Assessment of Mansoura University Students' Awareness about Infertility Risk Factors

1 Angham Elsayed Elsayed 2 Nagwa Ibrahim El-Feshawy 3 Ahmed Elsayed Ragab &4 Hanan Elsayed Mohammed Elsayed

1 Clinical Instructor-Techninal Institute of Nursing, Faculty of Nursing, Mansoura University, Egypt
2lecturer of Woman's Health and Midwifery Nursing, Faculty of Nursing, Mansoura University, Egypt
3 Professor of obstetric and gynecology medicine, Faculty of medicine – Mansoura University, Egypt.
4 Professor and Head of Woman's Health and Midwifery Nursing, Faculty of Nursing, Mansoura University, Egypt.
Corresponding author E-mail: anghamshawky35@gmail.com

1.ABSTRACT

Background: The number of infertility risk factors expanded as new businesses, technologies and lifestyles emerged. Therefore, preventing infertility requires that people are aware of.**Aim:** This study aimed to assess Mansoura University Students' awareness about infertility risk factors. **Study design:** Descriptive cross sectional design. **Setting:** The study was carried out in the faculties of Mansoura University except faculty of nursing and medicine. **Sample type:** A simple random sampling was used. **Study subjects:** included 578 students. **Tools:** One tool was used(structured interview questionnaire) with two parts included; Socio-demographic data of the students and students' awareness regarding infertility risk factors. **Results:** The current study showed that nearly one quarter of students had inadequate awareness about infertility risk factors. The total awareness of male students regarding infertility risk factors was more than total awareness of female students. Female students were more aware about female, male and medical risk factors of infertility than male students. While, male students were more aware about combined, social, environmental and occupational risk factors of infertility than female students. **Conclusion:** The awareness of infertility risk factors, particularly occupational and environmental risk factors, is noticeably lacking among university students in Mansoura.There is a highly statistically significant relation between students' awareness regarding infertility risk factors especially faculty of veterinary medicine, pharmacy & dentistry. **Recommendation:** Simple, well-designed brochures will be designed and distributed among university students to increase their awareness regarding infertility risk factors.

Keywords: *Awareness, Infertility, Mansoura university students, Risk factors hlebitis*

2.Introduction:

One of today's most worrisome issues, infertility has the ability to have a profound psychological impact on a person's life**.** Failure to obtain a clinical pregnancy after 12 months of consistent, unprotected sexual activity, or after six months for women 35 years of age or older, defines infertility as a disorder of the male or female reproductive system. Primary or secondary infertility are both possible. Infertility can be classified as primary or secondary. Primary infertility refers to a person's inability to conceive, while secondary infertility refers to a person's inability to conceive after achieving at least one prior pregnancy or for 12 months after ceasing contraception**(Abebe, Afework & Abaynew, 2020).**

According to epidemiological research, infertility is a major issue in Africa, where provincial incidence rates range from 30 to 40%. According to WHO definitions, the prevalence of infertility among married couples in Egypt has been estimated to range from 10% to 15%**.**

Additionally, 12% of Egyptian couples have infertility, according to a research by the Egyptian Fertility Care Society that was funded by the World Health Organization (WHO). 7.7% of them experience secondary infertility, while 4.3% experience main infertility**(El-Sherif, Kamal, Ahmed & Sayed, 2021).**

A crucial and fundamental issue to protect fertility is awareness of the risk factors for infertility. University students are more likely to put off starting a family because of their career goals, according to studies, which increases their chance of being infertile. Furthermore, due to societal norms, traditions, and beliefs, they have incomplete or incorrect understanding about fertility. However, there haven't been many studies done to examine university students' awareness of infertility risk factors**(Atijosan, Adeyeye & Ogungbayi, 2019).**

Lack of knowledge about infertility risk factors has a detrimental impact on fertility and may cause childbirth to be postponed. Therefore,

evaluating students' knowledge of these elements is crucial for halting the global spread of infertility. Each year, a number of new infertility risk factors (IRFs) are identified as a result of technology advancements, the emergence of new businesses, and modifications in human behaviour and lifestyle. The important link between young people's awareness of infertility risk factors and their health risks related to infertility underscores the necessity to test young people's knowledge of infertility risk factors and educate them on fertility. They may be able to protect their present and future fertility by avoiding health hazards associated with conception**(Mu, Hanson, Hoelzle & Fehring, 2019).**

2.1 Significance of the study

Infertility is a major public health problem affects large numbers of people globally who are of reproductive age and harms their families and communities. According to the antecodal records of fertility center at Mansoura University Hospital, The infertility rate is 25% in 2020. The prevalence of primary and secondary infertility was 9 and 16%, respectively with a greater burden in developing countries than developed countries**.** The lives of infertile couples, and notably the lives of the women, are significantly negatively impacted by infertility on the social level. Women are more likely to face domestic abuse, divorce, social stigma, emotional stress, despair, anxiety, and low self-esteem. Numerous issues may result from this infertility's effects**(Gouni, Jarašiūnaitė-Fedosejeva, Akik , Holopainen & Calleja-Agius, 2022).**

2.2 Aim of the study

- The present study aimed to assess Mansoura university students' awareness about infertility risk factors.

2.3 Research questions:

Are Mansoura university students aware about infertility risk factors?

Does the awareness of male students about infertility risk factors differ from female students?

3. Methed

3.1 Study design: A descriptive cross sectional design was used. It is an observational study in which the condition and potentially related factors are measured at a specific point of time for a defined population.

3.2 Study setting: The study was carried out at Mansoura university faculties except faculty of medicine and nursing. Mansoura University locates on the east bank of the Nile, in the city of Mansoura. Mansoura University main campus is located in the city center and is comprised of 15 faculties. There are 3 faculties outside the Mansoura university campus.

3.3 Sample type: Simple random sample was used.

3.4 Study Sample: 578 students from predetermined setting and without considering any other special criteria.

3.5 Study size calculation

Based on data from literature **(Alaee et al ., 2016)**, to calculate the sample size with precision/absolute error of 5% and type 1 error of 5%:

- Sample size = $[(Z1-\alpha/2)2.P (1-P)]/d2$

Where,

- $Z1-\alpha/2$ = is the standard normal variate, at 5% type 1 error ($p<0.05$) it is 1.96.
- P = the expected proportion in population based on previous studies.
- d = absolute error or precision.
- So,
- Sample size = $[(1.96)2.(0.5946).(1-0.5946)]/(0.04)2 = 578.8$

Based on the above formula, the sample size required for the study is 578 students (248 male and 330 female) from the different faculties of Mansoura University except faculty of medicine and nursing.

3.6 Tool of data collection:

Data was collected using one tool: **This tool was a Structured Interview Questionnaire:** It was designed by the researcher after reviewing relevant literature **Alaee, Yousefian, Talaiekhozani, Ziaee & Homayoon, 2019)** and consisted of two parts:

- **Part (1) Socio- demographic characteristics of the studied students (**age, gender, marital status, level of education, socio-economic status, residence, faculty name).
- **Part (2): Student's awareness regarding infertility risk factors questionnaire:** It was developed by the researcher after reviewing the relevant literature **(Alaee et al ., 2016).** It included four domains to assess infertility risk factors. **The first domain** is personal risk factors as (age, weight, life style). **The second domain** is social risk factors as (income, residence, level of education,.). **The third domain** is environmental risk factors as (air pollution, pesticides,…) and **the fourth domain** is occupational risk factors as (

working in telecommunication towers, working in dental clinics,)

Scoring system

A scoring system was applied to assess the students' awareness regarding infertility risk factors. Each statement with three answer choices; Yes, No, and I don't know. The students' awareness about infertility risk factors was adequate and inadequate. Each statement was scored as following 1 point for each correct answer, zero point for an incorrect and I don't know answer. The total awareness score level ranges from (0-82). Higher score indicates adequete awareness and lower score indicate inadequete awareness. It was categorized as inadequete < 74%, adequete ≥ 74% **(Talaiekhozani, 2016).**

3.7Validity of the study tool:

The study tool was reviewed by three woman's healthy and midwifery experts (Assist. Prof. Dr Amal Yousef, Assist. Prof. Dr Eman Fadel & Assist. Prof. Dr Ahlam Ghoda) to assess the tool for clarity, relevance and applicability. Changes were considered according to their comments as certain sentences were simplified to be easily under stood by the students.

3.8Reliability of the tool:

The tool of data collection was tested for its reliability by using Cronbach's α (alpha) test which was (0.897) for the second part of the data collection tool. This means high reliability of the tool.

3.9Pilot study:

A pilot study was carried out on 58 students (10% of the sample size). The aim of the pilot study was to evaluate the clarity and applicability of the tool used in the study prior to the start of data collection, as well as to estimate the time required for response. The adjustments to the tool were made as a consequence of data analysis of the pilot results, such as paraphrase of some words. The pilot findings were not included in the sample size.

3.10Ethical considerations:

- The Ethics Committee of the Faculty of Nursing, Mansoura University granted official omit and an official letter from the Faculty of Nursing, Mansoura University was directed to the Deans of the different faculties to conduct the study after explaining its goal.

- The research's purpose was explained to the students, and signed permission to participate in the study was acquired. Participation in the study was entirely optional.

- All participants were free to leave at any moment. Throughout the study, anonymity, privacy, safety, and confidentiality were strictly maintained.

- The study participants were informed that the findings will be utilized as part of the required research for Master's degree, as well as for publishing, education and research process

3.11Study procedure

The current study was done through of two process; preparatory phase and data collection phase as following:

Preparatory phase: This phase was started by obtaining approval from the concerned authorities in the previous mentioned faculties. Tool for data collection was designed after reviewing the national and international related literatures. Then pilot study was conducted on 58 students before collecting the actual sample. This process took about one month from beginning of October 2021 to the beginning November 2021.

Data Collection Phase:

- The current study was carried out from the beginning of November 2021 to the end of January 2022.

- Data was collected from sixteen faculties at Mansoura University.

- The researcher attended the previously mentioned settings three days weekly from 9 A.M. to 1 P.M until the end of complete data of studied students (578).

- The researcher introduced herself to the students, explained the aim of the study and obtained the students' informed consent to participate in the study after assuring the confidentiality of data.

- The researcher gave the students the data collection tool and students were permitted to record their answers in the data collection sheet.

- Every student spent about (15-25) minutes to complete the data collection sheet.

- The students started first by answering the questions about socio-demographic data (age, sex, marital status, family income, residence and faculty name

- Then, students answered the questions that assess their awareness regarding infertility risk factors that included female, male, combined, medical, social, environmental and occupational risk factors of infertility.

- Students were permitted to ask for any interpretation and explanation.
- Finally, the researcher collected the sheets from the students until the end of the data collection period.

3.12 Statistical Analysis

Collected data were coded, computed and statistically analyzed using SPSS (statistical package of social sciences), version 22. Data were presented as frequency and percentages (quantitative variables). Chi square ($\chi2$) was used for comparison of categorical variables, and was Exact test if the expected value of any cell was less than five. The difference was considered significant at $P \leq 0.05$.

Table (1) shows that (70.8%) of the studied students aged <20 years with average (19.2 ±0.9) years. (57.1%) of them were female and (97.1%) were unmarried. About (79.6%) of them were from rural and (92.2%) of them had enough income.

Table (2) shows that (87.0%, 78.0%, 67.5%, 64.2% respectively) of the studied students had adequate awareness about female, male, combined & medical risk factors of infertility. While, (51.9%, 46.0% &43.6% respectively) had inadequete awareness about occupational, social & environmental risk factors of infertility.

Table (3) shows that there was no statistical significant difference between male & female awareness regarding infertility risk factors except in female risk factors (p=0.003)

Figure (1) presents that (87% & 78% respectively) of the studied students had adequete awareness rearding male and female risk factors of infertility.

Figur (2) illusterates that (78.7%) of the studied students had adequete awareness regarding infertility risk factors.

Table (4) shows that there was a significant statistical relation between the student's awareness regarding infertility risk factors and marital status (p= 0.030). While there was no a statistical relation between student's awareness regarding infertility risk factors and age, gender, residence & income (p>0.005).

Table (5) shows that there was a highly statistically significant relation between students' awareness regarding infertility risk factors and faculties (p<0.001).

5. Discussion

The current study aimed to evaluate university students' awareness about infertility risk factors. The results of the study answered the study questions as the current study assessed students' awareness regarding infertility risk factors. Also, this study compared between male and female students' awareness regarding infertility risk factors.

As regards to the level of students' awareness about infertility risk factors, the present study found that majority of the studied students had adequate awareness about female, male, combined & medical risk factors of infertility. While, more than half of them had inadquete awareness about occupational, social & environmental risk factors of infertility. The present study findings were similar to *Alaee et al. (2019)* who reported that more than two thirds of the studied students had adequete awareness about male, female, combined and medical risk factors of infertility and more than half of them had inadequete awareness about environmental risk factors of infertility.

Also, the present study findings were similar to *Rehman, Zarak & Musatafa (2017)* who reported that more than three quarters of the studied students had adequete awareness regarding combined and male risk factors of infertility. In addition, the present study results were in the same line with *Ahmed et al. (2020)* who studied awareness regarding causes of infertility among out-patients at a tertiary care hospital in Karachi, Pakistan, and reported that more than two thirds of them had adequete awareness regarding female risk factors of infertility.

Also, The study results were supported by *Rouchou & Forde (2015)* who reported that more than two thirds of the students had adequete awareness regarding combined risk factors of infertility. Furthermore, the current study findings were in adherence with *Bayoumi et al. (2018)* who evaluated the comprehensiveness, feasibility and acceptability of a fertility awareness educational tool, and revealed that nearly two thirds of the studied students had adequete awareness regarding medical risk factors of infertility.

While, the study results were in a disagreement with *Daumler et al. (2016)* who carried a study to assess the awareness of factors of male infertility and reported that more than two thirds of participants had adequete awareness regarding environmental risk factors of infertility. Also, *Talaiekhozani et al. (2016)* who conducted a study to assess knowledge of men and women about infertility risk factors and reported that more than two thirds of the studied students had adequete awareness regarding environmental risk factors of infertility.

Regarding male and female students' awareness regarding infertility risk factors, the current study revealed that female students were more aware about female, male and medical risk factors of infertility than male students. While male students were more aware about combined, social, environmental and occupational risk factors of infertility than female students. The current study results were in consistent with *Rouchou & Forde (2015)* who reported that male students were more aware about combined and environmental risk factors of infertility than female students. While female students were more aware about female, male and medical risk foctors of infertility than male students.

While, the present study finding was contradicted with *Alaee et al., (2019)* who revealed that male students were more aware about male, female and medical risk factors of infertility than female students. Also, These findings were contradicted with *Talaiekhozani et al ., (2016)* who assessed knowledge of men and women about infertility risk factors and reported that female students were more about environmental, occupational and combined risk factors of infertility than male students.

In addition, the current study results were in an disagreement with *Alaee et al. (2016)* who revealed that male students were more aware about male factors than female students while female students were more aware about combined, environmental and occupational risk factors of infertility than male students. This difference between study results may be due to difference in culutures.

Concerning association between the students' socio-demographic characteristics and infertility risk factors awareness level, the present study results revealed that there was a significant statistical relation between the students' awareness regarding infertility risk factors and marital status. While, there was no statistical relation between students' awareness regarding infertility risk factors and age, gender, residence & income. Also, there was a highly statistically significant relation between students' awareness regarding infertility risk factors and faculty .

The current study results were in consistent with *Talaiekhozani et al (2016)* who revealed that there was no statistical relation between male and female studentds' awareness regarding infertility risk factors. While, there was a significant statistical relation between married and single students awareness regarding infertility risk factors. Also, *Atijosan et al, (2019)* found that there was no

a statistical relation between students' awareness regarding infertility risk factors and age and gender. Also, *Alaee et al. (2016)* reported that there was no significant statistical relation between male and female students' awareness regarding infertility risk factors. While, *Daumler et al. (2016)* found that there was a significant statistical relation between male and female students' awareness regarding infertility risk actors.

Regarding association between the students' faculties and infertility risk factors awareness, the present study illustrated that there was a highly statistically significant relation between students' awareness regarding infertility risk factors and faculties especially (science, veterinary medicine, pharmacy & Dentistry (P<0.001). The current study results were in consistent with *Rehman et al. (2017)* who revealed that the students of science departments had higher knowledge regarding infertility and infertility risk factors than students of arts departments.

Finally, infertility is an increasingly significant issue worldwide. Despite the importance of youth knowledge about infertility and infertility risk factors, these issues are often neglected. So, increasing students' awareness about infertility risk factors is an important issue to preserve their future fertility.

6. Conclusion

The current study concluded that, there are notable gaps in the knowledge of Mansoura university students regarding the infertility risk factors especially occupational and environmental risk factors of infertility. Female students are more aware about female, male, combined and medical risk factors of infertility than male students. While, male students are more aware about combined, social, environmental and occupational risk factors of infertility than female students. There is a statistical significant difference between female and male students' awareness regarding female risk factors of infertility.

7. Recommendations:

Based on the study findings, the current study recommended the following:

- Simple, well-designed brochures will be designed and distributed among university students to increase their awareness regarding risk factors of infertility.

- University students should be counselled about individual lifestyle factors in relation to reproductive goals, as a health preventive measure

- Activating the role of the media such as social media, television programs, radio programs, and newspapers in health education about infertility and infertility risk factors.

Further researches should be recommended to:

- Assess students' awareness about infertility risk factors in the other universities

- Evaluate the role of health institutions in achieving awareness of reproductive health.

- Perform a proposed program to increase the awareness of reproductive health concepts among university students.

8.Acknowledgement

Researchers would like to thank all students who took part in the research for their assistance during the research procedure.

9.Declaration of conflicting interests

The researchers reported that they had no possible conflicts of interest.

10.References:

Abebe, M. S., Afework, M., & Abaynew, Y. (2020). Primary and secondary infertility in Africa: systematic review with meta-analysis. *Fertility Research and Practice*, *6*(1), 1-11.

Ahmed, H. M., Khan, M., Yasmin, F., Jawaid, H., Khalid, H., Shigri, A., ... & Hasan, C. A. (2020). Awareness regarding causes of infertility among out-patients at a tertiary care hospital in Karachi, Pakistan. *Cureus*, *12*(4),11-21

Alaee, S., Talaiekhozani, A., Ziaei, G. R., & Lohrasbi, P. (2016). Evaluation of Iranian college students' awareness about infertility risk factors. *Jundishapur Journal of Health Sciences*, *8*(2),49-55.

Alaee, S., Yousefian, E., Talaiekhozani, A., Ziaee, G. R., & Homayoon, H. (2019). Infertility Knowledge, Attitudes, and Beliefs among Iranian College Students. *Journal of Environmental Treatment Techniques*, *7*(1), 171-8.

Atijosan, A., Adeyeye, O., & Ogungbayi, O. (2019). Knowledge and perception regarding infertility among university students in Ile-Ife: a view through gender lens. *Covenant Journal of Business and Social Sciences*, *10*(1),304-316.

Bayoumi, R. R., Van der Poel, S., El Samani, E. Z., & Boivin, J. (2018). An evaluation of comprehensiveness, feasibility and acceptability of a fertility awareness educational tool. Reproductive biomedicine & society online, 6, 10-21.

Daumler, D., Chan, P., Lo, K. C., Takefman, J., & Zelkowitz, P. (2016). Men's knowledge of their own fertility: a population-based survey examining the awareness of factors that are associated with male infertility. Human Reproduction(31)12, 1-10.

El-Sherif, M. A., Kamal, N. N., Ahmed, E. R., & Sayed, S. I. (2021). Coping Strategies and Quality of Life among Infertile Women, Minia District. *Minia Journal of Medical Research*, *32*(2), 40-41.

Gouni, O., Jarašiūnaitė-Fedosejeva, G., Kömürcü Akik, B., Holopainen, A., & Calleja-Agius, J. (2022). Childlessness: Concept Analysis. *International Journal of Environmental Research and Public Health*, *19*(3), 1464.

Mu, Q., Hanson, L., Hoelzle, J., & Fehring, R. J. (2019). Young women's knowledge about fertility and their fertility health risk factors. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *48*(2), 153-162.

Rehman, A., Zarak, M. S., & Musatafa, G. (2017). Assessment of knowledge and awareness about male infertility among the students of university of Balochistan,Quetta,Pakistan. *AGE*, *18*(22), 23-27.

Rouchou, B., & Forde, M. S. (2015). Infertility knowledge, attitudes, and beliefs of college students in Grenada. *Science Journal of Public Health*, *3*(3), 353-360.

Talaiekhozani, A., Alaee, S., Ziaei, G. R., Mir, M., Yazdan, M., & Ataabadi, M. S. (2016). Knowledge of men and women about infertility risk factors. *Iranian Journal of Health, Safety and Environment*, *3*(4), 600-606.

Table1.Distribution of the studied students according to their socio-demographic characteristics(N=578).

Items	No.	%
Age (Years)		
< 20	409	70.8
≥ 20	169	29.2
Mean ±SD	19.2 ±0.9	
Gender		
Male	248	42.9
Female	330	57.1
Marital Status		
Unmarried	561	97.1
Married	17	2.9
Residence		
Rural	460	79.6
Urban	118	20.4
Family Income		
Not Enough < 4000 pounds	40	6.9
Enough (4000-8000) pounds	533	92.2
Enough & more > 8000 pounds	5	0.9

Table 2. Distribution of the studied students regarding level of awareness about infertility risk factors (N=578)

Infertility risk factors	Inadequate Awareness		Adequate Awareness	
	No.	%	No.	%
Female risk factors	75	13.0	503	87.0
Male risk factors	127	22.0	451	78.0
Combined factors	188	32.5	390	67.5
Medical risk factors	207	35.8	371	64.2
Social risk factors	266	46.0	312	54.0
Environmental risk factors	252	43.6	326	56.4
Occupational risk factors	300	51.9	278	48.1
Total Score	123	21.3	455	78.7

Table 3. Distribution of male and female students' awareness regarding infertility risk factors scores (N= 578)

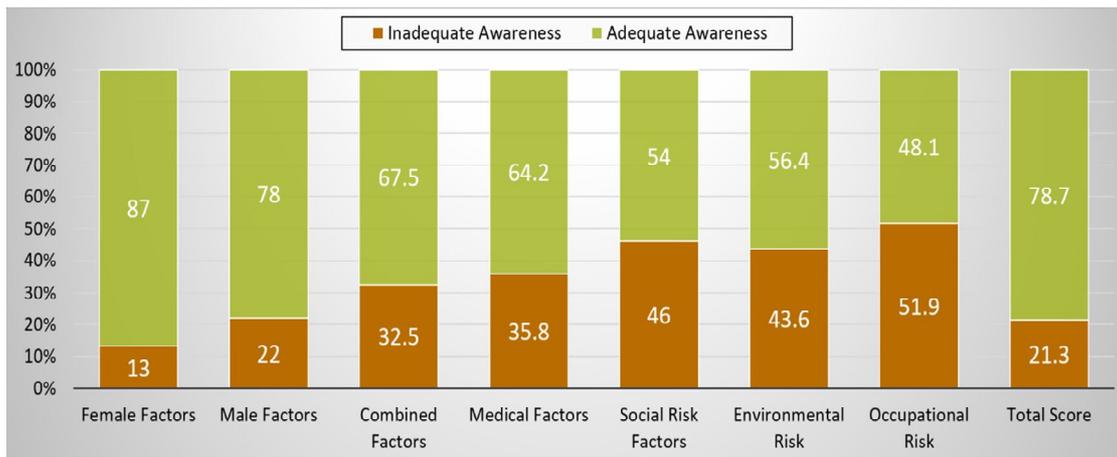| Infertility risk factors	Male (N=248)				Female (N=330)				Chi-Square	
	Inadequate Awareness		Adequate Awareness		Inadequate Awareness		Adequate Awareness			
	No	%	No	%	No	%	No	%	X^2	P
Female factors	44	17.7	204	82.3	31	9.4	299	90.6	8.738	0.003[*]
Male factors	60	24.2	188	75.8	67	20.3	263	79.7	1.250	0.264
Combined factors	77	31.0	171	69.0	111	33.6	219	66.4	0.432	0.511
Medical factors	94	37.9	154	62.1	113	34.2	217	65.8	0.825	0.364
Social factors	107	43.1	141	56.9	159	48.2	171	51.8	1.446	0.229
Environmental factors	99	39.9	149	60.1	153	46.4	177	53.6	2.391	0.122
Occupational factors	120	48.4	128	51.6	180	54.5	150	45.5	2.151	0.142

Figure (1) presents that (87% & 78% respectively) of the studied students had adequete awareness rearding male and female risk factors of infertility.
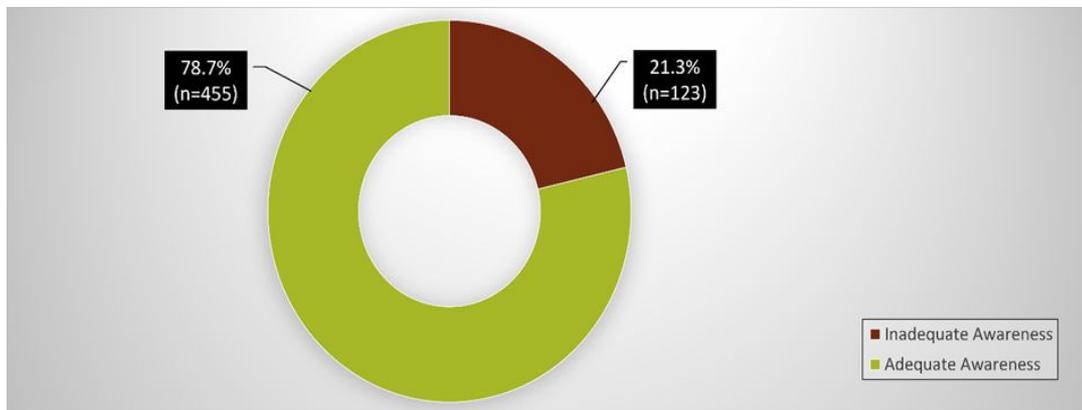

Figure 2. **Total score of the studied students' awareness regarding infertility risk factors**

Table 4. Association between the students' socio-demographic characteristics and infertility risk factors awareness level (N= 578)

Infertility risk factors awareness level				Significant test	
Socio-demographic characteristics	Inadequate awareness		Adequate awareness		Chi-Square	
	No.	%	No.	%	X^2	P
Age (Years)						
< 20	92	74.8	317	69.7		
≥ 20	31	25.2	138	30.3	1.230	0.267
Gender						
Male	49	39.8	199	43.7		
Female	74	60.2	256	56.3	0.601	0.438
Marital Status						
Unmarried	123	100.0	438	96.3		
Married	0	0.0	17	3.7	4.735	0.030*
Residence						
Rural	98	79.7	362	79.6		
Urban	25	20 3	93	20.4	0.001	0.978
Family Income						
Not Enough< 4000 pounds	8	6.5	32	7.0		
Enough(4000-8000) pounds	114	92.7	419	92.1		
Enough And more >8000 pounds	1	0.8	4	0.9	0.048	0.976

Table (5) shows that there was a highly statistically significant relation between students' awareness regarding infertility risk factors and faculties (p<0.001).

	Inadequate awareness		Adequate awareness		Significant test	
	No.	%	No.	%	X^2	P
Faculty of Dentistry	0	0.0	14	3.1		
Faculty of Pharmacy	0	0.0	17	3.7		
Faculty of Veterinary Medicine	0	0.0	13	2.9		
Faculty of Science	0	0.0	18	4.0		
Faculty of Agriculture	0	0.0	18	4.0		
Faculty of Engineering	4	3.3	59	13.0		
Faculty of Information Technology	1	0.8	21	4.6		
Faculty of Fine Arts	2	1.6	3	0.7		
Faculty of Education	6	4.9	30	6.6		
Faculty of Commerce	26	21.1	90	19.8		
Faculty of Law	25	20.3	66	14.5		
Faculty of specific education	9	7.3	15	3.3		
Faculty of Physical Education	7	5.7	19	4.2		
Faculty of Tourism and Hotels	5	4.1	5	1.1		
Faculty of Early Childhood	5	4.1	6	1.3		
Faculty of Arts	33	26.8	61	13.4	61.115	<0.001**