

Women's Autonomy And Contraceptive Use Among Rural Women In Assiut District

Marwa A. Orabi¹, Omaima El-Gibaly², Doaa Mohamed Osman²

¹ Demography and Reproductive Health, Faculty of Medicine, Assiut University, Egypt.

² Public Health and Community Medicine Department, Faculty of Medicine, Assiut University, Egypt.

Corresponding author: Marwa A. Orabi Demography and Reproductive Health, Faculty of Medicine, Assiut University, Egypt E-mail: marwa.ma72@med.aun.edu.eg.

Abstract

Introduction: Women's autonomy has been shown to increase the uptake of modern contraception use and could affect the ability of women to utilize health services. The use of modern FP methods promotes the socio-economic well-being of women and their families. **Aim:** This research aimed to investigate the predictors of women's autonomy and its relationship with modern contraception use among married women in rural Assiut. **Methods:** A cross-sectional study was conducted on 101 married women of reproductive age recruited from primary health care centers.

Results: Total women's autonomy score ranged from 5–29 with a mean value of 19.2 ± 4.6 . Working for cash and living in a nuclear family were significant positive predictors of women's autonomy. Individual decision-making and the mobility domains of women's autonomy were significantly associated with the usage of FP methods ($P < 0.05$). The significantly higher odds ratio for using long-acting/permanent FP methods was observed with an increase in the number of living children and with professional/employee occupations of husbands of the women. An increase in women's age was a significant negative predictor of the use of long-acting/permanent FP methods.

Conclusion: Women's employment and independence from family residence increase their autonomy in Upper Egypt. Women's participation in household decision-making and their freedom of mobility have positive impacts on contraceptive use. Usage of long-acting/permanent FP methods is positively affected by the high number of living children and the husbands' occupation of the women.

Keywords: women's autonomy, contraceptive use, Egypt.

Abbreviations: FP (family planning), PHC (primary health care), EDHS (Egypt demographic health survey), EFHS (Egyptian family health survey).

Introduction

The estimated Egyptian population in 2021 is 101.6 million (1). Between 2011 and 2018, Egypt's population increased by 11 million (2). Unless the fertility rate of 3.47 changes by 2030, Egypt's population is predicted to reach 128 million (3).

High fertility incorporates rapid population increase, putting Egyptian health and well-being at risk. Furthermore, it is likely to inflict a significant financial burden on Egypt by inhibiting economic development, limiting educational and employment opportunities, and raising health risks for women and children (4).

According to the data of the Egyptian Family Health Survey (EFHS) 2021, two-thirds of the currently married women between the

ages of 15-49 use a method of family planning (5). Women living in rural Upper Egypt have the lowest contraceptive use rate (6).

Although the Ministry of Health began providing all forms of contraception to women for free last year, official results of the Central Agency for Public Mobilization and Statistics "CAPMAS" revealed that Assiut was one of the governorates with the highest fertility rates, 3.77 children per woman (1).

Women's autonomy means the capacity and freedom for women to act or decide independently on their issues (7). Women's ability to visit healthcare institutions and obtain treatment is determined by their ability to make personal decisions (7).

Limited access to health care has a significant impact on women's health and well-being (8). Women who have more autonomy are more likely to seek health care for themselves and use the many types of health care services available to them (9), (10).

Women's autonomy in Egypt is similar to that of other societies. It is influenced not only by women's traits but also by the familial and societal rules that predominate in the area the women reside in (11). Generally, women's autonomy affects the use of modern contraception methods among women in Egypt (12), (13). However, the available data about women's autonomy among the rural women in Upper Egypt is outdated and limited. Moreover, the role of women's autonomy in determining the type of contraceptive method used by those populations has not been evaluated.

This study aimed to explore the level of women's autonomy, detect the predictors of women's autonomy, and investigate the determinants of choice between long-acting/permanent methods among married women in rural Assiut, Upper Egypt.

Subjects And Methods

Study Design and Site:

A cross-sectional study was conducted in a rural primary health care center in Assiut district, Egypt.

Study Population and Sampling:

The studied population consisted of married women within the reproductive age group (15-49 years) who attended PHCs for their services (vaccination of their children, family planning services, and medical care of their children). A purposive non-probability sampling technique was applied to recruit the study population. The sample size was calculated using the following formula:

$n = [Z * SD / d]^2$. The mean and standard deviation of the household women's autonomy from ELMS 2012 was 5.58 ± 3.66 . We set the maximum error or deviation from the mean at 0.7. The calculated sample size turned out to be 104 women.

Study Tool:

The data collection stage lasted two months: August and September 2022. Data was

collected through a semi-structured interview administered questionnaire. It included:

1. **Sociodemographic characteristics:** Age of woman, husband's age, age at marriage, marital duration, education, occupation of both woman and her husband, and type of family.
2. **Contraceptive history:** Included current use of contraceptives (yes, no), type of contraceptive method used, whether long-acting/permanent or short-acting, and name of the method (IUD, pills, injection,..).
3. **Obstetric and reproductive history:** Included parity, history of abortion, number and type of living children (females or males), and the interval between the index child and the previous one.
4. **Women's autonomy:** It includes four measures: movement autonomy, financial autonomy, household decision-making, and domestic violence attitude (7). Standard scoring of each domain and total women's autonomy score were performed.

Statistical Analysis:

Data was entered and analyzed SPSS using software version 20. Data was described as mean and standard deviation or frequencies and percentages based on its type. The Chi-square test and student t-test were used to compare the differences between proportions or means, respectively. Multiple linear regression, with a stepwise method, was used to identify the predictors of women's autonomy score. Binary logistic regression with the backward LR method was used to identify predictors using the long-acting/permanent method. P value < 0.05 was considered a significant cutoff point for all applied statistical tests.

Ethical Consideration:

The study was approved via the Ethical Review Committee of Assiut Faculty of Medicine (IRB local approval number: 17101435). All ethical considerations were ensured, including maintaining the privacy and confidentiality of all data and obtaining written informed consent. For illiterate women, consent was obtained by orally

presenting the consent materials under the observation of an impartial witness.

Results

Table (1) shows the sociodemographic characteristics of studied women. The age of women ranged from 19 to 49 years with a mean of age 30.77 ± 5.97 . The mean marriage duration was 9.7 years. Mean values of parity and number of living children were 2.9 ± 1.3 and 3.2 ± 1.4 in order.

Slightly less than half (43.6%) of the studied women had a history of abortion. More than half of the studied women live in nuclear families (61.4%). Nearly 65% of women have both males and females. About one-third of husbands (37%) were not working or were unskilled manual workers. Nearly 64% of women had secondary education or above, and most of them (95%) were housewives.

Figure (1) shows contraceptive usage by studied women. Most of the women studied used contraceptive methods (92%). **Figure (2)** illustrates the contraceptive method type used by studied women. Users of short-acting contraception were 65.6%, while 34.4% were using long-acting methods.

Table (2) displays women's autonomy and knowledge of FP use by studied women. The mean values of individual decision-making and joint decision-making autonomy were 3.9 ± 0.29 and 2.75 ± 0.26 , respectively. About 40% of the women have financial autonomy. The mean mobility score was 8.18 ± 1.8 . Total Women's autonomy score ranged from 5–29 with a mean value of 19.2 ± 4.6 .

Figure (3) shows the relationship of family planning usage with total women's autonomy

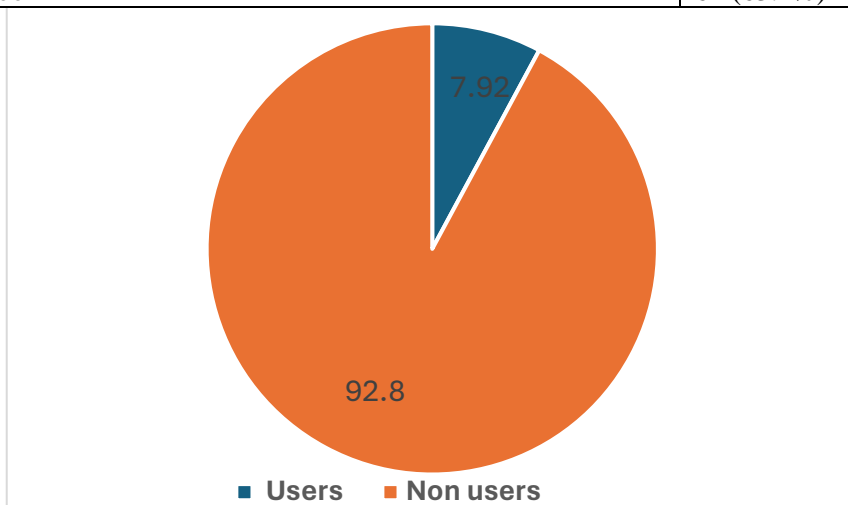
and its domains. The individual decision-making and mobility domains were significantly higher among users of family planning methods. When the authors conducted bivariate analysis, they found that women who were using FP methods had significantly higher marriage duration than non-users of FP methods ($p = 0.005$). While other variables such as age, education, occupation, and family type were not significantly associated with the usage of FP methods.

Table (3) displays the predictors of the increase in women's autonomy score among studied rural women in Assiut district. Working for cash was a significant positive predictor for women's autonomy ($\beta = 5.449$ and 95% C. I= 1.425-9.472). Also, living in a nuclear family was a significant positive predictor for women's autonomy ($\beta = 2.437$ and 95% C. I= 0.417- 4.456).

Table (4) shows the factors predicting the usage of long-acting/permanent methods among rural women in Assiut district. The final model shows that significantly higher odds ratio for using long-acting/permanent FP methods were observed with a higher number of living children (OR=2.284 and C. I= 1.293- 4.035) and with professional/employee occupation of husbands of the women (OR= 4.265 C. I= 1.137 - 15.992). On the other hand, the increase in women's age was a significant negative predictor for using long-acting/permanent FP methods (OR=0.856 and C. I=0.752-0.975).

Table (1): Personal and reproductive characteristics of studied rural women, Assiut district.

| Variable | Total (n=101) Frequency (%) |
|--|-----------------------------|
| Women age Mean \pm SD (range) | 30.77 \pm 5.97 (19 - 49) |
| Husband age Mean \pm SD (range) | 36.82 \pm 7.039 (24 - 60) |
| Women age at marriage Mean \pm SD (range) | 21 \pm 3.5 (15 - 33) |
| Marriage duration Mean \pm SE (range) | 9.7 \pm 0.32 (1 - 36) |
| Parity Mean \pm SD (range) | 2.9 \pm 1.33 (1 - 10) |
| Number of living children Mean \pm SD (range) | 3.25 \pm 1.39 (1- 8) |
| Abortions Mean \pm SD (range) | 1.6 \pm 0.92 (1 -5) |
| Interval between index child and the previous one Mean \pm SE (range) | 3.4 \pm 0.22 (1 - 10) |
| Family type | |
| Nuclear | 62 (61.4%) |
| Extended | 39 (38.6%) |
| Sex of living children | |
| Males | 21 (20.8%) |
| Females | 15 (14.9%) |
| Both | 65 (64.4%) |
| History of abortion | |
| Yes | 44 (43.6%) |
| No | 57 (56.4%) |
| Occupation for husband | |
| Non-working/ Unskilled manual worker | 38 (37.6%) |
| Skilled manual worker /Trades | 43 (42.6%) |
| Semiprofessional/ Professional | 20 (19.8%) |
| Occupation for women | |
| Housewife | 96 (95.0%) |
| Working for pay | 5 (5.0%) |
| Husband education | |
| Basic education or less | 35 (34.6%) |
| Secondary + | 66 (65.4%) |
| Wife education | |
| Basic education or less | 37 (36.6%) |
| Secondary school+ | 64 (63.4%) |

**Figure (1):** Usage of FP methods by studied rural women, Assiut district

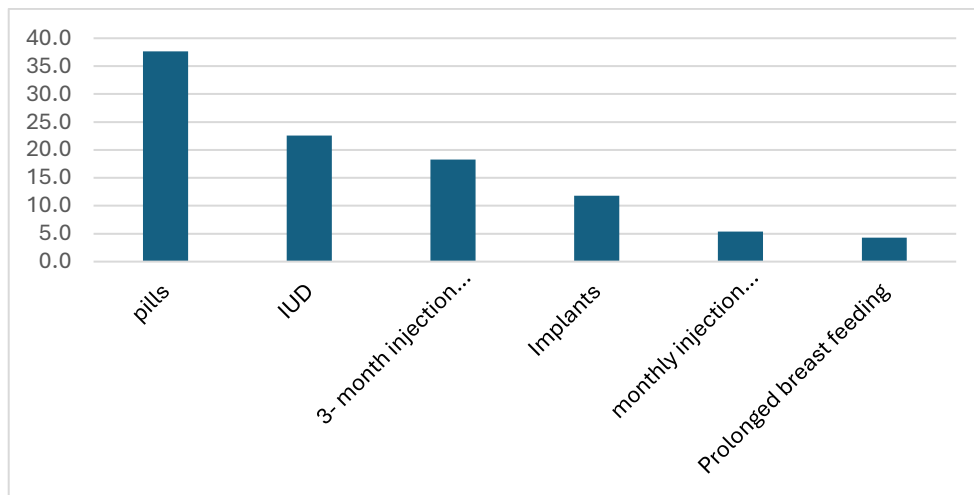


Figure (2): Type of method used by studied rural women, Assiut district.

Table (2): Women's autonomy and knowledge of FP use among studied rural women in Assiut district.

| Variable | Total (n=101) Frequency (%) |
|---|-----------------------------|
| Individual decision making Mean \pm SD/SE (range) | 3.9 \pm 0.29 (0 – 9) |
| Joint decision making Mean \pm SD/SE (range) | 2.75 \pm 0.26 (0 – 9) |
| Domestic violence attitude Mean \pm SD/SE (range) | 4.12 \pm 1.7 (0 – 7) |
| Mobility score Mean \pm SD/SE (range) | 8.18 \pm 1.8 (4 – 16) |
| Financial autonomy | |
| not having financial autonomy | 61 (60.4%) |
| having financial autonomy | 40 (39.6%) |
| Total women's autonomy score Mean \pm SD/SE (range) | 19.2 \pm 4.6 (5 – 29) |
| Women's knowledge score Mean \pm SD/SE (range) | 7.64 \pm 1.7 (2 – 14) |

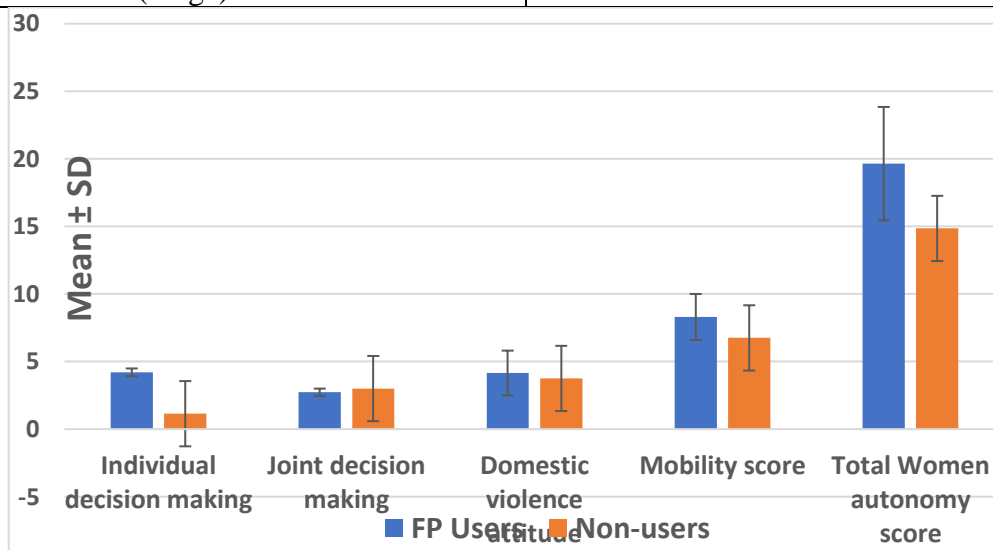


Figure (3): The relationship of family planning usage with total women autonomy and its domains among studied rural women, Assiut district.

Table (3): The predictors of women's autonomy of studied rural women, Assiut district.

| Variable | β | 95% CI | P value |
|--------------------------------------|-----------------|---------------|---------|
| Wife Occupation: Housewife | Reference group | | |
| Working for cash | 5.449 | 1.425 - 9.472 | 0.009 |
| Type of Family | Reference group | | |
| Nuclear | 2.437 | 0.417 - 4.456 | 0.019 |

Final model of stepwise linear regression.

The other variables entered in the regression model were the wife's age, age difference, marriage duration, wife's education, husband's education, husband's occupation, and number of living children.

Table (4): The predictors of choice for using long-acting/permanent or short-acting methods of studied rural women, Assiut district.

| Variable | Initial model | | | | Final model | | | |
|--|-----------------|----------|--------|---------|-----------------|----------|--------|---------|
| | OR | 95% C.I. | | P value | OR | 95% C. I | | P value |
| | | Lower | Upper | | | Lower | Upper | |
| Woman's age | 0.773 | 0.616 | 0.969 | 0.025 | 0.856 | 0.752 | 0.975 | 0.019 |
| Marriage duration | 1.154 | 0.943 | 1.414 | 0.165 | | | | |
| Number of living children | 2.199 | 1.157 | 4.178 | 0.016 | 2.284 | 1.293 | 4.035 | 0.004 |
| Women's education: basic education or less | Reference group | | | | Reference group | | | |
| secondary education or higher | 0.877 | 0.217 | 3.543 | 0.853 | | | | |
| Women's occupation: Housewife | Reference group | | | | Reference group | | | |
| working for cash | 1.950 | 0.184 | 20.647 | 0.579 | | | | |
| Husband's education: Basic education or less | Reference group | | | | Reference group | | | |
| (secondary education or higher) | 2.730 | 0.608 | 12.249 | 0.190 | | | | |
| Husband's occupation: Not professional or employee | Reference group | | | | Reference group | | | |
| (professional / employee) | 3.247 | 0.645 | 16.348 | 0.153 | 4.265 | 1.137 | 15.992 | 0.031 |

Table (4): The predictors of choice for using long-acting/permanent or short-acting methods of studied rural women, Assiut district. *(Cont.)*

| Variable | Initial model | | | | Final model | | | |
|---|-----------------|----------|-------|---------|-----------------|----------|-------|---------|
| | OR | 95% C.I. | | P value | OR | 95% C. I | | P value |
| | | Lower | Upper | | | Lower | Upper | |
| Type of family: Extended | Reference group | | | | Reference group | | | |
| Nuclear | 0.505 | 0.141 | 1.816 | 0.296 | | | | |
| Women's knowledge score | 0.956 | 0.674 | 1.356 | 0.801 | | | | |
| Women's autonomy score | 1.112 | 0.957 | 1.292 | 0.167 | | | | |
| Interval between index child and the previous one | 0.951 | 0.694 | 1.304 | 0.757 | | | | |

Binary logistic regression, backward LR method.

Discussion

The present study aimed to explore women's autonomy and its relationship with modern contraception usage among married women in rural Assiut.

As regards the sociodemographic characteristics of the studied women, the educational and employment status of women were similar to or close to the national levels revealed by the Egyptian Family Health Survey (EFHS) 2021(5). The housewives formed most of the studied women (95%) and 63.4% of studied women had secondary education or higher.

In the present study, the majority (92%) of studied women were using a contraceptive method. The most frequently used methods in order were pills (37.6%), IUD (22.6), three-month injections (18.2%), and implants (11.8%). According to the data of the EFHS 2021, two-thirds of the currently married women between the ages of 15-49 use a method of family planning. The EFHS 2021 reported most frequently used methods in order were IUDs (29%), pills (20%), and injections (10%) (5).

This higher level of contraception usage in our study could be attributed to the present studied population were women seeking family planning services or vaccination

services at the PHC centers, who are more likely to be users of FP methods.

Women's autonomy in the current study was assessed by four measures: movement autonomy, financial autonomy, household decision-making, and domestic violence attitude. The scores of the different domains in the current study were similar/close to the results of the Egyptian Labor Market Panel Survey (ELMPS)2012 and the secondary analysis conducted by Samari et al. 2018 (11). However, women's participation in household decision-making was slightly lower than the results of (ELMPS) because the study was conducted among rural women only (14).

As regards financial autonomy, women who have financial autonomy represented 53% (n=212) of studied women while 47% (n=188) did not. Samari et al. 2018 reported that 60% of married Egyptian women in 2012 were having financial autonomy (15).

We noticed that in our study, the percentage of women having financial autonomy was less than the percentage in 2012. This can be explained by the multiple events that affect the economic status of Egypt as the 25 January revolution and the subsequent events, the COVID-19 pandemic and the Ukraine war. Moreover, the current study was conducted in Upper Egypt, where higher

levels of poverty, unemployment, and unfair traditions limit her legacy rights in inheritance.

This study revealed that women's participation in household decision-making is significantly associated with contraceptive use, which is consistent with other studies in Zambia, Ethiopia, and Pakistan (16-18).

Also, the mobility domain was significantly higher among users of contraceptives (8.3 ± 1.7) compared to among non-users (6.7 ± 1.7). This is consistent with a study conducted among Pakistani women by Fariyal et al. (19).

As regards the predictors of women's autonomy, the current study revealed that working for cash was a significant positive predictor for women's autonomy ($\beta = 5.449$ and 95% C. I= 1.425 - 9.472). This finding is consistent with other studies conducted in Egypt, Bangladesh, and Pakistan (20-22).

Also, living in a nuclear family was a significant positive predictor for women's autonomy ($\beta = 2.437$ and 95% C. I= 0.417 - 4.456), which is consistent with other studies conducted in India (23).

In India, Debnath et al., a study conducted to estimate the effect of joint versus nuclear household structure on the autonomy of women revealed that women living in nuclear households have greater decision-making power and greater autonomy (23).

Unwanted pregnancy is a major public health problem both in developed and developing countries. Although the reduction in the rates of these pregnancies requires multifactorial approaches, increasing access to long-acting contraceptive methods can contribute significantly to changing this scenario (24).

The current study showed that a significantly higher odds ratio for using long-acting/permanent FP methods was observed with a higher number of living children and

with professional/employee occupations of husbands of the women, as the desire to postpone pregnancy and use long-acting methods increases after having more children or completing her family.

On the other hand, young women were significantly more likely to use long-acting/permanent FP methods. The high fertility in this age can explain why this motivates them to use long-acting/permanent methods as highly efficient methods. Moreover, the usage of an IUD as a long-acting method is preferred by young women to avoid the side effects of hormonal methods.

Conclusion:

Women's employment and independence from family residence increase their autonomy in Upper Egypt. Women's participation in household decision-making and their freedom of mobility have positive impacts on contraceptive use. Usage of long-acting/permanent FP methods is positively affected by the high number of living children and of husbands' occupation of the women.

Recommendations:

Women's autonomy could be enhanced by offering opportunities for women employment and promoting independent residence of couples from their original families.

To increase the prevalence of contraception, family planning programs should consider those social factors. Efforts that can be made may include: Increasing awareness of the women about their rights in sharing in household decision-making and freedom of mobility; Encouraging and motivating men to allow the participation of their wives in household decision-making, and decreasing restrictions on their mobility.

References

1. CAPMAS. Population of Egypt. Cairo, Egypt: Central Agency for Public Mobilization and Statistics; 2021 [cited 2024 18 April]. Available from: <https://www.capmas.gov.eg/Pages/populationClock.aspx>.
2. Samari G. Education and fertility in Egypt: Mediation by women's empowerment. *SSM - Population Health*. 2019;9:100488.
3. Omer Karasapan SS. Egypt's population: Boom then bust? Future development. Washington, DC: Brookings Institute;

- 2018 [cited 2024 18 April]. Available from: <https://www.brookings.edu/blog/future-development/2018/05/22/egypts-population-boom-then-bust/>.
4. Samari G. Women's Agency and Fertility: Recent Evidence from Egypt. *Population Research and Policy Review*. 2017;36(4):561-82.
 5. Statistics CAfPMA. Egyptian Family Health Survey 2022 [cited 2024 18 April]. Available from: <https://www.capmas.gov.eg/pdf/%D9%85%D8%B3%D8%AD%20%D8%B5%D8%AD%D9%89%20%20%D8%B9%D8%B1%D8%A8%D9%89.pdf>.
 6. El-Zanaty F, Way A. Egypt Demographic and Health Survey. Ministry of Health, El-Zanaty and Associates, and Macro International. 2008.
 7. Alemayehu M, Meskele M. Health care decision making autonomy of women from rural districts of Southern Ethiopia: a community based cross-sectional study. *International journal of women's health*. 2017:213-21.
 8. Acharya DR, Bell JS, Simkhada P, Van Teijlingen ER, Regmi PR. Women's autonomy in household decision-making: a demographic study in Nepal. *Reprod Health*. 2010;7(1):1-12.
 9. Rahman MM, Mostofa MG, Hoque MA. Women's household decision-making autonomy and contraceptive behavior among Bangladeshi women. *Sexual & Reproductive Healthcare*. 2014;5(1):9-15.
 10. Upadhyay UD, Hindin MJ. Do higher status and more autonomous women have longer birth intervals? Results from Cebu, Philippines. *Social science & medicine*. 2005;60(11):2641-55.
 11. Samari G, Pebley AR. Longitudinal Determinants of Married Women's Autonomy in Egypt. *Gend Place Cult*. 2018;25(6):799-820.
 12. AlSumri HH. A National Study: The Effect of Egyptian Married Women's Decision-Making Autonomy on the Use of Modern Family Planning Methods. *African journal of reproductive health*. 2015;19(4):68-77.
 13. Samari G. Women's empowerment in Egypt: the reliability of a complex construct. *Sex Reprod Health Matters*. 2019;27(1):1586816-.
 14. Bank w. Egypt country report 2022 BTI transformation index 2022 [cited 2024 18 April]. Available from: <https://bti-project.org/en/reports/country-report/EGY#pos9>.
 15. Samari G, Pebley AR. Longitudinal Determinants of Married Women's Autonomy in Egypt. *Gend Place Cult*. 2018;25(6):799-820.
 16. Mangimela-Mulundano A, Black KI, Cheney K. A cross-sectional study of women's autonomy and modern contraception use in Zambia. *BMC Women's Health*. 2022;22(1):550.
 17. Mare KU, Aychiluhm SB, Tadesse AW, Abdu M. Married women's decision-making autonomy on contraceptive use and its associated factors in Ethiopia: A multilevel analysis of 2016 demographic and health survey. *SAGE Open Medicine*. 2022;10:20503121211068719.
 18. Nadeem M, Malik MI, Anwar M, Khurram S. Women Decision Making Autonomy as a Facilitating Factor for Contraceptive Use for Family Planning in Pakistan. *Social Indicators Research*. 2021;156(1):71-89.
 19. Fikree FF, Khan A, Kadir MM, Sajan F, Rahbar MH. What Influences Contraceptive Use Among Young Women In Urban Squatter Settlements of Karachi, Pakistan? A journal of peer-reviewed research. 2001;27(3):130.
 20. Nazier H, Ramadan R. What empowers Egyptian women: resources versus social constraints? *Review of Economics and Political Science*. 2019;3(3/4):153-75.
 21. Alam M. Factors Effect on Women Autonomy and Decision-Making Power within the Household in Rural Communities. *Journal of Applied Sciences Research*. 2011;7:18-22.
 22. Habib F. STUDY OF WORKING – WOMEN EMPOWERMENT IN SOUTH ASIA: CASE OF PAKISTAN. *Pakistan Journal of International Affairs*. 2021;1.

23. Debnath S. The Impact of Household Structure on Female Autonomy in Developing Countries. *The Journal of Development Studies*. 2015;51(5):485-502.
24. Machado RB, Monteiro IMU, Magalhães J, Guazzelli CAF, Brito MB, Finotti MF, et al. Long-Acting Reversible Contraception. *Rev Bras Ginecol Obstet*. 2017;39(6):294-308.
- 25.