

# Knowledge and Use of Contraception among Women in Malta

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## Background

The aim of this cross-sectional study was to assess knowledge of contraception among women of reproductive age by testing for a statistically significant difference in awareness between women with different demographics and according to the type of contraceptives they had ever used.

## Methods

151 women, aged 16 to 50 years, who visited Primary Health Clinics in the Northern Catchment Area, participated in the study by filling in an anonymous questionnaire. Demographic data and 12 statements related to the safe use of contraceptives were included and could be marked as either True, False or Don't Know. Statistical analysis was performed using the unpaired t-test and the Chi-Square test.

## Results

Participants with a tertiary level of education were more knowledgeable about contraception. No statistically significant difference in awareness between Maltese and foreign women was found. Participants who used the OCP were more aware than their counterparts of increased risk of thromboembolic events related to its use.

## Conclusion

It is suggested that national efforts be directed at improving sexual education in the Minimum Curriculum. It is recommended that Family Doctors adopt the role of educating women about the risks associated with the use of the OCP and protection against STIs.

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The safe and effective use of birth control methods is key in the holistic practice of reproductive health.<sup>1</sup> When counselling women on the ideal contraceptive method to be opted for, healthcare professionals are to consider efficacy in preventing pregnancies, transmission of sexually transmitted infections (STIs) and most crucially, the past medical and drug histories of the patient with subsequent reference to the UK Medical Eligibility Criteria for Contraceptive Use (UKMEC).

The aim of this cross-sectional study was to assess knowledge of contraception use among women of reproductive age residing in the Northern Catchment Area of the Primary Health Care Department. The fact that the vast majority of healthcare is delivered at a Primary Setting puts General Practitioners at the forefront when it comes to advocating for the safe use of contraceptives. Hence determining the extent of such awareness was deemed essential to guide Family Doctors in providing thorough counselling when discussing birth control methods with their patients as to date, local data on contraception is very limited.

## MATERIALS AND METHODS

The research project was approved by the Data Protection Officer of the Primary Healthcare Department who did not suggest an Ethics Committee Board approval as the study did not involve the collection of data that could jeopardise anonymity, did not involve any intervention and did not impinge on either provided or perceived healthcare provision. Patients were only to be invited to participate at the end of a consultation.<sup>2</sup>

Participant selection was done through convenience sampling whereby female patients seen at the Health Centre were invited to fill in an anonymous questionnaire at the end of the consultation if they satisfied the inclusion criteria in [Table 1](#).

Participants had the option of answering the questionnaire in either Maltese or English. Data collection took place between September and November 2021.

The first section of the questionnaire was aimed at collecting demographic data including level of

**Table 1** Inclusion Criteria

Inclusion Criteria
Female Patients
Age between 16 and 50 years
Able to understand the written questionnaire in either Maltese or English

education. Participants were also asked whether they had ever utilised any type of contraception. The second section consisted of 12 statements, listed in [Table 2](#), which could be marked as either True False or Don't Know. The statements were constructed using lay language and mostly with the scope of assessing awareness about the effectiveness, side effects and contraindications to the oral contraceptive pill (OCP) and the Levonorgestrel Intrauterine System (LNG-IUS). A brief pilot study was conducted before distributing the questionnaire to ensure that the statements were comprehensive.

After voluntarily opting in to participate and once completing the questionnaire, the candidates were given a copy of the questionnaire marked with the correct answers. It also contained a Quick Response (QR) Code to access further information relevant to them from a UK online patient portal.<sup>3</sup>

The demographics (country of origin, age group and educational level) and any type of contraceptives used were identified as variables. Analysis was carried out by stratifying the data according to these variables to assess for a statistically significant discrepancy in the knowledge between these groups. Statistics were then calculated using Microsoft Excel and an online processor for the Chi-squared test (<https://www.socscistatistics.com/tests/chisquare2/default2.aspx>).<sup>4</sup> The p-value cut-off for statistical significance was <0.05 for both t-tests and Chi-squared tests.

**Table 2** Statements in the questionnaire

Statement
1 Some contraceptive methods are 100% effective
2 <b>Throwing up can make the OCP less effective</b>
3 <b>Mood swings are a side effect of the OCP</b>
4 <b>The OCP can ease painful and heavy periods</b>
5 <b>Some contraceptives should not be used by those with a history of blood clots</b>
6 Once placed, implants make contraception life-long
7 The Mirena® protects against sexually transmitted infections
8 Natural contraceptive methods are reliable in women with irregular menstrual cycles
9 Emergency contraceptive pills are available over the counter in Malta
10 <b>Smoking increases health risks when using certain pills</b>
11 <b>Weight gain increases health risks with certain types of pills</b>
12 Condoms are the only contraceptives protecting against sexually transmitted infections

## RESULTS

A total of 151 women filled in the questionnaire. Approximately two-thirds (66.9%), answered the questionnaire in English whereas 33.1% preferred to answer the questionnaire in Maltese.

### Demographics

Table 3 shows the demographic data of the study.

Table 3 Demographic Data

Demographic Feature	Number / n	Percentage / %
Country of Origin		
Maltese	116	76.82
Foreign	35	23.18
Age		
16 - 20	14	9.27
21 - 25	19	12.58
26 - 30	26	17.22
31 - 35	32	21.19
36 - 40	26	17.22
41 - 45	19	12.58
46 - 50	15	9.93
Education		
Primary	2	1.32
Secondary	44	29.13
Tertiary	105	69.53

### Average Scores

When calculating the score out of 12, the 2 modal average scores achieved by the participants were of 8 and 9. Only 9 participants obtained full marks as shown in Figure 1.

The overall average score obtained was of 63.2% with Figure 2 depicting how those aged between 21 and 25 years fared best with an average score of 69.3%, followed by the 46 to 50 year band (69.1%). On the other hand, the lowest average score (60.5%) was obtained by participants aged between 41 and 45 years.

### Correlation Of Knowledge With Demographics

Statistical significance between the mean scores achieved by participants who had a primary or secondary level of education (57.6%) versus those with a tertiary level (65.7%) was tested for using the unpaired t-test. A p-value of 0.04 was obtained suggesting a statistically significant difference. Conversely when the unpaired t test was used to compare the mean score achieved by the Maltese

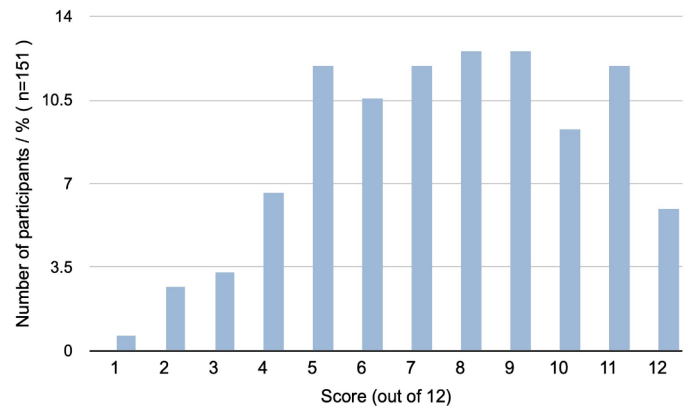


Figure 1 The frequency in percentage of each total score (maximum score 12)

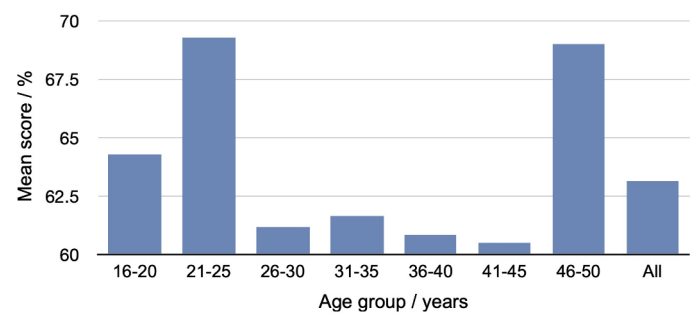


Figure 2 Mean score according to age group

participants (63.8%) with that obtained by the foreign recruits (60.9%), the p-value was found to be that of 0.5. The difference was not found to be statistically significant.

### Contraceptive Use Among The Participants

Of all participants surveyed, 80.1% used at least one type of contraceptive. The most common types of contraceptives used were the condom and the pill as demonstrated in Figure 3.

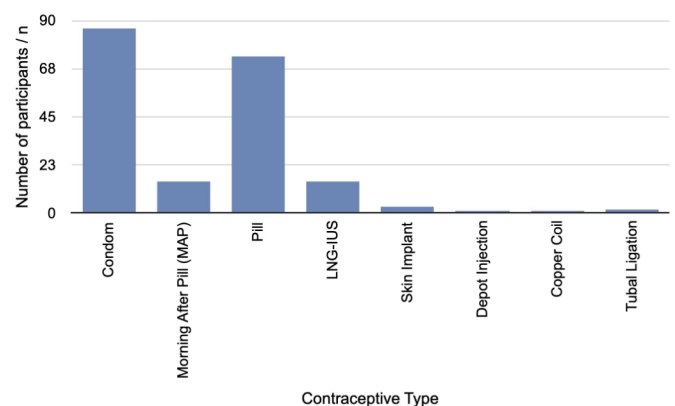


Figure 3 Contraceptive Type Frequency

**Table 4** The percentage of women who have ever used a birth control method versus those who never used any according to age group

Age Group / years	Ever used a birth control method?	
	Yes (%)	No (%)
16-20	64.29	35.71
21-25	89.47	10.53
26-30	80.77	19.23
31-35	71.88	28.13
36-40	88.46	11.54
41-45	68.42	31.58
46-50	100.00	0.00

**Table 4** shows that all participants aged between 46 and 50 years have used at least 1 type of birth control method. In comparison, only 64.3% of the 16-20 years cohort had ever used contraception up till the period of data collection.

### Knowledge Related To OCP and LNG-IUS Use

The Chi-Squared Test was used to assess whether there was a statistically significant difference when comparing the knowledge related to the statements highlighted in bold in **Table 2**, between patients who have ever used the OCP and those who have never used it.

**Table 5** provides a summary of the Chi-Squared values obtained for each tested statement.

On analysing the values, one can deduce that the only statistically significant difference in knowledge between those who have ever taken the OCP and those who have never taken it lies in question 5 ( $p = 0.03$  therefore,  $<0.05$ ). This confirms that participants who were on the oral contraceptive were more aware of venous thromboembolic event (VTE) risk when taking the OCP.

Similarly no statistically significant difference (Chi-Squared  $p=0.24$ ) was found between participants

**Table 5** Statement Numbers and their corresponding Chi-Squared Value

Statement Number	Chi-Squared Value
2	0.57
3	0.39
4	0.66
5	0.03
10	0.15
11	0.54

with a LNG-IUS and those without on asking whether intrauterine devices conferred protection against transmission of STIs.

## DISCUSSION

Barrier methods of contraception remain one of the commonest types of birth control methods which women in Malta resort to. A local study conducted in 2012 showed the upward trend in barrier contraception use from 12% in 1971 to 39.3% in 2010.<sup>5</sup> According to this study, conducted 10 years later, the use of barrier methods has increased further as 57% of our respondents admitted to having used condoms at least once. Similarly in a recent study among Singaporean women, the condom also emerged as the commonest method of contraception.<sup>6</sup>

This study shows that there is a statistically significant difference in knowledge about contraception between women with a tertiary level of education and those with either a primary or secondary level, with the former cohort faring better. On the contrary, the difference in awareness between Maltese and foreign women was not statistically significant. Similarly, two studies, one in Serbia<sup>7</sup> and one in Yemen<sup>8</sup>, showed correlation between knowledge on contraception and level of education.

Participants who used the OCP were more aware than their counterparts of increased risk of thromboembolic events related to its use. Conversely there was no difference in knowledge with regards to the effect of vomiting and the risks associated with smoking and obesity. This might suggest that prescribers should dedicate more time to discuss such association. The United Kingdom Faculty of Sexual and Reproductive Healthcare (FSRH)

considered obesity and smoking as risk factors making the combined hormonal contraceptive pill (CHC) contraindicated in certain instances<sup>9</sup>

Having almost 3 out of 4 participants (72.2%) of participants aware that condoms are the only contraceptives conferring protection against STIs might be deemed as reassuring. On the other hand, only 52.31% of those surveyed knew that the LNG-IUS does not prevent STIs. Therefore more efforts should be directed at improving the Maltese population awareness on STIs and how to protect oneself against them.

The main limitation of the study is the small sample size mainly attributed to the short period of data collection. Another limitation is that only participants residing in the Northern part of Malta were included.

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### CONCLUSION

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In conclusion, future studies could therefore increase both the size and geographical spread of the sample population. We also suggest the implementation of reforms in the education system to improve the delivery of sexual education in the National Minimum Curriculum.

### SUMMARY BOX

#### What is already known

- Barrier methods are among the commonest types of birth control methods used in Malta.
- A past personal history of blood clots is a contraindication to the use of the OCP
- Smoking and obesity increase health risks in women on the OCP

#### New findings

- Participants who used the OCP were more aware than their counterparts of increased risk of thromboembolic events related to its use.
- OCP users were not found to be more knowledgeable than their counterparts about the increased risks posed by smoking and obesity whilst taking the OCP
- Merely 52.31% of the participants knew that the LNG-IUS does not confer protection against STIs.

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