

## THE USE OF HERBS AS DOCUMENTED IN MALAY MEDICAL MANUSCRIPTS FOR FEMALE SEXUAL DYSFUNCTION (*MATI PUTIK*) AMONG WOMEN IN KUANTAN PAHANG, MALAYSIA

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### ABSTRACT

Female sexual dysfunction (FSD), also known as "mati putik," is a disorder that affects sexual desire, arousal, and orgasm in women, with a global prevalence of 12% in 2020. Traditional Malay medicine based on herbal consumption is a common alternative to treat or prevent FSD. As recorded in the Malay Medical Manuscripts (MMM), Manjakani, Halba, Adas Pedas, Zafaran, and Sirih were herbs described to treat FSD. Even the use of herbs has become a trend nowadays; however, the knowledge regarding herbs among women in Malaysia is inconclusive which might contribute to the increasing diagnosis of FSD. Hence, this study aimed to investigate the knowledge, attitude and practice (KAP) of herbs used to treat FSD among women in Kuantan, Pahang. A cross-sectional study was conducted in Kuantan, Pahang between April and July 2021. A total of 100 respondents were recruited among women that fulfilled the inclusion and exclusion criteria for this study. Convenience sampling and self-administered online questionnaires were distributed among the respondents. All the data from the respondents were analysed through the Statistical Package for Social Sciences (SPSS). It has been found that the respondents had low knowledge ( $n=86$ ; 94.5%), a moderate attitude ( $n=62$ ; 68.1%), and low practice ( $n=68$ ; 74.7%) on the use of herbs for FSD. There was a significant association detected by using the Kruskal-Wallis test in terms of occupation and the practice score of the respondents. The Spearman coefficient revealed a significant correlation between respondents' knowledge and attitude ( $r = 0.309$ ,  $p = 0.003$ ) and knowledge and practice ( $r = 0.435$ ,  $p 0.001$ ). The findings revealed that promotion and awareness of this issue, as well as appropriate guidance on the use of herbs among women by healthcare provider, are demanded so that women with FSD can live a better quality of life.

Keywords: *mati putik*, KAP, natural product, Malay Medical Manuscript

### INTRODUCTION

Female sexual dysfunction can be defined as a disorder in sexual desire, orgasm, arousal, or pain during intercourse that results in significant personal distress (Gruenwald et al., 2019). This disorder, also known as "mati putik" in Malay, is defined as a sexual problem experienced by women, the majority of whom are married and have children. It is believed that "mati putik" among Malay women is caused by a lack of time and energy, as well as a lack of knowledge and attitude (Shahimi, 2017). Pathologically, this condition is an inability to develop or maintain adequate genital responses, while female sexual arousal disorder is a difficulty or inability to achieve or maintain adequate mental excitement associated with sexual activity. Female genital arousal disorder can be caused by neurological or vascular injury or dysfunction. Neurological injuries such as pudendal neuropathy and radiculopathy may disturb the function of the central nervous system and the peripheral nervous system. As for vascular dysfunction, disturbances in the vascular system affect the blood vessels within the sexually responsive organs (Goldstein, 2018). Hormonal changes such as oestrogen and testosterone levels also play an important role in sexual function. A low level of oestrogen will not enhance the blood flow at the genital parts and, hence, will not produce sufficient lubrication at the vaginal parts due to inadequate genital arousal of the sexual organ (Goldstein, 2018).

Female sexual dysfunction has a high prevalence worldwide. This is supported by a study conducted in Beijing and Australia, in which a greater percentage of the women revealed having sexual dysfunction. In Beijing, the prevalence of women having sexual dysfunction is about 63.3% (Lou et al., 2017), while Australia recorded a slight increase in prevalence, which is 64.3%, that is occurring among post-partum women (Khajehei et al., 2015). Shifren (2020) reported that there was a 12% prevalence of FSD worldwide (Shifren, 2020). In Malaysia, the prevalence of FSD based on a study conducted in a healthcare setting was 29.6% in 2017 and 35.8% in 2010 (Ishak et al., 2010). In addition, a study by Salamon et al., 2020 shows that the majority of the postpartum women in Malaysia, particularly in Sarawak, are also affected by sexual dysfunction. Among them, 57% were found to have FSD, and there are about 98.6% that experience sexual satisfaction disorder, with half of that percentage having arousal disorder, and only 28.9% confront lubrication disorder (Salamon et al., 2020).

Female sexual dysfunction might be associated with other risk factors that influence the normal physiology of sexual function. The risk factors include biological factors, physiological factors, and sociocultural factors. According to McCabe (2016), it was reported that Moroccan women had a higher level of sexual dysfunction in diabetic patients, which affects lubrication in women, while heart disease is reported to have been associated with problems in orgasm among Korean women. Moreover, hypertension also affects arousal and orgasmic function (Goldstein, 2018; McCabe et al., 2016). However, a study in the United States did not find any association between heart disease, diabetes, and hypertension and sexual function in women, but the consumption of hypertensive drugs had a negative effect on orgasmic function and sexual interest (McCabe et al., 2016). Other than that, a psychological factor also causes a significant impact on sexual function in women. Dun et al., as cited in McCabe et al. (2016), found that depression and anxiety cause arousal, insufficient lubrication, orgasmic dysfunction, and dyspareunia. Furthermore, depression indirectly influences women's emotions, affecting and decreasing their interest, activity, and satisfaction in sexual function (Clayton & Valladares Juarez, 2019). Besides, the treatment of the anxiety or depression itself increases the chance of

developing sexual dysfunction due to the side effects of the drugs, such as the serotonin reuptake inhibitors that cause impairment in sexual function (Clayton & Valladares Juarez, 2019). Next, sociocultural factors also contribute to sexual dysfunction among women. As reported by Clayton & Valladares Juarez (2019), women in Sweden who had a history of sexual abuse had more sexual dysfunction compared to those without a history of abuse. Aside from that, low education, job stress, and unemployment have been linked to a lack of sexual interest, as have some conditions characterised by dyspepsia and orgasmic dysfunction. In other conditions, women who faced financial household problems also experienced the same sexual dysfunction in terms of sexual interest and lubrication, with a high prevalence of dyspareunia.

There are several modern treatments for FSD, which can be classified into psychological therapy, pharmacological therapy, and device therapy. As for pharmacological therapy, it provides hormonal and non-hormonal therapy (Kingsberg et al., 2017). In hormonal therapy, testosterone and estrogenic activity regulators can be used to improve sexual excitement, arousal, and orgasm. Like hormonal therapy, non-hormonal therapy in a topical form, such as a non-hormonal moisturiser or lubricant, may treat sexual arousal problems involving low vaginal lubricant by reducing sexual distress and relieving symptoms. For example, prostaglandin in topical form may improve pain and arousal by acting as a vasodilatory agent and boosting the activity of sensory afferent nerves of the vagina (Kingsberg et al., 2017). Aside from that, vibrator devices can be used to stimulate vaginal and clitoral blood flow to increase arousal in women (Goldstein, 2018). Interestingly, the use of herbs to treat and prevent "mati putik" among Malay women has been practised for a long time. These practices and the details regarding the herbal formulation specifically for FSD have been documented in a Malay medical manuscript. According to Anhar et al. (2020), *manjakani*, *halba*, *saffron*, *sirih*, and *adas pedas* are the herbs that were used to treat FSD by Malay ancestors.

*Manjakani*, scientifically known as *Quercus infectoria* is used to treat conditions related to FSD (Anhar, 2020). It consists of two medicinal parts, the hulls (Jaft-E-Ballot) and galls (Mazo), which contain a high concentration of tannins as an astringent that is responsible for FSD treatment. Mahboubi (2020) points out that Mazo in the form of an ointment can be used for vaginal laxity, while excessive vaginal discharge can be treated by using pessaries. According to Mahboubi (2020), Jaft-e-Ballot gel may improve vaginal relaxation and lubrication, reduce libido, and improve the individual's feeling of satisfaction and orgasm. While *Trigonella foenum-graecum*, also known as *halba* in Malay, is thought to treat and stimulate sexual interest and arousal in women. The previous study shows that *halba* is used to treat low sexual desire symptoms (Anhar, 2020). Similarly, Rao et al. (2015) found that the extract of *T. foenum-graecum* seed had phytoestrogen properties that gave a positive correlation to the levels of estradiol and testosterone in women, were good for the stimulation of vaginal lubrication, excite the sexual interest, and reduced FSD symptoms in menopause women (Najaf Najafi & Ghazanfarpour, 2018).

The other herb is called *zafaran*, or scientifically named *Crocus sativus*, and is used in traditional remedies for FSD (Anhar, 2020). *C. sativus* is well known for its aphrodisiac effect and contains fluoxetine, an antidepressant that inhibits the reuptake of serotonin and hence improves sexual dysfunction among depressed people (Mollazadeh et al., 2015). Also, a study by Barton et al. (2003) shows that there was an improvement in pain during intercourse among those who consumed *C. sativus*. Therefore, *Crocus sativus* is beneficial to improve FSD associated with depression and pain in women. While *Piper betle*, also known as *sirih* among Malay, is being used to treat one of the symptoms of Female Sexual Arousal Disorder (FSAD) (Anhar, 2020). Moreover, according to Peddapalli et al. (2020), the piper betle is being used traditionally to avoid and treat vaginal discharge, and the aphrodisiac properties of the betle leaf can excite sexual desire. *Adas pedas* or fennel is scientifically named as *Foeniculum vulgare*. In traditional treatments of FSD, *F. vulgare* has been used for women's beauty and fertility (Anhar, 2020). Moreover, finding by Abedi et al., (2018), it has been observed that fennel can be used to treat FSD since it has an estrogenic effect which can improve sexual function. The use of fennel cream at the vaginal part may reduce postmenopausal symptoms, increase milk production, and improve menstruation in women. Furthermore, fennel cream may also give a significant improvement towards vaginal atrophy by reducing vaginal pH, repair vaginal tissues, and improve vaginal lubrication, itching, pallor, and dyspareunia, which lead to vaginal atrophy (Ghazanfarpour et al., 2017).

## METHODOLOGY

### *Study Ethics*

The International Islamic University Malaysia Research Ethical Committee (IREC) [IIUM/504/14/11/2/IREC 2021-KAHS (DBMS)] provided ethical approval for this study.

### *Study Design and Respondents' Recruitment*

This is a cross-sectional study in Kuantan, Pahang, and the respondents were selected through convenient sampling. The women involved in this study had married, practised herbs, and stayed in Kuantan. Women who are traditional practitioners, such as midwives and massage therapists, will be excluded. The sample size was calculated using the single proportion formula to calculate the number of respondents needed in this study. The proportion in the population used for this study was based on the prevalence of Asian people having sexual dysfunction (FSD), which was 12.0% (Shifren J. L., 2019). The number for this study is 83; however, by adding a 10% non-response rate, which was about 8 respondents, the total estimated number of participants or sample size required for this study was 91 respondents. As a result, the total number of respondents in this study was 100.

### *Questionnaire as a Research Tool*

The questionnaire was prepared in Malay as it involved local respondents. It was divided into four parts, namely Part A, Part B, Part C, and Part D. Part A consisted of demographic data, including age, race, level of education, marital status, number of children, working status, monthly household income, and health history. Next, Part B consisted of the questions related to knowledge about herbs and female sexual dysfunction (FSD). This section provided several options that represent their understanding. Part C consisted of attitudes towards the use of herbs and FSD. This section was graded on a scale of 1 to 5, with 1 indicating strong

agreement and 5 indicating strong disagreement. Finally, Part D included questions about the use of herbs in the treatment of FSD. This part assesses the frequency of their practices, which are commonly, sometimes, seldom, and never. Answers given were given points, and the level of KAP was evaluated based on the percentage (%) of points gained. The questionnaire was being prepared in Malay as the expected respondents can be from different races that live in Kuantan, Pahang.

#### Statistical Analysis

The data was analysed using the Statistical Package for Social Sciences (SPSS). All data were examined for normality using a histogram and comparing means and skewness. The descriptive frequency table was used for the first objective, which is to identify the level of KAP regarding herbs used to treat FSD (mati putik) among women in Kuantan, Pahang. As for the second objective, an ANOVA and Kruskal-Wallis test were used to compare the socio-demographic characteristics that related to the level of KAP regarding herbs used to treat FSD. Lastly, the correlation analysis, which is the Spearman correlation coefficient, was used to determine the association between KAP and herbs used to treat FSD (mati putik) among women in Kuantan, Pahang.

## RESULTS

### Sociodemographic and Characteristics of Participants

There was 100 total number of respondents that had participated in this study. The mean of age of respondent is 41 and the respondents were all female from Malay ethnicity. More than half of the respondents undergo secondary level education, with 64.8% having a degree, master's, or PhD, followed by 18.7% who have a certificate or diploma. A total of 68 respondents were employed, and most of the respondents who participated in this study were from M40 and B40. About 90.1% of the participants had at least one child in their family.

### Level of Knowledge, Attitude and Practice on Female Sexual Dysfunction

Table 1 represents the scores in the categories of knowledge, attitude, and practice on female sexual dysfunction among the respondents. In terms of knowledge, it was recorded that the majority of respondents had a low level of knowledge on the use of herbs and female sexual dysfunction (mati putik), with 86 respondents. For attitude scores, most of the respondents had a moderate level of attitude towards the use of herbs and female sexual dysfunction, with 62 respondents (68.1%). Next, for practice scores, most of the respondents constituted with a low level of practice, which n=68 (74.7%).

**Table 1: Category of Knowledge, Attitude and Practices Scores on Use of Herbs to Treat Female Sexual Dysfunction (Mati Putik) Among Women**

Category	Percentage (%)
<b>Knowledge scores</b>	
Low	94.5
Moderate	4.4
High	1.1
<b>Attitude score</b>	
Low	11.0
Moderate	68.1
High	20.9
<b>Practice score</b>	
Low	74.7
Moderate	20.9
High	4.4

### Association between Knowledge, Attitude and Practice Related To Herbs Used To Treat FSD (Mati Putik) Among Women in Kuantan, Pahang

According to Table 2, there is a significant, positive with fair strength of correlation of Spearman's correlation coefficient,  $r_s = 0.309$  between knowledge and attitude scores. Similar to the association between knowledge and practice scores, the  $r_s$  value indicates that the relationship is positive,  $r_s = 0.435$ . The result of this association is significant with a p-value of 0.000. As for attitude and practice, the correlation coefficient,  $r_s = 0.104$ , shows that there is no correlation between the attitude and practice scores.

**Table 2: The association of knowledge, attitude and practice**

Variables	Correlation coefficient, $r_s$	p-value
Knowledge scores - Attitude scores	+0.309	0.003**
Knowledge score - Practice scores	+0.435	<0.000**
Attitude score - Practice score	+0.104	0.328

## DISCUSSION

For a long time, herbal plants have been used to treat FSD or “mati putik”. Some Malay Medical Manuscripts have documented different types of herbs and their sexual health benefits. In addition, the Ministry of Health reported that the use of traditional and complementary medicine was well known among the community in Malaysia for curing disease and maintaining health (MOH, 2016). However, the users of T&CM might not have enough knowledge and awareness regarding their practices (Ali et al., 2018). Hence, throughout this study, the KAP regarding the related herbs' use for FSD will be further investigated.

A questionnaire was developed and validated as a research tool for this study. The development of the questionnaire was based on the literature review and modified from Hazwani & Radiah, 2020. The domain included was regarding the definition of FSD, risk factors, treatment, and five types of specified herbs that were extracted from Anhar (2021) from Malay Medical Manuscripts which are *Manjakani*, *Sirih*, *Adas Pedas*, *Zafaran*, and *Halba*. In terms of sociodemographic characteristics, the questions regarding age, race, level of education, marital status, number of children, occupation, household income, and underlying disease were included. The content validation of the questionnaire regarding facts on FSD was done by six medical doctors from different centres. Then, a pilot study was performed to ensure the questionnaire was understandable by the respondents. According to Abu Hassan et al. (2006), the purpose of the pilot study was to ensure that the questionnaire was comprehensible and appropriate and that the questions were well defined, clearly understood, and presented in a consistent manner. Hence, the questionnaires were used to collect the data from the respondents to the actual study. Other than that, the questionnaire was also validated using cronbach's alpha test using the data obtained from the pilot study to observe the internal consistency of each item of the questionnaire for KAP and the results were 0.834, 0.788 and 0.890. According to Stephanie et al. (2019), the alpha value of the knowledge and practices questionnaires showed that there was good internal consistency between the items, while the attitude items were acceptable. Thus, the questionnaire for this study is reliable since it has a good and acceptable internal consistency between the measured items.

The objective of this study is to identify the level of KAP regarding herbs used to treat FSD, “Mati Putik”, among women in Kuantan, Pahang. The level of knowledge and practice of the respondents was low, which was represented by 94.5% and 74.7% respectively. According to a survey conducted in Bahrain, most respondents (64.6%) among physicians had basic knowledge of herbal medicines (Mahmood & Hilal, 2017). It was reported that the main source of knowledge on herbal medicines among the physicians was based on their own experiences, followed by academic study and from internet sources (Mahmood & Hilal, 2017). Furthermore, the physicians' ability to consume herbs is facilitated by their extensive knowledge and the low cost of the herbs. Thus, the reason why the respondents have a low level of knowledge and are not consuming herbs for FSD might be because they are not experiencing the disorder; hence, they are not aware of the existence and functions of consuming herbs for the treatment of FSD, which becomes a hindering factor in consuming the herbs for the purpose of sexual health. This is supported by the findings of the knowledge distribution on herbs and FSD, in which the majority of respondents were unsure about the risk factors and FSD. Moreover, most of them were also not sure and answered wrongly on the functions of the herbs to treat the symptoms of FSD, where the ratio of respondents who got the wrong answer outweighed the number of respondents who answered the questions successfully (Table 4.3). In addition, the findings from the distribution of practice on the use of herbs also found that the majority of the respondents had never consumed the herbs to treat FSD but were still consuming the herbs for general women's health. As a result, the FSD may influence women's knowledge and practises regarding the use of herbs for treating sexual dysfunction. Other than that, despite having low-level knowledge and practices on the use of herbs to treat FSD, 68.1% of the respondents express a good level of attitude towards the use of herbs to treat FSD. The findings from the distribution of attitudes on the use of herbs to treat FSD show that the respondents believe in the effectiveness and benefits of herbs for sexual health. Aligned to a study on the perception of herbal remedies among Malay women in Malaysia, the participants agreed that herbs are safe and effective for managing health problems among women.

The next objective of this study was to determine the sociodemographic characteristics that contribute to the level of KAP on the use of herbs to treat FSD (mati putik) among women in Kuantan, Pahang. It was found that there was a significant difference in terms of practices between the occupation groups. The respondents from the private sector had a high level of herb use practises ( $X=17.08$ ,  $M=18.00$ ). This finding was similar to a study that reported employed respondents were more likely to use herbs compared to unemployed users (Jasamai & Jamal, 2019). Thus, it shows that the types of occupations influence the practice of using herbs among the respondents. The final objective was to determine the correlation between KAP and the use of herbs to treat FSD among women. In Tables 4.9 and 4.10, there was a significant and weak correlation between knowledge and attitude ( $r = 0.309$ ,  $p = 0.003$ ) and knowledge and practises ( $r = 0.435$ ,  $p 0.001$ ) regarding the use of herbs for FSD. The positive correlation between knowledge and attitude and knowledge and practices in this study reaffirmed the relationship between these elements. This indicates that adequate knowledge might influence the attitude of the respondents towards the use of herbs for FSD. Other than that, the respondents tend to consume herbs with adequate knowledge. Therefore, there is a need to spread knowledge and information regarding the use of herbs as a treatment for FSD among the community; hence, the community manages to get adequate knowledge on the use of herbs for FSD.

The current study included a few restrictions. Due to cultural and religious sensitivities, this study was challenging to undertake, especially in Malaysia, which is renowned for its conservative culture among its multiethnic population. Even for the majority of medical professionals, discussing openly sexual issues in public is still taboo. Some of the potential respondents refused to grant consent because they felt uncomfortable discussing personal subjects, particularly those with sexual overtones. The sample size as a result was minimal but achievable due to this factor. Since our samples were drawn through convenience sampling and most of the patients were in stable relationships or marriages, there may be pre-selection bias.



## CONCLUSION

The low use of herbs to treat FSD and the success in reducing FSD symptoms among women in this study are both strongly influenced by low knowledge of these treatments. The degree of practise is considerably influenced by the occupational background. Other than that, there was a substantial correlation between the knowledge and attitude and knowledge and behaviour variables among the respondents. Besides recommendation on the increasing number of respondents from other area in Malaysia, the findings imply that clinical practice to establish appropriate therapy in Malaysia as well as sexual health promotion measures to prevent FSD are required, as is education and awareness of FSD and herb usage.

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