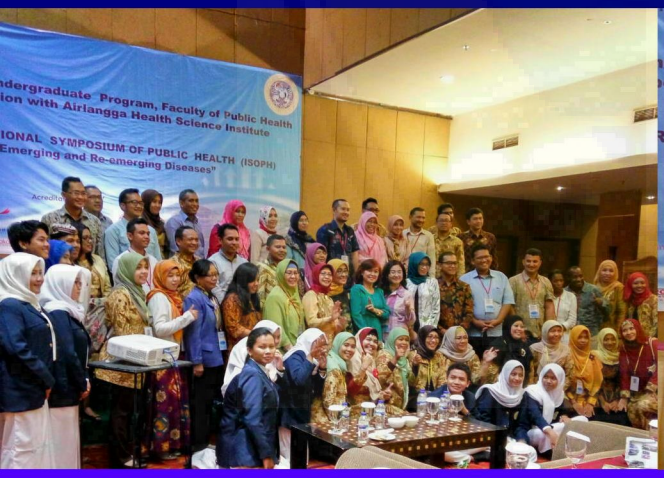
S3 Ilmu Kesehatan
Fakultas Kesehatan Masyarakat
Universitas Airlangga

# Proceeding of the 1st International Symposium of Public Health

## "Emerging and Re-emerging Diseases"





Editors
Sri Sumarmi
Ika Yuni Widyawati
Trias Mahmudiono
Triska Susila Nindya
Maya Sari Dewi
Atik Choirul Hidajah

# Proceeding of the 1st International Symposium of Public Health

# "Emerging and Re-emerging Diseases"

Editors
Sri Sumarmi
Ika Yuni Widyawati
Trias Mahmudiono
Triska Susila Nindya
Maya Sari Dewi
Atik Choirul Hidajah

Reviewer Board
Ika Yuni Widyawati
Ratna Dwi Wulandari
Sondang Sidabutar
Dewi Kurniasih

S3 Ilmu Kesehatan
Fakultas Kesehatan Masyarakat
Universitas Airlangga

Proceeding of the 1st International Symposium of Public Health, "Emerging and Re-emerging Diseases"


Cetakan Pertama – Oktober 2017

S3 Ilmu Kesehatan
Fakultas Kesehatan Masyarakat
Universitas Airlangga
Kampus C Mulyorejo Surabaya 60115
Telp/Fax. (031) 5990603
Email: s3ikes.fkmua@gmail.com

ISBN 978-602-61293-0-7

# WELCOME MESSAGE

*Assalamu'alaikum warahmatullahi wabaraqatuh*

I wish you all a warm welcome to Surabaya Indonesia.

It is a great pleasure for me to invite you in the 1st International Symposium of Public Health, held by Faculty of Public Health, Universitas Airlangga. This remarkable event is conducted by Doctorate and undergraduate program of Faculty of Public Health, Universitas Airlangga in collaboration with Airlangga Health Science Institute and Smart FM Surabaya. It's an honor to present "Emerging and Re-emerging Diseases" focusing on Zika virus as the main theme of our Symposium, as Zika being a new emerging disease in asia region.

The aim of this symposium is to disseminate the strategic planning of Indonesian Government, particularly the Ministry of Health, to prevent the transmission of Zika virus as well as the global and regional regulation. In relation to this matter, we invite Minister of Health as keynote speaker and also foreign expert: Professor Cordia Chu from Griffith University, Australia, but**,** unfortunately in this opportunity Professor Chu with a great regret can not come physically to Surabaya, due to a combination of critical family and urgent business. Instead, she likes to nominate Mr. Febi Dwirahmadi, SKM, MSc.PH, PhD to share the scientific knowledge about managing and Handling Zika in Community Setting. We also invite Dr. Pang Junxiong Vincent from National University of Singapore, who are going to discuss about the epidemiology of Zika, as well as Professor Nasronudin to present the role of Universitas Airlangga in research development.

The committee also invite the audience to submit abstracts in several sub themes in public health areas. We are expecting of two hundreds (200) participants, with at least ten percent (10%) coming from foreign countries and ninety percent (90%) from local participant coming from various region in Indonesia. There are a hundred and seven (107) abstracts were submitted, and then eighty nine (89) abstracts were accepted. From the accepted abstracts, there are fifty two (52) abstracts were accepted as oral presentation, and thirty seven (37) are presented as poster. This symposium was devided into two sessions, the plennary session and panel oral presentation. It is designed in such way, so that the delegates from various countryies or provinces, could share their local experience and best practices and discover ideas for strong regional initiatives.

At last, we would like to ackowledge for all parties which are provide the valuable materials as well as financial support for the successful symposium. As chair of organizing committee, I would also like to say deep thank you for all committees; my colleagues, and also students in faculty of Public Health Universitas Airlangga, who have been working to be part of a solid team and amazing committee.

To all of audience, thank you very much for your participation in this symposium, I hope you enjoy not only the symposium but also the sparkling city of Surabaya.

*Wassalamu'alaikum warahmatullahi wabaraqatuh*

Sincerely,

Chair Person

Dr. Sri Sumarmi, SKM, M.Si

# UNIVERSITAS AIRLANGGA

**Rector's Official Address**
**in**
**INTERNATIONAL SYMPOSIUM OF PUBLIC HEALTH**
**"Emerging and Re-emerging Disease"**
**November 30, 2016**

***Assalamu'alaikum wa-rahmatullahi wa-barakatuh.***

***May the peace, mercy and blessings of Allah be upon you.***

Alhamdulillah! Praise be to Allah and along with this gratefulness let us also send *shalawat* and *salam* to our Prophet Muhammad SAW (Praise Be Upon Him): *Allaahumma shalli 'alaa Muhammad wa 'alaa aali Muhammad.* May Allah give mercy and blessings upon Him.

**Ladies and Gentlemen,**

The world always advances along with its challenges including in medical field. There are emerging diseases which have just occured recently such as the one caused by Zika virus. There are also re-emerging diseases for the ones we assumed have been eradicated but they occured again such as measles and polio.

Special for diseases related to Zika virus, some countries have declared a state of emergency. WHO even declared Zika virus transmission in South America as international public health emergency. Regarding the matter, for the global Zika virus epidemiology development, we regret to learn that information on Zika virus is limited such as on the risks, diagnosis, and the transmission method of the virus. In short, Zika virus has continued to spread and become a global precedence.

Therefore, this "INTERNATIONAL SYMPOSIUM OF PUBLIC HEALTH" is very welcomed and I appreciated the theme, "Emerging and Re-emerging Disease". I believe the communities, academic or general public will achieve benefits from the symposium results.

**Ladies and Gentlemen,**

Through this symposium, we are expected to get explanation and updates on measures to handle the "Emerging and Re-emerging Disease". The explanation is expected to give new insights for us to improve the quality of life as the demand to better quality of life, free from diseases, is even higher.



Kampus C Mulyorejo Surabaya 60115 Telp. (031) 5914042, 5914043, 5912546, 5912564 Fax (031) 5981841
Website : http://www.unair.ac.id E-mail : rektor@unair.ac.id

# UNIVERSITAS AIRLANGGA

Hopefully, this event works as an effort to spread the knowledge and also functions as an input for the policy maker in medical field.

I would like to express my deepest gratitude to all participants, either domestic and from other countries, also to the committee and other parties who support this international symposium. I hope that our active participations can bring success to this seminar and they are regarded as act of kindness.

By saying grace: "*Bismillahirrahmanirrahim*", I officially open the "INTERNATIONAL SYMPHOSIUM OF PUBLIC HEALTH" on "Emerging and Re-emerging Disease".

May this symposium be a success, run well and all the objectives achieved. Let us advance together to a better life in all aspects, especially in Public Health.

Have a great symposium and continue success!

**Wassalamu'alaikum wa-rahmatullahi wa-barakatuh.**

Rector of Universitas Airlangga,

**Prof. Dr. Moh. Nasih, SE., MT., Ak., CMA.**
NIP. 196508061992031002.



Kampus C Mulyorejo Surabaya 60115 Telp. (031) 5914042, 5914043, 5912546, 5912564 Fax (031) 5981841
Website : http://www.unair.ac.id E-mail : rektor@unair.ac.id

# TABLE OF CONTENT

# UNDERSTANDING BARRIERS OF CONTRACEPTIVE USE AMONG WOMEN IN INDONESIA

Dwi Martiana Wati[1], Andrei Ramani[1], Iken Nafikadini[2]

[1] *Department of Epidemiology, Biostatistics and Population, Faculty of Public Health, University of Jember, Kalimantan Rd. 37 Jember, East Java, Indonesia*
[2] *Department of Behavioral Sciences, Faculty of Public Health, University of Jember, Kalimantan Rd. 37 Jember, East Java, Indonesia*
Email: dmartiana@unej.ac.id

## ABSTRACT

Family Planning is part of the basic rights of individuals and families. Through family planning, an individual or a family has opportunities for planning their family life by limiting pregnancies and spacing births. If family planning is done properly, it will increase the possibilities for improving mothers' and children's health, even improving family welfare. But in fact, the family planning program in Indonesia is still encountered many hindrances, whether internal or external barriers. One of that hindrances is the unmet need. The high unmet need will allow unintended pregnancies which could lead to an increasing abortion, which in turn will increase MMR and IMR. If this condition is not immediately get serious handling, the SDGs will not be achieved. One effort that can be done to overcome these problems is to determine barriers faced in family planning program. IDHS is national survey that can provide demographic and reproductive health data, including family planning program. This research was intended to analyze determinants of barriers of contraceptive use, especially among women. Chi-square test showed a significant association between contraceptive use and age group as well as literacy among women, educational attainment, profession, wealth index, women's autonomy, access to the media, including media that conveyed about family planning. Finally, visiting of family planning clerk also had significant association with contraceptive use.

Keywords: Association, Barriers, Contraceptive Use

## INTRODUCTION

Rapid population growth was considered a potential hindrance to economic development [4]. In response to population-related issues, many countries have implemented many development programs, including Indonesia. The most important program that widely implemented was the Family Planning Program. For over three decades, family planning has not only contributed in reducing fertility rate but also improving family welfare. That's why the discussion about family planning was not limited to family planning as a program, but also

family planning as a basic right for family, included individual within it. Through family planning, an individual or a family has opportunities for planning their family life by limiting pregnancies and spacing births. The efforts for family planning was associated with contraceptive use, both were conventional or modern ones.

IDHS reported that Indonesia's fertility rate has declined since 1980s until 1990s, but in 2010 still remained stagnant [4]. It meant that its implementation still dealth with many hindrances. One of the hindrances was the unmet need. Addressing the unmet need, the family planning programs has been proposed as a major strategy for reducing fertility rate in developing countries [1]. Many studies has describes what is meant by the term of "unmet need". Casterline and Sinding considered that the term "unmet need" was not asked directly from respondents whether they perceived an inconsistency between their fertility preferences and contraceptive practice [2]. Therefore this term was associated with the high incidence of pregnancies that are reported as unintended and the large numbers of births that are reported as unwanted. Meanwhile Bhushan gave wider description about the term "unmet need" as the condition of fecund women of reproductive age who do not want to have a child soon or ever but are not using contraception [1]. In attention to both explanations and others that were related, it was concluded that the term "unmet need" was associated with not using any modern contraception.

Many researches have been developed to determine any possible barriers that occur together with contraceptive use. Generally they are separated into internal and external barriers, based on the sources of those barriers. Internal barriers to use modern contraceptive includes the lack of knowledge and the fear of side effect [5]. On the other hands, religious consideration, husband apposition, and the lack of family planning promotion were considered external ones. For decreasing odds of discontinuation, high quality services given could be considered [3]. This high quality services given included high level of information given by one-to-one counseling that could increase acceptor's satisfaction.

According to recent IDHS in 2012, IDHS covered the measurement of trend in fertility and contraceptive prevalence, along with factors that affected, such as marital status, residence, education, knowledge, availability of contraception, and contraceptive providers' services. Therefore this study was intended to determine barriers faced by family planning program in Indonesia, both internal and external ones. Factors considered as internal barriers were demographic characteristics, such as age, residence, educational attainment, job status, and marital status, literacy, also women's autonomy and wealth quintiles. Then access to family planning information and visiting of family planning clerk were considered as external barriers.

## MATERIAL & METHOD

This study was a cross-sectional national survey and carried out by Statistics Indonesia (BPS) in collaboration with the National Population and Family Planning Board (BKKBN) and the

Ministry of Health (MOH). This survey has been conducted regularly since 1990s.

The population referred here were 15 – 49 years old women. The total number of female respondents in this survey were 45,607 respondents. But in order to meet the objective of this study, the respondents selected were 15 – 49 years old which had sexual experiences, included married women or women that had been living together with their mates. The number of selected women here were 30,192 respondents.

Data collected by using Women's Questionnaire of IDHS. Afterward, the data analyzed with Chi-Square Test, where $p < 0.05$ determining the significance level for association.

## RESULT

A total number of 30,192 women were interviewed. Among them, nearly 75% were currently using modern contraception. While the rest, more than 25% women, were reported not using modern contraception.

More than one-thirds of respondents (38.5%) were 30 – 39 years old. Their mean age were 34.45 years old (±8.2). According to the previous study [1] they were liable to using contraception for limiting pregnancies. On the other hands, younger women were liable to spacing births. As shown in Table 1, the older women tend to use contraception compared with the younger ones. But in women over 30 years old, the odds became lower than the younger ones. Based on their marital status, most of them were married. Only 1% respondents confessed that they were living together with their mates. The association test shown that women who were living together with their mates tend not to use contraception, more than 3 times higher than others who were married.

Table 1. Characteristics of Respondents

| Characteristics | Contraceptive Use | | p-value | Odds | 95% CI |
|---|---|---|---|---|---|
| | Using | Not using | | | |
| Age group | | | | | |
| 15 – 19 | 466(1.5%) | 287(1%) | 0.004* | 1.262 | 1.076 – 1.480 |
| 20 – 24 | 2,451(8.1%) | 776(2.6%) | <0.0001* | 2.445 | 2.219 – 2.717 |
| 25 – 29 | 4,222(14%) | 1,101(3.6%) | <0.0001* | 2.981 | 2.724 – 3.262 |
| 30 – 34 | 4,616(15.3%) | 1,143(3.8%) | <0.0001* | 3.139 | 2.872 – 3.431 |
| 35 – 39 | 4,594(15.2%) | 1,262(4.2%) | <0.0001* | 2.830 | 2.593 – 3.087 |
| 40 – 44 | 3,662(12.1%) | 1,414(4.7%) | <0.0001* | 2.013 | 1.846 – 2.195 |
| 45 – 49 | 2,362(7.8%) | 1,836(6.1%) | | 1 | |
| Marital status | | | | | |
| Living together | 136(0.4%) | 166(0.6%) | <0.0001* | 0.282 | 0.224 – 0.354 |
| Married | 22,237(73.7%) | 7,653(25.3%0 | | 1 | |
| Residence | | | | | |
| Rural | 11,867(39.3%) | 4,206(13.9%) | 0.252 | 0.970 | 0.921 – 1.022 |
| Urban | 10,506(34.8%) | 3,613(12%) | | 1 | |
| Educational attainment | | | | | |
| No education | 603(2%) | 653(2.2%) | <0.0001* | 0.404 | 0.353 – 0.461 |
| Primary | 8,105(26.8%) | 2,878(9.5%) | <0.0001* | 1.231 | 1.131 – 1.339 |

| Characteristics | Contraceptive Use | | p-value | Odds | 95% CI |
|---|---|---|---|---|---|
| | Using | Not using | | | |
| Secondary | 11,299(37.4%) | 3,254(10.8%) | <0.0001* | 1.517 | 1.397 – 1.649 |
| More than secondary | 2,366(7.8%) | 1,034(3.4%) | | 1 | |
| Literacy | | | | | |
| Blind/usually impaired | 84(0.3%) | 62(0.2%) | <0.0001* | 0.429 | 0.309 – 0.598 |
| Can't read at all | 1,381(4.6%) | 1,121(3.7%) | <0.0001* | 0.391 | 0.360 – 0.425 |
| Can read part or a whole sentence | 20,908(69.3%) | 6,636(21.9%) | | 1 | |
| Job status | | | | | |
| Unemployment | 9,317(30.9%) | 3,014(10%) | <0.0001* | 1.138 | 1.079 – 1.199 |
| Employed | 13,056(43.2%) | 4,805(15.9%) | | 1 | |
| Wealth quintile | | | | | |
| Lowest | 5,121(17%) | 2,337(7.7%) | <0.0001* | 0.744 | 0.687 – 0.805 |
| Second | 4,761(15.8%) | 1,451(4.8%) | 0.013* | 1.114 | 1.022 – 1.213 |
| Middle | 4,381(14.5%) | 1,314(4.4%) | 0.006* | 1.132 | 1.037 – 1.235 |
| Fourth | 4,177(13.8%) | 1,382(4.6%) | 0.564 | 1.026 | 0.941 – 1.119 |
| Highest | 3,933(13%) | 1,335(4.4%) | | 1 | |
| Women's autonomy | | | | | |
| No | 17,156(56.8%) | 7,819(25.9%) | <0.0001* | 0.687** | 0.681 – 0.693 |
| Yes | 5,217(17.3%) | 0(0%) | | 1 | |
| Access to FP information | | | | | |
| No | 11,513(38.1%) | 4,553(15.1%) | <0.0001* | 0.760 | 0.722 – 0.801 |
| Yes | 10,860(36%) | 3,266(10.8%) | | 1 | |
| Visiting FP clerk | | | | | |
| No | 20,959(69.4%) | 7,452(24,7%) | <0.0001* | 0.730 | 0.649 – 0.821 |
| Yes | 1,414 (4.7%) | 367 (1.2%) | | 1 | |

*significant under $\alpha = 5\%$

About 48.2% respondents have completed their secondary level or part of secondary level. It was more than the others that has just completed on primary level, even no education at all. Only one-tenth of respondents have gained higher educational level. Based on their educational attainment in Table 1, it was found that the more level gained, the higher odds for them to use contraception. But among women with higher educational level, it was found that the odds for using contraception became lower than others with educational level below. Women with secondary level had almost two times higher for using contraception than the higher ones.

Because of this attainment, it was possible for them to get appropriate job. It was shown that almost three-fifth of respondents were employed. But the analysis proved that the unemployment women tend to use contraception than the employed ones. Furthermore it is also known that more than 50% respondents had middle – high economic status than the rest. When compared by wealth quintile, it is proved that the lowest ones tend to not using contraception. While the

second and the middle one tend to use contraception than the richest ones.

As seen in Table 1, the odds for using contraception were nearly the same between women who lived on rural and those in urban area. It meant that the Family Planning program has reached their target regardless where they lived, whether on rural or urban area. All the factors above then formed women's autonomy. It was measured by 6 indicators: decision to use contraception, decision to use wife's income, decision to have medical examination, decision to buy durable goods, decision to visit relatives, and decision to use husband's income. All of indicators could be decided by women herself, women as wife with their husband or others, or by others except women. Then, it could be said that women who had authorities to decide all of those indicators, were having autonomy on their family life. Based on women's autonomy, it was known that most of them were not having autonomy (82.7%). And women who had no autonomy on their family life were liable to not using contraception than the others who had it. It took nearly 1.5 times higher for not using contraception.

As we know, barriers for women not using contraception began with the lack of knowledge about contraception. It could be minimized by giving them appropriate information about family planning, including the right contraceptive methods. Kind of this information could be delivered by mass media, such as television, radio, and magazines/ newspapers and by visiting Family Planning clerk to respondent as target of Family Planning program. IDHS accommodated these two information. Based on access to Family Planning information and visiting Family Planning clerk, it was proved that the women who had no access to Family Planning information and had not been visited by any Family Planning clerk were liable not to using contraception. It took more than 1.3 times higher.

## DISCUSSION

All of the results above proved that demographic characteristics and socio-economic status were associated with contraceptive use among women in Indonesia, except residence. It meant that the barriers for using contraception existed, whether internal or external barriers.

Based on the widespread adoption of family planning on many countries, it was known that family planning brings one of the most dramatic changes of the 20s century. The most dramatic changes was family planning could prevent many more deaths, particularly in the poorest countries by saving women's lives, children's lives, adolescents' lives, reducing deaths from AIDS, and helping governments achieve their national and international development goals [6].

For gaining those goals, determining barriers for using contraception is necessity. The result above proved that age, marital status, educational attainment, literacy, job status, wealth quintile, women's autonomy, access to Family Planning information, and visiting Family Planning clerks were associated with contraceptive use. The higher prevalence of contraceptive use was on 20 – 34 years old women, married, having secondary level on educational attainment,

unemployment, women who could read, middle quintile above, having autonomy, access to Family Planning information, also ever visited by Family Planning clerk.

Focusing on family planning program, it will be valuable if the reasons for using contraception were considered on the analysis, whether for limiting or spacing births. According to Bhushan [1], the separated reasons can lead to different method. On the other hand exploring KAP (knowledge, attitude, practice) toward Family Planning and more complex external barriers, such as husband's disapproval and religious consideration are also substantial in developing family planning program. Multilevel analysis can be considered to the next analysis for determining any disparities of contraceptive use among women.

## CONCLUSION

The findings of this study show that the family planning program should be focus on younger married women, having no education or primary level, employed women, lowest quintile, having no autonomy on their family life and access to Family Planning information, and never visited by Family Planning clerk. The contraceptive use among women in Indonesia are mostly influenced by contextual factors that rely among them. Developing new method for giving appropriate information is also suggested.

## ACKNOWLEDGEMENT

The data used in this study was supported by Measures DHS, ICF International.

## REFERENCES

[1] I. Bhushan, Understanding Unmet Need, Baltimore: Working Paper 4th ed, John Hopkins University School of Public Health, Center for Communication Programs, November 1997.

[2] J. B. Casterline and S. W. Sinding, "Unmet Need for Family Palnning in Developing Countries and Implication for Population Policy," Population and Development Review, Vol. 26, No. 4, pp. 691-723, December 2000.

[3] B. Gubhaju, "Barriers to Sustained Use of Contraception in Nepal: Quality of Care, Socioeconomic Status, and Method-Related Factors," Biodemography and Social Biology, Vol. 55, pp. 52-70, 2009.

[4] Statistics Indonesia (BPS), National Population and Family Planning Board (BKKBN), Kementerian Kesehatan (MOH), and ICF International, "Indonesia Demographic ad Health Survey 2012," BPS, BKKBN, Kemnekes, and ICF International, Jakarta, 2013.

[5] J. K. Mathe, K. K. Kasonia and A. K. Maliro, "Barriers to Adoption of Family Planning among Women in Eastern Democratic Republic of Congo," African Journal of Reproductive Health, Vol. 15, No. 1, pp. 69-77, 2011.

[6] R. Smith, L. Ashford, J. Gribble and D. Clifton, Family Planning Saves Lives, 4th ed., Washington DC: Population Reference Bureau, 2009.