Attitudes of the Australian Public to Current and Emerging Assisted Reproductive Technologies

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This thesis is submitted in partial fulfilment of the Honours Degree of Bachelor of Psychology.

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University of Adelaide

October 2019

Word count: 9403

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Abstract

Aims. Infertility is a global public health issue. Scientific advancements and demand for alternative pathways to parenthood have resulted in emerging reproductive technologies. The present research aimed to clarify how demographic and fertility factors influence attitudes toward current and emerging assisted reproductive technologies (ART) in Australia.

Methods. 265 participants aged 16-87 years completed an online questionnaire exploring attitudes toward current and emerging ARTs between April and August 2019. Acceptability of the technologies and their contextual use were analysed alongside demographic (including gender, age, education), and fertility, factors.

Results. Medically necessary procedures typically attracted higher acceptability than social use. Suggested age requirements for ART varied from current practice guidelines. Utilising reproductive techniques in the case of infertility ranked higher (64%) than choosing to adopt (10%) or foster (3.4%) a child. Females and older participants more strongly supported mandatory counselling. Commercial and altruistic surrogacy attracted support for legalisation.

Conclusions. Demographic factors have been demonstrated to relate to the acceptability of various ART. Genetic lineage remains important when selecting alternate pathways to parenthood. Australians are generally accepting of government funding for ARTs, with the exception of sex selection and commercial surrogacy.

Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the School to restrict access for a period of time.

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October 2019

Acknowledgments

Chapter 1: Introduction

1.1 Overview

The increased use of Assisted Reproductive Technologies (ART) worldwide reflects the impact of infertility, which affects approximately one in six couples (Boivin, Bunting, Collins, & Nygren, 2007). Infertility is recognised by the World Health Organisation as a global public health issue generating public interest concerning safety, efficacy and availability of ART (Zegers-Hochschild et al., 2009). However, current Australian attitudes towards existing and emerging techniques are largely unknown. This study, therefore, aimed to add to the limited knowledge in this area by exploring attitudes among the Australian population to 13 ARTs, whether attitudes vary according to gender, and whether demographic and fertility factors are associated with these attitudes.

1.2 Medical and Social Infertility

Accessing ART before oncological-therapies can prevent infertility for patients untimely diagnosed with cancer (Partridge, 2015). Cryopreservation techniques provide theoretically perpetual preservation of gametes (sperm and eggs) and embryos for future access (Nakhuda, Wang, & Sauer, 2011). Age-related decline in oocyte (egg) quality and reduced success of ART are unanticipated; consequently, preservation techniques historically developed for oncological-related infertility are now accessed by otherwise healthy women to safeguard future reproductive success (Stoop, van der Veen, Deneyer, Nekkebroeck, & Tournaye, 2014). Present research indicates higher approval of cryopreservation for medical rather than social causes of infertility (Wennberg, Rodriguez-Wallberg, Milsom, & Brännström, 2016). The predominant reason for social infertility is the age-related decline in fecundity (Stoop et al., 2014). Knowledge and availability of contraception, economic wealth and changes in societal trends have allowed women greater opportunities, resulting in delayed childbearing (Broekmans, Knauff, te Velde, Macklon, & Fauser, 2007). Current literature

suggests that women delay childbearing to pursue education, career development and financial stability and are less financially prepared for motherhood during their prime fertility years (Sauer, 2015). Prime fecundity occurs between 15-30 years of age, yet career-driven individuals are unlikely to be prepared for pregnancy until 35-45 years of age (Leridon, 2004).

1.3 Development and Controversy of Fertility Treatments

The birth of the first in vitro fertilisation (IVF) baby, Louise Brown, was shrouded by global controversy (Dow, 2017). Consequences of technological intervention and the relationships between humans, nature and God were amplified (Henig, 2004). Due to the reproductive success of IVF producing healthy individuals without social or cognitive problems, IVF has become a routine procedure, resulting in the birth of over 6 million children conceived via ART (Dyer et al., 2016; Punamäki et al., 2015). In Australia, approximately one in 25 children are conceived by ART, with 1 in 12 born to women over 35 years of age (Chambers et al., 2017).

Further technological advancements have continued ethical, religious and legal debates (Porcu & Venturoli, 2006). Posthumous gamete retrieval has created the possibility for men to become parents after death (Nakhuda et al., 2011). Despite the simplicity of the procedure, significant legal and ethical concerns arise. Autonomy of the deceased and the welfare of the child remain significant concerns surrounding posthumous parentage (Hans, 2014).

Genetic lineage remains desirable as many perceive a biological link implies ongoing interest and responsibility (Goedeke & Payne, 2009). Treatments without genetic links are stigmatised by normative expectations of parenthood and attitudes of the population (Poote & van den Akker, 2009). While the majority of children are born to heterosexual couples, more LGBT+ individuals are seeking parenthood (Brzyski, 2009). Previously, lesbians conceived

using donor sperm via artificial insemination, a process lacking legal recognition for the inseminated woman's partner (Marina et al., 2010). Many lesbian couples utilise clinic services to gain legal protection, ensure control over donor involvement and provide recognition for both mothers (Hayman, Wilkes, Halcomb, & Jackson, 2015).

More recently, lesbians have accessed reciprocal/partner IVF, a process allowing shared motherhood. An oocyte retrieved from one partner is fertilised in vitro and then implanted into her partner (Bodri et al., 2018). One individual possesses a genetic link, and the other carries the pregnancy (Bodri et al., 2018). Ethical concerns have surfaced questioning the cost-effectiveness and justifiability of this procedure (Marina et al., 2010).

Genetic testing initially developed to screen for chromosomal abnormalities, can also detect gender. However, sex selection is typically reserved for preventing transmission of sex-linked disorders such as haemophilia (Smith & Taylor-Sands, 2018). Only medical use of sex selection is permissible in Australia, with Australians historically disapproving social use (Kippen, Gray, & Evans, 2018). Common concerns regarding sex selection include gender biases and ratio distortion (Kippen et al., 2018). Correlations between disapproval and demographic factors were identified amongst females, young people and more educated individuals (Kippen et al., 2018). Gender preferences are prevalent in families with two children of the same sex, who are consequently more likely to have a third child, suggesting a preference for at least one child of each gender (Kippen, Evans, & Gray, 2011).

Three-person IVF prevents hereditary genetic mitochondrial defects, using the mitochondrial DNA of a donor, combined with the DNA of two intending parents (Lane & Nisker, 2016). This technique elicits legal and ethical concerns regarding possible progression toward genetically engineered children (Baylis, 2013).

Uterine transplantation, unavailable in Australia, has proved successful internationally (Grynberg, Ayoubi, Bulletti, Frydman, & Fanchin, 2011). Millions of women experience

congenital or acquired uterine affections globally, often requiring a premature hysterectomy (Grynberg et al., 2011). The research of Wennberg and colleagues (2016) established uterine transplantation to be significantly more acceptable amongst the Swedish population than surrogacy. Such an invasive procedure for both recipient and donor raises questions about the value of carrying one's biological child (Kuehn, 2017).

Surrogacy occurs where one woman carries a pregnancy on behalf of another, agreeing upon specific terms before conception (Perkins, Boulet, Jamieson, & Kissin, 2016). Gestational surrogacy, where no genetic link exists between surrogate and child, is the most common. This involves the creation of an embryo genetically related to the intending parents being implanted in a third party to gestate on their behalf (MacCallum, Lycett, Murray, Jadva, & Golombok, 2003). When intending parents are unable to produce viable gametes, a donated oocyte, sperm or embryo may be used, potentially resulting in up to five participating individuals; a gestational mother, an intending mother, an intending father, and, if required, an oocyte or sperm donor (MacCallum et al., 2003). Traditional surrogacy, where the surrogate provides the oocyte, also occurs. Surrogacy remains controversial due to the complex legal and emotional relationships developed (Mukherjee, 2018; Brazier, Golombok, & Campbell, 1997). Familiar surrogates are often considered preferable; however, many seek unknown surrogates out of necessity, creating a complex dynamic with a stranger (Brazier et al., 1997). Commercial surrogacy, paying for the service, remains illegal in Australia, punishable by fines and imprisonment (Stuhmcke, 2011).

1.4 Ethics of Fertility Treatments

Australia was the first country to introduce mandatory criminal history checks to identify relevant child protection issues for people seeking fertility treatments. However, this has been identified as presumptuous and potentially discriminatory (Thompson & McDougall, 2015). Counselling, also mandatory for accessing some fertility services, is

considered beneficial for individuals contemplating ART (Hammarberg, Carmichael, Tinney, & Mulder, 2008). While many report beneficial experiences, the expectation that it be mandated is contentious, and the requirement may ethically impede upon patient autonomy (Benward, 2015).

Critical attitudes toward ART for same-sex couples are amplified by concerns regarding child welfare (Burnett, 2006). Improving legal recognition and social acceptance of same-sex families in Western countries has increased demand for ART (Greenfeld & Seli, 2016). The number of children living in same-sex households in Australia has almost doubled from 2001-2011 (Australian Bureau of Statistics, 2013). As same-sex couples have a greater need for ART, the mandatory requirements for counselling and criminal history can be perceived as discriminatory.

1.5 Influences on Attitudes Toward Fertility Treatments

Understanding the perception of emerging reproductive technologies is vital in guiding medical practitioners, and legal and public policies, as laws surrounding such techniques, vary broadly both nationally and internationally (Bos & Van Rooij, 2007). Attitudes towards current and emerging fertility treatments in the Australian population remain unknown. British research illustrates that fertile and infertile individuals differ in opinions, highlighting the impact of personal experience on attitude development (Poote & van den Akker, 2009). Generally, those utilising ART are of higher socioeconomic status and find services more affordable (Chambers, Hoang, & Illingworth, 2013). The economics of ART treatments accompany ethical, scientific and clinical debates surrounding the accessibility of fertility treatments and highlight the impact of demographic factors influencing attitudes.

1.6 Current Study

This study aims to examine attitudes towards 13 current and emerging ARTs (oocyte, sperm, and embryo cryopreservation, uterus transplantation, single women accessing ART, altruistic and commercial surrogacy, sex selection, genetic testing, three-person IVF, embryo donation, posthumous gamete retrieval and reciprocal IVF). Specifically, it seeks to explore attitudes towards six areas: whether each of the 13 ARTs should be: (1) legally available in Australia, (2) subsidised by Medicare, (3) available for medical reasons, (4) available for social reasons, and whether individuals seeking any of the 13 ARTs should undergo mandatory (5) criminal history checks, and (6) counselling.

For each of the six areas, the research aims to (1) explore attitudes among the Australian population to each of the 13 ARTs, (2) determine whether attitudes for each of the 13 ARTs vary according to gender; and (3) explore demographic and fertility factors associated with attitudes toward each of the 13 ARTs. In addressing these aims, it may also be possible to explore whether genetic lineage is important in Australians' ART preferences and whether attitudes regarding legalisation and Medicare subsidisation align with current legislation.

Chapter 2: Method

2.1 Participants

Australians aged 18 years or older and fluent in English were eligible to participate. First-year psychology students at The University of Adelaide who had consented to participate in research as part of their course were eligible to participate between 16-18 years of age. The sample consisted of 265 participants, 78 males, 184 females, and three genders other than male or female (one neutrosis, one non-binary and one transgender), aged 16 to 87 years ($M = 31.77$, $SD = 14.01$). Demographic and reproductive characteristics are shown in Tables 1 and 2, respectively.

2.2 Materials

A study-specific questionnaire was constructed based on a review of previous research examining public attitudes to ART and current and emerging reproductive techniques. The survey was hosted online on Google Forms and comprised three sections, Demographics, Reproductive History and Intentions, and Attitudes to 13 ARTs (Appendix A).

2.2.1 Demographics

Participants were asked eight items, including age, gender, sexual orientation, ethnic heritage, relationship status, postcode, education and employment status.

2.2.2 Reproductive Intentions and History

Participants responded to four items on the intention to have children subscale, one item on the importance of having children subscale, and one item on the behavioural intention in case of infertility subscale of the Swedish Fertility Awareness Questionnaire (SFAQ; (Lampic, Svanberg, Karlstrm, & Tydn, 2006). Items included whether participants want children, their desired number of children, desired ages for first and last child, the importance of having children, and actions in the event of infertility. The SFAQ has been reported to have satisfactory face validity and reliability (Peterson, Pirritano, Tucker, & Lampic, 2012).

Table 1

Demographic Characteristics for Overall Sample and According to Gender

Characteristics	Overall Sample (n=265)	Male (n=78)	Female (n=184)
Age, range (*SD*)	16-87 (14.01)	18-87 (15.93)	16-67 (13.21)
Mean	31.77	32.77	31.49
Median	26	26	27
Ethnicity (%)			
Australian	213 (80.38)	56 (71.79)	154 (83.70)
Chinese	8 (3.02)	4 (5.13)	4 (2.17)
English	7 (2.64)	4 (5.13)	3 (1.63)
Other	37 (13.86)	14 (17.95)	23 (12.50)
Sexual Orientation (%)			
Straight (Heterosexual)	225 (84.91)	68 (87.18)	158 (85.87)
Gay or Lesbian	11 (4.15)	4 (5.13)	7 (3.80)
Bisexual	21 (7.92)	6 (7.69)	13 (7.07)
Other	8 (3.02)	0 (0)	6 (3.26)
Relationship Status (%)			
Single	112 (42.26)	36 (46.16)	76 (41.30)
In a relationship	153 (57.74)	42 (53.85)	108 (58.69)

Education (%)			
University Educated	**176 (66.42)**	**52 (66.65)**	**122 (66.30)**
Not University Educated	**89 (33.58)**	**26 (33.33)**	**62 (33.70)**
Employment (%)			
Employed	196 (73.96)	55 (70.52)	139 (75.54)
Unemployed	69 (26.03)	23 (29.48)	45 (24.45)
Residence (%)			
Urban	246 (92.83)	72 (92.31)	175 (95.12)
Rural	19 (7.17)	3 (7.69)	16 (3.89)

Note. Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Participants who selected genders other than male or female were included in most analyses but were excluded from gender-based analyses due to the small sample size (n = 3). *SD* = standard deviation.

Table 2

Reproductive Characteristics for Overall Sample and According to Gender

Characteristics	Overall Sample (n = 265)	Male (n = 78)	Female (n = 184)
Have Children (%)	78 (29.43)	21 (26.92)	57 (30.98)
Yes	184 (69.43)	57 (73.08)	127 (69.02)
No			
Number of current children *M (SD)* Range (1-5)	2.18 (0.83)	2.38 (1.09)	2.04 (1.06)
Children desired, *M (SD)*	1.09 (1.08)	.92 (0.81)	1.15 (0.80)
Age at first child, *M (SD)*	28.64 (4.60)	29.52 (4.07)	27.60 (4.32)
Age at last child, *M (SD)*	32.28 (5.06)	35.55 (5.18)	31.28 (4.46)
Satisfaction with number of children (%)	79	21	57
Yes	68 (86.08)	21 (100)	46 (80.70)
No	11 (13.92)	0 (0)	11 (19.30)
Desired age at first child, *M (SD)* [a]	28.75 (5.60)	28.48 (7.36)	28.83 (4.68)
Desired age at last child, *M (SD)* [a]	33.96 (7.00)	33.93 (8.82)	33.92 (6.14)
Confidence in having desired [a] number of children (%)	184	57	127
Very confident	23 (13.37)	7 (12.28)	16 (12.60)
Confident	38 (22.09)	19 (33.33)	31 (24.41)
Moderately confident	48 (27.91)	14 (24.56)	34 (26.77)
Slightly confident	33 (19.19)	9 (15.79)	24 (18.90)
Not confident	30 (17.44)	8 (14.04)	22 (17.32)

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Action if unable to conceive naturally (%)	265	78	184
Undergo fertility treatment	158 (59.62)	37 (47.44)	121 (65.76)
Foster a child	11 (4.15)	3 (3.85)	8 (4.35)
Adopt a child	43 (16.23)	14 (17.95)	28 (15.22)
Choose not to have a child	32 (12.08)	16 (20.51)	15 (8.15)
I do not want children	21 (7.92)	8 (10.25)	12 (6.52)
Importance of having children (%)	265	78	184
Very important	101 (38.11)	26 (33.33)	74 (40.22)
Important	71 (26.80)	20 (25.64)	51 (27.72)
Moderately Important	34 (12.83)	14 (17.94)	20 (10.87)
Slightly important	18 (6.79)	3 (3.85)	15 (8.15)
Not important	41 (15.47)	15 (19.23)	24 (13.04)
Fertility knowledge self-rating (%)	262	78	184
Not educated at all	29 (11.07)	17 (21.80)	12 (6.52)
Somewhat educated	130 (49.62)	35 (44.87)	95 (51.62)
Educated	56 (21.37)	17 (21.79)	39 (21.20)
Very educated	29 (11.07)	4 (5.13)	25 (13.59)
Extremely educated	18 (6.87)	5 (6.41)	13 (7.07)
Previous fertility consultation (%)	262	78	184
Yes	38 (14.50)	7 (8.97)	31 (16.85)
No	224 (85.50)	71 (91.03)	153 (85.15)
Currently trying to conceive (%)	262	78	184
Yes	9 (3.44)	1 (1.28)	8 (4.35)
No	253 (96.56)	77 (98.72)	176 (95.65)

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Currently pregnant (%)	262	78	184
Yes	3 (1.15)	0 (0)	3 (1.63)
No	259 (98.85)	78 (100)	183 (99.46)

Note. [a] Questions differed for participants currently without children .Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Participants who selected genders other than male or female were included in most analyses but were excluded from gender-based analyses due to the small sample size (n = 3). M = mean; SD = standard deviation.

Participants were also asked whether they had children (if so, how many) and whether they were satisfied with the number of children they had. Additionally, participants indicated whether they, or their partner, were currently trying to conceive or were pregnant, whether they had previously sought a fertility consultation, and, lastly, provided a self-rating of their fertility knowledge.

2.2.3 Attitudes to ARTs

No psychometrically validated scales concerning attitudes to ART were identified. Therefore, a series of items were formulated based on previous research. Participants were asked to indicate their attitudes concerning the minimum and maximum allowable ages to access ART. Additionally, they were asked about their attitudes toward 13 current and emerging ARTs including oocyte, sperm and embryo cryopreservation, uterus transplantation, ART for single women, commercial surrogacy, altruistic surrogacy, sex selection, genetic testing, three-person IVF, embryo donation, posthumous gamete retrieval, and reciprocal/partner IVF. A brief definition of each ART method was provided to allow participants to form and express an informed opinion (See Appendix B). However, it was not possible in this study to provide in-depth medical information regarding each technique and their respective benefits and limitations, which could alter opinions and attitudes.

Questions specifically explored whether participants believed each of the 13 ARTs should be: (1) legally available in Australia, (2) subsidised by Medicare, (3) available for medical reasons, and (4) available for social reasons. Participants were also asked whether individuals seeking any of the 13 ARTs should undergo mandatory (5) criminal history checks, and (6) counselling.

Participants were asked to specify the extent to which they agreed with the use of each ART in the given context using a 5-point Likert scale (1='strongly disagree', 3='neither agree nor disagree', 5='strongly agree'). After each question regarding attitudes to ART, participants were able

to leave an extended response. Finally, participants were asked to consider whether they believed that traditional IVF treatment has become more accepted in society over time and whether in time they believe emerging ARTs will become increasingly accepted.

2.3 Procedure

The University of Adelaide School of Psychology Research Ethics Sub-Committee approved this study on April 18 2019 (approval number 19/20). Participation was voluntary, and all participants were provided with an information sheet and consent form (Appendices C and D) before commencement. Data was collected from April-August 2019 via an online cross-sectional survey which took approximately 30 minutes to complete.

Participants were recruited using flyers (Appendices E) displayed in public locations such as University campuses in Adelaide, through the University of Adelaide School of Psychology first-year psychology student research platform, the social media accounts of the author and the research supervisor (Appendices F), and via snowball sampling. First-year psychology students received course credit for participating. No other participants received any incentive for participation.

2.4 Power Analysis

For multiple regression, there is no consistent rule regarding appropriate sample size (Bonett & Wright, 2011). Rules of thumb, based on a minimum sample size plus additional participants depending on the number of independent variables, have been proposed. For example, Harris (1975) recommended a minimum sample of 50 plus the number of independent variables, while Tabachnick and Fidell (2013) recommended a sample of "50 + 8m", where m is the number of independent variables. Others have simply proposed a minimum. For example, Nunnally (1978) recommended a sample size of at least 100 when exploring less than three independent variables and 300-400 for nine or 10 independent variables, while Combs (2010) stated there is an assumption that a sample of at least 100

participants is sufficient regardless of the number of independent variables. Using the suggestion of Tabachnick and Fidell (2013), the current study had sufficient statistical power, as the maximum number of independent variables that could have been entered in a given regression was 10 meaning a minimum sample size of 150 would be required; the current study included 265 participants.

2.5 Data Analysis

Quantitative data were analysed using SPSS Statistics Version 25, where statistical significance was defined as a probability value of $p < 0.05$. Although not the intended focus of the research and beyond the scope of the thesis to adequately address, preliminary thematic analysis of extended responses was conducted as the responses appeared to provide context to survey answers, (Appendix G). Further analysis of this data will be undertaken in the future.

2.5.1 Support for ARTs

The level of support for six areas related to ART availability and use, namely, legal availability, Medicare subsidisation, medical and social use, and mandatory criminal history checks and counselling, was examined for 13 ARTs. First, to determine support among the overall population, and then according to gender, for the six areas for each of the ARTs, continuous variables were dichotomised into two categories, agree or disagree (where agree = the combination of 'strongly agree' and 'agree' and disagree = the combination of 'strongly disagree' and 'disagree'; responses of 'neither agree nor disagree' were excluded from this analysis). For the overall sample, frequencies were then calculated to ascertain the number and percentage of participants who were agreeable toward each of the six areas relating to the availability and use of the 13 ARTs.

Subsequently, potential differences in attitudes, according to gender, were examined. Frequencies were calculated to determine the number and percentage of male and female participants who were supportive of each of the six areas regarding the 13 ARTs. As only

three participants identified with a gender other than male or female, they were excluded from

the gender analysis due to sample size. Pearson's chi-square was conducted to assess

significant differences in acceptance towards ARTs according to gender.

2.5.2 Factors Associated with Support for ART

A total of 10 variables were selected for analysis to identify factors associated with attitudes

towards ARTs. These variables were grouped into two categories, demographic and fertility factors.

2.5.2.1 Demographics

Five demographic variables were examined, including age, gender, sexual orientation,

relationship status, and education. All demographic variables, excluding age, were dichotomised.

2.5.2.2 Fertility Factors

Five factors concerning fertility history were analysed, including whether participants had

children, had undertaken fertility consultation, actions in the case of infertility, self-rated fertility

knowledge, and the importance of having children. Presence of children, prior fertility consultation

and actions in the case of infertility (seek treatment or not) were dichotomous. All other variables

were continuous.

The dependent variables examined were agreeableness as indicated by participants'

continuous responses for the six areas (legalisation, Medicare subsidisation, medical and social use,

mandatory criminal history checks and counselling) for each of the 13 ARTs. Analysis was

conducted in two stages. First, potential relationships were examined univariately using correlations

for continuous variables and t-tests for dichotomous variables. Secondly, factors found to be

significant in stage one were examined multivariately using multiple regression to determine the

relative importance of each factor. Potential factors were entered using the enter method.

Chapter 3: Results

3.1 Support for ARTs in Australia

This section reports findings related to overall population attitudes to ART as well as attitudes to ART according to gender. Specifically, it reports attitudes towards legalisation, Medicare subsidisation, medical and social use, mandatory criminal history checks and counselling for 13 ARTs.

3.1.1. Support for ARTs to be Legally Available

Among the overall population, there was strong support for the majority of the ARTs to be legally available in Australia (see Table 3). Sex selection received the least support for legal availability with 50.78% of people in favour. Males were more in favour of the availability of three-person IVF and sex selection ($\chi^2 = 4.34(1)$, p= .037, $\chi^2 = 3.98(1)$, p= .046, respectively).

3.1.2. Support for ARTs to be Subsidised by Medicare

The least supported ARTs for Medicare subsidisation among the overall population were commercial surrogacy and sex selection (45.65% and 38.89% in favour, respectively; see Table 4). Males were more in favour of the subsidisation of sex selection ($\chi^2 = 6.14(1)$, p= .013).

3.1.3. Support for ARTs to be Available for Medical Reasons

Among the overall population, the least supported ARTs for medical reasons were commercial surrogacy and sex selection (72.50% and 65.88% in favour, respectively; see Table 5). No statistically significant gender differences toward medical use were identified.

3.1.4. Support for ARTs to be Available for Social Reasons

The least supported ART for social reasons among the overall population was sex selection (44.62% in favour; see Table 6). No statistically significant gender differences toward social use were identified.

Table 3

Support for ARTs to be Legally Available in Australia for the Overall Sample and According to Gender

Assisted Reproductive Technique	Overall Sample		Male		Female		Chi Square
	In Favour N (%)	Not in Favour N (%)	In Favour N (%)	Not In Favour N (%)	In Favour N (%)	Not In Favour N (%)	
Oocyte cryopreservation	235 (97.51)	6 (2.49)	65 (98.48)	1 (1.52)	170 (97.14)	5 (2.86)	.356
Sperm cryopreservation	240 (98.36)	4 (1.64)	66 (98.51)	1 (1.49)	174 (98.31)	3 (1.69)	.012
Embryo cryopreservation	228 (97.02)	7 (2.98)	64 (98.46)	1 (1.54)	164 (96.47)	6 (3.53)	.645
Uterus transplantation	203 (91.86)	18 (8.14)	55 (94.83)	3 (5.17)	148 (90.80)	15 (9.20)	.929
ART for single women	211 (91.74)	19 (8.26)	53 (86.89)	8 (13.11)	158 (93.49)	11 (6.51)	2.58
Altruistic surrogacy	199 (92.99)	15 (7.01)	54 (93.10)	4 (6.90)	145 (92.95)	11 (7.05)	.002
Commercial surrogacy	146 (74.11)	51 (25.89)	40 (74.07)	14 (25.93)	106 (74.13)	37 (25.87)	.000
Sex selection	98 (50.78)	95 (49.22)	35 (62.50)	21 (37.50)	63 (45.99)	74 (54.01)	4.34*
Genetic testing	205 (93.18)	15 (6.82)	59 (95.16)	3 (4.84)	146 (92.41)	12 (7.59)	.532

Three-person IVF	169 (81.25)	39 (18.75)	53 (89.83)	6 (10.17)	116 (77.85)	33 (22.15)	3.98*
Embryo donation	213 (94.25)	13 (5.75)	60 (95.24)	3 (4.76)	153 (93.87)	10 (6.13)	.158
Posthumous gamete retrieval	142 (74.74)	48 (25.26)	8 (79.17)	10 (20.83)	104 (73.24)	38 (26.76)	.668
Reciprocal/partner IVF	200 (88.50)	26 (11.50)	53 (86.89)	8 (13.11)	147 (89.09)	18 (10.91)	.213

Note. Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Overall sample may not = 265 as participants who answered 'neither agree nor disagree' were excluded from this analysis. Also, three participants who did not identify as male or female were excluded from the gender difference analysis. Significant values, p <.05 *, p< .01**, p<.001***

Table 4

Support for Medicare Subsidisation of ART in Australia for the Overall Sample and According to Gender

Assisted Reproductive Technique	Overall Sample		Male		Female		Chi Square
	In Favour N (%)	Not in Favour N (%)	In Favour N (%)	Not in Favour N (%)	In Favour N (%)	Not In Favour N (%)	
Oocyte Cryopreservation	173 (84.39)	32 (15.61)	46 (85.19)	8 (14.81)	127 (84.11)	24 (15.89)	.035
Sperm cryopreservation	175 (84.13)	33 (15.87)	45 (83.33)	9 (16.67)	130 (84.42)	24 (15.58)	.035
Embryo Cryopreservation	167 (83.08)	34 (16.92)	41 (80.39)	10 (19.61)	126 (84.00)	24 (16.00)	.352
Uterus transplantation	156 (78.39)	43 (21.61)	45 (78.95)	12 (21.05)	111 (78.17)	31 (21.83)	.015
ART for single women	148 (75.13)	49 (24.87)	35 (66.04)	18 (33.96)	113 (78.47)	31 (21.53)	3.21
Altruistic surrogacy	123 (69.10)	55 (30.90)	36 (72.00)	14 (28.00)	87 (67.97)	41 (32.03)	.274
Commercial Surrogacy	84 (45.65)	100 (54.35)	25 (48.08)	27 (51.92)	59 (44.70)	73 (55.30)	.172
Sex selection	77 (38.89)	121 (61.11)	29 (52.73)	26 (47.27)	48 (33.57)	95 (66.43)	6.14*
Genetic testing	169 (81.25)	39 (18.75)	39 (73.58)	14 (26.42)	130 (83.87)	25 (16.13)	2.74

Three-person IVF	122 (65.59)	64 (34.41)	42 (73.68)	15 (26.32)	80 (62.02)	49 (37.98)	2.39
Embryo donation	151 (81.18)	35 (18.82)	41 (83.67)	8 (16.33)	110 (80.29)	27 (19.71)	.270
Posthumous gamete retrieval	110 (60.11)	73 (39.89)	35 (67.31)	17 (32.69)	75 (57.25)	56 (42.75)	1.57
Reciprocal/partner IVF	143 (75.26)	47 (24.74)	36 (67.92)	17 (32.08)	107 (78.10)	30 (21.90)	2.13

Note. Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Overall sample may not = 265 as participants who answered 'neither agree nor disagree' were excluded from this analysis. Also, three participants who did not identify as male or female were excluded from the gender difference analysis. Significant values, $p < .05$ *, $p < .01$**, $p < .001$***.

Table 5

Support for ART Treatment to be Available for Medical Reasons in Australian for the Overall Sample and According to Gender

Assisted Reproductive Technique	Overall Sample		Male		Female		Chi Square
	In Favour	Not In Favour	In Favour	Not In Favour	In Favour	Not In Favour	
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
Oocyte Cryopreservation	229 (95.02)	12 (4.98)	65 (95.59)	3 (4.41)	164 (94.80)	9 (5.20)	.064
Sperm cryopreservation	230 (95.44)	11 (4.56)	64 (95.52)	3 (4.48)	166 (95.40)	8 (4.60)	.002
Embryo Cryopreservation	227 (95.38)	11 (4.62)	65 (95.59)	3 (4.41)	162 (95.29)	8 (4.71)	.010
Uterus transplantation	204 (91.48)	19 (8.52)	55 (93.22)	4 (6.78)	149 (90.85)	15 (9.15)	.312
ART for single women	191 (87.21)	28 (12.79)	49 (80.33)	12 (19.67)	142 (89.87)	16 (10.13)	3.60
Altruistic surrogacy	191 (89.25)	23 (10.75)	55 (88.71)	7 (11.29)	136 (89.47)	16 (10.53)	.027
Commercial Surrogacy	145 (72.50)	55 (27.50)	42 (75.00)	14 (25.00)	103 (71.53)	41 (28.47)	.244
Sex selection	139 (65.88)	72 (34.12)	41 (71.93)	16 (28.07)	98 (63.64)	56 (36.36)	1.27
Genetic testing	205 (91.93)	18 (8.07)	52 (88.14)	7 (11.86)	153 (93.29)	11 (6.71)	1.56

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Three-person IVF	168 (80.00)	42 (20.00)	52 (85.25)	9 (14.75)	116 (77.85)	33 (22.15)	1.48
Embryo donation	202 (92.66)	16 (7.34)	56 (91.80)	5 (8.20)	146 (92.99)	11 (7.01)	.092
Posthumous gamete retrieval	159 (75.00)	53 (25.00)	47 (82.46)	10 (17.54)	112 (72.26)	43 (27.74)	2.31
Reciprocal/partner IVF	182 (85.05)	32 (14.95)	49 (81.67)	11 (18.33)	133 (86.36)	21 (13.64)	.749

Note. Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Overall sample may not = 265 as participants who answered 'neither agree nor disagree' were excluded from this analysis. Also, three participants who did not identify as male or female were excluded from the gender difference analysis. Significant values, p <.05 *, p< .01**, p<.001***

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Table 6

Support for ART Treatment to be Available for Social Reasons in Australia for the Overall Sample and According to Gender

Assisted Reproductive Technique	Overall Sample		Male		Female		Chi Square
	In Favour N (%)	Not In Favour N (%)	In Favour N (%)	Not In Favour N (%)	In Favour N (%)	Not In Favour N (%)	
Oocyte Cryopreservation	182 (87.92)	25 (12.08)	49 (92.45)	4 (7.55)	133 (86.36)	21 (13.64)	1.38
Sperm cryopreservation	180 (87.80))	25 (12.20)	46 (90.20)	5 (9.80)	134 (87.01)	20 (12.99)	.363
Embryo Cryopreservation	180 (87.38)	26 (12.62)	45 (90.00)	5 (10.00)	135 (86.54)	21 (13.46)	.411
Uterus transplantation	151 (77.04)	45 (22.96)	40 (76.92)	12 (23.08)	111 (77.08)	33 (22.92)	.001
ART for single women	174 (83.65)	34 (16.35)	44 (77.19)	13 (22.81)	130 (86.09)	21 (13.91)	2.40
Altruistic surrogacy	156 (83.42)	31 (16.58)	40 (85.11)	7 (14.89)	116 (82.86)	24 (17.14)	.129
Commercial Surrogacy	121 (66.85)	60 (33.15)	32 (68.09)	15 (31.91)	89 (66.42)	45 (33.58)	.044
Sex selection	83 (44.62)	103 (55.38)	28 (56.00)	22 (44.00)	55 (40.44)	81 (59.56)	3.58

Genetic testing	155 (80.73)	37 (19.27)	41 (82.00)	9 (18.00)	114 (80.28)	28 (19.72)	.070
Three-person IVF	131 (72.38)	50 (27.62)	44 (86.27)	7 (13.73)	87 (66.92)	43 (33.08)	.643
Embryo donation	167 (84.77)	30 (15.23)	45 (86.54)	7 (13.46)	122 (84.14)	23 (15.86)	.171
Posthumous gamete retrieval	121 (66.48)	61 (33.52)	36 (73.47)	13 (26.53)	85 (63.91)	48 (36.09)	.470
Reciprocal/partner IVF	155 (85.16)	27 (14.84)	45 (90.00)	5 (10.00)	110 (83.33)	22 (16.67)	1.28

Note. Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Overall sample may not = 265 as participants who answered 'neither agree nor disagree' were excluded from this analysis. Also, three participants who did not identify as male or female were excluded from the gender difference analysis. Significant values, $p < .05$ *, $p < .01$**, $p < .001$***.

3.1.5. Support for Mandatory Criminal Checks Before ART

Among the overall population, there was moderate to high support for mandatory criminal history checks for all 13 ARTs (68.78-87.32% in favour; see Table 7), particularly for altruistic and commercial surrogacy (86.73% and 87.32% in favour, respectively). No statistically significant gender differences toward mandatory criminal history checks were identified.

3.1.6. Support for Mandatory Counselling Before ART

There was high support for mandatory counselling among the overall population for all 13 ARTs (89.67-65.58% in favour; see Table 8). Females were more in favour of mandatory counselling for sex selection and embryo donation ($\chi^2 = 6.09(1)$, p= .014 and $\chi^2 = 4.00(1)$, p= .045, respectively).

3.2 Factors Associated with Support for ART in Australia

This section reports findings concerning factors associated with attitudes toward legalisation, Medicare subsidisation, medical and social use, and mandatory criminal history checks and counselling for each of the 13 ARTs.

Table 7

Support for Criminal History Check as a Requirement of ART in Australia for the Overall Sample and According to Gender

Assisted Reproductive Technique	Overall Sample		Male		Female		Chi Square
	In Favour N (%)	Not In Favour N (%)	In Favour N (%)	Not In Favour N (%)	In Favour N (%)	Not In Favour N (%)	
Oocyte Cryopreservation	140 (70.35)	59 (29.65)	41 (68.33)	19 (31.67)	99 (71.22)	40 (28.78)	.168
Sperm cryopreservation	143 (70.44)	60 (29.56)	43 (68.25)	20 (31.75)	100 (71.43)	40 (28.57)	.210
Embryo Cryopreservation	141 (70.85)	58 (29.15)	41 (67.21)	20 (32.79)	100 (72.46)	38 (27.54)	.565
Uterus transplantation	151 (76.26)	47 (23.74)	44 (72.13)	17 (27.87)	107 (78.10)	30 (21.90)	.831
ART for single women	156 (76.47)	48 (23.53)	45 (72.58)	17 (27.42)	111 (78.17)	31 (21.83)	.749
Altruistic surrogacy	183 (86.73)	28 (13.27)	52 (83.87)	10 (16.13)	131 (87.92)	18 (12.08)	.624
Commercial Surrogacy	186 (87.32)	27 (12.68)	53 (82.81)	11 (17.19)	133 (89.26)	16 (10.74)	1.68

Sex selection	140 (71.07)	57 (28.93)	41 (67.21)	20 (32.79)	99 (72.79)	37 (27.21)	.638
Genetic testing	141 (68.78)	64 (31.22)	42 (66.67)	21 (33.33)	99 (69.72)	43 (30.28)	.189
Three-person IVF	147 (75.77)	47 (24.23)	44 (72.13)	17 (27.87)	103 (77.44)	30 (22.56)	.643
Embryo donation	159 (76.81)	48 (23.19)	47 (73.44)	17 (26.56)	112 (78.32)	31 (21.68)	.592
Posthumous gamete retrieval	152 (75.62)	49 (24.38)	46 (73.02)	17 (26.98)	106 (76.81)	32 (23.19)	.338
Reciprocal/partner IVF	155 (75.61)	50 (24.39)	47 (74.60)	16 (25.40)	108 (76.06)	34 (23.94)	.050

Note. Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Overall sample may not = 265 as participants who answered 'neither agree nor disagree' were excluded from this analysis. Also, three participants who did not identify as male or female were excluded from the gender difference analysis. Significant values, $p < .05$ *, $p < .01$**, $p < .001$***.

Table 8

Support for Counselling as a Requirement of ART in Australia for the Overall Sample and According to Gender

Assisted Reproductive Technique	Overall Sample		Male		Female		Chi Square
	In Favour N (%)	Not In Favour N (%)	In Favour N (%)	Not In Favour N (%)	In Favour N (%)	Not In Favour N (%)	
Oocyte Cryopreservation	159 (78.33)	44 (21.67)	42 (76.36)	13 (23.64)	117 (79.05)	31 (20.95)	.171
Sperm cryopreservation	158 (77.07)	47 (22.93)	43 (74.14)	15 (25.86)	115 (78.23)	32 (21.77)	.394
Embryo Cryopreservation	162 (77.88)	46 (22.12)	42 (73.68)	15 (26.32)	120 (79.47)	31 (20.53)	.804
Uterus transplantation	186 (86.11)	30 (13.89)	51 (82.26)	11 (17.74)	35 (87.66)	19 (12.34)	1.08
ART for single women	185 (86.05)	30 (13.95)	49 (79.03)	13 (20.97)	136 (88.89)	17 (11.11)	3.57
Altruistic surrogacy	191 (89.25)	23 (10.75)	49 (84.48)	9 (15.52)	142 (91.23)	14 (8.97)	1.89
Commercial Surrogacy	191 (89.67)	22 (10.33)	49 (58.96)	8 (14.04)	142 (91.03)	14 (8.97)	1.15
Sex selection	177 (84.69)	32 (15.31)	45 (75.00)	15 (25.00)	132 (88.59)	17 (11.41)	6.09*

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Genetic testing	173 (82.78)	36 (17.22)	48 (78.69)	13 (21.31)	125 (84.46)	23 (15.54)	1.01
Three-person IVF	181 (85.38)	31 (14.62)	46 (77.97)	13 (22.03)	135 (88.24)	18 (11.760)	3.60
Embryo donation	181 (84.58)	33 (15.42)	46 (76.67)	14 (23.33)	135 (87.66	19 (12.34)	4.00*
Posthumous gamete retrieval	188 (86.64)	29 (13.36)	50 (81.97)	11 (18.03)	138 (88.46)	18 (11.54)	1.60
Reciprocal/partner IVF	141 (65.58)	74 (34.42)	10 (16.39)	51 (83.61)	131 (85.06)	23 (14.94)	.072

Note. Data presented as n (%), unless otherwise indicated; percentage values may add to greater than 100% due to rounding protocol. Overall sample may not = 265 as participants who answered 'neither agree nor disagree' were excluded from this analysis. Also, three participants who did not identify as male or female were excluded from the gender difference analysis. Significant values, $p < .05$ *, $p < .01$**, $p < .001$***.

3.2.1 Oocyte Cryopreservation

3.2.1.1 Preliminary Analyses

Younger participants and those with higher fertility knowledge were more agreeable towards oocyte cryopreservation being legally available ($r= -.17$, $p= .009$, $r= -.14$, $p= .029$, respectively). Those who considered having children important were more agreeable toward Medicare subsidisation ($r= -.19$, $p= .006$), medical use ($r= -.16$, $p= .011$), and mandatory criminal history checks and counselling ($r= -.14$, $p= .045$, $r= -.19$, $p= .006$, respectively). Older participants favoured mandatory counselling ($r= .30$, $p= .000$).

Findings for dichotomous variables are reported in Table 9. Females and university educated participants supported oocyte cryopreservation legalisation ($t(260)= -3.11$, $p= .002$, $t(263)= 2.27$, $p= 0.24$, respectively). In contrast, those without university education favoured mandatory criminal history checks ($t(181.87)= -4.01$, $p= .000$) and counselling ($t(168.77)= -2.06$, $p= .041$). Heterosexual participants ($t(25.46)= 2.61$, $p= .015$) and those with children ($t(188.10)= 4.04$, $p= .000$) also supported mandatory counselling.

3.2.1.2 Multivariate Analyses

Four independent variables (IV) were entered into the regression equation examining legal availability of oocyte preservation: age, gender, education, and fertility knowledge. The total variance explained by the model was 4% ($R^2= 0.04$, $F(4,263)= 2.70$, $p= 031$; Table 10). Younger people were more supportive of legalisation ($\beta= -.14$, $t(236)= -2.21$, $p= .028$).

One IV, importance of having children, was entered into the regression equation to explore association toward attitudes regarding Medicare subsidisation. The total variance explained by the model was 3.6% ($R^2= 0.04$, $F(1,205)= 7.74$, $p= .006$; Table 10). Participants who rated having children important supported Medicare subsidisation ($\beta = -.19$, $t(205)= -2.78$, $p= .006$).

Table 9

Preliminary Examination of Factors Associated with Attitudes to Oocyte Cryopreservation (n = 265)

Oocyte Cryopreservation Factors	Legal M (SD)	Legal t (df)	Medicare M (SD)	Medicare t (df)	Medical M (SD)	Medical t (df)	Social M (SD)	Social t (df)	Criminal History M (SD)	Criminal History t (df)	Counselling M (SD)	Counselling t (df)
Gender												
Male	4.18 (.79)	-3.11 (260) **	3.71 (1.01)	-.808 (260)	1.96 (.21)	.253 (239)	1.93 (.27)	1.33 (11.82)	1.68 (.47)	-.408 (197)	1.74 (.43)	-.412 (201)
Female	4.49 (.72)		3.82 (1.08)		1.95 (.22)		1.86 (.34)		1.71 (.45)		1.79 (.41)	
Sexual Orientation												
Heterosexual	4.42 (.70)	.308 (260)	3.79 (1.04)	.039 (260)	1.95 (.22)	-.488 (239)	1.88 (.33)	-.360 (205)	1.72 (.45)	1.44 (199)	1.81 (.39)	2.61 (25.46) *
Non-Heterosexual	4.38 (.83)		3.78 (1.13)		1.97 (.17)		1.90 (.30)		1.57 (.50)		1.52 (.51)	
Relationship Status												
In a relationship	4.46 (.71)	-1.34 (221.64)	3.86 (1.08)	-1.35 (263)	1.96 (.21)	-.468 (242)	1.86 (.34)	.836 (208)	1.67 (.47)	.918 (200)	1.70 (.42)	.447 (203)
Not in a relationship	4.33 (.80)		3.68 (1.03)		1.94 (.23)		1.90 (.30)		1.73 (.45)		1.80 (.41)	
Education												
University Educated	4.48 (.72)	2.27 (263) *	3.75 (1.09)	-.691 (191.50)	1.95 (.21)	.135 (242)	1.90 (.31)	.974 (106.22)	1.61 (.49)	-4.07 (181.87) ***	1.74 (.44)	-2.06 (168.77)*
Non-university Educated	4.26 (79)		3.84 (1.00)		1.95 (.22)		1.85 (.36)		1.86 (.35)		1.86 (.35)	

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Have Child(ren)												4.04
Yes	4.32 (.83)	-1.24	3.80 (1.06)	.163	1.94 (.24)	-.431	1.86 (.35)	-.461	1.72 (.45)	.511	1.92 (.27)	(188.10)
No	4.44 (.71)	(263)	3.77 (1.07)	(263)	1.96 (.21)	(242)	1.89 (.32)	(208)	1.69 (.47)	(200)	1.72 (.45)	***
Previous Fertility Consult												
Yes	4.50 (.73)	.856	3.89 (1.06)	.712	1.97 (.17)	.607	1.85 (.37)	-.583	1.71 (.46)	.201	1.88 (.33)	1.77
No	4.39 (.75)	(263)	3.76 (1.06)	(263)	1.95 (.22)	(242)	1.89 (.32)	(208)	1.70 (.46)	(200)	1.76 (.43)	(54.63)
Use ART												
Yes	4.44 (.69)	.880	1.90 (.31)	1.57	1.98 (.14)	1.68	1.90 (.30)	1.38	1.72 (.43)	-.214	1.80 (.40)	-.077
No	4.35 (.84)	(242)	1.81 (.40)	(97.42)	1.93 (.26)	(107.55)	1.83 (.38)	(118.33)	1.73 (.45)	(185)	1.80 (.40)	(188)

Note. *M* = mean; *SD* = standard deviation; *t* = *t* value; df = degrees of freedom; Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Table 10

Multivariate Examination of Factors Associated with Attitudes to Oocyte Cryopreservation Using Multiple Regression (n = 265)

Oocyte Cryopreservation	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	2.11			1.95			-			-			1.47			1.35		
Age	.00	-.14	**.028**	-	-	-	-	-	-	-	-	-	-	-	-	-	.30	**.002**
Gender	-.01	-.03	.650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-.02	-.04	.491	-	-	-	-	-	-	-	-	-	.24	.25	**.000**	.09	.11	.485
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.07	.485
Importance of Having Children	-	-	-	-.05	-.19	**.006**	-	-	-	-	-	-	-.04	-.13	.053	-.05	-.17	**.030**
Fertility Knowledge	-.02	-.12	.075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R²	.044			.036			-			-			.081			.117		
Adjusted R²	.028			.032			-			-			.072			.100		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

Two IV were entered into the regression equation examining mandatory criminal history checks: education and importance of having children. The total variance explained by the model was 8.1% (R^2= 0.08, $F(2,199)$= 8.80, p= .000; Table 10). University educated participants were more supportive of mandatory criminal history checks (β = .248, t(199)= 3.65, p= .000).

Four IV were entered into the regression equation exploring mandatory counselling: education, age, having a child and importance of having children. The total variance explained by the model was 11.7% (R^2= 0.12, $F(4,200)$= 6.64, p= .000; Table 10). Older participants and those who rated having children important favoured mandatory counselling (β= .30, t(200)= 3.10, p= .002, β= -.16, t(200)= -2.18, p= .030, respectively).

3.2.2 Sperm Cryopreservation

3.2.2.1 Preliminary Analyses

Younger participants favoured Medicare subsidisation (r= -.15, p= .031), while older participants supported mandatory counselling (r= .31, p= .000). Increased importance of having children correlated with mandatory counselling (r= -.18, p= .010) and criminal history checks (r= -.14, p= .040), and medical use (r= -.19, p= .003). Participants with greater fertility knowledge supported legalised sperm cryopreservation (r= -0.14, p= 0.02).

Findings for dichotomous variables are reported in Table 11. Females favoured legalisation of sperm cryopreservation (t(260)= -3.36, p= .001). University-educated participants supported mandatory criminal history checks and counselling (t(178.2)= -3.94, p= .000, (t(165.46)= -2.04, p= .043, respectively), while those without university education favoured legalisation (t(263)= 2.17, p= .31). Participants with children and those who previously had fertility consultations favoured mandatory counselling (t(180.41)= 3.86, p= .000, (t(55.48)= 2.04, p= .046, respectively).

3.2.2.2 Multivariate Analyses

Three IV were entered into the regression equation examining legalisation of sperm cryopreservation: gender, education, and fertility knowledge. The total variance explained by the model was 2.4% (R^2= 0.02, F(1.94,240)= 2.70, p= .124; Table 12). Participants with greater fertility knowledge favoured legalisation (β= -.15, t(240)= -2.89, p= .003).

Two IV were entered into the regression equation exploring Medicare subsidisation: age and importance of having children. The total variance explained by the model was 6% (R^2= 0.06, F(2,207)= 6.58, p= .002; Table 12). Younger participants (β= -1.88, t(207)= -2.73, p= .007), and those who considered having children important (β= -1.98, t(207)= -2.88, p= .004), favoured Medicare subsidisation.

One IV, importance of having children, was entered into the regression equation exploring medical use of sperm cryopreservation. The total variance explained by the model was 3.7% (R^2= .037, F(1,242)= 9.17, p= .003; Table 12). Participants who rated having children important were more agreeable toward medical use of sperm cryopreservation (β= -1.91, t(242)= -3.03, p= .006).

Two IV were entered into the regression equation exploring mandatory criminal history checks: education and importance of having children. The total variance explained by the model was 7.7% (R^2= .077, F(2, 203)= 8.46, p= .000). University-educated participants and those who rated having children less important supported mandatory criminal history checks before sperm cryopreservation (β=.238, t(203)= 3.52, p= .001, β=.044, t(203)= -2.03, p= .044, respectively).

Five IV were entered into the regression equation examining attitudes toward mandatory counselling: age, importance of having children, education, having children and previous fertility consultation. The total variance explained by the model was 12.7% (R^2= .13, F(5,202)= 5.85, p= .000).

Table 11

Preliminary Examination of Factors Associated with Attitudes to Sperm Cryopreservation (n = 265)

Sperm Cryopreservation Factors	Legal		Medicare		Medical		Social		Criminal History		Counselling	
	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Gender												
Male	4.21 (.78)	-3.36	3.65 (1.04)	-1.38	1.96 (.21)	.040	1.90 (.30)	.600	1.68 (.47)	-.457	1.74 (.44)	-.626
Female	4.53 (.68)	(260)	3.85 (1.08)	(260)	1.95 (.21)	(239)	1.87 (.34)	(203)	1.71 (.45)	(201)	1.78 (.41)	(203)
		**										
Sexual Orientation												
Heterosexual	4.46 (.67)	.554	3.78 (1.05)	-.294	1.96 (.20)	-.380	1.88 (.33)	-.445	1.71 (.45)	1.41	1.78 (.40)	2.72
Non-Heterosexual	4.38 (.83)	(44.02)	3.84 (1.14)	(260)	1.97 (.17)	(239)	1.91 (.30)	(203)	1.57 (.50)	(34.35)	1.50 (.51)	(26.96)
Relationship Status												
In a relationship	4.50 (.66)	-1.74	3.87 (1.08)	-1.43	1.96 (.18)	-.787	1.86 (.35)	1.19	1.67 (.47)	.943	1.75 (.43)	.395
Not in a relationship	4.35 (.79)	(263)	3.68 (1.07)	(263)	1.94 (.23)	(242)	1.91 (.29)	(204.28)	1.73 (.45)	(204)	1.78 (.42)	(206)
Education												
University Educated	4.51 (.70)	2.17	3.77 (1.11)	-.350	1.96 (.20)	.319	1.90 (.30)	1.25	1.62 (.49)	-3.94	1.72 (.45)	-2.04
Non-university Educated	4.30 (.75)	(263)	3.82 (1.01)	(193.38)	1.95 (.22)	(242)	1.84 (.37)	(107.98)	1.86 (.36)	(178.18)	1.84 (.37)	(165.46)
		*								***		*

	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Have Child(ren)												
Yes	4.42 (.69)	-.294	3.80 (1.07)	.086	1.96 (.21)	.076	1.85 (.36)	-.900	1.72 (.45)	.391	1.91 (.29)	3.86
No	4.45 (.74)	(263)	3.78 (1.08)	(263)	1.95 (.21)	(242)	1.89 (.31)	(206)	1.69 (.46)	(204)	1.70 (.46)	(180.41)
												***
Previous Fertility												
Consult	4.50 (.73)	.574	3.87 (1.07)	.492	1.97 (.17)	.507	1.85 (.37)	-.562	1.71 (.46)	.188	1.88 (.33)	2.04
Yes	4.43 (.72)	(263)	3.78 (1.08)	(263)	1.95 (.21)	(242)	1.89 (.32)	(206)	1.70 (.46)	(204)	1.74 (.44)	(55.48)
No												*
Use ART												
Yes	4.47 (.65)	.973	1.90 (.31)	1.57	1.99 (.12)	1.93	1.91 (.29)	1.73	1.72 (.45)	-.049	1.79 (.41)	.443
No	4.38 (.79)	(242)	1.81 (.39)	(97.42)	1.93 (.26)	(100.38)	1.81 (.39)	(114.01)	1.72 (45)	(189)	1.76 (.43)	(117.76)

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Table 12

Multivariate Examination of Factors Associated with Attitudes to Sperm Cryopreservation Using Multiple Regression (n = 265)

Sperm Cryopreservation	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	2.04			2.12			2.02			-			1.49			1.26		
Age	-	-	-	-.19	-.01	**.007**	-	-	-	-	-	-	-	-	-	.34	.01	**.000**
Gender	.01	.85	**.003**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-.05	-.02	.402	-	-	-	-	-	-	-	-	-	.24	.23	**.001**	.11	.10	.103
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.11	.29	.100
Importance of Having Children	-	-	-	-.20	-.05	**.004**	-.19	-.03	**.003**	-	-	-	-.14	-.04	**.044**	-.15	-.05	**.035**
Knowledge about Fertility	-.15	-.02	**.023**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.02	-.02	.820
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R^2	.024			.060			.037			-			.077			.127		
Adjusted R^2	.011			.051			.033			-			.068			.105		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

Older participants and those who rated having children important favoured mandatory counselling (β=.34, $t(202)$= 3.62, p= .000, β= -.15, $t(202)$= -2.12, p= .035, respectively).

3.2.3 Embryo Cryopreservation

3.2.3.1 Preliminary Analyses

Participants with greater fertility knowledge favoured legalisation of embryo preservation (r= -.16, p= .012). Older participants and those who rated having children as important supported mandatory counselling before embryo cryopreservation (r= .28, p= .000, r= -.20, p= .004, respectively).

Findings for dichotomous variables are reported in Table 13. Females and those with children supported embryo cryopreservation legalisation (t(260)= -2.99, p= .003, t(263)= .455, p= .050, respectively). Single participants supported Medicare subsidisation (t(263)= -2.01, p= .046). Non-university educated participants support mandatory criminal history checks (t(178.07)= -3.85, p= .000). University-educated participants and those with children favoured mandatory counselling (t(179.64)= 3.57, p= .003, t(177.89)= 3.57, p= .000, respectively).

3.2.3.2 Multivariate Analyses

Three IV were entered into the regression equation exploring legalisation of embryo cryopreservation: gender, having a child and fertility knowledge. The total variance explained by the model was 2.9% (R^2= .03, F(3,231)= 2.29, p= .079; Table 14). Participants with less fertility knowledge supported legalisation (β= -.17, t(231)= -2.49, p= .014).

Five IV were entered into the regression equation examining mandatory counselling: sexual orientation, education, age, having a child and importance of having children. The total variance explained by the model was 14.8% (R^2= .15, F(5,201)= 7.0, p= .000; Table 14).

Table 13

Preliminary Examination of Factors Associated with Attitudes to Embryo Cryopreservation (n = 265)

Embryo Cryopreservation	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Gender												
Male	4.41 (.79)	-2.99	3.58 (1.05)	-1.86	1.96 (.21)	.097	1.90 (.30)	.639	1.67 (.47)	-.749	1.74 (.44)	-.894
Female	4.47 (.82)	(260)	3.85 (1.09)	(260)	1.95 (.21)	(236)	1.87 (.34)	(204)	1.72 (.45)	(197)	1.79 (.41)	(206)
		**										
Sexual Orientation												
Heterosexual	4.40 (.78)	.122	3.73 (1.09)	-1.12	1.96 (.21)	-.365	1.87 (.34)	-1.24	1.72 (.45)	1.49	1.81 (.39)	2.85
Non-Heterosexual	4.38 (.83)	(260)	3.95 (.970)	(260)	1.97 (.17)	(235)	1.93 (.25)	(48.91)	1.57 (.50)	(34.30)	1.50 (.51)	(26.72)
												**
Relationship Status												
In a relationship	4.44 (.78)	-1.58	3.88 (1.05)	-2.01	1.95 (.22)	-.173	1.85 (.36)	1.05	1.68 (.47)	.980	1.78 (.42)	.048
Not in a relationship	4.28 (.87)	(263)	3.61 (1.11)	(263)	1.96 (.21)	(238)	1.90 (.30)	(203.83)	1.74 (.44)	(192.40)	1.78 (.42)	(208)
				*								
Education												
University Educated	4.40 (.83)	.78	3.73 (1.13)	-.648	1.96 (.20)	.279	1.89 (.32)	.827	1.62 (.49)	-3.85	1.72 (.45)	-2.97
Non-university Educated	4.31 (.81)	(263)	3.82 (.980)	(200.29)	1.95 (.22)	(238)	1.84 (.36)	(205)	1.86 (.36)	(178.07)	1.88 (.32)	(179.64)
										***		**

	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Have Child(ren)												
Yes	4.41 (.78)	.455	3.78 (1.06)	.220	1.96 (.20)	.141	1.84 (.37)	-.862	1.72 (.45)	.317	1.91 (.29)	3.57
No	4.35 (.84)	(263)	3.75 (1.10)	(263)	1.95 (.21)	(238)	1.89 (.32)	(205)	1.70 (.46)	(200)	1.72 (.45)	(177.89)
		*										***
Previous Fertility												
Consult	4.58 (.68)	1.70	3.92 (1.02)	.976	1.97 (.17)	.526	1.85 (.36)	-.377	1.71 (.46)	.140	1.85 (.36)	1.21
Yes	4.33 (.84)	(263)	3.74 (1.09)	(263)	1.95 (.22)	(238)	1.88 (.33)	(205)	1.70 (.46)	(200)	1.76 (.43)	(49.88)
No												
Use ART												
Yes	4.44 (.74)	1.38	1.90 (.30)	1.62	1.98 (.14)	1.70	1.89 (.31)	1.00	1.71 (.45)	-.616	1.80 (.41)	-.229
No	4.28 (.90)	(148.43)	1.79 (.41)	(87.02)	1.92 (.27)	(103.97)	1.84 (.37)	(120.60)	1.75 (.43)	(185)	1.81 (.40)	(193)

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample $n = 265$ for all except analyses that did not include gender. Where gender was included, $n = 262$ as three participants identified as neither male or female. Significance values, p $<.05$ *, p$< .01$**, p$<.001$***

Table 14

Multivariate Examination of Factors Associated with Attitudes to Embryo Cryopreservation Using Multiple Regression (n = 265)

Embryo Cryopreservation	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	2.08			-			1.99			-			1.39			1.45		
Age	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.01	.28	**.003**
Gender	-.01	-.04	.590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.18	-.14	**.044**
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.23	.24	**.001**	.14	.16	**.018**
Have Child	-.01	-.03	.606	-	-	-	-	-	-	-	-	-	-	-	-	.10	.11	.293
Importance of Having Children	-	-	-	-	-	-	-.01	-.10	.127	-	-	-	-	-	-	-.04	-.14	.052
Knowledge about Fertility	-.03	-.17	**.014**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R²	.029			-			.010			-			.057			.148		
Adjusted R²	.016			-			.006			-			.053			.127		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

Older, university-educated participants who identified as non-heterosexual favoured mandatory counselling (β=.28, t(201)= 2.97, p= .003, β= .16, t(201)= 2.38, p= .018, β= -.14, t(201)= -2.03, p=.044, respectively).

3.2.4 Uterus Transplant

3.2.4.1 Preliminary Analyses

More knowledgeable participants supported legalisation of uterus transplantation (r= -.17, p= .010). Importance of having children significantly correlated with agreeableness toward Medicare subsidisation (r= -.20, p= .005), medical use (r= -.21, p= .002), mandatory counselling (r= -.14, p= .046) and criminal history checks (r= -.16, p= .020). Younger participants supported medical use (r= -.15, p= .024), while older participants supported mandatory counselling (r= .25, p= .000).

Findings for dichotomous variables are reported in Table 15. Females favoured uterus transplant legalisation (t(260)= -3.36, p= .001). Participants with children supported both legalisation and counselling before uterus transplantation (t(263)= .267, p= .035, t(215.94)= 4.23, p= .000, respectively). Heterosexual participants supported medical use and non-heterosexual participants supported criminal history checks (t(190)= -4.45, p= .000), t(31.70)= 2.23, p= .033, respectively). Single participants favoured government funding (t(263)= -2.49, p= .014). Participants who previously sought fertility treatment supported mandatory counselling, (t(69.92)= 2.10, p= .039).

3.2.4.2 Multivariate Analyses

Two IV were entered into the regression equation exploring factors associated with attitudes towards legalisation of uterus transplantation: having children and fertility knowledge.

Table 15

Preliminary Examination of Factors Associated with Attitudes to Uterus Transplantation (n = 265)

Uterus Transplant	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)
Gender												
Male	3.91 (.90)	-1.56	3.55 (1.10)	-.368	1.93 (.25)	.556	1.77 (.43)	-.023	1.72 (.45)	-.909	1.82 (.39)	-.971
Female	4.11 (.99)	(260)	3.61 (1.18)	(260)	1.91 (.29)	(221)	1.77 (.42)	(194)	1.78 (.42)	(196)	1.88 (.33)	(98.93)
Sexual Orientation												
Heterosexual	4.06 (.96)	-.589	3.58 (1.16)	-.880	1.91 (.29)	-4.45	1.77 (.43)	-1.53	1.78 (.41)	2.23	1.87 (.33)	1.62
Non-Heterosexual	4.16 (.93)	(260)	3.76 (1.07)	(260)	2.00 (.00)	(190) ***	1.87 (.35)	(46.94)	1.56 (.51)	(31.70) *	1.72 (.46)	(27.44)
Relationship Status												
In a relationship	4.14 (.88)	-1.57	3.75 (1.10)	-2.4	1.92 (.28)	.011	1.75 (.44)	.945	1.72 (.45)	1.34	1.86 (.35)	-.247
Not in a relationship	3.96 (1.10)	(263)	3.39 (1.20)	(263) *	1.92 (.28)	(223)	1.81 (.40)	(196)	1.80 (.40)	(193)	1.85 (.36)	(216)
Education												
University Educated	4.06 (1.00)	-.173	3.53 (1.19)	-1.35	1.89 (.31)	-1.96	1.76 (.43)	-.841	1.70 (.46)	-3.10	1.83 (.38)	-1.94
Non-university Educated	4.08 (.87)	(263)	3.73 (1.06)	(263)	1.96 (.20)	(21.22)	1.81 (.40)	(196)	1.87 (.34)	(180.57) **	1.92 (.28)	(184.26)

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Have Child(ren)												
Yes	4.09 (.91)	.267	3.68 (1.07)	.804	1.92 (.27)	.301	1.75 (.44)	-.544	1.75 (.43)	-.038	1.97 (.17)	4.23
No	4.05 (1.00)	(263)	3.56 (1.19)	(263)	1.91 (.28)	(223)	1.78 (.41)	(196)	1.76 (.43)	(199)	1.81 (.40)	(215.94)
		*										***
Previous Fertility												
Consult	4.24 (.79)	1.19	3.87 (1.12)	1.58	1.97 (.17)	1.25	1.75 (.44)	-.282	1.76 (.44)	.032	1.94 (.24)	2.11
Yes	4.04 (1.00)	(263)	3.55 (.117)	(263)	1.91 (.29)	(223)	1.78 (.42)	(196)	1.76 (.43)	(199)	1.84 (.37)	(69.92)
No												*
Use ART												
Yes	4.11 (.89)	.119	1.85 (.36)	1.28	1.95 (.22)	1.04	1.80 (.40)	1.00	1.79 (.41)	.369	1.86 (.35)	-.512
No	4.09 (.97)	(242)	1.76 (.43)	(99.08)	1.91 (.29)	(123.41)	1.73 (.45)	(178)	1.77 (.43)	(184)	1.88 (.32)	(201)

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

The total variance explained by the model was 3.5% (R^2= .04, F(2,221)= 4.01, p= .020; Table 16). Those with less fertility knowledge supported legalisation (β= -.17, t(221)= -2.75, p= .006).

Two IV were entered into the regression equation examining factors associated with attitudes to Medicare subsidisation of uterus transplantation: relationship status and importance of having children. The total variance explained by the model was 5% (R^2= .06, F(2,198)= 5.76, p= .004; Table 16). Considering having children important significantly predicted support for Medicare subsidisation (β= -.31, t(220)= -4.66, p= .021).

Three IV were entered into the regression equation exploring factors associated with attitudes to medical use of uterus transplantation: sexual orientation, age and importance of having children. The total variance explained by the model was 12% (R^2= .120, F(3,220)= 10.05, p= .000; Table 16). Younger participants and those who identified as non-heterosexual supported medical use of uterus transplants, (β= -.18, t(220)= -2.76, p= .006, β= .17, t(220)= 2.56, p= .011, respectively).

Four IV were entered into the regression equation exploring factors associated with attitudes toward mandatory criminal history checks before uterus transplants: sexual orientation, age, education and importance of having children. The total variance explained by the model was 9% (R^2= 0.09, F(4,193)= 4.78, p= .001; Table 16). Heterosexual and university-educated participants supported mandatory criminal history checks (β= -.15, t(193)= -2.10, p= .037, β= .20, t(193)= 2.86, p= .005, respectively).

Four IV were entered into the regression equation examining factors associated with attitudes for mandatory counselling before uterus transplants: age, having children, previous fertility consult and importance of having children. The total variance explained by the model was 9% (R^2= 0.09, F(4,193)= 4.78, p= .001; Table 16). Older participants favoured mandatory counselling (β=.20, t(213)= 2.15, p= .033).

Table 16

Multivariate Examination of Factors Associated with Attitudes to Uterus Transplants Using Multiple Regression (n = 265)

Uterus Transplant	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	2.12			1.72			2.02			-			1.90			1.81		
Age	-	-	-	-	-	-	.00	-.18	**.006**	-	-	-	.00	-.09	.221	.01	.20	**.033**
Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	.13	.17	**.011**	-	-	-	-.19	-.15	**.037**	-	**-**	-
Relationship Status	-	-	-	.11	.13	.072	-	-	-	-	-	-	-	-	-	-	**-**	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.18	.20	**.005**	-	**-**	-
Have Child	-.04	-.07	.270	-	-	-	-	-	-	-	-	-	-	-	-	-.03	-.04	.730
Importance of Having Children	-	-	-	-.05	-.17	**.021**	-.06	-.31	**.000**	-	-	-	-.04	-.14	.061	-.02	-.08	.253
Knowledge about Fertility	-.05	-.18	**.006**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.01	-.01	.846
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R²	.035			.055			.120			-			.090			.070		
Adjusted R²	.026			.045			.108			-			.071			.053		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

3.2.5 ART for Single Women

3.2.5.1 Preliminary Analyses

Older participants, (r= .20, p= .003) and those who considered having children as more important (r= -.18, p= .007) supported counselling for single women accessing ART.

Findings with regards to dichotomous variables are reported in Table 17. Females more strongly supported legalisation (t(260)= -4.40, p= .000), and Medicare subsidisation (t(260)= -2.41, p= .017) for single women accessing ART. Non-heterosexual participants favoured Medicare subsidisation for single women accessing ART (t(260)= -2.10, p= .037). Non-university educated participants supported mandatory criminal history checks and counselling before single women access ART (t(205)= -4.06, p= .000, t(206.38)= -3.01, p= .003, respectively). Participants with children and experience of previous fertility consultations supported mandatory counselling for single women before ART, (t(212.74)= 2.19, p= .000, t(74.57)= 2.19, p= .031, respectively).

3.2.5.2 Multivariate Analyses

Two IV were entered into the regression equation exploring factors associated with attitudes toward criminal history checks before single women can access ART: education and importance of having children. The total variance explained by the model was 9.1% (R^2= .091, F(2,204)= 10.22, p= .000; Table 18). University-educated participants and those who considered having children important favoured criminal history checks (β= .24, t(204)= 3.54, p= .001, β= -.18, t(204)= -2.72, p= .007, respectively).

Five IV were entered into the regression equation examining factors associated with attitudes toward counselling before single women access ART: age, having children, previous fertility consult, education and importance of having children. The total variance explained by the model was 8.5% (R^2= .09, F(5,212)= 3.93, p= .000; Table 18).

Table 17

Preliminary Examination of Factors Associated with Attitudes to Single Women Accessing ART (n = 265)

ART for Single Women	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)
Gender												
Male	3.74 (1.03)	-4.40	3.29 (1.18)	-2.41	1.80 (.40)	-1.68	1.77 (.42)	-1.42	1.72 (.45)	-.863	1.79 (.41)	-1.70
Female	4.32 (.93)	(260)	3.68 (1.21)	(260)	1.90 (.30)	(87.70)	1.86 (.35)	(85.98)	1.78 (.42)	(202)	1.89 (.32)	(91.57)
		***		*								
Sexual Orientation												
Heterosexual	4.14 (.96)	-.140	3.50 (1.20)	-2.10	1.87 (.34)	-.900	1.83 (.38)	-1.21	1.79 (.41)	2.01	1.88 (.33)	1.88
Non-Heterosexual	4.16 (1.10)	(260)	3.95(1.15)	(260)	1.93 (.26)	(216)	1.90 (.30)	(48.31)	1.60 (.50)	(202)	1.70 (.47)	(29.84)
				*								
Relationship Status												
In a relationship	4.20 (8.66)	-1.15	3.63 (1.21)	-1.07	1.90 (.31)	-1.08	1.85 (.36)	-.607	1.76 (.43)	-.243	1.86 (.35)	.032
Not in a relationship	4.05 (1.15)	(263)	3.47 (1.21)	(263)	1.85 (.36)	(187.72)	1.82 (.39)	(208)	1.75 (.44)	(205)	1.86 (.35)	(216)
Education												
University Educated	4.18 (1.04)	.927	3.57 (1.25)	.040	1.86 (.35)	-.758	1.84 (.37)	.126	1.68 (.47)	-4.06	1.82 (.39)	-3.01
Non-university Educated	4.06 (.91)	(263)	3.56 (1.14)	(263)	1.90 (.30)	(219)	1.83 (.38)	(208)	1.90 (.30)	(205)	1.94 (.23)	(206.38)
										***		**

	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Have Child(ren)												
Yes	4.05 (.90)	-.909	3.53 (1.20)	-.301	1.85 (.36)	-.633	1.82 (.38)	-.324	1.78 (.42)	.363	1.96 (.21)	3.56
No	4.17 (1.03)	(263)	3.58 (1.22)	(263)	1.88 (.32)	(219)	1.84 (.37)	(208)	1.75 (.43)	(205)	1.81 (.39)	(212.74)
												***
Previous Fertility												
Consult	4.13 (.96)	-.029	3.79 (1.19)	1.23	1.93 (.25)	1.32	1.81 (.40)	-.448	1.80 (.41)	.573	1.94 (.23)	2.19
Yes	4.14 (1.00)	(263)	3.53 (1.21)	(263)	1.86 (.34)	(47.54)	1.82 (.37)	(208)	1.75 (.43)	(205)	1.84 (.37)	(74.57)
No												*
Use ART												
Yes	4.17 (.90)	.250	1.81 (.39)	1.47	1.90 (.30)	.969	1.87 (.33)	1.66	1.79 (.41)	.490	1.87 (.33)	.357
No	4.14 (1.00)	(242)	1.71 (.46)	(98.51)	1.85 (.36)	(132.22)	1.78 (.42)	(124.85)	1.76 (.43)	(190)	1.86 (.36)	(201)

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Table 18

Multivariate Examination of Factors Associated with Attitudes to Single Women accessing ART Using Multiple Regression (n = 265)

Single Women	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	1.80			1.38			-			-			1.60			1.67		
Age	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.00	.16	.098
Gender	.07	.11	.109	.11	.11	.127	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	.16	.13	.066	-	-	-	-	-	-	-	-	-	-	**-**	-
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.21	.24	**.001**	.12	.16	**.021**
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.02	.02	.818
Importance of Having Children	-	-	-	-	-	-	-	-	-	-	-	-	-.05	-.18	**.007**	-	-.15	**.038**
Knowledge about Fertility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.03	-.03	.707
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R^2	.011			.030			-			-			.091			.085		
Adjusted R^2	.007			.020			-			-			.082			.063		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

University-educated participants and those who considered having children important favoured mandatory counselling, (β= .16, t(212)= 2.32, p= .021, β= -.15, t(212)= -2.09, p= .038, respectively).

3.2.6 Altruistic Surrogacy

3.2.6.1 Preliminary Analyses

Participants who rated importance of having children higher favoured mandatory counselling (r= -.14, p= .034), and Medicare subsidisation (r= -.15, p= .039), and those who rated importance lower, supported mandatory criminal history checks (r= .16, p= .004). Older participants and those with increased fertility knowledge favoured mandatory counselling (r= .16, p= .016, r= .16, p= .017, respectively).

Findings with regards to dichotomous variables are reported in Table 19. Participants with previous fertility consultation experiences supported legalisation (t(263)= 2.11, p= .036), Medicare subsidisation (t(263)= 3.20, p= .002), and mandatory counselling (t(180)= 5.24, p= .000), before accessing altruistic surrogacy. Non-university educated participants supported mandatory counselling and criminal history checks, (t(197.22)= -2.10, p= .037, t(192)= -2.36, p= .019, respectively).

3.2.6.2 Multivariate Analyses

Two IV were entered into the regression equation exploring factors associated with attitudes toward criminal history checks before altruistic surrogacy: education and importance of having children. The total variance explained by the model was 5.7% (R^2= .057, F(2,211)= 6.42, p= .002; Table 20).

Table 19

Preliminary Examination of Factors Associated with Attitudes to Altruistic Surrogacy (n = 265)

Altruistic Surrogacy	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Gender												
Male	3.90 (.89)	-1.58	3.47 (1.10)	.485	1.89 (.32)	-.163	1.85 (.36)	.357	1.84 (.37)	-.787	1.84 (.37)	-1.23
Female	4.09 (.92)	(260)	3.39 (1.18)	(260)	1.89 (.31)	(212)	1.83 (.38)	(185)	1.88 (.33)	(209)	1.91 (.29)	(84.49)
Sexual Orientation												
Heterosexual	4.01 (.91)	-.937	3.40 (1.15)	-.557	1.89 (.32)	-.283	1.82 (.39)	-1.94	1.88 (.32)	1.43	1.91 (.29)	2.08
Non-Heterosexual	4.16 (1.01)	(260)	3.51 (1.15)	(260)	1.90 (.30)	(213)	1.93 (.26)	(51.03)	1.77 (.43)	(209)	1.71 (.46)	(25.28)
Relationship Status												
In a relationship	4.09 (.88)	-1.35	3.44 (1.15)	-.563	1.88 (.33)	-.409	1.81 (.40)	.829	1.86 (3.5)	-1.52	1.87 (.34)	-.726
Not in a relationship	3.94 (.96)	(263)	3.36 (1.16)	(263)	1.90 (.31)	(215)	1.86 (.35)	(186)	1.86 (.35)	(212)	1.90 (.30)	(214)
Education												
University Educated	4.09 (.93)	1.61	3.38 (1.17)	-.459	1.87 (.33)	-1.23	1.85 (.36)	1.19	1.83 (.38)	-2.36	1.86 (.35)	-2.10
Non-university Educated	3.90 (.89)	(263)	3.45 (1.13)	(263)	1.93 (.27)	(157.72)	1.77 (.42)	(186)	1.93 (.26)	(192)	1.94 (.23)	(197.22)
										*		*

Have Child(ren)											
Yes	4.00 (.86)	-.305	3.49 (1.16)	.828	1.89 (.32)	-.121	1.77 (.43)	-1.26	1.85 (.36)	-.133	1.97 (.17)	3.37
No	4.04 (.94)	(263)	3.37 (1.15)	(263)	1.89 (.31)	(215)	1.85 (.36)	(79.72)	1.86 (.35)	(212)	1.85 (.36)	(213.98)
												**
Previous Fertility Consult											
Yes	4.32 (.70)	2.11	3.95 (1.01)	3.20	1.94 (.24)	.992	1.81 (.40)	-.321	1.90 (.30)	.750	2.00 (.00)	5.24
No	3.98 (.94)	(263)	3.31 (1.15)	(263)	1.88 (.33)	(215)	1.83 (.37)	(186)	1.85 (.36)	(212)	1.87 (.34)	(180)
		*		**								***
Use ART											
Yes	4.06 (.90)	-.209	1.72 (.45)	.598	1.89 (.32)	-.366	1.85 (.36)	.901	1.89 (.31)	.707	1.89 (.32)	-.519
No	4.08 (.83)	(242)	1.68 (.47)	(159)	1.91 (.30)	(198)	1.80 (.42)	(169)	1.86 (.35)	(197)	1.91 (.29)	(200)

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Table 20

Multivariate Examination of Factors Associated with Attitudes to Altruistic Surrogacy Using Multiple Regression (n = 265)

Altruistic Surrogacy	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	2.09			2.08			-			-			1.84			1.81		
Age	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.00	.08	.416
Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.10	.14	**.044**	.08	.11	.102
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.02	-.03	.791
Importance of Having Children	-	-	-	-.03	-.11	.158	-	-	-	-	-	-	-.05	-.19	**.004**	-.02	-.09	.246
Knowledge about Fertility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.03	.11	.158
Previous Fertility Consult	-.09	-.12	.079	-.17	-.14	.082	-	-	-	-	-	-	-	-	-	-.05	-.06	.487
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R²	.014			.040			-			-			.057			.070		
Adjusted R²	.010			.030			-			-			.048			.043		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

University-educated participants and those with higher rated importance of having children supported mandatory criminal history checks (β= .14, t(211)= 2.03, p= .044, β= -.19, t(211)= -2.89, p= .004. respectively.

3.2.7 Commercial Surrogacy

3.2.7.1 Preliminary Analyses

Participants who rated importance of having children higher supported Medicare subsidisation (r= -.15, p= .042), mandatory counselling (r= -.19, p= .006) and criminal history checks (r= -.21, p = .002), while participants reporting less importance supported social use (r= .18, p= .015) of commercial surrogacy. Younger participants supported social use (r= -.19, p= .010), while older participants were more agreeable toward mandatory counselling (r= .16, p= .010). More knowledgeable participants favoured legalisation and medical use of commercial surrogacy, (r= -.19, p= .008, r= 1.17, p= .015), respectively.

The findings with regards to dichotomous variables are reported in Table 21. Non-university educated participants supported legalisation (t(215.36)= -1.98, p= .049), Medicare subsidisation (t(263)= -4.13, p= .000) and medical use (t(151.11)= -2.81, p= .006). Participants without children supported social use of commercial surrogacy, (t(82.01)= -2.70, p= .009), while those with children supported mandatory counselling (t(212.93)= 3.23, p= .001).

3.2.7.2 Multivariate Analyses

Two IV were entered into the regression equation examining factors associated with attitudes toward legalisation of commercial surrogacy: education and fertility knowledge. The total variance explained by the model was 6.4% (R^2= .064, F(2,196)= 6.72, p= .002; Table 22). University-educated participants and those with greater fertility knowledge (β=.17, t(196)= 2.45, p= .015, β= -.19, t(196)= -2.69, p= .008, respectively) favoured legalisation.

Table 21

Preliminary Examination of Factors Associated with Attitudes to Commercial Surrogacy (n = 265)

Commercial Surrogacy	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)
Gender												
Male	3.45 (1.04)	-.783	2.92 (1.24)	.273	1.75 (.44)	.492	1.68 (.47)	.208	1.83 (.38)	-1.20	1.86 (.35)	-.977
Female	3.57 (1.24)	(170.9)	2.88 (1.33)	(260)	1.72 (.45)	(198)	1.66 (.47)	(179)	1.89 (.31)	(100.77)	1.91 (.29)	(84.91)
Sexual Orientation												
Heterosexual	3.51 (1.17)	-.672	2.88 (1.28)	-.305	1.71 (.46)	-1.41	1.65 (.48)	-1.99	1.89 (.32)	1.66	1.91 (.28)	2.01
Non-Heterosexual	3.65 (1.34)	(260)	2.95 (1.43)	(260)	1.82 (.39)	(39.91)	1.81 (.40)	(40.58)	1.75 (.44)	(36.93)	1.73 (.45)	(27.76)
Relationship Status												
In a relationship	3.55 (1.14)	-.453	2.84 (1.30)	.638	1.71 (.46)	.386	1.63 (.49)	1.26	1.87 (.34)	-.315	1.91 (.28)	-1.73
Not in a relationship	3.48 (1.25)	(263)	2.95 (1.31)	(263)	1.74 (.44)	(200)	1.71 (.45)	(179.29)	1.86 (.35)	(214)	1.87 (.34)	(165.97)
Education												
University Educated	3.43 (1.26)	-1.98	2.66 (1.29)	-4.13	1.67 (.47)	-2.81	1.66 (.48)	-.337	1.85 (.36)	-1.32	1.87 (.34)	-1.91
Non-university Educated	3.71 (1.00)	(215.36)	3.34 (1.22)	(263)	1.84 (.37)	(151.11)	1.68 (.47)	(181)	1.91 (.30)	(176.91)	1.94 (.23)	(191.33)
		*		***		**						

ATTITUDES TO ASSISTED REPRODUCTIVE TECHNOLOGIES

	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Have Child(ren)												
Yes	3.38 (1.16)	-1.27	2.94 (1.39)	.407	1.63 (.49)	-1.86	1.51 (.51)	-2.70	1.87 (.34)	.084	1.97 (.17)	3.23
No	3.58 (1.19)	(263)	2.87 (1.26)	(263)	1.76 (.43)	(96.58)	1.73 (.45)	(82.01)	1.86 (.34)	(214)	1.86 (.35)	(212.93)
								**				**
Previous Fertility Consult												
Yes	3.34 (1.19)	-1.01	2.87 (1.42)	-.094	1.68 (.48)	-.561	1.43 (.51)	-2.49	1.94 (.25)	1.57	2.00 (.00)	5.12
No	3.55 (1.18)	(263)	2.89 (1.29)	(263)	1.74 (.45)	(200)	1.70 (.46)	(181)	1.85 (.35)	(52.63)	1.87 (.34)	(179.00)
								*				***
Use ART												
Yes	3.51 (1.14)	-.827	1.46 (.50)	-.624	1.72 (.45)	-.884	1.67 (.47)	-.137	1.91 (.28)	1.64	1.90 (.30)	-.233
No	3.64 (1.15)	(242)	1.51 (.50)	(166)	1.78 (.42)	(184)	1.68 (.47)	(165)	1.83 (.38)	(113.26)	1.91 (.29)	(198)

Note. *M* = mean; *SD* = standard deviation; *t* = *t* value; df = degrees of freedom; Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Two IV were entered into the regression equation exploring factors associated with attitudes toward Medicare subsidisation of commercial surrogacy: education and importance of having children. The total variance explained by the model was 12.7% (R^2= .127, $F(2,183)$= 13.27, p= .000; Table 22). University-educated participants and those rating having children more important supported Medicare subsidisation (β=.32, t(183)= 4.68, p =.000, β=-.14, t(183)= -2.08, p= .039, respectively).

Three IV were entered into the regression equation examining factors associated with attitudes toward medical use of commercial surrogacy: education, age and fertility knowledge. The total variance explained by the model was 9.7% (R^2= 0.097, $F(3,197)$= 7.03, p= .000; Table 22). Younger participants, those without a university education and participants with less fertility knowledge supported medical use (β= -.20, t(197)= -2.82, p= .005, β= .20, t(192)= 2.91, p= .004, β= -.14, t(197)= -2.00, p= .047, respectively).

One IV, importance of having children, was entered into the regression equation exploring associations between attitudes toward criminal history checks and commercial surrogacy. The total variance explained by the model was 5.7% (R^2= .057, $F(1,214)$= 7.03, p= .000; Table 22). Participants who viewed having children as more important supported mandatory criminal history checks (β= -.21, t(214)= -3.19, p= .002).

3.2.8 Sex Selection

3.2.8.1 Preliminary Analyses

Participants who considered having children less important supported social use of sex selection (r= .15, p= .038). Those who considered having children more important supported mandatory counselling (r= -.16, p= .020), and criminal history checks (r= -.16, p = .027). Older participants also supported mandatory counselling before sex selection (r= .19, p= .007).

Table 22

Multivariate Examination of Factors Associated with Attitudes to Commercial Surrogacy Using Multiple Regression (n = 265)

Commercial Surrogacy	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	1.72			1.12			1.82			1.25			1.42			2.06		
Age	-	**·**	-	-	**·**	-	-.01	-.20	**.005**	.00	-.10	.336	-	-	-	.00	.09	.362
Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**·**	-
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**·**	-
Education	.16	.17	**.015**	.35	.32	**.000**	.19	.20	**.004**	-	-	-	-	-	-	-	-	-
Have Child	-	**·**	-	-	**·**	-	-	-	-	.07	.07	.548	-	-	-	-.02	-.03	.753
Importance of Having Children	-	-	-	-.05	-.14	**.039**	-	-	-	.04	.11	.190	-.05	-.21	**.002**	-.03	-.14	.066
Knowledge about Fertility	-.08	-.19	**.008**	-	**·**	-	-.06	-.14	**.047**	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	**·**	-	-	**·**	-	-	-	-	.17	.11	.138	-	-	-	-.07	-.08	.268
Use ART	-	**·**	-	-	**·**	-	-	-	-	-	-	-	-	-	-	-	-	-
R^2	.064			.127			.097			.073			.045			.057		
Adjusted R^2	.055			.117			.083			.052			.041			.039		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

The findings with regards to dichotomous variables are reported in Table 23. Non-heterosexual participants supported legalisation (t(260)= -2.11, p= .036), medical use (t(43.60)= -2.47, p= .017), and social use of sex selection (t(184)= -2.11,p=.036), while heterosexual participants supported mandatory criminal history checks (t(31.12)= 2.17, p= .038) and counselling (t(23.46)= 2.12, p= .044). Females (t(85.51)= -2.10, p= .031), participants with children (t(202.30)= 3.31, p= .001) and participants with experience of previous fertility consultation (t(117.02)= 3.75, p= .000) supported mandatory counselling. Non-university educated participants favoured criminal history checks (t(163.10)= -3.45, p= .001).

3.2.8.2 Multivariate Analyses

One IV, sexual orientation, was entered into the regression equation to explore association between attitudes toward legalisation of sex selection. The total variance explained by the model was 2.8% (R^2= .028, F(1,191)= 5.54, p= .020; Table 24). Non-heterosexual participants supported legalisation (β= .17, t(191)= 2.35, p= .020).

One IV was entered into the regression equation to explore association between attitudes toward medical use of sex selection and sexual orientation. The total variance explained by the model was 2.1% (R^2= .021, F(1,208)= 4.39, p= .037; Table 24). Non-heterosexual participants also favoured medical use of sex selection (β= .14, t(208)= 2.10, p= .037).

Three IV were entered into the regression equation examining factors associated with attitudes toward criminal history checks before sex selection: sexual orientation, education and importance of having children. The total variance explained by the model was 9.2% (R^2= .092, F(3,192)= 6.49, p= .000, Table 24). University-educated participants supported mandatory criminal history checks (β= .22, t(192)= 3.26, p= .001).

Table 23

Preliminary Examination of Factors Associated with Attitudes to Sex Selection (n = 265)

Sex Selection	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)
Gender												
Male	3.22 (1.19)	1.92	3.00 (1.24)	2.43	1.72 (.45)	1.16	1.56 (.50)	1.90	1.67 (.47)	-.796	1.75 (.44)	-2.19
Female	2.90 (1.26)	(260)	2.58 (1.32)	(260)	1.64 (.48)	(106.01)	1.40 (.49)	(184)	1.73 (.45)	(195)	1.89 (.32)	(85.51)
Sexual Orientation												
Heterosexual	2.94 (1.23)	-2.11	2.66 (1.30)	-1.70	1.63 (.48)	-2.47	1.42 (.49)	-2.11	1.73 (.45)	2.17	1.87 (.34)	2.12
Non-Heterosexual	3.41 (1.28)	(260)	3.05 (1.37)	(260)	1.83 (.38)	(43.60)	1.64 (.49)	(184)	1.50 (.51)	(31.12)	1.64 (.49)	(23.46)
		*						*		*		*
Relationship Status												
In a relationship	3.03 (1.28)	-.612	2.73 (1.38)	-.237	1.67 (.47)	-.346	1.44 (.50)	.227	1.67 (.47)	1.20	1.85 (.36)	-.353
Not in a relationship	2.94 (1.21)	(263)	2.69 (1.22)	(235.34)	1.64 (.48)	(211)	1.46 (.50)	(185)	1.75 (.44)	(191.02)	1.83 (.38)	(209)
Education												
University Educated	3.00 (1.26)	.138	2.64 (1.28)	-1.28	1.68 (.47)	.832	1.43 (.50)	-.572	1.63 (.48)	-3.45	1.82 (.39)	-1.60
Non-university Educated	2.98 (1.24)	(263)	2.85 (1.37)	(263)	1.62 (.49)	(211)	1.48 (.50)	(185)	1.85 (.36)	(163.10)	1.90 (.31)	(163.10)
										**		

Have Child(ren)												
Yes	**2.85 (1.27)**	**-1.23**	**2.63 (1.37)**	**-.618**	**1.61 (.49)**	**-.986**	**1.41 (.50)**	**-.636**	**1.70 (.46)**	**.003**	**1.94 (.24)**	**3.31**
No	**3.05 (1.24)**	**(263)**	**2.74 (1.29)**	**(263)**	**1.68 (.47)**	**(211)**	**1.46 (.50)**	**(185)**	**1.70 (.46)**	**(197)**	**1.80 (.41)**	**(202.30)**
												**
Previous Fertility Consult												
Yes	2.68 (1.25)	-1.65	2.58 (1.31)	-.662	1.69 (.47)	.394	1.33 (.48)	-1.20	1.69 (.47)	-.134	1.97 (.17)	3.75
No	3.04 (1.24)	(263)	2.73 (1.32)	(263)	1.65 (.48)	(211)	1.46 (.50)	(30.77)	1.71 (.46)	(197)	1.82 (.39)	(117.02)
												***
Use ART												
Yes	2.96 (1.20)	-.159	1.38 (.49)	-.073	1.62 (.49)	-.792	1.42 (.50)	.376	1.74 (.44)	.583	1.86 (.35)	.507
No	2.99 (1.30)	(242)	1.39 (.49)	(180)	1.68 (.47)	(192)	1.39 (.49)	(168)	1.70 (.46)	(182)	1.83 (.38)	(194)

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Seven IV were entered into the regression equation exploring factors associated with attitudes toward mandatory counselling before sex selection: gender, sexual orientation, age, having children, importance of having children, previous fertility consultation and fertility knowledge. The total variance explained by the model was 10.8% (R^2= .108, F(7,197)= 3.42, p= .002; Table 24). Females and those who identified as non-heterosexual supported mandatory counselling (β= .18, t(197)= 2.55, p= .012, β= -.14, t(197)= -2.02, p= .045, respectively).

3.2.9 Genetic Testing

3.2.9.1 Preliminary Analyses

Those reporting higher importance of having children favoured mandatory counselling and criminal history checks before genetic testing (r= -.15, p= .030, r= -.19, p = .007, respectively). Older participants also supported mandatory counselling (r= .24, p= .000).

The findings with regards to dichotomous variables are reported in Table 25. Non-university educated participants supported legalisation (t(263)= -.789, p= .020) and mandatory criminal history checks (t(173.04)= -3.61, p= .000) before genetic testing. Females supported legalisation and Medicare subsidisation (t(162.36)= -2.16, p= .033, t(260)= -2.37, p= .018, respectively). Non-heterosexual participants supported mandatory criminal history checks (t(34.16)= 2.04, p= .050) and counselling (t(26.28)= 2.14, p= .042), while heterosexual participants supported Medicare subsidisation (t(52.45)= -2.27, p= .028), medical use (t(190)= -4.31, p= .000) and social use (t(95.25)= -3.95, p= .000), of genetic testing.

3.2.9.2 Multivariate Analyses

Four IV were entered into the regression equation exploring factors associated with attitudes toward Medicare subsidisation before genetic testing: gender, sexual orientation, relationship status and previous fertility consult.

Table 24

Multivariate Examination of Factors Associated with Attitudes to Sex Selection Using Multiple Regression (n = 265)

Sex Selection	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	*β*	p	B	*β*	p	B	*β*	p	B	*β*	p	B	*β*	p	B	*β*	p
Constant	1.24			-			1.43			1.14			1.71			1.77		
Age	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.00	.10	.342
Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.14	.18	**.012**
Sexual Orientation	.25	.17	**.020**	-	-	-	.20	.14	**.037**	.18	.13	.095	-.18	-.14	.058	-.18	-.14	**.045**
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.22	.22	**.001**	-	-	-
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.04	-.05	.663
Importance of Having Children	-	-	-	-	-	-	-	-	-	.04	.12	.115	-.04	-.12	.090	-.01	-.05	.534
Knowledge about Fertility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.03	.09	.226
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.02	-.02	.769
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R²	.028			-			.021			.037			.092			.108		
Adjusted R²	.023			-			.016			.026			.078			.077		

Note. B = unstandardised beta; *β* = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

The total variance explained by the model was 5.7% (R^2= .057, $F_{(4,200)}$= 3.03, p= .019; Table 26). Non-heterosexual participants and those who previously experienced fertility consultations favoured Medicare subsidisation (β=.14, $t_{(200)}$= 2.05, p= .042, β= -.15, $t_{(200)}$= 2.05, p= -.030, respectively).

Two IV were entered into the regression equation examining factors associated with attitudes toward medical use of genetic testing: sexual orientation and previous fertility consult. The total variance explained by the model was 3.3% (R^2= .033, $F_{(2,220)}$= 3.70, p= .026; Table 26). Non-heterosexual participants and those who previously sought fertility consultation supported medical use of genetic testing (β= .14, $t_{(220)}$= 2.04, p= .043, β= -.14, $t_{(220)}$= -2.06, p= .040, respectively).

One IV, sexual orientation, was entered into the regression equation to explore association between attitudes toward social use of genetic testing. The total variance explained by the model was 2.0% (R^2= .029, $F_{(1,189)}$= 5.71, p= .018; Table 26). Non-heterosexual participants supported social use of genetic testing (β= .17, $t_{(189)}$= 2.39, p= .018).

Three IV were entered into the regression equation examining factors associated with attitudes toward mandatory criminal history checks before genetic testing: sexual orientation, education and importance of having children. The total variance explained by the model was 9.5% (R^2= .095, $F_{(3,202)}$= 7.08, p= .000; Table 26). University-educated participants and those who considered having children more important supported mandatory criminal history checks (β=.22, $t_{(202)}$= 3.30, p= .001, β= -1.54, $t_{(202)}$= -2.23, p= .027).

Table 25

Preliminary Examination of Factors Associated with Attitudes to Genetic Testing (n = 265)

Genetic Testing	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)
Gender												
Male	3.94 (.86)	-2.16	3.46 (1.10)	-2.37	1.88 (.33)	-1.10	1.82 (.39)	.264	1.67 (.48)	-.433	1.79 (.41)	-1.01
Female	4.20 (.98)	(162.36)	3.83 (1.15)	(260)	1.93 (.25)	(83.98)	1.80 (.40)	(190)	1.70 (.46)	(203)	1.84 (.36)	(207)
		*		*								
Sexual Orientation												
Heterosexual	4.09 (.92)	-1.41	3.67 (1.15)	-2.27	1.91 (.29)	-4.31	1.78 (.41)	-3.95	1.71 (.46)	2.04	1.85 (.36)	2.14
Non-Heterosexual	4.32 (.94)	(260)	4.08 (1.01)	(52.45)	2.00 (.00)	(190)	1.97 (.18)	(95.25)	1.50 (.51)	(34.16)	1.63 (.50)	(26.28)
				*		***		***		*		*
Relationship Status												
In a relationship	4.16 (.90)	-.861	3.86 (1.09)	-2.20	1.94 (.24)	-1.09	1.83 (.37)	-.953	1.65 (.48)	1.14	1.83 (.37)	-.379
Not in a relationship	4.06 (1.00)	(263)	3.54 (1.20)	(263)	1.90 (.31)	(178.21)	1.78 (.42)	(192)	1.72 (.45)	(205)	1.81 (.39)	(209)
				*								
Education												
University Educated	4.22 (.93)	2.33	3.75 (1.17)	.508	1.91 (.28)	-.466	1.82 (.38)	.691	1.61 (.49)	-3.61	1.80 (.41)	-1.71
Non-university Educated	3.93 (.94)	(263)	3.67 (1.11)	(263)	1.93 (.25)	(224)	1.78 (.42)	(192)	1.83 (.38)	(173.04)	1.88 (.32)	(165.18)
		*								***		

	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Have Child(ren)												
Yes	4.05 (.93)	-.789	3.77 (1.11)	.440	1.94 (.24)	.677	1.83 (.38)	.377	1.71 (.46)	.494	1.94 (.24)	3.77
No	4.15 (.95)	(263)	3.70 (1.16)	(263)	1.91 (.28)	(224)	1.80 (.40)	(192)	1.67 (.47)	(205)	1.77 (.42)	(203.41) ***
Previous Fertility Consult												
Yes	4.37 (.82)	1.76	4.13 (.84)	3.02	2.00 (.00)	4.44	1.78 (.42)	-.345	1.72 (.46)	.533	1.91 (.29)	1.80
No	4.08 (.96)	(263)	3.66 (1.18)	(69.93) *	1.91 (.29)	(192) ***	1.81 (.39)	(192)	1.67 (.47)	(205)	1.81 (.40)	(59.72)
Use ART												
Yes	4.11 (.95)	.116	1.82 (.38)	.029	1.93 (.27)	.179	1.81 (.40)	.627	1.72 (.45)	.497	1.83 (.38)	.023
No	4.09 (.93)	(242)	1.82 (.39)	(189)	1.92 (.28)	(204)	1.77 (.43)	(173)	1.68 (.47)	(190)	1.83 (.38)	(194)

Note. M = mean; SD = standard deviation; $t = t$ value; df = degrees of freedom; Sample $n = 265$ for all except analyses that did not include gender. Where gender was included, $n = 262$ as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Table 26

Multivariate Examination of Factors Associated with Attitudes to Genetic Testing Using Multiple Regression (n = 265)

Genetic Testing	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	2.02			1.74			2.00			1.60			1.67			1.92		
Age	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.01	.18	.077
Gender	-.03	-.05	.470	.06	.07	.314	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	.16	.14	**.042**	.10	.14	**.043**	.18	.17	**.018**	-.15	-.11	.124	-.14	-.12	.101
Relationship Status	-	-	-	.06	.08	.268	-	-	-	-	-	-	-	-	-	-	-	-
Education	-.03	-.05	.434	-	-	-	-	-	-	-	-	-	.22	.22	**.001**	-	-	-
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.04	-.04	.672
Importance of Having Children	-	-	-	-	-	-	-	-	-	-	-	-	-.05	-.15	**.027**	-.02	-.06	.467
Knowledge about Fertility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	-	-	-.17	-.15	**.030**	-.10	-.14	**.040**	-	-	-	-	-	-	-	-	-
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R²	.005			.057			.033			.029			.095			.083		
Adjusted R²	-.004			.038			.024			.024			.082			.064		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

3.2.10 Three-person IVF

3.2.10.1 Preliminary Analyses

Participants who rated having children important supported mandatory criminal history checks and counselling (r= -.20, p= .006, r= -.15, p= .030, respectively), while those who considered having children less important supported legalisation and social use of three-person IVF (r= .15, p= .030; r= .17, p = .019, respectively). Fertility knowledgeable (r= -.16, p= .025) and younger participants (r= -.15, p= .037), supported legalisation, while older participants supported mandatory counselling (r= .24, p= .000).

The findings with regards to dichotomous variables are reported in Table 27. Participants who would use ART, supported legalisation of three-person IVF (t(194.84)= -3.09, p= .002). Non-heterosexual participants supported medical (t(63.28)= -2.83, p= .006) and social use (t(45.54)= -2.66, p= .011), while heterosexual participants favoured mandatory counselling (t(29.39)= .2.58, p= .015). Female participants supported social use of three-person IVF, (t(123.56)= 3.03, p= .003). Non-university educated participants supported mandatory criminal history checks and counselling (t(195)= -3.14, p= .002, t(208.83)= -3.26, p= .001, respectively). Participants who previously sought fertility consultation supported mandatory counselling (t(104.64)= 1.97, p= .001).

3.2.10.2 Multivariate Analyses

One IV, sexual orientation, was entered into the regression equation exploring the association between attitudes toward medical use of three-person IVF. The total variance explained by the model was 1.9% (R^2= .019, F(1,207)= 4.04, p= .046; Table 28). Heterosexual participants supported medical use of three-person IVF (β= .14, t(207)= 2.01, p= .046).

Table 27

Preliminary Examination of Factors Associated with Attitudes to Three-Person IVF (n = 265)

Three-Person IVF	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)
Gender												
Male	3.78 (.92)	.715	3.47 (1.10)	1.54	1.85 (.36)	1.30	1.86 (.35)	3.03	1.72 (.45)	-.799	1.78 (.42)	-1.70
Female	3.68 (1.19)	(185)	3.22 (1.29)	(260)	1.78 (.42)	(208)	1.67 (.47)	(123.56)	1.77 (.42)	(192)	1.88 (.32)	(86.08)
								**				
Sexual Orientation												
Heterosexual	3.69 (1.10)	-1.75	3.25 (1.24)	-1.71	1.78 (.42)	-2.83	1.70 (.46)	-2.66	1.77 (.42)	1.68	1.88 (.33)	2.58
Non-Heterosexual	4.03 (1.01)	(260)	3.62 (1.19)	(260)	1.94 (.25)	(63.28)	1.89 (.32)	(45.54)	1.61 (.50)	(33.71)	1.63 (.49)	(29.39)
						**		*				*
Relationship Status												
In a relationship	3.72 (1.14)	-.098	3.34 (1.29)	-.642	1.79 (.41)	.363	1.70 (.46)	.812	1.75 (.44)	.047	1.86 (.35)	-.562
Not in a relationship	3.71 (1.08)	(263)	3.24 (1.17)	(263)	1.81 (.39)	(210)	1.76 (.43)	(180)	1.75 (.43)	(195)	1.84 (.37)	(213)
Education												
University Educated	3.73 (1.54)	.289	3.23 (1.25)	-1.31	1.79 (.41)	-.612	1.72 (.45)	-.040	1.69 (.47)	-3.14	1.80 (.40)	-3.26
Non-university	3.69 (1.03)	(263)	3.44 (1.21)	(263)	1.83 (.38)	(210)	1.73 (.45)	(180)	1.87 (.34)	(195)	1.94 (.23)	(208.83)
Educated										**		**

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Have Child(ren)												
Yes	3.65 (1.08)	-.645	3.37 (1.22)	.591	1.78 (.42)	-.502	1.68 (.47)	-.789	1.78 (.42)	.615	1.97 (.17)	4.53
No	3.74 (1.13)	(263)	3.27 (1.25)	(263)	1.81 (.39)	(210)	1.74 (.44)	(180)	1.74 (.44)	(195)	1.80 (.40)	(211.61)
												***
Previous Fertility												
Consult	3.66 (1.15)	-.331	3.42 (1.22)	.662	1.89 (.32)	1.45	1.58 (.51)	-1.35	1.79 (.42)	.453	1.97 (.172)	3.49
Yes	3.72 (1.11)	(263)	3.28 (1.24)	(263)	1.79 (.41)	(39.53)	1.74 (.44)	(21.26)	1.75 (.44)	(195)	1.83 (.38)	(104.64)
No												**
Use ART												
Yes	3.54 (1.13)	-3.09	1.63 (.48)	-1.29	1.77 (.42)	-1.57	1.67 (.47)	-1.41	1.79 (.41)	.698	1.86 (.35)	.046
No	3.98 (.99)	(194.84)	1.73 (.45)	(127.13)	1.86 (.35)	(168.65)	1.77 (.42)	(137.10)	1.75 (.44)	(180)	1.86 (.35)	(142.76)
		**										

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Three IVs were entered into the regression equation examining factors associated with attitudes toward social use of three-person IVF: gender, sexual orientation and importance of having children. The total variance explained by the model was 9% (R^2= .090, F(3,174)= 5.76, p= .001; Table 28). Males supported social use of three-person IVF, (β= -.23, t(174)= -3.12, p= .002).

Two IVs were entered into the regression equation exploring factors associated with attitudes toward criminal history checks before three-person IVF: education and importance of having children.

The total variance explained by the model was 7.6% (R^2= .076, F(2,194)= 8.03, p= .000; Table 28). University-educated participants supported mandatory criminal history checks (β= .20, t(194)= 2.83, p= .005). Participants rating having children important supported criminal history checks (β= -.19, t(205)= -.490, p= .006).

Six IV were entered into the regression equation exploring factors associated with attitudes toward mandatory counselling before three-person IVF: Sexual orientation, education, age, having children, previous fertility consultation and importance of having children. The total variance explained by the model was 12.4% (R^2 = .124, F(6,205)= 4.83, p= .000; Table 28). University-educated and heterosexual participants supported mandatory counselling (β=.16, t(205)= 2.29, p= .023, β= -.17, t(205)= -2.41, p= .017, respectively).

3.2.11 Embryo Donation

3.2.11.1 Preliminary Analyses

Younger participants supported legalisation (r= -.13, p= .047), medical use (r= -.21, p= .002), and social use of embryo donation (r= -.16, p= .026), while older participants favoured mandatory counselling (r= .28, p= .000).

Table 28

Multivariate Examination of Factors Associated with Attitudes to Three-Person IVF Using Multiple Regression (n = 265)

Three-Person IVF	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	1.71			-			1.63			1.82			1.65			1.99		
Age	.00	-.05	.519	-	-	-	-	-	-	-	-	-	-	-	-	.00	.13	.175
Gender	-	-	-	-	-	-	-	-	-	-.23	-.23	**.002**	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	.16	.14	**.046**	.17	.14	.071	-	-	-	-.18	-.17	**.017**
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.18	.20	**.005**	.12	.16	**.023**
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.03	-.04	.734
Importance of Having Children	.04	.13	.091	-	-	-	-	-	-	.04	.13	.087	-.06	-.19	**.006**	-.01	-.04	.625
Knowledge about Fertility	-.04	-.10	.153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.07	-.07	.304
Use ART	.12	.15	.057	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R²	.073			-			.019			.090			.076			.124		
Adjusted R²	.053			-			.014			.075			.067			.098		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

Participants who considered having children important supported medical use (r= -.15, p= .029) and criminal history checks (r= -.15, p= .036). Participants with less fertility knowledge supported mandatory counselling (r= .16, p= .021).

The findings with regards to dichotomous variables are reported in Table 29. Females supported the legalisation of embryo donation, (t(158.15)= -2.19, p= .030). Non-heterosexual participants supported medical (t(185)= -4.21, p= .000) and social use (t(81.91)= -3.06, p= .003) of embryo donation. Non-university educated participants supported mandatory criminal history checks (t(183.08)= -3.06, p= .003) and counselling (t(186.62)= -2.30, p= .023).

Participants who experienced fertility consultations favoured mandatory counselling (t(78.50)= 2.52, p= .014) and Medicare subsidisation (t(263)= 2.28, p= .024), of embryo donation. Participants with children supported mandatory counselling (t(212.34)= 4.73, p= .000).

3.2.11.2 Multivariate Analyses

Two IV were entered into the regression equation exploring factors associated with attitudes toward legalisation of embryo donation: gender and age. The total variance explained by the model was 1.8% (R^2= .018, F(2,223)= 2.03, p= .134; Table 30). Younger participants supported legalisation (β= -.03, t(223)= -1.96, p= -.049).

Three IV were entered into the regression equation examining factors associated with attitudes toward medical use of embryo donation: sexual orientation, age and importance of having children. The total variance explained by the model was 10.7% (R^2= .107, F(3,214)= 8.52, p= .000). Younger participants and those who considered having children important favoured medical use (β= -.23, t(214)= -3.49, p= .001, β= -.25, t(214)= -3.61, p= .000, respectively).

Table 29

Preliminary Examination of Factors Associated with Attitudes to Embryo Donation (n = 265)

Embryo Donation	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Gender												
Male	3.97 (.87)	-2.19	3.56 (.95)	-.722	1.92 (.28)	-.301	1.87 (.35)	.411	1.73 (.45)	-.767	1.77 (.43)	-1.80
Female	4.24 (.95)	(158.15)	3.67 (1.12)	(260)	1.93 (.26)	(216)	1.84 (.37)	(195)	1.78 (.41)	(205)	1.88 (.33)	(87.89)
		*										
Sexual Orientation												
Heterosexual	4.15 (.88)	-.928	3.61 (1.06)	-1.36	1.92 (.27)	-4.03	1.83 (.38)	-3.06	1.78 (.42)	1.47	1.86 (.35)	1.44
Non-Heterosexual	4.30 (1.10)	(260)	3.86 (1.03)	(260)	2.00 (.00)	(185)	1.97 (.18)	(81.91)	1.63 (.49)	(31.90)	1.72 (.46)	(27.85)
						***		**				
Relationship Status												
In a relationship	4.16 (.94)	-.023	3.73 (1.05)	-1.69	1.94 (.24)	-.625	1.84 (.37)	.562	1.74 (.44)	.903	1.86 (.34)	-.975
Not in a relationship	4.16 (.93)	(263)	3.51 (1.08)	(263)	1.92 (.28)	(219)	1.87 (.34)	(197)	1.79 (.41)	(207)	1.82 (.39)	(215)
Education												
University Educated	4.23 (.92)	1.60	3.60 (1.07)	-.883	1.93 (.26)	-.078	1.85 (.36)	.046	1.70 (.46)	-3.06	1.81 (.40)	-2.30
Non-university Educated	4.03 (.96)	(263)	3.72 (1.07)	(263)	1.93 (.26)	(219)	1.85 (.36)	(197)	1.87 (.34)	(183.08)	1.92 (.28)	(186.62)
										**		*

	M (SD)	t/(df)	M (SD)	t/(df)	M (SD)	t/(df)	M (SD)	t/(df)	M (SD)	t/(df)	M (SD)	t/(df)
Have Child(ren)												
Yes	4.08 (.93)	-.981	3.75 (1.12)	1.08	1.90 (.30)	-.917	1.79 (.41)	-1.29	1.77 (.43)	.126	1.97 (.17)	4.73
No	4.20 (.94)	(263)	3.59 (1.05)	(263)	1.94 (.24)	(219)	1.87 (.34)	(197)	1.76 (.43)	(207)	1.78 (.41)	(212.34)
												***
Previous Fertility												
Consult	4.26 (.95)	.719	4.00 (.986)	2.28	1.97 (.17)	1.37	1.83 (.38)	-.231	1.77 (.43)	.081	1.94 (.23)	2.52
Yes	4.15 (.93)	(263)	3.58 (1.07)	(263)	1.92 (.27)	(63.24)	1.85 (.36)	(197)	1.76 (.43)	(207)	1.82 (.38)	(78.50)
No				*								*
Use ART												
Yes	4.17 .89	-.224	1.86 (.35)	.013	1.96 (.19)	1.46	1.86 (.35)	.693	1.80 (.41)	.518	1.85 (.36)	.317
No	4.20 .89	(242)	1.80 (.40)	(167)	1.91 (.30)	(109.86)	1.82 (.39)	(179)	1.76 (.43)	(191)	1.84 (.37)	(201)

Note. *M* = mean; *SD* = standard deviation; *t* = *t* value; df = degrees of freedom; Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Two IV were entered into the regression equation exploring factors associated with attitudes toward criminal history checks before embryo donation: education and importance of having children. The total variance explained by the model was 5.6% (R^2= .056, F(2,206)= 6.08, p= .003; Table 30). University-educated participants (β= .19, t(206)= 2.75, p= .007), and those who considered having children more important (β= -.14, t(206)= -2.09, p= .038), supported criminal history checks.

Five IV were entered into the regression equation examining factors associated with attitudes toward mandatory counselling before embryo donation: education, age, have children, fertility consultation and fertility knowledge. The total variance explained by the model was 10.3% (R^2= .103, F(5,210)= 4.85, p= .000; Table 30). Older participants supported mandatory counselling (β= .22, t(210)= 2.42, p= .016).

3.2.12 Posthumous Gamete Retrieval

3.2.12.1 Preliminary Analyses

Older participants supported counselling before posthumous gamete retrieval (r= .21, p= .002). The findings with regards to dichotomous variables are reported in Table 31.

Participants who had previously experienced fertility consultations supported legalisation and Medicare subsidisation of posthumous gamete retrieval (t(263)= 2.10, p= .037, t(263)= 2.14, p= .033, respectively). University-educated participants supported mandatory criminal history checks (t(173.72)= -2.51, p= .013), while non-university educated participants supported mandatory counselling (t(17.05)= 2.84, p= .000). Participants with children also supported mandatory counselling (t(205.1)= 2.84, p= .005). Non-heterosexual participants favoured medical use of posthumous gamete retrieval (t(211)= -2.05, p= .047).

Table 30

Multivariate Examination of Factors Associated with Attitudes to Embryo Donation Using Multiple Regression (n = 265)

Embryo Donation	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	2.04			-			2.06			1.85			1.63			1.45		
Age	.00	-.13	**.049**	-	-	-	-.01	-.23	**.001**	.00	-.14	.052	-	▪	-	.01	.22	**.016**
Gender	-.02	-.03	.670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	.10	.13	.052	.11	.11	.142	-	-	-	-	-	-
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.17	.19	**.007**	.07	.09	.177
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	▪	-	-.03	-.04	.662
Importance of Having Children	-	-	-	-	-	-	-.04	-.25	**.000**	-	-	-	-.04	-.14	**.038**	-	-	-
Knowledge about Fertility	-	-	-	-	-	-	-	-	-	-	-	-	-	▪	-	.04	.12	.093
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	▪	-	.01	.01	.906
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	▪	-	-	-	-
R²	.018			-			.107			.038			.056			.103		
Adjusted R²	.009			-			.094			.028			.047			.082		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

3.2.12.2 Multivariate Analyses

One IV, education, was entered into the regression equation exploring association between attitudes toward mandatory criminal history checks before posthumous gamete retrieval. The total variance explained by the model was 2.7% (R^2= .027, F(1,201)= 4.48, p= .020; Table 32). University-educated participants supported mandatory criminal history checks (β=.16, t(201)= 2.34, p= .020).

Three IV were entered into the regression equation examining factors associated with attitudes toward mandatory counselling before posthumous gamete retrieval: education, age and have children. The total variance explained by the model was 7.3% (R^2= .073, F(3,216)= 5.65, p= .001; Table 32). University-educated and older participants favoured mandatory counselling (β= .17, t(216)= 2.58, p= .011, β=.21, t(216)= 2.22, p= .028, respectively).

3.2.13 Reciprocal IVF

3.2.13.1 Preliminary Analyses

Younger participants supported medical use (r= -.14, p= .047), while older participants favoured mandatory counselling (r= .22, p= .001) before reciprocal IVF. Participants that considered having children important supported mandatory criminal history checks (r= -.15, p= .035).

The findings with regards to dichotomous variables are reported in Table 33. Non-heterosexual participants supported legalisation (t(260)= -2.82, p= .005), Medicare subsidisation (t(260)= -2.41, p= .017), medical (t(69.92)= -2.92, p= .005) and social use (t(72.13)= -2.74, p= .008), of reciprocal IVF, while heterosexual participants supported mandatory counselling (t(29.87)= 2.09, p= .045).

Table 31

Preliminary Examination of Factors Associated with Attitudes to Posthumous Gamete Retrieval (n = 265)

Posthumous Gamete Retrieval	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)	M (SD)	*t* (df)
Gender												
Male	3.45 (1.00)	-.389	3.33 (1.12)	1.12	1.83 (.38)	1.64	1.73 (.45)	1.25	1.73 (.45)	-.579	1.82 (.39)	-1.16
Female	3.51 (1.25)	(260)	3.14 (1.33)	(260)	1.72 (.45)	(115.95)	1.64 (.48)	(92.00)	1.77 (.42)	(199)	1.88 (.32)	(93.77)
Sexual Orientation												
Heterosexual	3.49 (1.17)	-.612	3.18 (1.26)	-.770	1.74 (.44)	-2.05	1.65 (.48)	-.806	1.76 (.43)	1.33	1.87 (.33)	1.13
Non-Heterosexual	3.62 (1.26)	(260)	3.35 (1.34)	(260)	1.89 (.33)	(211)	1.74 (.45)	(177)	1.63 (.49)	(32.39)	1.78 (.42)	(30.74)
						*						
Relationship Status												
In a relationship	3.52 (1.12	-.397	3.31 (1.30)	-1.61	1.78 (.42)	-1.01	1.69 (.46)	-.894	1.73 (.44)	.605	1.89 (.32)	-1.23
Not in a relationship	3.46 (1.16)	(263)	3.05 (1.22)	(263)	1.72 (.45)	(177.21)	1.63 (.49)	(180)	1.77 (.42)	(201)	1.83 (.38)	(178.91)
Education												
University Educated	3.47 (1.22)	-.512	3.11 (1.29)	-1.66	1.74 (.44)	-.786	1.66 (.47)	-.034	1.70 (.46)	-2.51	1.82 (.39)	-3.55
Non-university Educated	3.55 (1.12)	(263)	3.38 (1.22)	(263)	1.79 (.41)	(212)	1.67 (.48)	(180)	1.85 (.36)	(173.72)	1.96 (.20)	(217.05)
										*		***

	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Have Child(ren)												
Yes	3.56 (1.23)	-.526	3.37 (1.27)	1.40	1.73 (.45)	-.565	1.67 (.47)	.149	1.74 (.44)	-.153	1.94 (.23)	2.84
No	3.47 (1.17)	(263)	3.13 (1.27)	(263)	1.76 (.43)	(212)	1.66 (.48)	(180)	1.75 (.43)	(201)	1.83 (.38)	(205.08)
												**
Previous Fertility												
Consult	3.87 (1.12)	2.10	3.61 (1.26)	2.14	1.84 (.37)	1.47	1.65 (.49)	-.137	1.73 (.45)	-.210	1.91 (.28)	1.10
Yes	3.44 (1.17)	(263)	3.13 (1.26)	(263)	1.74 (.44)	(48.09)	1.67 (.47)	(180)	1.75 (.43)	(201)	1.85 (.35)	(56.03)
No		*		*								
Use ART												
Yes	3.51 (1.18)	-.108	1.66 (.48)	1.38	1.76 (.43)	.403	1.69 (.46)	1.23	1.76 (.43)	.000	1.87 (.33)	-.002
No	3.52 (1.14)	(222)	1.55 (.50)	(122.94)	1.74 (.44)	(196)	1.60 (.50)	(121.89)	1.76 (.43)	(185)	1.87 (.34)	(203)

Note. M = mean; SD = standard deviation; t = t value; df = degrees of freedom; Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Table 32

Multivariate Examination of Factors Associated with Attitudes to Posthumous Gamete Retrieval Using Multiple Regression (n = 265)

Posthumous Gamete Retrieval	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	P	B	β	p	B	β	p	B	β	p
Constant	1.98			1.93			1.59			-			1.55			1.50		
Age	-	-	-	-	-	-	-	-	-	-	-	-	-	**·**	-	.01	.21	**.028**
Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	-	-	-	-	-	-	.15	.11	.104	-	-	-	-	-	-	-	-	-
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	.15	.16	**.020**	.13	.17	**.011**
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	**·**	-	.02	.03	795
Importance of Having Children	-	-	-	-	-	-	-	-	-	-	-	-	-	**·**	-	-	-	-
Knowledge about Fertility	-	-	-	-	-	-	-	-	-	-	-	-	-	**·**	-	-	-	-
Previous Fertility Consult	-.12	-.10	.175	-.18	-.13	.079	-	-	-	-	-	-	-	**·**	-	-	-	-
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	**·**	-	-	-	-
R²	.010			.017			.012			-			.027			.073		
Adjusted R²	.004			.011			.008			-			.022			.060		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significant values are bolded.

University-educated participants supported mandatory criminal history checks ($t(184.94)= -3.33$, p= .001) and counselling ($t(194.03)= -2.40$, p= .017). Participants with children also supported mandatory counselling ($t(191.03)= 2.70$, p= .008).

3.2.13.2 Multivariate Analyses

Two IV were entered into the regression equation exploring factors associated with attitudes toward mandatory criminal history checks before reciprocal IVF: education and importance of having children. The total variance explained by the model was 6.3% ($R^2=$ .063, $F(2,205)= 6.88$, p= .001; Table 34). University-educated participants and those who considered having children important favoured criminal history checks ($\beta=.20$, $t(205)= 3.02$, p= .003, $\beta= -.15$, $t(205)= -2.14$, p= .033, respectively).

Three IV were entered into the regression equation to explore factors associated with attitudes toward mandatory counselling before reciprocal IVF: having children, sexual orientation and age. The total variance explained by the model was 6.3% ($R^2= .063$, $F(2,205)= 6.88$, p= .001; Table 34). Heterosexual ($\beta= -.14$, $t(211)= -2.05$, p= .042) and older participants ($\beta= .19$, $t(211)= 2.00$, p= .046), supported mandatory counselling.

Table 33

Preliminary Examination of Factors Associated with Attitudes to Reciprocal IVF (n = 265)

Reciprocal IVF	Legal		Medicare		Medical		Social		Criminal History		Counselling	
Factors	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)	M (SD)	t (df)
Gender												
Male	3.82 (.96)	-1.79	3.40 (1.11)	-1.47	1.82 (.39)	-.863	1.90 (.30)	1.24	1.75 (.44)	-.222	1.84 (.37)	-.266
Female	4.08 (1.09)	(260)	3.63 (1.16)	(260)	1.86 (.34)	(212)	1.83 (.37)	(108.39)	1.76 (.43)	(203)	1.85 (.36)	(213)
Sexual Orientation												
Heterosexual	3.94 (1.07)	-2.82	3.49 (1.13)	-2.41	1.84 (.37)	-2.92	1.84 (.37)	-2.74	1.77 (.42)	1.90	1.87 (.34)	2.09
Non-Heterosexual	4.46 (.80)	(260)	3.97 (1.04)	(260)	1.97 (.19)	(69.92)	1.96 (.19)	(72.13)	1.59 (.50)	(34.79)	1.67 (.48)	(29.87)
		**		*		**		**				*
Relationship Status												
In a relationship	4.04 (1.03)	-.500	3.67 (1.11)	-1.74	1.87 (.34)	-.857	1.86 (.35)	-.342	1.72 (.45)	1.14	1.85 (.36)	-.186
Not in a relationship	3.97 (1.11)	(263)	3.42 (1.83)	(263)	1.83 (.38)	(214)	1.84 (.37)	(182)	1.79 (.41)	(199.60)	1.84 (.37)	(216)
Education												
University Educated	4.13 (1.07)	2.60	3.57 (1.17)	.118	1.88 (.33)	1.33	1.88 (.33)	1.44	1.69 (.47)	-3.33	1.81 (.40)	-2.40
Non-university Educated	3.78 (1.01)	(263)	3.55 (1.10)	(263)	1.80 (.40)	(118.14)	1.79 (.41)	(91.52)	1.87 (.34)	(184.94)	1.92 (.28)	(194.03)
		**								**		*

	M (SD)	t/df	M (SD)	t/df	M (SD)	t/df	M (SD)	t/df	M (SD)	t/df	M (SD)	t/df
Have Child(ren)												
Yes	3.90 (1.02)	-1.13	3.56 (1.15)	-.049	1.81 (.40)	-.969	1.81 (.40)	-1.00	1.77 (.42)	.447	1.93 (.26)	2.70
No	4.06 (1.08)	(263)	3.56 (1.14)	(263)	1.87 (.34)	(89.84)	1.87 (.34)	(182)	1.74 (.44)	(206)	1.81 (.40)	(191.03) **
Previous Fertility Consult												
Yes	3.89 (1.13)	-.731	3.55 (1.33)	-.056	1.89 (.32)	.652	1.73 (.46)	-1.42	1.76 (.44)	.115	1.86 (.35)	.308
No	4.03 (1.05)	(263)	3.56 (1.11)	(263)	1.85 (.36)	(214)	1.87 (.34)	(24.21)	1.75 (.44)	(206)	1.84 (.37)	(216)
Use ART												
Yes	4.00 (1.03)	-.416	1.81 (.40)	1.39	1.88 (.33)	1.16	1.88 (.33)	1.16	1.76 (.43)	-.340	1.83 (.38)	-1.10
No	4.06 (1.06)	(242)	1.71 (.46)	(92.22)	1.81 (.40)	(121.57)	1.81 (.40)	(110.14)	1.79 (.41)	(191)	1.88 (.32)	(158.02)

Note. *M* = mean; *SD* = standard deviation; *t* = *t* value; df = degrees of freedom; Sample *n* = 265 for all except analyses that did not include gender. Where gender was included, *n* = 262 as three participants identified as neither male or female. Significance values, p <.05 *, p< .01**, p<.001***.

Table 34

Multivariate Examination of Factors Associated with Attitudes to Reciprocal IVF Using Multiple Regression (n = 265)

Reciprocal IVF	Legal			Medicare			Medical			Social			Criminal History			Counselling		
Factors	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p	B	β	p
Constant	1.81			1.57			1.84			1.71			1.60			1.86		
Age	-	-	-	-	-	-	.00	-.12	.086	-	-	-	-	**-**	-	.01	.19	**.046**
Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sexual Orientation	.09	.11	.114	.17	.14	.057	.10	.10	.154	.13	.13	.077	-	-	-	-.15	-.14	**.042**
Relationship Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-.02	-.03	.612	-	-	-	-	-	-	-	-	-	.19	.20	**.003**	-	**-**	-
Have Child	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	.00	.00	.999
Importance of Having Children	-	-	-	-	-	-	-	-	-	-	-	-	-.04	-.15	**.033**	-	-	-
Knowledge about Fertility	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-
Previous Fertility Consult	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-
Use ART	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-
R²	.012			.019			.029			.017			.063			.067		
Adjusted R²	.003			.014			.020			.012			.054			.054		

Note. B = unstandardised beta; β = standardised beta; p = p value. Sample n = 265 for all except analyses that did not include gender. Where gender was included, n = 262 as three participants identified as neither male or female. Significant values are bolded.

3.3 Proposed Age Restrictions for ART Access

Participants proposed a minimum age of 22.46 years and maximum of 46.36 years. Many participants noted that age limits should be flexible depending on the health and maturity of the patient. Others left comments stating that no fixed maximum limits should apply. No significant difference regarding age restrictions were identified (see Table 35).

Table 35

Proposed Age Restrictions on ART Access

	Population (SD)	Male (SD)	Female (SD)	t (df)
Minimum age limit *M, (SD)*	22.46 (4.25)	20.89 (5.36)	22.02 (3.67)	-1.90 (242)
Maximum age limit *M, (SD)*	46.36 (8.81)	47.61 (9.95)	45.11(8.24)	1.92 (224)

Note. M = mean; SD = standard deviation; $t = t$ value; df = degrees of freedom; Significance values, $p < .05$ *, $p < .01$**, $p < .001$***.

3.4 Perceived Acceptance of ART in Australia

Participants reported that they perceived traditional IVF had become more accepted over time in Australia 98.49%. Most participants also believed emerging ART techniques would eventually gain similar support 95.85%.

Chapter 4: Discussion

4.1 Overview

This study explored attitudes of the Australian public toward current and emerging assisted fertility treatments. Currently, there are very few studies examining Australian attitudes toward emerging fertility treatments. Oocyte, sperm and embryo cryopreservation have revolutionised assisted reproduction as they allows for effective fertility preservation. Australian data concerning public attitudes toward gamete cryopreservation is limited. The development of these techniques has facilitated the advancement of numerous techniques, including surrogacy and posthumous gamete retrieval, and has allowed further research into sex selection and genetic testing. Among the overall population sample, participants were generally supportive of ART; attitudes varied depending on context. Each will be discussed in turn.

4.2 Gender Differences

This study aimed to explore gender differences in attitudes toward current and emerging ARTs. Significant differences were identified between males and females in their attitudes toward legalisation, Medicare subsidisation and mandatory counselling before accessing sex selection, genetic testing and embryo donation. Males supported legalisation and Medicare subsidisation of sex selection while females more strongly supported the legalisation of three-person IVF and mandatory counselling before sex selection and embryo donation.

The research of Kippen et al. (2011) demonstrated that Australians generally oppose the legalisation of sex selection, particularly for social reasons. The current research supports this, as 65.88% of Australians were in favour of sex selection for medical reasons, reducing to 44.62% for social reasons. Existing research demonstrated females to be less supportive of sex selection and to have greater concern for individuals who are electing to utilise this

technique (Kippen et al., 2011). The present research supports this, as females favoured mandatory counselling before sex selection.

Overwhelmingly, Australians believed that IVF has become more accepted over time, with similar responses in the belief that new and emerging techniques would also reach similar acceptability eventually. These results align with the research of Kovacs, Morgan, Levine, and McCrann (2012), who analysed several Australia-wide surveys administered from July 1981 to February 2011, that found increasing support for both use and Medicare subsidisation of IVF. Increasing support has been attributed to improved understanding, familiarity with technologies, repeated media exposure and increasing rates of babies born by IVF (Kovacs et al., 2003).

Both men and women supported ART access for single women; however, some differences approached significance, with women supporting use for medical reasons (p= .058), and a requirement for mandatory counselling (p= .059), more so than men. Overall, participants supported ART access for single women, which aligns with the current literature in Australia, illustrating increasing support over time (Kovacs et al., 2012).

4.3 Legal Availability

The legality of oocyte, sperm and embryo cryopreservation, was highly accepted by the Australian public. The overall population was strongly in favour, over 80%, of the legalisation of several treatments including oocyte, sperm and embryo cryopreservation, uterus transplantation, ART for single women, altruistic surrogacy, genetic testing, three-person IVF, embryo donation and reciprocal/partner IVF. Commercial surrogacy (74.11%), sex selection (50.78%), and posthumous gamete retrieval (74.74%) recorded lower agreeableness toward legalisation.

Despite commercial surrogacy being illegal in Australia, 74.11% of participants supported its legalisation. While there was little support for Medicare subsidisation of

commercial surrogacy (45.65%), 72.50% agreed it should be available for medical reasons. This conflicts with existing Australian laws with those who currently seek such an arrangement needing to do so internationally with great difficulty (Millbank, 2011).

4.4 Medicare Subsidisation

While participants were supportive of legalising many techniques, less support was recorded when considering Medicare subsidisation for the same techniques. As expected, sex selection (38.89%) and commercial surrogacy (45.65%) attracted the least support for subsidisation. Preliminary thematic analysis of extended responses demonstrated approval of Medicare subsidisation for medically required treatments but questioned the use of public funding for infertility perceived to be caused by choice.

4.5 Medical and Social Reasons

The current findings support previous research (Wennberg et al., 2016) suggesting greater support for medical use (65.88-95.44%) compared with social use (44.62-87.92%). There was little consistency between significant predicting demographic factors across the 13 ARTs for medical and social use contexts. Wennberg et al. (2016) found more support amongst the Swedish population for uterus transplants rather than surrogacy, highlighting the importance placed on carrying one's biological child. The present study found consistent responses as uterus transplants received 91.48% support for medical use with altruistic surrogacy receiving 89.25% and commercial surrogacy 72.50% support.

4.6 Mandatory Criminal History Checks

The world's first legislation to deny access to patients seeking ART with a criminal history was enacted in Australia, attracting criticism for discrimination (Thompson & McDougall, 2015). The present research supports the continued administration of criminal history checks (68.78-87.32 % in favour). However, preliminary thematic analysis of extended comments highlights the complexity of mandatory screening. Responses indicated

that participants felt uncomfortable with treating individuals as criminals for seeking ART,

yet were concerned that individuals with a history of violent or child-related crimes could

have children in their custody. Altruistic (86.73%) and commercial surrogacy (87.32%)

received the most support for criminal history checks, highlighting the ethical and legal

concerns for complex arrangements. University-educated participants were identified as

significantly more agreeable towards criminal history checks across techniques.

4.7 Mandatory Counselling

Older participants more strongly supported mandatory counselling, emphasising the

influence of life experience. ART-related stress often escalates with increasing numbers of

unsuccessful cycles, which could account for the greater support for counselling from older

participants (Kondaveeti et al., 2011).

Women were generally more supportive of mandatory counselling than men across

techniques. This is consistent with existing literature identifying gender differences when

examining the openness of couples seeking IVF to discuss infertility or seek support from

family and friends (Kondaveeti et al., 2011).

Having children and previous fertility consultations also predicted attitudes toward

mandatory counselling before sex selection. Sexual orientation significantly predicted

attitudes toward legalisation, medical and social use, criminal history checks and counselling

before sex selection.

Counselling is considered beneficial for individuals considering donor procedures

(Hammarberg et al., 2008). The present research supports these claims as more complicated

procedures resulting in unknown biological parentage or complex surrogate arrangements

received increased support for mandatory counselling. Participants' extended comments

reinforced concerns reported by Hvidman et al. (2015), that mandatory counselling may turn

clients into patients and provoke needless anxiety or overtreatment. Concerns surrounded the

importance of autonomy and freedom for clients, aligning with the existing research of Benward (2015), reporting that however beneficial, compulsory counselling inhibits patient rights.

4.8 Proposed Age Restrictions for ART Access

Participants proposed a minimum age of 22.46 years before accessing ART and a maximum of age of 46.36 years. Many participants noted that age limits should be flexible, depending on the health and maturity of the patient. Thirty-five participants left comments rather than a specific number, stating that no fixed maximum should exist. Other suggestions were contingent upon the health of the individual and whether or not they had reached menopause. These comments align with current guidelines; however, the numeric average was lower than 50 years, the upper age limit recommended in South Australia (Assisted Reproductive Treatment Act, 1988). A maximum age of 46 years aligns with prior research indicating poorer outcomes after the age of 45 years. Women older than 45 years have relatively few births, even using ART, and experience increased risks in obstetric complications including foetal abnormalities, pregnancy loss and stillbirth (Sauer, 2015). Subsequently, the preliminary thematic analysis also revealed concerns about the impact of having elderly parents early in life. This highlights that the age of first-time parents is a complex and case dependent issue.

4.9 Limitations and Future Research

Significantly more females participated in the current research compared to males, a consistent issue occurring in research examining attitudes toward fertility (Wennberg et al., 2016). Authors have also reported that females seem to experience greater concern regarding infertility, despite it impacting both genders equally (Armuand, Rodriguez-Wallberg, Wettergren, & Lampic, 2011). One theory exploring this disparity is that, as sperm-banking is a well-established and relatively straightforward process, less consideration is required by

males concerning fertility preservation (Sylvest et al., 2018). Conversely, fertility preservation for females requires a more complicated and invasive process with historically uncertain and age-dependent success rates (Armuand et al., 2011). Also, three participants identified as non-binary and were excluded from gender comparisons due to the small sample. Thus, it would be valuable for future research to examine the attitudes of non-binary individuals when exploring gender differences.

It is noted that the regression analyses in this exploratory study explained a relatively small amount of variance in attitudes. The *a priori* power analyses indicated an appropriate sample size for the conducted regression analyses. However, it is recognised that the likelihood of identifying significant relationships was increased due to the large number of statistical tests undertaken. Future research, using a larger sample, should explore a broader range of demographic and fertility factors associated with attitudes to ART.

It is recognised that, although consistent with other research in this field, attitudes were assessed using a study-specific questionnaire as no psychometrically validated measures exist, and therefore reliability and validity may have been impacted. Further research to develop a psychometrically validated measure following scale development protocol may be required for future investigation.

The focus of the current research intended to be quantitative; however, as the volume of extended responses received exceeded expectations, preliminary thematic analysis was conducted. This analysis identified participants qualifying their answers and providing personal examples and contexts which have influenced their attitudes regarding more controversial techniques. Future research could explore population opinions regarding ARTs utilising a qualitative approach to gain a richer understanding of attitude formation. Lastly, personal experience arose as a significant factor and was frequently mentioned in extended comments. Specifically, sampling from populations who have experienced ART treatments,

or achieved parenthood at an advanced age, may produce insightful data on how lived-experience influences attitude formation.

4.10 Significance of the Research

While potential limitations and future research avenues have been highlighted, the current research also offers findings of significance. The study has provided valuable insight into the relationships between several ART techniques and attitudes of the Australian population. It has the potential to contribute to the literature as no previous research has analysed these techniques with regards to Australian opinions, gender differences and factors associated with such attitudes. A review of current surrogacy laws in some Australian states (e.g. *Surrogacy: A Legislative Framework: A Review of Part 2B of the Family Relationships Act 1975;* Plater, Thompson, Moulds, Williams, & Brunacci, 2018), recommends against commercial surrogacy. Given the current debate regarding surrogacy in Australia, the attitudinal responses to broadening legalisation are insightful and do not reflect current practices and guidelines (Brezina & Zhao, 2012). Despite current laws, Australians are in support of legalising commercial surrogacy. Furthermore, posthumous gamete retrieval was also supported by participants despite the variation in state laws. The current research importantly demonstrates that current laws do not align with the attitudes of the Australian population and perhaps should be reviewed.

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Appendix A

Online Survey Questions

Demographic Questions	
Questions	Options
What is your age in years?	Text box
Gender	Male, Female, Other: Please Specify
How do you identify?	Straight (Heterosexual); Gay or Lesbian; Bisexual; Other; or Don't Know. The category of 'Other' includes people identifying as a sexual orientation other than heterosexual, gay, lesbian or bisexual.
What country were you born in?	Text box
What is your postcode where you currently live?	Text box * not required *
Which of the following best represents your ethnic heritage? (peoples' ethnicity describes their feeling of belonging and attachment to a distinct group of a larger population that shares their ancestry, colour, language or religion)	African, American (including Canadian, Mexican, Brazilian etc), Asian, Australian, European, Indigenous Australian, Maori or Pacific Islander, Middle Eastern, Middle Eastern, Other (please specify).
What is your current relationship status?	Married/de facto/engaged, separated/divorced, in a relationship, single, widowed
What is the highest level of education you have completed, or are currently completing?	Apprenticeship, Bachelor, Honours, Masters, the area of study (i.e., medicine, health science, engineering), and year you are currently in (i.e., 1, 2, 3, completed).
Are you currently employed?	full-time/employed part-time/ unemployed/retired

Intention to have children	
1. Do you have any children? YES (go to question 2)/NO (go to question 8)	Yes/no
2. How important was it for you to have children?	very important, important, moderately important, slightly important, not important
3. How many children do you have?	Text box
4. How many children do you want?	Text box
5. At what age did you have your first child?	Text box
6. At what age did you have, or would you like to have, your last child?	Text box
7. How confident are you that you will have your desired number of children?	very confident, confident, moderately confident,

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	slightly confident, not confident
8. How important is it for you to have children?	very important, important, moderately important, slightly important, not important
9. How many children do you want?	Text box
10. At what age would you like to have your first child?	Text box
11. At what age would you like to have your last child?	Text box
12. How confident are you that you will have your desired number of children?	very confident, confident, moderately confident, slightly confident, not confident

Reproductive Information	
What would you most likely do if you and your partner could not get pregnant?	undergo fertility treatment, foster a child, adopt a child, choose not to have a child, I do not want children
What have been your primary sources of information on fertility and reproduction?	Books, magazines, brochures, newspapers, internet, videos, radio, television programs, public health centres, doctor, family members, friends, other Option to select multiple sources
How would you rate your knowledge of fertility and infertility issues?	not educated at all, somewhat educated, educated, very educated, extremely educated
Have you previously sought a medical consultation and/or treatment for your fertility? This includes seeking advice from a doctor, undergoing fertility diagnostic testing, ovulation induction, insemination, surgery and treatment with Assisted Reproductive Technologies	Yes/no
Are you currently trying to conceive?	Yes/no
Are you or your partner currently pregnant?	Yes/no
What is the maximum age someone should access ART to have a child?	Text box

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	Should this intervention be legal in Australia?				
ART	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
Oocyte cryopreservation					
Sperm cryopreservation					
Embryo cryopreservation					
Uterus transplantation					
Assisted reproductive treatments (ART) for single women					
Altruistic Surrogacy					
Commercial Surrogacy					
Sex selection					
Genetic testing					
Three-person IVF					
Embryo donation					
Posthumous gamete retrieval					
Reciprocal/partner IVF					
Open text box: If you wish to, please share any other relevant comments					

	Should this intervention be subsidized by Medicare?				
ART	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
Oocyte cryopreservation					
Sperm cryopreservation					
Embryo cryopreservation					
Uterus transplantation					
Assisted reproductive treatments (ART) for single women					
Altruistic surrogacy					
Commercial surrogacy					
Sex selection					
Genetic testing					
Three-person IVF					
Embryo donation					

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Posthumous gamete retrieval				
Reciprocal/partner IVF				
Open text box: If you wish to, please share any other relevant comments				

ART	Should this intervention be available for medical reasons?				
	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
Oocyte cryopreservation					
Sperm cryopreservation					
Embryo cryopreservation					
Uterus transplantation					
Assisted reproductive treatments (ART) for single women					
Altruistic surrogacy					
Commercial surrogacy					
Sex selection					
Genetic testing					
Three-person IVF					
Embryo donation					
Posthumous gamete retrieval					
Reciprocal/partner IVF					
Open text box: If you wish to, please share any other relevant comments					

ART	Should this intervention be available for social reasons?				
	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
Oocyte cryopreservation					
Sperm cryopreservation					
Embryo cryopreservation					
Uterus transplantation					
Assisted reproductive					

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treatments (ART) for single women					
Altruistic surrogacy					
Commercial surrogacy					
Sex selection					
Genetic testing					
Three-person IVF					
Embryo donation					
Posthumous gamete retrieval					
Reciprocal/partner IVF					
Open text box: If you wish to, please share any other relevant comments					

	Should individuals seeking ART undergo criminal history and child protection checks?				
ART	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
Oocyte cryopreservation					
Sperm cryopreservation					
Embryo cryopreservation					
Uterus transplantation					
Assisted reproductive treatments (ART) for single women					
Altruistic surrogacy					
Commercial surrogacy					
Sex selection					
Genetic testing					
Three-person IVF					
Embryo donation					
Posthumous gamete retrieval					
Reciprocal/partner IVF					
Open text box: If you wish to, please share any other relevant comments					

ATTITUDES TO ASSISTED REPRODUCTIVE TECHNOLOGIES

ART	Should individuals seeking forms of ART undergo counselling?				
	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
Oocyte cryopreservation					
Sperm cryopreservation					
Embryo cryopreservation					
Uterus transplantation					
Assisted reproductive treatments (ART) for single women					
Altruistic surrogacy					
Commercial surrogacy					
Sex selection					
Genetic testing					
Three-person IVF					
Embryo donation					
Posthumous gamete retrieval					
Reciprocal/partner IVF					
Open text box: If you wish to, please share any other relevant comments					

IVF	
Questions	Options
In your opinion, has traditional IVF treatment been increasingly accepted in society over time?	Yes/No
Do you believe emerging ART techniques will become more acceptable with time?	Yes/No
Open text box: If you wish to, please share any other relevant comments	

If you wish to receive more information about the results of this research after the study has been completed, please enter your email address	Open text box
Please use these contact numbers should you experience any distress: Lifeline (available 24/7, phone: 13 11 14) Beyond Blue (available 24/7, phone: 1300 224 636)	

Appendix B

Definitions of ARTs Examined

In Vitro Fertilisation (IVF)

A medical fertility procedure where an egg (oocyte) is fertilised by sperm outside the body.

Oocyte cryopreservation

A procedure to preserve a woman's eggs that can be used for medical reasons

(cancer treatments) or social reasons (education, employment, advancing age) to

delay childbearing.

Sperm Cryopreservation

A procedure to preserve male genetic material. Often used prior to cancer

treatments to allow for biological parenthood later in life.

Embryo Cryopreservation

The process of freezing and storing a fertilised egg for IVF use. This can occur

during immediate IVF cycles or to preserve future fertility.

Uterus transplantation

A surgical procedure involving a healthy uterus that is transplanted into the body of an

individual desiring pregnancy that either has a diseased or absent uterus. This is an

emerging procedure however healthy babies have been born internationally from both

deceased and living donors.

Assisted Reproductive Treatments (ART) for single women

IVF, oocyte cryopreservation, surrogacy and embryo preservation are some of the fertility

treatments single women can utilise to achieve parenthood whilst remaining single.

Traditional surrogacy

The surrogate is also the biological mother.

Gestational surrogacy

The surrogate has no biological ties to the embryo (i.e. the egg

and/or sperm has been provided by either a donor or the intended parents.

Commercial surrogates

Are paid for their services

Altruistic surrogates

Decide to carry a child for intending parents for philanthropic reasons.

Sex Selection

Currently, it is possible to detect the gender of an embryo prior to implantation. In

Australia this is available for medical reasons to prevent gender specific inheritance of

genetic conditions.

Genetic Testing

This is common practice for advanced pregnancies as they are more susceptible to

particular abnormalities and diseases, however they are not subsidised by Medicare.

Three Person IVF

Involves the combining of two individual's nuclear DNA and the mitochondrial DNA of a

third. This procedure can prevent the inheritance of mitochondrial disease.

Posthumous Gamete Retrieval

The retrieval of spermatozoa from a male after being pronounced legally brain dead.

Usually allowed in special circumstances where permission has been given prior to death

OR fertility treatments to conceive have already begun.

Reciprocal/Partner IVF

Commonly referred to as 'shared motherhood' is typically utilised by same-sex female

couples. In this IVF process, the egg of one individual is retrieved, fertilised and then

implanted into the other individual. Whilst one partner will share genetic material with the

child, the other will carry the pregnancy.

Participant Information Sheet

PARTICIPANT INFORMATION SHEET

PROJECT TITLE: Attitudes of the Australian Public to Pre-existing and Novel Fertility Treatments

HUMAN RESEARCH ETHICS COMMITTEE APPROVAL NUMBER: ▉▉▉
PRINCIPAL INVESTIGATOR: Dr Melissa Oxlad
STUDENT RESEARCHER: Jessica D'Annunzio
STUDENT'S DEGREE: Bachelor of Psychological Sciences

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?
This research project is about Australian attitudes toward Assisted Reproductive Techniques (ART) both current and emerging in Australia.

The aim of this research is to identify the Australian public's attitude toward pre-existing and novel Assisted Reproductive Technology (ART) techniques and the ways in which they are accessed. ART techniques such as In Vitro fertilization are regularly accessed by the Australian population to achieve pregnancy due to medical fertility issues. However, social barriers such as remaining single, advanced age and same-sex relationships still remain a common cause of unintended childlessness. This study aims to elucidate population attitudes to the varying circumstances that lead to or prevent individuals from access to treatments that could result in desired parenthood.

Who is undertaking the project?
This project is being conducted by Jessica D'Annunzio. This research will form the basis for the degree of Honours in Psychological Sciences at the University of Adelaide under the supervision of Dr Melissa Oxlad.

Why am I being invited to participate?
You are being invited to submit your opinions and attitudes toward assisted reproductive technologies and their accessibility in Australia. Eligibility requires you to be over eighteen years of age and a native English speaker.

What am I being invited to do?
You are being invited to complete a survey questioning attitudes to Assisted Reproductive Technology (ART) techniques (approximately 30 minutes). You will be required to complete the questionnaire in full which includes both demographic and attitudinal questions. As this questionnaire can be completed online, you are welcome to complete it from anywhere using any device.

Alongside these questions you will be provided with a brief explanation of each ART technology to assist in generating an informed opinion. Questions about age, sexual

orientation, relationship status, cultural identity and education will be included to elucidate relationships between attitudinal and demographic data.

The questions regarding ART technologies will require participants to select a response using a Likert scale (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). Questions will explore whether participants believe these technologies should be utilized for social barriers to conception, legal, funded by Medicare and age limited as well as personal questions which ask the participant to consider whether they would use particular ART technologies themselves.

How much time will my involvement in the project take?
The project will require one session that will take approximately 30 minutes.

Are there any risks associated with participating in this project?
Completing this questionnaire may generate further questions regarding the availability and procedural factors of varying ART techniques. The 30 minutes that it may take to complete the questionnaire could be perceived as inconvenient.

Contact details for support and helpline numbers are provided at the bottom of this information sheet should any concerns arise during the participation of this survey.

Contact information will be included thus participants may contact researchers with any questions or concerns that may arise from completing the questionnaire.

If participants wish to speak to someone not directly involved in the research about their rights as a participant or about the study itself, they may contact the Human Research Ethics Committee Secretariat, at the University of Adelaide. Participants will find the University of Adelaide Human Research Ethics Committee procedure for dealing with complaints about the research below.

What are the potential benefits of the research project?
Although answering questions about ART procedures may cause distress to participants who may have experienced infertility difficulties, understanding attitudes to fertility treatments available, and possibly to be available in the future, is important. Misinformation and limited education on the various ART technologies can lead to strong attitudes that either prevent the legalisation of possible treatment or ultimately discourage or prevent eligible individuals from accessing such technologies due to stigmatisation resulting in involuntary childlessness. Understanding attitudes and their development in the context of ART access may reveal how behaviour is influenced. The findings of this study may generate information for fertility professionals to better understand what the general public believes about ART and how they could better provide information and services to their clients and prospective clients.

Can I withdraw from the project?
Participation in this project is completely voluntary. If you agree to participate, you can withdraw from the study at any time before submission.

What will happen to my information?
Your responses will remain entirely confidential and will not be linked with any identifying information. All data will be stored securely for a period of five years. The resulting data will form the research for an Honours thesis, the results of which will be written up for publication in a peer-reviewed journal.

ATTITUDES TO ASSISTED REPRODUCTIVE TECHNOLOGIES

Your information will only be used as described in this participant information sheet and it will only be disclosed according to the consent provided, except as required by law.

Who do I contact if I have questions about the project?
Should you wish to ask any further questions about the project, please contact Jessica ▬▬▬ ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ or Dr Oxlad (▬▬▬▬▬▬▬▬▬▬ ▬▬▬▬▬▬▬▬▬▬▬).

What if I have a complaint or any What if I have a complaint or any concerns?
The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number ▬▬▬ April 18th). This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research 2007 (Updated 2018). If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. If you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant, please contact the Human Research Ethics Committee's Secretariat on:
Phone: +61 8 8313 6028
Email: hrec@adelaide.edu.au
Post: Level 4, Rundle Mall Plaza, 50 Rundle Mall, ADELAIDE SA 5000
Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

If I want to participate, what do I do?
Please contact Jessica (▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ or Dr Oxlad (phone:▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬). You will then receive a link to the consent form and the online survey.
Yours sincerely,

Ms Jessica D'Annunzio
Dr Melissa Oxlad

Support Resources
- Lifeline (available 24/7, phone: 13 11 14)
- Beyond Blue (available 24/7, phone: 1300 224 636)

Appendix D

Consent Form

CONSENT FORM

1. I have read the attached Information Sheet and agree to take part in the following research project:

Title:	Attitudes of the Australian Public to Current and Emerging Fertility Treatments
Ethics Approval Number:	▮▮▮▮ Approved April 18th 2019

2. I have had the project, so far as it affects me, and the potential risks and burdens fully explained to my satisfaction by the research worker. I have had the opportunity to ask any questions I may have about the project and my participation. My consent is given freely.

3. Although I understand the purpose of the research project is to improve the quality of health/medical care, it has also been explained that my involvement may not be of any benefit to me.

4. I agree to participate in the activities as outlined in the participant information sheet.

5. I understand that as my participation is anonymous, I can withdraw any time up until submission of the survey/completion of the interview.

6. I have been informed that the information gained in the project may be published in a book/journal article/thesis/news article/conference presentations/website/report.

7. I have been informed that in the published materials I will not be identified and my personal results will not be divulged.

8. I agree to my non-identifiable information being used for future research purposes as follows:
   - Research undertaken by these same researcher(s) Yes ☐ No ☐
   - Related research undertaken by any researcher(s) Yes ☐ No ☐
   - Any research undertaken by any researcher(s) Yes ☐ No ☐

9. I understand my information will only be disclosed according to the consent provided, except where disclosure is required by law.

Participant to complete:

Name: _____ Signature: _____

Date: _____

Appendix E

Study Flyer

**School of Psychology
The University of Adelaide**

PARTICIPANTS NEEDED

We are seeking participants to take part in a

Study of Attitudes of the Australian Public Regarding Assisted Reproductive Treatments (ART).

As a participant you will be required to answer questions regarding your attitudes toward ART techniques including IVF, surrogacy and oocyte (egg) cryopreservation. Resulting data may help to further understand circumstances that may lead to or prevent individuals from accessing treatments that could result in desired parenthood.

Native English speakers over the age of eighteen years are eligible to participate.

During the study you will respond to a 30-minute survey. This can occur at any location in your own time from any device as long as you have an Internet connection.

You may not receive any direct benefit from this study, but your responses will be used to better understand the attitudes of the Australian public toward ART procedures and their accessibility.

For more information about this research study, or to volunteer, please contact:

Jessica D'Annunzio or Dr Melissa Oxlad (School of Psychology) at:

This study has been reviewed and approved by the Human Research Ethics Committee (1████.

Approved April 18th 2019)**, The University of Adelaide.**

ATTITUDES TO ASSISTED REPRODUCTIVE TECHNOLOGIES

Appendix F

Social Media Recruitment Post

We are seeking participants to take part in a

Study of attitudes of the Australian public regarding Assisted Reproductive Treatments (ART).
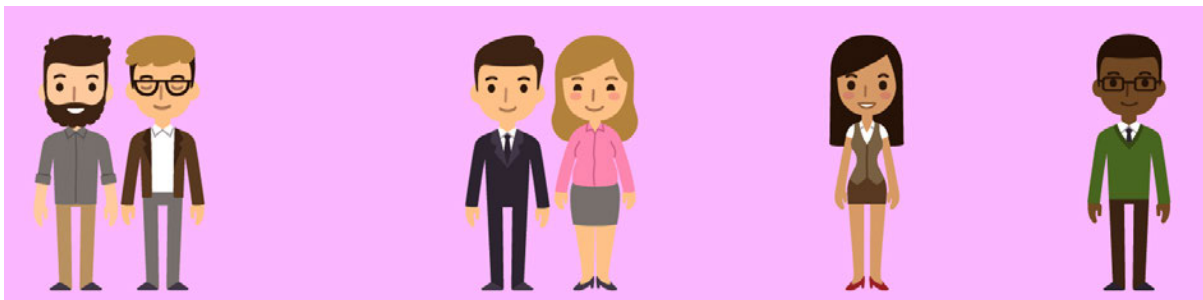
Infertility: What are the options?

It is estimated that over 70,000 in vitro fertilisation (IVF) cycles occur across Australia and New Zealand annually. Whilst ART techniques such as IVF are regularly accessed by the Australian population to achieve pregnancy due to medical fertility issues, social reasons such as remaining single, advanced age and same-sex relationships, often result in unintended childlessness. The aim of this project is to identify attitudes of the Australian public toward existing and novel Assisted Reproductive Technology (ART) techniques and the ways in which they are accessed.

The survey results form the research for an Honours thesis and the results of this study will be written up for publication in a peer-reviewed journal and may be presented at conferences.

For more information about this research study, or to volunteer, please contact:

Jessica D'Annunzio or Dr Melissa Oxlad (School of Psychology) at:

This study has been reviewed and approved by the Human Research Ethics Committee, The University of Adelaide.
(▆▆▆▆ Approved April 18th 2019)

ATTITUDES TO ASSISTED REPRODUCTIVE TECHNOLOGIES

Appendix G

Preliminary Thematic Analysis

Participants' extended comments regarding whether 13 ARTs should be legal, subsidised by Medicare, available for medical use, available for social use, require mandatory criminal history checks and counselling, were analysed using thematic analysis.

Data analysis was conducted as described by Braun and Clarke (2006). This analytic method is comprised of six steps, beginning with familiarisation of data through multiple readings and preliminary notation. Second, codes were generated by collating related interesting factors. Third, primary codes were organised into developing themes and sub-themes. Fourth, collated themes underwent revision to compare relevance to the raw data and research aims. The fifth step requires identifying and refining themes which best represent the raw data and preliminary codes. Next, compelling quotes were selected to represent themes in the results. Finally, as recommended by Braun and Clarke (2006) the chosen codes and themes were cross-checked by the academic supervisor (MO) to enhance their consistency and trustworthiness, and ensure appropriateness of analysis and fit to data.

When conducting qualitative research, it is also important to practice self-reflexivity to acknowledge the potential effect of the researcher's subjective biases and preconceptions on the research (Clarke & Braun, 2013). This process involves engaging in honest and transparent self-awareness that leads to sincere research (Tracy, 2010). The researcher (JD) is a young female without children or personal experience of seeking fertility treatment, while the researcher did not have direct interactions with participants in the form of interviews or focus groups, her biases and preconceptions may have influenced the interpretation of open-ended comments during thematic analysis.

The emerging themes across all comments were allocated into five categories, Traditional Values, Qualifiers, Slippery Slope, Freedom of Choice and Discrimination. Figure 1 summarises these findings.

Theme 1: Traditional Values

1.1 Infertility happens for a reason

The primary concern was for future outcomes of parental and family structure rather than conception and pregnancy. Participants were less concerned with the availability and possibility of treatments and more worried about the quality of life for the resulting child, as shown below:

> *"I think that it is the luck of the draw, and if you wish to become pregnant then I am not sure that it should be subsidised - it's a personal choice."*

Some participants spoke from personal experiences which impacted their fertility.

> *"I believe that if a person cannot get pregnant it is for a reason. Although I have 2 children I had complications with a 3rd beyond my control."*

Comments from personal experience highlighted that advanced age should be foreseeable and that making sacrifices is part of parenting.

> *"Some actively such as myself – knew that child rearing and having a child would prevent many opportunities in life such as mature age studying at university."*

Some participants considered infertility to be a result of choice and therefore, should not necessarily be treated as the individual should have known the consequences of their decisions.

1.2 We should not intervene with a natural process

Participants were particularly sceptical when considering public funding being made available for fertility interventions when they perceived the intervention was required due to choice, such as delayed parenting.
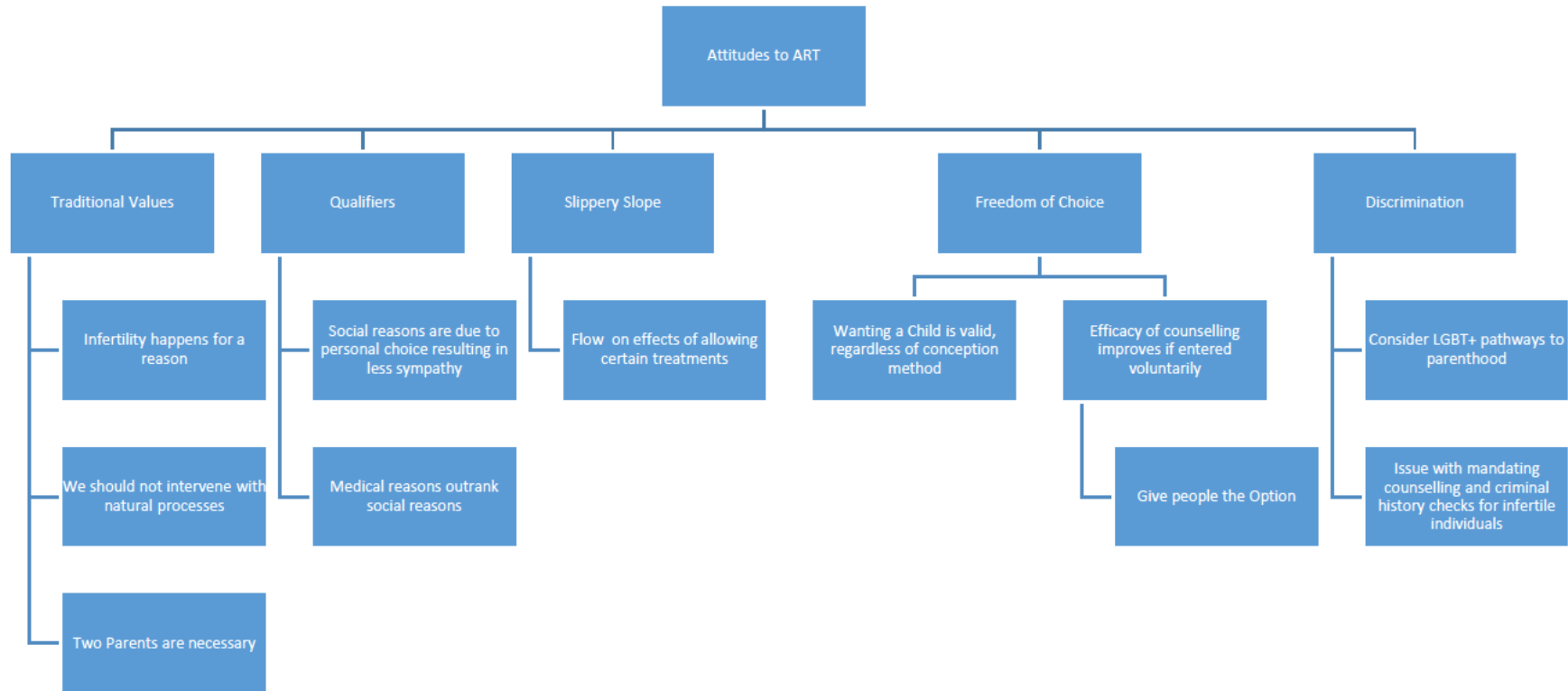
ATTITUDES TO ASSISTED REPRODUCTIVE TECHNOLOGIES

Figure 1. *Thematic Map*

"I agree with medical intervention for sexuality and relationship status, however I do

not agree with medical intervention when age is the main contributing factor"

Many participants felt that age was not a valid reason for seeking fertility treatments as they

assumed the individual would likely have conceived naturally if they had not prioritised other

aspects of life ahead of starting a family.

"Big difference between natural infertility i.e. age and other reasons."

Several participants did not perceive age as a natural cause of infertility, rather, as an

inevitable result that should have been foreseen by the individual.

1.3 Two Parents are Necessary

Several participants referred to fertility as a natural process and favoured treatments

which would support a traditional two-parent family, free from scientific intervention with a

focus on the welfare of the child. For example,

"In everything the child should come first - the child has the right to be brought up by

2 parents and have them into adulthood which is why I think single women and elderly

women are selfish when they want children."

Participants who favoured two-parent families had a belief that this traditional family

structure would be beneficial for the child's wellbeing.

"I know that it is better for a child health to have two parents though I'm not familiar

with the research behind same-sex parenting. "

Furthermore, such participants did not necessarily focus on the traditional heterosexual family

structure but believed that

"Children need 2 parents, regardless of gender/sexual identity of those parents. "

These comments illustrate that despite increased acceptance for same-sex couples to utilise

fertility services and create families, there still appears to be stigma associated with single

women and those of advanced age.

Theme 2: Qualifiers

2.1 Social reasons are due to personal choice, resulting in less sympathy

A focus on regulation and safety emerged when considering historically controversial treatments and social use.

"For medical purposes and to avoid disease these options should be considered. However, not for designer babies. Again it should all be regulated."

Participants were generally accepting of most treatments in each of the main questions asked, but qualified their answers by suggesting regulation. This qualification infers an underlying fear that without regulation, individuals may access certain treatments for, what some might consider, frivolous reasons.

2.2 Medical reasons outrank social reasons

Many participants indicated specific qualifying factors that they would deem appropriate to allow a particular treatment. Availability of almost any treatment may be applicable and should be accessible given the 'right' circumstances. Many participants indicated difficulty in broadly answering whether or not a treatment should be available without considering a particular circumstance. Outcomes for the child, medical necessity, and questioning the purposes of sex selection arose as concerns in the case of availability.

"I would agree to sex selection in limited circumstances."

Comments such as this raise concerns for the purposes behind particular interventions, highlighting that participants understand there are some cases where a particular technique may be required to maximise health outcomes.

Theme 3: Slippery Slope

3.1 Flow on effects of allowing certain treatments

The main fear for social use of many techniques was the possibility of designer babies as previously referred to in 3.3.2.

> *"Sex selection for the point of avoiding chromosome linked sex specific*
>
> *conditions I agree with. Doing it simply because you want a specific gender*
>
> *not so much."*

Others highlighted that specifying genetic features of a child without a medical requirement would not only be unnecessary but also pulls focus from the primary concern, the child's health.

> *"There as some, such as sex selection, which may be seen as totally unnecessary as it*
>
> *shouldn't matter what gender the baby is as long as it is healthy. "*

Participants were concerned with the reason for selecting specific traits in their child, if not for medical need. Previous international issues with gender preferences based on social norms have impacted the way participants viewed the availability of sex selection in Australia.

> *"There are always special circumstances… Similarly, if a couple carry a gene that is*
>
> *affecting on sex only, then sex selection is appropriate to avoid that gene, but not for*
>
> *social reasons. Look at what has happened in China with the one child policy. We*
>
> *need to maintain a roughly 50/50 split between the sexes in the population."*

Participants also had concerns regarding the flow-on effects of ART availability and its requirements, particularly concerning counselling and criminal history checks.

> *"If that were the case, every soon to be parent should have the criminal history*
>
> *checked. However, I don't see the government forcing abortions or sterilisation... so,*
>
> *nope."*

It seemed to some participants that if infertile individuals must complete a criminal history check and counselling, then eventually, all prospective parents should have to do the same.

> *"If that were the case, every soon to be parent should have the criminal history*
>
> *checked. However, I don't see the government forcing abortions or sterilisation... so,*
>
> *nope."*

Requiring a particular standard of an individual before becoming a parent was considered a 'slippery slope' into dictating the rights of others, verging on discrimination.

Theme 4: Freedom of Choice

4.1 Wanting a child is valid, regardless of conception method

Freedom of choice, equity and opportunity to access ART emerged across the comment sections as an important consideration in ART availability.

> *"Everyone should be entitled to have a family - regardless of the way in which it was*
>
> *conceived."*

Participants acknowledged the importance of having a family and understood the lengths individuals would likely go to in order to complete that goal.

> *"No part of this process should be illegal. IVF is challenging enough without adding*
>
> *legal challenges on top."*

Furthermore, participants leaving supportive comments often had personal experience of infertility and spoke from experiences.

> *"Any fertility treatment that is required in the opinion of a medical specialist should*
>
> *be on the Medicare rebate list. These treatments are invasive and expensive and*
>
> *people do not undertake these treatments lightly. We all pay taxes and when we need*
>
> *medical assistance to have a child, Medicare shouldn't prevent those without financial*
>
> *means to pay for it from achieving those dreams."*

Participants perceived that those seeking fertility treatments take great consideration before accessing medical intervention to achieve conception. The barriers preventing access, financial or otherwise, should not make a difficult process even harder.

4.2 Efficacy of counselling improves if entered voluntarily

Participants largely stated that counselling is a beneficial process for any parent and that offering counselling would be helpful.

> *"Counselling only works if it's entered into voluntarily. It should never be compulsory for medical procedures."*

Many participants qualified their quantitative response to mandatory counselling by commenting that it would only be helpful if participants wanted to participate. Assuming patients need counselling was noted as inappropriate.

4.3 Give people the option

Patient autonomy and choice was a recurring factor amongst comments.

> *"People should be free to choose what will work for them"*

These comments reveal an understanding and empathy that others should be able to make decisions that will result in the best possible outcomes for the individual.

Theme 5: Discrimination

5.1 LGBT+ Pathways to Parenthood

Discrimination was of particular concern when considering mandatory counselling and criminal history checks as well as treatment availability for LGBT+ individuals.

> *"The categorisation of sexuality, relationship status and age as 'social' factors is troubling. It implies the person has made a choice that has resulted in their infertility. I do not see these factors as choices. Sexuality in particular is not a choice, and therefore not social. It does not sit well with me to imply some kind of responsibility on the individual who cannot conceive as they identify as LGBTQIA."*

The classifications used to describe types of infertility arose as problematic. While it is medically impossible for a same-sex couple to naturally conceive a child, assuming their

infertility is social implies choice. Such insinuations may prevent accessibility on medical grounds.

5.2 Issue with mandating counselling and criminal history checks for infertile individuals

Some participants took issue when considering sexuality, relationship status and age to be social factors, the implication being that the individual knowingly made specific choices resulting in an inability to conceive naturally. Thus, treating these individuals differently due to contributing factors outside of their control could be considered discriminatory.

"because [counselling] wouldn't be forced on all parents. It should be offered and readily available"

As many participants pointed out, most couples who can naturally conceive are not required to undergo a criminal history check and mandatory counselling, and so felt that requiring infertile individuals to meet these demands would be discriminatory.

"People with criminal history can conceive naturally without checks, so why relevant for ART? Sounds discriminatory"

Demanding criminal history clearances from patients before accessing fertility treatments was considered by participants to be unfair and discriminatory. Requiring counselling and criminal history checks to be completed implies that the individual seeking treatment is potentially unsuitable to be a parent, purely based on their inability to conceive. Such processes would require more time for individuals who are likely to have already been through a lengthy process attempting to achieve pregnancy and seeking assistance.