The Indonesian national family planning program: progress and remaining challenges in implementing a rights-based approach

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Abstract

Purpose – *Indonesia subscribes to rights-based principles of family planning. However, a chasm between principles and practice has long been noted on a global basis, and progress has not been well-documented. This paper aims to assess the extent to which the Indonesian national family planning program has evolved in a manner that is consistent with rights-based principles.*

Design/methodology/approach – *The primary source of data was five Indonesian Demographic Health Surveys undertaken from 1997 to 2017. The analyses were organized around three major categories of family planning-related human rights. Trend analysis and logistic regression were used in analyzing the data.*

Findings – *Indonesian women have considerable autonomy in family planning decision, reporting that family planning decisions were mainly made by themselves or jointly with their spouse. Although contraceptive method awareness and demand for family planning are high, Indonesia fares poorly with regard to informed choice in contraceptive method selection. Access to family planning services is comparatively high as judged by contraceptive prevalence, family planning demand satisfaction and unmet need for family planning. However, significant geographic and socioeconomic inequity were observed on many indicators, with eastern Indonesian provinces consistently lagging behind.*

Research limitations/implications – *This paper focuses on married couple, as Indonesia has a restrictive policy to limiting access and information of family planning for other groups, unmarried youth in particular.*

Originality/value – *This paper makes an important contribution to document how effectively the prohuman rights policy orientation toward family planning has been translated into services.*

Keywords *Indonesia, Rights-based family planning*

Paper type *Research paper*

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List of abbreviations

CPR = Contraceptive prevalence rate;
DHS = Demographic Health Survey;
FP = Family planning;
GI = Gini Index;
ICPD = International Conference on Population and Development;
IDHS = Indonesia Demographic Health Survey;
IQR = Interquartile range;

JKN = Jaminan Kesehatan National;
mCPR = Modern contraceptive prevalence rate;
MII = Method Information Index;
NFP = National family planning program;
TFR = Total fertility rate;
UHC = Universal health coverage; and
VRBFP = Voluntary rights-based family planning.

Introduction

Motivated in part by landmark international conferences such as the 1994 International Conference on Population and Development (UNFPA, 1994) and the 2012 London Summit on Family Planning (Hardee *et al.*, 2014a), a sizeable literature has been accumulated over the years on the basic principles of rights-based family planning and the activities/processes needed to achieve rights-based programming (Center for Reproductive Rights, 2009; Cottingham *et al.*, 2012; Erdman and Cook, 2008; Hardee *et al.*, 2014a; IPPF, 1996; Kerber *et al.*, 2007; Kumar *et al.*, 2013, 2014; Kumar, 2015; World Health Organization, 2014; Zaidi *et al.*, 2013). Rights-based approach to family planning conceptualized as "one in which all phases of a program (needs assessment, planning, implementation, monitoring, evaluation, and management) are viewed through the lens of individuals' human rights and how rights are, or are not, upheld in communities and in FP programs" (Hardee *et al.*, 2014b; Kumar *et al.*, 2014). Erdman and Cook group these reproductive rights into three major categories:

1. those related to reproductive self-determination;
2. those related to access to sexual and reproductive health services, commodities, information and education; and
3. those related to equality and nondiscrimination (Erdman and Cook, 2008).

Hardee proposes a useful conceptual framework for voluntary, human rights-based family planning developed by combining the three elements/categories from the Erdman and Cook conceptualization with four "interrelated and essential" elements of the right to the highest attainable standard of health from Article 12 of the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights, General Comment No. 14 (sometimes referred to as "AAAQ"), namely, availability, accessibility, acceptability and quality (CESCR, 2000). The framework is structured around ten human rights-related principles and standards that pertain to contraceptive information and services which are availability, accessibility, acceptability, quality, nondiscrimination and equality, informed decision-making, privacy and confidentiality, participation, accountability and agency/autonomy/empowerment (FP2030, UNFPA and What Works Association, 2021).

Most countries around the globe have endorsed the concept of rights-based family planning. However, the extent to which government endorsement has been translated into concrete and effective policy and programmatic action varies across diverse country settings. Indeed, the UN High Commission for Human Rights made note of this "chasm between theory and practice" many years ago (Office of the United Nations High Commissioner for Human Rights, 2006). There were several publications in progress toward countries' advancing rights-based family planning, but on specific context in South East Asia has not well-documented (FP 2020 and UNFPA, 2018; Hardee and Jordan, 2021).

The research reported in this article sought to assess the extent to which the Indonesian national family planning program (NFP) has evolved in a manner that qualifies as being genuinely human rights based. The Indonesian NFP was highly successful in lowering the total fertility rate (TFR) from 3.0 in 1991 to 2.6 in 2002. During this period, the contraceptive

prevalence rate (CPR) increased from 49.7 in 1991 to 60.3 in 2002 and the modern contraceptive prevalence rate (mCPR) from 47.1 to 56.7 (Central Bureau of Statistics *et al.*, 2003). Progress in increasing contraceptive prevalence and reducing fertility has, however, since slowed – in 2017, the CPR was 63.7%, the mCPR 57.4% and TFR 2.3 (Central Bureau of Statistics *et al.*, 2018). Rights-based principles of family planning information and services have long served as the main guiding principles of the NFP (although program efforts prior to 2000 focused heavily on population control) (Hayes, 2016; Permana and Westoff, 1999). These rights are enshrined in the Constitution of Indonesia and other national laws such as the 1984 Law on Human Rights (Law No. 7/1984) and the 2009 Health Law (No. 36/2009). The preamble of the Health Law states that every individual is equal before the law and includes a chapter that explicitly acknowledges citizens' rights to realize reproductive aspirations and protect their reproductive health, including access to family planning services. Under the family planning articles, it stated that everyone has the right to choose their own contraceptive method without coercion and that each choice will be provided according to the health status of the person. This rights-based orientation is clearly reflected in background document for the Medium-Term Development Plan 2020–2024 (Bappenas, 2018).

In this article, we assess how effectively the prohuman rights policy orientation toward family in Indonesia has been translated into family planning services in a manner that is consistent with basic human rights principles. The reference period for the study is the 20-years from 1997 to 2017. The primary focus of the analyses undertaken was on married women and couples of reproductive age, who are the primary focus of the NFP. It is acknowledged that Indonesian reproductive health policy has been criticized regarding restrictiveness concerning access to contraceptives for unmarried youth as well as access to quality abortion services (BKKBN and UNFPA, 2014). We consider these issues along with the main findings of the study in an overall assessment presented in the Discussion section of the paper.

Methods

The primary source of data for the research was the five Indonesian Demographic Health Surveys (IDHS) undertaken from 1997 to 2017 (Central Bureau of Statistics *et al.*, 2003, 2008, 2013, 2018), with the 2017 IDHS being subject to more in-depth analysis. Respondents for the respective survey rounds were chosen using stratified, multistage cluster sampling designs. The sample sizes for currently married women of reproductive age in the respective surveys were as follows: 1997 – 26,886; 2002 – 27,857; 2007 – 30,931; 2012 – 33,465; 2017 – 35,681. We also make limited use of the survey responses from the samples of currently married males interviewed in the respective survey rounds, the sample sizes of which were as follows: 1997 – no male sample; 2002 – 8,310; 2007 – 8,758; 2012 – 9,306; 2017 – 10,009.

At the most basic level, NFPs have two main activities: providing accurate information that provides a basis for informed choice as to whether to use contraceptive methods and if so which method to use and providing universal access to quality family planning services that offer a wide range of contraceptive methods. The conceptual schemes of voluntary rights-based family planning (VRBFP) and reproductive rights were used to select variables for the analyses to assess compliance with rights-based principles (Erdman and Cook, 2008; Hardee *et al.*, 2014a). The analyses and presentation of results were organized therefrom around the three major categories of family planning-related human rights identified. Rights pertaining to the first category, reproductive self-determination, were assessed via responses to IDHS questions concerning who makes family planning decisions in the case of survey respondents – the respondent alone, the respondent and spouse jointly, spouse only or others. Unfortunately, such questions were included only in the 2017 IDHS.

Rights pertaining to the second category of rights, access to sexual and reproductive health information and services, were assessed via several process and outcome indicators. Access to information was assessed via two measures:

1. contraceptive knowledge, operationalized in terms of numbers of contraceptive methods known; and
2. the Method Information Index (MII), which measures the extent to which family planning clients had been provided with information on alternative methods available to them, the side effects associated with each method and what can be done about these side effects.

The index was operationalized via a 0–3 scale, although we also examined performance on each component of the index as well. Availability of and access to services was measured in terms of several indicators: contraceptive use (any method and modern methods), satisfaction of demand for family planning, unmet need to family planning and unmet need for modern methods. The definitions of above measures were per standard DHS definitions. We also examined two additional indicators of service access:

- the proportion of women with unmet need for family planning that cited program/service-related factors as the reason for not using contraception; and
- method mix skewness, an indicator of possible provider bias and/or supply chain issues.

The latter measure was operationalized alternatively as the proportion of women using (a) the most widely used modern contraceptive method and (b) the two most widely used methods.

The third category of family planning-related rights related to equality and nondiscrimination was assessed by examining the magnitude of differentials in indicators for the first two categories/dimensions of family planning-related rights for among women varying by socioeconomic status and geographic location. Socioeconomic status was measured in terms of level of education and household wealth quintiles. Geographic location was assessed in terms of urban–rural character of place of residence and province. Provinces were classified into four geographic groupings as follows: Java–Bali; Western Indonesia (Aceh, North Sumatera, West Sumatera, Riau, Jambi, South Sumatera, Bengkulu, Lampung, Bangka Belitung, Riau Island, West Kalimantan and Central Kalimantan); Central Indonesia (West Nusa Tenggara, East Nusa Tenggara, South Kalimantan, East Kalimantan, North Kalimantan, North Sulawesi, Central Sulawesi, South Sulawesi, Gorontalo and West Sulawesi); and Eastern Indonesia (Maluku, North Maluku, West Papua and Papua). Inequities in access to information and services by socioeconomic status and geographic location were assessed via logistic regressions in which include the demographic characteristics of respondents and differences in other nonprogram factors were controlled statistically.

To provide a basis for interpretation, we compared our findings based upon the latest IDHS (2017) data against the latest DHS data from other southeast Asian peer countries. Unfortunately, only three other countries undertook DHS in a comparable timeframe – Cambodia in 2014 (National Institute of Statistics *et al.*, 2015), Myanmar in 2015–16 (Ministry of Health and Sports *et al.*, 2015) and the Philippines in 2017 (Phillipines Statistics Authority and ICF International, 2018). Although this is admittedly a limited sample of countries, it is to be noted that all three comparator countries, like Indonesia, had engaged in the global FP2020 and continued the commitment in FP 2030 initiative and were thus in principle committed to a human rights-based perspective on family planning and reproductive health.

All data were weighted prior to analysis using the sampling weights provided in the databases of the respective IDHS surveys. STATA version 16.0 was used to undertake the analyses.

Results

Right of self-determination

There is limited information available in the IDHS surveys on the matter of self-determination in reproductive health decision-making. However, the data that are available suggest that Indonesian women and couples have considerable autonomy in such decision-making. In the 2017 IDHS (the only survey round in which relevant questions were asked), women currently using a contraceptive method reported that contraceptive use decisions were mainly made by themselves (35.5%) or jointly with their spouse (57.2%). Another 7.2% of respondents reported that contraceptive use decisions were mainly made by their spouse and 0.3% by others. Similar responses were offered regarding contraceptive nonuse decisions among women not currently using a contraceptive method at the time of the survey – 38.3% mainly by female respondents themselves, 52.0% jointly with their spouses, 8.0% by their spouse and 1.7% by others. Comparable data were available from only one of the three comparator countries considered in the study – the Philippines. The proportion of women reporting making family planning-related decisions either alone or jointly with their spouses in Indonesia (92.4%) was essentially the same as that in the Philippines (93.9%).

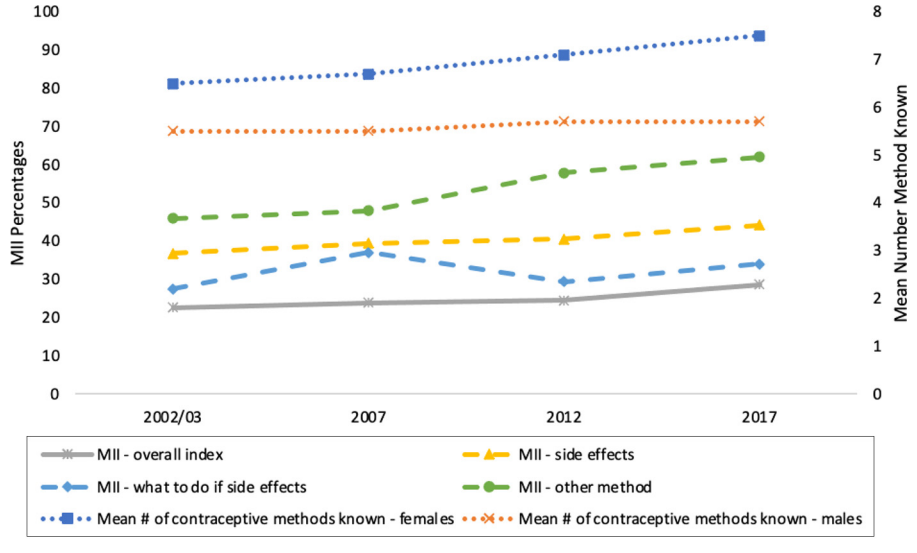
Rights related to access to sexual and reproductive health services, commodities, information and education

We divided this component into two subthemes:

1. access to family planning-related information; and
2. access to family planning services.

Regarding access to information, data for two indicators are displayed in Figure 1. Number of contraceptive methods known (mean) is used as a proxy measure to capture the aggregate effects of all program efforts to provide information and education on family planning. As may be observed, knowledge of contraceptive methods is relatively high among both Indonesian females and males (6–8 methods on average), although the gap

Figure 1 Long-term trends in contraceptive method knowledge and informed choice



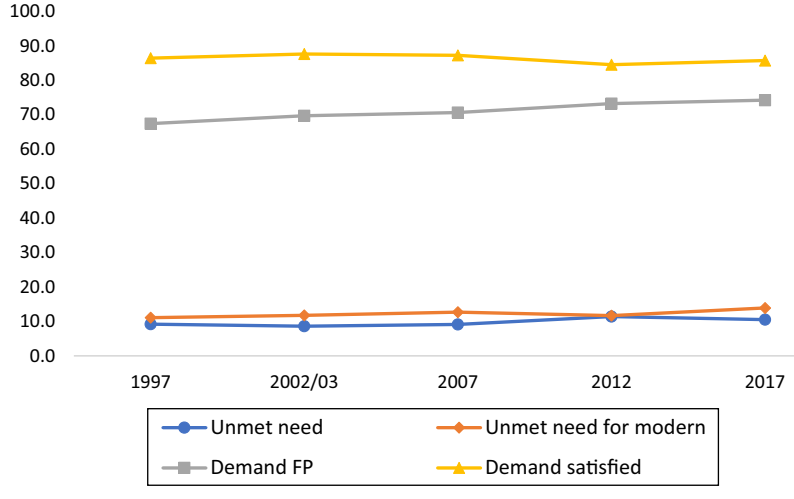
Source: Figure by authors

between females and males appears to have widened over time. Indonesian females (mean of 7.5 methods known in 2017) lagged slightly behind women from the Philippines and Cambodia in terms of knowledge of contraceptive methods (9.1 and 8.7 methods on average), respectively, but slightly above women from Myanmar (mean of 6.9 methods).

The second indicator displayed in the figure, the MII, is a measure of the quality of counseling on family planning being provided at the time that female survey respondents began using the contraceptive method that they were using at the time of the survey. Indonesia fares less well on this indicator. Against a maximum index score of 100%, Indonesia has consistently scored around 20%, with a slight increase to 28.7%. On this important indicator, Indonesia lags far behind the Philippines (59.8) and Cambodia (67.4) but is comparable to Myanmar (25.0). Less than stellar performance on all three components of the MII are noted. The strongest performance has over time consistently been with regard to informing family planning clients of alternative contraceptive method options, but even at the high point of this data series in 2017 the percentage of clients being informed of method alternatives was only 62.1%. The frequency of informing clients about the side effects of the method chosen and what can be done about the side effects has been consistently lower.

Turning next to access to services, the fact that the CPR in Indonesia has been above 60% since the early 2000s indicates that access to family planning services has been being provided to a substantial proportion of women and couples desiring such services for some time. The data shown in Figure 2 support a further "unpacking" of the service access situation. As may be observed, demand for family planning or women who declare they want to avoid pregnancy has been in the vicinity of 70% since the early 2000s, reaching 74.2% in 2017. The NFP has been successful in satisfying 80% or more of this demand on a consistent basis. In the 2017 figure, 85.7% of women using contraception among women who say they do not want to get pregnant are termed "demand satisfied." However, unmet need for family planning has consistently been in the 10%–12% range over the years, with unmet need for modern contraceptive methods being slightly higher. These data suggest that while the national program has by and large been successful in satisfying demand for family planning, it has been less successful in identifying and addressing the factors

Figure 2 Long-term trends in demand for family planning, demand satisfaction and unmet need for family planning



Source: Figure by authors

underlying unmet need. It is noteworthy, however, that based upon the latest DHS data from the Asian comparator countries considered in our research, Indonesia was outperforming these countries both in terms of demand generation and demand satisfaction. The 74.2% total demand for family planning in Indonesia in 2017 exceeded that in the Philippines (70.9%), Cambodia (68.8%) and Myanmar (68.5%). Differences in the proportion of demand satisfied and in unmet need for family planning were yet larger – Demand satisfied: 85.7% for Indonesia vs 81.9% for Cambodia, 76.5% for the Philippines and 76.3% for Myanmar; Unmet need: 10.5% for Indonesia vs 12.5 for Cambodia, 16.2% for Myanmar and 16.7% for the Philippines.

To what extent does lack of access contribute to unmet need for family planning? To assess this matter, we examined the reasons given by women desiring to limit or space future pregnancies (i.e. women with unmet need for family planning) for not using contraceptive methods – see Table 1. A plurality of the responses given by women in all survey rounds fell under the heading of what the IDHS labeled as "fertility-related reasons" (sub/infecund, postpartum amenorrheic/breastfeeding, not having sex/infrequent sex). Sizeable proportions of responses (between 24% and 41% in the various survey rounds) were classified in the IDHS as "method-related reasons." We divided these into two subgroups: service delivery issues and health concerns. As may be observed in Table 1, health concerns (most notably fear of side effects, which has declined steadily in frequency of being cited across survey rounds) were more frequently cited except in the 2017 IDHS, when service delivery issues (especially lack of access/too far) were cited more frequently. The reasons underlying the large jump in reported lack of physical access in the 2017 IDHS are unclear. Whatever the underlying reasons, these data indicate that there is considerable room for the NFP to improve the extent to which the reproductive aspirations of Indonesian women and couples to be reached by mitigating service provision barriers and bottlenecks and strengthening education and counseling concerning family planning side as well by increasing service responsiveness to assist women in addressing side effects.

The last issue considered under the heading of access to services was the extent to which method choice might be being constrained by service delivery issues that limited method choice. To assess this, we examined the degree of concentration or skewness in the mix of

Table 1 Reasons for not using a contraceptive method among women desiring to space or limit future births, 2002–2017

Reason given	2002	2007	2012	2017
Fertility-related reasons	*44.0*	*44.1*	*47.3*	*48.4*
Opposition to use	*4.6*	*3.1*	*2.2*	*3.9*
Lack of knowledge	*1.1*	*1.1*	*0.9*	*0.3*
Method-related reasons	*28.8*	*35.6*	*23.9*	*40.1*
Service delivery issues	*5.4*	*14.2*	*4.3*	*23.5*
Lack of access/too far	0.6	0.3	0.2	21.2
Cost too much	3.7	3.6	2.1	0.6
Inconvenient to use	1.1	1.4	1.9	0.1
Preferred method not available	–	7.8	0.0	1.5
No method available	–	1.1	0.0	0.1
Health concerns	*22.4*	*21.4*	*19.6*	*17.6*
Fear of side effect	21.8	20.5	18.0	13.9
Interferes with body's processes	0.6	0.8	1.6	2.8
Get fat/thin	–	–	–	0.9
Other	*19.2*	*9.5*	*24.3*	*13.1*
Don't know	*3.4*	*6.6*	*1.4*	*2.9*

Note: As multiple responses were permitted in the IDHS questioning, the sum of the percentages shown exceed 100%
Source: Table by authors

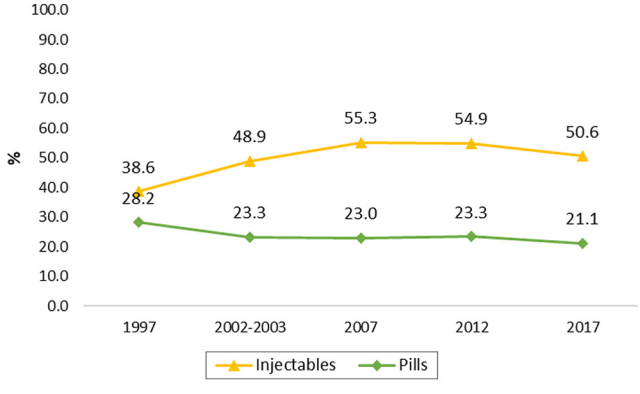
modern contraceptive methods being used. While skewed method mixes are not necessarily indicative of service delivery problems (they could simply reflect widely held method preferences and/or social influence among contraceptive users), they can also result from restricted method choice due to provider bias and/or supply chain issues. Figure 3 displays the proportion of modern contraceptive method users who were using the most commonly used method in Indonesia (injectables) and the two most commonly used methods (injectables and pills) from 1997 to 2017. Injectable contraceptives have been the most widely used in Indonesia since the late 1990s with a market share ranging from 38.6% in 1997 to 55.3% in 2007 (Figure 3). This market share had fallen to 50.6% by 2017. Oral contraceptives have been the second most widely used in Indonesia during this period with a market share in the 21%–28% range. Combined, these two methods have accounted for a market share of between 67% and 78% since 1997. The latest DHS data from comparator countries suggest, however, that the degree of method skewness observed in Indonesia as of 2017 is unremarkable. The market share of the most commonly used method in Indonesia (injectables) of 50.6% falls in the middle of the range of results from the other comparator countries (45.1%–53.7%), and the market share of the top two methods (injectables and orals) of 71.7% is comparable to that in the Philippines (70.3%) and in Cambodia (68.4%), and significantly lower than in Myanmar (80.4%).

Rights related to equality and nondiscrimination

The third and final category of family planning-related rights in the Erdman and Cook (2008) classification scheme concerns equality and nondiscrimination. We assessed equality in terms of the magnitude of differences in self-determination and access to information and services by 2017 IDHS survey respondents classified by socioeconomic status and place of residence. Logistic regression was used to control statistically for differences in other factors. Specifically, we controlled for health insurance status and women's demographic characteristics (age and parity).

The findings regarding self-determination and access to information shown in Table 2 point to varying levels of inequality across the indicators considered. Regarding socioeconomic inequities, contraceptive method knowledge may be observed to increase steadily and significantly with both increasing levels of female education and household wealth. However, no relationship is observed between socioeconomic level and degree of reproductive self-determination, and with regard to informed choice (i.e. the MII), it is only

Figure 3 Long-term trends in market share of the two most commonly used modern contraceptive methods



Source: Figure by authors

Table 2 Logistic regression: factors associated with self-determination and access to family planning information, 2017

Variable	*Category*	*Self-determination*	*Male contraceptive knowledge*	*Female contraceptive knowledge*	*MII*
Insurance status	No	1.000	1.000	1.000	1.000
	Yes	1.124	1.254**	1.286**	1.163*
		(0.98–1.29)	(1.11–1.41)	(1.21–1.36)	(1.05–1.29)
Age (single year)	Numeric	1.000	1.008*	1.019**	1.006
		(0.99–1.00)	(1.00–1.02)	(1.01–1.02)	(0.99–1.01)
Parity	Numeric	1.000	1.042	1.045**	0.943
		(0.99–1.00)	(0.99–1.08)	(1.02–1.07)	(0.89–0.99)
Education	Low	1.000	1.000	1.000	1.000
	Secondary	1.078	2.689**	2.810**	1.305**
		(0.86–1.33)	(2.37–3.05)	(2.62–3.01)	(1.15–1.47)
	High	0.960	8.147**	9.051**	2.186**
		(0.76–1.21)	(6.48–10.23)	(8.01–10.22)	(1.81–2.63)
Wealth Index	Poorest	1.000	1.000	1.000	1.000
	Poorer	0.981	1.710**	1.475**	1.077
		(0.79–1.21)	(1.42–2.05)	(1.34–1.62)	(0.92–1.26)
	Middle	0.928	1.819**	1.921**	1.135
		(0.75–1.15)	(1.50–2.20)	(1.74–2.11)	(0.96–1.34)
	Richer	0.968	2.181**	2.381**	1.179
		(0.76–1.22)	(1.77–2.68)	(2.15–2.63)	(0.98–1.41)
	Richest	0.953	2.972**	3.230**	1.452**
		(0.73–1.35)	(2.35–3.75)	(2.87–3.62)	(1.19–1.77)
Region	Java–Bali	1.000	1.000	1.000	1.000
	West	0.921	0.827*	0.830**	0.838*
		(0.74–1.14)	(0.71–0.97)	(0.77–0.88)	(0.74–0.93)
	Central	0.824	1.038	0.918*	0.882*
		(0.63–1.07)	(0.87–1.24)	(0.85–0.98)	(0.78–0.99)
	East	0.348**	0.542**	0.403**	0.805
		(0.22–0.53)	(0.42–0.69)	(0.35–0.45)	(0.62–1.04)
Residence	Urban	1.000	1.000	1.000	1.000
	Rural	1.023	0.988	0.746**	0.961
		(0.86–1.20)	(0.84–1.15)	(0.70–0.79)	(0.86–1.07)

Note: *$p < 0.05$; **$p < 0.001$
Source: Table by authors

women with the highest level of education and from the wealthiest households that differ significantly from other women.

Geographic inequalities are somewhat more pronounced. Regarding reproductive choice self-determination, the only statistically significant inequity observed was the lower likelihood of family planning decisions being made by women or jointly by women and their husbands (odds ratio [OR] = 0.348; 95% confidence interval [CI] = 0.22–0.53) in eastern Indonesia (as compared to Java–Bali). Knowledge of contraceptive methods among males and more so among females is systematically lower outside of Java–Bali, with the extremely low levels of contraceptive knowledge in eastern Indonesia being particularly noteworthy. Female contraceptive knowledge is also significantly lower in rural than urban areas (OR = 0.746; 95% CI = 0.70–0.79). Informed choice is also systematically lower outside of Java–Bali, although the OR for eastern Indonesia failed to attain statistical significance. Having health insurance is associated with higher levels of contraceptive knowledge and MII scores, but the effect sizes were moderate (ORs of 0.163–0.286).

Table 3 presents the results of similar logistic regression analyses for demand for family planning and three service access-related outcomes: demand satisfaction, unmet need for family planning and unmet need for modern methods. The findings regarding demand for family planning largely mimic the findings for access to information in that woman with the lowest levels of education and those in the poorest 20% of households have lower levels of

Table 3 Logistic regression: factors associated with demand for family planning, demand satisfaction and unmet need, 2017

Variable	*Category*	*Demand for FP*	*Demand satisfied*	*Unmet need*	*Unmet need for modern methods*
Insurance status	No	1.000	1.000	1.000	1.000
	Yes	0.952	1.147*	0.869*	0.945
		(0.89–1.01)	(1.04–1.25)	(0.79–0.94)	(0.87–1.02)
Age (single year)	Numeric	0.954**	0.977**	1.010*	1.012**
		(0.95–0.96)	(0.97–0.98)	(1.00–1.02)	(1.01–1.02)
Parity	Numeric	2.172**	0.998	1.160**	0.999
		(2.07–2.28)	(0.96–1.04)	(1.13–1.19)	(0.99–1.00)
Education	Low	1.000	1.000	1.000	1.000
	Secondary	1.222**	1.200*	1.087	1.197*
		(1.13–1.31)	(1.04–1.38)	(0.98–1.20)	(1.04–1.37)
	High	1.033	1.153	0.967	1.631**
		(0.93–1.15)	(0.98–1.35)	(0.82–1.14)	(1.40–1.89)
Wealth Index	Poorest	1.000	1.000	1.000	1.000
	Poorer	1.347**	1.106	1.000	0.942
		(1.22–1.49)	(0.96–1.27)	(0.87–1.14)	(0.83–1.07)
	Middle	1.312**	1.128	0.980	0.930
		(1.18–1.45)	(0.97–1.30)	(0.85–1.13)	(0.81–1.06)
	Richer	1.159*	1.101	0.983	0.931
		(1.04–1.29)	(0.94–1.28)	(0.85–1.14)	(0.81–1.07)
	Richest	1.243**	0.990	1.128	1.078
		(1.10–1.40)	(0.84–1.17)	(0.95–1.33)	(0.92–1.25)
Region	Java–Bali	1.000	1.000	1.000	1.000
	West	0.674**	0.991	0.909	1.209*
		(0.63–0.72)	(0.89–1.10)	(0.82–1.01	(1.07–1.36)
	Central	0.652**	0.637**	1.368**	1.431**
		(0.60–0.70)	(0.57–0.70)	(1.24–1.51)	(1.24–1.64)
	East	0.277**	0.344**	1.818**	1.719**
		(0.24–0.32)	(0.29–0.41)	(1.54–2.13)	(1.37–2.16)
Residence	Urban	1.000	1.000	1.000	1.000
	Rural	1.029	1.225**	0.833**	0.775**
		(0.96–1.10)	(1.10–1.34)	(0.75–0.92)	(0.70–0.85)

Note: $^{*}p < 0.05$; $^{**}p < 0.001$
Source: Table by authors

demand than more educated women and those from higher wealth households. However, levels of demand do not increase systematically with increasing education and/or household wealth but rather vary within a modest range of effect sizes (all of which, with the exception highly educated women are statistically significant). Demand for family planning is significantly lower among women residing outside of Java–Bali, once again with women residing in eastern Indonesia standing out (OR = 0.227; 95% CI = 0.24–0.32). No urban–rural differential is observed.

Only minor socioeconomic inequality is observed regarding demand satisfied and unmet need for family planning. The only statistically significant difference is higher odds of women with secondary education being more likely to have their demand for family planning satisfied (OR = 1.20; 95% CI = 1.04–1.38). No statistically significant differences in either demand satisfaction and unmet need for family planning are observed among household wealth quintiles.

The analyses of geographic differences indicate somewhat larger levels of inequality. Women residing in provinces outside Java–Bali other than those in the western part of the country, who had lower levels of demand for family planning, also had lower levels of demand satisfaction and higher levels of unmet need than residents of Java–Bali. However, demand satisfaction was higher and unmet for family planning lower among women residing in rural vs urban areas.

The results for unmet need for modern contraceptives reveal an interesting finding regarding female education. Although unmet need for family planning was unrelated to level of education, unmet need for modern contraceptives increases steadily and significantly with rising levels of education. This result reflects the relatively high prevalence of traditional contraceptive methods use among women with higher levels of education – 8.6% among women who had completed secondary education and 11.5% among those with postsecondary levels of education (BPS, BKKBN, Kemenkes RI, *et al.*, 2018). Unmet need for modern methods was higher in provinces outside of Java–Bali and in urban vs rural areas. The latter result is due to the higher prevalence of traditional method use in urban (5.5%) vs rural (3.8%) areas (Central Bureau of Statistics *et al.*, 2018). The increased use of traditional methods, however, raises questions about whether traditional methods are a genuine preference or if family planning programs are failing to provide sufficient information or an adequate array of contraceptive method options.

In view of the significant levels of inequality observed by place of residence, the final step in the analysis entailed a detailed examination of provincial differences in selected priority indicators. Table 4 displays 2017 IDHS provincial-level estimates and 95% CIs for three (3) indicators: MII, demand for family planning and percent of demand satisfied. The magnitude of variability and inequality across provinces was quantified via the interquartile range (IQR) and Gini Index (GI) statistics, respectively. Substantial levels of provincial inequality are documented in these data. Regarding the MII, three provinces (Jakarta, Yogyakarta and Bali) had MII scores over 40% (well above the national figure of 28.3%), while five provinces had MII scores of less than 20%. The IQR, which measures the difference in MII scores between the provinces ranked at the 25th and 75th percentiles in the distribution of provinces by MII, was 10.9, indicating substantial variability even in the "middle" of the distribution of provinces by MII score. The GI for provincial inequality regarding MII was 0.193. In the way of a benchmark, the GI for household income inequality in September 2017 was estimated to be 0.391 (Badan Pusat Statistik, 2018). GI ranges from 0 to 1 where a higher GI indicates greater inequality.

Comparable levels of provincial-level inequality are observed regarding both demand for family planning and demand satisfaction. Demand for family planning in 2017 ranged from a high of 82.2% in Yogyakarta to a low of 53.6% in Papua Province (nationally 74.4%), with most provinces in eastern Indonesia falling below the national figure. Six provinces had demand satisfaction levels of 90% or above, while nine provinces fell below 80% and one below 70% (the national figure was 85.6%). Provinces with below average levels of demand satisfaction were again disproportionately located in eastern Indonesia. The IQRs for these measures were slightly lower than for MII, while the GIs were slightly higher.

Managing a rights-based family planning program in Indonesia faces significant challenges. These include a high degree of sociocultural diversity, difficult geography (over 7,000 inhabited islands), a decentralized system of government in which primary responsibility for the implementation of family planning and other health services has been transferred from the central to the district level and a large private sector role in the provision of family planning services – 66% of contraceptive users in the 2017 IDHS reported a nongovernment source of supply for the contraceptive method being used at the time of the survey (Central Bureau of Statistics *et al.*, 2018).

The foregoing analyses paint a mixed picture regarding Indonesia's performance in implementing its largely prohuman rights reproductive health policies. On the positive side, the level of self-determination in contraceptive decision-making is high. Indonesia has also been successful in both promoting the benefits of family planning to its citizens, with demand for family planning reaching 74% among married women in 2017, and in satisfying the demand generated, with 86% of married women desiring to space or limit births using a contraceptive method in 2017. Indonesia compared favorably with its regional peers considered in the study on both measures.

Table 4 Provincial inequalities in selected indicators, Indonesia, 2017

Province	*MII*	*95% CI*	*Demand for FP*	*95% CI*	*Demand Satisfied*	*95% CI*
Java–Bali						
Jakarta	40.6	34.1–46.7	72.5	70.1–74.9	78.6	74.9–81.8
West Java	29.4	26.7–32.3	74.1	72.4–75.7	85.4	83.7–86.8
Central Java	30.5	27.3–34.2	76.4	74.4–78.3	86.0	84.1–87.7
Yogyakarta	45.4	36.7–54.6	82.2	77.7–86.0	92.4	88.5–95.0
East Java	29.9	26.7–33.2	77.5	75.8–79.1	90.1	88.5–91.5
Banten	21.1	17.2–25.5	71.4	68.6–74.0	86.3	82.9–89.1
Bali	46.0	35.3–55.4	77.8	73.4–81.6	86.5	82.5–89.6
Western Indonesia						
Aceh	25.6	21.7–29.9	63.7	60.8–66.5	81.0	77.6–83.9
North Sumatera	22.7	18.7–27.6	69.5	66.8–72.1	84.7	81.9–87.1
West Sumatera	32.5	25.2–40.8	69.0	65.7–72.2	87.1	82.8–90.5
Riau	21.3	15.1–29.2	71.5	66.7–75.8	84.4	80.1–87.8
Jambi	19.7	14.4–26.2	76.3	72.0–80.1	91.3	87.6–94.0
South Sumatera	32.3	26.0–39.5	76.3	73.5–78.8	88.9	85.4–91.6
Bengkulu	18.6	13.1–25.7	77.2	74.2–79.9	91.4	88.6–93.6
Lampung	26.5	21.5–32.1	77.8	73.8–81.2	89.5	86.8–91.7
Bangka Belitung	28.1	22.4–33.8	76.8	68.8–83.2	92.7	89.7–94.8
Riau Island	34.3	26.7–40.6	68.1	63.7–72.2	84.7	81.3–87.5
West Kalimantan	20.6	16.3–25.7	76.8	73.9–79.4	87.2	83.1–90.4
Central Kalimantan	33.8	27.4–40.3	79.5	72.3–85.2	92.1	88.9–91.9
Central Indonesia						
West Nusa Tenggara	31.4	25.6–37.4	67.8	64.5–70.9	77.2	72.1–81.6
East Nusa Tenggara	33.9	29.0–39.7	67.6	64.9–70.1	74.2	70.4–77.7
South Kalimantan	25.7	19.5–33.5	76.6	73.1–79.8	88.9	84.8–91.9
East Kalimantan	29.8	24.1–36.3	76.7	72.7–80.2	86.8	83.9–89.2
North Kalimantan	25.5	18.1–34.7	68.5	64.5–72.2	77.0	71.4–81.8
North Sulawesi	10.9	6.7–16.3	80.0	75.1–83.7	84.5	78.6–88.8
Central Sulawesi	23.7	18.7–29.5	74.6	71.1–77.7	87.8	84.8–90.3
South Sulawesi	27.7	22.7–32.7	71.0	68.3–73.4	80.0	76.5–83.1
Southeast Sulawesi	18.4	14.5–23.1	68.9	66.0–71.7	78.0	73.5–81.9
Gorontalo	25.8	17.0–37.3	74.5	69.4–78.9	82.6	78.8–85.8
West Sulawesi	29.3	23.9–35.2	68.8	65.6–71.7	78.9	74.5–82.6
Eastern Indonesia						
Maluku	16.7	13.4–20.8	65.7	62.8–68.4	71.4	67.1–75.3
North Maluku	17.5	12.3–24.4	69.2	65.8–72.4	75.0	69.6–79.7
West Papua	20.0	13.5–28.9	64.1	59.7–68.3	63.2	53.9–71.6
Papua	32.4	24.9–41.9	53.6	44.1–62.8	71.6	62.2–79.5
Interquartile range	10.907		7.935		9.972	
Gini Index	0.193		0.216		0.199	

Source: Table by authors

On a less positive note, the level of unmet need for family planning (10.4% in 2017), while moderate by low- and middle-income country standards, has declined only slightly during the 20-year period from 1997 to 2017. Analysis of the reasons given for not using a contraceptive method by IDHS 2017 respondents with demand for family planning suggests that unmet need might be reduced by perhaps to one-third if the NFPs were better able to address selected service access issues and health concerns, most notably fear of side effects.

The issue of side effects provides a convenient segue into a major human rights issue – the low level of informed choice occurring when women choose contraceptive methods. Indonesia's MII score in 2017 was less than one-half of that in regional peer countries Philippines and Cambodia, and there has been only modest improvement in the 15 years

between 2002 and 2017. Furthermore, the results suggest that what counseling improvements have been realized have been limited to providing information about alternative contraceptive options with little or no movement on providing information on side effects and what can be done about them (see Figure 1). Aside from being a rights-to-access-to-information issue, there is considerable evidence in the scientific literature linking the quality of family planning counseling services to contraceptive outcomes such as discontinuation rates and unmet need for family planning (Chakraborty *et al.*, 2019; Feeser *et al.*, 2019; Tumlinson *et al.*, 2015).

Also detracting from Indonesia's rights-based family planning credentials are sizeable socioeconomic and geographic inequities. Access to information about contraceptive methods and demand for family planning and a lesser extent informed choice were all systematically higher for more educated and wealthier women, although to the credit of the NFP demand satisfaction and unmet need for family planning were not. Likely contributing to the latter finding is the deployment of a national social health insurance scheme, the *Jaminan Kesehatan Nasional* (JKN), in 2014. Having health insurance was observed in the analyses to be associated with greater access to family planning information and services and higher levels of informed choice. The JKN had achieved approximately 75% national coverage by early 2018 and 80% by the end of 2020 with the ultimate target of universal health care coverage. Provided that service quality can be maintained and even improved, the JKN is likely to further reduce inequities in service access going forward.

Geographic disparities were more pronounced, with provinces outside of Java–Bali experiencing lower levels of contraceptive knowledge, informed choice, demand for family planning and demand satisfaction. Provinces in eastern Indonesia lagged provinces located in the rest of the country more or less across the board. Generating demand for family planning is admittedly challenging in some local sociocultural contexts, but to have low demand for family planning concurrently with high levels of unmet need along with low levels of informed choice in such locations indicates that efforts to protect the reproductive health of women and help women and couples achieve their reproductive aspirations have been less than effective.

Finally, as noted earlier, our analyses focused on married women and couples as historically family planning policies in Indonesia have focused on promoting healthy outcomes for families. The resulting policies limiting information on family planning and access to service to married couples both significantly reduces accessibility to and affordability of services for other groups, unmarried youth in particular, and is inconsistent with a genuine rights-based approach to reproductive family planning (BKKBN and UNFPA, 2012; UNFPA, 2012). In addition to putting unmarried persons at risk of negative reproductive and health outcomes, the exclusion of unmarried persons from program performance measures considered in the above analyses paints NFP accomplishments in a more favorable light than is merited.

In broad overview, the Indonesian NFP has been relatively successful over the years, albeit not entirely in compliance with rights-based principles. This, however, does not distinguish Indonesia from other countries – a recent study on improving VRBFP reported finding no evidence of national programs that had attempted to address the full range of rights-based principles (Hardee *et al.*, 2019). Furthermore, although the need for "rights" to be made more explicit in family planning programs to ensure that rights become fully embedded was noted many years ago (Rodríguez *et al.*, 2013), there are few examples available of detailed guidelines, comprehensive costed implementation plan, tools and training materials being developed to operationalize VRBFP principles in the form of family planning program actions and processes (FP, 2020, 2018; What Works Association and Palladium, 2021). An intervention research proposed and tested a set of service delivery-level intervention in Nigeria and Uganda designed to bridge the gap between principles and policies on the one hand and explicit program action on the other (Hardee *et al.*, 2019). These consisted of interventions to build provider and supervisor capacity in VRBFP, develop facility-based action plans, strengthen supervision and mentorship to support action plan implementation,

strengthen local health structures, provide mentorship and technical support to local health structures and increase client's rights literacy. The implementation research undertaken indicated that explicit VRBFP-based programming was feasible, was well appreciated by service providers and health system officials and produced improved family planning outcomes. For Indonesia context, the implementation of these suggested interventions can be divided into several level of targeted interventions. For health providers, there's a need for strengthening the competencies in providing counseling and services to fulfill the aspects of quality of care. There are also program managers who needs to strengthen their capacity in improving the overall health system to implement the VRBFP program, such as ensuring resources, e.g. contraceptives, consumables, human resources and financing for the program. There are decision-makers who need to be advocated on the developmental impact of the program to be able to provide enabling environment for the program implementation, and lastly the rights holders themselves need to aware of their rights as a client. This experience provides a useful template for Indonesia to consider in taking the next step toward translating theory and policy into practice.

Conclusions

With the exception of restrictive policies toward contraceptive use by unmarried youth, Indonesia's reproductive health and family planning policies are rights-based. However, implementation of these has been less than optimal. In addition to reconsidering policies toward use of contraceptives by unmarried youth, the operationalization of rights-based principles in the form of explicit, detailed service delivery standard operating procedures and the provision of management support for their implementation would seem to be the way forward for closing the gap between principles and service delivery realities.

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