

# Why Don't Couples Use the Contraceptive That's Best for Them? Social Determinants of Long Acting and Permanent Contraceptive Method Use in Indonesia

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## ABSTRACT

**Objectives** : To examine social determinants of long acting and permanent contraceptive method (LAPM) use among currently married Indonesian women aged 15 to 49 years.

**Method.** Data were derived from a cross-sectional study in Tuban, Kediri, and Lumajang District (East Java Province) and Lombok Barat, Lombok Timur, and Sumbawa District (West Nusa Tenggara Province). Information was obtained from 5,930 respondents using a structure questionnaire. We estimated adjusted odds ratios to evaluate for social determinant factors associated with LAPMs use using multivariate logistic regressions.

**Results.** The prevalence of LAPMs use was 19%. The odds of LAPMs use among women who paid transport cost were higher than that among women who paid none. Similarly, LAPMs use were positively associated with LAPMs availability, encouragement to use LAPMs, perceived distance, knowledge about LAPMs, desire to have no more children, and contraceptive decisions jointly with husbands.

**Conclusions.** Our findings demonstrate the relatively low level of LAPMs use among currently married Indonesian women, and highlight social determinants that influence women to choose LAPMs. Further studies are warranted to include health provider perspective as well as collecting qualitative data in order to adequately assess behaviors of women associated with LAPMs use.

**Keywords.** Contraception; Long acting and permanent methods; LAPMs; Family planning

## INTRODUCTION

Indonesia's family planning program was once recognized as one of the most successful programs in the world. However, modern contraceptive prevalence rate (CPR) of 57% among Indonesian couples is lower than its neighbors of South Korea (67%), Vietnam (69%), and Thailand (70%).<sup>1</sup> Study showed that among ever married

women in Indonesia who use modern contraceptives, 86% used short acting methods —mostly injectables (60%) and oral contraceptive pills (26%) — whereas only 7% used IUD, 6% used implants, and less than 1% underwent female sterilization.<sup>2</sup>

A large number of studies have demonstrated high efficacy, acceptability and continuation rates of long-acting and permanent methods (LAPMs).<sup>3,4</sup> In the Contraceptive CHOICE Project in the United States for example, women aged 14-45 years who used long-acting reversible contraception were 21 times less likely to become pregnant than women using short-acting methods like oral contraceptives.<sup>5</sup> Furthermore, a total of 77 % of the 7,486 women in the study<sup>5</sup> chose a long-acting

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and reversible method. At 12 months, women who used long-acting and reversible methods of contraception had higher levels of satisfaction and continuation rates than women who used oral contraception.<sup>6</sup>

Some studies have highlighted a number of factors related to utilization of LAPMs including healthcare providers,<sup>7-9</sup> knowledge about LAPMs,<sup>10,11</sup> and joint contraceptive decision with spouse.<sup>10,12</sup> Little is known about the factors associated with LAPMs use in the Indonesian context. Understanding more about what may help women select and retain a form of contraception that suits them is particularly important at a time when contraceptive services are being transferred to local authorities.<sup>13</sup> Given the particularly low use of LAPMs in Indonesia<sup>2</sup>, more research is needed to examine factors associated with utilization of LAPMs among currently married women in Indonesia.

## METHOD

### *Study participants*

Data were derived from a cross-sectional study conducted from March to October 2013 in Tuban, Kediri and Lumajang districts (East Java Province) and Lombok Barat, Lombok Timur and Sumbawa districts (West Nusa Tenggara Province). The study was conducted with the approval of the Ethics Committee of Indonesia University Faculty of Public Health, and written informed consent was obtained from all participants. The participants were married women aged 15-49 years. Using a multi-stage cluster design, 50 villages were selected from each district and one neighborhood was randomly selected from each village. In each neighborhood, 40 individuals in East Java and 50 in West Nusa Tenggara were selected randomly for interview. A total of 13,162 women were recruited with participation rate of 97.5%. The present study was based on currently married women who reported using a method of family planning in the previous month before the survey (n=8,503). Out of 8,503 eligible women, we excluded 60 participants who traveled to the contraceptive service provider more than 4 hours and whose contraceptive use was decided by other than spouse. We further excluded 2,453 participants with missing information on the variables we studied. Our final sample for analyses included a total of 5,930 participants.

### *Data collection*

Women were interviewed using a structure questionnaire regarding their socioeconomic and demographic characteristics, knowledge and used of family planning, and reproductive history. LAPMs was defined as those methods that prevent pregnancy more than and equal to two years per application (Implants, IUD, male and female sterilizations). Detailed information on LAPMs use was ascertained by asking women the contraception type they had used in the last month prior to the survey. Access to the source of contraception method were assessed by asking respondent's perception about distance to the service place, transport cost spent for commuting to the service points, and LAPMs availability. The time required to commute to the service place were grouped into quintile to define the perceived distance, and the highest quintile was used as a cut-off point. Perceived distance was near if the time was < 14 minutes, and far if the time was  $\geq$  15 minutes. Transport cost was defined none if there was no transportation cost needed, while less and more were cut off by mode of amount of money paid for transportation (Rp. 10,000 or USD 0.75). Women were asked regarding the LAPMs availability and whether LAPMs was the most recommended family planning methods. Women assessed whether they satisfied with the family planning services provided in the health care, and the answers were categorized in to three categories: 'satisfied', 'neutral', and 'dissatisfied'. Knowledge about contraceptive methods was scored from zero to six, by computing six questions: two about appropriate spacing and limiting methods, and four about long-term LAPMs use (IUD, Implant, female and male sterilization). Desire for children were classified as wanted if the woman reported having wanted to become pregnant, undecided if she was not sure of having wanted to become pregnant, and wanted no more if she did not want to get pregnant. Woman was asked about who decided for her to use the contraception, and the answers were categorized into "herself" if she had an autonomy to decide, "husband" if she did not have an autonomy, and "joint with husband" if they discussed and decided together on contraception use.

## STATISTICAL ANALYSIS

Associations between LAPMs use and selected social determinants of contraception among currently married woman were examined in terms of odds ratio

and 95% confidence interval, which were obtained from logistic regression analysis. Statistical adjustment was made for age (mean), education level (not complete primary, complete primary, and complete secondary and higher), residence area, wealth index (poor, middle, and rich), and parity (nulliparous, primiparous, and multiparous). A two-sided *P*-value <0.05 was considered as statistically significant. Statistical analyses were calculated using SPSS software (SPSS, Inc., version 15).

## RESULTS

Nineteen percent of currently married woman participated in the present study chose one of the three LAMPs (7.8% implant, 7.6% IUD, and 3.5% female sterilization). More than half of women were not able to correctly answer three out of six questions regarding contraceptive methods (Figure 1). Only 47% of women mentioned LAMPs as appropriate for limiting childbirth, whereas 78% identified injectables and oral pills as appropriate spacing methods. In addition, only a few women understood male and female sterilization

as LAMPs, the proportions were 29% and 39%, respectively (data not shown).

We further examined associations between LAMPs use and selected social determinants of contraception among currently married women (Table 1). The odds of LAMPs use among women who paid transport cost for commuting to service point were markedly higher than that among women who paid none. Similarly, there were significant positive associations of LAMPs availability, encouragement to use LAMPs, perceived distance, and knowledge about LAMPs with LAMPs use among currently married women. Conversely, women who satisfied with provider service had significantly lower odds of LAMPs use relative to women who were not satisfied. The odds of LAMPs use in women who did not want more children were significantly higher compared to those women who did. Moreover, women who made contraceptive decisions jointly with their husbands had a higher odds of LAMPs use compared with women who made decisions alone.

**Table 1. Associations between social determinants of contraception and LAMPs use among currently married Indonesian woman.**

Variable	n* (%)	OR (95% CI) <sup>†</sup>	OR (95% CI) <sup>‡</sup>
Perceived distance			
Near	1901 (32.1)	1.00	1.00
Far	4029 (67.9)	2.74 (2.32-3.24)	2.72 (2.29-3.24)
Transport cost, Rupiah			
None	1897 (32.0)	1.00	1.00
Cheap	3025 (51.0)	1.92 (1.61-2.30)	1.86 (1.54-2.24)
Expensive	1008 (17.0)	5.86 (4.81-7.14)	5.57 (4.53-6.86)
LAMPs availability			
Not available	1615 (27.2)	1.00	1.00
Available	4315 (72.8)	5.26 (4.20-6.59)	4.38 (3.47-5.53)
Encouragement			
Short acting	3554 (59.9)	1.00	1.00
LAMPs	2376 (40.1)	4.15 (3.60-4.78)	3.75 (3.24-4.35)
Satisfied with provider service			
Dissatisfied	39 (0.6)	1.00	1.00
Neutral	271 (4.6)	0.27 (0.13-0.58)	0.29 (0.14-0.63)
Satisfied	5620 (94.8)	0.44 (0.23-0.86)	0.46 (0.23-0.91)
Knowledge			
Poor (<4)	3057 (51.5)	1.00	1.00
Good (≥4)	2873 (48.5)	2.56 (2.23-2.94)	2.19 (1.89-2.53)

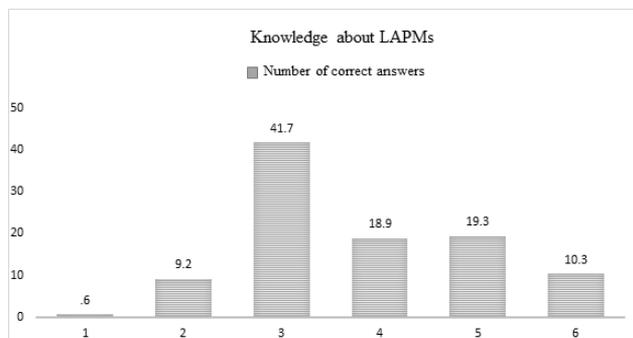
**Cont... Table 1. Associations between social determinants of contraception and LAPMs use among currently married Indonesian woman.**

Desire for children			
Wants another	2688 (45.3)	1.00	1.00
Undecided	367 (6.2)	0.96 (0.70-1.32)	0.97 (0.70-1.34)
Wants no more	2875 (48.5)	1.66 (1.34-1.97)	1.48 (1.21-1.81)
Decision for contraceptive use			
Alone	3913 (66.0)	1.00	1.00
Husband	108 (1.8)	1.36 (0.82-2.34)	1.25 (0.75-2.08)
Joint with husband	1909 (32.2)	1.82 (1.59-2.09)	1.73 (1.50-2.00)

\*Number of participants.

†Adjusted for age.

‡Adjusted for age, education level, residence area, wealth index, and parity.



**Figure 1. Knowledge about LAPMs among currently married Indonesian women**

## DISCUSSION

In the present study the low use of LAPMs (19%) among currently married Indonesian women was similar with the previous findings showing that LAPMs were the least utilized methods of contraception.<sup>14,15</sup> Results from the study in three regions including Asia have suggested that the limited use of LAPMs was driven primarily by a more substantial role in the provision of short-acting methods other than LAPMs.<sup>16</sup> In addition, the present findings also implies a significant effect of methods availability on LAPMs use. One study showed an increased in modern conceptive use across 113 countries when more methods were available to a large portion of the population.<sup>17</sup> Interestingly, it is likely that financial matter, such as transport cost, was taken in to account when participants decided to use LAPMs. Furthermore, greater distance to the service provider (measured in relation to travel time) tended to promote greater odds of LAPMs use. Use levels for IUDs and female sterilization that were dependent on travel to clinics rise as travel

time increases among currently married women in the Philippines.<sup>18</sup>

In Indonesia midwives are the main providers of contraception since the Village Midwife Program was introduced in 1989 by the government. The program's primary goals were not only to improve the use of family planning services but also to enhance the mix of contraceptive products available to target populations.<sup>19</sup> As previously noted, the village midwives in Indonesia influenced women to switch from pills to injectable contraceptives as opposed to switching to LAPMs.<sup>19</sup> The relatively infrequent use of LAPMs may indicate the midwives in Indonesia have not been effectively advocated for these methods of contraception. Therefore, It was likely that women in the present study addressed only the quality of short-acting contraception methods served by the health care provider since LAPMs were not commonly used in Indonesia.<sup>2</sup>

Knowledge of different contraceptive methods is an important factor in a woman's choice of LAPMs.<sup>10,11</sup> The present findings were in line with previous studies showing that the low use of LAPMs were attributed to women's lack of knowledge as well as their misperceptions about the methods.<sup>20,21</sup> The findings from a study among young women aged 15-24 years showed that one third of women had a lack of knowledge about IUD-related amenorrhea and they would not use the IUD.<sup>20</sup>

In the present study, an increased use of LAPMs associated with desire for no more children was consistent with findings from the previous studies.<sup>22,23</sup> Interestingly, the joint contraceptive decision-making with husband had also increased the LAPMs use even though less than half (42.3%) of women received support from their husbands to use LAPMS. This suggests that

there is a need of increasing spousal communication on family planning, particularly on the LAPMs use. Although men were reported as less involved in deciding which method to use and showed reluctance to discuss about contraception, the importance of communication between spouses regarding the LAPMs use have been emphasized in these studies.<sup>10,12</sup>

Advantages in the present study were the large size of the study population, systematic consideration of important social determinants of contraception, and the high participation rate (97.5%). However, information about family planning collected only from married women in reproductive age was a limitation in the present study. In addition, we could not establish a cause-effect relationship between the social determinant factors of contraception and LAPMs use due to its cross-sectional design. We attempted to control for potential confounders of known factors in the multivariable analysis.

### CONCLUSION

We concluded that in order to increase the uptake of LAPMs, more actions should be taken by encouraging women to choose LAPMs, discussion between partners about LAPMs, and improving women's knowledge about LAPMs. We suggest that further studies could include health provider perspective to understand determinant of LAPMs use as well as collecting qualitative data in order to adequately assess behaviors of women associated with LAPMs use.

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**Competing Interests:** The authors declare that they have no competing interests.

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