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Perspectives of Obstetricians and Gynaecologists on the Use of Weight Loss Medications

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ABSTRACT

Objectives: To investigate perspectives of Obstetricians and Gynaecologists on the use of glucagon-like peptide-1 receptor agonists (GLP-1RA) for weight loss in women living with obesity and subfertility.

Methods: Qualified Obstetricians and Gynaecologists were invited via hospital networks, colleague groups, and clinical training bodies to complete an anonymous, online cross-sectional survey (May to September 2024).

Results: Overall, 62 clinicians responded. Although 82.3% ($n = 51$) were familiar with GLP-1RAs, only 12.9% ($n = 8$) had prescribed them before. Most agreed that GLP-1RAs should be offered to patients with obesity-related comorbidities or subfertility, with 62.9% ($n = 39$) endorsing their use in women with subfertility and 71% ($n = 44$) supporting their use to meet body mass index (BMI) criteria for state-funded assisted reproduction technologies (ART). However, there was hesitation due to concerns about prescribing responsibilities and long-term follow-up. Most (79%; $n = 49$) felt that prescribing responsibility should lie with either a bariatric team or endocrinologist; no respondents felt that gynaecologists or fertility specialists should be primarily responsible for prescribing. Only 29% ($n = 18$) were aware that GLP-1RAs should be discontinued before conception, and 75.8% ($n = 47$) were not confident discussing potential teratogenic risks. Additionally, 96.7% ($n = 60$) expressed the need for more education and guidance on safety data.

Conclusion: The study finds that targeted education, interdisciplinary collaboration, and clear guidelines are essential to bridge knowledge gaps and safely integrate GLP-1RAs into reproductive health care. This could offer significant benefits for managing obesity and improving fertility outcomes in women of reproductive age.

1 | Introduction

Obesity is a global health concern with well-established contributions to cardiovascular and metabolic disease. An increasing body of research is interested in the associations between obesity and reproductive outcomes, affecting both male and female fertility. National figures derived from the Healthy Ireland Survey indicate that between 18% and 24% of men and women of peak reproductive age (25–44 years) have a BMI $\geq 30.0\,kg/m^2$, while 50% of pregnant women presented as living either with overweight or obesity at their first antenatal clinic booking visit [1, 2].

In women, obesity is linked to altered menstrual cycles, polycystic ovarian syndrome (PCOS) [3], ovulatory dysfunction, decreased oocyte quality, subfertility and miscarriage [4–6]. Likewise in men, obesity is associated with impaired semen quality, altered sex hormone levels and higher rates of erectile dysfunction [7, 8]. Knowing these associations, gynaecologists and fertility experts frequently discuss weight loss with individuals trying to conceive.

However, other than lifestyle changes and hypocaloric diets, there are a lack of noninvasive therapeutic interventions to help. Bariatric surgeries for weight loss, such as gastric bypass or gastric banding, have been shown to improve fertility parameters in both men and women, including improved hormonal profiles, ovulatory function and increased rates of spontaneous pregnancy [9, 10]. In the absence of surgery, significant and sustained weight loss often cannot be achieved.

Gynaecology and fertility consultations provide a unique timepoint where pre-pregnancy interventions can be instigated. This has the benefit of improving fertility outcomes, reducing adverse events in pregnancy and labour, and also having future health implications for the mother and baby. In 2019, a meta-analysis identified a 264% increase in the odds of childhood obesity when the mother has obesity before conception [11], highlighting the importance of maternal and paternal preconceptual interventions to prevent intergenerational obesity [12].

Glucagon-like peptide-1 (GLP-1) receptor agonists are promising agents that may provide an intervention for weight loss in women with subfertility. They mimic endogenous GLP-1, a peptide hormone secreted from intestinal cells that is responsible for increasing insulin secretion from the pancreas, while decreasing glucagon secretion, thereby improving glucose homeostasis. They also increase satiety and energy expenditure, while reducing food intake [13, 14].

While the primary focus of GLP-1 receptor agonists so far has been on weight loss and glycemic control in patients with Type 2 Diabetes Mellitus (T2DM) or in women with PCOS, emerging evidence suggests potential positive effects on fertility [13, 15]. A recent meta-analysis of preconception weight loss interventions on fertility revealed that women with obesity who were exposed to a weight loss intervention, including GLP-1R agonists, were more likely to become pregnant [16].

Liraglutide (a GLP-1 receptor agonist) shows weight loss by an average of 5.25 kg when compared with placebo [17], and this reduction in weight is maintained for 2 years after cessation [18]. It has demonstrated an improvement in menstrual bleeding patters, reduction in testosterone and ovarian volume, and an increase in sex-hormone binding globulin in women with PCOS [19]. When used in combination with metformin in the preconception period, liraglutide achieved an increase in in-vitro fertilisation (IVF) pregnancy rates, higher pregnancy rates per embryo transfer, and an increase in spontaneous pregnancy rates [20]. Semaglutide has a similar mechanism of action and has shown to be superior for weight loss when compared to other agents in its class, achieving an average weight loss of 15.8% [21]. Its extended duration of action and favourable safety profile make it an attractive option for long-term weight management. Tirzepatide is a long-acting, dual agonist of both the GLP-1 and glucose-dependent insulinotropic polypeptide (GIP) receptor. GIP is released by enteroendocrine K cells and similarly regulates postprandial plasma glucose by stimulating insulin secretion [22]. Recent findings from the SURMOUNT-5 clinical trial showed superior weight loss results at 72 weeks with tirzepatide than semaglutide in nondiabetic patients living with obesity [23].

GLP-1 receptor agonists also indicate an important role in male reproduction. They have been shown to increase testosterone levels and improve sperm production and motility. This is, in part, a result of weight loss, but also due to the expression of GLP-1 receptors on Leydig, Sertoli, and germ cells. As a result, evidence suggests that GLP-1 receptor agonist treatments may directly modulate testicular function [24, 25].

Animal studies of GLP-1 receptor agonist exposure throughout gestation have provided mixed findings, but include fetal growth restriction, visceral anomalies and early fetal demise [26]. To date, there is limited data on the teratogenicity of GLP-1RA in humans, though increasing use of these medications is likely to lead to a higher incidence of periconceptional exposure in unintended pregnancies. Several published case reports have examined outcomes in patients who had unplanned pregnancies while using GLP-1 receptor agonists up to 17 weeks of gestation [27–33]. Pregnancy complications included brief neonatal hypoglycemia, with no adverse fetal outcomes, and one incidence of congenital malformation (transient atrial septal defect). Two recent large observational cohort studies of GLP-1 receptor agonist exposure in first-trimester pregnancy did not show increased risk of major birth defects among live births [34, 35]. While reassuring, there remains insufficient evidence to support the use of GLP-1 receptor agonists during pregnancy, and guidelines indicate that patients should be counselled to use effective contraception and to allow a 2-month washout period before trying to conceive [36].

The literature suggests that GLP-1 receptor agonists may provide a successful intervention for the management of couples with obesity and subfertility. They show significant potential for weight loss and may have direct positive implications both for fertility and obstetric outcomes, though study findings are varied [37, 38]. In Ireland, liraglutide is available through the public healthcare system for eligible patients via both primary care clinicians (GPs) and hospital prescribers. Eligibility criteria include patients living with obesity Class II-III (initial BMI ≥ 35) with pre-diabetes and high risk of cardiovascular disease. Figures to December 2024 indicate that over 3700 patients were accessing liraglutide under this protocol [39]. Guidelines provided by the European Association for the Study of Diabetes (EASD) are used by endocrinologists who regularly prescribe GLP-1 receptor agonists [40].

This study was aimed at doctors working in Obstetrics and Gynaecology in Ireland and assessed their experience with antiobesity medications (AOMs). We investigated if many clinicians already use these medications in their practice, and in what scenarios. We explored if they felt adequately educated and informed on how to prescribe the medications, and the attitudes regarding who is responsible for the long-term follow-up of such patients. Additionally, we examined prescribing practices surrounding women with obesity who are trying to conceive and those facing fertility issues.

2 | Methods

2.1 | Questionnaire

A cross-sectional survey was designed using the platform SurveyMonkey to evaluate knowledge and attitudes amongst

obstetricians and gynaecologists regarding glucagon-like peptide-1 (GLP-1) receptor agonists for weight loss, such as Semaglutide (Ozempic) and Liraglutide (Saxenda). The survey covered:

- Demographic details including age group, level of experience and subspeciality interest.
- Attitudes towards the use of GLP-1 receptor agonists and the management of obesity in women.
- Opinions on responsibility for the prescribing and follow-up of these patients.
- Knowledge, confidence, and educational needs for using GLP-1 agonists.

2.2 | Participants and Recruitment

Ethical approval was granted by the Research Ethics Committee at the National Maternity Hospital, Dublin, Ireland (EC15.2024). Qualified Obstetricians and Gynaecologists practicing in Ireland were invited to complete the online questionnaire between May 2024 and September 2024. The survey was anonymous, with no unique identifiers collected. It was disseminated through hospital networks, colleague groups, and training bodies (such as the Royal College of Physicians, Ireland (RCPI) and the Junior Obstetrics and Gynaecology Society (JOGS). Participants were also recruited through the technique of 'snowballing', whereby existing study subjects could recruit others from among their acquaintances. Full information regarding the study outline and consent was provided at the survey link before enrolment and questionnaire completion.

2.3 | Analysis

Results were analysed using Survey Monkey and Microsoft Excel. GraphPad PRISM 9 was used for the descriptive statistical analysis (CSTAR, UCD). Contingency tables were constructed for different clinical scenarios, comparing the opinions of clinicians with over 10 years of experience in the field of obstetrics/gynaecology to those with 10 years or less. Fisher's exact test was employed to calculate *p*-values and assess the statistical significance of the differences between these groups.

3 | Results

3.1 | Demographics

There were 62 respondents to the questionnaire, representing approximately 12% of Obstetricians and Gynaecologists currently working in Ireland [41, 42]. Of these, 11.3% ($n = 7$) were consultants, 54.8% ($n = 34$) were specialist registrars, 11.3% ($n = 7$) were registrars, 6.5% ($n = 4$) were junior registrars, and 16.1% ($n = 10$) were senior house officers. The majority of respondents had an interest in Maternal & Fetal Medicine (27.4%, $n = 17$) or Benign Gynaecology (24.2%, $n = 15$), with a smaller portion focused on Assisted Reproduction & Fertility (16.2%, $n = 10$). The respondents were predominantly female (87.1%, $n = 54$) with a small number of male respondents (11.3%, $n = 7$) reflecting the typical gender distribution within the field of Obstetrics and Gynaecology. One person preferred not to disclose their gender (1.6%, $n = 1$). See Table 1 for list of demographic details.

TABLE 1 | Survey participant demographics.

Demographic ($n = 62$)		*n*	%
Age	20–30	9	14.5
	31–40	46	74.2
	41–50	4	6.5
	> 50	3	4.8
Gender	Female	54	87.1
	Male	7	11.3
	Prefer not to say	1	1.6
Role	Consultant	7	11.3
	Specialist registrar	34	54.8
	Registrar	7	11.3
	Senior house officer	10	16.1
How many years practicing in O&G	< 5	19	30.7
	5–10	31	50.0
	11–15	6	9.7
	16–20	2	3.2
	> 20	4	6.4
Subspeciality interest	Maternal Fetal Medicine	17	27.4
	Benign Gynaecology	15	24.2
Assisted Reproduction & Fertility		10	16.2
	Gynae-Oncology	6	9.7
	Urogynaecology	5	8.0
Paediatric & Adolescent Gynaecology		4	6.5
	Other	5	8.0

3.2 | Familiarity and Attitudes Toward Weight Loss Medications

82.3% ($n = 51$) respondents were familiar with glucagon-like peptide-1 receptor agonists. 91.9% ($n = 57$) agreed that weight loss medications such as Semaglutide have been glamorised and popularised in the media. Despite this, most respondents believed that weight loss medications should be offered to patients living with obesity Class II (BMI 35–40) (46.8%, $n = 29$), followed by Class I (BMI 30–35) (32.3%, $n = 20$), then Class III (BMI > 40) (20.9%, $n = 13$). Nearly all respondents (96.8%, $n = 56$) agreed that weight loss medications are appropriate for patients living with obesity with a weight-related comorbidity. Additionally, 62.9% ($n = 39$) thought they were suitable for patients with obesity and subfertility, with 71.0% ($n = 44$) suggesting that weight loss medications should be offered to

women who are trying to meet criteria for public funding of IVF (BMI < 30 kg/m^2). 59.7% ($n = 37$) would not consider prescribing weight loss medications to a man with obesity and with an abnormal semen analysis result. Few respondents (9.7%, $n = 6$) felt that GLP-1 agonists were appropriate for low self-esteem or body image disorders.

We subdivided our cohort by years of experience to examine any difference in opinions between clinicians with more than 10 years of experience ($n = 12$) compared to those with 10 years or less of experience ($n = 50$). There were no statistically significant differences in opinions on management between the two groups (see Table 2).

3.3 | Responsibility and Prescription Practices

Although 79.0% ($n = 49$) of respondents encounter patients with obesity daily, only 12.9% ($n = 8$) had ever prescribed weight loss medications before (Figures 1 and 2). When asked who should primarily be responsible for the prescribing of these medications, 30.7% ($n = 19$) felt they should be initiated by a bariatric multidisciplinary team, 29.0% ($n = 18$) felt it was the responsibility of the patient's GP, 20.9% ($n = 13$) felt that any qualified doctor should be suitable to prescribe, and 19.4% ($n = 12$) felt it should be initiated by an endocrinologist. No respondents felt that gynaecologists or fertility experts should be primarily responsible for the prescribing of weight loss medications.

TABLE 2 | Examining the opinions of clinicians with more than 10 years of experience to those with 10 years or less of experience.

Survey question: How likely are you to prescribe weight loss medications to women with a BMI > 30 kg/m^2 who also have the following?					
	Years of experience	**Likely *n* (%)**	**Neutral *n* (%)**	**Unlikely *n* (%)**	***p*-value between groups**
Endometrial hyperplasia	≤ 10 years	14 (28)	12 (24)	24 (48)	NS
	> 10 years	3 (25)	4 (33.3)	5 (41.7)	
Endometrial cancer	≤ 10 years	9 (18)	12 (24)	29 (58)	NS
	> 10 years	2 (16.7)	4 (33.3)	6 (50)	
PCOS	≤ 10 years	20 (40)	11 (22)	19 (38)	NS
	> 10 years	4 (33.3)	2 16.7)	6 (50)	
Menstrual irregularity	≤ 10 years	10 (20)	9 (18)	31 (62)	NS
	> 10 years	0 (0)	3 (25)	9 (75)	
Menorrhagia	≤ 10 years	4 (8)	12 (24)	34 (68)	NS
	> 10 years	0 (0)	3 (25)	9 (75)	
Subfertility	≤ 10 years	15 (30)	12 (24)	23 (46)	NS
	> 10 years	3 (25)	4 (33.3)	5 (41.7)	
Pelvic floor prolapse	≤ 10 years	7 (14)	15 (30)	28 (56)	NS
	> 10 years	1 (8.3)	2 (16.7)	9 (75)	
Pre-op weight optimisation	≤ 10 years	14 (28)	9 (18)	27 (54)	NS
	> 10 years	2 (16.7)	3 (25)	7 (58.3)	

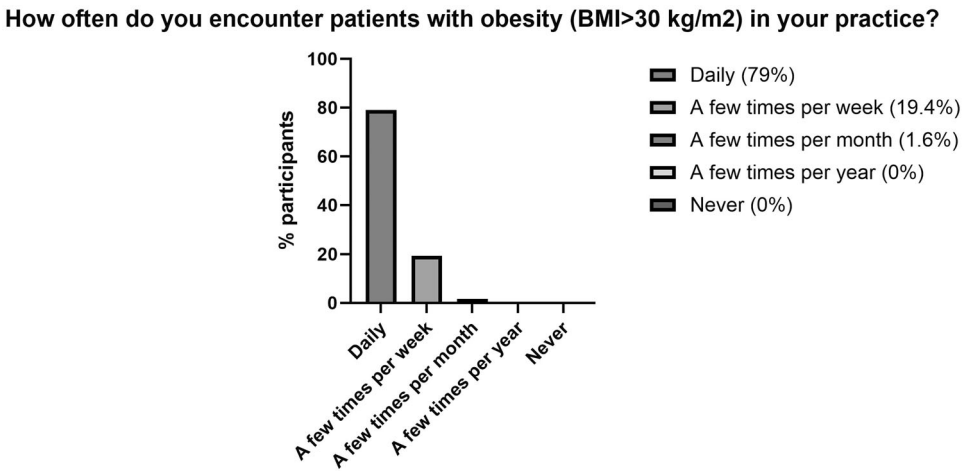

FIGURE 1 | Frequency with which obstetrician gynaecologists encounter patients living with obesity.

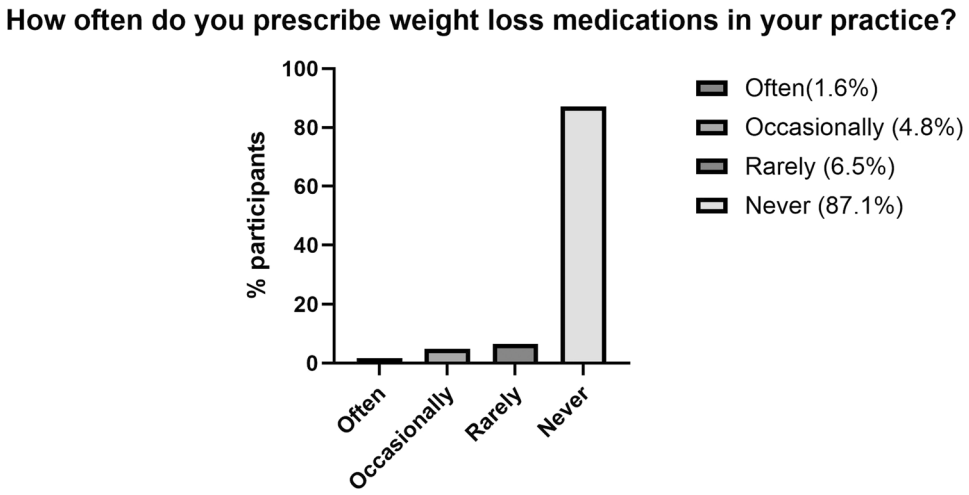

FIGURE 2 | Weight loss medication prescribing practices of Obstetrician Gynaecologist survey respondents.

FIGURE 3 | Attitudes of obstetrician gynaecologist survey respondents towards further knowledge and training on weight loss medications.

For the long term follow up of these patients, 62.9% ($n = 39$) suggested that they should attend their GP, 16.1% ($n = 10$) suggested that follow up should occur within a bariatric MDT setting, 14.5% ($n = 9$) said it should be with an endocrinologist, while 6.5% ($n = 4$) suggested that the responsibility for long term follow up should lie with the doctor who prescribes the weight loss medication. No respondents felt that the long-term follow-up of patients taking weight loss medications should be with their gynaecologist or fertility expert.

3.4 | Knowledge Gaps and Educational Needs

96.7% ($n = 60$) of survey respondents indicated that they need more knowledge and training on weight loss medications (Figure 3). Only 29.0% ($n = 18$) of respondents were aware of the recommendation regarding the discontinuation of medications like Semaglutide before trying to conceive. 75.8% ($n = 47$) indicated that they would not be confident discussing potential teratogenic effects should a women become pregnant while taking weight loss medications. When asked what additional information or teaching would be helpful to feel more confident about prescribing weight loss medications to patients, respondents suggested national or international guidelines (93.5%, $n = 58$), teaching sessions from an endocrinologist (91.9%, $n = 57$), more research and safety data in the literature (48.4%, $n = 30$), local hospital guidelines (45.2%, $n = 28$), and/or teaching sessions from the relevant drug companies (16.1%, $n = 10$). One person replied that they feel adequately informed to prescribe weight loss medications. One person replied that they will not be prescribing these medications, as they feel it is outside the remit of an obstetrician and gynaecologist.

4 | Discussion

The findings of this study offer valuable insights into the perspectives of obstetricians and gynaecologists in Ireland regarding weight loss medications in the management of obesity and subfertility.

The study demonstrated that most clinicians are familiar with GLP-1 receptor agonists, but their application in clinical practice remains limited. Despite the high awareness and frequent exposure to patients living with obesity, only a small percentage (12.9%) of doctors had previously prescribed weight loss medications, highlighting a disconnect between knowledge and clinical application. This may be due to uncertainty about prescribing responsibilities, lack of confidence in managing these medications, and perceived barriers related to long-term patient follow-up. The majority of respondents felt that these medications should be prescribed and monitored by specialists such as bariatric teams or endocrinologists, indicating a reluctance to take on the responsibility themselves.

The hesitation from obstetricians and gynaecologists to engage in prescribing weight loss medications is likely tied to the perceived lack of training and concerns about safety. Nearly half (48.4%) of doctors wished for more safety data in the literature. There was a clear need for further education with almost all respondents (96.7%) expressing a desire for additional training in weight loss medications, including their potential side effects, teratogenic risks, and guidelines for discontinuation before conception. Only a minority were aware of the need to stop these medications before pregnancy, and even fewer were confident in discussing their potential teratogenic effects.

Given the intricate interplay between obesity and reproductive health, there is an opportunity to bridge this gap with additional education and collaboration between specialties. Future efforts should focus on multidisciplinary education, ensuring that obstetricians and gynaecologists are well-informed about the risks and benefits of weight loss medications. Collaborating with endocrinologists, bariatric specialists, psychologists and fertility experts to provide training sessions, develop clear prescribing guidelines, and create patient education materials could greatly enhance clinicians' confidence and ability to use these medications effectively. Input from dieticians will also be critical, as the principal healthcare professional group providing practical advice and support on management and maintenance of eating habits, nutritional balance and potential gastrointestinal side effects associated with GLP-1 receptor agonist use. National and local guidelines would also help standardise care and ensure that clinicians are using these interventions safely and appropriately. Notably, it will be important to consider the role of both regulated and unregulated private providers, including online pharmacies and telehealth companies, who prescribe and fill prescriptions for GLP-1 receptor agonists with variable patient support and oversight.

In this study, attitudes toward prescribing weight loss medications to women with subfertility were cautiously optimistic, with 62.9% believing they are appropriate for this patient group. The eligibility criteria for publicly-funded assisted reproductive technology (ART) in Ireland, particularly the BMI limits for women, have been a topic of significant debate in the media, with the BMI thresholds being criticised as 'crude' and overly strict [43, 44]. A large proportion of obstetricians and gynaecologists (71%) felt that antiobesity medications could help women achieve the thresholds for inclusion in state-funded ART. Additionally, the role of GLP-1 agonists in improving fertility outcomes, particularly in women with PCOS and obesity, is supported by emerging evidence [13, 15, 19], highlighting the need for more definitive guidelines on their role in this context. For a fertility population seeking public ART funding to help them conceive, it will be important to consider potential challenges in patient compliance with guidelines on contraception use and possible weight gain after cessation of GLP-1 receptor agonist use in the washout period before fertility treatment.

A key strength of this study is its focus on the perspectives of a diverse group of Obstetricians and Gynaecologists, capturing a wide range of views from various levels of experience and subspecialties. No statistically significant differences in opinions were observed between groups stratified by years of experience. The inclusion of both consultants and trainees provides a comprehensive overview of current practices and educational needs within the field.

Another strength lies in the fact that there is limited research on the experience and opinions of obstetricians and gynaecologists with glucagon-like peptide 1 receptor agonists in the literature, as these medications are traditionally used for managing T2DM. However, there is growing interest in the use of these medications in the fields of reproductive health and obstetrics, given the increasing prevalence of obesity and gestational diabetes in pregnancy. Qualitative studies reporting on primary care doctors, endocrinologists and other health care professionals show similar findings whereby there is a hesitation towards prescribing weight loss medications due to lack of training and safety concerns [45–47].

There are limitations to acknowledge. The response rate (approximately 12%) may not fully capture the attitudes of the broader population of Irish obstetricians and gynaecologists, potentially limiting generalisability of the findings. Additionally, the self-reported nature of the survey could introduce bias, with respondents potentially overestimating their familiarity or confidence with medications. However, the study is current and topical, with much attention to weight loss medications in the media. Incorporating them into practice for obstetricians and gynaecologists means further training is needed first.

5 | Conclusion

This study highlights both the familiarity and hesitation of Irish obstetricians and gynaecologists in using GLP-1 receptor agonists for weight loss. While the majority of clinicians recognise the potential benefits of these medications, their current use in practice remains limited. There is a strong need for further education and training to address knowledge gaps, build confidence in prescribing, and to ensure the safe and effective use of these medications in women of reproductive age. As obesity rates continue to rise and its impact on fertility becomes more apparent, incorporating weight loss interventions like GLP-1 receptor agonists into reproductive care pathways could offer significant benefits for women. Moving forward, national guidelines, interdisciplinary collaboration, and targeted education will be crucial in optimising care for women living with obesity and subfertility and other reproductive health concerns.

Author Contributions

Ciara Nolan: conceptualisation, methodology, investigation, data curation, formal analysis, writing – original draft, review and editing. **Sarah Petch:** conceptualisation, methodology, writing – original draft, review and editing. **Niamh Joyce:** conceptualisation, methodology, writing – original draft, review and editing. **Louise E. Glover:** conceptualisation, methodology, investigation, data curation, formal analysis, writing – original draft, review and editing, supervision. **David Crosby:** conceptualisation, methodology, writing – review and editing, supervision, project administration. All authors agree to be accountable for all aspects of the work.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data discussed within this article is available upon request to foster transparency and support further research.

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