Pregnant Women in Community Health Center Tegalwaru 2022

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.840.000[a]	8	<.001
Likelihood Ratio	1.333.796	8	<.001
Linear-by-linear association	817.997	1	<.001
N of Valid Cases	920		

The Chi Square results suggest that PSRC is highly successful in identifying high-risk pregnant women, as the p value is less than 0.001.

Discussion
1) Type Risk of Pregnancy

The research results showed that there were 617 respondents (67.1%) of low risk pregnant women, 279 respondents (30.3%) with high risk pregnancies, and 24 respondents (2.6%) with very high risk pregnancies.

The risks associated with this pregnancy are variable, as pregnant women who were once considered to have a normal risk can suddenly become high-risk. A compromised pregnant mother's health, such as anemia, could potentially lead to a low birth weight for the baby. Infants with low birth weight (LBW) are more susceptible to illnesses such as lower respiratory tract infections and mortality compared to infants born with a typical weight. A pregnancy that initially has a low risk can gradually escalate to a high risk or even a very high danger. Special and ongoing surveillance is necessary to prevent pregnant women with low risk from transitioning to high risk or even extremely high risk. In involvement of midwives and the provision of suitable treatment are highly beneficial in endeavors to decrease the maternal mortality rate (MMR) and infant mortality rate (IMR).

2) Pregnant Women's Scores Using the Poedji Rochjati Score Card (PRSC)

The research results showed that respondents with a score of 2 were 617 respondents (67,1%), a score of 6 was 235 respondents (25,5%), a score of 10 was 44 respondents (4,8%), a score of 14 was 20 respondents (2,2%) , and a score of 18 was 4 respondent (0,4%).

In contemporary obstetrics, there is a recognition of inherent risk, wherein pregnancy and labor inherently entail the potential for danger or the occurrence of difficulties. Complications can range from moderate to severe and have the potential to result in mortality, illness, or impairment for either the mother or the baby. The extent of risk factors impacts the severity of complications, indicating that the more risk factors a pregnant woman possesses, the higher her likelihood of encountering difficulties (Zainiyah et al., 2020).

As a pregnant woman's score increases, so does the mother's risk throughout pregnancy and childbirth, potentially endangering the baby as well. Provision of support throughout pregnancy and implementation of a complete treatment plan are crucial in order to minimize and effectively manage the mother's risk factors (Widarta et al., 2015).

3) Effectiveness of the Poedji Rochjati Score Card (PRSC) for Detecting High Risk in Pregnant Women

The research results show that the Poedji Rochjati Score card (PRSC) is effective for detecting high risk in pregnant women. Based on the results of the Chi Square test, the p value was <0.001.

The Poedji Rochjati Score Card is a diagnostic tool that identifies and categorizes pregnancies into high-risk and low-risk categories. This enables comprehensive midwifery care to be planned early (Yalina et al., 2017). The majority of pregnant women with a score of 2 (indicating a low-risk pregnancy) experienced no complications during pregnancy or delivery. However, there were some cases where pregnant women initially scored 2 but experienced complications by the end of pregnancy and at the time of delivery. Therefore, additional care may be necessary in such situations. We should design an all-encompassing approach not only for moms identified as high or very high risk, but also for low risk mothers who may face potential difficulties during pregnancy and labor (Andriani, 2019).

Conclusion

There were respondents 617 respondents (67.1%) of low risk pregnant women, 279 respondents (30.3%) with high risk pregnancies, and 24 respondents (2.6%) with very high risk pregnancies. Pregnant women with a score of 2 were 617 respondents (67,1%), a score of 6 was 235 respondents (25,5%), a score of 10 was 44 respondents (4,8%), a score of 14 was 20 respondents (2,2%) , and a score of 18 was 4 respondent (0,4%). The Poedji Rochjati Score Card (PRSC) is effective for detecting high risk in pregnant women. Based on the results of the Chi Square test, the p value was <0.001. For respondents are required to consistently uphold their well-being by regularly consulting healthcare professionals and promptly seeking medical attention if any indications of risk or difficulties arise throughout pregnancy. For the health workers enhancing service standards and offering additional information to mothers will enable them to identify the warning signs they may be encountering.

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