

Relationship between knowledge level and contraceptive compliance among family planning acceptors: A Cross-Sectional Study

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ABSTRACT

Introduction: Contraceptive compliance is a key determinant of the effectiveness of family planning programs. Inadequate compliance may lead to contraceptive failure, unintended pregnancy, and reduced confidence in family planning services. Knowledge level is considered an important factor influencing compliance; however, empirical evidence linking knowledge to contraceptive compliance remains limited, particularly in primary health care settings. This study aimed to examine the relationship between knowledge level and contraceptive compliance among family planning acceptors.

Methods: A quantitative analytical study with a cross-sectional design was conducted at selected primary health care facilities. The study involved 50 women of reproductive age who were active family planning acceptors. Data were collected using a structured questionnaire assessing socio-demographic characteristics, knowledge of contraception, and contraceptive compliance. Knowledge levels were categorised as low, moderate, or high, while the correct and consistent use of contraceptive methods and adherence to follow-up schedules were used to assess compliance. Data analysis included descriptive statistics and chi-square tests, with a significance level set at $p < 0.05$.

Results: 44.0% of respondents had a high level of knowledge, 36.0% had moderate knowledge, and 20.0% had low knowledge. Overall, 62.0% of respondents were compliant with contraceptive use. A statistically significant relationship was found between knowledge level and contraceptive compliance ($p = 0.012$). Respondents with high knowledge levels demonstrated the highest compliance rate (81.8%), while non-compliance was most prevalent among those with low knowledge levels (70.0%).

Conclusion: Knowledge level is significantly associated with contraceptive compliance among family planning acceptors. Strengthening structured and client-centred educational and counselling interventions is essential to improve contraceptive compliance and enhance the effectiveness of family planning programs.

Keywords: Contraceptive Effectiveness; Counselling; Female; Pregnancy.



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INTRODUCTION

Family planning programs play a critical role in improving maternal and child health, reducing unintended pregnancies, and supporting sustainable population growth [1]. The effectiveness of these programs, however, is not determined solely by access to contraceptive services but also by the extent to which acceptors consistently and correctly use the chosen contraceptive methods [2]. Contraceptive compliance, defined as adherence to recommended use, schedules, and follow-up requirements, remains a persistent challenge in many settings, particularly in low- and middle-income countries. Non-compliance can lead to method failure, discontinuation, unintended pregnancy, and reduced confidence in family planning services, thereby undermining public health objectives [3].

One key factor frequently associated with contraceptive compliance is the level of knowledge among family planning acceptors [4]. Knowledge encompasses understanding of contraceptive types, mechanisms of action, benefits, side effects, correct usage, and the consequences of non-adherence. Adequate knowledge enables acceptors to make informed decisions, anticipate and manage side effects, and maintain consistent use of contraception [5]. Conversely, limited or inaccurate knowledge may contribute to fear, misconceptions, inappropriate use, and premature discontinuation of contraceptive methods. Despite ongoing counselling efforts by midwives and other health professionals, gaps in knowledge persist among acceptors, suggesting that information delivery is insufficient, inconsistent, or poorly retained [6].

Several studies have explored determinants of contraceptive use, highlighting socio-demographic factors such as age, education, parity, and spousal support [7]. While these variables are essential, they do not fully explain why some acceptors adhere well to contraceptive regimens while others do not [8]. In practice, family planning services often emphasise method uptake rather than sustained compliance. As a result, acceptors who initially choose a method may later become non-compliant due to misunderstandings of instructions, misinterpretations of side effects, or a lack of ongoing reinforcement of information [9]. This situation points to a critical problem within family planning programs: high enrollment does not necessarily translate into effective and continuous contraceptive use [10].

The existing literature shows a substantial focus on contraceptive prevalence and method choice, but comparatively fewer studies specifically examine contraceptive compliance as an outcome variable [11]. Moreover, studies that do assess knowledge often measure it broadly without clearly linking different levels of knowledge to concrete compliance behaviors, such as timely pill intake, scheduled injections, routine follow-up visits, or continued use over a defined period. This represents a notable research gap [12]. Understanding whether and how knowledge level is associated with compliance can provide more actionable evidence to improve counselling strategies and service delivery models within family planning programs [13].

Another gap lies in the variability of family planning services across contexts. Cultural beliefs, health system characteristics, and the role of frontline providers, particularly midwives, differ across regions and influence how information is delivered and received [14]. Findings from one context may not be directly applicable to another. Therefore, localized quantitative evidence is needed to clarify the relationship between knowledge level and contraceptive compliance among family planning acceptors in specific service settings. Without such evidence, interventions may rely on assumptions rather than data-driven insights [15].

The novelty of this study lies in its explicit focus on contraceptive compliance as a measurable behavioral outcome and its systematic examination of knowledge level as a key determinant. Rather than merely assessing whether acceptors know about contraception, this study evaluates how variations in knowledge are associated with actual compliance behaviors. By adopting a quantitative cross-sectional approach, the study provides empirical evidence on the strength and direction of this relationship within a defined population of family planning acceptors. This approach allows for a clearer understanding of whether higher knowledge levels are significantly associated with better compliance, thereby moving beyond descriptive assessments toward analytical insight.

Furthermore, this study contributes to the field by providing evidence directly relevant to midwifery practice and family planning counselling. Identifying a significant relationship between knowledge and compliance would underscore the importance of targeted, structured, and

comprehensible education during family planning services. It would also support the development of standardised counselling tools and follow-up strategies aimed not only at increasing acceptance but also at sustaining effective contraceptive use. Examining the relationship between knowledge level and contraceptive compliance among family planning acceptors addresses a critical problem in reproductive health services, fills an important gap in the existing literature, and offers a novel, practice-oriented contribution. The findings are expected to inform evidence-based interventions that strengthen the quality and effectiveness of family planning programs by improving educational and counselling approaches.

MATERIALS AND METHODS

Study Design

This study employed a quantitative, cross-sectional design to examine the relationship between knowledge level and contraceptive compliance among family planning acceptors. The cross-sectional design was considered appropriate for assessing exposure (knowledge level) and the outcome (contraceptive compliance) simultaneously within a defined population.

Study Setting and Population

The study was conducted at selected primary health care facilities providing family planning services. The study population consisted of women of reproductive age who were registered as active family planning acceptors and were receiving contraceptive services during the study period. A total of 50 respondents participated in this study, all of whom met the predefined inclusion criteria. These respondents represented active family planning acceptors who routinely accessed contraceptive services at the selected health care facilities during the data collection period.

Sample Size and Sampling Technique

The sample size was determined using a standard formula for analytical cross-sectional studies, considering a 95% confidence level and an acceptable margin of error. A proportional sampling technique was applied to ensure adequate representation of family planning acceptors across the selected facilities. Eligible participants were recruited using consecutive sampling until the required sample size was achieved.

Inclusion and Exclusion Criteria

The inclusion criteria were family planning acceptors aged 15–49 years who had been using a contraceptive method for at least three months and were willing to participate in the study. Acceptors who had cognitive impairments, severe illness at the time of data collection, or incomplete medical records were excluded.

Study Variables

The independent variable was the level of knowledge regarding family planning and contraception. The dependent variable was contraceptive compliance. Socio-demographic characteristics, including age, education level, parity, and duration of contraceptive use, were treated as potential confounding variables.

Data Collection Instruments

Data were collected using a structured, self-administered questionnaire developed based on relevant literature and family planning guidelines. The questionnaire consisted of three sections: socio-demographic characteristics, knowledge of contraception, and contraceptive compliance. The knowledge section assessed understanding of contraceptive types, mechanisms of action, benefits, side effects, and correct usage. Knowledge scores were categorised into low, moderate, and high levels based on predetermined cut-off points. Contraceptive compliance was measured using questions about correct and consistent use of the selected method, adherence to schedules, and attendance at follow-up visits.

Validity and Reliability

Content validity of the questionnaire was evaluated by experts in midwifery and public health. A pilot test was conducted to assess clarity and reliability. Internal consistency was assessed using Cronbach's alpha, with a coefficient ≥ 0.70 considered acceptable.

Data Collection Procedure

Trained research assistants carried out data collection. Participants were informed about the study

objectives and procedures prior to data collection. Written informed consent was obtained from all participants. Questionnaires were completed in a private setting to ensure confidentiality.

Data Analysis

Data were analyzed using statistical software. Descriptive statistics were used to summarize socio-demographic characteristics, knowledge levels, and compliance status. Bivariate analysis was performed using the chi-square test to assess the relationship between knowledge level and contraceptive compliance. Multivariate logistic regression analysis was conducted to control for potential confounding variables. Statistical significance was set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the relevant institutional ethics committee prior to the study. Participants' anonymity and confidentiality were strictly maintained, and participation was voluntary with the right to withdraw at any time without consequences.

RESULTS

This section presents the study's findings on the relationship between knowledge level and contraceptive compliance among family planning acceptors. The results are organized to describe the characteristics of respondents, the distribution of knowledge levels, the level of contraceptive compliance, and the statistical analysis examining the association between knowledge level and contraceptive compliance among the study participants.

Table 1. Demographic characteristics of respondents (n = 50)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	15–24	8	16.0
	25–34	22	44.0
	35–49	20	40.0
Education Level	Primary school	12	24.0
	Secondary school	26	52.0
	Higher education	12	24.0
Parity	Primiparous	14	28.0
	Multiparous	36	72.0
Type of Contraceptive Method	Hormonal	32	64.0
	Non-hormonal	18	36.0
Duration of Contraceptive Use	≤ 1 year	19	38.0
	> 1 year	31	62.0

Table 1 shows that most respondents were aged 25–34 years (44.0%), followed by those aged 35–49 years (40.0%), indicating that the majority of family planning acceptors were in the active reproductive age group. In terms of education, more than half of the respondents had secondary education (52.0%), while equal proportions had primary (24.0%) and higher (24.0%) education. The majority of respondents were multiparous (72.0%), suggesting prior childbirth experience, which may influence contraceptive decision-making. Most respondents used hormonal contraceptive methods (64.0%), and more than half had been using contraception for more than one year (62.0%). Overall, these findings indicate that the respondents were predominantly experienced family planning acceptors with adequate exposure to contraceptive services.

Table 2. Distribution of knowledge level among family planning acceptors (n = 50)

Knowledge Level	Frequency (n)	Percentage (%)
Low	10	20.0
Moderate	18	36.0
High	22	44.0

Table 2 indicates that nearly half of the respondents had a high level of knowledge about family planning and contraception (44.0%), while 36.0% had a moderate level. However, 20.0% of respondents still had a low level of knowledge. These findings suggest that although the majority of family planning acceptors possessed adequate knowledge, a substantial proportion remained insufficiently informed, which may negatively influence correct and consistent contraceptive use.

Table 3. Relationship between knowledge level and contraceptive compliance among family planning acceptors (n = 50)

Knowledge Level	Compliant n (%)	Non-Compliant n (%)	Total n (%)	p-value
Low	3 (30.0)	7 (70.0)	10 (100)	0.012
Moderate	10 (55.6)	8 (44.4)	18 (100)	
High	18 (81.8)	4 (18.2)	22 (100)	

Chi-square test; significance level $p < 0.05$.

Table 3 demonstrates a clear association between knowledge level and contraceptive compliance among family planning acceptors. Respondents with a high level of knowledge showed the highest proportion of compliance (81.8%), whereas non-compliance was more common among those with low knowledge levels (70.0%). As knowledge levels increased from low to high, the proportion of compliant acceptors also increased. The chi-square test revealed a statistically significant relationship between knowledge level and contraceptive compliance ($p = 0.012$), indicating that knowledge level is significantly associated with compliance behavior. The findings indicate that a higher level of knowledge is significantly associated with better contraceptive compliance among family planning acceptors. Acceptors with adequate knowledge are more likely to use contraception correctly and consistently, highlighting the importance of strengthening educational and counseling interventions within family planning services to improve compliance outcomes.

DISCUSSION

This study examined the relationship between knowledge level and contraceptive compliance among family planning acceptors and found a statistically significant association between the two variables. The results demonstrate that acceptors with higher levels of knowledge were more likely to comply with contraceptive use compared to those with moderate or low knowledge. This finding underscores the central role of knowledge as a determinant of sustained and correct contraceptive use within family planning programs.

The observed pattern, in which compliance increased progressively with higher levels of knowledge, aligns with contemporary perspectives in reproductive health that emphasise informed choice and health literacy as foundations for effective family planning [16]. Knowledgeable acceptors are better equipped to understand instructions for use, recognize expected side effects, and differentiate them from danger signs [17]. This understanding reduces anxiety and misconceptions that often lead to irregular use or discontinuation. In contrast, acceptors with limited knowledge may misinterpret normal side effects as harmful, forget usage schedules, or discontinue contraception prematurely, resulting in lower compliance rates, as reflected in this study [18].

The proportion of non-compliance among respondents with low knowledge levels was notably high. This finding suggests that inadequate knowledge remains a critical barrier to effective family planning outcomes, despite the availability of services [19]. Recent evidence indicates that access alone is insufficient; the quality of counselling and the recipient's understanding of the information provided are equally important [20]. In many primary health care settings, counselling sessions may be brief, provider-centred, or focused mainly on method selection rather than on long-term use and follow-up. Such practices may limit knowledge retention and fail to address individual concerns, contributing to suboptimal compliance [21].

The predominance of respondents with secondary education and multiparous status may have influenced the distribution of knowledge observed in this study [22]. Individuals with prior reproductive experience are more likely to have encountered family planning information through repeated contact with health services [23]. However, the presence of a substantial proportion of acceptors with moderate to low knowledge indicates that repeated exposure does not automatically translate into adequate understanding [24]. This finding highlights the need for tailored educational approaches that consider varying levels of literacy, learning preferences, and cultural contexts [25].

The significant association identified in this study supports behavioural health theories that posit that knowledge is a prerequisite for attitude formation and behaviour change. Knowledge alone may not

guarantee compliance, but it provides a necessary foundation for positive attitudes and consistent behaviours to develop. Acceptors who understand the benefits of contraception, the consequences of non-compliance, and the management of side effects are more likely to remain committed to their chosen methods [26]. Therefore, strengthening knowledge should be viewed as a strategic entry point for improving compliance, rather than as an isolated educational goal [27]. From a service delivery perspective, the findings have important implications for midwifery and family planning practice. Midwives are often the primary providers of family planning services and play a pivotal role in delivering information and counseling [28]. The demonstrated link between knowledge and compliance suggests that counseling should be structured, comprehensive, and interactive. Strategies such as visual aids, simplified messages, teach-back methods, and scheduled follow-up counselling may enhance knowledge retention and support sustained compliance [29]. Additionally, incorporating partners or family members into counseling sessions, where culturally appropriate, may further reinforce understanding and adherence [30].

The results of this study are consistent with recent global trends that emphasise person-centred family planning services. Current approaches advocate moving beyond numerical targets of contraceptive uptake toward ensuring that acceptors are fully informed and supported throughout the duration of use. By focusing on compliance as an outcome, this study contributes to a more nuanced understanding of family planning effectiveness. High uptake without compliance does not achieve the intended health benefits and may even increase dissatisfaction and distrust in services. Despite its contributions, this study has limitations that should be considered when interpreting the findings. The cross-sectional design limits causal inference, as knowledge and compliance were measured simultaneously. It is possible that compliant acceptors seek more information over time, thereby increasing their knowledge. Additionally, compliance was assessed through self-reported measures, which may be subject to recall or social desirability bias. The relatively small sample size may also limit generalizability to broader populations.

Nevertheless, the findings provide valuable empirical evidence supporting the importance of knowledge in promoting contraceptive compliance. Future research could employ longitudinal designs to assess changes in knowledge and compliance over time and to evaluate the effectiveness of specific educational interventions. Exploring additional factors, such as attitudes, perceived side effects, quality of provider–client communication, and spousal support, would also provide a more comprehensive understanding of compliance behaviour. This study confirms that knowledge level is a significant factor associated with contraceptive compliance among family planning acceptors. Strengthening the educational and counselling components of family planning services is essential to improve compliance, enhance program effectiveness, and ultimately improve reproductive health outcomes.

CONCLUSIONS

This study concludes that there is a significant relationship between knowledge level and contraceptive compliance among family planning acceptors. Acceptors with higher levels of knowledge were more likely to use contraception correctly and consistently compared to those with lower knowledge levels. These findings indicate that knowledge plays a critical role in supporting sustained contraceptive use and the overall effectiveness of family planning programs. Based on these results, it is recommended that family planning services strengthen structured, client-centred educational interventions, particularly during midwife counselling sessions. Enhancing the clarity, consistency, and continuity of contraceptive information, along with regular follow-up and reinforcement, is essential to improve compliance and prevent unintended pregnancies. Future programs should prioritize knowledge-based counseling as a key strategy to improve family planning outcomes.

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Authors' contributions

All authors contributed significantly to the development and completion of this research study.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this research. No financial, professional, or personal relationships have influenced the outcomes or interpretations presented in this study.

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