

## The Effect of Maternity Care Health Education Through Leaflet Media on The Level of Knowledge of Pregnant Women

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### ABSTRACT

Introduction: The Maternal Mortality Rate (MMR) serves as an indicator of the dangers encountered by mothers throughout pregnancy and childbirth, factors of which encompass maternal nutritional well-being, socioeconomic circumstances, pre-pregnancy health status, occurrences of complications during pregnancy and delivery, as well as the accessibility and utilization of healthcare facilities, including health services. Health education, on the other hand, is a purposefully organized procedure designed to offer individuals opportunities for ongoing learning, fostering heightened awareness, and enhancing their proficiency, capabilities, and skills to promote their overall health. Objective: Knowing the influence of health education about childbirth care through leaflet media on the level of knowledge of pregnant women Method: This type of research is quantitative research with a pre-experimental design method with the design used is one group pretest posttest. In this study, the study sample was 30 pregnant women who were divided into 2 intervention groups: Pre Test and Post test. The media used in providing education use pamphlets. Results: analysis results in the Pre Test group with a Mean of  $1.33 \pm 0.479$  and the Post test group with a Mean of  $1.70 \pm 0.466$ . The results of the analysis showed a P-Value value of 0.004 ( $< 0.05$ ). Conclusion: Providing education using leaflets can be an alternative in educational strategies that are more effective in increasing knowledge of maternity care in pregnant women because the educational component provided is easy to remember and can be read repeatedly.

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### 1. INTRODUCTION

The process of pregnancy marks a significant life transition as individuals prepare to embark on parenthood. This experience brings forth numerous challenges for women, involving the management of postnatal physical and emotional changes linked to childbirth, while simultaneously navigating their pre-existing life roles [1]. Pregnancy, being a natural phenomenon, induces various alterations in different aspects of a woman's body. Women aged between 15 and 49 years, during their pregnancy, constitute a vulnerable group with a heightened risk of complications [2]. Consequently, prioritizing the health of pregnant women becomes imperative, even for those classified as "low risk," to promptly identify potential complications [3]. The classification of pregnancy risk takes into account both clinical conditions and psychological/emotional aspects, providing a comprehensive understanding of potential risks. This process necessitates both physical and psychological adjustments, demanding specialized care. In the care continuum for pregnant women, nurses assume a crucial role [4], [5].

The maternal mortality rate (MMR) serves as an indicator of the risks encountered by mothers during pregnancy and childbirth, factors that are influenced by maternal nutritional status, socioeconomic conditions, pre-pregnancy health conditions, the occurrence of complications during pregnancy and delivery, as well as the accessibility and utilization of healthcare facilities, including health services [6]. This situation may be attributed to the insufficient health knowledge and literacy levels among pregnant women [7], [8]. An individual's health literacy level is a crucial factor that

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positively contributes to their overall health [9]. As per research conducted by Tugut et al. (2021), only one-third of the population possesses an adequate level of health literacy. Low health literacy has adverse effects on people's health, resulting in reduced utilization of preventive health services, increased reliance on medical services, elevated rates of hospitalization, escalated health costs and medication errors, and diminished adherence to self-care and medication [10].

Health education is a purposefully organized process designed to provide individuals with ongoing learning opportunities, fostering heightened awareness, and enhancing their knowledge, abilities, and skills for the betterment of their health [11]. It is a systematic approach aimed at acquiring knowledge and skills to enhance individual and community health. Recognized as the most effective, economical, and sensible component of health services, it contributes to the development of a positive health culture. Thus, in the process of providing health education, it is expected to use media that facilitates in-depth discussions, broader knowledge and an interesting health education process [12], [13]. The results of Munthe's research. (2021) explained that by providing friendly and safe health education methods as interventions to increase knowledge, attitudes, and practices can help improve knowledge, attitudes, and behaviors during pregnancy that can affect the quality of life of mothers and their babies postpartum [14].

According to Purnamasari et al. (2020), a viable approach for enhancing knowledge and instigating behavioral changes is to deliver information that raises awareness, leading to subsequent alignment of community behavior with this newfound knowledge [15]. An effective method for disseminating such information involves the distribution of leaflets and the display of banners [16]. The results of research by Suriah et al. (2020) show a significant impact of providing education through leaflet media on maternal knowledge in postpartum care [17]. The results of a preliminary study by conducting interviews with pregnant women found that 12 out of 15 pregnant women had a low level of knowledge about childbirth care because of the large amount of material and the unavailability of adequate time in reading the material. Based on these problems, researchers aim to determine the effect of health education about childbirth care through leaflet media on the level of knowledge of pregnant women.

## 2. METHOD

This study adopts a quantitative research approach employing the pre-experimental design method, specifically utilizing the one-group pretest-posttest design. The research sample comprises 30 pregnant women within the jurisdiction of the Klego Health Center, selected through total sampling. Inclusion criteria involve pregnant women with healthy uterine conditions, those willing to participate as respondents, and those nearing childbirth. Exclusion criteria encompass pregnant women with two or more children and those with cognitive limitations. The instrument used in this study is a knowledge questionnaire that has been tested for validity and reliability with the results of the questionnaire valid and reliable (alpha Cronbach 0.861). Meanwhile, the media used in providing education uses leaflets which consists of an explanation of the stages of labor, preparation before delivery, signs of labor, pain and its management, the role of the companion, postpartum care, supporting breastfeeding, and emotional care. Data analysis using independent t-test

## 3. RESULTS AND DISCUSSION

The results of demographic characteristics (Table 1) were obtained by the majority of respondents aged 26-30 years (46.7%). The majority work as housewives, as many as 28 people (93.9%).

**Table 1.** Characteristics Participant Data

Characteristics	Total (n)	Percentage (%)
<b>Work</b>		
Housewives	28	93.3
Private Employees	2	6.7
<b>Age</b>		
20-25 tahun	9	30.0

Characteristics	Total (n)	Percentage (%)
26-30 tahun	14	46.7
31-40 tahun	7	23.3

**Table 2.** Overview of respondents' Knowledge Level

Variabel	Pre Test		Post Test	
	Total (n)	Percentage (%)	Total (n)	Percentage (%)
Bad Knowledge	20	66.7	9	30.0
Good Knowledge	10	33.3	21	70.0

The level of knowledge of respondents is illustrated in Table 2 where in the pre-test group given intervention through *leaflet* media, 10 people have a good level of knowledge and 20 people have a bad level of knowledge. Meanwhile, the group given post-test intervention through *leaflet* media found that 21 people had a good level of knowledge, 9 people had a poor level of knowledge.

**Table 3.** Results of Bivariate Analysis

Variabel	Mean $\pm$ SD	Mean Dif	95% CI	P-Value
Pre Test	1.33 $\pm$ 0.479	0.37	0.611 - 0.122	0.004*
Post Test	1.70 $\pm$ 0.466			

*\*Independent t Test*

The results of the analysis found that the average difference between the pretest with a mean of 1.33 (SD = 0.47) and the post test 1.70 (SD = 0.46) was different by 0.37 with a confidence level of 0.611 - 0.122, which showed an increase in knowledge between before and after being given health education about childbirth care. After further analysis, the significance value shows a P-Value of 0.004 ( $< 0.05$ ) where  $H_0$  is rejected. So it states that there is an influence of health education about childbirth care through *leaflet* media on the level of knowledge of pregnant women.

Data pertaining to the characteristics of the respondents in this study reveal that the majority fall within the age range of 25-30 years, aligning with the findings of Malisngorar et al. (2019), who observed a predominant age range of 20-35 years in their research. The recommended age for healthy reproductive pregnancies is 20-35 years, considering optimal functioning of reproductive organs during this period. Malisngorar et al. (2019) noted that an individual's mindset maturity influences behavior, stating that higher knowledge and experience levels correlate with more mature patterns of thinking when dealing with various situations [18]. Consequently, age and experience are factors that can impact an individual's readiness and proactiveness in facing challenges. Additionally, a significant portion of the respondents in this study are engaged in housewife activities, consistent with the findings of Puspitasari & Sunarsih (2021), who reported that a majority of pregnant women work as housewives. This alignment may be attributed to the fact that homemakers typically have more time at home compared to working mothers, allowing them ample time to seek information about nursing care [19].

In contemporary times, the availability and accessibility of information have significantly expanded through various channels such as television, radio, print media, and the internet. These channels play a pivotal role in enhancing knowledge by providing a diverse range of information. Human knowledge predominantly stems from sensory inputs, primarily through sight and hearing [20]. Cognitive knowledge is a crucial domain that shapes an individual's overt behavior. It is noteworthy that humans acquire knowledge through their five senses. The process of acquiring knowledge occurs when individuals use their senses to explore materials or events previously unseen or unfelt [21].

The findings of this study reveal that there is a significant impact of health education utilizing *leaflet* media on the knowledge level of pregnant women. This outcome aligns with the research conducted by Achjar et al. (2023), demonstrating a statistical influence of *leaflet* counseling on the increase in stunting knowledge among pregnant women both before and after the counseling intervention [22]. Additionally, the results from Suriah et al. (2020) indicate that providing *leaflets* can reinforce a mother's intention to engage in postpartum care, generating sustained intentions even

after the leaflet intervention has been implemented [17]. Utami et al. (2019) also supported the efficacy of leaflets as a medium for health education. Their research highlighted that the most effective method for enhancing the knowledge of breastfeeding mothers about exclusive breastfeeding tips for working mothers is through leaflet media. The analysis indicated significant differences between pretest, posttest, and posttest 2 ( $P \leq 0.001$ ). However, they emphasized that alongside the appropriate media, the communication skills of health workers are crucial for achieving the goals of health education [23].

Knowledge is the outcome of the process of acquiring information, typically occurring after an individual experiences various stimuli, such as visual observations, auditory inputs, olfactory sensations, tactile experiences, and the like. Nevertheless, the majority of knowledge is often acquired through visual and auditory means [24]. It holds significant importance in shaping an individual's behavior, as knowledge has the potential to bring about changes in perceptions and habits. Enhanced knowledge can alter people's views on diseases and contribute to a shift from negative to positive behaviors, while also fostering the development of trust [25]. The results of this study indicate that the majority of respondents fall within the age range of 26-30 years. This finding corresponds with the research conducted by Suriah et al. (2020), demonstrating that mothers aged between 20-35 years exhibit stronger intentions, likely associated with the productive phase of female reproduction. Mothers below the age of 35 may be more prepared to embrace the pregnancy process compared to those over 35, possibly contributing to their heightened desire to engage in health education processes [17], [26].

The utilization of leaflets in health education initiatives demonstrates a notable and positive impact on enhancing understanding and fostering positive attitudes within the community. This medium not only offers easily accessible information but also effectively heightens awareness and promotes acceptance of correct health practices [27]. The advantages of leaflet media lie in its cost-effectiveness, convenience, long-term storage capabilities, and the ability to be revisited for reference [28]. Leaflet media stands out as an effective choice in ensuring the availability of information for pregnant women. Interventions employing leaflet media are considered supportive in enhancing knowledge related to the delivery care process [29]. Leaflets designed with vibrant color combinations, complemented by appealing images and clear language, are believed to possess the capacity to enhance respondents' knowledge and comprehension. A visually appealing design, coupled with easily understandable content, provides a more effective and engaging learning experience for individuals accessing the leaflet [30]. The leaflet serves as a reinforcement tool, aiding respondents in retaining the presented material. These study findings align with prior research, which also demonstrated significant differences in knowledge levels before and after leaflet interventions [31]. The majority of participants responded positively to the material, showing enthusiasm in reading the leaflet contents and posing questions about the provided information [32].

#### 4. CONCLUSION

Health education about childbirth care through leaflet media affects the level of knowledge of pregnant women. Health education media in the form of leaflets can be a means of media in the process of providing health education and information in increasing health knowledge and literacy in pregnant women so that it can help reduce the risk of complications that arise because the educational component provided is easy to remember and can be read repeatedly. The use of leaflets can be combined with other educational media such as videos or booklets so as to further increase patient understanding in increasing knowledge.

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