

**Socio-Economic and Demographic Factors Affecting the Use
of Contraceptive: Evidence from The National Socioeconomic Survey (*Susenas*)**

Haerawati Idris

Faculty of Public Health, Sriwijaya University
Jl. Raya Palembang-Unsri KM 32 Indralaya, Ogan Ilir_Palembang
Corresponding: haera@fkm.unsri.ac.id/+6285299604286

Abstract

Background

Rapid population growth has become a major concern and attention of many national governments and the international community. Most developing countries have acknowledged the role of family planning as an effective way to improve maternal/child health and suppress population growth. This study aims to investigate the socio-economic, and demographic factors that influence the use of contraceptives in Indonesia.

Subject & Methods

This was a cross-sectional study using secondary data derived from National Socio-Economic Survey (SUSENAS) in 2014. A sample of 286,695 married women was selected for this study. The dependent variable was contraceptives use. The independent variables included maternal age, number of living children, family income, maternal education, maternal employment status, rural urban residence, and region of residence. Multiple logistic regression analyses were used to estimate the effects of socio-economic and demographic variables on contraceptive use.

Results

Only 42% of married women in Indonesia used contraceptive. The most popular contraceptive method used was injection (55%). Factors affecting contraceptive use were maternal age 30-34 year (OR = 1.16; CI95% 1.13 to 1.20; $p < 0.001$), living in urban area (OR = 0.82; CI95% 0.81 to 0.84; $p < 0.001$), family income quintile 4 (OR = 1.25; CI95% 1.22 to 1.29; $p < 0.001$), secondary school (OR = 1.06; CI95% 1.04 to 1.08; $p < 0.001$), work (OR = 0.95; CI95% 0.94 to 0.97; $p < 0.001$), residing in Java/Bali (OR = 1.68; CI95% 1.64 to 1.72; $p < 0.001$), number of living children > 2 (OR = 1.56; CI95% 1.53 to 1.59; $p < 0.001$)

Conclusion

Maternal age 30-34 year, family income quintile 4, secondary school, residing in Java/Bali and number of living children, increase the likelihood of contraceptive use. Living in urban area and work, decrease the likelihood of contraceptive use. Family planning policy information, education, and communication program should consider these determinants of contraceptive use

Key words: contraceptive use, women, socio-economic demographic factors, Susenas

Introduction

Rapid population growth has become a major concern and attention of many national governments and the international community (Lucas, 1992; Oliver, 1995; Feyisetan and Ainsworth, 1994; Cohen, 2000). The study by Foreit and Frejka (1998), Kolsand Sherman (1998), FMHHS (1994), Okoroafor (2001) indicated that high population growth is directly or indirectly related with low productivity, various social problems including poverty, land scarcity, environmental degradation and political instability. In response to the high level of population growth, many countries like Korea, Brazil, Colombia, China, India, Bangladesh and Malawi have

successfully adopted family planning as an effective way to suppress population growth (Moni, 1992; World Bank, 1994; Cohen, 2000; Chinese Embassy, 2003). In fact, family planning have been acknowledged in most developing countries to be an effective way effective way in improving maternal and child health and reducing fertility and mortality (Palamuleni. 2014).

Indonesia is one of the developing countries suffering from population problems. Indonesia currently has almost 220 million populations an annual population growth level of nearly 1.5%. Reducing population growth and the level of fertility in Indonesia have been the priorities of the Indonesian government (UNFPA. 2003). These priorities have been seen in the extensive campaign on the use of family planning methods in Indonesia. As a result, in 2002-2003, 60% of married women at productive age used contraceptives and 57% of married women in Indonesia used modern method of contraceptives (BPS & ORC, 2003). The prevalence in the use of contraceptive methods in fact increased by 10% from 1991.

Family planning and reproductive health programs are carried out to meet reproductive rights. Fulfillment of reproductive rights allows households to have ideal time, number and spacing of child birth that suit their wishes and free will and directly leads to the establishment of quality small, healthy and prosperous family envisaged by the Indonesian National Family Planning Coordinating Board (BKKBN) as the "Quality Family 2015" (BKKBN. 2005). This study aims to examine the social, economic, and demographic factors that influence the use of contraceptives in Indonesia

Data sources & methods

Data sources

This study uses secondary data collected from the National Social Economic Survey (*Susenas*) of 2014. Samples are collected from 286,695 married females. The National Social Economic Survey is a survey on consumption and expenditure at the household level. The *Susenas* survey has been fielded annually since 1963. It is aimed at collecting a wider variety of social and demographic data, including those on education, health/nutrition, housing, other social economic aspects, social and cultural activities, consumption/expenditure and income at the household level, travel and community perspectives on household welfare.

Susenas is divided into two types, as follows: a). Core *Susenas*, which is held annually, and b). Module *Susenas*, which is held once in three years. Core *Susenas* collects data in general while the module *Susenas* collects detailed data. Core data are collected once a year

through core questionnaires while module data are collected through questionnaires of specific and more detailed questions of by topic once every three years for every topic. The advantage of using Susenas data is that the survey covers very extensive samples from all provinces in Indonesia. The Susenas survey is designed to collect relatively extensive social and demographic data on annual basis.

Methods

The study used univariate, bivariate and multivariate analysis approaches. Univariate descriptive analysis is used to examine the distribution of the variable frequency. Bivariate analysis is used to identify the relationship between the independent variables and the use of contraceptives. Significant difference is established using chi square $p < 0.05$. Logistic regression is used to examine the influence of the social, economic and demographic factors on the use of contraceptives in Indonesia where the dependent variable is a binary.

Description of Variables

The dependent variable in the study is the use of contraceptives, which was collected from the question whether female respondents were currently using contraceptives or not. If a female respondent reported that she was using a contraceptive method, it is coded "1" and "0" for otherwise. Independent variables were selected to be used in the analysis based on the previous study that examined the association of the social, economic and demographic factors in the use of contraceptives. The independent variables were the age of woman, number of living children, level of income, status of residence, status of region, level of education and work status.

Results

Characteristics of respondents

Table 1 presents the statistical summary of the samples used in the study. A total of 41.82% respondents use contraceptives, with the majority using injection method (55%). The majority of the respondents have primary education only (52.72%). The majority of the respondents live in

the rural areas (55.73%) and majority of them live in Java/Bali (35.32%) and the eastern part of Indonesia (35.33%).

Table 1. characteristic of respondent

Characteristic	Total (N, %)
Total of respondent	286.695
Use contraceptive	
Yes	119.886(41.82%)
No	166.809(58.18%)
Age (year)	
<30	53,554(18.68%)
30-34	40,591(14.16%)
35-39	40,482(14.12%)
40-44	38,371(13.38%)
45-49	32,191(11.23%)
>49	81,506(28.43%)
Level of income (per capita expenditure)	
First quintile	60,092(20.96%)
Second quintile	56,846(19.83%)
Third quintile	56,217(19.61%)
Fourth quintile	56,236(19.62%)
Fifth quintile	57,304(19.99%)
Work status	
Work	163,592(57.06%)
No work	123,103(42.94%)
Number of living children	
>2	131,659(45.92%)
1-2	155,036(54.08%)
Level of education	
Primary	151,134(52.72%)
Secondary	111,720(38.97%)
Tertiary	23,841(8.32%)
Status of area	
Urban	126,931(44.27%)
Rural	159,764(55.73%)
Region	
Sumatera	84,149(29.35%)
Java-Bali	101,260(35.32%)
Eastern Indonesia	101,286(35.33%)

Source: author's calculations based on 2014 national Socio-economic Survey (*SUSENAS*)

Bivariate analysis

Table 2 shows the statistical summary of the bivariate analysis. The use of contraceptives among married females increased when they are 35-39 year old and declines in age group >40. The low prevalence in the use of contraceptives among women aged <30 may be due to the fact that most of them are newly married, and married is seen as an institution for

generating children. Newly married women may also have problems with accessing family planning services. The decline use of contraceptives among older women may be due to the fact that they have reduced sexual activities. The use of contraceptives among married women increases with the women's level of education. Majority of use of contraceptives are found in Java and Bali. This domination may be due to better access to contraceptives in Java and Bali than other regions.

Table 2. Bivariate analysis between use contraceptive and Independent variable

Variable		use contraceptive				OR (CI 95%)
		yes		no		
		n	%	n	%	
age (year)	<30	30,726	57.37	22,828	42.63	0.61(0.60- 0.61)***
	30-34	25,470	62.75	15,121	37.25	
	35-39	25,538	63.08	14,944	36.92	
	40-44	21,400	55.77	16,971	44.23	
	45-49	11,841	36.78	20,350	63.22	
	>49	4,911	6.03	76,595	93.97	
Level of income	First quintile	21,552	35.87	38,540	64.13	1.04(1.03- 1.05)***
	Second quintile	25,000	43.98	31,846	56.02	
	Third quintile	25,019	44.50	31,198	55.50	
	Fourth quintile	24,862	44.21	31,374	55.79	
	Fifth quintile	23,453	40.93	33,851	59.07	
Work status	Work	67,988	41.56	95,604	58.44	0.86(0.84- 0.87)**
	No work	51,898	42.16	71,205	57.84	
Number of living children	>2	46,234	35.12	85,425	64.88	0.59(0.58-0.60)***
	1-2	73,652	47.51	81,384	52.49	
Level of education	Primary	53,048	35.10	98,086	64.90	1.42(1.41-1.44)***
	Secondary	56,706	50.76	55,014	49.24	
	Tertiary	10,132	42.50	13,709	57.50	
Status of area	Urban	50,540	39.82	76,391	60.18	0.86(0.84-0.87)***
	Rural	69,346	43.41	90,418	56.59	
Region	Sumatera	34,320	40.78	49,829	59.22	0.98(0.97-0.99)***
	Java-Bali	44,914	44.36	56,346	55.64	
	Eastern Indonesia	40,652	40.14	60,634	59.86	
	Indonesia					

Source: author's calculations based on 2014 National Socio-economic Survey (SUSENAS), Key: ***significant at 1% level; **5% level; *10% level

Multivariate analysis

All variables that were statistically found significant in the bivariate analysis were used to establish the determinant factors in the use of contraceptives among women using multivariate logistic regression analysis. Analysis was carried out using logistic regression model to calculate the odds ratio and p-value. The variables that were statistically found significant in the use of contraceptives after keeping the other explanatory variables constant are presented in Table 2. The results of logistic regression analysis shows that the variables that explain most of the variations in the use of contraceptives in Indonesia are: age, status of region, level of income, level of education, number of living children, and work status. The respondents' age is one of the variables that influence the current use of contraceptives in Indonesia. Women in age group 30-34 are 1.16 times more likely to use contraceptives than women in age group <30 while women in age group 35-39 are 1.09 times more likely to use contraceptives than women in age group <30. The decrease in odds ratio with the increase of the respondents age may reflect decline in the use of contraceptives among older women.

Table 3. Multivariate analysis

Variable	category	OR	CI	p
Age (year)	<30 (ref)			0.000
	30-34	1.16	1.13-1.20	
	35-39	1.09	1.06-1.12	
	40-44	0.76	0.74-0.78	
	45-49	0.33	0.32-0.34	
	>49	0.03	0.03-0.03	
Level of income	quintile 1 (ref)			0.000
	quintile 2	1.19	1.16-1.22	
	quintile 3	1.21	1.18-1.25	
	quintile 4	1.25	1.22-1.29	
	quintile 5	1.19	1.15- 1.22	
Work status	No work (ref)			0.000
	Work	0.95	0.94- 0.97	
Number of living children	1-2 (ref)			0.000
	>2	1.56	1.53-1.59	
Level of education	primary (ref)			0.000
	Secondary	1.06	1.04-1.08	
	Tertiary	0.86	0.83-0.89	
Status of area	rural (ref)			0.000
	Urban	0.82	0.81- 0.84	
Region	Eastern			0.000
	Indonesia (ref)			
	Java-Bali	1.68	1.64- 1.72	
	Sumatera	1.11	1.09- 1.14	

Source: author's calculations based on 2014 National Socio-economic Survey (SUSENAS)

Indonesian women living in the urban areas are 0.82 times more likely to use contraceptives than those living in the rural settings. The results of the analysis show that the level of education among women is one of the predictors in the use of contraceptives in Indonesia. Women with secondary education are 1.06 times more likely to use contraceptives than those with low level of education. The analysis also shows that the number of living children also influence the use of contraceptives. Women with >2 children are 1.56 times more likely to use contraceptives than those with 1 to 2 children. The use of contraceptives in Indonesia is also influence by the work status. Working women are 0.95 times more likely to use contraceptives than those who are not working. Women who live in the urban areas are 0.82 times more likely to use contraceptives than women who live in the rural areas. Women who live in Java-Bali region are 1.68 times more likely to use contraceptives compared to the women in the eastern part of Indonesia. Women who are at the 4th quintile in terms of wealth are 1.25 times more likely to use contraceptives than women who are at the 1st quintile.

Discussion

The study aims to examine the social, economic, and demographic factors that are associated with the use of contraceptives in Indonesia. Results of analysis indicate that all variables used in the study have significant influence in the use of contraceptives. Some studies have indicated the positive correlation between the use of contraceptives and level of education (Feyisetan 2000; Hiale- mariam et al 1999;. Tawiah 1997; Saleem and Martin 2005; Stephenson et al 2007; Rutherford et al 1989). This is indicative that the higher the level of education among women, the higher use of contraceptives. Use of contraceptives is also higher in the urban areas than in rural areas. Survey held in a number of countries by Curtis and Katherine (1996) reported that the use of contraceptives is twice higher in the urban than rural areas. This may have been the result of different availability of social services, including information related to methods of contraceptives, access to contraceptives and the needed health care services.

Robey et al. (1992) indicated that factors such as age of women, number of living children, desired family sized and experience of child death influence contraceptive use. He also added that contraceptive use is lowest among young women, reaches a peak among women in their thirties and declines among older women. This is indicative of a high desire for child bearing among young women, and interest in spacing births among women in their thirties. The

percentage in the use of contraceptives declines among women at older ages of reproduction, probably because they do not face the risk of pregnancy. Some studies have indicated that the use of contraceptives increases with the parity of women up to the third and fourth child and declines thereafter (Dang 1995; Shah et al.1998; Mamdani et al. 1993).

The work status of women has also been linked with the use of contraceptives. The level of use of contraceptives among women who work outside of the home is higher than among women who do not work outside of their homes (house wives) (Robey et al.1992; Gage 1995; Hialemaria et al 1999). Working women and women who have cash income are assumed to have greater control over decisions made at the household level. This has in turn led to their greater control over reproductive decisions (Gage 1995; Hialemaria et al, 1999). Some studies have also added that paid work provide alternative satisfaction for women in rearing children and may promote the use of contraceptives.

Individual awareness to adopt family planning is among the important variables that influence the use of contraceptives. This study has reported that lack of knowledge on the methods of contraceptives and where to access contraceptive services have made individuals or couples to postpone child birth or avoid it (Robey et al.1992). In addition, findings from a number of studies have indicated that women prefer not to use contraceptives due to husband's disapproval, members of family's fear for side effect, and inaccessibility of contraceptives (Robey et al.1992). Husband's approval is very important in the decision concerning the use of contraceptives (Nwanko & Ogueri.2006). These variable has not been examined in this study due to lack of coverage of these variable in this Survey. Despite such limitation, it is hoped that this study will provide information concerning the factors associated with the use of contraceptives in Indonesia.

Family planning has been recognized by most developing countries as an effective way to improve maternal and child health and as having major role in mortality and transitional fertility. Family planning also influences women's empowerment. To improve the coverage of the use of contraceptives, it is necessary to identify the determinants of the use of contraceptives. To explain these differences, this paper aims at examining the relationship between the chosen social and economic variables and the use of contraceptives among married women in Indonesia. The results of multivariate analysis has indicated that age, economic well-being, level of education, number of living children, and region of residence are the strongest explanatory variables of the current use of contraceptives in Indonesia. These

factors should be taken into account in the re-design of the national family planning programs in Indonesia. The government should improve and intensify further provision of information, educational and communication programs concerning the use of contraceptives.

Conclusions

Factors affecting contraceptive use were maternal age of 30-34 year, living in the urban area, family wealth status in quintile 4, secondary school, work, residing in Java/ Bali, the number of living children > 2. Family planning policy information, education, and communication program should consider these determinants of contraceptive use

References

Badan Pusat Statistik-Statistics Indonesia (BPS) and ORC Macro (2003). Indonesia Demographic and Health Survey 2002-2003, Calverton, MD, USA: BPS dan ORC Macro

Badan Koordinasi Keluarga Berencana Nasional (BKKBN) (2005). Keluarga Berencana dan Kesehatan Reproduksi: Kebijakan, Program dan Kegiatan Tahun 2005-2009, Jakarta.

Cohen B (2000). Family Planning Programs, Socio-economic Characteristics, and contraceptive use in Malawi. *World Dev.* 28(5): 843-860

Chinese Embassy in the UK (2003). "Facts Sheet 3 – Family Planning in China". One World News Service; IIA/Family Planning in China.

Curtis SL, Katherine N (1996). Contraceptive Knowledge, Use and Sources, Demographic and Health Survey Comparative Studies No.19. Calverton, Maryland: International Inc.

Dang A (1995). Differentials in contraceptive use and method choice in Vietnam. *International Family Planning Perspectives*, 21(1): 2–5.

Feyisetan BJ (2000). Spousal communication and contraceptive use among the Yoruba of Nigeria. *Population Research and Policy Review*, 19(1): 29-45.

Feyisetan BJ, Ainsworth M. (1994). Contraceptive use and the quality, price, and availability of family planning in Nigeria. Living Standards Measurement Study working Paper. Washington DC: The World Bank p. 108.

Foreit JR, Frejka T (1998). Family Planning Operations research: a book of readings. New York: The Population Council.

Federal Ministry of Health and Human Services (1994). Annual Bulletin. Lagos Federal Ministry of Information (FMI) (1993).

Gage A (1995). Women's socio-economic position and contraceptive behavior in Togo. *Studies in Family Planning* 26: 264–277

Hiale mariam A, Berhanu B, Hogan DP (1999). Household organization women's autonomy and contraceptive behaviour in southern Ethiopia. *Studies in Family Planning*, 30(34): 302-314.

Kols AJ, Sherman JE (1998). Family Planning Programs: improving quality. *Population Reports, Series J*. Baltimore, Johns Hopkins University School of Public Health, Population Information Program. p. 47.

Lucas D (1992). Fertility and Family Planning in Southern and Central African. *Stud. Fam. Plan.* 23(3): 145-158.

Mamdani M, Garner P, Harpham T, Campbell O (1983). Fertility and contraceptive use in poor urban areas of developing countries. *Health Policy and Planning*, 8(1): 1-18.

Moni N (1992). Family Planning Success Stories in Bangladesh and India. Policy Research Working Paper. World Bank, Washington DC p. 1041.

Nwankwo BO, Ogueri E (2006). Influence of husband's decision on the use of modern contraceptives among rural and urban married women in Imo State, Nigeria. *International Journal of Tropical Medicine*, 1(40): 140-144.

Oliver R (1995). Contraceptive use in Ghana; the role of service availability, quality, and price. Living Standards Measurement Study working paper. Washington, DC: The World Bank p. 111.

Okoroafor OE (2001). Large Families: Causes, consequences and cures. Springfield Publishers Ltd. Owerri.

Palamuleni, M.E (2014). Demographic and Socio-economic Factors Affecting Contraceptive Use in Malawi. *J Hum Ecol*, 46(3), pp.331-341.

Robey B, Rutstein SO, Morris L (1992). The Reproductive Revolution: New Survey Findings. *Population Reports, Series M*, Number 11

Rutherford RD, Thapa S, Desilva V (1989). Strength of fertility motivation: Its effects on contraceptive use in rural Sri Lanka. *Asia Pacific Population Journal*, 4(4): 21-44

Shah NM, Shah MA, Radovanovic Z (1998). Patterns of desired fertility and contraceptive use in Kuwait. *International Family Planning Perspectives*, 24(3): 133–138.

Saleem S, Martin B (2005). Women's autonomy, education and contraception use in Pakistan: A national study. *Reproductive Health*, 1-8.

Stephenson R, Baschieri A, Clements S, Hennink M, Madise N (2007). Contextual influences on modern contraceptive use in Sub-Saharan Africa. *American Journal of Public Health*, 97(7): 1233–1240.

Tawiah, EO (1997). Factors affecting contraceptive use in Ghana. *Journal of Biosocial Science*, 29: 141- 149.

United Nations Population Fund (UNFPA) (2003). Population data for development: Indonesia, <http://indonesia.unfpa.org>

World Bank (1994). Population and Development: Implications for the World Bank. The World Bank, Washington DC p. 29.



Haerawati Idris <haera@fkm.unsri.ac.id>

Pemberitahuan Syarat Penerbitan Artikel di Jurnal KEMAS

6 pesan

Jurnal Kemas <kemas@mail.unnes.ac.id>

25 Juli 2019 pukul 14.56

Kepada: haera@fkm.unsri.ac.id, putri.bungsu10@ui.ac.id, intan.fitri@fisip.unila.ac.id

Yth. Penulis di Jurnal KEMAS

Dengan hormat,

Kami beritahukan bahwa artikel Bapak/ Ibu akan segera kami kirimkan untuk direview Mitra Bebestari untuk dapat diterbitkan di Jurnal KEMAS.

Sesuai dengan syarat administratif, bagi artikel yang akan dimuat:

1. Penulis dikenakan biaya Publish dan translet ke bahasa Inggris sebesar Rp. 1.700.000,00 dengan ketentuan sebagai berikut:
 - a. Penulis akan mendapatkan 1 eksemplar Jurnal dan bebas ongkos kirim. Biaya tersebut dikirim ke Jurnal KEMAS dengan no rek. BNI 0328641658 a.n Widya Hary Cahyati jika artikel telah dinyatakan **LAYAK MUAT** (jadi pembayarannya bisa dilakukan setelah mendapatkan **SURAT LAYAK MUAT**).
 - b. Bukti transfer harap dikirim ke email : kemas@mail.unnes.ac.id dan konfirmasi ke Redaksi Kemas Nur Siyam 085727713199 (pada jam Kerja).
 - c. Apabila penulis menghendaki lebih dari 1 eksemplar, maka bisa melakukan konfirmasi ke Redaksi KEMAS dan mengganti biaya cetak Rp 200.000/ eksemplar.
2. Bagi Bapak/Ibu yang belum menyertakan Surat Bebas Plagiat dan Surat Kesediaan Membayar Biaya Submit, mohon segera mengirimkan surat pernyataan tersebut ke email kemas@mail.unnes.ac.id (Form terlampir, mohon bubuhkan materai 6000 pada kedua form tersebut).

Informasi lebih lanjut dapat menghubungi: Nur Siyam 085727713199.

Demikian pemberitahuan kami, atas perhatian dan kerjasamanya kami ucapkan terimakasih.

Ketua Dewan Redaksi

Prof. Dr. dr. Oktia Woro K.H., M.Kes.

KEMAS Journal

F5 Building, 2nd Floor, Public Health Department, Sport Science Faculty, Semarang State University, Semarang, Central Java, Indonesia, 50229

<http://journal.unnes.ac.id/nju/index.php/kemas>



SURAT PERNYATAAN BEBAS PLAGIAT dan KESEDIAAN PEMBAYARAN BIAYA SUBMIT-2 (1).doc

33K

Haerawati Idris <haera@fkm.unsri.ac.id>

26 Juli 2019 pukul 11.34

Kepada: jurnal_fkm@fkm.unsri.ac.id

[Kutipan teks disembunyikan]

Haerawati Idris <haera@fkm.unsri.ac.id>

26 Juli 2019 pukul 14.00

Kepada: Jurnal Kemas <kemas@mail.unnes.ac.id>

yth Ketua Dewan Redaksi Jurnal Kemas

Berikut terlampir surat pernyataan yang diminta. Sebagai informasi bahwa abstrak studi ini pernah di presentasikan pada acara international conference on public health 1 di solo (tanpa melampirkan full paper). berikut link

abstrak **INTERNATIONAL CONFERENCE ON PUBLIC HEALTH**

http://theicph.com/en_US/2017/11/05/socio-economic-and-demographic-factors-affecting-contraceptive-use-in-women-evidence-from-the-indonesian-national-socioeconomic-survey-susenas/

adapun full paper belum dipublikasikan dimanapun. mohon informasinya apa paper saya masih bisa publish di kemas?

terima kasih

salam,

Haerawati Idris

Pada tanggal Kam, 25 Jul 2019 pukul 14.56 Jurnal Kemas <kemas@mail.unnes.ac.id> menulis:

[Kutipan teks disembunyikan]

2 lampiran



Surat Pernyataan Kemas Haera019.pdf

436K



Surat Pernyataan Kemas Haera2020.pdf

399K

Jurnal Kemas <kemas@mail.unnes.ac.id>
Kepada: Haerawati Idris <haera@fkm.unsri.ac.id>

17 September 2019 pukul 10.49

Yth. Ibu Haerawati Idris,

Mohon untuk sedikit membedakan judul dan abstrak agar tidak sama dengan artikel yang telah terbit di konferensi tersebut. terima kasih

KEMAS Journal

F5 Building, 2nd Floor, Public Health Department, Sport Science Faculty, Semarang State University, Semarang, Central Java, Indonesia, 50229

<http://journal.unnes.ac.id/nju/index.php/kemas>

[Kutipan teks disembunyikan]

Haerawati Idris <haera@fkm.unsri.ac.id>
Kepada: Jurnal Kemas <kemas@mail.unnes.ac.id>

17 September 2019 pukul 10.50

baik mbak. saya edit

terima kasih

[Kutipan teks disembunyikan]

Haerawati Idris <haera@fkm.unsri.ac.id>
Kepada: Jurnal Kemas <kemas@mail.unnes.ac.id>

19 September 2019 pukul 02.47

yth Ketua editor jurnal kemas

terlampir perbaikan judul dan abstrak sesuai dengan sarannya kemarin. saya sudah mengupload perbaikan ke ojs jurnal kemas. atas perhatiannya saya ucapkan terima kasih

salam,

haerawati idris

[Kutipan teks disembunyikan]



14098-36082-2-ED (1).docx

46K



HOME ABOUT USER HOME SEARCH CURRENT ARCHIVES ANNOUNCEMENTS

Home > User > Author > Submissions > #14098 > Summary

#14098 Summary

SUMMARY REVIEW EDITING

Submission

Authors	Haerawati Idris
Title	Factors Affecting the Use of Contraceptive in Indonesia: Analysis from the National Socioeconomic Survey (Susenas)
Original file	14098-33297-1-SM.DOCX 2018-04-18
Supp. files	None
Submitter	ms haerawati idris
Date submitted	April 18, 2018 - 11:35 AM
Section	Articles
Editor	Nur Siyam, S.K.M, M.PH
Abstract Views	1018

Status

Status	Published Vol 15, No 1 (2019)
Initiated	2019-10-06
Last modified	2019-10-22

Submission Metadata

Authors

Name	Haerawati Idris
Affiliation	Faculty of Public Health, Universitas Sriwijaya
Country	Indonesia
Competing interests	CI POLICY —
Bio Statement	—
Principal contact for editorial correspondence.	

Title and Abstract

Title	Factors Affecting the Use of Contraceptive in Indonesia: Analysis from the National Socioeconomic Survey (Susenas)
Abstract	

Rapid population growth has become a major concern and attention of many national governments and international community. Most developing countries have acknowledged the role of family planning as an effective way to improve maternal/child health and suppress population growth. This study aimed to investigate the socioeconomic and demographic factors that influence the use of contraceptives in Indonesia. This was a cross-sectional study using secondary data derived from National Socio-Economic Survey (SUSENAS) in 2014. A sample of 286,695 married women was selected for this study. Multiple logistic regression analyses were used to estimate the effects of socio-economic and demographic variables on contraceptive use. Only 42% of married women in Indonesia used contraceptive method. The most popular contraceptive method was injection (55%). Factors affecting contraceptive use were maternal age of 30-34 year, living in the urban area, family wealth status in the 4th quintile, secondary school, working women, residing in Java/Bali, and the number of living children > 2. Family planning policy information, education, and communication program should consider these determinants of contraceptive use.

Indexing

Keywords	contraceptive use, women, socio-economic demographic factors, Susenas
Language	en

Supporting Agencies

Agencies	—
----------	---

OpenAIRE Specific Metadata

ProjectID	—
-----------	---

References

References	<p>Abraha, T.H., Gebrezgiabher, B.B., Aregawi, B.G., Belay, D.S., Tikue, L.T. & Welay, G.M. 2018. Predictors of Postpartum Contraceptive Use in Rural Tigray Region, Northern Ethiopia: A Multilevel Analysis. BMC public health, 18, 1017.</p> <p>Adebowale, S.A., Adedini, S.A., Ibisomi, L.D. & Palamuleni, M.E. 2014. Differential Effect of Wealth Quintile on Modern Contraceptive Use and Fertility: Evidence from Malawian Women. BMC women's health, 14, 40.</p> <p>Anasel, M.G. & Mlinga, U.J. 2014. Determinants of Contraceptive Use among Married Women in Tanzania: Policy Implication. African Population Studies, 28, 976-988.</p> <p>Asiimwe, J., Ndugga, P. & Mushomi, J. 2013. Socio-Demographic Factors Associated with Contraceptive Use among Young Women in Comparison with Older Women in Uganda.</p> <p>Earsido, A., Gebeyehu, A. & Kisi, T. 2015. Determinants of Long Acting and Permanent Contraceptive Methods Utilization among Married Women in Hossana Town, Southern Ethiopia: A Case-Control Study. J Preg Child Health, 2, 2.</p> <p>Elstrom, K.M. & Stephenson, R. 2012. The Role of Place in Shaping Contraceptive Use among Women in Africa. PloS one, 7, e40670.</p> <p>Guidavne S W Zengbe D T Asmamaw T & Kibret G D 2015 Factors Affecting the Use of Long-Acting Reversible</p>
------------	--

ABOUT THE JOURNAL

Focus and Scope
Manuscript Submission
Guide for Authors
Editorial Board
Reviewer Team
Abstracting/Indexing
Ethics Statement
Policy of Screening for Plagiarism
Contact
2,048,567
View Visitor Stats

USER

You are logged in as...
haerawati
 » My Journals
 » My Profile
 » Log Out

JOURNAL CONTENT

Search

Search Scope

Browse

» By Issue
 » By Author
 » By Title
 » Other Journals

COLLABORATION WITH



Ikatan Ahli Kesehatan Masyarakat Indonesia

IAKMI (The Indonesian Public Health Association) is an independent professional organization for the benefit of public health, based on Pancasila based on the 1945 Constitution. Mul Agreement No: 402/UN.37.1.6/IKM/2012



Jejaring Nasional Pendidikan Kesehatan (JNPK)

JNPK is an organization that gathers experts and observers in the field of health education, which was established on September 1, 2014. The founder of this organization is the university of Teacher Training Education Institutir (LPTK) which organizes public health education, namely Universitas Negeri

Sedeghin, S.H., Egeye, S.H., Fashamun, H. & Meroy, G.H. 2023. Factors Affecting the Use of Long Acting Reversible Contraceptive Methods among Married Women in Debre Markos Town, Northwest Ethiopia 2013. Global Journal of Medical Research.

Jalangi, R., Thuita, F., Barasa, S.O. & Njoroge, P. 2017. Determinants of Contraceptive Use among Postpartum Women in a County Hospital in Rural Kenya. BMC public health, 17, 604.

Johnson, O.E. 2017. Determinants of Modern Contraceptive Uptake among Nigerian Women: Evidence from the National Demographic and Health Survey. African journal of reproductive health, 21, 89-95.

Kimani, M., Njeru, M. & Ndirangu, G. 2013. Regional Variations in Contraceptive Use in Kenya: Comparison of Nyanza, Coast and Central Provinces. African Population Studies, 27.

Larsson, C. & Stanfors, M. 2014. Women's Education, Empowerment, and Contraceptive Use in Sub-Saharan Africa: Findings from Recent Demographic and Health Surveys. African Population Studies, 28, 1022-1034.

Mekonnen, W. & Worku, A. 2011. Determinants of Low Family Planning Use and High Unmet Need in Butajira District, South Central Ethiopia. Reproductive Health, 8, 37.

Mindarsih, T., Ludji, I.D.R. & Pelokilla, M.L. 2018. Counseling and Individual Factors on Postpartum Mother to Use Contraceptive Method. Jurnal Kesehatan Masyarakat, 14.

Ndugwa, R.P., Cleland, J., Madise, N.J., Fotso, J.-C. & Zulu, E.M. 2011. Menstrual Pattern, Sexual Behaviors, and Contraceptive Use among Postpartum Women in Nairobi Urban Slums. Journal of Urban Health, 88, 341-355.

Nonvignon, J. & Nonvignon, J. 2014. Trend and Determinants of Contraceptive Use among Women of Reproductive Age in Ghana. African Population Studies, 28, 956-967.

Pandey, A. & Singh, K. 2015. Contraceptive Use before First Pregnancy by Women in India (2005-2006): Determinants and Differentials. BMC public health, 15, 1316.

Pasha, O., Goudar, S.S., Patel, A., Garces, A., Esamai, F., Chomba, E., Moore, J.L., Kodkany, B.S., Saleem, S. & Derman, R.J. 2015. Postpartum Contraceptive Use and Unmet Need for Family Planning in Five Low-Income Countries. Reproductive health, 12, S11.

Rutaremwu, G., Kabagenyi, A., Wandera, S.O., Jhamba, T., Akiror, E. & Nviiri, H.L. 2015. Predictors of Modern Contraceptive Use During the Postpartum Period among Women in Uganda: A Population-Based Cross Sectional Study. BMC public health, 15, 262.

Unumeri, G., Ishaku, S., Ahonsi, B. & Oginni, A. 2015. Contraceptive Use and Its Socio-Economic Determinants among Women in North-East and North-West Regions of Nigeria: A Comparative Analysis. African Population Studies, 29.

ISSN: 2355-3596

Semarang, Universitas Negeri Malar
and Universitas Negeri Gorontalo.Mu
Agreement No: 75/UN.37.1.6/KS/201

**LINK**

Universitas Negeri Semarang
Pengembang Jurnal
Faculty of Sport Science

**KEYWORDS**

Adolescent Attitude COVID-19
Covid-19 Diarrhea HIV/AIDS
Hospital Hypertension Indonesia
Jurnal Kesehatan Masyarakat
Knowledge Management
Motivation Nutrition Stress Studen
Stunting Toddler Tuberculosis We
stunting



Factors Affecting the Use of Contraceptive in Indonesia: Analysis from the National Socioeconomic Survey (Susenas)

Haerawati Idris[✉]

Faculty of Public Health, Sriwijaya University

Article Info

Article History:
Submitted April 2018
Accepted July 2018
Published July 2019

Keywords:
contraceptive use, women,
socio-economic demo-
graphic factors, Susenas

DOI
<https://doi.org/10.15294/kemas.v15i1.14098>

Abstract

Rapid population growth has become a major concern and attention of many national governments and international community. Most developing countries have acknowledged the role of family planning as an effective way to improve maternal/child health and suppress population growth. This study aimed to investigate the socioeconomic and demographic factors that influence the use of contraceptives in Indonesia. This was a cross-sectional study using secondary data derived from National Socio-Economic Survey (SUSENAS) in 2014. A sample of 286,695 married women was selected for this study. Multiple logistic regression analyses were used to estimate the effects of socio-economic and demographic variables on contraceptive use. Only 42% of married women in Indonesia used contraceptive method. The most popular contraceptive method was injection (55%). Factors affecting contraceptive use were maternal age of 30-34 year, living in the urban area, family wealth status in the 4th quintile, secondary school, working women, residing in Java/Bali, and the number of living children > 2. Family planning policy information, education, and communication program should consider these determinants of contraceptive use.

Introduction

Sustainable population growth is an important problem for developing countries (Earsido et al., 2015). To overcome this, the government developed policies to limit population growth. Family planning is a tool to control population growth (Mekonnen and Worku, 2011). Family planning is important as an efforts to reduce poverty, increasing economic growth, increasing women's productivity, reduce fertility, and improve the survival of children and mothers health. Family Planning can prevent maternal mortality up to 20-35% (Gudaynhe et al., 2015).

Contraceptive use is considered as an important control measure of fertility (Asiimwe

et al., 2013; Johnson, 2017). Contraceptive use is an effort to control population growth. The benefits of contraception can be divided into micro and macro levels. At the micro level, contraception is a measure to control the number of births and number of family members. Some forms of contraception also provide protection against sexually transmitted diseases (STDs). At the macro level, the benefit of contraception is limitation of population growth which results in reduction of burden in the national burden (Nonvignon and Novignon, 2014). Contraception should be given before menstruation returns in order to avoid pregnancy (Mindarsih et al., 2018)

Several factors have been identified to be

[✉] Correspondence Address:
Jl. Raya Palembang-Unsri KM 32 Indralaya, Ogan Ilir Palembang
Email: haera@fkm.unsri.ac.id

associated to the use of family planning method or contraceptives. These factors are social factors which includes economy, culture, and religion. The study by Kimani found that socio-economic variables, including education and wealth, were significant determinant of contraceptive use in Kenya. They also found that contraceptive use increased with less culture conservatism and the environment (Kimani et al., 2013). This study aimed to examine the social, economic, and demographic factors that influence the use of contraceptives in Indonesia.

The analysis was based on data from the National Social Economic Survey (*Susenas*) of 2014. Samples were collected from 286,695 married females. The National Social Economic Survey is a survey on consumption and expenditure at the household level. The *Susenas* survey has been conducted annually since 1963. It is aimed to collect a wide variety of social and demographic data, including those on education, health/nutrition, housing, other socio-economic aspects, social and cultural activities, consumption/expenditure and wealth status of the household level, travel and community perspectives on household welfare.

Susenas is divided into two types: a) Core *Susenas*, which is held annually, and b) Module *Susenas*, which is held once in three years. Core *Susenas* collects general data while Module *Susenas* collects more specific data. Core data are collected annually through core questionnaires while module data are collected through specific questionnaires and more detailed questions once every three years for every topic. The advantage of using *Susenas* data is that the survey covers very large samples from all provinces in Indonesia. The *Susenas* is designed to collect relatively extensive social and demographic data on an annual basis.

Method

This study used a cross-sectional design. The data were analyzed using univariate, bivariate, and multivariate analysis approaches. Univariate descriptive analysis was used to examine the distribution of the variable frequency. Bivariate analysis was used to identify the relationship between the independent variables and the use of contraceptives. The significant difference was

established using chi-square $p < 0.05$. Logistic regression was used to examine the influence of the social, economic, and demographic factors on the use of contraceptives in Indonesia where the dependent variable was binary.

The dependent variable in the study was the use of contraceptives, which was collected from the question of whether female respondents were currently using contraceptives or not. If a female respondent reported that she was using a contraceptive method, it was coded as "1" and "0" for otherwise. Independent variables were selected to be used in the analysis based on the previous study that examined the association of the social, economic, and demographic factors in the use of contraceptives. The independent variables were maternal age, number of living children, level of wealth status, the status of residence, the status of the region, level of education, and work status.

Results and Discussion

Characteristic of Respondent

Table 1 presents the statistical summary of the samples used in the study. A total of 41.82% of respondents used contraceptives, with the majority using injection method (55%). The majority of the respondents underwent primary education only (52.72%), lived in rural areas (55.73%), and lived in Java/Bali (35.32%) and the eastern part of Indonesia (35.33%).

Bivariate Analysis

Table 2 shows the statistical summary of the bivariate analysis. The use of contraceptives among married females increased when they were 35-39 year old and declined in age group >40. The low prevalence of contraceptives use among women aged <30 may be explained because most of them are newly married, and marriage is seen as a way to produce offspring. Newly married women might also have problems with accessing family planning services. The declining use of contraceptives among older women may be since they have reduced sexual activities. The use of contraceptives among married women increased with the women's level of education. The majority of contraceptives users were found in Java and Bali. This might be caused by better access to contraceptives in Java and Bali compared to other regions.

Table 1. Characteristics of Respondents

Characteristics	Total (N, %)
Total of respondent	286,695
Use contraceptive	
Yes	119,886(41.82%)
No	166,809(58.18%)
Age (year)	
<30	53,554(18.68%)
30-34	40,591(14.16%)
35-39	40,482(14.12%)
40-44	38,371(13.38%)
45-49	32,191(11.23%)
>49	81,506(28.43%)
Level of wealth status (per capita expenditure)	
First quintile	60,092(20.96%)
Second quintile	56,846(19.83%)
Third quintile	56,217(19.61%)
Fourth quintile	56,236(19.62%)
Fifth quintile	57,304(19.99%)
Work status	
Work	163,592(57.06%)
No work	123,103(42.94%)
Number of living children	
>2	131,659(45.92%)
1-2	155,036(54.08%)
Level of education	
Primary	151,134(52.72%)
Secondary	111,720(38.97%)
Tertiary	23,841(8.32 %)
Status of area	
Urban	126,931(44.27 %)
Rural	159,764(55.73 %)
Region	
Sumatera	84,149(29.35%)
Java-Bali	101,260(35.32%)
Eastern Indonesia	101,286(35.33%)

Source: 2014 National Socio-economic Survey (SUSENAS)

Table 2. Bivariate analysis between contraceptive use and independent variable

Variables	Contraceptive use					OR (CI 95%)
	Yes		No			
	n	%	n	%		
Age (year)	<30	30,726	57.37	22,828	42.63	0.61(0.60- 0.61)***
	30-34	25,470	62.75	15,121	37.25	
	35-39	25,538	63.08	14,944	36.92	
	40-44	21,400	55.77	16,971	44.23	
	45-49	11,841	36.78	20,350	63.22	
	>49	4,911	6.03	76,595	93.97	
Level of wealth status	First quintile	21,552	35.87	38,540	64.13	1.04(1.03- 1.05)***
	Second quintile	25,000	43.98	31,846	56.02	
	Third quintile	25,019	44.50	31,198	55.50	
	Fourth quintile	24,862	44.21	31,374	55.79	
	Fifth quintile	23,453	40.93	33,851	59.07	
Work status	Work	67,988	41.56	95,604	58.44	0.86(0.84- 0.87)**
	No work	51,898	42.16	71,205	57.84	
Number of living children	>2	46,234	35.12	85,425	64.88	0.59(0.58-0.60)***
	1-2	73,652	47.51	81,384	52.49	
Level of education	Primary	53,048	35.10	98,086	64.90	1.42(1.41-1.44)***
	Secondary	56,706	50.76	55,014	49.24	
	Tertiary	10,132	42.50	13,709	57.50	
Status of area	Urban	50,540	39.82	76,391	60.18	0.86(0.84-0.87)***
	Rural	69,346	43.41	90,418	56.59	
Region	Sumatera	34,320	40.78	49,829	59.22	0.98(0.97-0.99)***
	Java-Bali	44,914	44.36	56,346	55.64	
	Eastern Indonesia	40,652	40.14	60,634	59.86	
	Indonesia					

Source: 2014 National Socio-economic Survey (SUSENAS),

Key: ***significant at 1% level; **5% level; *10% level

Multivariate Analysis

All variables that were found to be statistically significant in the bivariate analysis were used to establish the determinant factors in the use of contraceptives among women using multivariate logistic regression analysis. The analysis was carried out using logistic regression model to calculate the odds ratio and p-value. The variables that were found to be statistically

significant in the use of contraceptives after keeping the other explanatory variables constant are presented in Table 2. The results of logistic regression analysis showed that the variables that explain most of the variations in the use of contraceptives in Indonesia were: age, the status of the region, level of wealth status, level of education, number of living children, and work status. The respondents' age is one

Table 3. Multivariate analysis

Variable	Category	OR	CI	p
Age (year)	<30 (ref)			0.000
	30-34	1.16	1.13-1.20	
	35-39	1.09	1.06-1.12	
	40-44	0.76	0.74-0.78	
	45-49	0.33	0.32-0.34	
	>49	0.03	0.03-0.03	
Level of wealth status	quintile 1 (ref)			0.000
	quintile 2	1.19	1.16-1.22	
	quintile 3	1.21	1.18-1.25	
	quintile 4	1.25	1.22-1.29	
	quintile 5	1.19	1.15- 1.22	
Work status	No work (ref)			0.000
	Work	0.95	0.94- 0.97	
Number of living children	1-2 (ref)			0.000
	>2	1.56	1.53-1.59	
Level of education	Primary (ref)			0.000
	Secondary	1.06	1.04-1.08	
	Tertiary	0.86	0.83-0.89	
Status of area	Rural (ref)			0.000
	Urban	0.82	0.81- 0.84	
Region	Eastern Indonesia (ref)			0.000
	Java-Bali	1.68	1.64- 1.72	
	Sumatera	1.11	1.09- 1.14	

Source: 2014 National Socio-economic Survey (SUSENAS)

of the variables that influence the current use of contraceptives in Indonesia. Women in the age group 30-34 were 1.16 times more likely to use contraceptives than women in age group <30 while women in the age group 35-39 were 1.09 times more likely to use contraceptives than women in age group <30. The decrease in odds ratio with the increase of the respondent's age may reflect a decline in the use of contraceptives among older women.

Indonesian women living in urban areas were 0.82 times more likely to use contraceptives than those living in rural settings. The results of the analysis showed that the level of education among women is one of the predictors in the

use of contraceptives in Indonesia. Women with secondary education are 1.06 times more likely to use contraceptives than those with a low level of education. The analysis also shows that the number of living children also influences the use of contraceptives. Women with >2 children were 1.56 times more likely to use contraceptives than those with 1 to 2 children. The work status also influences the use of contraceptives in Indonesia. Working women were 0.95 times more likely to use contraceptives than those who were not working. Women who live in urban areas were 0.82 times more likely to use contraceptives than women who live in rural areas. Women who live in Java-Bali region were

1.68 times more likely to use contraceptives compared to the women in the eastern part of Indonesia. Women who were at the 4th quintile in terms of wealth are 1.25 times more likely to use contraceptives than women who were at the 1st quintile.

The study aimed to examine the social, economic, and demographic factors that are associated with the use of contraceptives in Indonesia. The results of the analysis indicate that all variables used in the study have a significant influence on the use of contraceptives. Some studies have indicated the positive correlation between the use of contraceptives and level of education (Larsson and Stanfors, 2014, Kimani et al., 2013, Nonvignon and Novignon, 2014, Asiimwe et al., 2013, Jalang'o et al., 2017, Rutaremwa et al., 2015). This is indicative that the higher the level of education among women, the higher the use of contraceptives. Use of contraceptives is also higher in urban areas than in rural areas. Survey held in some countries by reported that contraceptive use was higher among women from the urban than rural areas. (Nonvignon and Novignon, 2014, Johnson, 2017, Pandey and Singh, 2015, Unumeri et al., 2015). This may have been the result of different availability of social services, including information related to methods of contraceptives, access to contraceptives, and the needed health care services. Kimani et al. mentioned that ignorance regarding family planning methods and peculiar cultural factors might pose limitations to the use of contraceptives in rural areas (Kimani et al., 2013)

Age has a significant correlation with contraceptive use. Previous studies have demonstrated a significant relationship between age and contraceptive use (Ndugwa et al., 2011; Elfstrom and Stephenson, 2012; Rutaremwa et al., 2015). The work status of women has also been linked with the use of contraceptives. Women's employment status significantly predicted uptake contraceptive. Women who were in employment were more likely to use contraceptives. The previous study has mentioned that there is a relationship between contraceptive and employment. (Jalang'o et al., 2017, Pasha et al., 2015, Rutaremwa et al., 2015)

Wealth status has a significant relationship

with contraceptive use. The results indicated a direct relationship between women's wealth status and contraceptive use. Women from wealthier households are more likely to use contraceptive compared to those in the poorest households. Several studies have found the same result (Adebowale et al., 2014; Rutaremwa et al., 2015; Johnson, 2017; Anasel and Mlinga, 2014; Abraha et al., 2018). The number of living children has a significant correlation with the contraceptive. The previous study has explored that a higher number of living children were more likely to use contraceptive (Rutaremwa et al., 2015, Unumeri et al., 2015)

The limitation of this study was that there were some variables which had not been examined in this study due to lack of coverage of these variables in this survey like knowledge of women, exposure to media, husband's approval which is very important in the decision concerning the use of contraceptives. Despite such limitation, it is hoped that this study will provide information concerning the factors associated with the use of contraceptives in Indonesia.

Most developing countries have recognized family planning as an effective way to improve maternal and child health. It also has major role in mortality and transitional fertility. Family planning also influences women's empowerment. To improve the coverage of the use of contraceptives, it is necessary to identify the determinants of the use of contraceptives. To explain these differences, this paper aims at examining the relationship between the chosen social and economic variables and the use of contraceptives among married women in Indonesia. The results of multivariate analysis indicated that age, economic well-being, level of education, number of living children, and region of residence are the most important explanatory variables of the current use of contraceptives in Indonesia. These factors should be taken into account in the re-design of the national family planning programs in Indonesia. The government should improve and intensify further provision of information, educational, and communication programs concerning the use of contraceptives.

Conclusions

Factors affecting contraceptive use

were maternal age of 30-34 year, living in the urban area, family wealth status in quintile 4, secondary school, work, residing in Java/Bali, the number of living children > 2. Family planning policy information, education, and communication program should consider these determinants of contraceptive use.

References

- Abraha, T.H., Gebrezgiabher, B.B., Aregawi, B.G., Belay, D.S., Tikue, L.T. & Welay, G.M. 2018. Predictors of Postpartum Contraceptive Use in Rural Tigray Region, Northern Ethiopia: A Multilevel Analysis. *BMC public health*, 18, 1017.
- Adebowale, S.A., Adedini, S.A., Ibisomi, L.D. & Palamuleni, M.E. 2014. Differential Effect of Wealth Quintile on Modern Contraceptive Use and Fertility: Evidence from Malawian Women. *BMC women's health*, 14, 40.
- Anasel, M.G. & Mlinga, U.J. 2014. Determinants of Contraceptive Use among Married Women in Tanzania: Policy Implication. *African Population Studies*, 28, 976-988.
- Asiimwe, J., Ndugga, P. & Mushomi, J. 2013. Socio-Demographic Factors Associated with Contraceptive Use among Young Women in Comparison with Older Women in Uganda.
- Earsido, A., Gebeyehu, A. & Kisi, T. 2015. Determinants of Long Acting and Permanent Contraceptive Methods Utilization among Married Women in Hossana Town, Southern Ethiopia: A Case-Control Study. *J Preg Child Health*, 2, 2.
- Elfstrom, K.M. & Stephenson, R. 2012. The Role of Place in Shaping Contraceptive Use among Women in Africa. *PloS one*, 7, e40670.
- Gudaynhe, S.W., Zegeye, D.T., Asmamaw, T. & Kibret, G.D. 2015. Factors Affecting the Use of Long-Acting Reversible Contraceptive Methods among Married Women in Debre Markos Town, Northwest Ethiopia 2013. *Global Journal of Medical Research*.
- Jalang'o, R., Thuita, F., Barasa, S.O. & Njoroge, P. 2017. Determinants of Contraceptive Use among Postpartum Women in a County Hospital in Rural Kenya. *BMC public health*, 17, 604.
- Johnson, O.E. 2017. Determinants of Modern Contraceptive Uptake among Nigerian Women: Evidence from the National Demographic and Health Survey. *African journal of reproductive health*, 21, 89-95.
- Kimani, M., Njeru, M. & Ndirangu, G. 2013. Regional Variations in Contraceptive Use in Kenya: Comparison of Nyanza, Coast and Central Provinces. *African Population Studies*, 27.
- Larsson, C. & Stanfors, M. 2014. Women's Education, Empowerment, and Contraceptive Use in Sub-Saharan Africa: Findings from Recent Demographic and Health Surveys. *African Population Studies*, 28, 1022-1034.
- Mekonnen, W. & Worku, A. 2011. Determinants of Low Family Planning Use and High Unmet Need in Butajira District, South Central Ethiopia. *Reproductive Health*, 8, 37.
- Mindarsih, T., Ludji, I.D.R. & Pelokilla, M.L. 2018. Counseling and Individual Factors on Postpartum Mother to Use Contraceptive Method. *Jurnal Kesehatan Masyarakat*, 14.
- Ndugwa, R.P., Cleland, J., Madise, N.J., Fotso, J.-C. & Zulu, E.M. 2011. Menstrual Pattern, Sexual Behaviors, and Contraceptive Use among Postpartum Women in Nairobi Urban Slums. *Journal of Urban Health*, 88, 341-355.
- Nonvignon, J. & Novignon, J. 2014. Trend and Determinants of Contraceptive Use among Women of Reproductive Age in Ghana. *African Population Studies*, 28, 956-967.
- Pandey, A. & Singh, K. 2015. Contraceptive Use before First Pregnancy by Women in India (2005-2006): Determinants and Differentials. *BMC public health*, 15, 1316.
- Pasha, O., Goudar, S.S., Patel, A., Garces, A., Esamai, F., Chomba, E., Moore, J.L., Kodkany, B.S., Saleem, S. & Derman, R.J. 2015. Postpartum Contraceptive Use and Unmet Need for Family Planning in Five Low-Income Countries. *Reproductive health*, 12, S11.
- Rutaremwya, G., Kabagenyi, A., Wandera, S.O., Jhamba, T., Akiror, E. & Nviiri, H.L. 2015. Predictors of Modern Contraceptive Use During the Postpartum Period among Women in Uganda: A Population-Based Cross Sectional Study. *BMC public health*, 15, 262.
- Unumeri, G., Ishaku, S., Ahonsi, B. & Oginni, A. 2015. Contraceptive Use and Its Socio-Economic Determinants among Women in North-East and North-West Regions of Nigeria: A Comparative Analysis. *African Population Studies*, 29.