

Effectiveness of the Climacterium Digital Pocket Book on Menopause Readiness

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ABSTRACT

Background & Objective: Women in the climacteric period will experience certain changes that can cause mild to severe disorders. A woman's readiness or unpreparedness for the menopause can be influenced by the amount or lack of knowledge she has about the menopause. The results of the preliminary study in Sumberjaya Village show that most pre-menopausal women do not understand how to deal with the menopause. In this study, the media used to improve readiness is a climacterium digital pocket book. The aim of this study was to determine the effectiveness of the climacterium digital pocket book on menopause readiness. **Method:** This study is a pre-experimental study using a one group pretest-posttest design. The population in this study were premenopausal mothers aged 40-50 years totalling 482 people. The sample size was determined using the Slovin formula as many as 83 respondents. The sampling technique was carried out by accidental sampling. This research instrument used a questionnaire and data analysis using the Wilcoxon test. **Result:** The results of the difference test (Wilcoxon) pretest and posttest data on readiness to face menopause before and after reading the climacterium digital pocket book with a p-value of 0.000 ($p < 0.05$), which means that the climacterium digital pocket book is very effective in increasing readiness to face menopause among premenopausal mothers in Sumberjaya Village. **Conclusion:** Climacterium digital pocket book effectively improves the readiness of premenopausal women to face menopause in Sumberjaya Village. It is hoped that this climacterium digital pocket book can be used as one of the educational media in other locations, particularly for pre-menopausal.

Introduction

One indicator of the success of national development in terms of health is the increasing life expectancy of the population. Based on data from the Central Statistics Agency (BPS), the life expectancy of the Indonesian population in 2022 will be 73.83 years for women and 69.93 years for men (Badan Pusat Statistik, 2023). Ageing is a natural process that begins at birth and is common to all living things. Ageing is a scientific process which means that a person has three stages of life, namely child, adult and old (Nugroho, 2012).

The developmental period of normal female anatomy and physiology passes through six stages, namely pre-puberty, puberty, the reproductive period, climacterium and menopause, and the senile period. The reproductive period is the most important period in a woman's life, lasting approximately 33 years. Menstruation during this period is the most regular and significant for the possibility of pregnancy. Towards the end of the reproductive period there is the climacterium, a period of transition from the reproductive to the senile period. This period lasts several years before and after the menopause (Fitriana, 2014).

The growth of climacteric women is expected to continue to increase every year. According to the data compiled by the Central Statistics Agency (BPS), in Indonesia the number of population growth each year reaches 2,99 million people out of the total Indonesian female population of 134.923.865 million people (Kementerian Kesehatan RI, 2021).

Hormonal conditions will change in climacteric women who have entered old age with the age of 40 years. As a woman ages, the number of follicles in her ovaries decreases, which can automatically reduce their ability to respond to pituitary hormones, especially steroid hormones. At birth, a woman has approximately 750,000 primordial follicles, but this number decreases over the course of a woman's life, starting between the ages of 40 and 44. This decrease can be as high as 8300. In several journals it is mentioned that the decline in the number of primordial follicles in women is caused by two things: the process of ovulation in each cycle (menstruation every month) and another cause is apoptosis (primordial follicles that die and stop growing). This process continues throughout a woman's life until the age of 50 (Mulyaningsih & Pradnya, 2018) (Mulyaningsih & Pradnya, 2018).

Endocrinologically, the climacterium is characterised by falling estrogen levels and increased gonadotropin production. This estrogen deficiency leads to a decline in various degenerative or endocrinological functions of the ovaries which causes anxiety in most women. Complaints during this period are caused by the climacteric syndrome. There are four endocrine glands in a woman's body that produce reproductive hormones: the pituitary, the ovaries, the endometrium and the testes. The ovarian glands produce three hormones: oestrogen, progesterone and relaxin. Estrogen hormone is produced by the ovaries, estrogen is useful for the formation of sexual development traits in females, namely the formation of breasts, curves, pubic hair and others. The hormone progesterone maintains the thickness of the lining of the uterus so that it can accept the implantation of the zygote, regulates the formation of the placenta and milk production (Wahyuningsih, 2017).

Women in the climacterium period will experience certain changes that can cause mild to severe disturbances. The changes and disorders are of different kinds. The first stage of these changes is irregular and often interrupted menstruation. This is known as the premenopausal period. The premenopausal period is often

accompanied by increased activity, characterised by symptoms of increased sexual stimulation (Fitriana, 2014).

Physical changes or conditions in a woman's body during the climacterium or menopause will be easier to deal with if women have sufficient knowledge about issues related to the climacterium and menopause. Menopause is something that is natural and normal. Of course, every woman will experience it. Each woman's experience of the menopause is not always the same, it is influenced by different conditions, knowledge, interpretations and self-acceptance (Mulyaningsih & Pradnya, 2018).

In general, women experience several symptoms of climacterium, namely bleeding, vasomotor, urogenital atrophy, psychological effects, sexual function disorders, somatic symptoms, osteoporosis, cardiovascular disorders (Mulyaningsih & Pradnya, 2018). For some women entering their 50s, growing old is a frightening prospect. Such concerns stem from the thought that they will become unhealthy, unfit and no longer beautiful. Such conditions are indeed unpleasant and painful. But the reality is that ageing and menopause are stages that a woman has to go through in the course of her life. Just like other stages of life, such as childhood and childbearing. (Mulyaningsih & Pradnya, 2018).

The results of the preliminary study in Sumberjaya Village show that most pre-menopausal women do not understand how to deal with the menopause. Women's unpreparedness for menopause will affect her behaviour and feelings, and reduce her quality of life. In addition, during the menopause, women experience major changes in their lives, adjusting to changing roles in the family and society, and facing changes in their bodies and expectations of life. The most important thing a woman can do before and after the menopause is to prepare for it. A woman's readiness or lack of readiness at the time of the menopause can be influenced by how much or little she knows about the menopause (Muafira, 2018).

The arrival of the Industrial Revolution 4.0 has resulted in an increase in the development of highly sophisticated technologies that have a major impact on human life such as artificial intelligence, digital commerce (e-commerce), giant data, financial technology, sharing economy, and the use of robots (Prasetiantono, 2018). One of these is an electronic system in the sense of digitalisation. Electronics is a device made on the basis of electronic principles; things or objects that use tools that are made or work on the basis of electronics. ("Kamus Besar Bahasa Indonesia (KBBI) Online," n.d.). Various products are emerging as a result of the development of digitalisation. These products facilitate human activities.

One of the areas targeted for digital commercialisation is healthcare. The need for digital health services continues to grow, although not as much as in other sectors. The need for digital health services can be divided into several categories, including 58% looking for prescriptions, 32% exercise and healthy lifestyle, 31% paying medical bills, 24% looking for health-related problems, 18% health insurance and 15% alternative medicine (Klonoff et al., 2017).

The development of information and communication technology is very rapid, and Indonesia is one of the developing countries that feel it. One of these technologies is the internet, the existence of the internet has changed most of the ways of life and daily human activities. A digital pocket book is an electronic book that can be opened or accessed electronically using a computer or a mobile phone (Widodo & Wiyatmo, 2017). More practical, concise and accessible, as well as easy to carry, this digital

pocket book contains information that the owner can read at any time (Asyhari & Silvia, 2016). This digital pocket book uses lots of pictures and colour so it has an attractive look and feel for reading.

In this study, the media used to improve readiness is a climacterium digital pocket book. Climacterium digital pocket book is a digital based pocket book that discusses climacterium. The contents of this climacterium digital pocket book include climacterium pathophysiology, climacterium symptoms, climacterium aetiology, climacterium age limit, physical and psychological changes in climacterium, complaints that occur in climacterium and how to deal with them.

Easier access to health information supports the goal of Healthy Indonesia 2025, which is to increase awareness, willingness and ability of everyone to lead a healthy life, so that the highest level of public health can be achieved by creating an Indonesian society, nation and state characterised by a population living in healthy behaviour and environment.

Objective

The aim of this study was to determine the effectiveness of the climacterium digital pocket book on menopause readiness.

Method

This research is a pre-experimental study using a one group pretest-posttest design. The population in this study were premenopausal mothers aged 40-50 years living in Sumberjaya Village, a total of 482 people. The sample size was determined using the Slovin formula and the sample size was 83 respondents. The sampling technique was carried out by accidental sampling.

This research instrument uses a questionnaire to determine the readiness of premenopausal mothers to face menopause. Data collection begins with an explanation of the research procedure to the respondent, and the respondent fills out the consent form. The researcher pre-tested the respondents by distributing questionnaires. The researcher also gave the respondent a digital climacteric pocket book. After the respondent was given a digital climacterium pocket book, the researcher conducted a post-test. Data analysis using the Wilcoxon test to see the effectiveness of the climacterium digital pocket book on increasing the readiness of premenopausal women to face menopause.

Results

Research into the effectiveness of the climacterium digital pocket book on menopause readiness was carried out on 83 premenopausal mothers aged 40-50 years, and each subject was measured using a questionnaire with the results:

Table 1. Frequency Distribution of Respondent Characteristics

Variabel	N	%
Education		
Primary School (SD)	7	8,4
Junior High School (SMP)	28	33,7
Senior High School (SMA)	35	42,2
College (PT)	13	15,7
Work		
Work	32	38,6
Doesn't work	51	61,4

Based on table 1, it is known that out of 83 respondents, the highest level of education of respondents is high school (SMA), namely 35 people (42.2%), respondents who do not work the most, namely 51 people (61.4%) and respondents mostly have good knowledge as many as 38 people (45.8%).

Table 2. Frequency Distribution of Respondents Based on Menopause Preparedness in Premenopausal Mothers in the Post-Menopause Working Region of the Cihaurbeuti Resource Commission

No	Readiness	Pretest		Posttest	
		F	%	F	%
1	Ready	47	57	68	82
2	Not Ready	36	43	15	18
Jumlah		83	100	83	100

Based on table 2 above, it can be seen that the use of climacterium digital pocket book can increase readiness in facing menopause. The pretest results were categorised as ready by 57%. After the intervention using the climacterium digital pocket book, readiness to face menopause increased by 82%.

Based on the results of statistical tests using the Wilcoxon Signed Rank Test, the following results were obtained:

Table 3. Test Results of the Effectiveness of Climacterium Digital Pocketbook on Readiness to Face Menopause in Premenopausal Mothers in Sumberjaya Cihaurbeuti Village

Category	Z	Asymp.Sig (2-tailed)
Posttest Readiness-Pretest Readiness	-8,030 ^a	.000

The results of the difference test (Wilcoxon) pretest and posttest data on readiness to face menopause before and after reading the climacterium digital pocketbook with a p-value of 0.000 ($p < 0.05$), which means that the climacterium digital pocketbook is very effective in increasing readiness to face menopause among premenopausal mothers in Sumberjaya Cihaurbeuti Village.

Discussion

Based on the results of the research in Sumberjaya Village, it shows that the highest level of education of respondents is senior high school (SMA), as many as 35 people (42.2%). This is consistent with research (Misrina, 2021) in Meunasah Capa village, Kota Juang district, that education of premenopausal mothers affects readiness to face menopause. However, this is not consistent with research (Sri Yuliastuti & Widiarta, 2022) in Pungka Hamlet, Unter Iwes District, Sumbawa Regency, which found that education had no relationship with readiness to face menopause. The level of education can affect a person's level of knowledge. The more educated a person is, the easier it is for them to receive information and the more knowledge they will acquire (Kusumawati, 2019).

The results showed that most of the respondents who were not working were 51 people (61.4%) and most of the respondents who had good knowledge were 38 people (45.8%). The results of this study are consistent with research (Wahyuni, 2020) in East Langsa District, Langsa City, that women who do not work experience more symptoms of anxiety when facing menopause. However, this is not consistent with the results of a study (Sri Yuliastuti & Widiarta, 2022) that there is no relationship between work and readiness to face menopause. Work factors will influence the behaviour of each individual, especially women, where women who work tend to

have a mindset of feeling more secure because of their work and having confidence in themselves and their abilities.

Most working women are better prepared and able to cope with the menopause than women who do not work or who are stay-at-home mothers. This is because working women are used to physical activity and the problems that often arise at work, so the fear of the menopause is reduced and is not seen as a difficult problem to deal (Asmaradana, 2021).

A pocket book is a small-sized book that can be stored in a pocket and easily carried around. Digital pocketbooks are books that can be opened using smartphones, laptops and computers. If a conventional book is a collection of paper pages containing text and images, an e-book contains digital information, which may be in the form of images or text or both (Sholeh, 2021).

Based on the results obtained, the climacterium digital pocket book is effective in increasing the readiness of premenopausal women to face menopause in Sumberjaya Village. The level of readiness to face menopause before reading the climacterium digital pocket book according to table 2 most of the respondents were in the category of not ready to face menopause, namely 47 (57%). These respondents have an unprepared level of readiness because most of them think menopause is a scary thing and feel anxious about facing menopause.

The level of readiness to face menopause after reading the climacterium digital pocket book according to table 2 most of the respondents were in the category of ready to face menopause, namely 68 (82%). This shows that after the provision of climacterium digital pocket book media, there is an increase in the readiness of premenopausal women to face menopause. These results indicate a positive change in the respondents' values, and the researchers believe that the increase in readiness is influenced by the information the respondents received through the digital pocket book media.

This is consistent with the research (Sri Atikah & Meinita Wulansari, 2023) entitled *The Effectiveness of Health Education on Readiness to Face Menopause in Premenopausal Mothers in the Sonder Health Centre Work Area* with a value of χ^2 value = 0.025 with a significance level of 5% p -value ($0.025 < 0.05$). So there is an effect of health education on the readiness to face the menopause in premenopausal women in Sonder Health Centre working area.

The results of research conducted (Putri, Corniawati, & Imamah, 2023) on the effect of reproductive health education on the knowledge and attitudes of pre-elderly women in facing menopause in Keluharan Muara Komam which says that the results of statistical tests obtained with each value p -value = 0,000 < α (0,05) so it can be concluded that there are differences in knowledge and attitudes before and after the provision of reproductive health education. In this study, the medium used to improve knowledge and attitudes is a pocket book. A pocket book is a small book that contains material about the menopause or other material. Pocket book media can be used for counselling or advising respondents to improve knowledge and attitudes towards menopausal women.

A woman's menopause readiness is very helpful in coping with the menopause. A woman's menopause readiness is both physical and psychological. Physical readiness is a woman's readiness to deal with the physical changes that occur during the menopause, while psychological readiness is a woman's psychological readiness to deal with the psychological changes that occur. A woman's physical and

psychological readiness to face menopause will be very helpful in going through menopause well (Muafira, 2018).

Conclusion

Climacterium digital pocket book effectively improves the readiness of premenopausal women to face menopause in Sumberjaya Village. It is hoped that this climacterium digital pocket book can be used as one of the educational media in other locations, particularly for pre-menopausal women approaching the menopause.

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