The family planning “know-do” gap among married women of reproductive age in urban Pakistan

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OBJECTIVE: To examine the prevalence and predictors of family planning (FP) know-do gaps among married women of reproductive age (MWRA) in low socio-economic urban areas of Karachi, Pakistan.

DESIGN: This was a cross-sectional survey of randomly selected 7288 MWRA (16–49 years) to identify predictors of the know-do gap in FP using a logistic regression model.

RESULTS: More than one third (35.5%) of MWRA had FP know-do gap, i.e., despite having a knowledge of contraceptives and desire to limit or delay childbearing, they were not using contraceptives. Women were less likely to use FP if they were getting older (25–35 years: OR 1.45, 95% CI 1.09–1.94; >35 years: OR 3.02, 95% CI 1.90–4.80), from certain ethnicities (Sindhi: OR 1.64, 95% CI 1.11–2.42; Saraiki: OR 1.66, 95% CI 1.01–2.71; other minorities: OR 2.37, 95% CI 1.63–3.44); did not receive FP counselling: OR 1.43, 95% CI 1.13–1.80; and had not made a joint decision on FP: OR 1.44, 95% CI 1.06–1.98). Conversely, women were more likely to use contraceptives if they had >10 years of schooling (OR 0.66, 95% CI 0.46–0.94), with each increasing number of a living child (OR 0.68, 95% CI 0.62–0.75) and each increasing number of contraceptive method known (OR 0.93, 95% CI 0.88–0.98).

CONCLUSION: The predictors associated with the FP know-do gap among MWRA should be considered when planning future strategies to improve the contraceptive prevalence rate in Pakistan.

Family planning (FP) enables individuals and couples to meet their desired number of children and achieve healthy spacing and timings of their births. A number of affordable modern contraceptive methods can be used to achieve fertility goals.¹ Pakistan, the sixth most populous country in the world with a total fertility rate of 3.6 children per woman,² was among the first Asian countries to implement a national programme for FP,^{3,4} and has since strived to achieve an increase in contraceptive prevalence rate (CPR). To ensure that more women and girls are able to plan their families, Pakistan recently pledged to increase its CPR to 50% to contribute towards the 2020 Family Planning commitments,⁵ and announced a 30% increase (total of US\$197.7 million) in annual public spending for FP services.⁶ Pakistan's current modern contraceptive prevalence rate (mCPR), which has been stagnant for the last 25 years, stands at 25%² compared to 51% in India⁷ and 52% in Bangladesh.⁸ Although most

women are aware of both modern and traditional methods, male condoms and female sterilisation remain the most popular modern contraceptives in Pakistan, each used by 9%.⁹

Having knowledge of FP is an important prerequisite for increasing CPR. Despite universal knowledge of modern contraceptive methods among all men (98.6%) and women (98.1%) in Pakistan, only a quarter of married women of reproductive age (MWRA) use modern contraceptives, highlighting a discordance in knowledge and practice.¹⁰ The gap between contraceptive knowledge and behaviour has been named as know-do gap.

The know-do gap may lead to low mCPR and an increase in unmet need for contraceptives. An unmet need for FP is defined as the proportion of MWRA (15–49 years) who are fertile, do not want a baby in the next 2 years or want to limit their pregnancies and are not using any method of contraception, or have a mistimed or unwanted current pregnancy or birth in the last 2 years.¹¹ The current unmet need among MWRA in Pakistan is 17%, including 33% MWRA who are not using contraception but intend to use in the future.² Other factors influencing a woman's access to FP information and services include her desire to use contraception, age, education, occupation, socio-economic status, region of residence, number of living children, underlying medical conditions^{12–14} and exposure to mass media.^{15–17} However, less is known about the reasons for discordance between knowledge and behaviour.

In historically patriarchal societies like Pakistan, gender differentials and the lower status of women are deeply rooted in cultural norms, and prevent women from not only accessing health services but also in making health-related decisions.^{18,19} This disparity is further magnified by women's lack of autonomy and access to income opportunities.^{20,21} Moreover, women's education, employment status, and fertility-related concerns are strong predictors of FP knowledge and practice.^{22,23} Studies have found that education is a primary factor influencing women's attitudes towards FP. However, an analysis of 51 demographic and health surveys of low- and middle-income countries, including countries from South Asia, Africa and Latin America, indicated that opposition by women, husbands or other relatives was a common factor for non-use of contraceptives.²⁴ None of the earlier research has assessed the know-do gap in any South Asian country; our study aimed to examine and quantify the FP know-do gap and the underlying factors that pre-

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dict this discordance among MWRA in low socio-economic urban areas of Karachi.

MATERIAL AND METHODS

This study draws on data from a baseline cross-sectional survey of the Willows Program²⁵ that provides FP information, education and referral through household visits to MWRA (16–49 years) in underserved urban areas of Karachi, Pakistan, through local community field educators. It is a large-scale community-based reproductive health programme that has expanded to more than 60 project sites across Ghana, Turkey, Tanzania and Pakistan since its launch in 1999. Its main objective is to improve women's awareness and uptake of locally available reproductive health services. Communities selected for the Willows Program were characterised by low socio-economic status and low prevalence of modern contraceptive use. The methodology has been described in detail elsewhere. A total of 8403 MWRA were interviewed for the survey in 2018. The study excluded 1115 MWRA who were currently pregnant ($n = 868$), had no knowledge regarding FP methods ($n = 118$), were not currently living with their husband ($n = 87$) and those trying to conceive ($n = 42$). To investigate the predictors of the FP know-do gap, we included 2595 MWRA who exhibited the know-do gap, i.e., women who were eligible to use contraceptives but were not using any method despite of having knowledge about at least one method, and desire to delay or limit childbearing.

Data were collected during face-to-face interviews using a structured tablet-based questionnaire built using the CommCare application. The survey questionnaire included a range of topics on women's reproductive health, including information on socio-demographic characteristics of women, and their husband, fertility and contraceptive use. The primary variable of interest was the know-do gap, as defined earlier. The explanatory variables included women's age group, women's education level, husband's education level, number of living children, religion, ethnicity, media exposure, socio-economic status, number of contraceptive methods known, decision-making power for contraceptive use, perceived effectiveness of contraceptive methods and attendance of at least one counselling session during antenatal or postnatal care about the use of contraceptive methods.

The study categorised the age of currently married women as <25 years of age, 25–35 years and >35 years; education as no education, ≤10 years of education and >10 years of education; religion as Muslims and non-Muslims (Hindus, Christians, Buddhists and other minorities); ethnicity as Urdu speaking, Punjabi, Sindhi, Pushto, Saraiki, Hindko and others; and socio-economic status as five wealth quintiles starting from the poorest to the richest. The wealth index was constructed using principal component analysis with a range of socio-economic factors, including household construction, assets, utilities, source of drinking water and sanitation facilities. Any FP media exposure (including print media, electronic media and social media) that they can recall as yes or no; decision-making power for contraceptive use as joint decision with husband, or one-sided decision (either the woman's or husband's decision); and perceived effectiveness of contraceptive methods as likely, unsure/neutral and unlikely; attendance of counselling session as yes or no; number of living children, and number of contraceptive methods known were treated as continuous variables.

Descriptive statistics were presented using frequency and percentage for categorical variables and mean with standard deviation

(SD) for continuous variables. Since the study treated the know-do gap as a binary variable, bivariate and multivariable analysis were performed using binary logistic regression. Variables with $P < 0.20$ in the bivariate model were considered for adjustment in the multivariable model using the backward elimination method, and only variables with $P < 0.05$ were retained in the final model. Odds ratios (ORs) and their 95% confidence intervals (CIs) were computed with statistical significance determined at the 5% level ($P < 0.05$). All statistical analyses were performed using STATA v15 (Stata Corp, College Station, TX, USA).

The study received ethical approval from the Ethical Review Committee (ERC) at the Aga Khan University (AKU), Karachi, Pakistan (4964-Ped-ERC-17), and the Institutional Review Board (IRB) at the Harvard T. H. Chan School of Public Health, Cambridge, MA, USA (IRB17-1864). Verbal consent was provided by each study participant.

RESULTS

Sociodemographic characteristics by current contraceptive use method are presented in Table 1. Of the total 7288 MWRA, 36% had know-do gap (i.e., they had knowledge of contraceptives, were eligible for use, but were not using any method of contraception); while the remaining 64% were using contraceptives. Among those using contraceptives, the majority ($n = 3158$) were using modern methods and 1544 were using traditional methods. Non-users had high knowledge of eight contraceptive methods on average, while users of both traditional and modern methods were aware of nine methods on average. Almost half of all users (49.6%) and non-users (57.5%) were in the 25–35 years' age bracket, were Urdu speaking and had ≤10 years of education. The majority of all users (92.1%) and non-users (90.7%) were Muslims and made a joint decision on contraception usage (91.2%) or non-usage (85.3%). One third of all users (37.0%) and non-users (37.8%) belonged to the middle classes, and a quarter (27.9%) users and (25.6%) non-users were wealthy. About 69.5% of users compared to 57.0% non-users had a perceived belief in the effectiveness of contraception. While almost 42.4% users received counselling on FP, only 30.0% of non-users received FP counselling.

Most MWRA received information related to FP from informal sources such as relatives, friends and neighbours (88%); while 35% received information from formal sources (health facilities or community health workers). Husbands were the source of 25% of women, and 12% of FP knowledge was reported to come from the media (Table 2).

The most commonly reported reason for non-use was fatalism (the belief that one's fertility is solely determined by God) (36%), followed by infrequent or no intercourse (21%) and perceived effectiveness of contraceptive (14%). Other reasons for not using contraceptives despite having knowledge of them are presented in Figure 1.

Bivariate analyses of predictors of FP among women exhibiting a know-do gap are shown in Table 3. Women aged >25 years were more likely to use FP methods than women aged <25 years. Similarly, women and husbands who had received education for ≥10 years were more likely to use FP methods than those who had received no education. With each increasing number of a living child and with each increasing number of the FP method known, women were more likely to use FP methods. The likelihood of FP use was higher among non-Muslims than in Muslim women, and among women from richer wealth index than in women from the

TABLE 1 Sociodemographic characteristics of participants by their use or no use of contraceptive method

	Not using contraceptives (<i>n</i> = 2586) <i>n</i> (%)	Type of contraceptive used		Overall (<i>n</i> = 4702) <i>n</i> (%)
		Modern methods (<i>n</i> = 3158) <i>n</i> (%)	Traditional methods (<i>n</i> = 1544) <i>n</i> (%)	
Number of methods known, mean $\pm$ SD	8.16 $\pm$ 2.43	8.89 $\pm$ 2.02	8.88 $\pm$ 1.90	8.89 $\pm$ 1.98
Number of modern methods known, mean $\pm$ SD	6.81 $\pm$ 1.97	7.39 $\pm$ 1.62	7.29 $\pm$ 1.63	7.36 $\pm$ 1.62
Number of traditional methods known, mean $\pm$ SD	1.35 $\pm$ 0.71	1.50 $\pm$ 0.64	1.59 $\pm$ 0.51	1.53 $\pm$ 0.60
Woman's age, years				
<25	422/2,586 (16.3)	333/3,158 (10.5)	169/1,544 (10.9)	502/4,702 (10.7)
25–35	1283/2,586 (49.6)	1819/3,158 (57.6)	886/1,544 (57.4)	2705/4,702 (57.5)
>35	881/2,586 (34.1)	1006/3,158 (31.9)	489/1,544 (31.7)	1495/4,702 (31.8)
Women's education level, years				
None	813/2,586 (31.4)	929/3,158 (29.4)	401/1,544 (26.0)	1,330/4,702 (28.3)
≤ 10	1,327/2,586 (51.3)	1,649/3,158 (52.2)	803/1,544 (52.0)	2,452/4,702 (52.1)
>10	446/2,586 (17.2)	580/3,158 (18.4)	340/1,544 (22.0)	920/4,702 (19.6)
Husband's education level, years				
None	767/2,586 (29.7)	884/3,158 (28.0)	401/1,544 (26.0)	1,285/4,702 (27.3)
≤ 10	1,228/2,586 (47.5)	1,515/3,158 (48.0)	730/1,544 (47.3)	2,245/4,702 (47.7)
>10	591/2,586 (22.9)	759/3,158 (24.0)	413/1,544 (26.7)	1,172/4,702 (24.9)
Number of living children, mean $\pm$ SD	2.76 (1.81)	3.41 (1.61)	3.13 (1.55)	3.32 (1.60)
Religion				
Muslims	2,380/2,585 (92.1)	2,846/3,158 (90.1)	1,419/1,544 (91.9)	4,265/4,702 (90.7)
Non-Muslims	205/2,585 (7.9)	312/3,158 (9.9)	125/1,544 (8.1)	437/4,702 (9.3)
Tribe or ethnic group				
Urdu speaking	1,300/2,586 (50.3)	1,650/3,158 (52.2)	856/1,544 (55.4)	2,506/4,702 (53.3)
Punjabi	429/2,586 (16.6)	619/3,158 (19.6)	275/1,544 (17.8)	894/4,702 (19.0)
Sindhi	224/2,586 (8.7)	259/3,158 (8.2)	90/1,544 (5.8)	349/4,702 (7.4)
Pashtoon	155/2,586 (6.0)	172/3,158 (5.4)	99/1,544 (6.4)	271/4,702 (5.8)
Saraiki	129/2,586 (5.0)	124/3,158 (3.9)	59/1,544 (3.8)	183/4,702 (3.9)
Hindko	120/2,586 (4.6)	125/3,158 (4.0)	62/1,544 (4.0)	187/4,702 (4.0)
Others	229/2,586 (8.9)	209/3,158 (6.6)	103/1,544 (6.7)	312/4,702 (6.6)
Media exposure	233/2,551 (9.1)	291/3,118 (9.3)	137/1,526 (9.0)	428/4,644 (9.2)
Wealth Index				
Poorest	245/2,574 (9.5)	282/3,152 (8.9)	120/1,538 (7.8)	402/4,690 (8.6)
Poorer	464/2,574 (18.0)	506/3,152 (16.1)	253/1,538 (16.4)	759/4,690 (16.2)
Middle	973/2,574 (37.8)	1,164/3,152 (36.9)	573/1,538 (37.3)	1,737/4,690 (37.0)
Richer	658/2,574 (25.6)	864/3,152 (27.4)	446/1,538 (29.0)	1,310/4,690 (27.9)
Richest	234/2,574 (9.1)	336/3,152 (10.7)	146/1,538 (9.5)	482/4,690 (10.3)
Decision about use/non-use of contraceptives				
Joint decision	1,898/2,224 (85.3)	2,166/2,410 (89.9)	1,378/1,474 (93.5)	3,544/3,884 (91.2)
Respondent's decision	174/2,224 (7.8)	213/2,410 (8.8)	71/1,474 (4.8)	284/3,884 (7.3)
Husband's decision	152/2,224 (6.8)	31/2,410 (1.3)	25/1,474 (1.7)	56/3,884 (1.4)
Perception about getting pregnant by use/non use of contraceptives				
Likely	1,404/2,461 (57.0)	1,776/2,572 (69.1)	1,071/1,526 (70.2)	2,847/4,098 (69.5)
Unsure/neutral	748/2,461 (30.4)	574/2,572 (22.3)	358/1,526 (23.5)	932/4,098 (22.7)
Unlikely	309/2,461 (12.6)	222/2,572 (8.6)	97/1,526 (6.4)	319/4,098 (7.8)
Counselling on family planning				
Yes	154/513 (30.0)	534/1,233 (43.3)	210/520 (40.4)	744/1,753 (42.4)
No	359/513 (70.0)	699/1,233 (56.7)	310/520 (59.6)	1,009/1,753 (57.6)

SD = standard deviation.

poorest wealth indices. The likelihood of FP use was lower among women from Sindhi, Saraiki and other ethnic groups than in Urdu speaking women. The likelihood of FP use was lower among women who did not make a joint decision about contraception than in those who had made a joint decision on contraceptive

use, and among women whose perception of the effectiveness of contraception in preventing pregnancy were neutral or less certain than in women who were certain. Finally, women who did not receive counselling on FP were less likely to use contraceptives than women who received FP counselling.

TABLE 2 Source of information about family planning methods* (n = 7126)

Source of information	%
Informal contact (relatives/friends/neighbours)	87.7
Formal contact (in health care facility or at doorstep)	35.2
Husband	25.3
Electronic media (TV/radio/mobile phone)	7.5
Print media (newspaper/magazine/books)	2.3
Social media (social media and internet)	2.0
Other source	0.4

*Multiple response questions.

Woman's age, their education, ethnicity, wealth index, number of living children, FP counselling received, number of FP methods known and decision on contraception use or non-use were fitted into a multivariable logistic regression model (Table 3). Women aged >25 years compared to women aged <25 years, and women from Sindhi, Saraiki and other minor ethnicities compared to Urdu-speaking women were less likely to use FP methods. The interaction of age and parity indicates that for every unit increase in parity, women in the 25–35 years' age group were less likely to use any contraceptive method (Figure 2). Similarly, women who did not receive counselling on FP compared to women who had received counselling, and women who had not made a joint decision on use or non-use of contraceptives compared to women who had made a joint decision were less likely to use FP methods. On the other hand, women with more than 10 years of schooling were more likely to use FP than those with no education. Similarly, with each increasing number of a living child and each increasing number of contraceptive methods known, women were more likely to use FP.

DISCUSSION

In this study, more than one third of MWRA from urban Karachi had a FP know-do gap. Women's age, ethnicity, education, socio-economic status, number of living children, decision-making

power over contraceptive use and exposure to FP counselling were predictors of the use of contraceptives. On multivariable analyses, it was observed that older women were less likely to use FP than younger women, which may reflect their desire to attain their preferred number of children during their fertile years.²⁶

Women with more than 10 years of formal education were more likely to use FP than those with no formal education. This finding is in line with other research conducted in Pakistan,¹⁵ and India.^{16,27} Studies show that educated women were more aware and empowered to make choices, and therefore more likely to share decision-making power regarding FP and health overall.^{28,29} Similarly, our study found that women were less likely to use FP when the decision-making power was not shared. In Pakistan, men are considered primary authority figures, and there is a tendency for women to be perceived as subordinate. Women are often expected to follow the decisions made by husbands because of their economic dependence, low literacy and existing cultural norms. Therefore, most decisions related to the household are made by men with little or no involvement by women. Previous studies suggest that treating women with respect and sharing decision-making in matters related to FP can lead to improved contraceptive uptake and continuation.^{30–32}

Women belonging to wealthier households were more likely to use FP than women from the poorest wealth index. This may be because the women from wealthier indices have better access to contraceptives and contraceptive services. Moreover, women's socio-economic status also plays a role in women's and husband's education and their approach to decision-making for FP use.³³ Educated individuals may be better informed and have better access to FP services.¹⁵

We also observed that women who were Sindhi, Saraiki and from other minorities were less likely to use FP than women who were Urdu-speaking. Although this has not been explained in any earlier studies, the Pakistan Demographic and Health Survey also reported higher contraception use among MWRA from Punjab.² Our study found that use of FP increased with parity, which indicates that with an increase in number of children, women start limiting the size of the family. This finding is similar to previous

FIGURE 1 Reported reasons of not using contraceptives by non-users (n = 1001).

TABLE 3 Predictors of non-use of contraceptive methods

Background characteristics	Bivariate				Multivariate			
	OR	min95	max95	P value	OR	min95	max95	P value
Woman's age, years								
<25		Reference				Reference		
25–35	0.56	0.49	0.65	<0.0001	0.96	0.51	1.84	0.912
>35	0.70	0.60	0.82	<0.0001	0.85	0.33	2.18	0.734
Number of living children	0.80	0.78	0.83	<0.0001	0.47	0.33	0.68	<0.0001
Woman's age X number of living children								
<25		Reference				Reference		
25–35	—	—	—	—	1.38	0.95	2.02	0.094
>35	—	—	—	—	1.76	1.18	2.62	0.006
Woman's education level, years								
None		Reference				Reference		
≤10	0.88	0.79	0.99	0.029	0.79	0.60	1.04	0.093
>10	0.79	0.69	0.92	0.001	0.64	0.45	0.92	0.015
Husband's education level, years								
None		Reference				Reference		
≤10	0.92	0.82	1.03	0.144	—	—	—	—
>10	0.85	0.74	0.97	0.016	—	—	—	—
Number of methods known	0.86	0.84	0.88	<0.0001	0.94	0.89	0.99	0.025
Religion								
Muslims		Reference				Reference		
Non-Muslims	0.84	0.71	1.00	0.054	—	—	—	—
Tribe or ethnic group								
Urdu speaking		Reference				Reference		
Punjabi	0.93	0.81	1.06	0.271	1.00	0.73	1.37	0.992
Sindhi	1.23	1.03	1.47	0.025	1.57	1.06	2.34	0.026
Pashtoon	1.11	0.90	1.36	0.344	1.37	0.86	2.19	0.181
Saraiki	1.36	1.08	1.72	0.010	1.69	1.02	2.78	0.041
Hindko	1.24	0.98	1.58	0.077	1.32	0.76	2.27	0.324
Others	1.41	1.18	1.70	<0.0001	2.29	1.56	3.36	<0.0001
Media exposure	0.99	0.84	1.17	0.892	—	—	—	—
Wealth index								
Poorest		Reference				Reference		
Poorer	1.00	0.82	1.22	0.977	0.90	0.54	1.50	0.679
Middle	0.92	0.77	1.10	0.357	0.93	0.58	1.49	0.763
Richer	0.83	0.69	0.99	0.043	0.99	0.60	1.62	0.960
Richest	0.80	0.64	1.00	0.050	0.49	0.26	0.92	0.027
Decision about use/non-use of contraceptives								
Joint decision		Reference				Reference		
Respondent decision	1.15	0.94	1.40	0.173	0.72	0.47	1.11	0.137
Husband decision	5.08	3.72	6.93	<0.0001	5.62	3.25	9.74	<0.0001
Perception about getting pregnant by use/non-use of contraceptives								
Likely		Reference				Reference		
Unsure/neutral	1.62	1.44	1.82	<0.0001	—	—	—	—
Unlikely	1.96	1.65	2.32	<0.0001	—	—	—	—
Counselling on family planning								
Yes		Reference				Reference		
No	1.72	1.39	2.12	<0.0001	1.35	1.07	1.71	0.012

OR = odds ratio.

reports from Pakistan,³⁴ Bangladesh,³⁵ Ethiopia³⁶ and Tanzania.³⁷ Consistent with studies from India and Iran,^{31,38} mothers who received counselling were more likely to use FP.

Strengths and limitations

This is the first study to assess the FP know-do gap in Pakistan. Although the survey was conducted on a large scale, the prev-

alence and predictors of know-do gap are generalisable to similar urban settings of Pakistan or elsewhere globally. Our study had some limitations. We conducted household survey with women, but not with men. Therefore, we were unable to capture men's perspectives to better understand the predictors of non-use of contraceptives and FP decision-making dynamics. In-depth qualitative interviews with both women and their

FIGURE 2 Expected probability of non-use of family planning by age and parity.

partners would have been useful to explore these dynamics further.

CONCLUSION

The study found more than a third of women exhibited discrepant contraceptive behaviour. Women who were older, poorer, had less education, fewer children, were not counselled for FP, and who were not involved in mutual decision-making regarding FP were less likely to use contraceptives. These factors must be considered when designing FP programmes to ensure information and methods are available to those who need it.

References

- Cleland J, et al. Family planning: the unfinished agenda. *Lancet* 2006; 368(9549): 1810–1827.
- National Institute of Population Studies. Pakistan Demographic and Health Survey 2017–18. Islamabad, Pakistan & Rockville, MD, USA: NIPS & ICF, 2019.
- Rukanuddin AR, Hardee-Cleaveland K. Can family planning succeed in Pakistan? New York, NY, USA: International Family Planning Perspectives, 1992: pp 109–121.
- Corsa L. Family planning in Pakistan. *Am J Pub Health* 1965; 55(3): 400–403.
- Jones GW. Population situation analysis of Pakistan. Islamabad, Pakistan: United Nations Population Fund, 2016.
- Family Planning 2020, United Nations Foundation 1750. Family planning 2020 commitment. Washington DC, USA: FP2020, 2017.
- International Institute of Population Sciences. National Family Health Survey (NFHS-4) 2015–16. Mumbai, India: IIPS, 2017.
- National Institute of Population Research and Training. Bangladesh Demographic and Health Survey 2017–18: key indicators. Dhaka, Bangladesh & Rockville, MD, USA: NIPIRT and ICF, 2019.
- National Institute of Population Studies. Pakistan demographic and health survey 2017–18. Islamabad, Pakistan: NIPS/Pakistan and ICF, 2019.
- National Institute of Population Studies & Macro International Inc. Pakistan Demographic and Health Survey, 2006–07. Islamabad, Pakistan & Maryland USA: NIPS & Macro International Inc, 2008: p 21.
- Bradley SE, Casterline JB. Understanding unmet need: history, theory, and measurement. *Stud Fam Plann* 2014; 45(2): 123–150.
- Benagiano G, et al. Contraception in autoimmune diseases. *Best Practice & Research. Clin Obstet Gynecol* 2019; 60: 111–123.
- Binette A, et al. Ten challenges in contraception. *J Womens Health* 2017; 26(1): 44–49.

- Roos-Hesselink JW, et al. Contraception and cardiovascular disease. *Eur Heart J* 2015; 36(27): 1728–1734.
- Asif MA, Pervaiz Z. Socio-demographic determinants of unmet need for family planning among married women in Pakistan. *BMC Pub Health* 2019; 19: 1226.
- Choudhary S, et al. A study on the extent and reasons of unmet need for family planning among women of reproductive age group in rural area of Haryana. *Int J Health* 2011; 12(1): 1–7.
- Tadele A, Abebaw D, Ali R. Predictors of unmet need for family planning among all women of reproductive age in Ethiopia. *Contracept Reprod Med* 2019; 4: 6.
- Qadir F, et al. Male gender preference, female gender disadvantage as risk factors for psychological morbidity in Pakistani women of childbearing age—a life course perspective. *BMC Public Health* 2011; 11(1): 745.
- Sathar Z, et al. Women's status and fertility change in Pakistan. *Popul Dev Rev* 1988; 14(3): 415–432.
- Nasrullah M, Bhatti JA. Gender inequalities and poor health outcomes in Pakistan: a need of priority for the national health research agenda. *J Coll Physicians Surg Pak* 2012; 22(5): 273–274.
- Upadhyay UD, et al. Women's empowerment and fertility: a review of the literature. *Soc Sci Med* 2014; 115: 111–120.
- Mao J. Knowledge, attitude and practice of family planning (a study of Churachandpur District, Manipur). In: Indira R, Behera DK, eds. *Gender and society*, 1999: p 2.
- Khan RE, Bari KM. Revealing ideal number of children by households: a socioeconomic analysis using Pakistan demographic and health survey. *Pak J Comm Soc Sci* 2014; 8(3): 887–899.
- Sedgh G, Hussain R. Reasons for contraceptive nonuse among women having unmet need for contraception in developing countries. *Stud Fam Plann* 2014; 45(2): 151–169.
- Özcelik EA, et al. Applying inverse probability weighting to measure contraceptive prevalence using data from a community-based reproductive health intervention in Pakistan. *Int Perspect Sex Reprod Health* 2020; 46: 21–33.
- Rutaremwa G, et al. Predictors of modern contraceptive use during the postpartum period among women in Uganda: a population-based cross sectional study. *BMC Pub Health* 2015; 15: 262.
- Cleland J, Kamal N, Sloggett A. Links between fertility regulation and the schooling and autonomy of women in Bangladesh. *Girls schooling, autonomy, education and fertility change in South Asia*. New Delhi, India: Sage Publications, 1996: pp 205–217.
- Riaz S, Pervaiz Z. The impact of women's education and employment on their empowerment: an empirical evidence from household level survey. *Quality & Quantity* 2018; 52(6): 2855–2870.
- Kim J. Female education and its impact on fertility. *IZA World of Labor* 2016; 228: 1–10.
- OlaOlorun FM, Hindin MJ. Having a say matters: influence of decision-making power on contraceptive use among Nigerian women ages 35–49 years. *PLOS One* 2014; 9(6): e98702.
- Dehingia N, et al. Family planning counseling and its association with modern contraceptive use, initiation and continuation in rural Uttar Pradesh, India. *Reprod Health* 2019; 16(1): 178.
- Tedesse SY, et al. Women's autonomy decision making power on postpartum modern contraceptive use and associated factors in North West Ethiopia. *Adv Pub Health* 2019; 2019: 1861570.
- Sultan S. The effect of education, poverty, and resources on family planning in developing countries. *Clinics in Mother Child Health* 2018; 15(1): 1–6.
- Hakim A, Cleland J, Muh B. Pakistan Fertility and Family Planning Survey 1996–97. Islamabad, Pakistan & London, UK: National Institute of Population Studies, and Centre for Population Studies, London School of Hygiene & Tropical Medicine, 1998.
- Mostafa K, Aynul I. Contraceptive use: socioeconomic correlates and method choices in rural Bangladesh. *Asia Pac J Pub Health* 2010; 22(4): 436–450.
- Mohammed A, et al., Determinants of modern contraceptive utilization among married women of reproductive age group in North Shoa Zone, Amhara Region, Ethiopia. *Reprod Health* 2014; 11(13): 1–7.
- Lwelamira J, Mnyamagala G, Msaki MM. Knowledge, attitude and practice (KAP) towards modern contraceptives among married women of reproductive age in Mpwapwa District, central Tanzania. *Curr Res J Soc Sci* 2012; 4(3): 235–245.
- Farrokhi-Eslamlou H, et al. Impact of the World Health Organization's decision-making tool for family planning clients and providers on the quality of family planning services in Iran. *J Fam Plann Reprod Health Care* 2014; 40(2): 89–95.

OBJECTIF : Étudier la prévalence et les variables explicatives du fossé entre informations et actions en matière de planification familiale (FP) chez les femmes mariées en âge de procréer (MWRA) dans les quartiers urbains socio-économiquement défavorisés de Karachi, Pakistan.

PLAN : Enquête transversale réalisée auprès de 7 288 MWRA (16–49 ans) sélectionnées de manière aléatoire visant à identifier les variables explicatives du fossé entre informations et actions en matière de FP en utilisant un modèle de régression logistique.

RÉSULTATS : Un fossé entre informations et actions en matière de FP a été observé chez plus d'un tiers (35,5%) des MWRA, c.-à-d., qu'en dépit de connaissances sur les moyens de contraception et d'un souhait de limiter ou retarder les grossesses, ces femmes n'utilisaient aucun moyen de contraception. Les femmes étaient moins susceptibles d'avoir recours à la FP en vieillissant (25–35 ans : OR 1,45 ; IC 95% 1,09–1,94 ; >35 ans : OR 3,02 ; IC 95% 1,90–

4,80), si elles appartenaient à certains groupes ethniques (Sindhi : OR 1,64 ; IC 95% 1,11–2,42 ; Saraiki : OR 1,66 ; IC 95% 1,01–2,71 ; autres minorités : OR 2,37 ; IC 95% 1,63–3,44), si elles ne bénéficiaient d'aucune aide en matière de FP (OR 1,43 ; IC 95% 1,13–1,80), et si la décision relative à la FP avait été prise unilatéralement (OR 1,44 ; IC 95% 1,06–1,98). À l'inverse, les femmes étaient plus susceptibles d'utiliser des contraceptifs si elles avaient été scolarisées pendant >10 ans (OR 0,66 ; IC 95% 0,46–0,94), à mesure que leur nombre d'enfants vivants augmentait (OR 0,68 ; IC 95% 0,62–0,75) et à mesure que le nombre de moyens contraceptifs qui leur étaient connus augmentait (OR 0,93 ; IC 95% 0,88–0,98).

CONCLUSION : Les variables explicatives associées au fossé entre informations et actions en matière de FP chez les MWRA devraient être prises en compte lors de la planification de futures stratégies visant à améliorer le taux de prévalence des contraceptifs au Pakistan.