# Practice and barriers of family planning: A comparison among muslim women in three main cities, viz. New York City, Tehran and Kuala Lumpur

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**Background:** There is a lack of information on the practice of family planning among Muslim women in New York City in the United States of America (USA) [hereinafter known as "Muslim women residing in the United States" (MWRIU)], Tehran in the Islamic Republic of Iran (IRI) and Kuala Lumpur, Malaysia. The limited figures on this issue are either outdated or mere estimates. The importance of sexual and reproductive health of Muslim women is expected to have massive effects on the social and economic progress of developing countries like the IRI and Malaysia. It is also expected to have imperative impacts on the attempts to empower the MWRIU community and enhance their health status to meet the national standards.

**Objective:** The study objective is to explore and compare the practice of family planning, namely on contraceptive use and abortion among Muslim women in 3 major cities of different countries.

**Methodology:** A survey of 379, 377 and 380 respondents from New York City, Tehran and Kuala Lumpur respectively was conducted in 2013 using self-administered questionnaires.

**Results:** There were significant differences in contraceptive and abortion practices across these countries (P<0.01). While a significant 86.6% of Iranian and 66.2% of the MWRIU used contraception, only 22.9% of the Malaysian women did so. For abortion, 13.6% of the MWRIU and 6.3% of the Malaysian respondents had abortion at least once; while only 22% of Iranians revealed their abortion history, totaling 32.1% of them who had abortion. Financial problems and having an unsupportive husband were among the major factors hindering their practice of healthy family planning.

**Conclusion:** Educational campaigns should be promoted to increase the awareness on the permissibility of family planning in Islam, as well as on sexual and reproductive rights.

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## Introduction

Abortion laws play an important role in determining the practice of unsafe abortions. More access to safe abortions will result in less practice of unsafe abortions. Although abortion in the USA is legally permissible for all women upon request, abortion in the case of Malaysian women is allowed only to save their life or preserve their physical and/or mental health. In the IRI, abortion is only permitted when a woman's life is under threat[1].

Data on abortion rates and its related implications on maternal deaths in the IRI and Malaysia are rather limited. As there is no official data, only few studies have provided some estimates on this concern. Tey *et al.* (2011)[2] estimated that the abortion rate in Malaysia is at 16%. A study in the IRI estimated the abortion rate to be 26% per married women aged 15 – 49 years[3]. Another study in the IRI estimated that 5% of maternal deaths were due to complications resulting from unsafe abortions[4].

Unsafe abortion is rarely practiced in developed countries and 98% of unsafe abortions were reported in the developing world[5]. In the USA, unintended pregnancies amounted to 50% of the total number of pregnancies, and about 30 – 40% of unintended pregnancies ended with abortion[6,7]. However, there has been a noticeable decline in the overall abortion rate among the USA women: 8% decline between 2000 and 2008[6], and a 13% decline between 2008 and 2011[8]. Statistics also showed an apparent decline among rich women (28%), but an increase in abortion rates among poor women (18%) between 2000 and 2008[6]. Poverty can be considered as one of the main reasons for abortion in the USA, as 42% of women who performed abortions were living in poverty[9]. However, there are no figures or estimates on the abortion rates and contraception use among the MWRIU.

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There is a lack of information on the practice of family planning among MWRIU and Muslim women in the IRI and Malaysia. The limited figures on this issue are either outdated or mere estimates. The importance of sexual and reproductive health of Muslim women is expected to have massive effects on the social and economic progress of developing countries like the IRI and Malaysia. It is also expected to have imperative impacts on the attempts to empower the MWRIU community and enhance their health status to meet the national standards.

The study objective is to explore and compare the practice of family planning, namely on contraceptive use and abortion among Muslim women in 3 major cities of different countries.

**Methodology**

A survey on the practice of family planning was conducted in each major city of three countries viz. Kuala Lumpur, New York City, and Tehran between the early month of October and the end of December in 2013. Trained enumerators, chosen among postgraduate students of the University of Malaya, Malaysia, conducted the surveys in the three cities. The enumerators are either a citizen of or currently residing in the respective countries. As issues relating to sexual and reproductive health are sensitive, the self-administrated method was used to carry out the questionnaire. In this study, 1140 self-administered questionnaires were distributed to members of the general public based on convenience sampling. Responses from 1136 questionnaires were successfully collected: 380 from Kuala Lumpur, 377 from Tehran, and 379 from the MWRIU in New York City respectively. Most of the data were gathered at mosques and housing areas. The respondents were informed that participation in the study was voluntary, and their responses will be kept highly confidential and that data would be analyzed only at the aggregate level. By focusing on New York City, Tehran and Kuala Lumpur, it permitted the study of Muslim women respondents from different countries which enjoy varying levels of civil liberties. It is noted that the United States is considered as fully liberal, Malaysia as semi-liberal while Iran as non-liberal (Freedom in the World).

Although the questionnaire comprised of many sections, results from the sections on the practice of family planning, specifically contraception and abortion were analyzed for this part of the study. The first section of the questionnaire sought information on the respondents' socio-demographic background such as age, ethnic, marital status, educational level, and income. Data from Tehran were mostly from Persians, data from Kuala Lumpur were mostly from Malays while data from the MWRIU comprised of Middle Eastern & North Africans (43%), South Asians (52%), African Americans (3.7%) and Caucasian or White (1.3%).

In a specific section related to this paper, questions dwelled on the respondents' experience in using contraceptive methods. Respondents who were involved in the use of contraceptive methods were further probed for the frequency (1 – Never; 2 – Once; 3 – More than once; 4 – Regular) of their practice on several contraceptive methods listed in the questionnaire. Meanwhile, the respondents who have never used contraceptive methods were asked for the most influential reasons for not using contraceptive methods. Similar questions were posed to investigate the practice of abortion among the respondents.

Sexuality is a highly sensitive matter of discussion among the Muslim community. Thus, it is very likely for Muslim women to avoid answering several questions on their sexual and reproductive health. Due to this, we received different response rates for each question included in the section. Due to the non-parametric nature of the dataset for all the three cities, the non-parametric median tests were applied using IBM SPSS software version 22.0 to analyze the data.

**Results**

Table 1 illustrates the respondents' background by age, marital status, education level and general

practice of family planning from the three cities. The majority of respondents in Tehran and Kuala Lumpur were between 31 and 40 years old. In terms of marital status, the MWRIU sample respondents were fairly distributed across all categories whereas married women dominated the Iranian and Malaysian samples with 88.9% and 70.8%, respectively. The Malaysian sample also comprised of a relatively higher percentage of singles (26.6%) in comparison to the MWRIU (12.1%) and the IRI (5.3%). The majority of Iranian respondents also had at least college or technical school education (62.5%) while a large proportion of the MWRIU and Malaysian respondents had completed their high schools (42.2% and 49.2% respectively).

**Table 1:** Background of respondents from New York City, Tehran and Kuala Lumpur

| | New York City (*N*=379) | | Tehran (*N*=377) | | Kuala Lumpur (*N*=380) | |
|---|---|---|---|---|---|---|
| | *n* | % | *n* | % | *n* | % |
| **Age (years)** | | | | | | |
| 20 and below | 3 | 8 | 5 | 1.3 | 54 | 14.2 |
| 21 to 30 | 29 | 7.7 | 136 | 36.1 | 66 | 17.4 |
| 31 to 40 | 94 | 24.8 | 152 | 40.3 | 194 | 51.1 |
| 41 to 50 | 133 | 35.1 | 58 | 15.4 | 48 | 12.6 |
| 51 to 60 | 80 | 21.1 | 25 | 6.6 | 12 | 3.2 |
| Above 60 | 40 | 10.6 | 1 | 0.3 | 6 | 1.6 |
| **Marital Status** | | | | | | |
| Single | 46 | 12.1 | 20 | 5.3 | 101 | 26.6 |
| Married | 204 | 53.8 | 335 | 88.9 | 269 | 70.8 |
| Married (polygamous) | 20 | 5.3 | 5 | 1.3 | 3 | 0.8 |
| Divorced | 66 | 17.4 | 11 | 2.9 | 3 | 0.8 |
| Widowed | 43 | 11.3 | 6 | 1.6 | 4 | 1.1 |
| **Education level** | | | | | | |
| No Formal – Education | 32 | 8.4 | 1 | 0.3 | 4 | 1.1 |
| Grades 1 through 8 (Elementary) | 64 | 16.9 | 12 | 3.2 | 40 | 10.5 |
| Grades 9 through 12 (high school) | 160 | 42.2 | 109 | 29.0 | 289 | 49.2 |
| College 1 year to 2 years (College or technical school) | 64 | 16.9 | 235 | 62.5 | 38 | 10 |
| College 3 years (College graduate) | 46 | 12.1 | 19 | 5.1 | 9 | 2.4 |
| Graduate School (Advance Degree) | 13 | 3.4 | 0 | 0 | 0 | 0 |
| **Practice Family Planning** | | | | | | |
| *Contraception* | | | | | | |
| Single | 24 | 9.5 | 0 | 0.0 | 3 | 3.4 |
| Married | 147 | 58.6 | 302 | 95.3 | 83 | 95.4 |
| Divorced / Widow | 80 | 31.9 | 15 | 4.7 | 1 | 1.1 |
| **TOTAL** | **251** | **66.2** | **317** | **86.6** | **87** | **22.9** |
| *Abortion* | | | | | | |
| Single | 9 | 19.1 | 1 | 3.7 | 1 | 4.2 |
| Married | 23 | 48.9 | 26 | 96.3 | 22 | 91.7 |
| Divorced / Widow | 15 | 31.9 | 0 | 0 | 1 | 4.2 |
| **TOTAL** | **47** | **12.4** | **27** | **7.2** | **24** | **6.3** |

***Contraception use***

The results of chi-square test of association indicated significant differences in general practice of family planning among the MWRIU and respondents in Tehran and Kuala Lumpur (p-value of $\chi^2$ = 0.000; measure of association Cramer's V = 0.466). A total of 99% MWRIU and the respondents in Kuala Lumpur have responded to the related question: 'Have you ever used contraceptive methods? Nonetheless, about 3% of Iranian respondents who were single have ignored the question. The results in Table 1 showed that contraception usage vary across the three cities. The usage among Muslim women in Tehran was much higher (86.6%). While the use of contraceptives among the MWRIU was 66.2%, the percentage in Kuala Lumpur was much lower at 22.9%. About 9.6% of the MWRIU who have used contraceptives were single, and a small percentage of 3% of the Malaysian respondents were also single. The findings of this study also showed that 70.8% of the Malaysian respondents who did not use contraceptives claimed that there was no need for them to use contraception. Median tests for each city revealed different influence levels for each reason listed in Table 2 (p = 0.000). Two most influential reasons across the three cities were "want to have a child" and "husband's objection" (eta = 0.356 and 0.427, respectively). "want to have a child" was the most influential cited reason by both the MWRIU and Malaysian respondents; (median value =3.00), whereas the median value for Tehran was only 1.00. The median for "husband's objection" was highest for the MWRIU (3.00); Malaysians = 2.00; while Tehran was only 1.00. In Tehran, the most influential reason for not using contraceptive was financial problem (median = 4.00), compared to the other two cities (eta = 0.114).

**Table 2:** Reasons for not using contraceptives

| | New York City | | Tehran | | Kuala Lumpur | | Significant difference across country | |
|---|---|---|---|---|---|---|---|---|
| **Reasons for not using Contraceptives** | ***N*** | **Median** | ***N*** | **Median** | ***N*** | **Median** | **$\chi^2$ : p-value** | **Country Dependent** |
| I want to have a child | 228 | 3.00 | 85 | 1.00 | 49 | 3.00 | p =0.000 | eta=0.356 |
| Financial problem | 204 | 3.00 | 67 | 4.00 | 48 | 3.00 | p =0.000 | eta=0.114 |
| Husband's objection | 205 | 3.00 | 66 | 1.00 | 48 | 2.00 | p =0.000 | eta=0.427 |
| Religious constraint | 224 | 3.00 | 67 | 2.00 | 48 | 2.00 | p =0.000 | eta=0.285 |
| Health problems | 217 | 3.00 | 67 | 2.00 | 48 | 3.00 | p =0.000 | eta=0.150 |

In order to analyze the practice of contraception in this study, the non-parametric median test was also utilized. Table 3 summarizes the results showing different frequency of use for five contraception methods (p = 0.000) [Barrier: $\chi^2_{(2, N = 653)}$ = 178.5; Hormonal: $\chi^2_{(2, N = 635)}$ = 55.1; Sterilization: $\chi^2_{(2, N = 648)}$ = 251.5; Natural: $\chi^2_{(2, N = 639)}$ = 125.1; Unsafe/Secret: $\chi^2_{(2, N = 629)}$ = 552.5]. Across all three cities, barrier, hormonal and natural methods were more popular (median = 3.00). The MWRIU and respondents in Tehran used modern methods, i.e., hormonal and barrier methods more regularly (> 40% respondents scored larger than median =3.00). Meanwhile, the Malaysian respondents were more inclined towards the use of hormonals compared to the other methods. Table 3 also exhibits the use of traditional methods, such as withdrawal and rhythm, among MWRIU and Muslim women in Tehran (>50% with median = 3.00 for both cities).

**Table 3:** Country comparison on practice of contraceptive methods

| Contraceptive Methods | Significant difference across countries | | | Non-parametric Median Test | | |
|---|---|---|---|---|---|---|
| | Test of Association; Measure of Association | Cities (N) | | Median | % > Median | p-value |
| Barrier Methods | $\chi^2$ = 178.5 (p=0.000); Cramer's V=0.370 (p=0.000) | New York City | 236 | 3.00 | 41.1 | 0.086 |
| | | Tehran | 326 | 3.00 | 48.8 | 0.000 |
| | | Kuala Lumpur | 91 | 1.00 | 5.5 | 0.000 |
| Hormonal Methods | $\chi^2$ = 55.1 (p=0.000); Cramer's V=0.208 (p=0.000) | New York City | 218 | 3.00 | 48.8 | 0.298 |
| | | Tehran | 326 | 3.00 | 43.2 | 0.747 |
| | | Kuala Lumpur | 91 | 3.00 | 40.6 | 0.000 |
| Sterilization | $\chi^2$ = 251.5 ( p=0.000); Cramer's V=0.441 (p=0.000) | New York City | 231 | 2.00 | 69.9 | 0.000 |
| | | Tehran | 326 | 1.00 | 11.0 | 0.170 |
| | | Kuala Lumpur | 91 | 1.00 | 5.5 | 0.228 |
| Natural Methods | $\chi^2$ = 125.1 ( p=0.000); Cramer's V=0.313 (p=0.000) | New York City | 222 | 3.00 | 50.4 | 0.061 |
| | | Tehran | 326 | 3.00 | 57.3 | 0.000 |
| | | Kuala Lumpur | 91 | 1.00 | 19.8 | 0.000 |
| Unsafe or Secret Methods | $\chi^2$ = 552.5 ( p=0.000); Cramer's V=0.663 (p=0.000) | New York City | 221 | 4.00 | 96.4 | 0.000 |
| | | Tehran | 318 | 1.00 | 1.8 | 0.044 |
| | | Kuala Lumpur | 90 | 1.00 | 6.6 | 0.000 |

More than 62% of the MWRIU used contraception, indicating that they had regularly used unsafe/secret methods (median = 4.00). This revealed that the use of traditional and unsafe methods were most prevailing in the MWRIU over all other methods, including modern methods. In contrary, less than 2% of the respondents in Tehran and 7% in Kuala Lumpur had used unsafe/secret methods at least once.

### *Abortion*

In Table 1, about 13.8% of the MWRIU and 6.3% of the Malaysian respondents stated that they have performed abortion. The bulk of Iranian respondents ignored answering this question (response rate only 22.2%), yet 41.5% of those who responded stated that they had experienced abortion before. The results of test of association signifies the difference in general practice of abortion among the MWRIU and respondents in Tehran and Kuala Lumpur [Doctor: $\chi^2_{(2, N = 653)}$ = 38.25; Traditional Methods: $\chi^2_{(2, N = 635)}$ = 230.19; Non-specialist: $\chi^2_{(2, N = 648)}$ = 33.97; all with p=0.000 and measure of association Cramer's V > 0.300].

Table 4 reports the summary of abortion practice as cited by respondents from the three cities based on median test. Although the response rate to the question, 'have you ever had an abortion' was considerably low, a significant percentage reported on the abortion process they were involved in (doctors, traditional methods and non-specialists). Of the 27 Malaysian respondents who answered this question, 25 (92.2%) stated that the doctors performed their abortion compared to 42% (33/78) among the MWRIU and 26.8% (11/41) among the Iranians. Additionally, Table 4 depicts low median (< 3.00) for all three abortion processes throughout the three nations, suggesting that abortion is not regularly practiced as a family planning method among the Muslim women. Even so, 92.6% of the Malaysian respondents who

chose abortion prefer professionals, i.e. doctors (median > 2.00). On the other hand, the Iranians preferred traditional methods (median = 3.00). The results in Table 3 also show that the practice of unsafe abortion by self or a non-specialist is high in Tehran (more than 56% with median > 2.00).

**Table 4:** Country comparison on practice of abortion.

| Abortion | Significant difference across country | | | Non-parametric Median Test | | |
|---|---|---|---|---|---|---|
| | Test of Association; Measure of Association | Country (*M*) | | Median | % > Median | p-value |
| Doctor | $\chi^2$ = 38.25 ( p=0.000); Cramer's V=0.362 (p=0.000) | New York City | 78 | 1.00 | 42.3 | 0.096 |
| | | Tehran | 41 | 1.00 | 26.8 | 0.857 |
| | | Kuala Lumpur | 27 | 2.00 | 92.6 | 0.003 |
| Traditional Methods | $\chi^2$ = 230.19 (p=0.000); Cramer's V=0.495 (p=0.000) | New York City | 78 | 1.00 | 0.0 | @ |
| | | Tehran | 364 | 3.00 | 0.0 | @ |
| | | Kuala Lumpur | 27 | 1.00 | 4.7 | 0.001 |
| Non-Specialist | $\chi^2$ = 33.97 (p=0.000); Cramer's V=0.315 (p=0.000) | New York City | 78 | 1.00 | 41.0 | 0.072 |
| | | Tehran | 66 | 2.00 | 56.1 | 0.000 |
| | | Kuala Lumpur | 27 | 1.00 | 0.0 | 0.000 |

*@: All values are less than or equal to the median*

The reasons for not performing abortion are presented in Table 5. All the given reasons had moderate influence on the MWRIU (median = 3.00 for each). For Iranians, only 'financial problems' seems to have significant effect on their decision to perform abortion (median = 4.00), while other reasons had weak or no influence at all. For the case of Malaysian women, financial issues and health problems are the two most influential reasons to not perform abortion (median = 2), while the other reasons moderately affected the Malaysian women's decision on abortion.

**Table 5:** Reasons for not performing abortion

| Country dependent | New York City | | Tehran | | Kuala Lumpur | | Test of Association | |
|---|---|---|---|---|---|---|---|---|
| Reasons | *N* | Median | *N* | Median | *N* | Median | $\chi^2$ (p-value) | Eta |
| Health problems | 247 | 3.00 | 65 | 1.00 | 23 | 3.00 | 140.9 (0.000) | 0.440 |
| Financial problem | 247 | 3.00 | 65 | 4.00 | 23 | 3.00 | 127.7 (0.000) | 0.420 |
| Unsupportive Husband | 247 | 3.00 | 180 | 1.00 | 23 | 2.00 | 23.3 (0.003) | 0.207 |
| Religious reasons | 247 | 3.00 | 180 | 2.00 | 23 | 2.00 | 102.6 (0.000) | 0.400 |

**Discussion**

People's attitude and acceptance towards family planning practices differed across the three cities under study. The high sensitivity towards sexual issues within the Muslim community made it difficult to achieve high response rates for all the questions asked in this study. However, the comparison was still valid. This study has several findings that might be contradictory to certain Islamic values and previous literature. Firstly, although Islam strictly prohibits premarital sex, more than half of the single respondents among the MWRIU and about 3% of Malaysians appeared to have practiced safe sex before marriage. No respondents reported this from Tehran, IRI.

Secondly, the literature shows that more of USA women used contraception compared to the Iranians. Nevertheless, the results from 2 cities of the aforementioned countries suggested the opposite. This might indicate that the MWRIU's contraceptive usage was lower than other people that make up the USA community. The use of contraception in Kuala Lumpur is low compared to the other two cities. These results are in line with the latest figures on contraception usage.

Although the use of contraceptive methods was lowest among the Malaysian Muslim women, they were the least that practiced unsafe abortion and the highest in practicing safe abortion performed by specialists, compared to respondents from the other two countries. After the willingness to have children, financial barrier was the most significant reason expressed by the Malaysian women for not using contraception. This scenario might have likely prevented many women from practicing safe family planning methods. With this in mind, more efforts are needed to promote and subsidize contraception to allow those in need of its use. This will consequently help enhance the health quality of Malaysian Muslim women.

A non-negligible portion of Malaysian women cited religious reasons as the factor that prevented them from using contraception. This happened despite the fact that Islam allowed this practice in many circumstances. Thus, it highlighted the need for educational efforts or awareness program through religious channels (the mosque community or other religious bodies).

The practice of unsafe abortion in the IRI showed an alarming figure that needs urgent attention. These practices could be attributed to the legal prohibition of performing abortion, unless to save a woman's life[1]. The shortage of affordable, safe contraceptive methods means that policy makers should revise the current legislation to ease the access to safe contraceptive methods for Iranian women. However, the legislation must be in accordance to the Islamic rules and regulations. Quite a high portion of Iranian Muslim women used unsafe and traditional methods of contraception, which ultimately increases risks of morbidity. The highest cited reason by Iranians for not using contraception was problems in terms of finance. Thus, it is imperative for Iranian policy makers to provide aid and subsidy for the provision of modern and healthy contraceptive methods, allowing improved family planning practices in the IRI, which would, in turn, be reflected in higher levels of national health.

Although the majority of the MWRIU practice safe contraception and abortion, about one third or more of them still practice unsafe methods in family planning. Sexual and reproductive rights of the MWRIU are obviously affected by their husbands' attitude. The majority of MWRIU respondents cited husband's objection as the reason for not using contraception or not performing abortion. Although the legislation on abortion in the USA allows abortion upon request and provides easy access to contraceptive methods for women, Muslim women seem to be left behind in utilizing their rights towards sexual and reproductive health. Similar to the Malaysian women, the MWRIU need to be educated on the permissibility of contraception usage and family planning as about two thirds of them cited religious reasons to be moderately or strongly affecting their usage of contraception. Nevertheless, as stated

earlier, the permissibility must be within the context of the Islamic law

With different levels of development, the practice of family planning varied significantly among the MWRIU, respondents from Tehran and Kuala Lumpur. Unsafe abortion and contraception were still used by Muslim women in the three cities as a means for family planning. Muslim women in Tehran showed the highest percentage in practicing contraception and unsafe abortion, while Malaysian women were the lowest. Although unsafe abortion in the sample from New York City was rare, a non-negligible portion of Muslim women was still involved in this risky practice.

## Conclusion

Contraceptive methods should be subsidized in Malaysia and the IRI to reduce the practices of unsafe methods. Educating Muslim women in the three countries on the permissibility of practicing family planning and their sexual and reproductive rights is expected to leave a positive impact on the overall health and economic standard of the community.

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REFERENCES

1. UNPD (2016). World Abortion Policies 2013 (1st ed., p. 2). New York. Retrieved from http://www.un.org/en/development/desa/population/publications/pdf/policy/WorldAbortionPolicies2013/WorldAbortionPolicies2013_WallChart.pdf
2. Tey N, Ng S & Yew S. (2011). Proximate Determinants of Fertility in Peninsular Malaysia. *Asia-Pacific Journal Of Public Health*, 24(3), 495-505. http://dx.doi.org/10.1177/1010539511401374
3. Erfani A & McQuillan K. (2008). Rates of Induced Abortion in Iran: The Roles of Contraceptive Use and Religiosity. *Studies In Family Planning*, 39(2), 111-122. http://dx.doi.org/10.1111/j.1728-4465.2008.00158.x
4. Naghavi M. (1996), Estimate of Iran's maternal mortality due to pregnancies and deliveries, using Reproductive Age Mortality Survey (RAMOS). Tehran: Ministry of Health and Medical Education (In Persian).
5. WHO (2016). Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008. *Who.int*. Retrieved 16 June 2016, from http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241501118/en
6. Jones R & Kavanaugh M. (2011). Changes in Abortion Rates between 2000 and 2008 and Lifetime Incidence of Abortion. *Obstetrics & Gynecology*, 117(6), 1358-1366. http://dx.doi.org/10.1097/aog.0b013e31821c405e
7. Finer L & Zolna M. (2014). Shifts in Intended and Unintended Pregnancies in the United States, 2001–2008. *Am J Public Health, 104*(S1), S43-S48. http://dx.doi.org/10.2105/ajph.2013.301416
8. Jones R & Jerman J (2014). Abortion Incidence and Service Availability In the United States, 2011. *Perspectives On Sexual And Reproductive Health, 46*(1), 3-14. http://dx.doi.org/10.1363/46e0414
9. Jones R, Finer L & Singh S. (2010). *Characteristics of U.S. Abortion Patients, 2008.*