## UTILIZATION OF MODERN FAMILY PLANNING METHOD AMONG WOMEN WITH PSYCHIATRIC DISORDERS AT AMANUEL MENTAL HEALTH SPECIALIZED HOSPITAL ADDIS ABABA, ETHIOPIA, 2018

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### ABSTRACT

**BACKGROUND:** The family planning needs of patients with psychiatric disorders may not be routinely addressed in most psychiatric settings. Therefore, the present study aimed to assess the utilization of modern family planning and associated factors among women with a psychiatric disorder.

**METHODS:** Institution-based cross-sectional study design was conducted to assess utilization and associated factors of the modern family planning method among women with psychiatric disorders attending psychiatric outpatient services. 413 study subjects were selected using a systematic random sampling technique. Multivariate analysis was carried out to identify independent predictors of the utilization of modern family planning methods. A P-value of less than 0.05 was used to declare statistically significant associations.

**RESULT:** Among the total sample about (40.2%) of the respondents were using modern family planning methods at the time of the study. According to multivariate logistic regressions, a woman with a psychiatric disorder whose level of education was higher than primary was 6.6 times more likely to utilize modern family planning (FP) [AOR (95% C. I 6.6 (3.03-14.4)] than women whose level of education is primary. Moreover, women with a psychiatric illness living in urban areas were 7.8 times more likely to utilize modern FP methods [AOR 7.8(3.9-15.58)] than their counterparts. Similarly, women with a psychiatric illness counseled about modern family planningby a clinician or staff were 2.45 times more likely to utilize modern FP [AOR (2.45 (1.37-4.37)] methods than women who did not receive counsel.

**CONCLUSION:** This study revealed that marital status, educational status, residence, the status of employment, and counseling by health care providers were the significant predictors for the utilization of modern family planning methods. Therefore, psychiatrists and other health care providers should give a great emphasis regarding family planning utilization especially for those women with psychiatric illness, and who were unemployed, uneducated, and those residing in rural areas.

KEY WORDS: modern family planning, psychiatric disorder, Addis Ababa

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#### INTRODUCTION

Patients with major mental disorders, including schizophrenia-spectrum disorders, may have an enhanced risk when compared to groups of patients without psychiatric disorders for both unwanted pregnancies and children given up for others to raise <sup>1</sup>, <sup>2</sup>. Women who haved psychiatric illness may have difficulty in accessing information about family planning methods <sup>3</sup>. The prevalence of unplanned pregnancies is very high among psychiatric patients due to the frequent lack of insight, lack of planning, and difficulty in behavioral control 4, 5. Babies born to women with an untreated psychiatric disorder are at a higher risk of prematurity, low birth weight, and intrauterine growth restriction which could also affect childhood development <sup>6</sup>. Alcohol or illicit substance use disorders, which are likely more common in those with major mental disorders may contribute to the risk for unwanted pregnancies and the adverse consequences of those pregnancies 7, 8. Moreover, some of the risks of psychiatric disorders in women with major mental disorders who have unwanted pregnancies also extend to their infants, particularly if these women are depressed, psychotic, or have histories of trauma or addiction 9. Psychiatric disorders could also affect the quality of life factors such as employment rates, interpersonal and interfamilial communications, marriage, child-bearing, parental skills, reproductive behavior, and many other social cognitive areas. in different ways <sup>10</sup>.

A study on family planning among psychiatric patients hasve documented that low utilization, misuse, and high discontinuation rate for COCs and condoms, but also highly demonstrated for DMPA, IUDs, and implants <sup>11</sup>.

Various evidence suggested that counseling about family planning from health professionals, lack of integration with other health services, accessibility of family planning, place of residence, educational status, income status, employment status, desire to have children, and the number of alive children

were significantly associated with utilization of modern family planning methods 1, 3, 12-14. Likewise, another study showed that fear of side effects, indecision aboutto use, spousal opposition, as well as religious and cultural inhibitions were the most commonest predictors of contraceptives utilization in psychiatric patients <sup>15</sup>. Despite theseis significant factors, family planning needs of patients with major mental disorders may not be routinely addressed in most psychiatric settings <sup>16</sup>, <sup>17</sup>, and women with schizophrenia had multiple partners, high rates of coerced or forced sex, high rates of HIV risk behaviors, and limited knowledge about sexuality 18. Even when many heterosexually active women with major mental disorders do not want to become pregnant, they may not use birth control consistently, if at all <sup>2</sup>, <sup>19</sup>. However, in behaviorally disordered women, either by a psychiatric condition or by drug abuse, the provision of establishing a safe and effective means of birth control requires a great deal of clinical attention and effort <sup>20</sup>. Therefore, reproductive health services like sex education, provision of family planning, and prevention of sexually transmitted infections are very important for those women who have a psychiatric illness 21. Particularly, improving the reproductive health needs of psychiatric patients concerning family planning is one way of supporting the whole family system <sup>22</sup>. Therefore, the present study aimed to assess utilization and associated factors of the family planning methods among women with psychiatric illness in Ethiopia.

### METHOD & MATERIALS Study setting

The institution-based cross-sectional study design was conducted from February 10 to March 10, 2018, at Amanuel Mental Specialized Hospital, which is found in Addis Ababa. Amanuel Mental Specialized Hospital is the major referral hospital for psychiatric patients in Ethiopia who come from all over the country, which has ten adult

psychiatric outpatient departments (OPD), a nonpsychotic case team, and an addiction case team. According to reports on the Health Management Information system (HMIS), the average number of female psychiatric patients who received have gotten services from and appointed in Amanuel Hhospital from November 10-to December 10 /2017 was 4180.

#### Sample Size Determination

The sample size was determined by using a single population proportion by taking the proportion of modern family planning among psychiatric patients who were attending the outpatient clinic to be 57.5%, which was done in Kenya 13. а considering anticipating adding addition, 10% non-repose rate, the final sample size became The analysis part, which consisteds of descriptive 413 women who had a psychiatric illness in their statistics, percentage, mean, frequency, and bivariate reproductive age groups (18 - 49 years). Patients who and multivariate binary logistic regression, was had a full insight at the time of data collection and carried out to determine the association between psychiatric attending were receiving the outpatient service were included in the study. The among study participants. The adjusted odds ratios systematic random sampling technique was applied were used to interpret the strength of the association after proportionally allocating the estimated at a 95% confidence interval. A statistical test of sample size according to the intake capacity of the association was considered significant at a P-value respective OPD to those who met the inclusion of <0.05. criteria and giving consent to participate during Operational Definitions the period of the study.

Collection Data tools and Questionnaires were adapted from a similar study done in Kenya with accepted reliability and diaphragm, implants, intrauterine contraceptive validity. All the staff in the outpatient clinic whereas devices (IUCD), female tubal ligation, and male sensitized about the study. An English version of partner sterilization. the questionnaire was translated to Amharic and Modern Family planning utilization: Ever Uuse retranslated to its original language by third persons to check consistency. The pre-test was done on are exposed to sexual intercourse to prevent an about 5 % of the sample and a face-to-face interview unintended pregnancy. was conducted in Black Lion psychiatric outpatient Salary employed: is a worker who is paid a fixed clinic in, Addis Ababa. The data collectors were amount of money or compensation (also known as psychiatric professionals in collaboration with the a salary) by an employer. assigned psychiatric nurse. The insight assessment Self-employed is earning income directly from one's was carried out by psychiatric professionals who were experts in their profession. The Beck specified salary or wages from an employer. Cognitive Insight Scale (BCIS) was utilized to

understand patients' perspectives about their anomalous experiences and their interpretations of specific life events before the beginning of actual data collections.

Data collection mainly took place in ten psychiatric outpatient departments oin the working time of the hospital during the study period while patients attended their scheduled outpatient clinic time. Finally, the desired sample of psychiatric clients from each case team was determined based on proportional to population size for each case team.

#### Data Processing and Analysis

The data wasere cleaned and entered into the Epi-In data version 3.1 then exported to SPSS (Statistical Package for Social Science) version 24 for analysis. an independent variable with the outcome variable

Modern contraceptives: includes male and female procedures condoms, injectable (Depo Medroxy Progesterone Acetate) (DMPA), oral contraceptive pills.

of modern contraceptives when the study subjects

own business, trade, or profession rather than as a

**Full insight:** was defined based on the Beck Cognitive Insight Scale (BCIS). An overall score of Cognitive Insight is derived by subtracting the self-certainty (SC) score from the self-reflectiveness (SR) score; a higher score would be considered as full Cognitive insight <sup>23</sup>.

#### Ethics approval and consent to participate

Ethical clearance was sought from Addis Ababa University, School of Aallied Hhealth Ssciences, ethical review Committee. After this, a supporting letter was written by Amanuel Mmental Sspecialized Hhospital to conduct this research in the hospital. After explaining the purpose and the possible benefit of the study, verbal consent was obtained from the study participants. Confidentiality of information was maintained and no identifiers were on the study instruments except serial numbers.

#### RESULT

Socio-demographic characteristics of respondents In this study, 413 women with different psychiatric disorders werehad interviewed. All questions in the questionnaires responded to with a 100 % response rate. The mean age of the respondent was 28.99 ±4.82. Likewise, about 246 (59.6%) of them were married. The higher proportion of women were Oorthodox 199 (48.2%) followers. Regarding respondents' educational level, women with psychiatric disorders attended elementary (43.8%), secondary (36.6% 3), and higher education (19.6%), respectively (**Table 1**).

Table 1. Socio-demographic characteristic of respondents among women with a psychiatric diagnosis in Amanuel Mental Specialized Hospital, Addis Ababa (n=413)

| Variable           | Category             | Frequency | Percentage (%) |
|--------------------|----------------------|-----------|----------------|
| Age                | 18-24                | 75        | 18.2           |
| -                  | 25-30                | 202       | 48.9           |
|                    | 31-35                | 94        | 22.8           |
|                    | >=36                 | 42        | 10.2           |
| Religion           | Orthodox             | 199       | 48.2           |
| C                  | Muslim               | 148       | 35.8           |
|                    | Protestant           | 59        | 14.3           |
|                    | Catholic             | 7         | 1.7            |
| Marital status     | Married              | 246       | 59.6           |
|                    | Unmarried            | 167       | 40.4           |
| Level of education | Primary(1-8) grade   | 181       | 43.8           |
|                    | Secondary(9-12)grade | 151       | 36.6           |
|                    | Higher (>12 grade    | 81        | 19.6           |
| Residence          | Urban                | 201       | 48.7           |
|                    | Rural                | 212       | 51.3           |
| Income             | <1200                | 46        | 11.1           |
|                    | >=1200               | 291       | 70.5           |
| Employment         | None                 | 178       | 43.1           |
|                    | Salary employed      | 103       | 24.9           |

# Reproductive history of women with a psychiatric disorder

Of the participants, 42.1% had ever given birth, and 94.8% of them were living with their children and had parenting responsibilities. Moreover, 12.6

% of patients had lost their children, and 3.1% of them faced miscarriages/abortions. Among the respondents 4.1% were pregnant and of these, 70.6% of the pregnancies were not intended (Table 2).

| Variable   |                              | Frequency (N) | Percentage (%)      |
|--|------------------------------|---------------|---------------------|
| Have you ever given birth? N=413   | Yes                          | 174           | 42.1                |
|  | No                           | 239           | 57.9                |
| Do you have a child who is now   | Yes                          | 165           | 94.8                |
| living with you N=174  | No                           | 9             | 5.2                 |
| Number of children live one<br>with you N=174  | 68<br>Two<br>Three and above | 3<br>34<br>72 | 9.1<br>19.5<br>41.4 |
| Do you have any child who is alive   | Yes                          | 9             | 5.2                 |
| but not living with you N=174  | No                           | 165           | 94.8                |
| Do you have a child who was  | Yes                          | 22            | 12.6                |
| born alive, but later died N=174   | No                           | 152           | 87.4                |
| Are you pregnant? N=413  | Yes                          | 17            | 4.1                 |
|  | No                           | 396           | 95.9                |
| Gestational age N=17   | 1-3 month                    | 127           | 0.6                 |
|  | 4-6 month                    | 5             | 29.4                |
| Did you want to be pregnant  | Yes                          | 5             | 29.4                |
| when you got pregnant at that time?  | No                           | 12            | 70.6                |
| Did you want to have babies<br>later on or did not want any<br>additional children? N=17 | Later<br>No more             | 2<br>15       | 11.8<br>88.2        |
| Have you ever aborted or   | Yes                          | 13            | 3.1                 |
| ended in stillbirth N=413  | No                           | 400           | 96.9                |

Table 2. The reproductive history of women with different psychiatric illnesses in Amanuel Mental Specialized Hospital, Addis Ababa (n=413).

#### Types of psychiatric disorder

Regarding types of psychiatric disorders, results showed that 37% had psychotic disorder, 17.9% mood disorder with psychosis feature, 16.2% major depressive disorder, 12.1% generalized anxiety disorder, 7.7% bipolar disorder, 4.4% schizophrenia, 3.4% PTSD, 1% of women diagnosed with postpartum psychosis and 0.2% substance-induced psychosis (**Table 3**). Table 3. The previous psychiatric diagnosis of respondents in Amanuel mental specialized hospital, Addis Ababa

| Psychiatric disorder | Frequency (N=413) | Percentage (%) |
|----------------------|-------------------|----------------|
| Psychotic disorder   | 153               | 37.0           |
| Mood disorder with   | 74                | 17.9           |
| psychosis            |                   |                |
| Major depressive     | 67                | 16.2           |
| disorder             |                   |                |
| Generalized anxiety  | 50                | 12.1           |
| disorder             |                   |                |
| Bipolar disorder     | 32                | 7.7            |
| Schizophrenia        | 18                | 4.4            |
| PTSD                 | 14                | 3.4            |
| Postpartum psychosis | 4                 | 1.0            |
| Substance-induced    | 1                 | 0.2            |
| psychosis            |                   |                |

#### Utilization of modern family planning method

Among the total sample about (40.2%) of the respondents were using modern family planning methods at the time of the study. Similarly, a result showed that women withdifferent psychiatric disorders used implants (17.7%), injectables (19.4%), pills (1.5%), and emergency pills (1.7%) (Figure 1).

# Factors associated with the utilization of modern family planning

Binary logistic regression has been done to identify significant factors with modern family planning utilization. A p-value of less than 0.25 during bivariate analysis, taken to multivariate analysis.

According to multivariate logistic regressions, educational level, resident, employment, and counseling about family planning by psychiatric professionals were independently associated with

the utilization of modern family planning method. A woman with a psychiatric disorder whose level of education was higher (>12 grade) was 6.6 times more likely to utilize modern FP [AOR (95% C. I 6.6 (3.03-14.4)] than women whose level of education was primary (1-8 grade). Regarding the place of residence, women with a psychiatric illness living in urban areas were 7.8 times more likely to utilize the modern FP method [AOR 7.8(3.9-15.58)] than their counterparts. Additionally, women who had salary employed were 7.4 times more likely to utilize a modern family planning method [AOR 7.4 3.4-16.2 than those who werenot employed. Similarly, women with a psychiatric illness counseled about the modern family planning method by a clinician or staff were 2.45 times more likely to utilize modern FP [AOR (2.45 1.37-4.37 methods than women who did not counsel (Table 4).

Table 4. Factors associated with the utilization of modern family planning among women with psychiatric illness at Amanuel mental specialized hospital, Addis Ababa (n=413).

| Used modern FP  |                   |           |           |                   |                   |  |  |
|-----------------|-------------------|-----------|-----------|-------------------|-------------------|--|--|
| Variables       | Category          | Yes       | No        | COR (95%CI)       | AOR (95% CI)      |  |  |
| Marital status  | Married           | 133(32.2) | 113(27.4) | 4.80(3.5-7.80)**  | 3.18(1.10-9.56)*  |  |  |
|                 | Unmarried         | 33(8)     | 134(32.4) | 1.00              | 1.00              |  |  |
| Education level | Primary (1-8)     | 45(10.9)  | 136(32.9) | 1.00              | 1.00              |  |  |
|                 | Secondary (9-12)  | 60(14.5)  | 91(22)    | 1.99(1.25-3.2)**  | 1.68(0.88-3.2)    |  |  |
|                 | Higher(>12 grade) | 61(14.8)  | 20(4.8)   | 9.20(5.0-16.90)** | 6.60(3.03-14.4)** |  |  |
| Resident        | Urban             | 133(32.2) | 68(16.5)  | 10.60(6.6-17.0)** | 7.80(3.9-15.58)** |  |  |
|                 | Rural             | 33(8)     | 179(43.3) | 1.00              | 1.00              |  |  |
| Employment      | None              | 27(6.5)   | 151(36.6) | 1.00              | 1.00              |  |  |
|                 | Self employed     | 70(16.9)  | 62(15)    | 6.30(3.7-10.67)** | 4.40(2.2-8.5)**   |  |  |
|                 | Salary employed   | 69(16.7)  | 34(8.2)   | 11.30(6.3-20.3)** | 7.40(3.4-16.2)**  |  |  |
| Number of       | One               | 30(17.2)  | 38(21.8)  | 1.00              | 1.00              |  |  |
| alive children  | Two               | 6(3.4)    | 28(16.1)  | 0.27(0.10-0.70)** | 0.3(0.1-1.2)      |  |  |
|                 | Three & more      | 54(31)    | 18(10.3)  | 3.80(1.85-7.80)** | 1.2(0.4-3.3)      |  |  |
| Knowledge of FP | Good              | 130(31.5) | 134(32.4) | 3.0(1.95-4.75)**  | 0.7(0.37-1.35)    |  |  |
|                 | Poor              | 36(8.7)   | 113(27.4) | 1.00              | 1.00              |  |  |
| Counseled by    | Yes               | 77(18.6)  | 72(17.4)  | 2.10(1.4-3.20)**  | 2.45(1.37-4.37)** |  |  |
| psychiatrist    | No                | 89(21.5)  | 175(42.4) | 1.00              | 1.00              |  |  |

Note: 1.00=reference, \*=significant at p-value <0.05, \*\*=significant at p-value <0.001

#### DISCUSSION

To our knowledge, this is the first study to be conducted in Ethiopia to assess utilization and associated factors of modern family planning among women with psychiatric illness. This study showed that 40.2%, which was comparable with studies done in Kenya, which was 41.2%  $^{13}$  but this is higher as compared with a study done in Nigeria  $^{15}$  (27%) the difference might be due to small sample size and variation in demographic factors in Nigerian study.

In this study, the most utilized family planning methods were injectables (19.4%), implants (17.7%) emergency pills (1.7%), and pills (1.5%) to prevent unintended pregnancy. However, this contradicts a study done in Chicago among women with schizophrenic spectrum disorders in which the most commonly used birth control method was tubal ligation <sup>1</sup>. Moreover, this finding was also slightly different from a study done in Kenyan women with psychiatric illness in which the most commonlyct utilized methods by descending order were injectables (9.2%), implants (8.5%), pills (7.8%), IUD (6.5%), female sterilization (4.6%) and male condoms (2.6%) <sup>13</sup>. This variation might be due to low knowledge towards permanent methods of family planning in our study area.

Regarding factors, women with psychiatric illness with a higher level of education more likely utilize modern family planning than women whose level of education was primary. This finding is consistent with EDHS 2016, which showed women with more than a secondary education were more likely to utilize family planning methods than women with no education <sup>12</sup>. The possible reason might be that educated women with psychiatric illness have a better knowledge of family planning and translate their knowledge to the utilization of modern family planning. Similarly, women with psychiatric illness who are salary employed were more likely to utilize modern family planning than those who did not have employment. This finding is also supported by a study that was done in Kenya in which salary employed women were more likely to utilize family planning than the non-employed (13). The consistency might be because salary employed women with psychiatric illness have more knowledge about family planning methods. Additionally, women with psychiatric illness who were married were more likely to utilize a modern family planning method than those who did not marry which is in line with a study done in Kenya <sup>13</sup>. This might be due to married women being more highly engaged in sexual practice than unmarried women

Likewise, women with a psychiatric illness living in urban areas were more likely to utilize modern family planning than those living in a rural area. This finding is consistent with EDHS 2016 in which women who were living in an urban area were more likely to use modern family planning 12. The possible reason might be explained by urban women have more education and higher , economic status, as well as more access to family planning service than women who resides in a rural area.

Finally, women with psychiatric illness who were counseled by a psychiatrist were more likely to utilize modern family planning than those who did not counsel. This finding was also supported by a study done in Kenya in which counseling by staff at a health facility in the last year had a significant association with the utilization of modern family planning methods <sup>13</sup>. This could be explained as women with psychiatric illness who were counseled by health care providers could have a better opportunity to access appropriate information and services, which ultimately increases family planning utilization.

#### CONCLUSION

In this study, about 40.2 %,) of women with a psychiatric disorder were using modern family planning methods and injectable was the most common currently used method by respondents.

Marital status, educational status, residence, the status of employment, and counseling by health care providers onmodern family planning methods were the significant predictors for utilization of modern family planning methods among the women with psychiatric illness. Therefore, psychiatrists and other health care providers should give a great emphasis regarding family planning utilization. especially for those women with psychiatric illness and who were unemployed, uneducated, and or residing in the rural area.

#### List of abbreviations

AOR: Adjusted Odds Ratio, DMPA: Depo Medroxyprogesterone Acetate, EDHS: Ethiopian Demographic Health Survey, FP: Family Planning, IUD: Intrauterine Device, OR: Odds Ratio, PTSD: post-traumatic stress disorder, SPSS: Statistical Package for Social Sciences,

#### DECLARATIONS

Consent to Publish

#### Not Applicable

#### Availability of data and materials

Data is not available for online access, however, readers who wish to gain access to the data can write to the main author of this manuscript at abdus3536@gmail.com with their requests. Access can be granted subject to the Institutional Review Board (IRB) and the research collaborative agreement guidelines. This is a requirement mandated for this research study by our IRB.

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Competing interest

The authors confirm that this research is their original paper and that there is no conflict of interest in this work.

#### AUTHOR CONTRIBUTION

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis, and interpretation, or in all these areas. Some took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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