ISSN 1462 2815

BARRIERS TO MODERN CONTRACEPTIVE USE AMONG COASTAL WOMEN: A MIXED-METHODS STUDY IN PANGKAJENE ISLANDS, INDONESIA

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DOI: 10.5281/zenodo.13690828

Abstract

Background: Indonesia's family planning programme has been successful in reducing birth rates, but its implementation in coastal areas still faces challenges. This study aimed to identify barriers to accessing family planning education and information needs to increase the use of modern family planning, particularly IUDs, among coastal women. **Methods**: The research design used quantitative-qualitative mixed-methods in Pitusunggu Village, Pangkajene Islands Regency. Data were collected through a survey of 105 male respondents to assess husband support for family planning. Qualitative data were obtained through focus group discussions (FGDs) with married men, productive-age women, family planning cadres, and community leaders. **Results**: Most husbands (95%) agreed to family planning, but only 31% actively discussed and 27% were involved in family planning decision-making. FGDs revealed a lack of comprehensive understanding of modern contraceptive methods and their side effects. Key barriers include the stigma of family planning as a woman's business, fear of side effects, and difficult geographical access. Coastal women prefer injectable contraceptive methods (44.5%) and implants (39.6%). **Conclusion**: Unsupportive husbands and incomprehensive understanding are the main barriers to accessing family planning education in coastal areas. A more comprehensive and culturally sensitive education model is needed to increase men's participation and use of modern family planning. Further research on more practical male contraceptive methods is also recommended.

Keywords: Family Planning, Coastal Communities, Husband Support, Modern Contraception, Family Planning Education.

INTRODUCTION

The Indonesian government launched the Family Planning (FP) programme as an effort to control the birth rate. The family planning programme is a tactical response to the increasing population. The family planning programme is regulated in Law No. 52 of 2009 and aims to create a healthy and prosperous Indonesian society. Family planning aims to address excessive population growth as a driver of poverty, marginalisation and environmental degradation.

Families who follow the family planning programme have better maternal and child health through birth spacing. In addition, family planning is an effective strategy to reduce maternal mortality.

The family planning programme reduces maternal and child mortality by reducing the number of high-risk pregnancies that occur. Further efforts are needed to reduce sexual exposure, early marriage, postpartum infertility and induced abortion. Contraceptive use has reduced maternal mortality by 6-60% globally (Bearak et al., 2018; Meh et al., 2022).. In addition, contraceptive use reduces infant mortality and unsafe abortion rates.

While the family planning programme has been successful in implementation, it has stagnated over the past two decades. The contraceptive prevalence rate only increased from 60.3% in 2002 to 63.6 in 2017 (BPS, 2018). Current family planning programmes are organised based on health, education and economic aspects. The current generation has been exposed to various educational information from various media. The view of having children has also shifted. Modern society perceives that having children will have an impact on the economy, life burden, education and future demands. As a result, they do not want to have children. (Andriansyah A., 2020). However, on the other hand, reproductive health vulnerabilities continue to lurk among women, especially in marginalised areas. Therefore, the Nawacita Programme organised by The National Family Planning Agency has developed a programme to develop Indonesia from the periphery through strengthening population and family planning development at the national to village level (Hidayat et al., 2023).

The significant disparity in access to family planning education between urban and coastal areas is crucial. Modern contraceptive use (mCPR) for urban communities reached 62.7% while only 54.3% in coastal areas. (BPS, 2018). Research from Widyaningtyas et al (2021)showed that family planning services in coastal communities are lower than in urban areas. High awareness of contraceptive use does not guarantee a high level of knowledge about contraceptive methods and side effects. Studies show that low knowledge is associated with low contraceptive use (Bearak et al., 2018). This is related to myths and misconceptions about potential side effects and negative outcomes (Zajacova & Lawrence, 2018). Infrastructure issues, geographical location and a small workforce influence the disparity in access to family planning education in coastal and urban areas. These factors occur outside of clinical settings, meaning community-based interventions are a way to increase knowledge, awareness and understanding of family planning services and options on a wide scale (Sharma et al., 2018).

The use of contraceptives in coastal communities in the Pangkajene Islands Regency requires special attention. Although contraceptive use is widespread, the birth rate is still high. This condition identifies the use of contraceptives has not been in accordance with its original purpose, which is to regulate birth spacing. Coastal communities have marginalised characteristics. The characteristic of marginalised communities is low economic level. Coastal communities generally receive poor health services. Global documentation has shown that socio-economically rich and highly educated people get better health services (Gordon et al., 2020). Poor lifestyles such as smoking, unbalanced diet, and physical inactivity are prevalent in low socioeconomic communities. They rarely use preventive health services such as consulting a doctor. This situation is further complicated by health care facilities and financial barriers. Lower socioeconomic groups including coastal areas and remote islands have incomplete health facilities and services.

ISSN 1462 2815

In social ecology theory, the family planning use behaviour of coastal women is influenced by complex interactions between individuals and their social environment. At the microsystem (individual) level, women's decision to use family planning depends on their prior knowledge, attitudes and beliefs about contraceptive methods. Study (Srivastava et al., 2021) showed that individual positive knowledge and attitude interventions can significantly increase family planning use. The intervention is in the form of education that is tailored to the health literacy level of the local community. Education that is sensitive to local beliefs and culture also affects the acceptance of family planning. In addition, a study by (Raghupathi & Raghupathi, 2020) also found that certain myths have the potential to prevent women from using contraception. Therefore, programmed education is needed to correct negative myths circulating in the community. Community-level discussion programmes should be encouraged to reduce misconceptions and increase the use of modern contraception.

At the mesosystem (interpersonal) level, it is important to involve couples and families in family planning education. Study (Olapeju et al., 2024) found that 66% of men and women wanted their partners to contribute to and support the decision to use contraception. This support can take the form of driving to health services and discussing contraceptive planning together. Women and men's perspectives on contraceptive support often differ. Men are often unwilling to be involved in contraception due to patriarchal views where men work and do not have time to drive to health services (Tekakwo et al., 2023). Men oppose involvement in contraception due to limited knowledge, misconceptions about side effects, male dominance and physical violence (Kriel et al., 2019).

Family planning education that is sensitive to culture and local wisdom will increase women's power to make family planning decisions. Study (Muluneh et al., 2021) found that women's empowerment and the use of family planning proved to have a significant relationship. Women who have access to information, health facilities and know family planning methods and geographical location affect the decision to use family planning. Socio-demographic factors and access to information are determining factors in using contraception. In addition, women in marginalised areas are less likely to use modern contraceptive methods than urban women. This is triggered by information on modern contraceptive methods that are still believed to have many side effects. (Singh et al., 2021). Accurate health education on the use of contraceptive safety and reproductive health through the family planning village programme helps increase family planning use in the community (Idris et al., 2021). Coastal women were generally aware of at least one type of contraceptive such as the pill, injection and implant, but none were aware of the permanent method (Nanvubya et al., 2020). Study results from Nanvubya et al (2022) also corroborated that marginalised communities have high family planning awareness, but low knowledge of specific methods. Low knowledge is associated with gender, place of residence, marital status and sexual involvement. This study aims to find barriers to accessing modern family planning education among coastal women and identify information needs to increase the use of modern family planning, especially IUDs.

METHODS

The design of this study was a mixed method featuring both quantitative and qualitative data. Quantitative analyses were conducted to examine the level of family planning use in the coastal area of Pitusunggu village in Pangkajene Islands and to

examine variables that describe men's support for family planning education among coastal women. The variables assessed were 1) Agreeing to family planning; 2) Discussing contraception with wife at least once a year; 3) Involved in deciding whether the wife should or should not use family planning. After obtaining a picture of the level of family planning use, we tested the association of male involvement indicators with family planning use. Data on the level of family planning use was collected using data on contraceptive use from the The National Family Planning Agency in Pangkep district. The instrument to test male support for contraception was a questionnaire completed by 105 male respondents. The final step was a qualitative analysis to assess the relationship between male support in family planning. We analysed the decision to use family planning from both the wife's and husband's side. If the wife used contraception to avoid another birth or wanted to delay the next birth, then this was considered the wife's decision. If contraceptive use was the man's desire to limit or delay further births then this decision was assessed as the husband's need. Contraceptive use was not met if neither partner was using contraception at the time of the study in April - June 2024. Couples' needs were met if both partners wanted to limit and space pregnancies and used contraception.

Quantitative sampling in this study used simple random sampling method. The target population was married men of childbearing age (15-54 years) in the coastal area of Pitusunggu village, Pangkajene Islands. From the sampling frame in the form of a complete list of the target population, 105 respondents were randomly selected using the random number generator function. Inclusion criteria included residency of at least 6 months in the village and willingness to participate, while exclusion criteria included serious illness or absence during the data collection period. A replacement procedure was established for respondents who were unable to participate. Sample validation was conducted to ensure population representativeness. Data collection using validated questionnaires was conducted in April-June 2024, with due regard to research ethics including ethical approval and informed consent. This method ensures every member of the population has an equal chance of being selected, increasing the representativeness of the sample and allowing generalisation of the results to the target population.

Qualitative data were collected through FGDs on 3-8 June 2024 from 3 groups: 1) married men of childbearing age (5 participants), 3) married women of productive age (15 participants); family planning cadres (10 participants) and community leaders (5 participants). Characteristics of coastal communities through FGDs were obtained regarding the following: 1) Knowledge about family planning; 2) Family planning information; 3) Gender roles in contraceptive decision-making; 4) Family planning experience and 5) Barriers to family planning use. FGDs for family planning cadres focused on: 1) family planning costs; 2) Training; 3) Socio-cultural factors affecting family planning use; 4) Geographic access issues and 5) Contraceptive services. FGDs with community leaders, in this case village officials, focused on: 1) Perspectives on family planning and the family planning programme; 2) Socio-cultural influences and traditional beliefs, 3) barriers to supporting family planning programmes. 4) Barriers to family planning uptake. All discussions were scrutinised and transcribed verbatim. Once the transcripts were validated, the narratives were translated into English. Data were analysed using thematic content and direct quotes from men. Women, family planning cadres and community leaders are presented in italics to highlight key findings.

ISSN 1462 2815

Qualitative sampling in this study used snowball sampling method to select Focus Group Discussion (FGD) participants consisting of four groups: married men of childbearing age (5 participants), married productive age women (15 participants), family planning cadres (10 participants), and community leaders (5 participants). The process began by identifying a few key participants who met general inclusion criteria (Pitusunggu village residents, willing to participate, able to communicate well) and specific criteria for each group. These initial participants, recommended by local health workers or community leaders, were then asked to recommend other suitable candidates. This process continued until the required number of participants was met. This method allows researchers to reach participants who may be difficult to identify, while still being mindful of potential bias and participant diversity. FGDs were conducted from 3-8 June 2024 with a predetermined discussion focus for each group, while applying research ethics principles including informed consent and confidentiality assurance.

Quantitative data analysis in this study used the chi-square test statistical method with the help of SPSS software. Chi-square test was chosen to test the association between categorical variables, in this case indicators of male involvement (agreeing to family planning, discussing with wife, and being involved in decision-making) and family planning use. The steps of the analysis included: 1) Tabulation of data in SPSS; 2) Checking chi-square assumptions, including minimum expected frequencies; 3) Conducting the chi-square test; 4) Interpretation of results with a significance level of $p < 0.05$. If the p value is less than 0.05, the relationship between the variables is considered statistically significant. This analysis will produce chi-square values, degrees of freedom, and p values that will be used to draw conclusions about the relationship between the variables.

For qualitative analysis, this study used thematic content analysis with the following steps: 1) Familiarisation of the data: the researcher reads the FGD transcripts repeatedly to understand the content of the data in depth; 2) Coding: identifying and labelling units of meaning in the data; 3) Theme identification: grouping similar codes into potential themes; 4) Theme review: checking the themes against the original data to ensure congruence; 5) Theme definition and naming: giving a clear and descriptive name to each theme; 6) Report writing: compiling an analytical narrative that links the themes to the research questions.

To ensure the validity of the data, the triangulation method was used by: 1) Triangulation of data sources: comparing perspectives from different groups of participants (men, women, family planning cadres, community leaders); 2) Triangulation of methods: comparing the results of quantitative analysis with qualitative findings; 3) Researcher triangulation: involving more than one researcher in the analysis process to reduce individual bias. This process increases the credibility and depth of understanding of the phenomenon under study.

RESULTS AND DISCUSSION

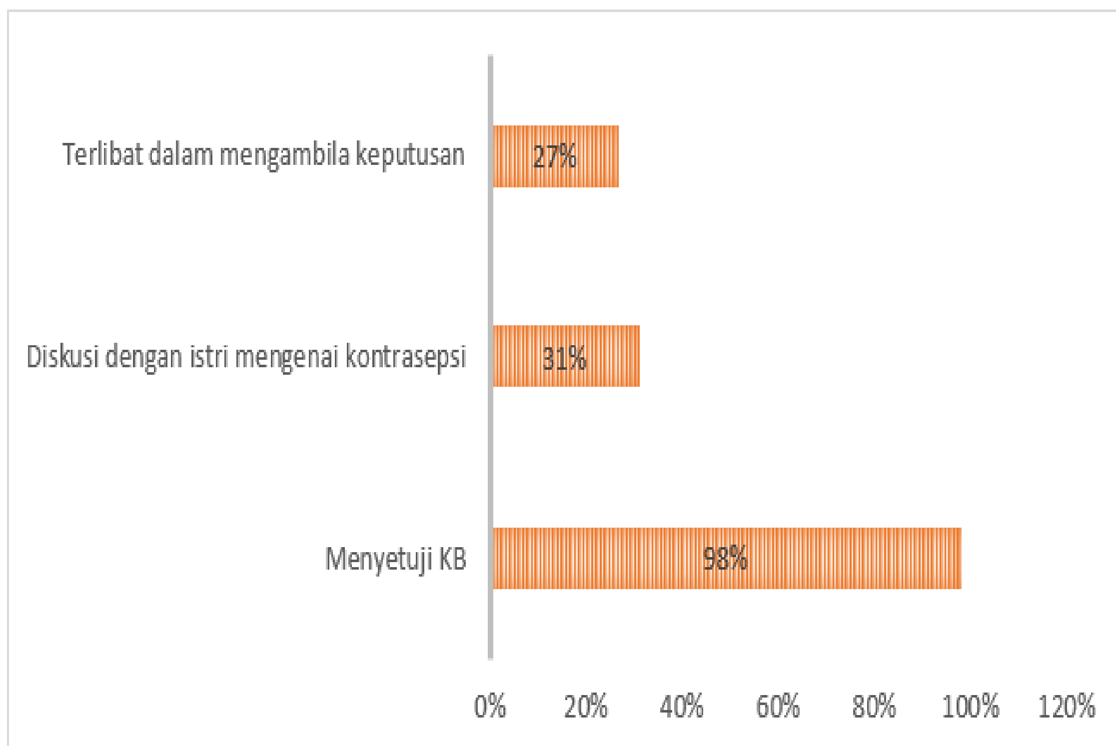
Family Planning Demand and Contraceptive Use Data

Based on the data in Table 1, 80% of requests were found to be appropriate and 53.41% were not appropriate, where cases of wives wanting to limit and regulate birth spacing were 2.37 times more common (37.58%) than cases of husbands wanting to limit or regulate birth spacing (15.83%). Overall, 74.85% of family planning requests

were from wives and 53.10% from men. Table 1 million illustrates the contraceptive use behaviour of husbands and wives. It can be seen that wives use contraceptives much more than husbands. 9.23% of couples who did not want family planning continued to use contraceptive methods with 80% of wives and 3% of husbands. Overuse of contraception was found in all cases with 1%-2% of both using contraception.

Table 1: Family Planning Demand and Contraceptive Use

Indicators	Total	Percent	Wife	Husband	Both	Neither
Wife wants to limit or distance, husband does not	121	37.58	90%	3%	2%	5%
Husband wants to limit or distance, wife does not	51	15.83	89%	3%	1%	7%
Both want to limit and distance	120	37.27	86%	1%	1%	15%
Both of them don't want to limit and give distance	30	9.32	80%	3%	1%	16%
Totally	322	100				



Graph 1: Questions on Male Support in Family Planning

Three variables were used in this study to assess husband support for family planning in Pitusunggu Village, Pangkajene Islands Regency. As observed in Figure 1, the majority of husbands approved of family planning, 31 per cent actively discussed contraception with their wives and 27 per cent were involved in making decisions about contraceptive use. The majority of husbands in Pitusunggu village do not see family planning as the sole responsibility of women (Leal Filho et al., 2023). They provide support to their partners despite the relatively low family planning use among husbands (Smith & Sinkford, 2022).

ISSN 1462 2815

Table 2: Background Factors Related to Husband Support

Background	Approve the JC	Discussion with wife about family planning	Engage in decision-making
Age			
<30	95.1	59.1**	28.7**
30-45	94.3	55.6	20.3
>45	90.2*	40.4	15.3
Education			
Primary	90.8*	47.7**	50.1**
Secondary	95.1	67	87.4
Higher	94.9	58.9	67.7
Occupation			
Not Working	91.3*	54.1**	33.9**
Fishermen	95.8	56.3	20.1
Pond Farmers	92.2	43.6	67
Fish traders	94.7	52.7	50.3
Seaweed Farmers	95.9	55.3	89.4

*p value < 0.05; **p value < 0.001

Table 2 presents data on the correlation between sociodemographic aspects and husband support for family planning and contraceptive use. More mature husbands were more agreeable to family planning, although they still had low support in discussions and involvement in contraceptive use. Husbands who have higher education are more open in discussing family planning with their wives and approve of contraceptive use, although they are still reluctant to use it. Employment indicators showed different variations.

The qualitative data collected in this study uncovered various reasons that emerged from the quantitative analysis. An issue arising from the focus group discussions (FGDs) was the role of community knowledge regarding contraceptive methods and side effects.

> "*So far, we only know the good and bad of using birth control. But rarely does anyone fully explain the side effects faced when using these types of contraceptives. Health workers should not only educate about the importance of family planning but also honestly explain the side effects of each contraceptive. I've only been using injectable birth control for 2 years, and now I've gained 20 kg. I finally changed to an implant. I hoped that the implant would be able to overcome the weight gain, because according to the info from the officer there are people who are thin because they use implants. In fact, something different happened to me, I still gained weight despite using the implant." (SN, 33-year-old housewife, Pitusunggu village*)

> *"I usually discuss contraception with my husband. My husband knows the different types of contraceptive methods. He also gives consideration to the side effects and practical aspects of contraception. But maybe because he is a man and considers the issue of childbirth a woman's business, he does not want to participate in contraception." (IM, female 27 years old fish trader, pitusungguh)*

> *"Some fishermen think that family planning programmes are the wives' business. They also don't find out about contraceptives that men can use. Even if advised by a doctor, husbands are reluctant to get a vasectomy. Husbands also do not want a*

vasectomy because they are worried about disturbing their vitality." (RS, 42 years old, seaweed farmer, pitusunggu)

"Actually, the health centre has often given counselling to my wife. We don't want to participate because we are embarrassed. Sometimes also because the socialisation is done in the morning, I am tired after a night at sea. So I prefer to sleep instead of joining the family planning socialisation. (WD, male 48 years old, fisherman, pitusunggu)

"The family planning cadres in Pitusunggu are very active. However, there are more contraceptives for women such as pills, injections, implants and so on. As far as I know, male contraceptives are condoms and surgery (vasectomy). Using a condom is uncomfortable for me while having surgery is costly. I hope there will be cheap contraceptive pills for men too." (SBH, male 35 years old, pond farmer, pitusunggu)

"In our family, it is the woman who uses birth control. I also approve of my wife using contraception. Sometimes I help her find information about good brands of birth control so that she doesn't get spotty. I look for information on the internet via browsing or watching educational videos on social media. But sometimes the internet is not good here, so we still ask the family planning cadre too." (FR, male 24 years old, fish trader, pitusunggu)

Information obtained from FGDs on family planning experience and family planning decision-making.

"When I first used the IUD, my husband complained because he felt uncomfortable. My husband said it felt like something was poking his genitals. I ended up going back to the midwife to remove the IUD and switch to implants. I discussed with my husband before deciding to use the implant. He was worried that he would no longer feel comfortable during sexual intercourse." (RS, 42 years old. Seaweed farmer, pitusunggu)

"The obvious thing that has happened since using contraception is that my weight has increased. I'm a little worried because it has affected my appearance. My husband actually advised me to stop using contraception. But I am also afraid of getting pregnant again." (SN, 33-year-old housewife, pitusunggu village)

Barriers to family planning participation were also noted by family planning cadres in the FGDs. They mentioned access to transport to health facilities and staff lacking training in clinical contraceptive services. Stakeholders, in this case sub-district officials, mentioned that the patriarchal culture that is still strong in the community makes resistance to modern contraceptives such as vasectomy still large. Information on the benefits of modern contraception for men also needs to be addressed.

"Male family planning still lacks information. Most of the information people get from family planning cadres, community health centres, and neighbourhood associations. The information is aimed at mothers only. It might be easier if there were contraceptives such as pills or injections for men as well. For mothers in Pitusunggu itself, it is still rare that they want to use the IUD because it is uncomfortable. Maybe the midwives need to improve their skills so that the IUD thread is neater and does not interfere with sexual activity between husband and wife." (S. village employee 44 years old, pitusunggu)

ISSN 1462 2815

DISCUSSION

In a household, the husband is the head of the family. The husband is the main decision maker in the family, including the use of contraceptives. Husbands who support their wives in family planning programmes provide greater access for wives to educational information about contraception. Longitudinal study conducted by Khan et al (2021) found that women who received husband support for contraceptive use were 1.8 times more likely to access health services and contraceptive education programmes.

This led to an increase in participation in counselling sessions by 63%. Findings from (Akinsolu et al., 2024; Mu & Chen, 2022) suggest that husbands who oppose contraception are 2.5 times more likely to hinder their wives' access to reproductive health information and services. Another corroborating study from (Asif et al., 2021) that in developing countries husband support has a positive correlation with the level of reproductive health literacy of wives.

Our study focused on three dimensions of husbands' support for family planning: agreeing to family planning, discussing with their wives about contraceptive choice and being involved in decision-making about contraceptive use. Although the majority of husbands agreed to family planning, few were involved in discussions and decision-making. Husbands consider family planning to be a woman's business. As a result, husbands still do not participate in contraceptive use.

The majority of people are reluctant to use permanent modern contraceptives. They have fears about side effects after permanent family planning. In addition, they are concerned about the high cost of permanent family planning because it requires surgery. Spousal consent has been shown to be a strong determinant of contraceptive use among women (Achola et al., 2024). Study from (Khan et al., 2021) corroborates the study results that women from marginalised environments prefer contraceptives such as pills, injectables and implants compared to permanent family planning such as vasectomy and tubectomy.

Therefore, family planning education for coastal women needs to involve their partners. Community leaders and the government also play an important role in encouraging men to get involved in family planning and reproductive health education. We also suggest finding alternative oral contraceptives for men.

We found that coastal women need new information about modern contraceptive methods, their side effects and advantages. So far, the information they get is not comprehensive so they are afraid. Their knowledge about modern contraceptives such as condoms is quite good. Many do not use them because their husbands feel uncomfortable. This indicates that their understanding of condom use is limited to convenience. They do not understand the great benefits of using condoms not only to regulate pregnancy but also to prevent infectious diseases.

They rarely hear about permanent contraceptive methods such as vasectomy and tubectomy. In this study, we supplemented family planning education from trusted sources of information. Information on long-term contraceptive methods with minimal side effects such as IUD, vasectomy and tubectomy was provided with a complete explanation of the procedure, cost, advantages and side effects.

ISSN 1462 2815

Although many people are still afraid and exaggerate the rare side effects (decreased male vitality), continuous education is believed to increase the use of permanent contraception in coastal communities. This is in line with research (Akinsolu et al., 2024) who found that the perception of others in the form of frightening words had an effect on contraceptive decision making. In addition, another study mentioned that exaggerating the side effects of permanent contraception due to misunderstanding often occurs in the community (Sundararajan et al., 2019).

The main strength of this study is that the primary data was collected from the coastal communities of Pangkajene Islands. However, this study has some limitations as it only used data from a cross-sectional survey so our findings are correlational. In addition, we did not identify confounding factors that may have influenced the decision to use contraception. Finally, we did not validate the interviewers.

CONCLUSION

This study found that the main barrier to accessing family planning information among coastal women was support from their husbands. The non-comprehensive understanding and stigma attached to contraception among women made some husbands neglect to participate in contraception. Information services from family planning cadres are also hampered because access to some locations is difficult.

Family planning cadres need continuous training to be able to provide up to date information to the community. A more comprehensive education model sensitive to the culture of coastal communities is needed to increase public confidence, including men, about permanent contraception. To increase men's participation in family planning, it is recommended that there be innovative male family planning in oral or injectable forms. More practical preparations such as oral and injectable are seen as easier for them to use.

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