

Background

Research indicates that those of reproductive age have inadequate awareness of fertility and infertility risk factors leading to certain consequences of delayed childbearing.¹

With an increased prevalence of delayed childbearing, in many countries, there has been a subsequent rise in the need for Assisted Reproductive Techniques (ART).^{1,,2,3}

This study helps to clarify why people tend to delay childbearing and in particular what demographic of people are more inclined to put off having children.

Aims and Methods

AIMS: The goal of this study is to assess and compare the knowledge and understanding of fertility among individuals attending CUMH Antenatal and Gynaecological outpatient appointments and UCC students, while also identifying areas where lack of knowledge might be present in each group.

METHODS: This was a quantitative cross-sectional study. An online validated questionnaire was distributed by email to all individuals (male and female) who attended antenatal and gynaecology clinics in CUMH, a tertiary maternity unit in Ireland, (using email addresses supplied by respondents) and all students in University College Cork (via UCC student email). The Fertility Awareness Survey (FAS)¹, was used for which ordinal categorical answers were applied in a Likert scale ranging from definitely agree (1) to definitely disagree (5). Descriptive statistics with independent t-tests and Chi-square tests were completed on SPSS V26.

DEMOGRAPHICS (N= 480)

- Age range: 25-42 years in the clinic attendees; 21-72 years in the students.
- 83% (n=400) born in Ireland.
- Majority of participants were either in full-time employment (45%, n=217) or full-time education (46.3%, n=222).

LIFESTYLE FACTORS

- >95% correctly reported that lifestyle factors (e.g., smoking; bodyweight) influence fertility.
- 61% (n=290) believed fertility supplements are effective in enhancing their fertility.

KNOWLEDGE

- 53% of participants felt they had some level of knowledge of fertility and (58%) assisted reproductive techniques (ARTs).
- Students considered themselves slightly more knowledgeable than those attending CUMH in both fertility knowledge (mean 2.39 vs 2.19) and knowledge of ART (mean 2.06 vs 1.81).

FERTILITY TREATMENT

- 75% of participants **correctly believed IVF is 30 to 60% effective** (n=360) (no significant differences between groups).
- 48% correctly believed assistance should be sought after one year of trying to conceive <35years of age.
- 29% (n=142) reported IVF would be 50-59% successful for women <35 years of age and only 11.6% (n=55) believed the same to be true for those > 35 years.

Conclusion

While it is reassuring that many people have a significant level of knowledge, there are still evident gaps and areas to be addressed. These include the differing views of the impact age can have on fertility and subsequent ART with students overestimating the ability to conceive. Identifying these areas provides a foundation to build on in tackling lack of knowledge amongst students and their potential fertility journey. The findings identified can be used to inform and improve fertility services in Ireland

Results

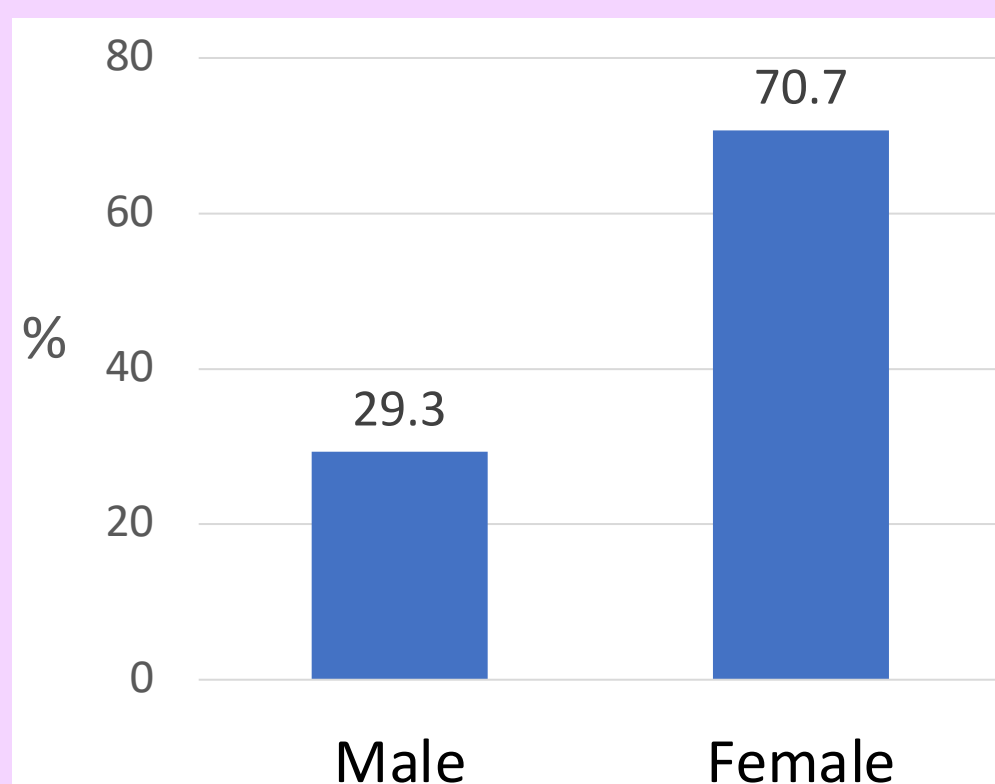


Fig. 1 – Sample's gender distribution

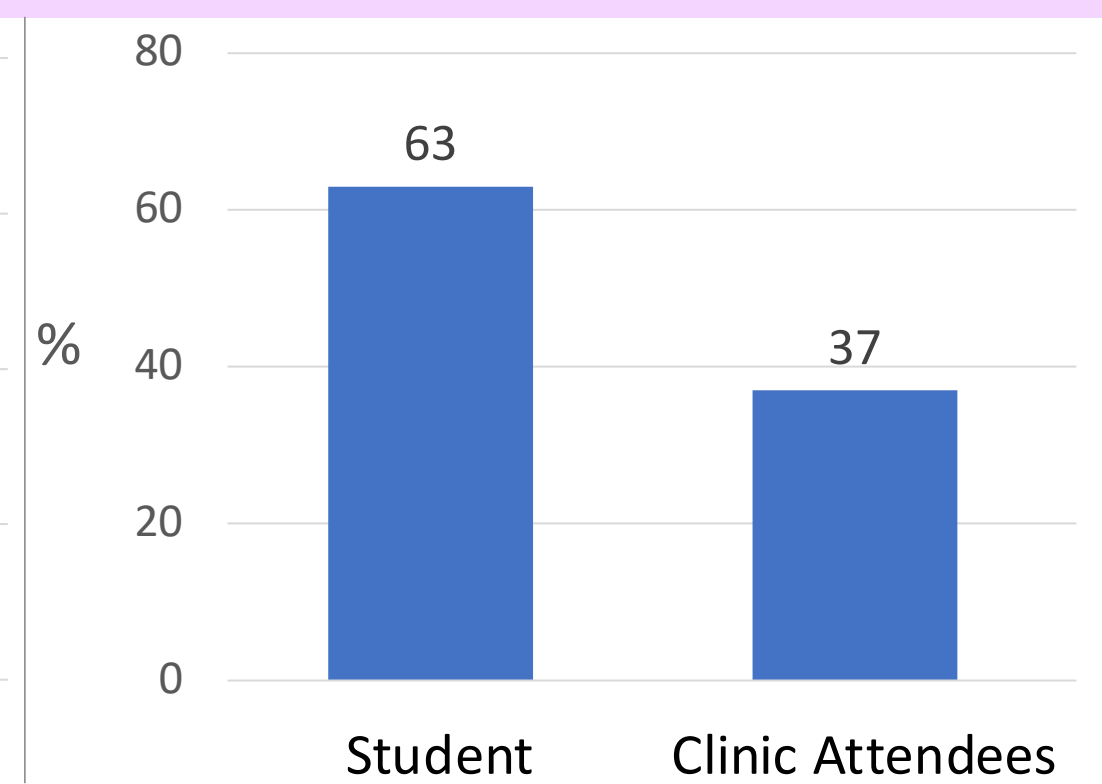


Fig. 2 – Participants from each group (%)

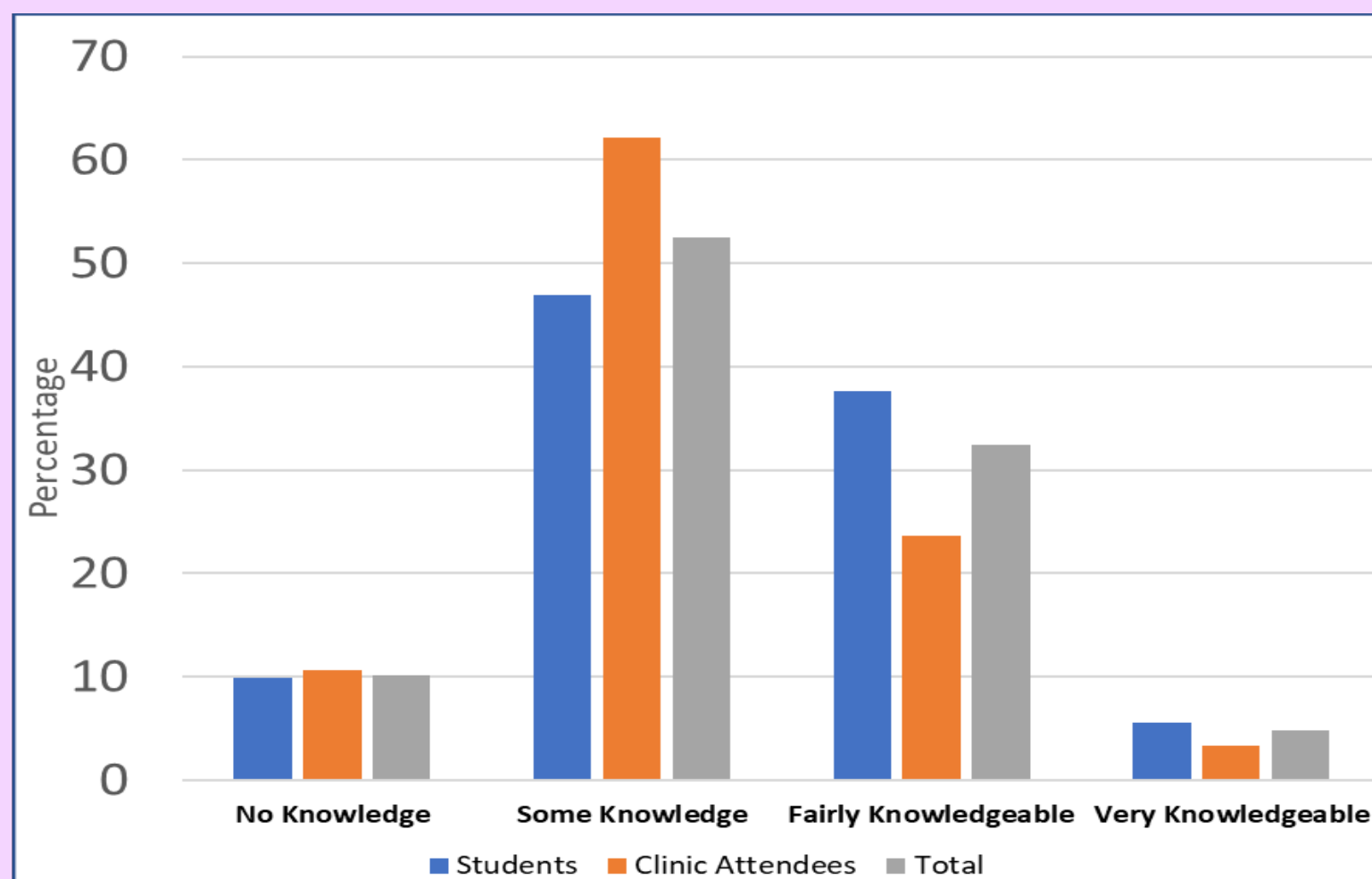


Figure 1 – Level of self-reported fertility knowledge (%)

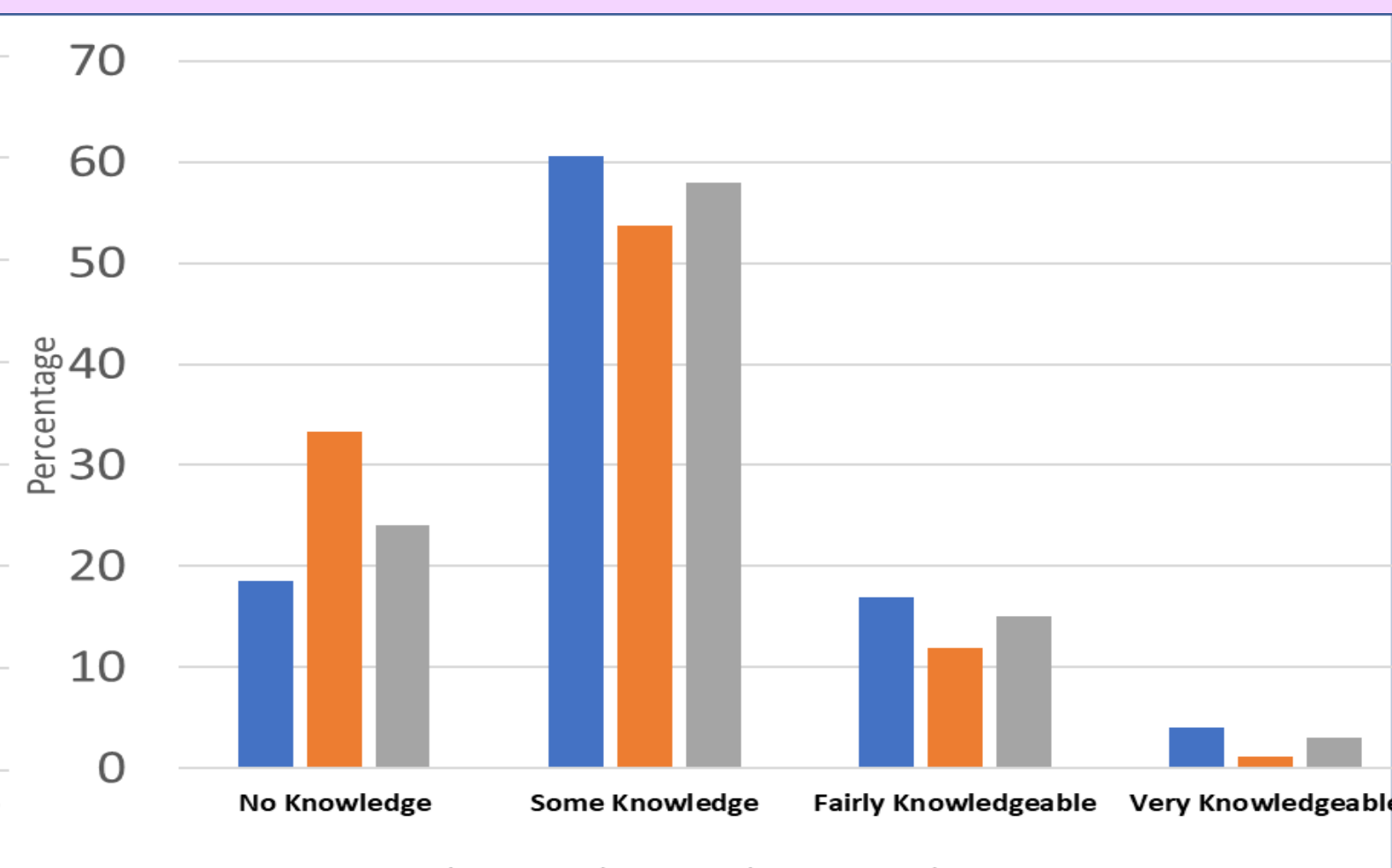


Figure 2 – Level of self-reported ARTs knowledge (%)

Table 1: Fertility Awareness Survey (FAS) knowledge item distribution

FAS Knowledge Item	Clinic Attendees					Students					Total
	True	Disagree	Unsure	Agree (n)	%	Disagree	Unsure	Agree (n)	%	p-value	%
	False	(n)	(n)			(n)	(n)				
A woman's overall health and fitness level is a better indicator of her current fertility status than her age	F	58	15	49	47.5	67	34	114	31.2	0.016*	37.1
There is a marked decrease in a woman's ability to become pregnant around 37 years of age	T	17	9	151	85.3	20	16	266	88.1	0.802	87.1
The age of a man is an important factor affecting a couple's fertility	T	60	22	95	53.7	128	43	130	43.2	0.053	47.1
Prior to a woman reaching menopause, the assisted reproductive technologies (e.g., In-Vitro Fertilization known as IVF) can help most women to have a baby using their own eggs	F	15	48	114	8.5	35	47	220	11.6	0.902	10.4
A woman's eggs are as old as she is	T	55	34	88	49.7	110	36	157	51.8	0.773	51
A man's age is related to an increased risk of birth defects	T	79	45	52	29.5	137	81	85	28.1	0.924	28.6
Taking birth control pills for more than 5 years negatively affects a woman's fertility	F	91	40	45	51.7	155	76	71	51.3	0.790	51.5
Using assisted reproductive technologies allow most women to have a baby with their own eggs at any age	F	113	31	32	64.2	160	74	67	53.2	0.020*	57.2
The total cost of one cycle of In-Vitro Fertilisation (IVF) is under 6000euro	T	71	60	46	26	132	106	65	21.5	0.194	23.1
There is a progressive decrease in a woman's ability to become pregnant after the age of 35	T	15	10	152	85.9	13	22	267	88.4	0.774	87.5
The rates of miscarriage are significantly higher for women in their 40s than for women in their 30s, even for physically fit women in excellent health	T	13	15	149	84.2	19	32	252	83.2	0.332	71
Egg freezing before the age of 35 can significantly prolong a woman's fertility	T	33	42	102	57.6	41	70	192	63.4	0.534	61.3
Most couples have to go through IVF more than once to have a baby	T	18	38	120	68.2	49	49	203	67.4	0.151	67.7
Most Irish fertility clinics will not provide treatment to women over the age of 45	T	21	80	76	42.9	39	147	115	38.2	0.270	40
At most fertility clinics in Ireland there are no age restrictions on when a woman can receive treatment	F	94	63	20	53.1	138	129	33	46	0.099	48.6
In vitro fertilization (IVF) success rates differ depending on a woman's age	T	13	25	138	78.4	15	46	240	79.7	0.865	79.2
By freezing her eggs, a woman has at least a 50% chance of having a baby	T	69	70	37	21	82	148	72	23.8	0.009*	22.8
With fertility treatments a woman in her 40s has at least a 50% chance of having a baby using her own eggs	F	72	67	38	40.7	83	146	71	27.7	0.026*	32.5

Note: % = Percentage of correct answers

References

- Daniłuk, J., Koert, E., and Cheung, E. Childless women's knowledge of fertility and assisted human reproduction: identifying the gaps. Mental Health, Sexuality and Genetics. Fertility and Sterility, 97 (2), February 2012.
- Almeida-Santos T, Melo C, Macedo A, Moura-Ramos M. Are women and men well informed about fertility? Childbearing intentions, fertility knowledge and information-gathering sources in Portugal. Reproductive Health. 2017;14(1).
- Bavan B, Porzig E, Baker V. An assessment of female university students' attitudes toward screening technologies for ovarian reserve. Fertility and Sterility. 2011;96(5):1195-1199