THE INFLUENCE OF MATURITY TO PARENTHOOD ON FERTILITY INTENTION AMONG MALAYSIAN CHILDLESS MARRIED COUPLES: EXAMINING THE MODERATING ROLE OF GENDER

CHEW EN JEE

YONG WEN HUI

A RESEARCH PROJECT

SUBMITTED IN

PARTIAL FULFILLMENT OF THE REQUIREMENT FOR

THE BACHELOR OF SOCIAL SCIENCE (HONS) PSYCHOLOGY

FACULTY OF ARTS AND SOCIAL SCIENCE

UNIVERSITI TUNKU ABDUL RAHMAN

APRIL 2025

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Acknowledgement

First and foremost, we owe a huge thank you to our amazing supervisor, Dr. Tan Soon Aun, for guiding us through this final year project without losing patience, despite our occasional panic, overthinking, confusion, and the flood of questions. You never once made us feel like giving up was an option. Your feedback, encouragement, and wisdom truly kept us on track (and sane). We couldn't have done it without you! Without your steady guidance, this project might have ended as a chaotic Word document titled “Final Year Mess”. Thank you for being the calm in our storm.

We would also like to thank Universiti Tunku Abdul Rahman (UTAR) for providing us with the platform to carry out this research, even though, at times, it felt like we were chasing deadlines more than knowledge.

To our participants: thank you for filling in the survey. We promise your answers were deeply appreciated, even if we secretly wished for a few more responses.

To our family and friends—thank you for your moral support and for patiently listening to our endless project updates (even when you had no idea what we were talking about). Your quiet support behind the scenes kept us going.

CHEW EN JEE
YONG WEN HUI

Declaration

We declare that the materials contained in this paper is the end result of our own work and that due acknowledgement has been provided in the bibliography and references to ALL sources, be they printed, electronic or personal.

Name: Chew En Jee

Student ID: 22AAB02175

Signed: 

Date: 21/04/2025

Name: Yong Wen Hui

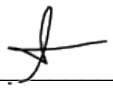
Student ID: 21AAB02349

Signed: 

Date: 21/04/2025

Approval form

This research paper attached hereto, entitled “The Influence of Maturity to Parenthood on Fertility Intention Among Malaysian Childless Married Couples: Examining the Moderating Role of Gender” prepared and submitted by “Chew En Jee and Yong Wen Hui” in partial fulfilment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.



Date: 21 April 2025

Supervisor

Dr. Tan Soon Aun

Abstract

As fertility rates continue to decline globally, understanding the psychological factors influencing individuals' fertility intentions becomes increasingly important. This study aimed to examine how different dimensions of maturity to parenthood—valence, behavioural, and cognitive-emotional—predict fertility intention, and whether gender moderates these relationships. A quantitative, cross-sectional research design was employed. Participants were recruited through non-probability sampling methods, including purposive, self-selection, and snowball sampling, resulting in a sample of 95 married individuals, currently childless, aged between 20 and 44 years (M = 31.23, SD = 5.25). Most participants were female (n = 71), followed by male (n = 24). The study was conducted in Malaysia, and data were collected via online self-report surveys. Instruments included the Desire to Avoid Pregnancy Scale, assessing fertility intention and the three subscales of the Maturity to Parenthood Scale. Data were analysed using SPSS, including Pearson correlation analysis, hierarchical multiple regression analysis and Hayes's PROCESS macro (Model 1). Results indicated that behavioural maturity significantly predicted fertility intention, whereas valence and cognitive-emotional maturity did not. Gender did not moderate the relationship between any maturity dimensions and fertility intention. These findings suggest that psychological maturity, particularly practical preparations, is more strongly related to fertility intention than valuing parenthood or holding realistic and emotionally grounded attitudes. No gender moderation may reflect shifting gender roles and shared practical and relational considerations, as well as similar viewpoints in family planning across genders. This study provides useful implications for fertility education, reproductive health interventions, and policymaking that promote earlier behavioural readiness toward parenthood.

Keywords: Fertility intention, valence maturity to parenthood, behavioural maturity to parenthood, cognitive-emotional maturity to parenthood, gender as moderator

Subject Area: Subclass H

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List of Abbreviations

Abbreviations	Description
CI	Confidence Interval
DAP	Desire to Avoid Pregnancy Scale
K-S	Kolmogorov-Smirnov
MPS	Maturity to Parenthood Scale
Q-Q	Quantile-Quantile
SIT	Social Investment Theory
SPSS	Statistical Package for Social Sciences
UTAR	Universiti Tunku Abdul Rahman
VIF	Variance Inflation Factor
FYP	Final Year Project

Chapter I

Introduction

Background of Study

In 2023, the worldwide fertility rate was 2.3 children per woman (Our World in Data, 2024). The fertility rate required to sustain a society's population size stands at 2.1, meaning a woman should give birth to at least 2 children (World Population Review, 2024). Over time, nations with fertility rates below this threshold may see a decline in population growth and an overall older population. Fertility rates in more economically developed nations, including Australia, much of Europe, and South Korea, are often lower than those in less developed or low-income nations (World Population Review, 2024).

Malaysia's population is projected to reach approximately 42 million by 2050 (Najihah et al., 2021). However, current concerning trends may jeopardise this estimation. Declining fertility rates have become a global phenomenon, affecting nearly every nation, including Malaysia. In 2019, Malaysia's fertility rate stood at 1.9 children per woman, placing it among the bottom three ASEAN countries, alongside Singapore (1.1) and Thailand (1.5; Najihah et al., 2021). In 2023, the total fertility rate fell to 1.7 births per woman between the ages of 15 and 49 (Department of Statistics Malaysia, 2024a). Without effective interventions to address this issue, Malaysia risks experiencing population shrinkage by 2072, a development that could profoundly affect its labour market and exacerbate challenges related to an ageing population (Najihah et al., 2021). For a country to fall below replacement-level fertility, it is typically not enough to just have fewer individuals marry; there must also be low fertility among those who marry (Jones, 2007), indicating the need to look into the fertility intention among Malaysian married individuals.

Fertility intention, the mental state between wanting children and trying to conceive (Ajzen & Klobas, 2013; Li et al., 2018), not only represents the desire for offspring and

planning to give birth to one but has also been shown to predict fertility behaviour (Dommermuth et al., 2015). Understanding the factors that influence fertility intentions can provide insight into the determinants of fertility rates (Li, 2021). Hence, it is important to look into the factors that have been identified in fertility intention in the past to address the declining fertility rates in Malaysia.

Couples' fertility intention in contemporary societies has long been influenced by various factors, such as individual determinants, familial and demographic determinants, cultural and social, health-related, economic, insurance-related factors, and government support (Ranjbar et al., 2024). However, there is an increasing acknowledgement of the importance of psychological factors, especially maturity, in the field of qualitative research (Behboudi-Gandevani et al., 2015; Bodin et al., 2021; Buber-Ennser & Fliegenschnee, 2013; Thompson & Lee, 2011). In Malaysia, it is essential to examine fertility intentions among married couples who are currently childless, as essentially no childbearing is out of wedlock (Jones, 2007).

Parenthood, a transition viewed as normal in developmental theories, is seen as a very taxing role that calls for significant social, financial, and personal resources (Rotkirch, 2020). Achieving maturity in this aspect means an idea that combines relational and personal viewpoints (Łada-Maśko & Kaźmierczak, 2023). Maturity to parenthood entails developing a picture of one becoming a parent in the future and incorporating anticipated or idealised parental responsibilities into feelings, thoughts, and life decisions or activities (such as in personal relationships or occupational life; Łada-Maśko & Kaźmierczak, 2021). One may become more mature when one embraces the responsibilities of adult roles, such as being a husband, friend, and parent (Hogan & Roberts, 2004).

Achieving maturity or being psychologically ready to be a parent is considered a further consideration in fertility decisions (Buber-Ennser & Fliegenschnee, 2013). Feeling

mature enough is one of the perceived preconditions that influence an individual's or couple's views towards the relative cost and benefits of having a child, thus influencing their fertility intention (Thompson & Lee, 2011). People refrain from setting a specific fertility intention until they feel psychologically prepared to take this step. In fact, immaturity is one of the main causes why individuals with fertility intention delay childbearing, especially those childless individuals who are in their 20s and late 30s (Schytt et al., 2014). Hence, the study looks into psychological maturity, specifically maturity to parenthood. Three dimensions of maturity of parenthood, which are valence, behavioural and cognitive-emotional maturity to parenthood will be investigated as independent variables in this study to understand to what extent they predicts the fertility intention among Malaysian currently childless couples. In addition, gender plays a significant role in reproductive decision-making, as men and women show differences in maturity to parenthood in past studies. Thus, this study will also consider gender as a moderator and examine how it affects the relationship between the three dimensions of maturity to parenthood and fertility intention.

Problem Statement

Practical Problem

There has been a significant decline in Malaysia's fertility rate in recent decades, from 2.14 (2010), 2.00 (2015), and 1.71 (2020) to 1.63 (2022; Department of Statistics Malaysia, 2024a). Although there is a slight increase in fertility rates in 2023 (1.73), the rates are still below fertility replacement rates, which is 2.1, to sustain population size. News reports significant concerns of society regarding the continuing decline, potentially harming the future labour force and becoming an ageing nation by 2030 (Azuar, 2024). In 2024, with 15,602 births per 1,000 people, a 1.71% drop from the previous year, indicates that Malaysia had a sharp decline in its birth rate, which resulted in the labour force between the ages of 15 and 64 shrinking (Azuar, 2024). Understanding the fertility intentions of currently childless

married couples—individuals who are legally and socially positioned to have children but have not yet done so (Jones, 2007)—can provide critical insights into the factors driving this phenomenon because fertility intention is found to be indicators of fertility behaviour (Tan & Tey, 1994), determinants of fertility rates (Li, 2021).

Knowledge Gap

Firstly, this study investigates a new variable, maturity to parenthood (including valence, behavioural and cognitive-emotional dimensions), which was newly conceptualised in 2021, with only two empirical studies focusing on it (Łada-Maśko & Kaźmierczak, 2021, 2023; Szcześniak et al., 2024). Thus, there is a lack of literature that researches this psychological variable. Moreover, while Łada-Maśko and Kaźmierczak (2021) report a positive correlation between three dimensions of maturity to parenthood and the willingness to have children, only one study tested its mediating role and association with postponing parenthood (Szcześniak et al., 2024). No study has explicitly examined their association with fertility intention or explored their predictive relationship. To expand the literature on this new variable, this study will research three dimensions of maturity to parenthood and its predictive role on fertility intention.

Secondly, there is a notable gap in quantitative research exploring the relationship between maturity to parenthood and fertility intention. While numerous qualitative studies have provided valuable insights into how various dimensions of maturity to parenthood influence fertility intentions, these findings remain largely unexplored quantitatively. Research has emphasized the importance of certain aspects of valence maturity (Goldberg et al., 2012; Mynarska & Rytel, 2020; Thompson & Lee, 2011), including the perceived satisfaction and emotional importance of a child. Similarly, behavioural maturity, which refers to the readiness to undertake the practical responsibilities of parenting (Datta et al., 2023; Hviid Malling et al., 2020; Spiteri et al., 2022), can impact fertility intention. Again,

cognitive-emotional maturity, involving the mental and emotional preparedness for parenthood, has been identified as a key factor influencing fertility intentions (Behboudi-Gandevani et al., 2015; Bodin et al., 2021; Buber-Ennser & Fliegenschnee, 2013; Thompson & Lee, 2011). However, these studies have primarily relied on qualitative methodologies, which is insightful but lacks the statistical rigour and generalisability that quantitative approaches can provide. To bridge this gap, this study will operationalise these qualitative findings into measurable constructs and test them using robust quantitative methods.

Thirdly, research on fertility intention in Malaysia remains scarce despite the country's declining fertility rates. To date, only a few scholars have briefly addressed fertility intention (e.g., Rashid et al., 2018; Zafrul, 2022). While Tan and Tey (1994) conducted a quantitative study on fertility intention, their focus was on the subsequent fertility intentions of married couples rather than childless married couples, and their findings are outdated. Most Malaysian research has concentrated on the factors contributing to fertility decline and fertility outcomes (e.g., Kamaruddin, 2017; Pong, 1994) rather than exploring the critical mediator between individual mental constructs and fertility behaviour—fertility intention (Bachrach & Morgan, 2013). The factors identified in existing research are predominantly sociodemographic and socioeconomic variables, such as age, marital status, occupation, education level, religion, homeownership, and the urbanisation of residential areas (Kamaruddin, 2017; Rashid et al., 2018). However, these studies have largely overlooked psychological factors, particularly maturity to parenthood. Furthermore, no research in Malaysia has specifically investigated maturity to parenthood or its role in shaping fertility intention. To address this gap, the present study focuses on fertility intention among childless married couples in Malaysia, exploring how maturity to parenthood influences their intentions.

Fourthly, there is a limitation in the measurements of fertility intention in the past literature. Most studies utilise 1 to 3 items (e.g., “Do you intend to have a child in the next three years?”) to measure fertility intention (Brzozowska & Beaujouan, 2021; Erfani & Jahanbakhsh, 2022; Jin et al., 2024; Kim, 2014; Lappegård et al., 2021; Matera et al., 2023; Xiong et al., 2022). This measurement approach presents a significant limitation, as it fails to meet the fundamental psychometric standards required for a scale, particularly in assessing reliability and validity. Additionally, the responses are captured as categorical data (e.g., *yes*, *no*, and *do not know*), which restricts the ability to evaluate fertility intention as a continuous variable. To overcome these limitations, this study adopts an alternative approach by employing a psychometrically valid and reliable scale to measure fertility intention.

Fifthly, no study has explicitly tested gender as a moderator in the relationship between maturity to parenthood and fertility intention, despite the potential that has been shown. To illustrate, past researchers highlighted the gendered difference in aspects of cognitive-emotional and behavioural maturity to parenthood that could impact fertility intention (Buber-Ennser & Fliegenschnee, 2013). Also, gender differences in fertility intention (Boivin et al., 2018; Shreffler et al., 2010) and aspects of maturity to parenthood (Boivin et al., 2018; Łada-Maśko & Kaźmierczak, 2021; Łada-Maśko & Kaźmierczak, 2023; Xu et al., 2023) have been found respectively. The importance of addressing contextual factors such as gender in reproductive research is demonstrated as well, in which both genders usually will have distinct prerequisites in fertility decisions (Boivin et al., 2018). Therefore, to address this gap, this study will regard gender as a moderator and investigate how it will affect the relationship between maturity to parenthood and fertility intention.

Research Questions

1. Does maturity to parenthood (i.e., valence, behavioural, and cognitive-emotional positively predict fertility intention among Malaysian childless married couples?

2. Does gender moderate the relationship between maturity to parenthood (i.e., valence, behavioural, and cognitive-emotional) and fertility intention among Malaysian childless married couples?

Research Objectives

1. To study the predictive effects of maturity to parenthood (i.e., valence, behavioural, and cognitive-emotional) on fertility intention among Malaysian childless married couples.
2. To explore the moderation role of gender between maturity to parenthood (i.e., valence, behavioural, cognitive-emotional) and fertility intention among Malaysian childless married couples.

Hypotheses

H_{1a}: Valence maturity to parenthood positively predicts fertility intention among Malaysian childless married couples.

H_{1b}: Behavioural maturity to parenthood positively predicts fertility intention among Malaysian childless married couples.

H_{1c}: Cognitive-emotional maturity to parenthood positively predicts fertility intention among Malaysian childless married couples.

H_{2a}: The association between valence maturity to parenthood and fertility intention is moderated by gender among Malaysian childless married couples.

H_{2b}: The association between behavioural maturity to parenthood and fertility intention is moderated by gender among Malaysian childless married couples.

H_{2c}: The association between cognitive-emotional maturity to parenthood and fertility intention is moderated by gender among Malaysian childless married couples.

Significance of Study

Practical Contribution

This study offers practical contributions to addressing Malaysia's declining fertility rates. By understanding the psychological factors, such as maturity to parenthood, that influence fertility intention, the government and non-profit organisations can design targeted campaigns and activities to promote parenthood and address barriers to fertility. For example, the study's insights could aid in public awareness campaigns to develop targeted interventions to encourage earlier readiness for parenthood and foster positive values about parenting, which can reduce misconceptions about parenting as a burden. The findings can also guide the interventionist and family counsellor to implement support programs, such as parenting workshops or counselling services. This is because this study can provide basic knowledge into understanding which aspects the couples may not achieve maturity; so that they can tailor their interventions to help the couples feel more cognitively, emotionally and behaviourally prepared and confident about starting a family. Furthermore, policymakers can incorporate psychological considerations into existing family and fertility policies, such as financial incentives, affordable childcare, and work-life balance initiatives. By addressing psychological factors, these policies can become more effective in helping married couples achieve maturity in parenthood, particularly regarding behavioural aspects, and assist them in progressing with parenthood. Ultimately, this study provides valuable insights for creating strategies to increase fertility rates and support individuals in their journey toward parenthood.

Knowledge Contribution

This study addresses a significant gap in the existing literature by investigating maturity to parenthood as a predictor of fertility intention. Specifically, it examines the three dimensions of maturity to parenthood: valence, behavioural, and cognitive-emotional maturity, which have not been explicitly linked to fertility intention in prior research. By exploring these dimensions, this study will expand the understanding of how maturity

influences fertility intentions, providing new insights into this psychological construct. The findings will contribute to the growing body of literature on the psychological factors that shape fertility decisions, offering a more nuanced understanding of how maturity can impact individuals' intentions to have children.

While numerous qualitative studies have explored the relationship between maturity to parenthood and fertility intention, there remains a notable lack of quantitative research on this topic. This study aims to bridge this gap by transforming the qualitative findings into measurable constructs and applying robust quantitative methods. By operationalising the dimensions of maturity to parenthood and testing their predictive relationship with fertility intention, the study will provide empirical evidence on how these factors interact and contribute to fertility decisions. The quantitative approach will enhance the generalisability of the findings and provide more precise insights into the factors that influence fertility intention.

Fertility intention research in Malaysia is limited, particularly among childless married couples. Existing studies have primarily focused on sociodemographic and socioeconomic factors rather than psychological variables. This study fills this gap by focusing specifically on childless married couples in Malaysia and investigating the role of maturity to parenthood in shaping their fertility intentions. The findings will provide valuable insights into the psychological factors influencing fertility decisions in Malaysia, which are crucial for addressing the nation's fertility challenges and formulating effective policies to promote higher fertility rates.

A significant limitation in the measurement of fertility intention in previous studies is the reliance on a small number of items or categorical responses, which fail to capture the full complexity of fertility intention. This study overcomes these limitations by utilising a psychometrically valid and reliable scale to measure fertility intention. This advancement in

measurement will not only enhance the reliability of the study's findings but also contribute to the development of more sophisticated tools for measuring fertility intention in future research.

There is a notable lack of research that examines gender as a moderating variable in the relationship between maturity to parenthood and fertility intentions. A moderation study is particularly important to undertake, as previous research has demonstrated its feasibility and highlighted its significance in understanding the influence of contextual factors, such as gender, on reproductive decision-making, which is highly sensitive to such influences. This study can contribute to closing this gap by exploring whether and how gender moderates this relationship. Investigating this moderation effect could provide deeper insights into how men and women differ in their decision-making about parenthood, offering a more nuanced understanding of gender-specific dynamics and providing actionable insights for gender-specific interventions targeting fertility intentions.

Definition of Terms

Conceptual Definition

Fertility Intention. Fertility intention is the mental state between the desire and the effort to conceive (Li et al., 2018). It can motivate one to become pregnant, which is influenced by one's perceptions of risk, benefit, expectations, fears, and priorities and shaped by values. Those who intend to have children will develop mental scripts of parenting linked with pleasant affective feelings and connected to a component in the picture of a possible future self (Ajzen & Klobas, 2013). Bernardi et al. (2015) emphasised the emotions associated with having children and posited that the emotional stance towards parenthood reflects a desire for children, which plays a crucial role in understanding fertility intentions.

Maturity to Parenthood. According to Łada-Maśko and Kaźmierczak (2021), maturity to parenthood is a multidimensional construct reflecting an individual's readiness to

assume future parenting roles. It encompasses three key dimensions: valence, behavioural, and cognitive-emotional maturity. This construct spans various domains of human functioning and may vary based on demographic factors such as gender. As a critical factor for starting a family, maturity to parenthood ensures adequate preparation for taking on parental responsibilities and addressing the challenges of childrearing.

Valence Maturity to Parenthood. Valence maturity involves integrating parenting as an important value within an individual's coherent and well-defined value system and possessing a clear and critical understanding of the motivations behind their parental aspirations, shaped by ethical and social norms (Łada-Maśko & Kaźmierczak, 2021).

Behavioural Maturity to Parenthood. Behavioural maturity involves aligning one's actions in intimate and social relationships, as well as in economic and work-related spheres, to prepare for future parental roles (Łada-Maśko & Kaźmierczak, 2021). This includes actively seeking information about parenthood and taking steps to ensure readiness for the responsibilities associated with raising a child.

Cognitive-Emotional Maturity to Parenthood. Cognitive-emotional maturity involves concentrating on the various facets of parenthood, constructing an image of parental responsibilities within the framework of an individual's family upbringing, feelings associated with parenthood, and accountability for decisions that will shape the future execution of parental roles (Łada-Maśko & Kaźmierczak, 2021).

Operational Definition

Fertility Intention. The fertility intention will be assessed by the Desire to Avoid Pregnancy Scale (DAP scale; Rocca et al., 2019). A higher score indicates a higher desire to avoid pregnancy. This study adapts the scoring and interprets lower scores (indicating less desire to avoid pregnancy) as high fertility intention.

Maturity to Parenthood. The maturity to parenthood will be measured by the Maturity to Parenthood Scale (MPS; Łada-Maśko and Kaźmierczak, 2021). A higher total score indicates a higher overall maturity and preparedness to be accountable for the parenthood role. The scale consists of three subscales, namely valence, behavioural, and cognitive-emotional maturity toward parenthood.

Valence Maturity to Parenthood. The subscale consists of 7 items, with a higher total subscale score in this dimension indicating stronger valence maturity.

Behavioural Maturity to Parenthood. The subscale consists of 9 items, with a higher total subscale score in this dimension reflecting higher behavioural maturity.

Cognitive-Emotional Maturity to Parenthood. The subscale consists of 8 items, with a higher total subscale score in this dimension corresponding to higher cognitive-emotional maturity.

Chapter II

Literature Review

Fertility Intention

Fertility intention represents the mental state between wanting children and trying to conceive (Ajzen & Klobas, 2013; Li et al., 2018). It is influenced by one's values, views on risks and benefits, and expectations (Li et al., 2018) and connected to one's potential future self-identity (Ajzen & Klobas, 2013). Emotional desire forms the foundation of intentions (Bernardi et al., 2015), while subjective attitudes shape concrete plans and timelines (Zhao et al., 2024). Fertility intention has been shown to influence fertility behaviour, as well as fertility rates (Dommermuth et al., 2015; Li, 2021).

A meta-analysis by Kim and Yi (2024) claimed several predictors of fertility intentions with significant effect sizes. For instance, husband's engagement in parenting, woman's education level, and socioeconomic situation all had statistically significant positive effects. In contrast, women's age, perceived parental stress, and household labour ratio indicated statistically significant negative impacts on fertility intention. Another review by Senasi and Na (2024) found that lower asset levels, financial strain, and household income are linked to decreased marriage and childbearing intention, as well as the significant role of education in shaping family behaviours and decisions. These previous studies indirectly show that psychological variables, particularly maturity, have not been extensively explored in quantitative research on fertility intention. While maturity is commonly identified as a key theme in qualitative studies on fertility intentions (Behboudi-Gandevani et al., 2015; Bodin et al., 2021; Buber-Ennser & Fliegenschnee, 2013; Thompson & Lee, 2011), there is a need to investigate how maturity, specifically maturity to parenthood, influences fertility intentions in a quantitative context to validate existing qualitative findings.

In Malaysia, studies research on factors that influence fertility outcomes (i.e., the number of children), instead of fertility intention. Those explored factors include marriage delay and contraception use (Tey et al., 2012), sociodemographic and socioeconomic variables like age, marital status, occupations, degree of education, religion, residential ownership, and urbanisation of residential areas (Kamaruddin, 2017; Rashid et al., 2018). The only Malaysian study on fertility intention, which employed Interpretative Structural Modelling, identified fertility perceptions as the most direct factor influencing university students' childbearing intentions, with external economic developments serving as the foundation (Xu et al., 2024). However, no studies in Malaysia have tested fertility intention using multiple regression or moderation analyses, nor have any incorporated psychological variables in the study of fertility intentions.

Several scales have been developed to measure fertility intention-related aspects, such as fertility attitude and desire, in the Attitudes toward Fertility and Childbearing Scale and Desire to Have Children Scale, respectively (Natividade et al., 2020; Söderberg et al., 2013). However, most studies access fertility intention in 2 to 3 items, such as "Do you intend to have a child in the next three years?", followed by categorical responses, such as *yes*, *no* and *do not know* (Erfani & Jahanbakhsh, 2022; Kim, 2014; Matera et al., 2023). The same measurement approach was also adopted by national studies (Brzozowska & Beaujouan, 2021; Jin et al., 2024; Lappegård et al., 2021; Xiong et al., 2022). Using a few items instead of a comprehensive scale to measure fertility intention may not meet standards for validity and reliability, potentially affecting the study's results and failing to capture all aspects of the concept of fertility intention.

In summary, it is crucial to examine how fertility intention—the intermediate mental stages of desire and planning for having a child can be influenced by the maturity to parenthood—a psychological variable that has emerged as a key factor in qualitative studies,

yet is underrepresented in quantitative research, while using a psychometrically robust scale in measuring fertility intention as a continuous variable among currently childless married couples in Malaysia.

Valence Maturity to Parenthood

Based on Łada-Maśko and Kaźmierczak (2021), valence maturity is defined as the degree to which an individual values being a parent within their coherent system of personal values and clearly understands their parental aspirations. Life values such as tolerance, tradition, and a sense of security in society correlate positively with valence maturity (Łada-Maśko & Kaźmierczak, 2021). In today's global shift toward postmodern culture, however, much emphasis is placed on individual fulfilment and self-reflexivity (Giddens, 1991; Wernet et al., 2005). This change moves beyond traditional parental roles, allowing individuals to derive their sense of worth from diverse life pursuits rather than solely from parenthood (Lebano & Jamieson, 2020; Volsche & Jankowiak, 2020). Still, individuals who aspire to become parents often report high life satisfaction when they become parents and perceive parenting as a meaningful and fulfilling social role. Hence, while parenthood is increasingly viewed as a matter of personal preference (Bazzani et al., 2025), valence maturity reflects an individual's willingness to integrate the value of parenthood into their personal goals and life aspirations clearly and accurately, shaped by ethical and social norms.

Behavioural Maturity to Parenthood

Behavioural maturity refers to the effort to foster interpersonal relationships and manage economic activities that support future parental roles (Łada-Maśko & Kaźmierczak, 2021). High maturity in this aspect is also reflected in parenting information-seeking behaviour. This shows that individuals are aware of the demands associated with parental roles and, therefore, are actively equipping themselves to navigate these responsibilities more effectively. Based on Young et al.'s (2018) review, past literature noted that the transition to

parenthood can be a vulnerable time of disequilibrium, thus urging for strong resources to combat parenting stressors. It was suggested that social connectedness, family relationships, and peer support are significant relational builders of resilience that facilitate positive adaptation to the parenthood role (Young et al., 2020). On the other hand, it is undoubtedly true that directing activities around work and economic spheres towards parenthood may facilitate better readiness, specifically in terms of work flexibility and financial stability, as past studies have identified economic security and work-related concerns as the major determinants of making fertility-related decisions (Bueno, 2019; Lappegård et al., 2022; Szcześniak et al., 2025). Thus, behavioural maturity can be understood as the positive involvement of an individual in taking on parental responsibilities, which includes both proactive relational efforts and practical planning to ensure better preparedness for having children.

Cognitive-Emotional Maturity to Parenthood

According to Łada-Maśko and Kaźmierczak (2021), cognitive-emotional maturity to parenthood refers to a general strategy for embracing and carrying out parental duties in everyday life. It involves directing one's thoughts, attention, and imagination toward parenting responsibilities alongside an emotional focus on the role of parenthood. According to Szcześniak et al. (2024), cognitive-emotional maturity to parenthood is defined as incorporating realistic attitudes about parenthood into everyday life. It involves concentrating on the various facets of parenthood, constructing an image of parental responsibilities based on an individual's family upbringing, feelings associated with parenthood, and accountability for decisions that will shape the future implementation of parental roles (Łada-Maśko & Kaźmierczak, 2021; Szcześniak et al., 2024).

Past scholars defined psychological maturity as a latent construct (an abstract notion measured indirectly) that can be examined by three markers: ego development, ego resiliency,

and hardiness (Camberis et al., 2014). Ego development reflects a broad cognitive maturity, including self-world integration. One who possesses this marker can thoughtfully integrate past experiences (e.g., experiences from the family of origin) into their life events, such as parenthood, which echoes the aspects of cognition in cognitive-emotional maturity of parenthood and leads to the framing of organised thoughts about parental responsibilities. On the other hand, ego resiliency and hardiness emphasise the self-regulatory ability to manage stress. Hardiness, in particular, aligns with characteristics such as perspective-taking (Camberis et al., 2016), a trait positively associated with cognitive–emotional maturity to parenthood (Łada-Maśko & Kaźmierczak, 2021), as it reflects the capacity to consider others' viewpoints, which is a key factor in adapting to the parental role.

Emotional readiness means reaching personal maturity or a strong "sense of self", emotional stability, mental readiness for the duties that come with having children and being prepared to invest emotionally in them (Buber-Ennser & Fliegenschnee, 2013). It aligns with the emotion component in cognitive-emotional maturity to parenthood, while relating to developmental readiness and psychological maturity (Thompson & Lee, 2011). One can achieve emotional readiness by obtaining information and skills about having and raising children, as well as experiencing vital "life lessons" like an accomplishment in a career, which gets one to a point where one is prepared to "settle down", open to change and be confident with their choices regarding parenthood in the future (Thompson & Lee, 2011).

Valence Maturity to Parenthood and Fertility Intention

Individuals nowadays tend to reassess the costs and benefits of becoming a parent against other life alternatives, as they enjoy greater autonomy and are exposed to different selections of personal goals (Bodin et al., 2021). On top of that, contemporary societal and economic challenges may diminish the priority placed on parenthood, especially when children are perceived as a potential burden to current living standards. To illustrate, Xu et al.

(2022) revealed an overall low fertility intention (38.8%) among college students in China, with females significantly less willing to have children. At the same time, the female respondents also rated the importance of having children lower than average, focusing instead on its negative impact (i.e., lower employment status, less freedom, and high costs). Similarly, Mynarska and Rytel (2020) found that individuals highly concerned about childcare demands (i.e., time, energy, and financial costs) had a lesser desire to have children. Thus, placing less priority on having children and focusing merely on their associated negative values is associated with lower fertility intention.

Possibly, individuals may also place lesser value on parenthood when having children is viewed as a threat to other future aspirations. A study conducted among Polish childless young women (Chwastek & Mynarska, 2024) found that those who placed a higher value on professional development (career-centred) anticipated higher childbearing costs, thus may express weak or no intention to pursue parenthood in the future (Mynarska & Rytel, 2022). Thompson and Lee (2011) also noted that for men, feeling content and satisfied with their current achievements was an important consideration before embarking on parenthood.

Meanwhile, past research highlighted that the emotional value attributed to children is strongly linked to an individual's parental aspirations (Mayer & Trommsdorff, 2010; Mynarska & Rytel, 2020). For women, factors like "feeling needed and connected" and the "joys of pregnancy, birth, and infancy" strongly predict child desire. At the same time, for men, the "satisfaction of childrearing" is a key motivator (Mynarska & Rytel, 2020). While not entirely comparable, it is highly notable that gay male couples express the desire to want children for psychologically oriented reasons too, including a love of children and viewing parenting as an integral part of life (Goldberg et al., 2012).

To embrace parenthood, the desire to have a child, be it for any reason, must stand out among competing priorities and alternative life goals. High-valence maturity toward

parenthood can be understood as valuing the parental role despite anticipated challenges and the effort to reconcile with other personal goals. Therefore, it is hypothesised that higher valence maturity may predict higher fertility intention, and vice versa.

Behavioural Maturity to Parenthood and Fertility Intention

Datta et al. (2023) found that most individuals agreed that a stable relationship with an intimate partner, financial security, and suitable housing are prerequisites for parental responsibilities. As noted in the study, accomplishing these life objectives fosters a sense of readiness to transition into the next phase of life, parenthood. Likewise, individuals in another study also reported a desire to follow the "right" chronological order of life milestones, where having a steady relationship, secure employment, and desirable financial status come before considering having a child (Hviid Malling et al., 2020). That is to say, individuals who feel more secure and less burdened by these aspects are more likely to feel prepared and present higher childbearing intentions.

Social relationships, ranging from intimate partners to broader social networks such as family and peers, play a vital role in shaping fertility intentions. A longitudinal study by Shreffler et al. (2018) discovered a positive association between couple-level agreement (couple congruence) and fertility intentions. Couples who agreed on their desire to have a child had higher odds of giving birth within three years following the initial survey, compared to couples with only one partner or neither expressed such intention. The findings align with another study, suggesting a positive correlation between women's first-birth intentions, marital satisfaction, and effective communication between partners (Chen & Yip, 2017). Furthermore, Artamonova et al. (2024) further revealed a positive association between adequate social support (i.e., perceived and received) from others and childbearing intentions among highly educated individuals in their prime childbearing age.

Based on a narrative review by Bueno (2019) among young adults in a developed country, perceived economic uncertainty still remained a persistent structural concern influencing fertility decisions. In the context of planned parenthood, most interviewees described financially saving up as a way to prepare for a baby, viewing it as part of their responsibility toward their future child (Spiteri et al., 2022). In like manner, Hanappi et al. (2017) found that worsening employment conditions for both men and women in Switzerland may contribute to the abandonment of childbearing intentions. These findings can be attributed to feelings of financial uncertainty and instability, which are strongly correlated with anxiety and lower resilience. Such emotions often lead individuals to avoid taking on life tasks, such as parenting, to mitigate the perceived risks of high child expenses or inflexible work schedules.

In line with the literature review, this study proposes that higher levels of behavioural maturity toward parenthood predict stronger fertility intentions.

Cognitive-Emotional Maturity to Parenthood and Fertility Intention

Emotional readiness, which aligns with the aspect of emotion in cognitive-emotional maturity to parenthood, is an important precondition before deciding on fertility intention. One may intend to have a child and be a parent when one is emotionally ready to invest in a child and feels ready to embark on parenthood (Thompson & Lee, 2011). Also, Buber-Ennser and Fliegenschnee's (2013) study showed that emotional readiness, particularly the couple's feeling of being ready, has the strongest association with childbearing intentions. They claimed emotional readiness as the determinant of fertility intention. Their interviewees further supported this statement, claiming that emotional readiness was even more important than economic aspects (e.g., the financial situation of self and couple) in deciding to bear a child. Buber-Ennser and Fliegenschnee (2013) even stressed the importance of emotional readiness by suggesting it as an add-on to the Theory of Planned Behaviour when examining

fertility intention, as an emotional domain. Hence, higher cognitive-emotional maturity to parenthood seems to determine higher fertility intention.

Incorporation of realistic attitudes regarding parenthood in daily life is an aspect of maturity towards parenthood (e.g., having an open attitude regarding pregnancy and childcare scenarios; Łada-Maśko & Kaźmierczak, 2021). However, one can see parenthood as an obstacle to their ideal lifestyle and choose to delay or opt out of childbearing (Rotkirch, 2020). Usually, they do not want to give up on the current lifestyle that is free of children, where they can enjoy sleep, sex and a career unrestrictedly; therefore, they remain childless (Rotkirch, 2020). The unwillingness to integrate or consider aspects of parenthood into everyday life reflects low cognitive-emotional maturity towards parenthood, which leads one to have low fertility intention. Conversely, if an individual adopts attitudes regarding parenthood in daily life, reflecting high cognitive-emotional maturity towards parenthood, it may lead to higher fertility intention.

Łada-Maśko and Kaźmierczak (2021) highlight the role of one's family upbringing in shaping expectations of parental responsibilities, emphasising it as a key aspect in defining cognitive-emotional maturity to parenthood. Huczewska and Mynarska (2023) found that individuals who felt satisfied when performing early caregiving roles within their family were more likely to view childbearing positively and experience fewer fears about parenthood. This early familial experience supports the family upbringing's influence on the cognitive-emotional maturity of parenthood (i.e., framing parenthood expectations). Meanwhile, this positive perspective from the family upbringing ultimately leads to their desire to have children (Huczewska & Mynarska, 2023), illustrating the critical link between cognitive-emotional maturity to parenthood and fertility intentions and suggesting the potential of cognitive-emotional maturity to predict parenthood and fertility intentions.

Drawing on insights from existing literature, this study posits that a greater level of cognitive-emotional maturity to parenthood predicts increased fertility intentions.

Gender as a Moderator

Past literature provides insights that show the potential predictive role of each dimension of maturity to parenthood towards fertility intention. To illustrate, individuals with high valence in maturity are those who favour parental roles despite the childcare demands (Mynarska & Rytel, 2020), value parent roles more than other future aspirations (Chwastek & Mynarska, 2024; Thompson & Lee, 2011), highly emotionally value the child and perceive satisfaction from childbearing (Mynarska & Rytel, 2020), which may predict to their strong intentions to have children. Also, those with higher behavioural maturity to parenthood will modify their behaviour to prepare themselves to attain career security (Datta et al., 2023), economic stability (Spiteri et al., 2022), and achieve couple congruence in childbearing decisions (Shreffler et al., 2018), potentially predicting higher fertility intention. Besides, individuals with higher cognitive-emotional maturity are those who are likely to achieve emotional readiness regarding parenthood (Thompson & Lee, 2011), incorporate aspects of parenthood in daily life (Rotkirch, 2020), perceive parenting positively (Huczewska & Mynarska, 2023) and thus predict higher fertility intentions (Buber-Ennser & Fliegenschnee, 2013). However, gender, a fundamental demographic factor, may influence how maturity to parenthood relates to fertility intention, yet this aspect remains underexplored.

Buber-Ennser and Fliegenschnee (2013) emphasised that women place greater importance on emotional readiness for determining fertility intentions compared to men, with 82% of women underscoring its significance, in contrast to 70% of men. This indicates that the prioritisation of emotional readiness, a key component of cognitive-emotional maturity to parenthood, differs by gender. Besides, they also mentioned that women's work situations play a larger and more significant role in fertility decisions compared to men. This

employment condition underscores the gendered influence on the behavioural aspects of maturity to parenthood, particularly the economic stability aspects, which influence one's fertility intention. Overall, such gender differences could influence how the dimensions of maturity to parenthood translate into fertility intention. If the elements of cognitive-emotional and behavioural maturity to parenthood vary by gender, the strength or nature of the relationship between maturity to parenthood and fertility intention is likely to differ between men and women.

There is a gender difference in fertility intention and maturity to parenthood in past studies, respectively. Starting with gender differences in fertility intention, Boivin et al. (2018) found that women exhibited a stronger personal desire for children than males. Also, Shreffler et al. (2010) suggested that 45% of women plan to give birth within the next three years, compared to 34% of males, indicating a substantial gender difference in fertility intentions. On the other hand, there is a gender difference in maturity to parenthood, especially in the aspect of readiness. Women are found to demonstrate more maturity in all three dimensions of maturity to parenthood earlier and achieve them earlier, as compared to men (Łada-Maśko & Kaźmierczak, 2021). To add on, women regarded economic, personal, and relational preparation (which are related to behavioural maturity to parenthood) as more essential in fertility decisions (Boivin et al., 2018). Contrasting finding also exists, as Xu et al. (2023) claimed that men placed greater value on having children than women, suggesting men may have higher valence maturity to parenthood. Besides, Łada-Maśko and Kaźmierczak (2023) found that women had greater overall and behavioural maturity to motherhood than males, but no significant gender differences in degrees of cognitive-emotional or valence maturity to parenthood.

In summary, previous studies have shown gender-specific differences in the role of cognitive-emotional and behavioural maturity to parenthood influencing fertility intention, as

well as distinct gender differences in fertility intention and all three dimensions of maturity to parenthood individually. However, despite these findings, no studies have explicitly tested gender as a moderator in the relationship between maturity to parenthood and fertility intention. This gap is significant, as moderator analyses are critical in reproductive research to account for the influence of contextual factors such as gender. Fertility behaviour is highly sensitive to these factors, and demographic studies consistently show that men and women have distinct considerations when deciding to start a family (Boivin et al., 2018). Hence, considering all insights from past works of literature, this study will incorporate gender as a moderator while investigating the predicted role of maturity to parenthood on fertility intention.

Theoretical Framework

The Neo-Socioanalytic Model, introduced by Roberts and Wood (2006), describes how life events and environmental factors can influence the change and development of personality as they unfold along the normative lifespan. This model expands upon the earlier socioanalytic theory (Hogan, 1982) and considers the development of personality traits observed across numerous longitudinal studies (Roberts & Wood, 2006). Hence, the Neo-Socioanalytic Model aims to examine the nature of personality development, particularly the changes that can occur in one's personal growth and identity that social situations (i.e., social roles) can stimulate when individuals commit to them. This is better elaborated by one of the principles of personality development embodied in the Neo-Socioanalytic Model—the social investment principle, or the Social Investment Theory (SIT).

Social Investment Theory (SIT) posits that investing in traditional social roles or age-graded life transitions fosters the development of personality traits, thereby promoting psychological maturation (Roberts & Nickel, 2017). Social roles refer to specific societal expectations that individuals are expected to live upon at a given age, such as completing

education, entering the workforce, committing to relationships, and becoming parents. By investing effort and adapting to the demands of these roles, individuals undergo rewarding experiences that are believed to drive personality growth. SIT also points out that the influence of these roles on an individual largely depends on the level of effort they are willing to invest in realising them (Roberts & Wood, 2006).

To date, studies have examined how personality traits evolve toward greater maturity as individuals take on various adult social roles (Bleidorn et al., 2013; Roberts et al., 2005). While other normative life transitions, such as pursuing education (Nye & Roberts, 2019), investing in romantic relationships (Lehnart et al., 2010), and starting a career (Leikas & Salmela-Aro, 2015), align with the principles of SIT and have been shown to foster positive personality development, the transition to parenthood does not demonstrate similar outcomes. For instance, van Scheppingen et al. (2016) found no significant increment in maturity-related traits (i.e., emotional stability, agreeableness, and conscientiousness) between parents and non-parents. Similarly, Galdiolo and Roskam (2014) reported that becoming a parent is associated with either no changes or slight negative changes in personality traits.

This discrepancy raises an important question about why parenthood deviates from the patterns observed in other life transitions that align with SIT. One possible explanation, as proposed by Roberts and Nickel (2017), is that the relevant personality changes may have occurred before individuals formally assumed the parental role. With increasing awareness of parenting responsibilities and demands, individuals may have prepared extensively for parenthood far in advance. They invested in various resources and were psychologically prepared before stepping into this irreversible life transition, therefore showing no significant personality development post-childbirth, for example. Vice versa, if individuals refuse to invest themselves in the parental role, they may present a lower development in terms of personality or sense of maturity and will not proceed to take on the social role.

Previous research has explored selection effects, referring to pre-existing differences in personality traits that influence an individual's likelihood of becoming a parent. While Specht et al. (2011) found no significant differences in personality traits between individuals who did or did not become parents in subsequent years, other studies have yielded mixed findings, with some highlighting notable gender differences. For instance, Denissen et al. (2019) found that parents were generally less open and less conscientious than non-parents. In contrast, Pusch et al. (2019) suggested that individuals who were more conscientious and emotionally stable were more likely to become parents in later years. Directing attention to gender distinctions, van Scheppingen et al. (2016) reported that less open and more extroverted men and women, as well as more conscientious women, were more inclined to become parents. On the other hand, Jokela et al. (2009) identified that more sociable and active men (but not women) were more likely to experience the birth of a child.

These findings shed some light on how individuals' personalities (i.e., maturity) prior to parenthood may shape individuals' plans to pursue it, reflecting nuanced selection effects across studies. Additionally, the observed gender-based distinctions emphasise the importance of considering gender, as it likely influences the dynamics of personality development and readiness for parenthood differently for men and women (Jokela et al., 2009; van Scheppingen et al., 2016). That said, the process of preparing for the parental role may represent the critical period during which personality traits (i.e., maturity) would gradually develop instead of after the role is occupied. This possible distinction differentiates the developmental trajectory observed in transitioning to parenthood from other life transitions. It warrants further exploration under the SIT framework, extending its application to cover a broader temporal span.

On top of that, according to SIT, the nature and degree of psychological investments made in specific social roles are vital for maturational processes (Roberts et al., 2005).

Roberts and Jackson (2008) pointed out that there is a limited understanding of the types and mechanisms of psychological investments required to induce positive maturity from a micro-analytic, process-oriented perspective within SIT. Therefore, in the case of life transition before parenthood, the nature of investments required to promote maturity also needs further investigation. Furthermore, Lodi-Smith and Roberts (2007) mentioned that simply assuming the role of parenthood does not necessarily equate to consciously committing to or investing effort in it. Individuals may occupy the parental role but fail to fully invest in embracing it. In the lens of SIT, such a lack and ingenuine investment in their roles will result in less motivation or preparation to change, showing no apparent growth in maturity (Roberts & Wood, 2006). Hence, this demonstrates the necessity for a more thorough investigation into the types and degree of investments required to promote maturity guided by the principles of SIT.

Considering all, the present study proposes to examine three types of investments— valence, behavioural maturity, and cognitive-emotional maturity— during the preparatory stage, prior to the attainment of the parental role. They are identified as key dimensions of psychological investments that individuals are expected to commit to in order for personality maturation to take place. Following this, previous literature review has highlighted the promising role of maturity across the three dimensions in predicting fertility intention, suggesting that individuals who actively engage in developing these aspects are better equipped with the physical and mental resources necessary for this transition, thereby possessing a higher intention to progress toward actual parenthood. Hence, it is suggested that the greater the involvement and investment individuals make in preparing to fulfil the expectations of the parental role, the more likely they are to experience positive changes and maturation in personality. This process, in turn, positions them to have a stronger desire to move on to the next phase of life (i.e., becoming parents), reflected in their fertility

intentions. Notably, gender may play a role in determining which investments they would focus more on, contributing to different growth in personality traits and maturity aspects, which may affect decision-making in fertility-related issues.

Conceptual Framework

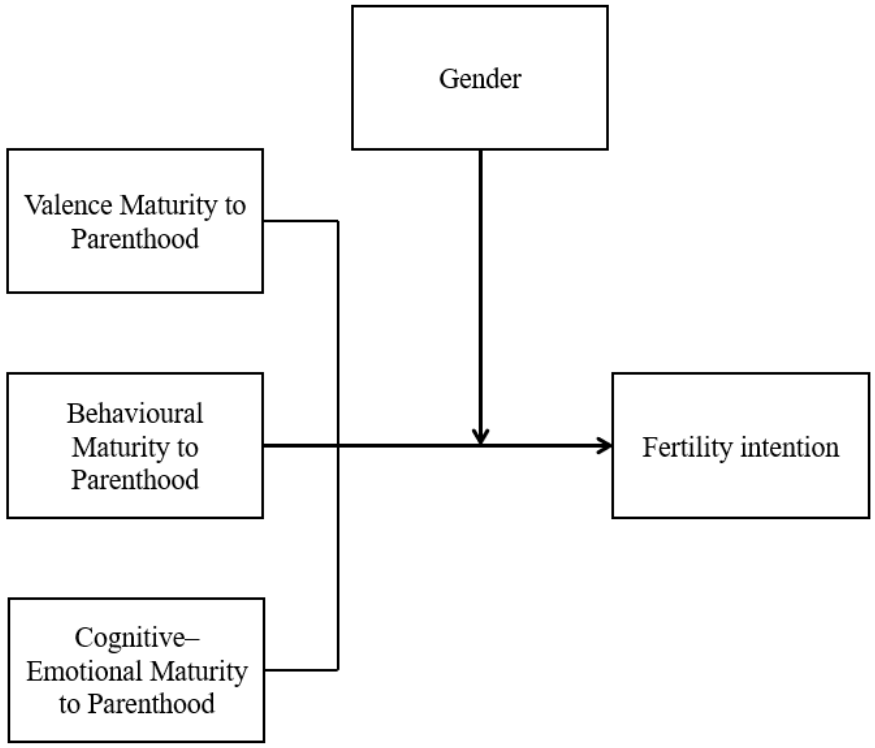
The conceptual framework presented in Figure 2.1 shows that the three dimensions of maturity to parenthood, namely valence, behavioural, and cognitive-emotional maturity, are examined as predictors of fertility intention, with gender as a moderator. Drawing upon the Social Investment Theory (SIT), individuals who are highly committed to the parental role will grow in psychological maturity during the process of role attainment. In this case, individuals are believed to facilitate better readiness to formally become parents, which is reflected in a higher intention to have a child. Additionally, existing literature has revealed a positive association between greater maturity in these three aspects and fertility intention, respectively (Artamonova et al., 2024; Buber-Ennser & Fliegenschnee, 2013; Datta et al., 2023; Huczewska & Mynarska, 2023; Mayer & Trommsdorff, 2010; Mynarska & Rytel, 2020; Spiteri et al., 2022; Thompson & Lee, 2011). Therefore, these aspects are posited to be potential areas of investment in this study for individuals to better prepare for the transition to parenthood. It is hypothesised that all three dimensions of maturity to parenthood (i.e., valence, behavioural, and cognitive-emotional) will positively predict fertility intention among Malaysian childless married couples.

The moderating effect of gender is also explored in the current study. Previous research has highlighted gender-specific differences in the impact of behavioural and cognitive-emotional maturity to parenthood on fertility intention (Buber-Ennser & Fliegenschnee, 2013), as well as the observed gendered differences within all dimensions of maturity to parenthood and fertility intention itself (Boivin et al., 2018; Łada-Maśko & Kaźmierczak, 2021; Xu et al., 2023). Therefore, it is hypothesised that gender significantly

moderates the relationship between valence, behavioural, and cognitive-emotional maturity on fertility intention, respectively. In other words, the investment made in aspects of three dimensions of maturity, which is necessary for achieving maturity to parenthood, varies depending on gender.

Figure 1

Conceptual Framework of the Study on Maturity to Parenthood (i.e., Valence, Behavioural, Cognitive-Emotional) and Fertility Intention: Gender as a Moderator



Chapter III

Methodology

Research Design

The current study employed a quantitative research approach with an online, cross-sectional survey design to gather and analyse data efficiently. Given the nature of the study, a quantitative design was deemed appropriate for exploring the predictive role of maturity to parenthood (i.e., valence, behavioural, cognitive-emotional) on fertility intention, as well as the moderating effect of gender, a sociodemographic variable, on the relationship between these variables. As Tashakkori et al. (2020) outlined, quantitative research involves collecting and analysing descriptive, numerical data, from which significant statistical inferences can be made about the sample.

Specifically, data collection was conducted via an online cross-sectional survey that administered a structured questionnaire, which, according to Cheung (2021), is effective for collecting both demographic information and data from validated instruments (Łada-Maśko & Kaźmierczak, 2021; Rocca et al., 2019) in alignment with the study's focus. The self-administered questionnaires were distributed across various internet platforms to facilitate data collection from currently childless married couples, a specific, hard-to-reach population (Siva et al., 2019). With the rise of the internet and advancements in computational capacity, the information collected was easily quantified and visualised via web-based software (Rea et al., 2022), enabling more efficient data processing. The cross-sectional design, as a one-time descriptive data collection process, provides a practical and efficient means of establishing a foundational understanding of the study topic and may set the stage for future in-depth research (Wang & Cheng, 2020). Hence, it was employed in the study.

Sampling Procedures

Sample

To ensure sample representativeness, the inclusion criteria were defined as follows: (1) Malaysian nationality, (2) aged between 18-45 years, (3) legally married, and (4) without children (biological or adopted). The age range for participants was set between 18 and 45 years, reflecting the minimum legal marriage age in most jurisdictions (Jamaiudin, 2023) and aligning with the natural reproductive age range (Delbaere et al., 2020). This age range was also consistent with the parameters the Department of Statistics Malaysia (2024a) used in measuring fertility rates, ensuring that the study's age scope was relevant and justifiable.

Following the focus of the study, the recruited participants were required to be in a marital relationship and to have not previously mothered or fathered a child. Past studies have indicated that fertility intentions among married individuals tend to be more stable and closely aligned with actual fertility behaviours (Sturm et al., 2023), as marriage often signifies a committed relationship and a readiness for family planning. As such, focusing on married participants offers a more reliable basis for examining the dynamics of fertility intentions and their potential outcomes. In addition, this focus is particularly relevant in the Malaysian context, where marriage rates have remained relatively stable, with only a slight decline in the crude marriage rate, from 6.6 in 2022 to 5.7 in 2023 (Department of Statistics Malaysia, 2024b). In contrast, the total fertility rate has remained below the replacement level of 2.1 for several years and continues to decline, reaching 1.7 in 2023 (Department of Statistics Malaysia, 2024a; Najihah et al., 2021). This growing disparity may have suggested an increasing decoupling between marriage and parenthood, highlighting the need to examine the factors influencing fertility intentions among married individuals who do not have children.

Meanwhile, responses were excluded from the current study if the participants or their partners (1) were currently pregnant and (2) had been diagnosed with or had previously sought treatment for infertility-related issues. These exclusion criteria were established to

eliminate confounding variables that could have interfered with the study results. As infertility is defined as a couple's inability to establish a clinical pregnancy following one year of consistent unprotected sexual intercourse (Messinis et al., 2016), infertile individuals were excluded to ensure that the sample better reflects individuals whose fertility intentions could be influenced by the variables under the current study. This exclusion aligned with the study's research objectives and was also used in past studies (Bassford & Fisher, 2020; Zhu et al., 2020).

Sampling Method

A non-probability sampling method was adopted, specifically purposive, self-selection, and snowball sampling, to recruit the target respondents via an online survey. Non-probability sampling is considered an appropriate approach when the target population of specific interest is difficult to access, making random sampling both challenging and impractical (Berndt, 2020). In this study, childless married couples played a key role in the analysis of this research; hence, due to the lack of a comprehensive sampling frame for the random selection of this specific group, non-probability sampling was selected. This method facilitated collecting a larger number of valid responses from the target group.

Purposive sampling was used to enhance the sample's representativeness and the accuracy of the results, as it involved an intentional selection of respondents based on predetermined inclusion and exclusion criteria (Stratton, 2021), which was presented in the previous sub-section. Besides that, unrestricted self-selection sampling, also known as voluntary sampling, was employed to ensure a sufficient and diverse sample size for the study (Galloway, 2005). Given the vast pool of potential participants available through websites and social media platforms, initiatives to advertise the study (e.g., a well-designed study poster and incentives) were necessary to encourage greater participation (Khazaal et al., 2014). This approach increased response rates and ensured more committed and engaged

volunteers, as participants were more likely to complete the survey when they chose to do so voluntarily. At the same time, snowball sampling was used to extend the participant reach, whereby initial participants identified and referred additional eligible individuals, facilitating a referral recruitment process that continued until the target sample size is achieved (Leighton et al., 2021).

Location of Study

Eligible respondents for this study were married Malaysians without children, aged between 18 and 45 years, and currently residing in Malaysia. The survey was primarily distributed through various social media platforms, including Facebook community groups (e.g., *Marriage/Wedding/Photography/Makeup Discussion*, *[Malaysia] Survey Group*, *Malaysia Dating/Marriage*, *DEWAN KAHWIN & PAKEJ LENGKAP PERKAHWINAN*, *IDEA GOODIES KAHWIN,* etc.), as well as XiaoHongShu, Instagram, TikTok, Twitter and Lemon8. This approach enabled outreach to potential participants across various states to ensure diverse representation.

Sample Size, Power, and Precision

A power analysis was conducted using the G*Power program (Faul et al., 2007) to determine the appropriate sample size for this study. The sample size calculation was generated with an alpha level set at .05, an effect size (f^2) of .15 (medium), and a statistical power of .95. The analysis indicated that, with a total of seven predictors, 119 participants were needed (see Appendix A). This study followed an exploratory design, an approach often used when there are few or no prior studies to refer to or rely on for anticipating an outcome (Mbaka & Isiramen, 2021). Consequently, the default effect size of .15 was used in G*Power, as there was no prior research to inform the estimate. The use of a medium effect size (f^2 = .15) to calculate sample size was also supported by other exploratory studies (Black & Gringart, 2019; Chachula, 2021; Lowe et al., 2020; Rothermich et al., 2021). The alpha level

and statistical power were also retained at their default values of .05 and 0.95, respectively, which are generally accepted in social science research (Hair et al., 2019).

Due to the possibility of missing data, the study oversampled by 20% of the calculated minimum sample size (Djimeu & Houndolo, 2016), resulting in a target of 142 participants. Upon the conclusion of data collection, a total of 261 responses were obtained. Following data cleaning procedures to ensure data quality and consistency, 95 valid responses remained for analysis. Although this is below the original target, the final sample size is deemed adequate, as the relevant justifications will be outlined in Chapter V Results.

Research Procedures

Ethical Clearance Approval

Prior to the commencement of the study, ethical clearance was sought from the UTAR Scientific and Ethical Review Committee (UTAR SERC) for the inclusion of human participants and the handling of their personal data. This process ensured that the research design and protocols complied with established ethical standards, thereby safeguarding the rights and well-being of all participants throughout the study. Ethical approval (Ref: U/SERC/78-415/2024) was granted on 17th December 2024 (see Appendix B), and all research activities were conducted in accordance with the approved ethical guidelines.

Procedures of Obtaining Consent

The information sheet, which was provided before the attached informed consent, included comprehensive details to ensure participants were fully informed about their rights and responsibilities, enabling them to make an informed decision regarding their involvement in this study. It outlined the purpose of the study, the questionnaires involved, and the eligibility criteria for participation. Apart from that, voluntary participation was emphasised, reassuring participants that they could withdraw at any point without bearing any adverse consequences. To address data protection, personal information was securely stored, used

exclusively for research purposes, and handled in compliance with the Personal Data Protection Act (2010). For the optional lucky draw and incentives, the sheet provided clear terms, highlighting that providing additional information (i.e., name and phone number) was necessary to participate in the lucky draw but was optional and would not affect participation in the actual study. Finally, the contact information of the researchers and supervisor was included for any questions, concerns, or complaints from participants.

An informed consent form was included immediately after the information sheet to obtain participants' approval to access and utilise their personal data in compliance with the Personal Data Protection Act 2010 (Act 709). Participants were required to agree to all terms and conditions before proceeding to the subsequent sections of the survey. This process ensured that all participants were fully informed about their rights, the potential risks and benefits of the study, and their involvement in it. The collected data was encrypted and made available only to the researchers and the supervisor of this study.

Data Collection Procedures

To recruit eligible respondents, the survey link, along with a poster (see Appendix C) containing the QR code, was circulated across various social media platforms such as Facebook community groups, XiaoHongShu, Instagram, TikTok, and Lemon8. Participants who answered the survey were encouraged to share the link within their networks, potentially reaching other valid respondents. In addition, to further incentivise participation, participants were offered a token of appreciation through a lucky draw to acknowledge their contribution. Data were collected and monitored using Qualtrics software over three months, from December 2024 to the end of March 2025. The average time required to complete the survey was estimated to be 15 to 20 minutes.

Agreement and Payment

In this research, tokens of appreciation were provided to participants—RM20 for the pilot study and RM10 for the actual study. A total of RM500 was requested from UTAR, Department of Psychology and Counselling, Final Year Project (FYP) Funding to acknowledge respondents' time and effort, and to encourage active engagement to ensure adequate data collection. To fully utilise the allocated funding, two winners from the pilot study received RM20 each, while 46 winners from the actual study were awarded RM10 each. Winners were selected through a lucky draw from a pool of respondents who met the study's inclusion criteria, completed the survey, and consented to participate in the draw. The terms and conditions for token distribution were clearly outlined on the first page of the online survey to ensure transparency and avoid miscommunication. Participants who opted into the draw were required to provide their name and phone number, which were used exclusively for the purposes of the draw and were not linked to their responses or any other data collected. Winners were notified after the completion of data collection, and the tokens were distributed via the Touch 'n Go EWallet.

Pilot Study

Upon ethical clearance approval, a small-scale pilot study was conducted before administering the survey. According to In (2017), conducting a pilot study is crucial for enhancing the effectiveness and quality of the primary study. This pilot study aimed to assess the reliability of the administered measures, and a minimum sample size of 24 participants is advised for conducting the Cronbach's alpha test (Bujang et al., 2024); therefore, 24 respondents were required for the pilot study. Participants were approached in person at various locations, including Kampar (Perak), Muar (Johor), and Sungai Petani (Kedah). This face-to-face approach was adopted to minimise response bias, particularly the risk of duplicate participation in both the pilot and the actual study, as the actual survey would later be distributed online. A total of 24 valid responses were collected throughout the pilot study.

Measures

The administered online survey was structured into three sections: an information sheet and informed consent, a demographic section, and the main questionnaires, which included two scales: the Maturity to Parenthood Scale (MPS; Łada-Maśko & Kaźmierczak) with three subscales (i.e., valence, behavioural, and cognitive-emotional) and the Desire to Avoid Pregnancy Scale (DAP; Rocca et al., 2019).

Demographic Information

The demographic information collected from participants included age, gender, ethnicity, religion, highest level of education, employment status, estimated monthly household income, and length of marriage. Collecting such demographic data was crucial for understanding the composition of the sample and helped contextualise study findings.

Desire to Avoid Pregnancy (DAP) Scale

Fertility intention was measured using the Desire to Avoid Pregnancy (DAP) scale (Rocca et al., 2019), which assesses a woman's underlying inclination to avoid becoming pregnant or her inherent disposition against pregnancy. The scale captures three domains: cognitive reflection on preferences regarding pregnancy and childbearing, affective emotions towards a possible pregnancy and child, and expected practical implications in the scenario of pregnancy and childbearing. It comprises 14 items rated on a 5-point Likert scale (0 = *strongly agree* to 4 = *strongly disagree*), with higher scores indicating a greater desire to avoid pregnancy. Both the internal and external validity of the DAP scale have been supported. The scale also demonstrated high reliability, with a Cronbach's alpha (α) of .95, indicating strong internal consistency (Rocca et al., 2019).

DAP scale was chosen for its psychometric robustness and its multidimensional approach to measuring pregnancy-related preferences (e.g., cognitive, affective, and practical considerations). While the scale was originally developed to assess the desire to avoid

pregnancy, its cognitive domain aligns well with the construct of fertility intention. The scale instructs participants to imagine the scenario of being pregnant would access the mental script of parenting, which is part of fertility intention (Ajzen & Klobas, 2013). Besides, its affective domain aligns with the emotional stance for having children, which is an indicator of fertility desire (Bernardi et al., 2015). Also, the practical implication domain accesses some factors that influence fertility intention, such as perceptions of risk, benefit and expectations (Li et al., 2018). Additionally, accessing the timeline to achieve a reproductive goal is a critical component of accessing fertility intention (Bernardi et al., 2015). Although the DAP scale is designed to assess pregnancy avoidance, its inclusion of time-specific items, such as preferences regarding the possibility of pregnancy within the next 3 months or having a new baby within a year, aligns with this principle, indirectly fulfilling the requirement of addressing fertility intention within a defined timeframe.

For the present study, the items in the DAP scale were reworded in advance to ensure their appropriateness for male respondents in assessing fertility intentions. As previously justified, although the DAP scale was initially developed to measure a woman's desire to avoid pregnancy, its item structure aligns with the broader conceptualisation of fertility intention. Therefore, the items were carefully reformulated to measure male fertility intention as well, without altering the core construct. For example, the original item "I wouldn't mind it if I became pregnant in the next 3 months" was reworded as "I wouldn't mind it if I (or my partner) became pregnant in the next 3 months". Likewise, "It would be a good thing for me if I became pregnant in the next 3 months" was changed to "It would be a good thing for me if I (or my partner) became pregnant in the next 3 months". Comparable adjustments were made to other relevant items to ensure conceptual consistency.

Additionally, the initial DAP scoring was reversed (0 = *strongly disagree* to 4 = *strongly agree*) so that higher scores directly reflected greater fertility intention. This

adjustment was also made to align with typical Likert scale conventions (Likert, 1932), where higher scores indicate stronger agreement or greater intensity, thereby improving clarity for both participants and researchers. Items 3, 7, 9, and 11 to 14 were reverse-coded before analysis.

Maturity to Parenthood Scale (MPS)

Valence Maturity to Parenthood. Valence maturity to parenthood was assessed using a 7-item subscale rated on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). The subscale includes items such as "In my life, I would like to experience being a parent" and "I know why I would like to become a mother/father". Individuals with higher total scores on this dimension exhibit a stronger sense of valence maturity. They integrated parenting as a meaningful life goal, alongside a clear understanding of their motivations to take on the parental role. The subscale has demonstrated good construct validity and high internal consistency, with a reported Cronbach's alpha (α) of .85 (Łada-Maśko & Kaźmierczak, 2021).

Behavioural Maturity to Parenthood. Behavioural maturity for parenthood was measured using a 9-item subscale, with responses recorded on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). Example items include "I am looking for a full-time job so that I can take maternity and/or parental leave" and "I am talking to my partner about parenting". Higher total scores on this subscale indicate greater behavioural maturity. Individuals scoring higher tend to actively engage in behaviours that facilitate their transition into future parental roles, such as cultivating stable relationships, managing economic and work-related responsibilities, and proactively seeking information about parenting to better navigate the anticipated demands of parenthood. The subscale demonstrated good construct validity, as it was strongly positively correlated with young adults' willingness to have

children in the future, and showed strong internal reliability, with a Cronbach's alpha (α) of .88 (Łada-Maśko & Kaźmierczak, 2021).

Cognitive-Emotional Maturity to Parenthood. Cognitive-emotional maturity to parenthood was measured with a total of 8 items, each rated on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). The items include statements such as "I take into account ageing in my plans for parenting" and "I know that the decisions and choices I make will affect my child's development". Higher total scores on this subscale are interpreted as greater cognitive-emotional maturity. A higher score indicates the ability to incorporate a realistic and flexible strategy of adopting and fulfilling parental responsibilities in daily life while holding positive thoughts and feelings about the future execution of parental roles. The subscale was positively correlated with both emotional and cognitive dimensions of empathy, supporting its construct validity. Cronbach's alpha (α) was .87, indicating good internal consistency (Łada-Maśko & Kaźmierczak, 2021).

Reliability of the Measures

Reliability analyses were conducted for all measures in both the pilot and actual studies using Cronbach's alpha coefficient. The Desire to Avoid Pregnancy (DAP) Scale and the three subscales of the Maturity to Parenthood Scale (MPS), namely valence, behavioural, and cognitive-emotional, demonstrated good internal consistency, with Cronbach's alpha (α) values all exceeding .80, indicating high reliability (Cronbach, 1951). The results are presented in Table 1 below.

Table 1

Reliability of Measures in the Pilot and Actual Studies

Scale	Number of Items	Cronbach's alpha, α	
		Pilot Study	Actual Study

		(n = 24)	(n = 95)
Desire to Avoid Pregnancy	14	.98	.95
Valence Maturity to Parenthood	7	.94	.91
Behavioural Maturity to Parenthood	9	.94	.90
Cognitive-Emotional Maturity to Parenthood	8	.91	.87

Data Analysis

All data were analysed using the Statistical Package for Social Sciences (SPSS) version 23 and the PROCESS macro (Hayes, 2018). The analysis included both descriptive and inferential statistics to address the research questions and test the hypotheses. In terms of descriptive statistics, the mean, standard deviation, minimum, maximum, and range were calculated for all three independent variables (i.e., valence, behavioural maturity, and cognitive-emotional maturity) and one dependent variable (i.e., fertility intention) to summarise the characteristics of the data. Furthermore, means and standard deviations were also calculated for the demographic variables.

Prior to the data analyses, normality assumptions were assessed to determine whether the data met the criteria for subsequent analyses. This was evaluated using visual inspections of histograms and quantile-quantile (Q-Q) plot, as well as skewness and kurtosis, and the Kolmogorov-Smirnov (K-S) Test.

Several inferential analyses were conducted to test the hypotheses and address the research questions. Firstly, Pearson correlation analysis was conducted to evaluate the strength and direction of the linear relationships between the independent variables and the dependent variable. The Pearson correlation coefficient (r) quantifies the degree of association between two variables, producing a value between -1 and +1. A value of +1

indicates a perfect positive linear relationship, where one variable increases as the other increases. Conversely, a value of -1 indicates a perfect negative linear relationship, where one variable decreases as the other increases. A value of 0 indicates no linear relationship between the variables (Carlson & Winquist, 2021).

Secondly, a hierarchical multiple regression analysis was employed to analyse the direct relationships between the independent variables and the dependent variable. This statistical technique involves entering predictors into the regression model in successive blocks or steps, based on theoretical or empirical rationale. It enables the evaluation of how much additional variance in the dependent variable is explained by each new block of variables, while also allowing for the assessment of the unique contribution of each independent variable after controlling for the effects of those entered in previous steps (Petrocelli, 2003). This approach was particularly suitable for testing whether including key predictors significantly improved the model's explanatory power beyond the effects of control variables (i.e., age and gender). As part of the validation process, key assumptions of regression analysis were first tested, including independence of errors, absence of multicollinearity, normality of residuals, linearity, and homoscedasticity. Additionally, Cook's Distance, Mahalanobis Distance, and Centered Leverage Values were examined to detect potential outliers and influential cases.

Thirdly, Hayes's PROCESS macro (Model 1) was used to examine whether the relationship between the independent variables and the dependent variable was moderated by gender. This analysis involves creating interaction terms (e.g., valence maturity to parenthood × gender, behavioural maturity to parenthood × gender, cognitive-emotional maturity to parenthood × gender) to determine whether the effect of each independent variable on fertility intention changes depending on gender. Moreover, if the regression model shows a significant coefficient for the interaction term for gender ($b_3 \neq 0$), it indicates that gender

moderates the relationship between the independent variable and fertility intention (Igartua & Hayes, 2021).

Chapter IV

Results

Data Cleaning

According to Guo et al. (2023), data cleaning refers to any process undertaken to detect and correct inaccurate or inconsistent data, thereby enhancing overall data quality. This step is essential, as false data can interfere with the accuracy of analyses and the validity of research findings. In the present study, 261 responses were collected over three months. As part of the data cleaning procedure, responses were excluded from participants who did not provide consent (n = 19), submitted incomplete or inconsistent data (n = 55), or responded more than once (n = 4), with only one response retained in cases of duplication. The remaining 183 responses were further filtered according to the established inclusion and exclusion criteria. Three responses were excluded due to non-Malaysian participants, four for exceeding the age range of 18-45, 58 for being unmarried, 12 for having children, 4 for infertility, and 7 for being currently pregnant. As such, 54.6% of the total responses were removed, leaving a final sample size of 95 for data analysis.

Although the final sample size (n = 95) was smaller than the initially calculated target of 145, the present study still yields meaningful insights due to the strength of the observed effects. Specifically, an adjusted R^2 value of .55 and a large effect size (f^2 = .81) calculated based on the formula $f^2 = \frac{R^2}{1-R^2}$, indicate that the model explained a substantial proportion of variance (Cohen, 1988). Furthermore, a post hoc power analysis conducted using G*Power confirmed that the study achieved high statistical power (.99) with seven predictors and an alpha level of .05 (see Appendix D). These findings suggest that the analysis retained sufficient statistical power despite the reduced sample size and offer valuable contributions to the field.

Normality Assumptions

Histogram

Histograms serve as visual indicators of normal distribution, where a bell-shaped curve indicates that the sample data are approximately normally distributed (Ramachandran & Tsokos, 2021). The histograms of fertility intention, valence maturity to parenthood, behavioural maturity to parenthood, and cognitive-emotional maturity to parenthood each displayed a unimodal and roughly symmetrical shape (see Appendix E). This suggested that the assumption of normality was not violated.

Quantile-Quantile (Q-Q) Plot

The Q–Q plots for fertility intention, valence maturity to parenthood, behavioural maturity to parenthood, and cognitive-emotional maturity to parenthood showed that the data points were closely aligned along the diagonal line (see Appendix F), indicating no major deviations from normality (Das & Imon, 2016). Hence, the assumption of normality was not violated.

Skewness and Kurtosis

Based on Table 2, the skewness and kurtosis values for all study variables fall within the acceptable range of ± 1.96, suggesting that the assumption of normality was not violated (George & Mallery, 2011).

Table 2

Skewness and Kurtosis of Study Variables

Variable	Skewness	Kurtosis
Fertility Intention	-.46	-.12
Valence Maturity to Parenthood	-.92	.32

Behavioural Maturity to Parenthood	-.73	.43
Cognitive-Emotional Maturity to Parenthood	-1.01	.96

Kolmogorov-Smirnov (K-S) Test

Normality was violated for fertility intention, valence maturity to parenthood, and cognitive-emotional maturity to parenthood, with a significance value of $p < .05$, indicating a significant difference between the sample distribution and the normal distribution (Mishra et al., 2019). On the other hand, normality was not violated for behavioural maturity to parenthood, with D (95) = .079, p = .179 (see Appendix G).

Summary of Normality Assumptions

Although the K-S test indicated violations of normality for fertility intention, valence maturity to parenthood, and cognitive-emotional maturity to parenthood, it can still be concluded that the normality assumption was met, as each variable satisfied at least three out of five other normality indicators.

Descriptive Statistics

Among the 95 valid responses, participants ranged in age from 20 to 44 years (M = 31.23, SD = 5.25). The majority were female (n = 71), followed by male participants (n = 24). In terms of ethnicity, most respondents identified as Chinese (80%), followed by Malay (9.5%), Indian (7.4%), and others (3.2%), which included Bidayuh, Bumiputera Sarawak, and Punjabi. Regarding religion, 57.9% reported practising Buddhism, followed by Christianity (18.9%), Islam (9.5%), Hinduism (6.3%), and other religions (7%). The average household monthly income (n = 93) was RM 9,400.63 (SD = 9,346.27), and the mean length of marriage was 2.92 years (SD = 2.82). Additional demographic information is presented in Table 3.

The cut-off values for each study variable (i.e., fertility intention, valence maturity to parenthood, behavioural maturity to parenthood, and cognitive-emotional maturity to parenthood) were determined using the median score of each variable. Based on these cut-off points, participants were classified into low and high categories, as shown in Table 3. The vast majority of participants were found to fall into the high category across all study variables: fertility intention (M = 30.44, SD = 14.06), valence maturity to parenthood (M = 34.34, SD = 9.94), behavioural maturity to parenthood (M = 42.76, SD = 11.81), and cognitive-emotional maturity to parenthood (M = 42.48, SD = 9.18).

Table 3

Frequency Distribution of Demographic Variables and Study Variables

Variable	*f*	%	*M*	*SD*
Demographic Variables				
Age			31.23	5.25
Gender				
Female	71	74.7		
Male	24	25.3		
Ethnicity				
Indian	7	7.4		
Malay	9	9.5		
Chinese	76	80		
Others	3	3.2		
Religion				
Buddhism	55	57.9		
Christianity	18	18.9		

Variable	*f*	%	*M*	*SD*
Hinduism	6	6.3		
Islam	9	9.5		
Others	7	7.4		
Highest level of education				
Secondary school	10	10.5		
STPM / A-level / UEC	2	2.1		
Diploma / Advanced Diploma / Vocational	13	13.7		
Bachelor's degree	56	58.9		
Master's degree	12	12.6		
Doctoral degree	2	2.1		
Employment status				
Full-time	68	71.6		
Part-time	5	5.3		
Self-employed	14	14.7		
Unemployed	6	6.3		
Retired	1	1.1		
Student	1	1.1		
Estimated household monthly income (n = 93)			9400.63	9,346.27
< 3000	9	9.7		
3000 – 5999	28	30.1		
6000 – 8999	19	20.4		
≥ 9000	37	39.8		
Do you own a house?				

Variable	*f*	%	*M*	*SD*
Yes	58	61.1		
No	37	38.9		
Are you living with your parents (or parents-in-law)?				
Yes	34	35.8		
No	61	64.2		
Length of marriage			2.92	2.82
< 1 year	9	9.5		
1–3 years	61	64.2		
4–6 years	12	12.6		
≥ 7 years	13	13.7		
Do you or your partner use family planning techniques?				
Yes	31	32.6		
No	64	67.4		
Have you (or your partner) ever experienced a miscarriage?				
Yes	8	8.4		
No	87	91.6		
Do you and your partner share the same views on having children?				
Yes, our views are completely the same	51	53.7		
Somewhat, but we have minor differences	38	40.0		
No, our views are very different	3	3.2		

Variable	*f*	%	*M*	*SD*
We haven't discussed it	3	3.2		
How closely do your childbearing plans match your partner's?				
Exactly the same	23	24.2		
Mostly the same	50	52.6		
Somewhat different	11	11.6		
We haven't discussed it	7	7.4		
Completely different	4	4.2		
Study Variables				
Fertility Intention			30.44	14.06
Low (< 31)	44	46.3		
High (≥ 31)	51	53.4		
Valence Maturity to Parenthood			34.34	9.94
Low (< 36)	45	47.4		
High (≥ 36)	50	53.6		
Behavioural Maturity to Parenthood			42.76	11.81
Low (< 44)	44	46.3		
High (≥ 44)	51	53.7		
Cognitive-Emotional Maturity to Parenthood			42.48	9.18
Low (< 44)	38	40		
High (≥ 44)	57	60		

Note. N = 95.

Inferential Statistics

Correlation Analysis

A Pearson correlation analysis was conducted to assess the strength, direction, and significance of the associations between the study variables. The results revealed significant positive associations between fertility intention and the three aspects of maturity to parenthood: valence r (93) = .68, $p < .001$, behavioural r (93) = .75, $p < .001$, and cognitive-emotional r (93) = .62, $p < .001$. The results are presented in Table 4 below.

Table 4

Correlations of Study Variables

Variable	1.	2.	3.	4.
1. Fertility Intention	1			
2. Valence Maturity to Parenthood	.68***	1		
3. Behavioural Maturity to Parenthood	.75***	.90***	1	
4. Cognitive-Emotional Maturity to Parenthood	.62***	.87***	.86***	1

Note. *** $p < .001$ (1-tailed).

Regression Assumptions

A hierarchical multiple regression analysis was performed in accordance with the first research objective, which was to study the predictive effects of maturity to parenthood (i.e., valence, behavioural, and cognitive-emotional) on fertility intention among Malaysian married couples without children. Prior to the analysis, the necessary assumptions for regression analysis were confirmed.

Independent and Types of Variables. The responses in the current study were assumed to be independent (Berry, 1993). All study variables were measured on a continuous

scale. Therefore, the assumptions of independence of observations and appropriate measurement level were considered met.

Independence of Errors. A Durbin-Watson value of 2.00 (see Appendix H), which fell within the acceptable range of 1 to 3, indicated that the assumption of independent errors was not violated (Champion et al., 1998).

Multicollinearity. Multicollinearity refers to a condition where high correlations among independent variables can distort the estimation of regression coefficients. In the present study, multicollinearity was not observed, as all Variance Inflation Factor (VIF) values were below 10 and all tolerance values exceeded .10 (Hair et al., 2010). Hence, this assumption was not violated (see Appendix I).

Normality of Residuals, Linearity, and Homoscedasticity. The residuals were randomly and evenly distributed along the zero line of the scatterplot (see Appendix J), indicating that the assumptions of normality of residuals, linearity, and homoscedasticity were met (Osborne & Waters, 2002).

Multivariate Outliers and Influential Cases. Mahalanobis Distance (Barnett & Lewis, 1994), Cook's Distance (Cook & Weisberg, 1982), and Centered Leverage Value (Hoaglin & Welsch, 1978) were adopted to identify potential multivariate outliers and influential data points. As shown in Table 5, five cases were initially flagged as potential outliers (see Appendix K). However, all values fell within the acceptable thresholds: Mahalanobis distance values were below 15 (appropriate for a sample size of 100), Cook's distance values were under 1, and leverage values were below .105, based on the formula $2 \times \left[\frac{(k+1)}{n}\right]$, where $k = 4$ predictors and $n = 95$. These results indicated no violation of the assumption, suggesting that the identified cases were not unduly influential on the regression model and, therefore, were retained in the analysis.

Table 5

Multivariate Outliers

Case Number	Mahalanobis Distance	Cook's Distance	Centered Leverage Value
32	5.64006	.06515	.06000
44	1.39947	.02085	.01489
62	6.17331	.06368	.06567
63	7.44313	.09382	.07918
85	3.87542	.06865	.04123

Hierarchical Multiple Regression Analysis

A hierarchical multiple regression analysis was conducted to examine the predictive effects of maturity to parenthood on fertility intention while controlling for age and gender. In the first step (Model 1), age and gender were entered as control variables. The model was not statistically significant, with F (2, 92) = .714, p = .493, and neither age (β = .074, p = .480) nor gender (β = .091, p = .386) significantly predicted fertility intention.

In the second step (Model 2), the three independent predictors, valence maturity to parenthood, behavioural maturity to parenthood, and cognitive-emotional maturity to parenthood, were added to the model. The inclusion of these variables significantly improved the model, F (5, 89) = 24.028, p < .001, accounting for 55.1% of the variance in explaining fertility intention. Among these predictors, only behavioural maturity to parenthood was a significant positive predictor of fertility intention (β = .745, p < .001), supporting H_{1b}. In contrast, valence maturity to parenthood (β = .216, p = .227) and cognitive-emotional maturity to parenthood (β = –.203, p = .193) were not significant predictors, and thus H_{1a} and H_{1c} were not supported. The results are presented in Table 6.

Table 6

Hierarchical Regression Analysis in Predicting Fertility Intention Among Malaysian Childless Married Couples

Variable	Model 1			Model 2		
	Unstandardized Coefficients		Standardized Coefficients	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	β	B	Std. Error	β
(Constant)	23.525	8.770		-9.122	7.143	
Age	.198	.279	.074	.164	.190	.061
Gender	2.919	3.353	.091	-2.984	2.337	-.093
Valence Maturity to Parenthood				.305	.251	.216
Behavioural Maturity to Parenthood				.886	.199	.745***
Cognitive-Emotional Maturity to Parenthood				-.311	.237	-.203
R	.124			.758		
Adjusted R^2	-.006			.551***		

Note. Dependent Variable: Fertility Intention.

*** $p < .001$

Moderation Analysis

Hayes's PROCESS macro (Model 1) was employed to address the second research objective, which aimed to explore the moderating role of gender in the relationship between maturity to parenthood (i.e., valence, behavioural, and cognitive-emotional) and fertility intention among Malaysian married couples without children, while controlling for age.

Based on the results presented in Table 7, the model examining the interaction between valence maturity to parenthood and gender in predicting fertility intention was statistically significant, F (4, 90) = 21.789, $p < .001$, $R^2 = .492$. However, the interaction term between valence maturity to parenthood and gender was not significant, b = -.533, t (90) = -1.486, p = .141. This suggests that gender did not significantly moderate the relationship between valence maturity to parenthood and fertility intention; therefore, H_{2a} was not supported.

In terms of behavioural maturity to parenthood, the model was statistically significant, F (4, 90) = 29.226, $p < .001$, $R^2 = .565$. However, the interaction term between behavioural maturity to parenthood and gender was not statistically significant, b = -.138, t (90) = -.463, p = .645, suggesting that no moderating effect was observed of gender on the association between behavioural maturity to parenthood and fertility intention. Hence, the results failed to support H_{2b}.

For cognitive-emotional maturity to parenthood, the model was also statistically significant at F (4, 90) = 14.135, $p < .001$, $R^2 = .386$. Nevertheless, the interaction term between cognitive-emotional maturity to parenthood and gender was not significant, b = -.305, t (90) = -.732, p = .466. Thus, gender did not significantly moderate the relationship between cognitive-emotional maturity to parenthood and fertility intention, and H_{2c} was not supported.

Table 7

Moderation Analysis of Gender on the Relationship of Maturity to Parenthood (i.e., Valence, Behavioural, Cognitive-Emotional) and Fertility Intention

	Fertility Intention				
	b	*SE*	*t*	*p*	95% CI

(Constant)	-.436	.544	-.802	.424	[-1.517, .644]
Valence Maturity to Parenthood	.075	.008	9.054	< .001	[.059, .092]
Gender	1.246	.985	1.264	.210	[-.712, 3.203]
Valence Maturity to Parenthood × Gender	-.038	.026	-1.486	.141	[-.089, .013]
Age	.019	.015	1.299	.197	[-.010, .048]
(Constant)	-.347	.493	-.702	.484	[-1.327, .634]
Behavioural Maturity to Parenthood	.065	.006	10.314	< .001	[.053, .078]
Gender	.292	1.008	.290	.772	[-1.710, 2.295]
Behavioural Maturity to Parenthood × Gender	-.010	.021	-.463	.645	[-.052. .033]
Age	.008	.013	.630	.530	[-.018, .035]
(Constant)	-.516	.646	-.798	.427	[-1.799, .768]
Cognitive-Emotional Maturity to Parenthood	.070	.010	7.174	< .001	[.050, .089]
Gender	.963	1.339	.720	.474	[-1.696, 3.623]
Cognitive-Emotional Maturity to Parenthood × Gender	-.022	.030	-.732	.466	[-.081, .037]
Age	.008	.016	.470	.640	[-.025, .040]

Note. Gender (Female = 0); *b* = coefficient; *SE* = Standard Error.

Chapter V

Discussion

Valence Maturity to Parenthood and Fertility Intention

The results of the current study did not support the hypothesis (H_{1a}) that valence maturity to parenthood positively predicts fertility intention. Instead, the analysis revealed a statistically nonsignificant predictive relationship between the two variables. This finding suggests that although individuals may place a high value on parenthood, such prioritisation does not necessarily translate into the formation of fertility intentions within the short-term timeframe defined in this study (i.e., within the next three months or one year). Several possible interpretations can be drawn from these findings.

In today's cultural landscape, shifting life values toward personal autonomy and individual fulfilment have reshaped how individuals evaluate major life decisions (Lebano & Jamieson, 2020; Volsche & Jankowiak, 2020), including the decision to become a parent (Halik et al., 2019). This shift is driven by various contemporary developments, including improved access to education and career opportunities (Khalili & Miskiman, 2012), which is evident in the high levels of educational attainment and workforce participation among many married individuals in the present study. As noted in previous research, this demographic transition reflects an expansion in lifestyle opportunities and life choices (Yeung & Alipio, 2013). Individuals might continue to derive their sense of purpose and self-worth from diverse domains such as career achievements, educational pursuits, leisure activities, or personal relationships, even after marriage. As such, parenthood is no longer necessarily regarded as the primary or expected path to achieving a sense of worth for married individuals; instead, it is viewed as one of many equally valid life choices.

Given these observations, it may be argued that although married individuals in collectivistic Asian contexts continue to endorse familial values and obligations (e.g.,

parenthood; Raymo et al., 2015; Wider et al., 2021), they may simultaneously prioritise other life goals, such as personal achievement, stimulating experiences, or romantic intimacy (Abidin, 2020). These competing life values may lead to value conflict that contributes to ambivalence toward childbearing. On top of that, individuals may hesitate to commit to parenthood even when they value it highly (i.e., demonstrate high valence maturity to parenthood) due to the irreversibility of the event, along with the considerable sacrifices it entails (Aguilar-Gomez et al., 2019; Doepke & Kindermann, 2019).

Hence, even when parenthood is regarded as equally important, married individuals may choose to prioritise other life pursuits first, weakening the direct influence of valence maturity to parenthood on fertility intention. As a result, despite a desire for children, competing priorities may suppress the intention to have children in the short term, potentially accounting for the lack of a significant predictive relationship between the variables in this study.

Behavioural Maturity to Parenthood and Fertility Intention

The results supported the hypothesis (H_{1b}) that behavioural maturity to parenthood is a significant positive predictor of fertility intention, accounting for the largest proportion of variance explained by the model. This finding aligns with previous qualitative research (Datta et al., 2023; Hviid Malling et al., 2020), which suggested that individuals who actively organise their relationships, careers, and economic activities around environments that support parental roles are better equipped to manage the demands of parenthood. Such behavioural preparedness, also characterised by proactive planning and information seeking, appears to facilitate the formation of fertility intentions by expanding the resources and support systems needed for parenting. Notably, the present study extends this line of evidence by demonstrating that behavioural maturity may be especially influential in shaping

immediate fertility intentions, particularly in light of the nonsignificant predictive effects of other factors (i.e., valence and cognitive emotional maturity).

This finding can be interpreted through the framework of individual (fertility) agency, as proposed by Bazzani and Vignoli (2022). Individual agency refers to an individual's capacity to control their course of action (Giddens, 1984). This is particularly salient in the context of parenthood, which involves long-term, often irreversible commitments that significantly shape an individual's life trajectory (Sanders et al., 2021). Fertility agency was conceptualised as the conversion of personal and social resources into concrete plans and actions, such as the formation of fertility intentions (Bazzani & Vignoli, 2022). Fertility agency can be fostered through extensive planning and adherence to relevant supportive behaviours (i.e., enabling conversion factors). Therefore, it is understandable that behavioural maturity toward parenthood, which is characterised by proactive engagement in activities such as securing stable resources and managing responsibilities in anticipation of future parental demands, may foster what Sen (1992) referred to as "agency freedom" and, in turn, increase the likelihood of forming immediate fertility intentions orientated toward the near future.

Economic-related factors have emerged as some of the most prominent enabling conversion factors (Bazzani & Vignoli, 2022). A positive economic situation, such as stable employment with adequate income, has been identified as a key prerequisite for childbearing. This is especially relevant among highly educated individuals who are more sensitive to economic instability when deciding whether to have children (Vignoli et al., 2020). Full-time employment and homeownership have also been linked to a greater likelihood of an earlier transition to parenthood (Hashemzadeh et al., 2021). The considerable costs associated with childrearing, including housing, education, healthcare, and general living expenses, demand a stable economic foundation. Consequently, couples with established financial security may be

more likely to develop positive fertility intentions compared to those experiencing economic uncertainty.

In addition, social networks and social support emerge as a possible determinant of fertility intention. Lau (2024) suggested that perceived support from family and friends can shape an individual's desire for children. Additionally, social influence within one's network may lead to the internalisation of others' life goals, thereby facilitating fertility intention. In terms of familial support, Chen et al. (2024) highlight that perceived family functioning, when characterised by a supportive, harmonious, and responsive family environment, encourages non-parents to adopt a positive outlook on parenthood and increases the likelihood of having a first child. Individuals in such environments are more likely to feel confident and emotionally prepared in their ability to navigate the challenges of raising children. Behavioural maturity in cultivating strong familial relationships enhances fertility intentions by ensuring that individuals have a reliable family support system, which reduces stress and provides practical help, making the idea of having children more feasible and desirable.

Cognitive-Emotional Maturity to Parenthood and Fertility Intention

The results of the current study did not support the hypothesis (H_{1c}) that cognitive-emotional maturity to parenthood positively predicts fertility intention. Instead, the analysis revealed a statistically nonsignificant relationship between the two variables. This suggests that while individuals may demonstrate a realistic, flexible view of parenthood, recognise its various aspects, relate it to their family background, feel positively about becoming a parent, and take responsibility for decisions that may impact their future parental role, these qualities do not necessarily translate into higher fertility intention.

One possible reason for the lack of prediction is that cognitive-emotional maturity has been found to positively predict burden-related motives for postponing parenthood,

suggesting that individuals may view childbearing as burdensome (Szcześniak et al., 2024). In the context of the current study, participants with high cognitive-emotional maturity usually have a realistic and flexible view of parenthood, where they consider both positive and difficult aspects (Łada-Maśko & Kaźmierczak, 2021). The realistic attitudes may lead them to recognise that having children comes with both joys and challenges. So even though they may express high fertility intention, their mature and thoughtful perspective may make them more aware of the responsibilities and potential difficulties of raising children. As a result, this awareness may cause them to delay acting on their fertility intention.

Besides, this idea is further supported by the negative predictive value found in the multiple linear regression analysis ($\beta = -.203$, $p = .193$). Although the result is statistically not significant, the negative direction could point to a possible tendency to postpone childbearing. Therefore, participants may score highly in both cognitive-emotional maturity and fertility intention, but the lack of a predictive relationship might be due to their maturity leading them to delay, rather than pursue, childbearing in the near term, potentially explaining the nonsignificant yet negative result.

Gender as a Moderator

The results of the current study did not support hypotheses H_{2a}, H_{2b}, and H_{2c}, which proposed that gender moderates the relationships between valence, behavioural, and cognitive-emotional maturity to parenthood and fertility intention among Malaysian childless married individuals. The moderation model was not statistically significant, indicating that gender does not influence the strength or direction of these associations. In other words, the effects of all three types of maturity on fertility intention appear to be consistent across both male and female participants.

Regarding the nonsignificance of gender as a moderator for all three types of maturity to parenthood, this may be due to the uneven sample sizes between male and female

participants, which could have influenced the results. Tests for interaction effects typically have low power, particularly when the sample sizes are small or an imbalance exists (Lorah, 2020). In the current study, female participants made up around 75% (n = 71), while male participants accounted for only about 25% (n = 24), which reflects the imbalance of sample size. This condition may increase the risk of a Type II error, where a true moderation effect exists but is not detected due to insufficient statistical power (Lorah, 2020). Differences in sample sizes may also overshadow or mask substantial differences in outcome variables (Adams, 2014).

For valence maturity to parenthood, the lack of gender differences may be explained by the growing influence of modern gender norms, which promote more egalitarian views on parenthood. This shift in gender norms may be shaping current trends in Malaysia, where more women are becoming educated, entering the workforce, and taking part in household decision-making, which are factors that increase their exposure to modern gender norms (Chiew & Siow, 2023). As a result, both male and female participants in this study may hold similar values about becoming a parent as egalitarian men prefer to partner with egalitarian women who share similar values in childbearing (Hashemzadeh et. al., 2021). This shared perspective could reduce gender differences in how valence maturity influences fertility intention, explaining why gender did not emerge as a significant moderator in this relationship.

For behavioural maturity to parenthood, the lack of gender differences may reflect how practical factors (e.g., income, job stability) as well as relational preparation (e.g., couple congruence, family relationships) for parenthood affect fertility intention similarly for both men and women. This aligns with past research by Boivin et al. (2018), which found that both men and women see the necessity of stable economic situations to be significant when making decisions related to childbearing. Although it may not be directly related, Zhou

(2018) also stressed the importance of financial conditions, as both male and female participants in his study consider time constraints and financial limitations as key obstacles to having additional children.

Moreover, Boivin et al. (2018) also found that relational readiness (i.e., being in a stable and secure relationship) and personal readiness (i.e., perceived ability to parent) were strongly interrelated and appeared to form a single underlying factor. This suggests that partners may mutually influence one another in fertility-related decisions. Their study also showed that both men and women tended to have a similar wish for children as their partners. In the current study, this shared influence may have resulted in participants aligning with their partners in both levels of readiness and fertility intentions, which reduces gender differences. This explanation can be supported by the descriptive data in Table 3, where over 50% of participants reported that they share the same views of having children, and their childbearing plans are mostly the same as their partners. Therefore, the absence of significant gender differences in behavioural maturity to parenthood may help explain why behavioural maturity predicted fertility intention similarly across genders in this study.

For cognitive-emotional maturity to parenthood, the lack of gender moderation may relate to shared idealistic views before becoming parents. Duvander et al. (2020) suggest that men and women tend to hold similar views about equal parenting before entering parenthood. Although in reality, the real gendered cost gap (e.g., mothers doing more work) often only becomes obvious after the birth of a child (Duvander et. al., 2020). Since the participants in this study are childless, they may still hold shared, possibly idealised, attitudes toward parenthood. These shared views may mask gender differences in how cognitive-emotional maturity influences fertility intention, contributing to the lack of moderation effects observed.

Implication of the Study

Theoretical Implication

The present study contributes to the field of fertility studies by introducing maturity to parenthood as a potential psychological influencing factor within the Malaysian context. The findings revealed that the three dimensions of maturity to parenthood, that is, valence, behavioural, and cognitive-emotional, each demonstrated a significant positive association with the fertility intentions of childless married couples. Given the limited research in this area (e.g., Rashid et al., 2018; Zafrul, 2022), this study not only adds to the underexplored body of knowledge in Malaysia but also underscores the importance of extending beyond demographic and economic factors to consider psychological variables in understanding fertility intention. These insights may also hold relevance for other non-Western countries with comparable cultural contexts. Moreover, with regard to the use of psychometric tools to assess fertility intention, the present study positions the Desire to Avoid Pregnancy (DAP; Rocca et al., 2019) scale as a potentially valid and reliable instrument within the Malaysian context. The scale demonstrated good internal consistency, as indicated by a strong Cronbach's alpha ($\alpha = .95$), supporting its applicability for measuring fertility intention among childless married couples. This suggests that the DAP scale could serve as a valuable tool in future research examining fertility or childbearing intentions within similar cultural contexts in other Asian countries.

Apart from that, this study draws attention to a subgroup that holds considerable relevance for future research by focusing specifically on childless married couples. In Malaysia, where marriage rates remain relatively stable, yet fertility rates continue to decline below the replacement level (Department of Statistics Malaysia, 2024a; Department of Statistics Malaysia, 2024b), this population represents an important group warranting further exploration. Understanding their psychological readiness and decision-making processes could offer valuable direction for addressing fertility-related challenges within Malaysia and

comparable societies. Accordingly, this study offers preliminary insight that may inform and shape the direction of future research on fertility intentions among similar populations.

In addition, the present study identified behavioural maturity to parenthood as a significant positive predictor of fertility intention, providing empirical support for a construct that has been frequently discussed in qualitative research (Datta et al., 2023; Hviid Malling et al., 2020; Spiteri et al., 2022). Given the limited availability of quantitative evidence on this association, the current study bridges the gap between qualitative insights and quantitative validation. The results in the current study further reinforce the statistical significance of behavioural maturity in shaping fertility intentions and enhance the generalisability of this relationship to broader populations.

Likewise, although valence and cognitive-emotional maturity did not emerge as significant predictors of fertility intention in the regression model, their strong positive correlations with fertility intention were statistically confirmed. These findings support prior qualitative research that emphasises maturity as a meaningful psychological factor in shaping individuals' childbearing intentions, in terms of valence (Goldberg et al., 2012; Mynarska & Rytel, 2020) and cognitive-emotional readiness (Bodin et al., 2021; Rotkirch, 2020) to embrace parenthood. Hence, the adoption of a multidimensional conceptualisation of maturity to parenthood (Łada-Maśko & Kaźmierczak), comprising valence, behavioural, and cognitive-emotional aspects, may hold potential as a promising framework for future research on fertility intention, particularly in contexts where psychological influences remain underexplored.

Lastly, the findings of this study extend the application of Social Investment Theory (SIT) by supporting the notion that personality maturation can occur before individuals formally assume the parental role (Roberts & Nickel, 2017). This suggests that those anticipating parenthood may begin investing psychologically in the role well in advance,

engaging in preparatory behaviours and reallocating resources to meet the perceived demands of parenting. Such pre-role investments likely reflect an increase in psychological maturity that contributes to the development of fertility intention.

The study further positions behavioural, as well as valence and cognitive-emotional maturity, as potential domains of psychological investment under SIT, offering insight into mechanisms that facilitate positive maturity development and, in turn, influence fertility intention. In doing so, the present study extends the beginning of the temporal lens of the parenthood journey beyond pregnancy, highlighting the psychological processes that begin as individuals start directing their resources, intentions, and relationships toward the prospect of becoming parents. This perspective urges scholars to pay closer attention to the earlier, intention-forming stages of the parenthood journey, which may be crucial for supporting the successful transition from fertility intention to actual fertility behaviours.

Practical Implication

The findings of this study offer several practical implications for government agencies, non-profit organisations, healthcare professionals, and policymakers aiming to address the declining fertility rate in Malaysia. Specifically, the identification of maturity to parenthood, particularly its valence, behavioural, and cognitive-emotional dimensions, as key psychological correlates of fertility intention highlight the need to expand fertility-related programmes to promote not only economic incentives but also psychological readiness for parenthood.

Public awareness campaigns can be designed to foster positive values about parenting. Equally important, however, is the need to emphasise how parenthood can be integrated with other significant life roles, such as career, personal aspirations, and relationships. By showing how parenthood can harmoniously coexist with these other life goals, these campaigns can help couples better understand how to balance the responsibilities of parenting with other

aspects of life. This approach can help address misconceptions about parenting as a burden and offer couples a more realistic and positive outlook on parenthood. Additionally, tailored interventions aimed at enhancing cognitive-emotional maturity can support couples in refining their rationale for childbearing, thus improving their psychological preparedness for the challenges and rewards of becoming parents. Behavioural maturity, as highlighted in this study, also requires significant attention when encouraging fertility intention, given its strong predictive role, particularly among childless married couples.

Furthermore, this study provides valuable insights into the primary concerns couples may have regarding parenthood, allowing family counsellors and healthcare professionals to better understand and address these concerns. By identifying areas where couples may feel underprepared, whether in terms of behavioural, cognitive, or emotional maturity, healthcare professionals can tailor their counselling and support services to meet the specific needs of couples. Policymakers, on the other hand, can integrate these psychological considerations into family and fertility policies, ensuring a more holistic approach to promoting positive fertility intentions. While financial incentives, such as subsidies and tax benefits, remain crucial for encouraging childbearing, incorporating psychological readiness into these policies can significantly enhance their effectiveness. For example, policies could support programs that offer parenting education, relationship counselling, and financial planning workshops for couples planning to start a family, thereby increasing the likelihood of a successful transition from fertility intention to actual childbearing behaviours.

Limitations

Firstly, the cross-sectional nature of the research design limits the generalisability of the findings, as one-time data collection does not allow the determination of causal relationships. While relationships between variables can be identified, it cannot be confirmed whether maturity to parenthood leads to changes in fertility intention over time.

Secondly, the representativeness of the sample can be affected using the non-probability sampling method (Shaughnessy et al., 2015). Notably, most participants were female, accounting for approximately 74% of the total sample. Additionally, around 80% of the participants identified as Chinese. These subject variables, such as gender and ethnicity, could serve as potential confounding factors, leading to biased results and limiting the generalizability of the findings.

Thirdly, the sample size was relatively small and did not meet the targeted sample size, largely due to the challenge of recruiting individuals who met the study criteria. Although the effect sizes in this study were found to be large, the limited sample size may still reduce the statistical power and reliability of the results. Also, the current sample size may have limited the ability to detect small or interaction effects, such as gender moderation.

Lastly, although all three subscales of maturity to parenthood are conceptually distinct, the very high intercorrelations, particularly between Behavioural and Valence Maturity (r = .90), and between Cognitive-Emotional Maturity and the other two subscales (r = .86 to .87), raise questions about the discriminant validity of these measures. It is possible that the items did not fully capture the unique dimensions of each maturity, or that participants interpreted or responded to the items inconsistently. This limitation could have affected the overall findings regarding the role of each maturity in predicting fertility intention.

Recommendations

Firstly, future studies should adopt a longitudinal design to better understand the causal pathways between maturity to parenthood and fertility intention. This would allow researchers to track changes in maturity and fertility-related decisions over time, offering greater insights into directionality and developmental trends. Also, mix-method study should be considered to enrich quantitative findings with comprehensive qualitative insights. For

instance, conducting interviews or focus groups could delve into how individuals interpret and experience the various dimensions of maturity related to parenthood in real-life contexts. These methods could reveal nuanced factors, such as cultural expectations, personal beliefs, or family dynamics, that may not be fully captured through surveys alone.

Secondly, although probability sampling can improve representativeness and reduce sampling bias, it may not be feasible in this context due to the difficulty of accessing the target population—married but currently childless individuals. Collaborations with governmental agencies or ministry departments may be necessary to obtain access to more representative databases. Until such access is granted, future researchers could consider using a more purposive snowball technique, such as setting quotas for gender, age, or socioeconomic background, to reach a broader, more balanced sample and enhance generalisability.

Thirdly, increasing the sample size is also essential. To overcome recruitment challenges, future researchers could explore partnerships with community organisations, fertility clinics, marriage preparation programmes, or relevant online platforms and forums. These collaborations may help reach a wider range of eligible participants, ensure better representation across demographics, and ultimately allow for stronger conclusions to be drawn.

Lastly, future research should conduct a pilot study and run a factorial structure test (EFA) to test the validity of the scale before conducting the full study. Refining existing items or developing a more psychometrically robust instrument to better capture the unique facets of each maturity dimension would contribute to more accurate measurement and theoretical clarity.

Conclusion

This study revealed that among the three dimensions of maturity to parenthood, only behavioural maturity significantly predicted fertility intention, underscoring the central role of practical readiness (such as proactive planning, stable financial and relational environments, and preparedness for the demands of parenthood) in influencing childbearing decisions among Malaysian married individuals without children. In contrast, valence and cognitive-emotional maturity, which reflect idealised values and emotional reflections on parenthood, did not significantly contribute to fertility intention when all dimensions were considered together, suggesting that intention to have children may be more strongly driven by concrete readiness than by beliefs or emotional perspectives alone. Additionally, gender did not significantly moderate the relationships, indicating a potentially equal weighting of maturity factors across men and women, although the predominantly female sample limits the strength of this conclusion. Overall, the findings underscore the critical role of behavioural maturity in fertility planning and offer practical implications for designing targeted interventions that enhance real-life readiness for parenthood. By bridging qualitative insights with quantitative validation, the study supports the use of the Desire to Avoid (DAP) scale and Social Investment (SIT) Theory to highlight the value of incorporating psychological dimensions, particularly in non-Western contexts, into future fertility research.

References

Abidin, R. Z. (2020). Exploring married Malay couples' conceptions of a satisfying marriage: Some implications for the education of family counsellors. *IIUM Journal of Educational Studies*, *7*(2), 73–89. https://doi.org/10.31436/ijes.v7i2.264

Adams, H. L. (2014). *The moderating effect of gender on the relationship between socialization and internalizing problems in early childhood* [Master's thesis, Louisiana State University]. https://repository.lsu.edu/gradschool_theses/1021/

Aguilar-Gomez, S., Arceo-Gomez, E., & De la Cruz Toledo, E. (2019). Inside the black box of child penalties. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3497089

Ajzen, I., & Klobas, J. (2013). Fertility intentions: An approach based on the theory of planned behavior. *Demographic Research*, *29*, 203–232. https://doi.org/10.2307/26348152

Artamonova, A., Sorsa, T., Berg, V., Hägglund, A. E., & Rotkirch, A. (2024). Social resources are associated with higher fertility intentions in contemporary Finland. *Comparative Population Studies*, *49*, 81–116. https://doi.org/10.12765/cpos-2024-04

Azuar, A. (2024, November 21). Malaysia's labour shortage due to declining birth rates. *The Malaysian Reserve*. https://themalaysianreserve.com/2024/11/21/malaysias-labour-shortage-due-to-declining-birth-rates/

Bachrach, C. A., & Morgan, S. P. (2013). A cognitive-social model of fertility intentions. *Population and Development Review*, *39*(3), 459–485. https://doi.org/10.1111/j.1728-4457.2013.00612.x

Barnett, V., & Lewis, T. (1994). *Outliers in statistical data*. John Wiley & Sons.

Bassford, M., & Fisher, H. (2020). The impact of paid parental leave on fertility intentions. *Economic Record*, *96*, 402–430. https://doi.org/10.1111/1475-4932.12561

Bazzani, G., Dommermuth, L., Lappegard, T., & Vignoli, D. (2025). Frontiers of self-realisation. How (un)certainty and imaginaries shape fertility intentions in Italy and Norway. *Acta Sociologica*, *0*(0). https://doi.org/10.1177/00016993241300434

Bazzani, G., & Vignoli, D. (2022). The agency of fertility plans. *Frontiers in Sociology*, *7*. https://doi.org/10.3389/fsoc.2022.923756

Behboudi-Gandevani, S., Ziaei, S., Farahani, F. K., & Jasper, M. (2015). The perspectives of Iranian women on delayed childbearing: A qualitative study. *Journal of Nursing Research*, *23*(4), 313–321. https://doi.org/10.1097/jnr.0000000000000084

Bernardi, L., Mynarska, M., & Rossier, C. (2015). Uncertain, changing and situated fertility intentions. In D. Philipov, A. Liefbroer, & J. Klobas (Eds.), *Reproductive Decision-Making in a Macro-Micro Perspective. S* (pp. 113–139). Springer. https://doi.org/10.1007/978-94-017-9401-5_5

Berndt, A. E. (2020). Sampling methods. *Journal of Human Lactation*, *36*(2), 224–226. https://doi.org/10.1177/0890334420906850

Berry, W. D. (1993). *Understanding regression assumptions*. SAGE Publications, Inc. https://doi.org/10.4135/9781412986427

Black, S. C., & Gringart, E. (2019). The relationship between clients' preferences of therapists' sex and mental health support seeking: An exploratory study. *Australian Psychologist*, *54*(4), 322–335. https://doi.org/10.1111/ap.12370

Bleidorn, W., Klimstra, T. A., Denissen, J. J. A., Rentfrow, P. J., Potter, J., & Gosling, S. D. (2013). Personality maturation around the world: A cross-cultural examination of Social-Investment Theory. *Psychological Science*, *24*(12), 2530–2540. https://doi.org/10.1177/0956797613498396

Bodin, M., Holmström, C., Plantin, L., Schmidt, L., Ziebe, S., & Elmerstig, E. (2021). Preconditions to parenthood: Changes over time and generations. *Reproductive Biomedicine & Society Online*, *13*, 14–23. https://doi.org/10.1016/j.rbms.2021.03.003

Boivin, J., Buntin, L., Kalebic, N., & Harrison, C. (2018). What makes people ready to conceive? Findings from the international fertility decision-making study. *Reproductive Biomedicine & Society Online*, *6*, 90–101. https://doi.org/10.1016/j.rbms.2018.10.012

Brzozowska, Z., & Beaujouan, E. (2021). Assessing short-term fertility intentions and their realisation using the Generations and Gender Survey: Pitfalls and challenges. *European Journal of Population*, *37*(2), 405–416. https://doi.org/10.1007/s10680-020-09573-x

Buber-Ennser, I., & Fliegenschnee, K. (2013). Being ready for a child: A mixed-methods investigation of fertility intentions. *Family Science*, *4*(1), 139–147. https://doi.org/10.1080/19424620.2013.871739

Bueno, X. (2019). Fertility decisions in transition: Young adults' perceptions on fertility three decades apart in Spain. *The History of the Family*, *25*(3), 386–405. https://doi.org/10.1080/1081602x.2019.1686049

Bujang, M. A., Omar, E. D., Hui, D., & Hon, Y. K. (2024). Sample size determination for conducting a pilot study to assess reliability of a questionnaire. *Restorative Dentistry and Endodontics*, *49*(1). https://doi.org/10.5395/rde.2024.49.e3

Camberis, A.-L., McMahon, C. A., Gibson, F. L., & Boivin, J. (2014). Age, psychological maturity, and the transition to motherhood among English-speaking Australian women in a metropolitan area. *Developmental Psychology*, *50*(8), 2154–2164. https://doi.org/10.1037/a0037301

Camberis, A.-L., McMahon, C. A., Gibson, F. L., & Boivin, J. (2016). Maternal age, psychological maturity, parenting cognitions, and mother-infant interaction. *Infancy*, *21*(4), 396–422. https://doi.org/10.1111/infa.12116

Carlson, K. A., & Winquist, J. R. (2021). *An introduction to statistics: An active learning approach* (3rd ed.). SAGE Publications, Inc.

Chachula, K. M. (2021). Professional quality of life factors and relationships in nursing and psychiatric nursing students: An exploratory study. *SAGE Open Nursing*, *7*, 237796082199439. https://doi.org/10.1177/2377960821994394

Champion, R., Lenard, C. T., & Mills, T. M. (1998). Demonstrating the Durbin-Watson statistic. *Journal of the Royal Statistical Society: Series D (the Statistician)*, *47*(4), 643–644. https://doi.org/10.1111/1467-9884.00161

Chen, M., Kin, C., Chen, Q., Ko Ling Chan, & Ip, P. (2024). Fertility intention in Hong Kong: Declining trend and associated factors. *Applied Research in Quality of Life*, *19*. https://doi.org/10.1007/s11482-024-10292-2

Chen, M., & Yip, P. S. F. (2017). The discrepancy between ideal and actual parity in Hong Kong: Fertility desire, intention, and behavior. *Population Research and Policy Review*, *36*(4), 583–605. https://doi.org/10.1007/s11113-017-9433-5

Cheung, A. K.-L. (2021). Structured questionnaires. *Encyclopedia of Quality of Life and Well-Being Research*, 1–3. https://doi.org/10.1007/978-3-319-69909-7_2888-2

Chiew, W. A., & Siow, L. L. (2023). Women's empowerment in Malaysia and Indonesia: The autonomy of women in household decision-making. *Pertanika Journal of Social Sciences & Humanities*, *31*(2), 903–916. https://doi.org/10.47836/pjssh.31.2.22

Chwastek, A., & Mynarska, M. (2024). Navigating work and motherhood: Exploring the link between career orientation and childbearing motivations in emerging adulthood.

Journal of Reproductive and Infant Psychology, 1–13. https://doi.org/10.1080/02646838.2024.2316317

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587

Cook, R. D., & Weisberg, S. (1982). *Residuals and influence in regression*. Chapman and Hall.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297–334. https://doi.org/10.1007/BF02310555

Das, K. R., & Imon, A. H. M. R. (2016). A brief review of tests for normality. *American Journal of Theoretical and Applied Statistics*, *5*(1), 5–12. https://doi.org/10.11648/j.ajtas.20160501.12

Datta, J., Maxwell, K. J., Mitchell, K. R., Lewis, R., & Wellings, K. (2023). Factors shaping the timing of later entry into parenthood: Narratives of choice and constraint. *Social Sciences & Humanities Open*, *8*(1), 100700. https://doi.org/10.1016/j.ssaho.2023.100700

Delbaere, I., Verbiest, S., & Tydén, T. (2020). Knowledge about the impact of age on fertility: A brief review. *Upsala Journal of Medical Sciences*, *125*(2), 167–174. https://doi.org/10.1080/03009734.2019.1707913

Denissen, J. J. A., Luhmann, M., Chung, J. M., & Bleidorn, W. (2019). Transactions between life events and personality traits across the adult lifespan. *Journal of Personality and Social Psychology*, *116*(4), 612–633. https://doi.org/10.1037/pspp0000196

Department of Statistics Malaysia. (2024a, October 17). *TFR and ASFR*. OpenDOSM. https://open.dosm.gov.my/data-catalogue/fertility?age_group=tfr&visual=table

Department of Statistics Malaysia. (2024b, November 21). *Marriage and divorce, 2024*. DOSM. https://www.dosm.gov.my/portal-main/release-content/marriage-and-divorce-2024

Djimeu, E. W., & Houndolo, D.-G. (2016). Power calculation for causal inference in social science: Sample size and minimum detectable effect determination. *Journal of Development Effectiveness*, *8*(4), 508–527. https://doi.org/10.1080/19439342.2016.1244555

Doepke, M., & Kindermann, F. (2019). Bargaining over babies: Theory, evidence, and policy implications. *American Economic Review*, *109*(9), 3264–3306. https://doi.org/10.1257/aer.20160328

Dommermuth, L., Klobas, J., & Lappegård, T. (2015). Realization of fertility intentions by different time frames. *Advances in Life Course Research*, *24*, 34–46. https://doi.org/10.1016/j.alcr.2015.02.001

Duvander, A.-Z., Fahlén, S., Brandén, M., & Ohlsson-Wijk, S. (2020). Who makes the decision to have children? Couples' childbearing intentions and actual childbearing. *Advances in Life Course Research*, *43*, 100286. https://doi.org/10.1016/j.alcr.2019.04.016

Erfani, A., & Jahanbakhsh, R. (2022). Do spousal intimate relationships affect fertility intentions and preferences? *Journal of Family Issues*, *43*(4), 1117–1135. https://doi.org/10.1177/0192513x211016041

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175–191. https://doi.org/10.3758/bf03193146

Galdiolo, S., & Roskam, I. (2014). Development of personality traits in response to childbirth: A longitudinal dyadic perspective. *Personality and Individual Differences*, *69*, 223–230. https://doi.org/10.1016/j.paid.2014.06.002

Galloway, A. (2005). Non-probability sampling. *Encyclopedia of Social Measurement*, *2*(1), 859–864. https://doi.org/10.1016/b0-12-369398-5/00382-0

George, D., & Mallery, P. (2011). *SPSS for windows step by step: A simple guide and reference 18.0 update* (11th ed.). Allyn & Bacon.

Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Standford University Press.

Goldberg, A. E., Downing, J. B., & Moyer, A. M. (2012). Why parenthood, and why now?: Gay men's motivations for pursuing parenthood. *Family Relations*, *61*(1), 157–174. https://doi.org/10.1111/j.1741-3729.2011.00687.x

Guo, M., Wang, Y., Yang, Q., Li, R., Zhao, Y., Li, C., Zhu, M., Yao, C., Xin, J., Song, S., Li, Q., & Gao, R. (2023). Normal workflow and key strategies for data cleaning toward real-world data: Viewpoint. *Interactive Journal of Medical Research*, *12*, e44310–e44310. https://doi.org/10.2196/44310

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning Emea.

Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). Pearson Education.

Halik, M., Wider, W., Idris, M., Mustapha, M., & Adeymend. (2019). Exploring the emerging adulthood experiences among young adults in Sabah, Malaysia: A preliminary study. *Education Sciences & Psychology*, *52*(2), 13–25. https://www.researchgate.net/publication/333971421_Exploring_the_Emerging_Adult

hood_Experiences_among_Young_Adults_in_Sabah_Malaysia_A_Preliminary_Study/citations

Hanappi, D., Ryser, V.-A., Bernardi, L., & Le Goff, J.-M. (2017). Changes in employment uncertainty and the fertility intention–realization link: An analysis based on the Swiss household panel. *European Journal of Population*, *33*(3), 381–407. https://doi.org/10.1007/s10680-016-9408-y

Hashemzadeh, M., Shariati, M., Nazari, A. M., & Keramat, A. (2021). Childbearing intention and its associated factors: A systematic review. *Nursing Open*, *8*(5), 2354–2368. https://doi.org/10.1002/nop2.849

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis : A regression-based approach*. The Guilford Press.

Hoaglin, D. C., & Welsch, R. E. (1978). The hat matrix in regression and ANOVA. *The American Statistician*, *32*(1), 17. https://doi.org/10.2307/2683469

Hogan, R. (1982). A socioanalytic theory of personality. In M. M. Page (Ed.), *Nebraska Symposium on Motivation* (pp. 55–89). University of Nebraska Press.

Hogan, R., & Roberts, B. W. (2004). A socioanalytic model of maturity. *Journal of Career Assessment*, *12*(2), 207–217. https://doi.org/10.1177/1069072703255882

Huczewska, I., & Mynarska, M. (2023). From parentification to parenthood: Caregiving responsibilities in childhood and childbearing desire in young adulthood. *Journal of Reproductive and Infant Psychology*, 1–15. https://doi.org/10.1080/02646838.2023.2220356

Hviid Malling, G. M., Pitsillos, T., Tydén, T., Hammarberg, K., Ziebe, S., Friberg, B., & Schmidt, L. (2020). “Doing it in the right order”: childless men’s intentions regarding family formation. *Human Fertility*, *25*(1), 188–196. https://doi.org/10.1080/14647273.2020.1778803

Igartua, J.-J., & Hayes, A. F. (2021). Mediation, moderation, and conditional process analysis: Concepts, computations, and some common confusions. *The Spanish Journal of Psychology*, *24*, e29. https://doi.org/10.1017/sjp.2021.46

In, J. (2017). Introduction of a pilot study. *Korean Journal of Anesthesiology*, *70*(6), 601–605. https://doi.org/10.4097/kjae.2017.70.6.601

Jamaiudin, N. (2023, May 14). *How Malaysia can get serious about child marriage*. The Star. https://www.thestar.com.my/news/focus/2023/05/14/how-malaysia-can-get-serious-about-child-marriage

Jin, C., Tooth, L. R., Xu, X., & Mishra, G. D. (2024). Associations between factors in childhood and young adulthood and childlessness among women in their 40s: A national prospective cohort study. *Journal of Affective Disorders*, *360*, 26–32. https://doi.org/10.1016/j.jad.2024.05.113

Jokela, M., Kivimäki, M., Elovainio, M., & Keltikangas-Järvinen, L. (2009). Personality and having children: A two-way relationship. *Journal of Personality and Social Psychology*, *96*(1), 218–230. https://doi.org/10.1037/a0014058

Jones, G. W. (2007). Delayed marriage and very low fertility in Pacific Asia. *Population and Development Review*, *33*(3), 453–478. https://www.jstor.org/stable/25434630

Kamaruddin, R. (2017). Women fertility decision using the count model in Malaysia. *Journal of Management and Sustainability*, *7*(3), 133–139. https://doi.org/10.5539/jms.v7n3p133

Khalili, N. M. M., & Miskiman, N. (2012). A demographic transition in Malaysia: The changing roles of women. *Journal of the Department of Statistics*, *19*(1), 21–39. https://www.dosm.gov.my/uploads/journal/20221220190453.pdf

Khazaal, Y., van Singer, M., Chatton, A., Achab, S., Zullino, D., Rothen, S., Khan, R., Billieux, J., & Thorens, G. (2014). Does self-selection affect samples'

representativeness in online surveys? An investigation in online video game research. *Journal of Medical Internet Research*, *16*(7), e164. https://doi.org/10.2196/jmir.2759

Kim , S. (2014). *The effects of work-family conflict and marital satisfaction on fertility intentions of married working women* [Master's Thesis, Seoul National University]. https://s-space.snu.ac.kr/handle/10371/134497

Kim, E., & Yi, J.-S. (2024). Determinants of fertility intentions among South Koreans: Systematic review and meta-analysis. *Behavioral Sciences*, *14*(10), 939. https://doi.org/10.3390/bs14100939

Łada-Maśko, A. B., & Kaźmierczak, M. (2021). Measuring and predicting maturity to parenthood: What has personality got to do with it? *Journal of Clinical Medicine*, *10*(24), 5802. https://doi.org/10.3390/jcm10245802

Łada-Maśko, A. B., & Kaźmierczak, M. (2023). Dyadic approach to maturity to parenthood: Multilevel study on attachment in expectant and non-expectant couples. *Journal of Reproductive and Infant Psychology*, 1–17. https://doi.org/10.1080/02646838.2023.2230592

Lappegård, T., Neyer, G., & Vignoli, D. (2021). Three dimensions of the relationship between gender role attitudes and fertility intentions. *Genus*, *77*, 15. https://doi.org/10.1186/s41118-021-00126-6

Lau, J. (2024). *The Freedom to Choose: Factors Shaping Women's Parenthood Decisions* [Master's thesis, OCAD University]. https://openresearch.ocadu.ca/id/eprint/4411

Leavy, P. (2022). *Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. Guilford Publications.

Lebano, A., & Jamieson, L. (2020). Childbearing in Italy and Spain: Postponement narratives. *Population and Development Review*, *46*(1), 121–144. https://doi.org/10.1111/padr.12313

Lehnart, J., Neyer, F. J., & Eccles, J. (2010). Long-term effects of social investment: The case of partnering in young adulthood. *Journal of Personality*, *78*(2), 639–670. https://doi.org/10.1111/j.1467-6494.2010.00629.x

Leikas, S., & Salmela-Aro, K. (2015). Personality trait changes among young Finns: The role of life events and transitions. *Journal of Personality*, *83*(1), 117–126. https://doi.org/10.1111/jopy.12088

Li, C.-C., Huang, S.-M., Lai, J. C.-Y., Hsiung, Y., Chen, Y.-H., & Lee, C.-F. (2018). Development and validation of a Fertility Intention Scale in breast cancer survivors. *Journal of Nursing Research*, *26*(3), 177–184. https://doi.org/10.1097/jnr.0000000000000223

Li, Y. (2021). The effect of air pollution on fertility intentions. *Problemy Ekorozwoju*, *16*(1), 165–170. https://doi.org/10.35784/pe.2021.1.17

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, *22*(140), 55.

Lodi-Smith, J., & Roberts, B. W. (2007). Social investment and personality: A meta-analysis of the relationship of personality traits to investment in work, family, religion, and volunteerism. *Personality and Social Psychology Review*, *11*(1), 68–86. https://doi.org/10.1177/1088868306294590

Lorah, J. A. (2020). Interpretation of main effects in the presence of non-significant interaction effects. *The Quantitative Methods for Psychology*, *16*(1), 33–45. https://doi.org/10.20982/tqmp.16.1.p033

Lowe, M. A., Prapanjaroensin, A., Bakitas, M. A., Hites, L., Loan, L. A., Raju, D., & Patrician, P. A. (2020). An exploratory study of the influence of perceived organizational support, coworker social support, the nursing practice environment,

and nurse demographics on burnout in palliative care nurses. *Journal of Hospice & Palliative Nursing*, *22*(6), 465–472. https://doi.org/10.1097/njh.0000000000000686

Matera, C., Dommermuth, L., Bacci, S., Bertaccini, B., Minello, A., & Vignoli, D. (2023). Perceived economic uncertainty and fertility intentions in couples: A dyadic extension of the theory of planned behaviour. *Journal of Family and Economic Issues*, *44*, 790–806. https://doi.org/10.1007/s10834-022-09872-x

Mayer, B., & Trommsdorff, G. (2010). Adolescents' value of children and their intentions to have children: A cross-cultural and multilevel analysis. *Journal of Cross-Cultural Psychology*, *41*(5-6), 671–689. https://doi.org/10.1177/0022022110372195

Mbaka, N., & Isiramen, O. M. (2021). The changing role of an exploratory research in modern organisation. *GPH-International Journal of Business Management*, *4*(12), 27–36. https://doi.org/10.5281/zenodo.6992256

Messinis, I. E., Messini, C. I., Daponte, A., Garas, A., & Mahmood, T. (2016). The current situation of infertility services provision in Europe. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, *207*, 200–204. https://doi.org/10.1016/j.ejogrb.2016.10.004

Mishra, P., Pandey, C. M., Singh, U., Sahu, C., Keshri, A., & Gupta, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, *22*(1), 67–72. https://pmc.ncbi.nlm.nih.gov/articles/PMC6350423/

Mynarska, M., & Rytel, J. (2020). Fertility desires of childless poles: Which childbearing motives matter for men and women? *Journal of Family Issues*, *41*(1), 7–32. https://doi.org/10.1177/0192513x19868257

Mynarska, M., & Rytel, J. (2022). Childbearing motivation at the onset of emerging adulthood. *Journal of Youth Studies*, *26*(9), 1163–1181. https://doi.org/10.1080/13676261.2022.2080536

Najihah, I., Irwan Nadzif, M., Nur Ashikin, M. F., & Nor Azah, S. (2021, August 3-5). *Achievement of desired fertility in Malaysia and association with sociodemographic characteristics* [Poster presentation]. The 5th Asian Population Association Conference, Jakarta, Indonesia. https://familyrepository.lppkn.gov.my/index.php/database_stores/store_view_page/54/524?link=Ij9saW5rPUlqOXNhVzVyUFVscU9YSmFXR3htWkVoc2QxcFdPSGRRVjFZMFdWZE9NRXB0ZEd4bFZqaDNVRlpTYjFwWVRuQmplVWtsTTBRbWEyVjVYM1I1Y0dWZk1EMWxlR0ZqZENaclpYbGZNRDFKYm1adlozSmhjR2hwWXlJJTNEJmtleV90eXBlXzA9ZXhhY3Qma2V5XzA9U2NpZW50aWZpYytQb3N0ZXImZ3JvdXBpbmc9SW1aaVgyUmhlUzVFUVZSRkxsbEZRVklpIg%3D%3D

Natividade, J. C., Londero-Santos, A., Carvalho, N. M. de, Mello, R. M. de, Machado, R. N., & Féres-Carneiro, T. (2020). Desire to have children: Validity evidence of an instrument. *Psicologia Clínica*, *32*(2), 273–294. http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S0103-56652020000200005

Nye, C. D., & Roberts, B. W. (2019). A neo-socioanalytic model of personality development. In B. Baltes, C. W. Rudolph, & H. Zacher (Eds.), *Work across the Lifespan* (pp. 47–79). Academic Press. https://doi.org/10.1016/b978-0-12-812756-8.00003-7

Osborne, J., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research, and Evaluation Practical Assessment*, *8*(2). https://doi.org/10.7275/r222-hv23

Our World in Data. (2024). *Fertility rate, total - United Nations "World Population Prospects."* [Data Set]. Our World in Data. https://ourworldindata.org/grapher/children-per-woman-un?tab=chart

Petrocelli, J. V. (2003). Hierarchical multiple regression in counseling research: Common problems and possible remedies. *Measurement and Evaluation in Counseling and Development*, *36*(1), 9–22. https://doi.org/10.1080/07481756.2003.12069076

Pong, S. (1994). Sex preference and fertility in Peninsular Malaysia. *Studies in Family Planning*, *25*(3), 137–148. https://doi.org/10.2307/2137940

Pusch, S., Mund, M., Hagemeyer, B., & Finn, C. (2019). Personality development in emerging and young adulthood: A study of age differences. *European Journal of Personality*, *33*(3), 245–263. https://doi.org/10.1002/per.2181

Ramachandran, K. M., & Tsokos, C. P. (2021). Chapter 11 - Categorical data analysis and goodness-of-fit tests and applications. In *Mathematical Statistics with Applications in R* (3rd ed., pp. 461–490). Academic Press. https://doi.org/10.1016/B978-0-12-817815-7.00011-7

Ranjbar, M., Rahimi, M. K., Heidari, E., Bahariniya, S., Alimondegari, M., Lotfi, M. H., & Shafaghat, T. (2024). What factors influence couples' decisions to have children? Evidence from a systematic scoping review. *BMC Pregnancy and Childbirth*, *24*(1), 223. https://doi.org/10.1186/s12884-024-06385-3

Rashid, S. A., Ab Ghani, P., Mahmud, A., Ismail, N., & Aziz, A. A. (2018). Chapter 12: Fertility preferences in Malaysia. In S. Gietel-Basten, J. Casterline, & M. K. Choe (Eds.), *Family Demography in Asia* (pp. 185–196). Edward Elgar Publishing. https://doi.org/10.4337/9781785363559.00017

Raymo, J. M., Park, H., Xie, Y., & Yeung, W. J. (2015). Marriage and family in East Asia: Continuity and change. *Annual Review of Sociology*, *41*(1), 471–492. https://doi.org/10.1146/annurev-soc-073014-112428

Rea, A., Marshall, K., & Farrell, D. (2022). Capability of web-based survey software: An empirical review. *American Journal of Business*, *37*(1), 1–13. https://doi.org/10.1108/ajb-07-2019-0058

Roberts, B. W., & Nickel, L. B. (2017). A critical evaluation of the neo-socioanalytic model of personality. In J. Specht (Ed.), *Personality development across the lifespan* (pp. 151–177). Academic Press.

Roberts, B. W., & Wood, D. (2006). Personality development in the context of the neo-socioanalytic model of personality. In D. Mroczek & T. D. Little (Eds.), *Handbook of Personality Development* (pp. 11–39). Psychology Press. https://doi.org/10.4324/9781315805610.ch2

Roberts, B. W., Wood, D., & Smith, J. L. (2005). Evaluating Five Factor Theory and social investment perspectives on personality trait development. *Journal of Research in Personality*, *39*(1), 166–184. https://doi.org/10.1016/j.jrp.2004.08.002

Rocca, C. H., Ralph, L. J., Wilson, M., Gould, H., & Foster, D. G. (2019). Psychometric evaluation of an instrument to measure prospective pregnancy preferences: The Desire to Avoid Pregnancy Scale. *Medical Care*, *57*(2), 152–158. https://doi.org/10.1097/mlr.0000000000001048

Rothermich, K., Johnson, E. K., Griffith, R. M., & Beingolea, M. M. (2021). The influence of personality traits on attitudes towards climate change – An exploratory study. *Personality and Individual Differences*, *168*, 110304. https://doi.org/10.1016/j.paid.2020.110304

Rotkirch, A. (2020). The wish for a child. *Vienna Yearbook of Population Research*, *18*, 49–62. JSTOR. https://www.jstor.org/stable/27041929

Sanders, R. E., Lehmann, J., & Gardner, F. (2021). Title: New parents' idealistic expectations of parenthood: The impact of preconceived ideas. *Journal of Family Issues*, *44*(3), 0192513X2110551. https://doi.org/10.1177/0192513x211055124

Schytt, E., Nilsen, A. B. V., & Bernhardt, E. (2014). Still childless at the age of 28 to 40 years: A cross-sectional study of Swedish women's and men's reproductive intentions. *Sexual & Reproductive Healthcare*, *5*(1), 23–29. https://doi.org/10.1016/j.srhc.2013.11.001

Sen, A. (1992). *Inequality reexamined*. Harvard University Press.

Senasi, V., & Na, J. (2024). Factors influencing decline marriage and childbearing rates in China: A review paper [Special issue]. *International Journal of Interdisciplinary Organizational Studies*. SSRN. https://ssrn.com/abstract=4855959

Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2015). *Research methods in psychology* (10th ed.). Mcgraw-Hill Education.

Shreffler, K. M., Pirretti, A. E., & Drago, R. (2010). Work–Family conflict and fertility intentions: Does gender matter? *Journal of Family and Economic Issues*, *31*, 228–240. https://doi.org/10.1007/s10834-010-9187-2

Shreffler, K. M., Tiemeyer, S., McQuillan, J., Greil, A. L., & Spierling, T. (2018). Partner congruence on fertility intentions and values: Implications for birth outcomes. *Journal of Social and Personal Relationships*, *36*(8), 2307–2322. https://doi.org/10.1177/0265407518787232

Siva, M., Nayak, D., & Narayan, K. (2019). Strengths and weakness of online surveys. *IOSR Journal of Humanities and Social Science*, *24*(5), 31–38. https://doi.org/10.9790/0837-2405053138

Söderberg, M., Lundgren, I., Christensson, K., & Hildingsson, I. (2013). Attitudes toward Fertility and Childbearing Scale: An assessment of a new instrument for women who

are not yet mothers in Sweden. *BMC Pregnancy and Childbirth*, *13*, Article 197. https://doi.org/10.1186/1471-2393-13-197

Specht, J., Egloff, B., & Schmukle, S. C. (2011). Stability and change of personality across the life course: The impact of age and major life events on mean-level and rank-order stability of the big five. *Journal of Personality and Social Psychology*, *101*(4), 862–882. https://doi.org/10.1037/a0024950

Spiteri, G., Borg Xuereb, R., & Kaner, E. (2022). Preparation for parenthood. In R. Borg Xuereb & J. Jomeen (Eds.), *Perspectives on Midwifery and Parenthood* (pp. 15–26). Springer, Cham. https://doi.org/10.1007/978-3-031-17285-4_2

Stratton, S. J. (2021). Population research: Convenience sampling strategies. *Prehospital and Disaster Medicine*, *36*(4), 373–374. Cambridge. https://doi.org/10.1017/S1049023X21000649

Sturm, N., Koops, J. C., & Rutigliano, R. (2023). The Influence of Partnership Status on Fertility Intentions of Childless Women and Men Across European Countries. *European Journal of Population*, *39*, 20. https://doi.org/10.1007/s10680-023-09664-5

Szcześniak, M., Falewicz, A., Meisner, M., & Grodecka, K. (2024). The mediating effect of maturity on anxiety and the motives for postponing parenthood. *Scientific Reports*, *14*, Article 20258. https://doi.org/10.1038/s41598-024-71043-9

Szcześniak, M., Timoszyk-Tomczak, C., Łoś, J., & Grzeczka, M. (2025). Future anxiety and the motives for postponing parenthood: Generational time perspective and life satisfaction as mediators. *Frontiers in Psychology*, *15*. https://doi.org/10.3389/fpsyg.2024.1441927

Tan, P. C., & Tey, N. P. (1994). Do fertility intentions predict subsequent behavior? Evidence from Peninsular Malaysia. *Studies in Family Planning*, *25*(4), 222–231. https://doi.org/10.2307/2137905

Tashakkori, A., Johnson, R. B., & Teddlie, C. (2020). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage Publications.

Tey, N. P., Ng, S. T., & Yew, S. Y. (2012). Proximate determinants of fertility in Peninsular Malaysia. *Asia Pacific Journal of Public Health*, *24*(3), 495–505. https://doi.org/10.1177/1010539511401374

Thompson, R., & Lee, C. (2011). Sooner or later? Young Australian men's perspectives on timing of parenthood. *Journal of Health Psychology*, *16*(5), 807–818. https://doi.org/10.1177/1359105310392091

van Scheppingen, M. A., Jackson, J. J., Specht, J., Hutteman, R., Denissen, J. J. A., & Bleidorn, W. (2016). Personality trait development during the transition to parenthood. *Social Psychological and Personality Science*, *7*(5), 452–462. https://doi.org/10.1177/1948550616630032

Vignoli, D., Mencarini, L., & Alderotti, G. (2020). Is the effect of job uncertainty on fertility intentions channeled by subjective well-being? *Advances in Life Course Research*, *46*, 100343. https://doi.org/10.1016/j.alcr.2020.100343

Volsche, S., & Jankowiak, W. (2020). Chinese women's autonomy: Parenthood as a choice. *Proceedings of the Wuhan Conference on Women*, *3*(2), 255–266. https://doi.org/10.33212/ppc.v3n2.2020.255

Wang, X., & Cheng, Z. (2020). Cross-sectional studies: Strengths, weaknesses, and recommendations. *Chest*, *158*(1), 65–71. https://doi.org/10.1016/j.chest.2020.03.012

Wernet, C., Elman, C., & Pendleton, B. (2005). The postmodern individual: Structural determinants of attitudes. *Comparative Sociology*, *4*(3-4), 339–364. https://doi.org/10.1163/156913305775010151

Wider, W., Low, S. K., Teng, H. Y., Krishnan, S., Tan, S. A., & Tan, T. Y. (2021). Conceptualization of adulthood among male and female Malaysian undergraduate students: A qualitative approach. *Current Psychology*, *41*, 7177–7184. https://doi.org/10.1007/s12144-020-01313-y

World Population Review. (2024). *Total fertility rate 2024*. World Population Review. https://worldpopulationreview.com/country-rankings/total-fertility-rate

Xiong, Y., Jiao, G., Zheng, J., Gao, J., Xue, Y., Tian, B., & Cheng, J. (2022). Fertility intention and influencing factors for having a second child among floating women of childbearing age. *International Journal of Environmental Research and Public Health*, *19*(24), 16531. https://doi.org/10.3390/ijerph192416531

Xu, J., Li, L., Ma, X.-Q., Zhang, M., Qiao, J., Redding, S. R., Wang, R., & Ouyang, Y.-Q. (2022). Fertility intentions, parenting attitudes, and fear of childbirth among college students in China: A cross-sectional study. *Journal of Pediatric and Adolescent Gynecology*, *36*(1), 65–71. https://doi.org/10.1016/j.jpag.2022.07.015

Xu, J., Li, L., Ma, X.-Q., Zhang, M., Qiao, J., Redding, S. R., Wang, R., & Ouyang, Y.-Q. (2023). Fertility intentions, parenting attitudes, and fear of childbirth among college students in China: A cross-sectional study. *Journal of Pediatric and Adolescent Gynecology*, *36*(1), 65–71. https://doi.org/10.1016/j.jpag.2022.07.015

Xu, Y. Y., HJ. Manap, J., Abdul Aziz, S. F., & Ngah, F. H. (2024). *Analysis of Factors Influencing University Students' Childbearing Intentions Under the Rise of Economic Uncertainty*. SSRN. https://ssrn.com/abstract=4905675

Yeung, W.-J. J., & Alipio, C. (2013). Transitioning to adulthood in Asia. *The ANNALS of the American Academy of Political and Social Science*, *646*(1), 6–27. https://doi.org/10.1177/0002716212470794

Young, C., Roberts, R., & Ward, L. (2018). Application of resilience theories in the transition to parenthood: A scoping review. *Journal of Reproductive and Infant Psychology*, *37*(2), 139–160. https://doi.org/10.1080/02646838.2018.1540860

Young, C., Roberts, R., & Ward, L. (2020). Enhancing resilience in the transition to parenthood: A thematic analysis of parents' perspectives. *Journal of Reproductive and Infant Psychology*, *39*(4), 1–13. https://doi.org/10.1080/02646838.2020.1724916

Zafrul, E. (2022). Chapter 8 fertility and fertility preferences in sabah. In *Demographic and Socioeconomic Changes in Sabah*. Universiti Malaysia Sabah Press.

Zhao, J., Zou, Z., Chen, J., Chen, Y., Lin, W., Pei, X., Li, E., Dong, Y., & Chen, X. (2024). Offline social capital, online social capital, and fertility intentions: Evidence from China. *Humanities and Social Sciences Communications*, *11*, Article 1131. https://doi.org/10.1057/s41599-024-03643-9

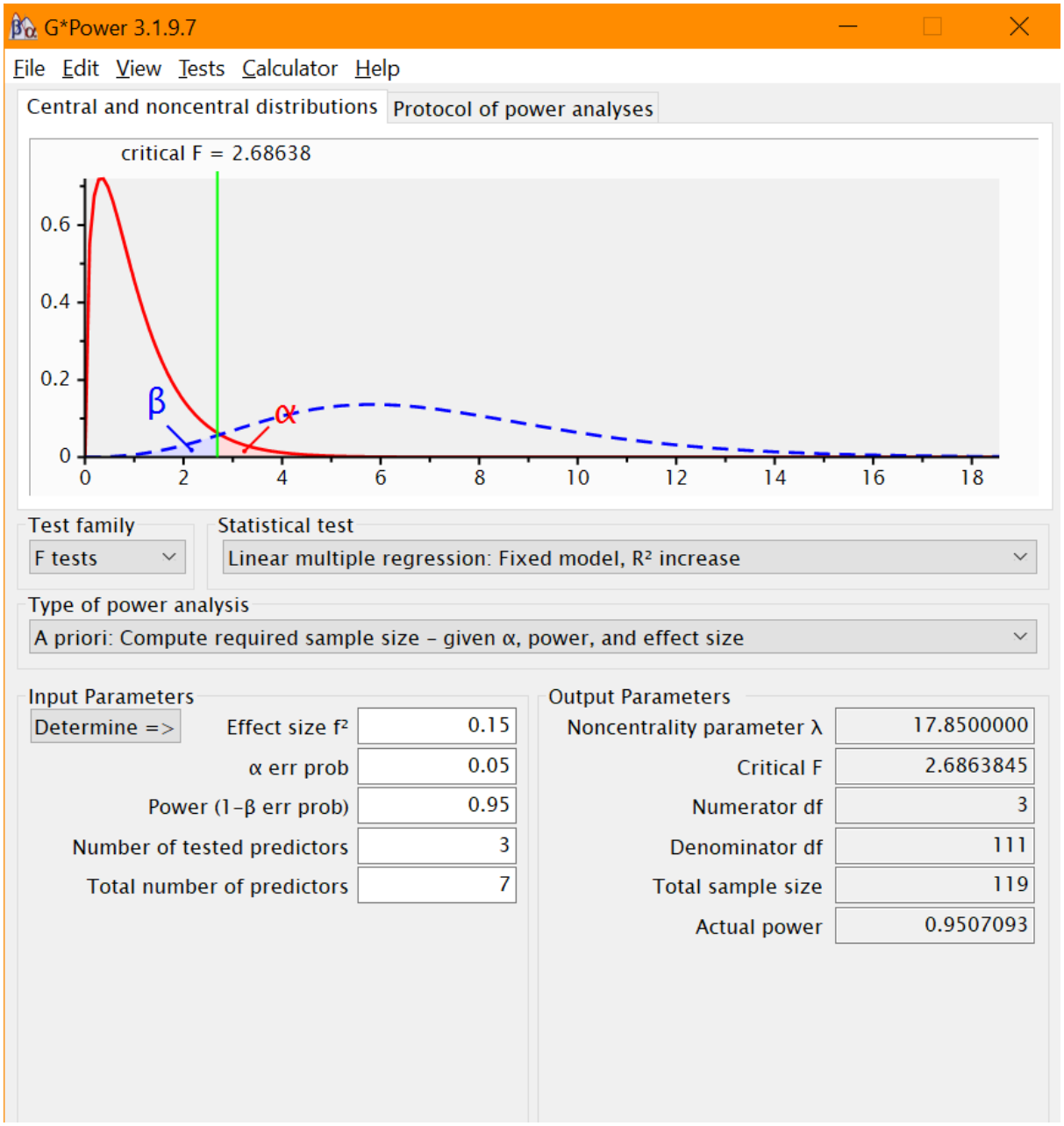
Zhou, Y. (2018). The dual demands: Gender equity and fertility intentions after the one-child policy. *Journal of Contemporary China*, *28*(117), 367–384. https://doi.org/10.1080/10670564.2018.1542219

Zhu, C., Wu, J., Liang, Y., Yan, L., He, C., Chen, L., & Zhang, J. (2020). Fertility intentions among couples in Shanghai under COVID-19: A cross-sectional study. *International Journal of Gynecology & Obstetrics*, *151*(3), 399–406. https://doi.org/10.1002/ijgo.13366

Appendices

Appendix A

Sample Size Calculation



Appendix B

Ethical Clearance Approval

UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
Wholly owned by UTAR Education Foundation Co. No. 578227-M

Re: U/SERC/78-415/2024

17 December 2024

Mr Tay Kok Wai
Head, Department of Psychology and Counselling
Faculty of Arts and Social Science
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak.

Dear Mr Tay,

Ethical Approval For Research Project/Protocol

We refer to the application for ethical approval for your students' research project from Bachelor of Social Science (Honours) Psychology programme enrolled in course UAPZ3013/UAPZ3023. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

No	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	The Influence of Valence, Behavioural, and Cognitive-Emotional Maturity to Parenthood on Fertility Intention: Examining the Moderating Role of Gender	1. Chew En Jee 2. Yong Wen Hui	Dr Tan Soon Aun	17 December 2024 – 16 December 2025
2.	The Fragile Bonds of Love: Examining How Partner Affirmation and Commitment Uncertainty Predict Sexual and Emotional Infidelity Among Married Couple in Malaysia	1. Chang Shan Mei 2. Tay Shi Swen 3. Wong Ming Jie		
3.	Sensitivity and Relationship Commitment Among Unmarried Couples in Malaysia: Attachment Styles as Mediator	1. Daphne Voon Kai Yen 2. Ng Yi Xuan		
4.	Pornography Consumption and Relationship Satisfaction Among Married Couples: A Moderated Mediation Model of Sexual Satisfaction and Gender	1. Tay Xue Jie 2. Wong Wei Zhong		

The conduct of this research is subject to the following:

(1) The participants' informed consent be obtained prior to the commencement of the research;

(2) Confidentiality of participants' personal data must be maintained; and

(3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.

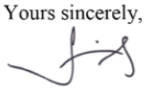
(4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
Sungai Long Campus : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia
Tel: (603) 9086 0288 Fax: (603) 9019 8868
Website: www.utar.edu.my

Should the students collect personal data of participants in their studies, please have the participants sign the attached Personal Data Protection Statement for records.

Thank you.

Yours sincerely,



Professor Ts Dr Faidz bin Abd Rahman
Chairman
UTAR Scientific and Ethical Review Committee

c.c Dean, Faculty of Arts and Social Science
Director, Institute of Postgraduate Studies and Research

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
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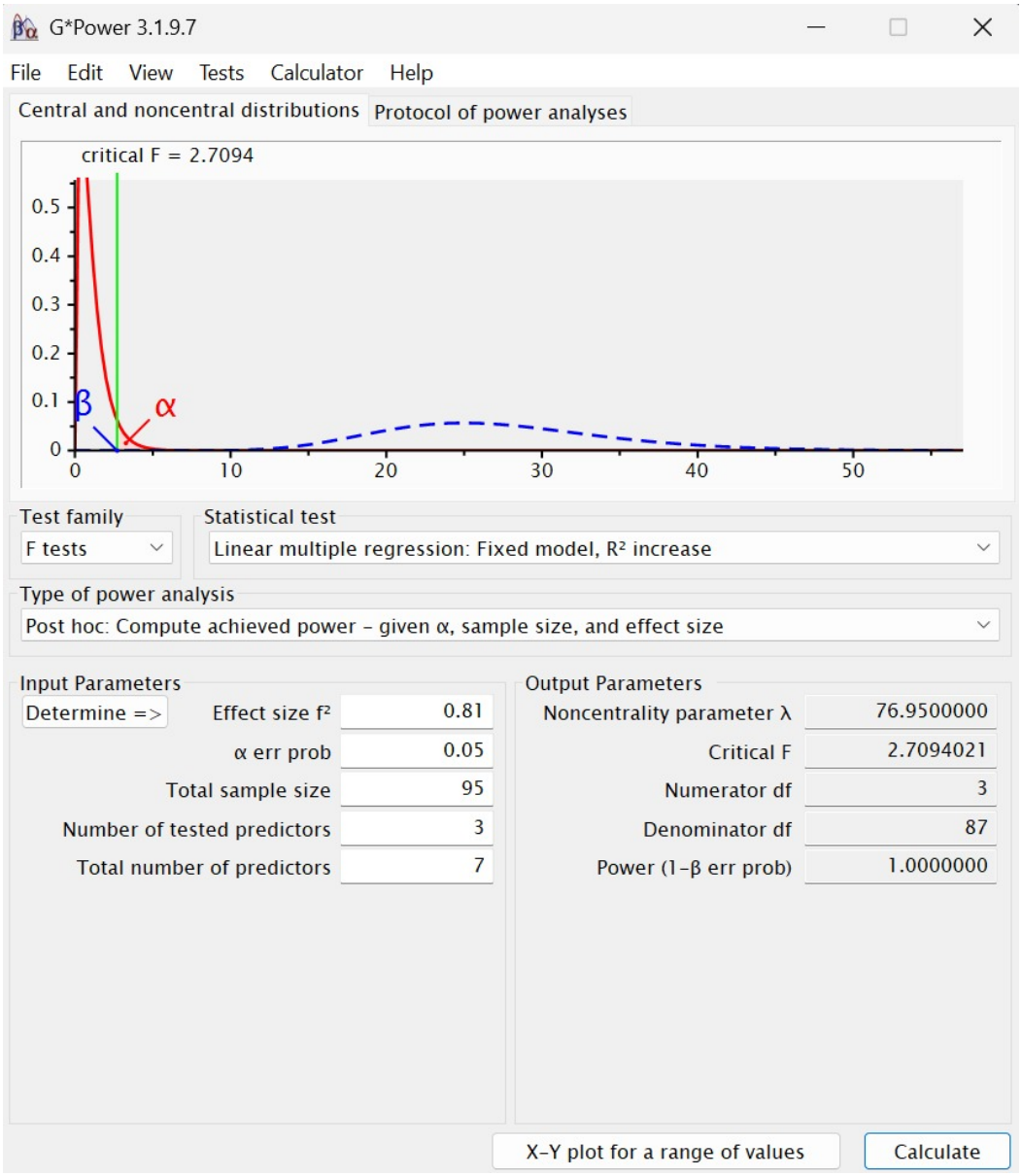
Appendix C

Poster

Appendix D

Post Hoc Power Analysis



Appendix E

Histogram

Figure E1

Histogram of Fertility Intention Distribution

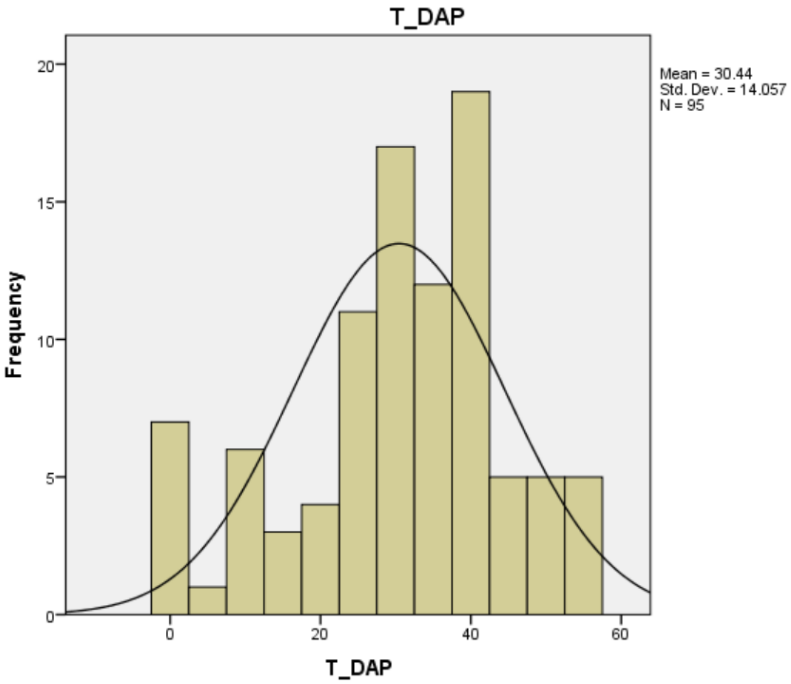


Figure E2

Histogram of Valence Maturity to Parenthood Distribution

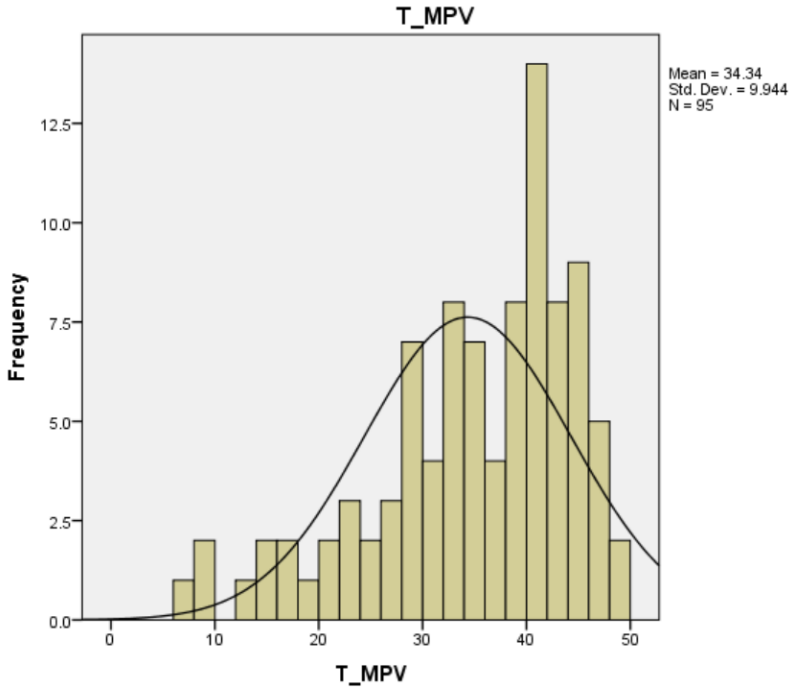


Figure E3

Histogram of Behavioural Maturity to Parenthood Distribution

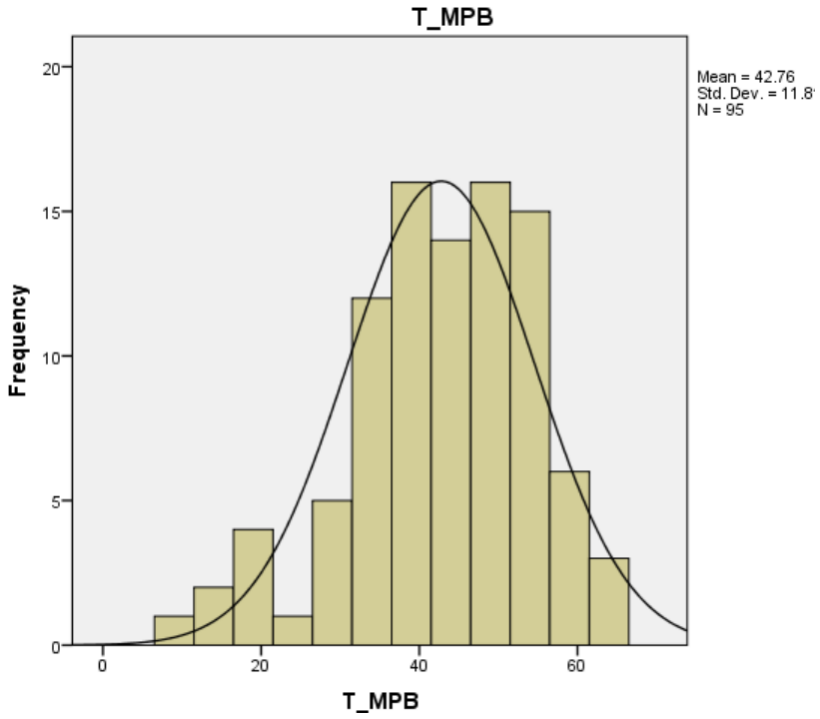
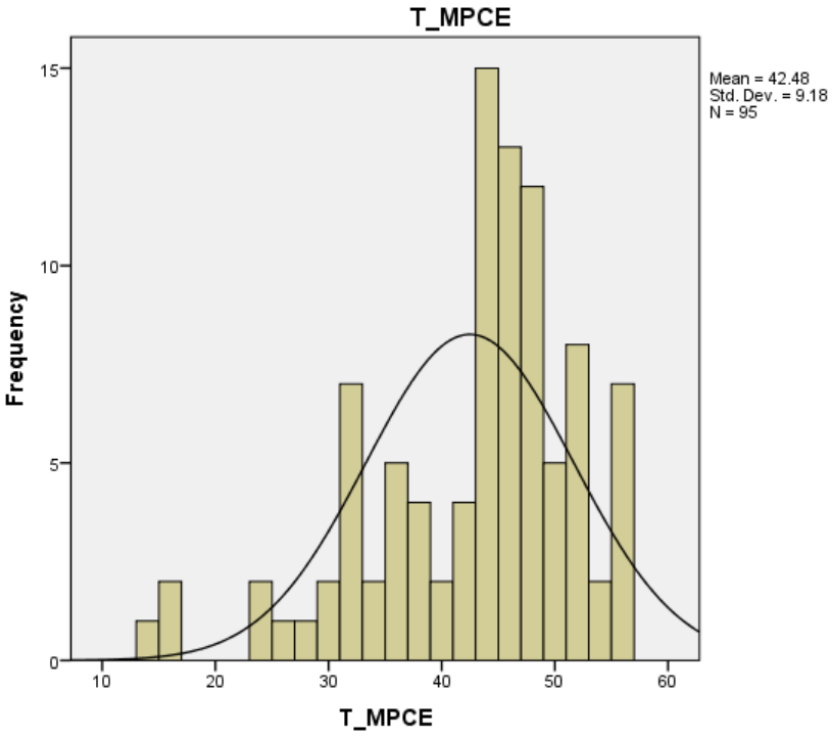


Figure E4

Histogram of Cognitive-Emotional Maturity to Parenthood Distribution



Appendix F

Q-Q Plot

Figure F1

Q-Q Plot of Fertility Intention Distribution

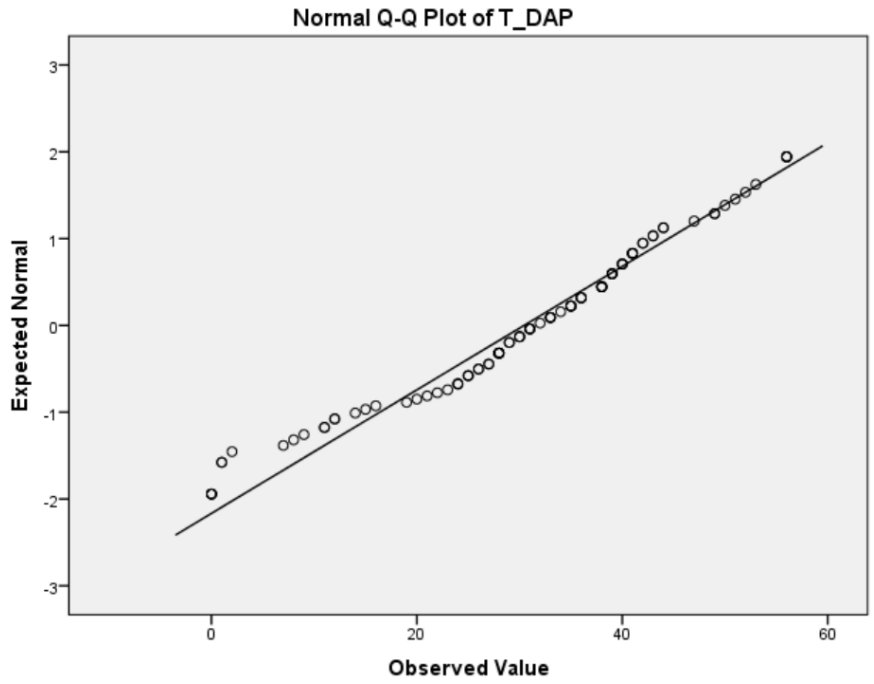


Figure F2

Q-Q Plot of Valence Maturity to Parenthood Distribution

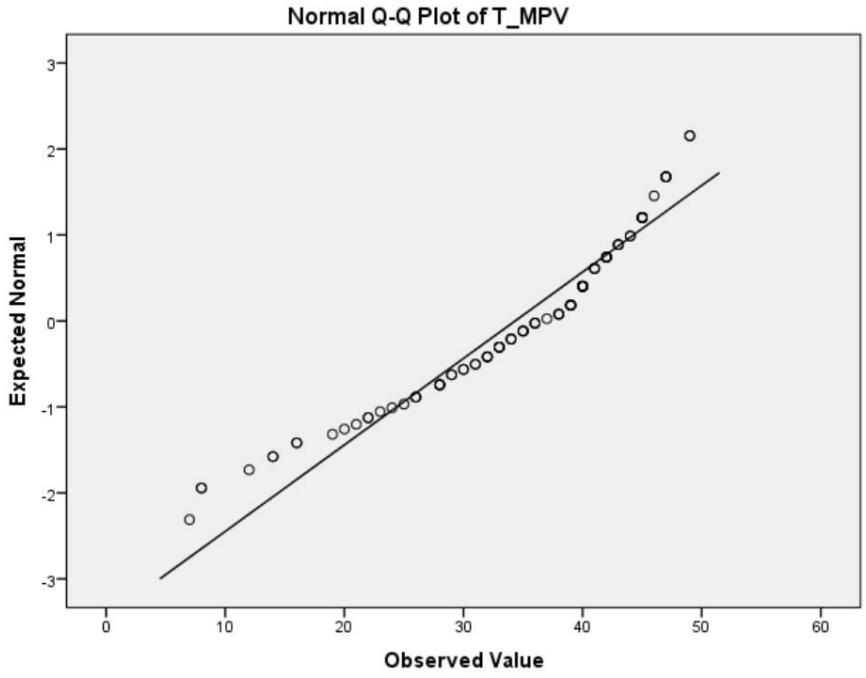


Figure F3

Q-Q Plot of Behavioural Maturity to Parenthood Distribution

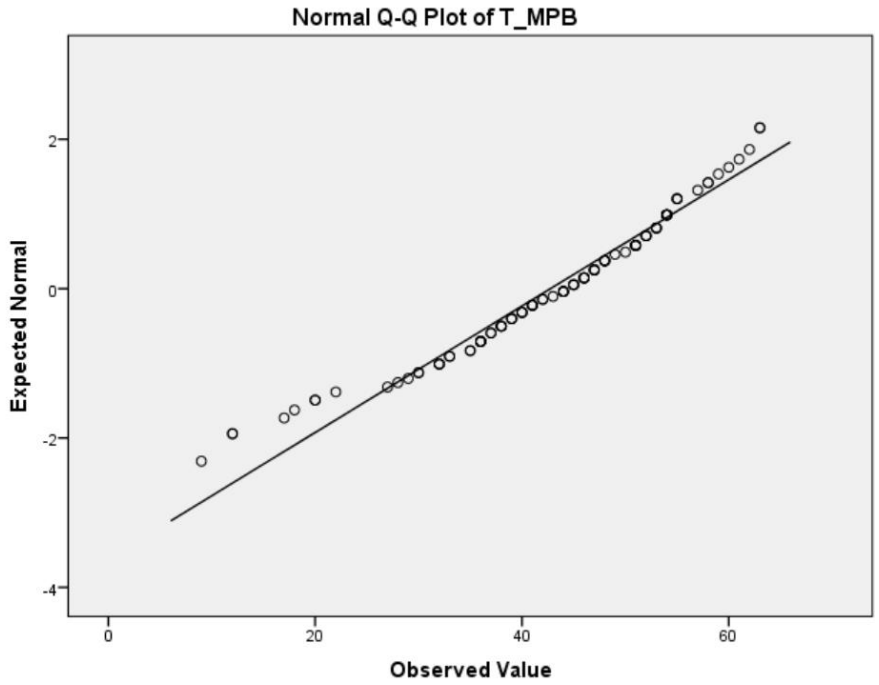
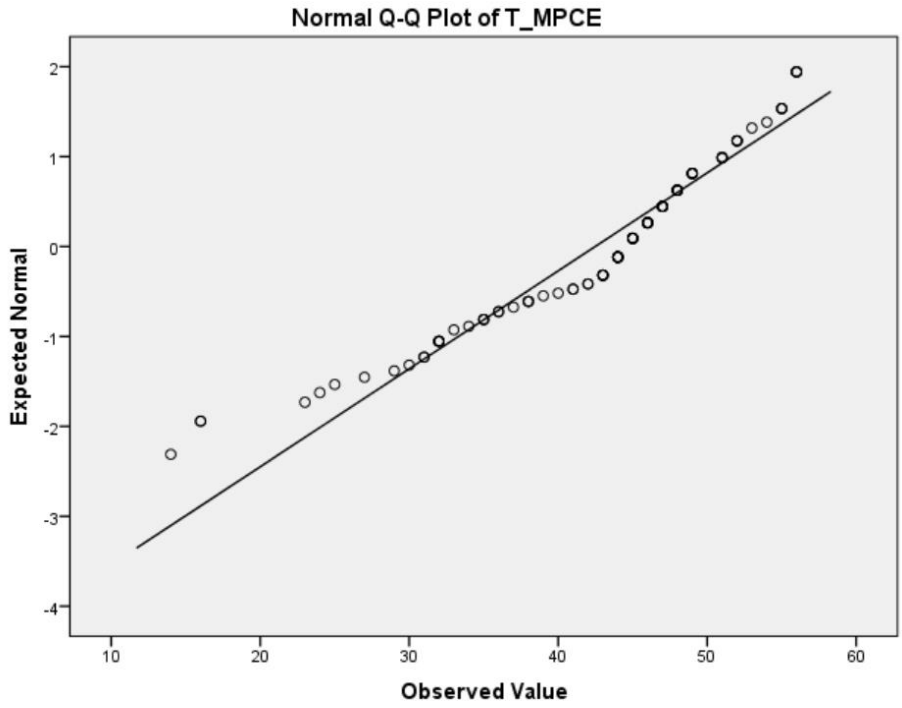


Figure F4

Q-Q Plot of Cognitive-Emotional Maturity to Parenthood Distribution



Appendix G

Kolmogorov-Smirnov (K-S) Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
T_DAP	.094	95	.037	.960	95	.006
T_MPV	.133	95	.000	.927	95	.000
T_MPB	.079	95	.179	.958	95	.004
T_MPCE	.175	95	.000	.923	95	.000

a. Lilliefors Significance Correction

Appendix H

Independence Error

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.124[a]	.015	-.006	14.100	.015	.714	2	92	.493	
2	.758[b]	.574	.551	9.424	.559	38.981	3	89	.000	2.004

a. Predictors: (Constant), Gender:, AGE

b. Predictors: (Constant), Gender:, AGE, T_MPCE, T_MPB, T_MPV

c. Dependent Variable: T_DAP

Appendix I

Multicollinearity

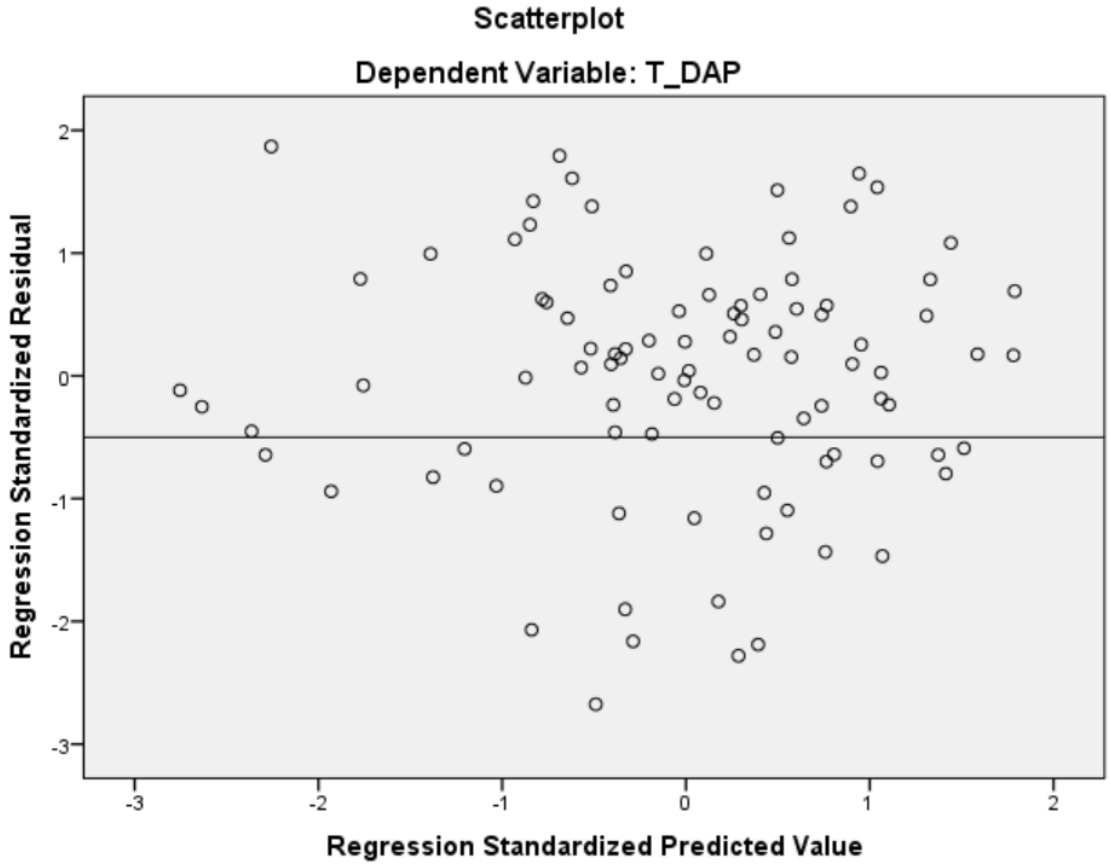
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	23.525	8.770		2.683	.009	6.108	40.943		
	AGE	.198	.279	.074	.710	.480	-.356	.752	.986	1.014
	Gender:	2.919	3.353	.091	.871	.386	-3.740	9.577	.986	1.014
2	(Constant)	-9.122	7.143		-1.277	.205	-23.314	5.071		
	AGE	.164	.190	.061	.865	.389	-.213	.542	.947	1.055
	Gender:	-2.984	2.337	-.093	-1.277	.205	-7.627	1.659	.907	1.103
	T_MPV	.305	.251	.216	1.216	.227	-.194	.805	.151	6.601
	T_MPB	.886	.199	.745	4.445	.000	.490	1.282	.170	5.870
	T_MPCE	-.311	.237	-.203	-1.312	.193	-.781	.160	.200	5.004

a. Dependent Variable: T_DAP

Appendix J

Normality of Residuals, Linearity, and Homoscedasticity



Appendix K

Multivariate Outliers

Casewise Diagnostics[a]

Case Number	Std. Residual	T_DAP	Predicted Value	Residual
32	-2.188	14	34.62	-20.621
44	-2.162	7	27.38	-20.376
62	-2.069	2	21.49	-19.494
63	-2.280	12	33.49	-21.488
85	-2.675	0	25.21	-25.210

a. Dependent Variable: T_DAP