MEASUREMENT BRIEF:
MEASURING CONTRACEPTIVE USE, ACCESS, AND DECISION-MAKING IN FAMILY PLANNING IN MEXICO

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WEDGE

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This measurement brief discusses the use of public data to measure the use and contraceptives needs, and women's decision-making about family planning in Mexico. It also includes limitations and recommendations for advancing measurement and research on this topic, that could be useful for all Latin American countries, and for comparative research. Like other countries from the region, Mexico has experienced declines in fertility and marriage, increases in the rates of children born from un-partnered women,[1] and cohabitations (Amador, 2016: Laplante et al., 2018). Fertility in Mexico decreased with some particularities in terms of what is expected according to the Second Demographic Transition. First, in the last three decades, fertility has diminished among women aged 35 years or older, meaning that the postponement of first birth was, on average, unobserved. Second, the average age of the first union remained similar across decades (Esteve, García-Román, and Lesthaeghe 2012). Third, the country has a persistently high fertility rate among women aged 15-19 years (Vázquez and Parrado, 2016; Instituto Nacional de las Mujeres, 2021).

Still, in the last four decades, the share of women aged 15 to 49 years using contraception has increased, leading to a persistent and relatively high percentage of sterilization among women (i.e., the share of sterilized women is around 50 percent) (ENADID, 2018). As a consequence, fertility rates have declined but the rates of unintended pregnancies, i.e., mistimed or unwanted, are still high, similar to the Latin American average of 71 per 1000 pregnancies annually. These rates are higher among rural and less economically advantaged women, compared to those from more developed and urban areas (70 percent versus 45 percent). Juárez et al. (2013) estimated that more than half of these pregnancies ended with induced abortions, i.e., 38 per 1,000 women aged 15–44 years) (Juárez, Singh, Maddow-Zimet and Wulf, 2013).

In 2022, Mexico will be one of the few Latin American countries where abortion has been decriminalized (2021). Abortion is illegal or only partially allowed in other countries with high rates of teenage pregnancies, e.g., Nicaragua, Guatemala, Panama, and Ecuador. The depenalization of abortion in the State of Mexico since 2007 caused a decline in fertility among women aged 20 to 34 years, but no reduction was observed among adolescents (Vázquez and Parrado, 2016). How abortion will affect the unintended pregnancy rates is an open question.

Both demographic changes and norms about contraceptive decisions rely on gender roles. As summarized in Table 1, fertility declined in Mexico without postponement (on average) in childbearing or union formation, and with scant changes in teenage pregnancy rates. Hence, there are open questions about these trends, as several datasets explore the role of use of and access to contraceptives, and decision-making regarding family planning.

AVAILABLE SURVEYS

Two public surveys, both representative at the national level, measure contraceptive use, needs and decisions. First, the *Encuesta Nacional de la Dinámica Demográfica* (ENADID), was collected by the Sistema Nacional de Información Estadística y Geográfica (INEGI), in 1992, 1997, 2009, 2014, and 2018. The sample design of this survey allows for inferences at the national, state, rural/urban, and location size levels. Households are selected

[1] Not married, not cohabitating.

Table 1. Demographic Trends Mexico, 1990-2020

Year	1990	2000	2010	2020
Total Fertility Rate	3.5	2.6	2.3	2.1
Mean Age at First Union*	18.8	19.4	20.4	20.4
Mean Age of Women at Childbirth^	28.7	-	26.6	26.6
Mean Age of Women at First Childbirth	-	-	20.8	21.4
Percentage of Mothers, Ages 15-19*	12.1	13.7	15.5	12.2
Average Ideal Number of Children for Women, Ages 15-49*	2.9	2.7	2.7	2.6
Percentage of Contraceptive Users among Partnered Women, Ages 15-49^	63.1	68.5	72.5	73.1
Percentage of Contraceptive Users among Women, Ages 15-49^	46.9	47.9	49.9	53.4

Sources: Interactive Tables INEGI, the World Bank Data, ENADID final reports, for 1997, 2009, 2014, and 2018, and OCDE Family Data.
(*) Years are 1992, 1997, 2009, or 2018.
(‡) Years are 1984, 2011, or 2018.
(^) Contraceptive methods include all methods, but natural methods are excluded (e.g., rhythm).

from the primary sample units, used for all national surveys in Mexico. One person aged 15 years is chosen to answer the questionnaire within each household, while all resident women aged 15 to 54 years answer the "women module" (119,800 households in 2018). The survey is in person and uses electronic devices for response registration. The survey covers the level and behavior of demographic dynamics, including fertility, mortality, and migration (domestic and international), as well as other topics related to households and housing. The "women module" includes questions about reproductive preferences, sexuality, birth control methods, unions, and maternal and child health.

Second, the Retrospective Demographic Survey (EDER)[2] was conducted in 2011 and 2017, covering a national representative sample of people aged 20 to 54 years, living in private households (33,000 households in 2017). For this survey, the households were selected using the same frame of primary sample units provided by INEGI. The survey, which was conducted in person using electronic devices, encompasses household characteristics, employment history, fertility history, marital history, and contraception.

Two international surveys address the issues of contraceptive use and family planning in Mexico. First, the Demographic and Health Surveys (DHS)[3] collects nationally representative data on population, health, HIV, and nutrition in 90 countries. The survey asks women, and in some countries, men also, about who in their respective households makes decisions related to contraception, health care, and household purchases. Women answered questions about fertility and contraceptive use. Mexico participated in the DHS once in 1987, and this sample is representative of households at the national level (8,100 households) and of women aged 15 to 49 years.

Second, the Multiple Indicator Cluster Surveys (MICS) was conducted in 2015 in Mexico in collaboration with the United Nations Children's Fund (UNICEF). This initiative aims to generate comparative indicators about the living conditions of children and women. This survey, which is also representative at the national level (covering 10,760 households), interviewed all women aged 15 to 49 years, and children from the selected households. The questions asked in the survey cover nutrition, health, access to water and sanitation, reproductive health, and child development, among other topics (*Instituto Nacional de Salud Pública* and UNICEF, 2016).

The data, questionnaires, and documentation of these four sources, i.e., ENADID, EDER, DHS, and MICS, are available on the respective websites.

Please see **Table 2. Topics Related to Contraceptive Use, Access, and Decision Making by Survey**.

CONTRACEPTIVE USE, NEEDS AND DECISION-MAKING IN MEXICO

In 1977, Mexico implemented a family planning policy that increased access to contraceptive methods, making it compulsory for the government and public health providers to offer contraceptive methods at no cost, thereby

[2] *Encuesta Nacional sobre Fecundidad y Salud* (ENFIES) in Spanish.
[3] *Encuesta Nacional de Niños, Niñas y Mujeres* (ENIM) in Spanish.

creating a National Family Plan Program.[4] Consequently, the unmet need for contraception—measured in terms of a woman not wanting to become pregnant (in the following years or not at all) and not practicing contraception—declined from 25 percent to 12 percent between 1974 and 2009 among women of reproductive age (Juarez, Gayet, and Mejia-Pailles, 2018). Nonetheless, contraceptive use remained low among poor young women in the 2000s (81 of the women in the very low income category reported that they had never used a contraceptive method) (ENADID, 2009). Currently, there is a higher risk of the unmet need for contraception among women living in rural and poorer areas (Juárez et al., 2013). The lack of access to contraception partially explains why despite the overall increase in the number of contraceptive users, the rate of abortion also increased from 25 per 1000 women to 33 per 1000 women aged 15 to 45 years between 1990 and 2006, which placed Mexico over the Latin America average rate of 31 per 1000 women (Juarez and Bayer, 2011; Juárez et al., 2013).

Mexican partnered women in their 20s also face a higher risk of the unmet need for contraception, while older women have often undergone sterilization procedures. Sterilization has been the most popular method among partnered women of reproductive age, at 37.6 percent, in the second half of the 1970s. At that time, hormonal methods were used for family planning by around one-quarter of contraceptive users. Currently, 45.9 percent of the sexually active Mexican women aged 15-49 years have undergone tubal ligation or other female sterilization procedures (ENADID, 2018; Miranda, 2006). Some scholars attribute this persistence of the use of sterilization to the shared experience and, consequently, trust in sterilization versus "newer" methods among women. This also accounts for the lack of access, information, knowledge, and experience with alternative methods. However, public hospitals promote tubal ligation immediately after deliveries, especially for women with high parity (Potter, 1999).

As mentioned earlier, the teenage pregnancy rate remains high in the country, at 70.5 per 1000 women aged 15-19 years in 2018; which is five times higher than the average recorded in the Organization for Economic Co-operation and Development (OECD) countries, where the corresponding rate is 13.7 births per 1000 women aged 15-19 years (OECD, 2019). This is not uncommon for a Latin American country, where the average rate of births per 1000 women aged 15-19 years is 61 (OECD, 2019). Certainly, beliefs and norms about the roles of women and children partially explain the relatively high and persistent patterns of teenage pregnancies in the region, in general, and in Mexico in particular (Hakkert, 2001). Nonetheless, among the participating countries in the DHS in the 2000s, Latin American countries have the lowest rates of desired pregnancies among mothers aged 20 years or younger who had a birth in the previous five years (Rodríguez, 2017).[5] Indeed, Latin American adolescent mothers registered a higher increase in unintended pregnancies between the 1990s and the 2010s, with slight differences between educational levels, (i.e., primary or lower versus secondary or higher). Data from MICS (2015) in Mexico shows that around 50 percent of teenage pregnancies are planned or intended, as compared to 59 percent of pregnancies among all mothers (Rodríguez, 2017).

In 2015, the country implemented a policy to reduce by half the rate of teenage pregnancy by 2030.[6] Addressing the issues of sexual education, employment opportunities, access to health care, and sexual violence, the national strategy (Estrategia Nacional para la Prevención del embarazo en Adolecentes or ENAPEA)[7] successfully reduced the rates of pregnancies among women aged 15-19 years (69 per 1000 women aged 15-19 years, in 2020) (Instituto Nacional de las Mujeres, 2021). Nonetheless, the program has been less effective in rural areas and among girls living in indigenous households. Their rates are 92 and 87 per 1000 for women aged 15-19 years, respectively. The unequal access to contraceptive methods and reproductive rights is partially related to the greater risk of poverty among women, in general, but among indigenous women, in particular (Echarri, 2020). The incidence of early motherhood (occurring at ages 10-15 years) is almost twice as high among indigenous girls than their non-indigenous counterparts and in rural versus urban areas. It is also five times more likely to occur among poor girls. The rate is also seven times higher among poor, indigenous, and rural girls than non-poor, urban and non-indigenous girls. Consistently, more educated adolescents

[4] The *Plan Nacional de Planificación Familiar* was formalized in 1977, and its primary purpose was to reduce fertility. A comprehensive explanation of this plan, the involvement of local governments and health workers, and its evaluation can be found in Potter (1999).
[5] The Latin American countries are: Guyana, Honduras, República Dominicana, Bolivia, Colombia, Haití, Perú, Guatemala, Nicaragua, Paraguay, and El Salvador.
[6] The rate was 77.9 births per 1000 women aged 15-19 years. Estrategia Nacional para la Prevención del Embarazo en Adolescentes (Instituto Nacional de las Mujeres, 2021).
[7] More information about this program can be found at https://enapea.segob.gob.mx/

and those who have their first sexual experience at later ages are more likely contraceptive users (Instituto Nacional de las Mujeres, 2021).

National strategies that used to target access, training on modern methods of contraception, and fertility rates, have shifted due to demands for ensuring Mexican women's reproductive autonomy since the 1990s[8] (Potter, 1999). The concentration of sterilization users depicts a situation where women have potentially less influence in their contraceptive decisions[9] (Bertrand et al., 2014). The last ENADID (2018) shows that 3.6 percent of contraceptive users among women aged 15 to 49 years declared that their current method is not their preferred method.

From a reproductive rights perspective, the use of modern methods should not be the only metric to evaluate the extent to which sexual and reproductive rights are guaranteed; nor should fertility rates be so (Senderowicz, 2020). Some scholars point out the need to measure how contraceptive decisions align with the choice made, specifically, the extent to which family planning decisions are free and, if women and men are able to cover their knowledge and information needs. Hence, the conditions in which women (and couples) decide (and how much they decide or not) are as important as the use of or access to contraceptives. Limited knowledge about contraception methods and their consequences, or restricted access to the reversal of IUD or implant insertions, threatens the goal of enhancing women's empowerment and ensuring their reproductive rights (Senderowicz, 2020). In addition, reproductive coercion from partners endangers women's empowerment (Upadhyay et al., 2014).

This perspective encourages the inclusion of measures for contraceptive decision-making free of coercion as being pivotal for evaluating the success of family planning policies.[10] Postpartum contraceptive decisions deserve special attention. Although spacing births is beneficial for mother and child health (Barber, 2007), in Mexico, sterilization and intra-uterine device insertions are traditionally offered to women with more children and those delivering in public hospitals (Potter, 1999).

Despite the availability of years of rich data on contraceptive use, especially from ENADID, few studies have analyzed the decision-making process. However, two studies based on other sources illustrate some dimensions of the process. First, Juarez and Bayer (2011) conducted interviews with 26 heterosexual Mexican women and men. In this sample, implants and IUDs are the most frequently used methods. They decide on using these methods a few years after the birth of one, but most commonly two, children, and sometimes after abortions. Women are the primary decision-makers regarding contraceptive use, pregnancy, and abortion. Second, Barber (2007) used the *Encuesta de Evaluacion Urbana*, a longitudinal survey conducted in 2003 and 2004 in low-income rural areas of Mexico.[11] The study explores the role of prenatal family planning, mandated by government guides, in postpartum contraceptive use. They found that prenatal provider contraceptive advice more than duplicates the odds of postpartum contraceptive use. These mothers were more likely to adopt IUDs, condoms, and female sterilization than those who did not receive this advice. Notably, the quality of the health system at the community level (measured by the adherence to government guidelines) supported postpartum contraceptive adoption, especially IUDs and female sterilization.

CONCLUSIONS

Mexican surveys are a rich source of data for understanding the use of and access to contraceptives, and, partially, decision-making in family planning. The available data covers cohorts born before the implementation of the national family policy in 1974. The topic most comprehensively covered by these surveys is that of contraceptive use. Regarding access, the ENADID and the DHS provide information about payment and access through the health system but are limited around possible barriers related to contraceptive methods. When questions

[8] Pressures to include reproductive rights in family planning policies came from national organizations. See, for example, the work of the Grupo de Información en Reproducción Elegida (GIRE) but also from the International Conference on Population and Development (Cairo 1994).
[9] The Guttmacher Institute reported in 2015 that the Dominican Republic, India, and Mexico were countries with a concentration of female sterilizations used as primary contraceptive methods among low-middle income countries. Rates in Mexico continued to rise during the 2000s, while the rate of female sterilization diminished in Brazil.
[10] Upadhyay et al. (2014) propose a validation in the US Reproductive Autonomy Scale. The scale includes freedom of coercion (focus on partner), communication, and decision-making.
[11] The survey aimed to evaluate *Oportunidades*, a conditional cash transfer program targeting mothers through incentives for sending their children to schools and for health checks.

on barriers are included, they are only asked to non-users, i.e., reasons for not using a contraceptive method. It would be beneficial to pose these questions to all women, considering that users also face access constraints, including access to removals in the case of methods that depend on providers such as IUDs and Implants. As regards the issue of decision-making in family planning, the DHS, MICS, and mainly ENADID cover some dimensions of the process, focusing on interactions between the provider and patient, prenatal and postpartum discussions with providers, and the partners' agreement with the current method being used.

FUTURE RESEARCH

- The EDER is an excellent resource for comparing the attitudes of women and men regarding contraceptive use, and could inspire other surveys in the region. Given changes in family in the last decades, EDER is a unique dataset in Latin America for measuring the association between marital status and contraceptive use. It could be an essential tool for better understanding the role of contraception in the increasing incidence of unpartnered mothers.
- The ENADID and EDER facilitate observation of contraceptive use trajectories to analyze the patterns and experiences before female sterilization. ENADID offers a unique opportunity to analyze associations in the contraceptive histories and behaviors of women living in the same household. Considering the issue of household composition in Mexico, i.e., the increasing rates of married couples or cohabiters living in extended family houses, this could be a field of future research.
- Incoming studies about the effect of the depenalization of abortion will also inform the situation in the country regarding family planning and its interaction with fertility and pregnancy intentions.
- More qualitative research can also deepen our understanding of the high rates of teenage pregnancies and the consequences of widespread sterilization in Mexico.
- The COVID-19 crisis could lead to new barriers to the use of and access to contraceptives, and decision-making on family planning, through diverse mechanisms, notably greater barriers to access to health services for women in general that might vary by social characteristics. The existing surveys could add new questions to analyze the consequences of the crisis in this domain.

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- Attempts to expand family planning measures might include reproductive autonomy, validating items for adolescents and ethnic minorities. In this regard, nationally representative surveys conducted by the government have an advantage because of their capability to reach diverse social strata.
- Questions about informed consent in postpartum contraceptive procedures—a government requirement for public providers—could be helpful for analyzing trends of women relying on sterilizations and IUDs.[12]
- Questions about gender norms around fertility, i.e., childlessness and abortion, and stigmas associated with contraceptives, could also improve the measurement of family planning (Bhan et al., 2020).[13]
- Interviewing practitioners is another way of advancing indicators of women's agency and gender norms in family planning (Bhan et al., 2020).
- Also of interest are the behaviors and perceptions of men, especially in a context of decreasing rates of dual-use methods, as has been witnessed among adolescents in Mexico.
- Finally, questions addressing the complexity of romantic relations and partnerships, i.e., the partner's pregnancy intentions, and the role of the extended family in family planning, could enrich our knowledge about contraceptive decisions and behaviors.

[12] The INEGI also conducted a nationally representative survey addressing women's experiences of violence in the years 2003, 2006, 2011, and 2016 (*Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares* - ENDIREH). The survey includes questions about reproductive violence in the health system to seek information about rates of contraceptive decisions taken by force.

[13] For a comparison of women's agency and norms in family planning and suggestions to measure these dimensions, please see "Measuring Women's Agency and Gender Norms in Family Planning: What do we know and where do we go?" EMERGE. Evidence-based Measures of Empowerment for Research on Gender Equality. Center on Gender Equity and Health (GEH).

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Prevalencia de uso de métodos anticonceptivos modernos en mujeres en edad fértil unidas por entidad federativa, años seleccionados de 1992 a 2018

Promedio de hijos nacidos vivos de las mujeres de 12 y más años por entidad federativa según estado conyugal, años censales de 2000, 2010 y 2020

Photo by Joanna Nix-Walkup on Unsplash

Porcentaje de nacimientos registrados de madres adolescentes (menores de 20 años) por entidad federativa de residencia habitual de la madre, serie anual de 2010 a 2020

The World Bank Data. Fertility rate, total (births per woman).

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