Families Behind the Filter: How Social Media Influences Undergraduate Students Perceptions of Parenthood

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Abstract

Social media is an influential and informational tool that has gained immense prevalence, particularly among young adults. On many social media platforms, parenthood has become a popular topic and highlights the lived experience of parents. This study explores how social media impacts undergraduate students' perceptions and attitudes towards parenthood. We seek to uncover the dominant messaging and themes surrounding parenthood on social media and explore the extent to which undergraduate students conform to online opinions. Previous research has yet to examine the relationship between social media and attitudes towards parenthood. In addition, few studies have looked at how undergraduate students conceptualize parenthood in this digital age. We conducted an online anonymous survey via the LimeSurvey platform using both open-ended and closed-ended questions. This research is qualitative in nature as it concerns undergraduate students' experiences on social media and their personal opinions. This study has been reviewed and approved by the McMaster Research Ethics Board. Our findings reveal that social media influences undergraduate students' stance towards having kids, as well as feelings of fear and/or anxiety towards birth, pregnancy, and having children. Furthermore, social media sustains this influence on undergraduate students' perceptions of parenthood regardless of skepticism towards social media, interest in parenthood, or other demographic factors. This research serves as a foundation for understanding the dominant ideologies surrounding parenthood on social media, and how they may permeate personal attitudes and lifestyle choices.

Introduction

In an era that is engulfed by social media and the influence it has on people's attitudes, beliefs, and ideas, it is no wonder that it is a widely researched topic in academia. Social media has a profound significance on how individuals not only view their current and past experiences (Abi-Jaoude et al., 2020), but it may also impact how they view their future. Among the myriad of power and influences that social media has, the manner in which it can mold the perception of parenthood is not something that has been extensively researched. Due to social media, individual attitudes are subject to change (Can & Alatas, 2019), and undergraduate students are constantly exposed to a variety of different content. This content has the potential to greatly influence the way

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undergraduate students perceive the complex journey of parenthood. Social media serves as a conduit for various perspectives and viewpoints, some of which might challenge pre-existing beliefs under the way of social media's inescapable influence. Thus, this research paper will seek to understand how social media can influence undergraduate students' perceptions of parenthood.

Each segment of this thesis paper will be clearly defined. First, a review of social psychological theories will be explored to aid in the understanding of this phenomena. Next, we will delve into the theoretical frameworks of social comparison theory and social learning theory, using them as guides to comprehend the mechanisms by which social media impacts individuals. Subsequently, a comprehensive literature review will explore existing research on the topic, identifying potential gaps and deficiencies. Following this, the methodology section will elucidate our research and analysis procedures. Next, the results will be presented, highlighting undergraduate students' current perspectives on parenthood, leading to a discussion of our findings. Finally, our conclusion will address limitations and significant insights collected from the study.

Theory
Social Comparison Theory

Social media in this generation has a significant impact on how individuals weigh their own ideas and beliefs (Kross et al., 2020). The constant stream of information that envelops people's lives seems omnipresent and persistent. With the frequency of social media usage, it is valuable to explore how much online content truly influences personal opinions and worldviews, and the extent to which people compare their mental constructs to those of others. The harsh exposure to these incessant and diverse voices on social media shows the significance of the potential negative effects on an individual's belief structures and systems. Thus, this establishes the use for employing social comparison theory.

Developed in 1954, social comparison theory was first introduced by Leon Festinger, an American social psychologist who is considered to be the leading theoretician (Festinger, 1954). The framework of this theory posits that individuals assess their personal opinions and beliefs compared to others' personal opinions and beliefs (Festinger, 1954). This is because people often look for external sources of information so they can advise for or against their own ideas (Festinger, 1954). If individuals stop comparing themselves to others, it can result in tension or conflict. They may become less open-minded towards different ideas, leading to hostility and criticism of other perspectives (Festinger, 1954). In regard to the perception that young people have toward parenthood, social media can impact what information we decide to integrate into our own ideas. Because social media is the main source of information, it is no wonder that the perception of parenthood is something that may be negatively affected. Similarly, undergraduate students' ideas of what parenthood means to them can stem from what others believe on these social media platforms. It can hone unrealistic expectations of what parenthood should be, or it may lead to feelings of self-doubt and apprehension as they compare their own lives and beliefs to others.

In Festinger's original research on social comparison theory, he had a number of hypotheses to explain why social comparison exists and how it influences an individual's thoughts and ideas. He hypothesized that there is an innate drive in humans

to appraise one's opinions and competencies and evaluate them through comparison with the capabilities and opinions of others (Festinger, 1954). For example, those who receive judgement in regard to an idea or opinion are more likely to change their opinion if others contend it. One tenet of this theory is that an individual is less likely to compare their opinions to those they perceive as too distant from themselves (Festinger, 1954). This is because it is impossible to accurately compare abilities when one is too low or high above them (Festinger, 1954). An individual who accepts a specific group as a standard of comparison may feel pressure to adjust their opinions to conform to that group's ideas (Festinger, 1954). Lastly, social comparisons can occur at one time, or across time, such as comparing oneself to an imagined ideal future self.

This principle is key for our research, as parenthood is a future experience that much of our sample is not yet a part of. All in all, social comparison theory can explain how comparing oneself to others on social media may impact personal ideas and opinions.

Social Learning Theory

Social learning theory hypothesizes that individuals learn by observing others (Bandura, 1977), which is a concept that is repeatedly represented in social media (Deaton, 2015). Social media platforms are significant vessels of information, and what we see on social media can often influence behaviour. Online behaviours, such as liking or disliking a post, act as reinforcements or punishments for those online behaviour (Deaton, 2015). Social media content continually contests and reconstructs today's social norms (Deaton, 2015). Casual and unsupported claims can easily result in misinformation, which is generally hard for people to recognize. In relation to parenthood, undergraduate students may frame their behaviours and beliefs by observing relevant content online. The framework of this theory postulates that social behaviour is learned by examining and copying a specific behaviour that another person has performed (Bandura, 1977). There are key components that the observing individual must follow, such as the ability to focus on the behaviour of the person modelling, the ability to understand what they observed and how to copy it, and the inclination to actually do the behaviour, which is guided by either a reward or punishment (Bandura, 1977). Individuals are constantly taking social cues and information from others, which in turn heavily forges their own beliefs and attitudes. Thus, the behaviours of others that undergraduate students see on social media can shape the way they view that information, and accordingly, how they copy it.

Based on the early work of American psychologist B.F. Skinner, Canadian-American psychologist Albert Bandura developed social learning in 1977 (Bandura, 1977). Bandura created his theory based on Skinner's concept of behaviourism, which posits that one's environment can influence behaviour (Grusec, 1994). Bandura's (1977) theory highlights the influence that social interactions have on one's learning and behaviour, hypothesizing that individuals will learn a new behaviour or gain new knowledge by observing another who performs that specific behaviour. The observer does not have to be aware that they are learning, rather these consequences can happen both intentionally and unintentionally (Bandura, 1977). Bandura (1977) acknowledges that many other factors, such as culture, have significant importance on how behaviour is molded. For example, personal values and social relationships can affect what one accepts regarding what they copy and what they evade.

Another key tenet of this theory is the reinforcement and punishment that follows a learned behaviour. This idea is heavily influenced by Skinner's work on operant conditioning, a component of behaviourism (Grusec, 1994). It holds that if there is a positive outcome that follows a behaviour, the more likely that behaviour will be repeated, and if instead there is a negative consequence, it may prevent that behaviour from being repeated (Bandura, 1977).

The principles of this theory are crucial for our research on how social media negatively influences undergraduates' perceptions on parenthood because it can help explain why what we see on social media is repeated. It is imperative to learn how what we see online can create behaviours and ideas that may stem from misleading information.

This section explores how social comparison theory and social learning theory explain the influence of social media on perceptions of parenthood among undergraduate students. These theories emphasize the role of comparison and observation in shaping beliefs and behaviours, shedding light on the impact of online content on personal attitudes.

Literature Review

Introduction

The rising popularity of social media creates a cause for concern in terms of how social media content is adopted by consumers. More specifically, the connection between social media and parenthood has been increasingly significant due to the prevalence of parenthood content displayed on social media apps. Thus, an evaluation of how social media influences viewers is essential to understand how perceptions of parenthood are being influenced by social media content. For the purpose of this research, we have identified four important themes throughout existing literature that will be thoroughly discussed in order to investigate the relationship between social media and parenting. The themes include, but are not limited to, social media and its general influence over behaviour and perception, depictions of motherhood, depictions of pregnancy and birth, as well as fatherhood. Each will be evaluated in terms of how they may have been influenced or shaped by social media content. For this study, social media will encompass apps and sites such as TikTok, Instagram, and Twitter; however, informing literature will explore a wider range of media including television shows, movies, and blogs. Therefore, this demonstrates the need for further research on the influence social media can have on perceptions of parenthood.

Social Media and its Influence

While exploring the relationship between social media and parenthood perceptions, the literature provides much support for how social media can influence people's ideologies and behaviours. To illustrate, online portrayals of smoking, drinking, and healthy lifestyles have been proven to influence the thoughts and behaviours of consumers (Dunlop et al., 2016; Yoo et al., 2016). One exemplary consideration is underage drinking and the connection to alcohol content on social media. Dunlop et al., (2016) state that the age group with the highest engagement with alcohol-related content on social media demonstrates the most troublesome alcohol use. Thus, a connection can be made between the content one engages with, and their behaviours

related to such content. Evidently, our actions reflect our beliefs, which supports the idea that social media content influences people's attitudes and conceptualizations. More concretely, a study reviewed by Dunlop et al., (2016) found that nearly all college students in the given study had problematic drinking because of the alcohol-related social media content they engaged with. This clearly demonstrates the influence social media can have on people.

Similarly, social media content related to smoking has also been shown to influence tobacco use, as well as perceptions of tobacco use by oneself and peers (Dunlop et al., 2016; Yoo et al., 2016). Research shows that online exposure to positive depictions of smoking leads to more positive perceptions of smoking and a higher likelihood of smoking behaviours; however, exposure to negative depictions of smoking does not yield the same results (Dunlop et al., 2016; Yoo et al., 2016). In contrast, antismoking content influenced some to rebel and increase smoking behaviours (Yoo et al., 2016). Overall, positive depictions of smoking were significantly more influential than antismoking content, specifically in terms of having consumers' behaviours align with the presented messages (Dunlop et al., 2016; Yoo et al., 2016). More importantly, the existing research supports how negative content has a significantly higher impact on consumers compared to positive content; thus, revealing the problem with certain types of social media content. This provides support for the current study in which we state that the inherent issue for this realm of research is how social media can negatively influence perceptions and behaviours towards the content one consumes.

Considering portrayals of parenthood in social media is essential to understand the mechanism behind how such social media content shapes viewers' perceptions of parenthood. On a more positive note, the current literature highlights how social media can be a beneficial outlet for many mothers. For example, certain apps allow mothers to share their pregnancy and parenting stories with other mothers, which promotes community and provides reassurance and relatability (Johnson, 2014; Kirkpatrick & Lee, 2022; Wegener et al., 2022). Furthermore, sharing experiences through social media can allow mothers to bring light to taboo or previously concealed topics (Wegener et al., 2022). This could have positive effects on mothers because they may feel less alone if others are experiencing similar situations. This promotes realistic experiences of motherhood, which increases mothers' competence. In addition, depictions of motherhood on social media can influence mothers perceived self-efficacy (Ouvrein, 2022). This reinforces the idea that social media can directly impact us and shows that this phenomenon translates to the topic of parenthood.

In contrast to the benefits social media can provide to mothers, it is more common to see how social media displays idealized examples of parenthood that elicit comparison and competition. For example, social media can add a quantitative aspect to mothering through comparing likes, comments, and followers, which leads to competition between mothers, objectification of motherhood, and feelings of anxiety or jealousy (Johnson, 2014; Kirkpatrick & Lee, 2022). Furthermore, parent-related content produced on social media is shown to influence perceptions of what mothering, pregnancy, and breastfeeding should look like; thus, comparisons to such content can influence mothers' actions, views of oneself, and expectations of parenting roles (Johnson, 2014; Kirkpatrick & Lee, 2022). This impact demonstrates that social media has become an

agent of socialization in today's society. Therefore, parent-related content can influence both societal and personal views of parenthood.

Depictions of Motherhood on Social Media

The possible influence social media holds over the perceived self-efficacy of mothers is of rising interest for many scholars. While various portrayals of motherhood are available on social media, Germic (2021) and Ouvrein (2022) identified two overarching categories: 1) the "realistic" displays of motherhood, and 2) the "unrealistic" displays of motherhood. Both experienced and first-time mothers have been found to interpret these representations differently in terms of how they influence one's perceived self-efficacy (Ouvrein, 2022). For example, Ouvrein (2022) found that first-time mothers who claimed to have had regular interaction with "unrealistic" portrayals, such as those of the "alpha mom" who appear to excel in their role as a mother with ease, scored higher on the self-efficacy scale. For experienced mothers, interaction with this category of content elicited an inverse response (Ouvrein, 2022). Although confounding variables, such as socioeconomic status and cultural backgrounds could possibly account for this discrepancy, Ouvrein's (2022) research nevertheless provides significant insight on the influence social media can have over a mothers' self-perception.

Germic (2021), while sharing some of the same observations as Ouvrein (2022), examines which platforms were home to realistic and unrealistic portrayals of motherhood. This investigation yielded interesting conclusions that are consistent with our later discussions on fatherhood. According to Germic (2021), "*mommy blogger*" websites reflected a more "realistic" side of parenting, one that did not hesitate to discuss internal and external anguish, bewilderment, and struggles that come with being a mother. Sharing normally hidden parenting experiences online seemed to foster a greater sense of relatability between producers and consumers, and thus are regarded as more "realistic" (Germic, 2021; Orton-Johnson, 2017). On the other hand, platforms such as Instagram and Facebook generated more "unrealistic" posts (Germic, 2021). Definitions of what constitutes realistic and unrealistic ideals for motherhood carry a myriad of nuances. However, Germic (2021) highlights a commonly overlooked aspect of the relationship between social media platforms and mom content creators. The information mothers wish to share correlates with the platform they use, and the type of content viewers consume is related to the platforms they engage with.

Depictions of Pregnancy and Birth on Social Media

By exploring apps designed to offer parents with support before, during, and after pregnancy, Baker & Yang (2018) and Johnson (2014) demonstrate the implicit messages embedded within these apps that influence the behaviours and attitudes of parents. Generally, this influence is seen to have favourable psychological and behavioural impacts on mothers but shapes and upholds problematic gender norms regarding the parental role of fathers (Baker & Yang, 2018; Johnson 2014).

Mothers often look to social media to enhance their social support networks and use apps to gain information throughout their pregnancy journey. Although these apps are not social media apps, they are often user-generated and represent specific ideologies the same way social media does. Apps like Sprout Baby, Baby Connect, andEbluebook

act as reminders, developmental stage trackers, and essential updates that aid in the management of daily tasks and routines for both mother and infant (Johnson, 2014). By providing empowering experiences that help moms feel productive, competent, and in control of their pregnancy, these apps are thought to have a favourable impact on the mental health and well-being of mothers (Johnson, 2014). Social media, particularly Facebook, functions as a platform for information much as pregnancy apps do. For example, Facebook pregnancy and birth forums serve as an informal learning environment that can foster meaningful connections with individuals in similar situations. This study focuses on women who are pregnant or already mothers but reinforces the influence social media has on our perceptions and actions.

Despite apps for expecting fathers being far less readily available, the handful that are available, tend to cast fathers in a very different light compared to mothers. Apps such as, Pregnant Dad and New Dad, have been shown to deliver information in a humorous and lighthearted manner (Johnson, 2014; Thomas et al., 2018). For example, statements such as *"Surprise your wife with tidbits of information about the development of your baby"* or "*Make your wife happy*" not only transformed a previously serious topic delivered to women into a humorous one for men, but also directs the information to the mother (Johnson, 2014; Thomas et al., 2018). The overemphasis on the mother may lead to problematic outcomes as it teaches fathers how to be a better partner rather than a better parent; thus, influencing fathers to perceive their role as being far less serious and important (Johnson, 2014; Thomas et al., 2018).

Depictions of Fatherhood
Societal norms and gender roles have greatly impacted the conceptualization of parenting, as made evident by the differences found in pregnancy apps for mothers and fathers. However, with recent progressive shifts in social policies, the discourses surrounding fatherhood have slowly evolved to become more inclusive (Grau Grau et al., 2022). Despite this recent change, literature examining the relationship between fathers and social media remains severely unaddressed. For now, we draw on studies that look at blog websites as both social media and blog websites are user-generated forms of media.

Scheibling (2020) and Teague & Shatte (2018) discovered that blog-based sites shared the bulk of the honest male experiences in parthood, which reflects Germic's (2021) findings that highlighted where "realistic" parenting portrayals occurred. The material making up these discussions primarily focuses on the difficulties, frustrations, and misunderstandings working fathers have when negotiating their role in the family, a role that most men wish to transcend beyond financial duties (Scheibling, 2020). Content on these websites, which was frequently characterized by humour, had a positive effect on fathers' psychological well-being, helping to establish better supportive networks (Scheibling, 2020). The humorous tone that often provides comic relief for current fathers may feed existing "incompetent" father stereotypes (Teague & Shatte, 2018; Scheibling, 2020). Even though blog depictions of fatherhood were realistic and supportive, there may be gender roles and stereotypes that are indirectly represented, which may appear lacking to some viewers.

Overall, the existing literature on the relationship between parenthood and social media demonstrates a significant connection between social media, personal beliefs,

and parenthood; thus, demonstrating the importance of our research. The themes we found in the literature revealed that media depictions of various topics influence consumers' opinions and ideologies regarding the topic observed. Similarly, social media platforms can shape both mother's and father's perception of oneself as a parent. This illustrates the influence that social media platforms have on people during pregnancy, birth, and postpartum. Lastly, the current literature reveals a gap in research regarding fatherhood on social media as well as gender biases in the conceptualization of parenting. With the inflation of parenting depictions on social media, we must aim to close the gaps in existing research by revealing unobserved phenomena concerning the influence social media has on perceptions of parenthood.

Methodology

Our methodology section will include a discussion regarding the recruitment process, ethical issues, survey procedure, data analysis, challenges, and the risks associated with our research. The research was approved by the McMaster Research Ethics Board (MREB#: 0327).

Recruitment

To begin our research, we first recruited participants for our survey and then collected participant data. Our sample population was undergraduate students over the age of eighteen who currently study at McMaster University. Therefore, our recruitment process was targeted to reach as many students as possible. We used a variety of recruitment strategies including physical posters and virtually reaching out to clubs. Our poster was created using a template found on the MREB website and included details about our study, our contact information, a link to the survey, and a QR code. Before posting the posters around campus, we got approval from the MSU Underground. The posters were then put up around campus in high traffic areas to reach the greatest number of students. After the winter break, we put more posters up around campus as many of them had been taken down or were missing many of the pull tabs.

An additional avenue of recruitment we used was reaching out to clubs at McMaster to post on their social media or send an email directly to their members about our study. We chose to reach out to groups and clubs that certain group members are a part of. To mitigate any ethical problems, our group members did not reach out to the clubs in which they hold membership. The groups we chose to recruit from included the Social Psychology Society, Maction, McMaster Book Club, McMaster Recreational Dance Team, and McMaster University Choirs. Recruitment from these clubs resulted in the social media coordinator for each club receiving an email from one of our group members, using the template provided by Dr. Clancy, which included information about our study, any risks involved in the research, and the estimated length of time it would take to complete the survey. A letter of information regarding our study was also provided and it was instructed to the social coordinator that the letter of information be provided to the club members as well. Given that we received many partial responses to our survey from students and a general lack of responsiveness from students, we requested an MREB amendment form on January 19, 2024, to recruit from additional clubs. These additional clubs included the McMaster Social Science Society, the McMaster Sociology Society, the McMaster Humanities Society, the McMaster PNB

Society, and the McMaster Human Behaviour Society. Furthermore, groups that we contacted in our first round of recruitment who failed to respond were sent a follow up email in early January. Our research relied on the sampling techniques of convenience sampling given that we sampled the undergraduate population at McMaster and relied on respondents to share our survey with their peers.

Survey Procedure

When prospective participants opened our survey, they first encountered a letter of information on the splash page of the survey. After participants read the letter of information, they were prompted with two options: yes, they consent to continue with the survey or no, they do not wish to complete the survey. If a participant selected yes, they were giving their implied consent that they agreed to participate in the study and were willing to let us use the information they provided in the survey. If participants clicked no, they were prompted to the end page of the survey which thanked them for their time and informed them of the poster session on March 20, 2024, where they could learn more about the results of our research.

Our research was conducted via an anonymous online survey and was hosted on the McMaster and MREB approved platform Lime Survey. Survey questionnaires have benefits in that they are low cost and highly adaptable to the environment which the respondent feels most comfortable in. The survey had 30 questions and was estimated to take participants 10-to-15 minutes to complete. The survey was designed so that participants could take the survey in a location of their choosing so long as they had access to the internet and a device capable of completing the survey. Our survey consisted of questions using a Likert scale as well as open-ended questions that participants answered themselves. Our survey sought to uncover how social media influences McMaster undergraduate students' perceptions of parenthood. The questions we asked in our survey attempted to gauge participants' attitudes toward certain social ideals surrounding parenthood. Additionally, there were questions to determine their personal feelings towards pregnancy, birth, and parenthood. We ended our survey by asking demographic questions such as age, gender identity, program of study, and religious affiliations to determine if these factors had any significance. The data that was collected was stored on a password protected computer that was only accessible to the members of our group. We kept our survey open until we reached 100 responses, or until February 16, 2024, whichever occurred earlier. We closed our survey on February 16th, 2024, at 11:59 PM with a total of 39 completed responses and 205 partially completed surveys.

Data Analysis

We began data analysis once our survey closed, on February 16th, 2024, and used Jamovi software for our quantitative data analysis. Qualitative data was analyzed using descriptive and analytical coding. We completed our data analysis on February 26th, 2024, to ensure we had enough time to transfer the information to our poster, which was due March 4th, 2024. Our data will be deleted no later than April 30th, 2024, or when Dr. Clancy informs us that we are able to delete it, whichever occurs first.

To complete our qualitative analysis, we employed both descriptive and inferential statistics to analyze the gathered data. Descriptive statistics facilitated the quantitative examination of the survey data. To accomplish this, we first improved the labeling of

each variable for clarity and streamlined data analysis. Subsequently, we re-coded the variables using a codebook to ensure smooth analysis and computation of the data. To establish measures of central tendency, we recalculated several related variables. Lastly, we transformed the data variables to distinguish between each response in the dataset and ensure the appropriate measure type was applied. Following these adjustments, a comprehensive descriptive analysis was carried out on all data variables to ensure thorough and accurate analysis. Finally, inferential statistics were conducted based on the insights gained from the descriptive analysis.

Inferential statistics were utilized to extrapolate conclusions about the broader sample data, enabling the formulation of predictions. Specifically, t-tests and correlation matrices were employed for this purpose. T-tests facilitated the assessment of the significance of disparities between the means of two groups and their interrelatedness. Meanwhile, correlation matrices enabled the examination of associations between multiple variables, identifying whether they were positive or negative, significant, or non-significant.

Furthermore, we applied thematic analysis to our open-ended survey questions using descriptive and analytical coding. Each response remained anonymous, and upon reviewing all submissions, we identified recurring themes and meticulously categorized them into a comprehensive codebook for optimal organization. The qualitative analysis adhered to these established procedures.

Challenges

A challenge that we anticipated encountering during data collection was the abundance of incomplete survey responses. Individuals may begin to take our survey but choose to exit at any point which would result in their survey response being incomplete. This was problematic as it did not give us a full picture of the participants' attitudes towards parenthood in relation to social media. Additionally, we recognized that our topic may be of more interest to female students resulting in fewer males who completed our survey compared to females. This made it difficult to compare the results between male and female respondents and impeded the generalizability of our findings on male participants. Finally, because only one of our group members was familiar with the Jamovi software, we anticipated running into some challenges during data analysis. To ensure that this group member was not solely responsible for data analysis, additional group members agreed to familiarize themselves with the software in the time between the release of the survey and when data analysis began.

Risks

Research naturally has inherent risks; however, we took all measures to limit and mitigate risks associated with our research. Furthermore, our research did not pose any risk greater than those in everyday life. To limit any ethical issues, we ensured that the group member who was a part of each club was not the one reaching out for recruitment. In terms of psychological risks, there was a possibility that completing our survey made individuals feel embarrassed, uncomfortable, worried, or upset due to the nature of some of the questions being asked. To minimize psychological risks, we made our survey online and anonymous so that participants could complete the survey in a safe location of their choosing, feeling comfortable to answer honestly. Support

resources were listed on the letter of information and end page of our survey so that participants could access help if needed. Finally, participants were not required to complete the survey and could exit at any time prior to submitting the survey without having their responses recorded.

In addition to psychological risks, there were also potential social risks associated with completing our survey. If participants completed our survey in a public setting, someone may have been able to see their responses, which would have resulted in their privacy being lost. Additionally, if someone liked or replied to a post about our survey, their identity could become known which would have social and psychological risks. To mitigate social risks and protect participant anonymity, we asked participants to complete the survey in a safe, private setting and to refrain from engaging with posts on social media or emails pertaining to our survey.

This section recounted the steps and ethical considerations that were taken to uncover how social media influences undergraduate students' perceptions of parenthood. McMaster students were recruited via posters and social media to participate in an online survey. After data collection on the MREB approved platform LimeSurvey, our quantitative data was analyzed using descriptive and inferential statistics on Jamovi, and our qualitative data was analyzed through descriptive and analytical coding. Many steps were taken throughout the recruitment and data analysis process to ensure the confidentiality of our participants.

Timeline for Data Collection and Analysis

Date	Task
October 19, 2023	Hand in research proposal and ethics protocol on Avenue to Learn by 11:59 pm
November 1, 2023	Zoom meeting with Dr. Clancy regarding our research proposal and ethics protocol
November 13, 2023	Final revisions must be handed in by this date in order to receive feedback
November 17, 2023	One-to-two page overview of research project due on Avenue to Learn at 11:59 pm
Closing down of data collection/survey - February 16, 2024	Survey is live on LimeSurvey and data analysis may begin
February 16, 2024	Survey closes on LimeSurvey
February 16 – March 4, 2024	Conduct data analysis for poster and final thesis paper
February 16, 2024 – March 28, 2024	Work on final thesis paper
March 4, 2024	First draft of poster due

March 7, 2024	Final draft of poster due
March 20, 2024	Poster Session
March 28, 2024	Final thesis paper is due on Avenue to Learn at 11:59 pm

Results

Sociodemographics

Our study included 39 undergraduate students from McMaster University (n=39), aged 18 years and above. The subsequent findings are contingent upon responses to demographic questions encompassing the program of study, age, gender identity, ethnicity, religious affiliation, sexual orientation, and relationship status.

Program of Study

The initial sociodemographic question in the survey pertained to participants' chosen field of study, marked as an open-ended question encompassing 24 distinct academic disciplines spanning various faculties. The majority of respondents specialized in social psychology (13.2%). This was followed by life sciences (8%), human behaviour (8%), molecular biology (5.3%), computer science (5.3%), psychology (5.3%), BTech (5.3%), engineering (5.3%), and English and cultural studies (5.3%). Additionally, a lesser portion of participants represented sociology (2.6%), nursing (2.6%), biochemistry (2.6%), political science (2.6%), biology (2.6%), civil engineering (2.6%), computer engineering (2.6%), chemistry (2.6%), software engineering (2.6%), chemical biology (2.6%), commerce (2.6%), PNB (2.6%), health and society (2.6%), film (2.6%), and medical radiation sciences (2.6%). Furthermore, a single participant did not provide a response to the question, leaving their field of study unknown.

Age

Figure 1 shows the frequency table of the ages in our sample population. The majority of our sample was 21 years of age. Interestingly, none of the individuals sampled were 22 years old.

Gender Identity

The majority of our participants identified as female (79.5%), with the rest identifying as male (20.5%).

Ethnicity

Our sample group displayed a rich variety of ethnic identities, facilitated by an open-ended question format encouraging diverse responses. Predominantly, participants self-identified as white (66.7%), with Asian (23%), mixed race (5.1%), Slavic (2.6%), and Arab

Figure 1
Frequency table of age

Age	Counts	% of Total	Cumulative %
18	6	15.4%	15.4%
19	9	23.1%	38.5%
20	9	23.1%	61.5%
21	14	35.9%	97.4%
22	0	0%	97.4%
23	1	2.6%	100.0%

(2.6%) individuals also represented.

Religion

Religious affiliation was determined through an open-ended question. The predominant portion of participants indicated no religious affiliation (28.2%), with Catholic (23%), Atheist/agnostic (20.5%), Christian (17.9%), Buddhist (2.6%), Muslim (2.6%), Sikh (2.6%), and prefer not to answer (2.6%) also found.

Sexual Orientation

This open-ended sociodemographic question revealed that the majority identified as heterosexual (66.7%), followed by bisexual (12.7%), homosexual (10.3%), and individuals who preferred not to answer (10.3%).

Relationship Status

The last demographic question asked in the survey pertained to relationship status. This close-ended question revealed the majority of participants were single (61.5%), followed by in a relationship (35.9%), with one respondent preferring not to answer (2.6%).

Social Media Use

Question 1 aimed to identify the social media platforms used by our participants. They were asked to select all listed platforms that they engaged with. Instagram was utilized by all participants (100%), with YouTube (84.6%), Snapchat (76.9%), TikTok (66.7%), Pinterest (53.8%), Facebook (33.3%), and X (30.8%) following in usage frequency.

Time Spent on Social Media

Figure 2 shows the frequency table of the amount of time spent on social media in our sample population. The majority of our sample spent 3-4 hours on social media, with the least amount of respondents spending 4-5 hours.

Quantitative Results

The following graphs depict responses to close-ended questions aimed at understanding the impact of social media on attitudes towards parenthood. There are

Figure 2

Amount of hours spent on social media

Hours on Social Media	Counts	% of Total	Cumulative %
1-2 Hours	4	10.3%	10.3%
2-3 Hours	8	20.5%	30.8%
3-4 hours	18	46.2%	76.9%
4-5 Hours	2	5.1%	82.1%
5+ Hours	7	17.9%	100.0%

Likert-style questions spanning from "Strongly agree" to "Strongly disagree," as well as Likert-style questions spanning from "Very often" to "Never."

    Figure 3 illustrates whether participants actively seek out parenthood-related content on social media. The data indicate that the majority of our sample disagrees with this statement, suggesting that this age cohort may not have a particular interest in this topic.

Figure 3
Actively seeking parenthood-related content because of interest
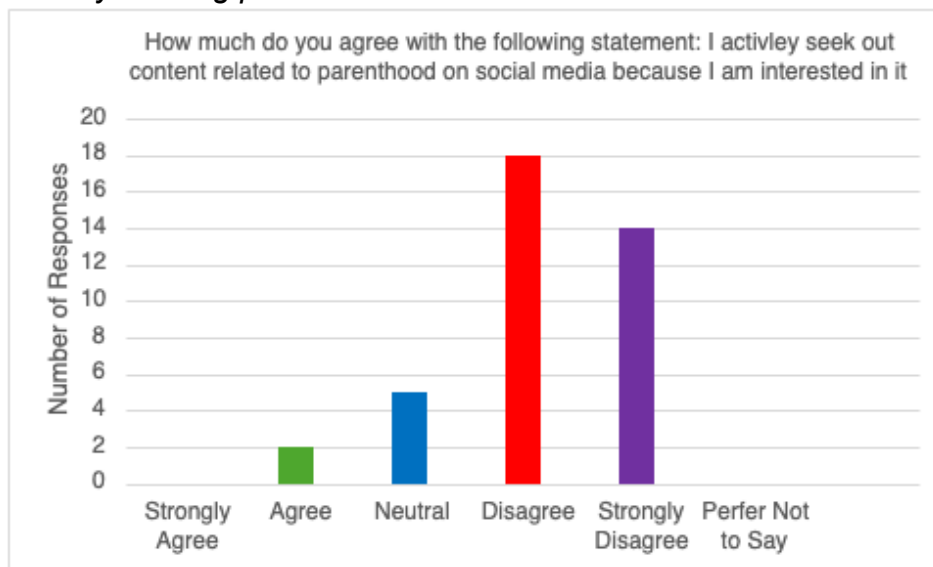
    Figure 4 reveals that most participants encounter social media content related to parenthood passively, without actively seeking it. This underscores the relevance of such content in contemporary social media usage, indicating that encountering it despite lacking specific interest is common.

Figure 4
Come across parenthood-related content on social media without any interest
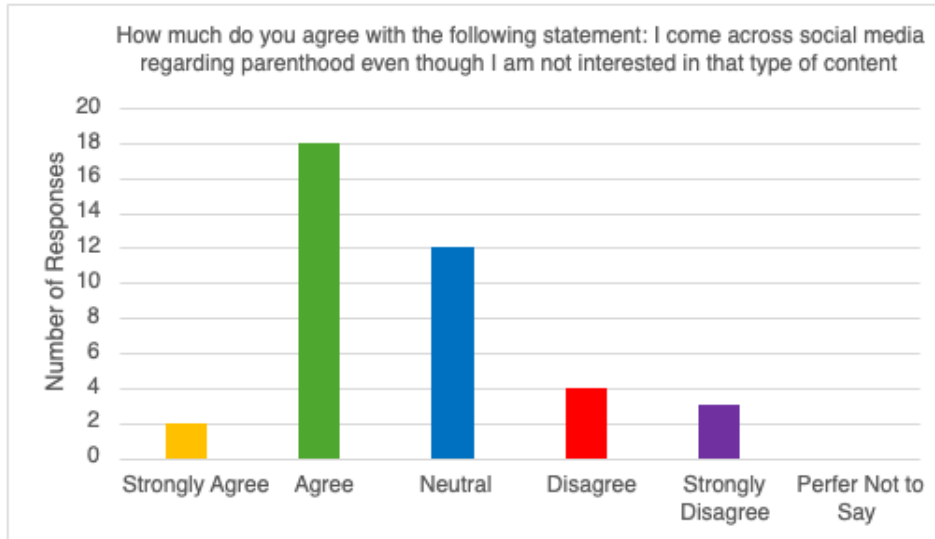
Figure 5
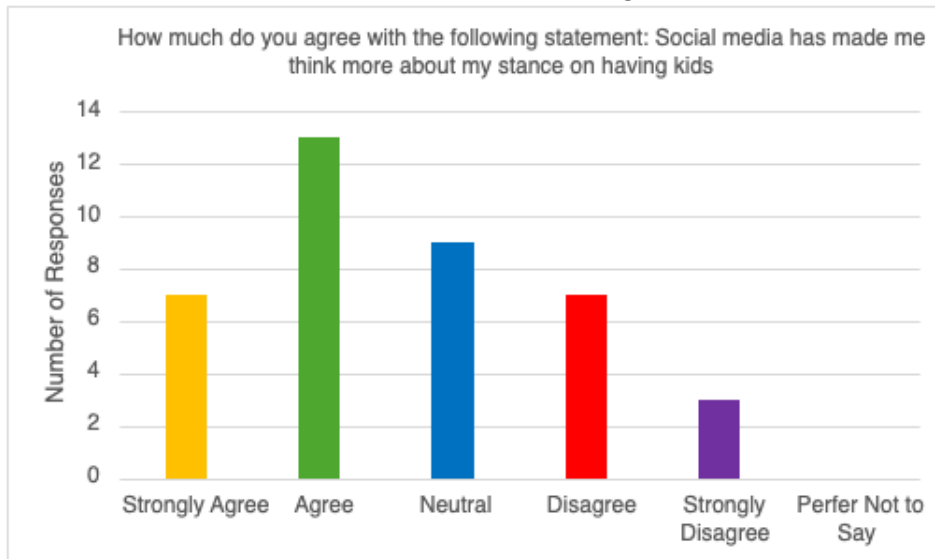*Social media's influence on stance on having children*

Figure 5 demonstrates that social media has influenced thoughts about future parenthood. This indicates that the content consumed on this topic is internalized, potentially significantly shaping our decision-making processes.

Figure 6 depicts the participants' desires regarding having children. The majority of responses indicate a desire to have children.

Figure 7 demonstrates whether our participants expressed a lack of desire to have children. The majority indicated disagreement with the statement, suggesting that they do, in fact, want to have children in the future.
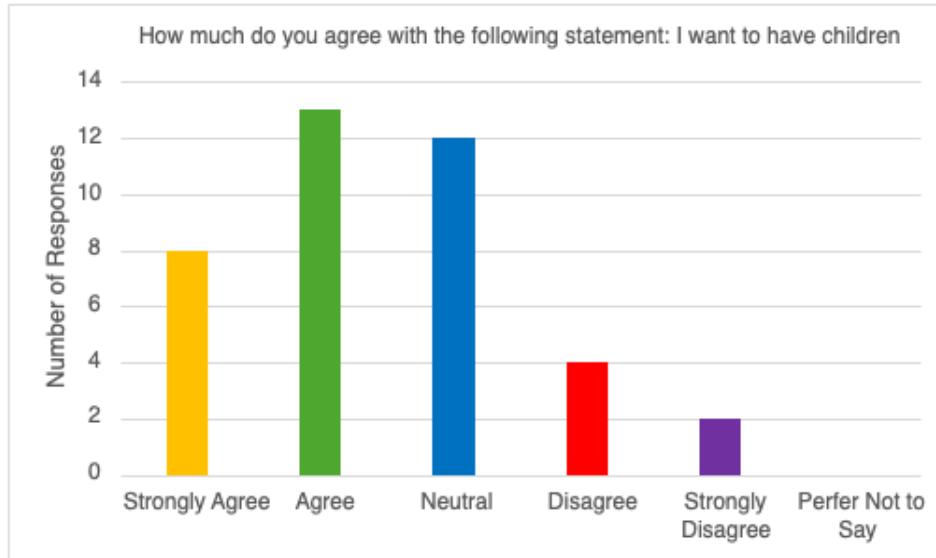
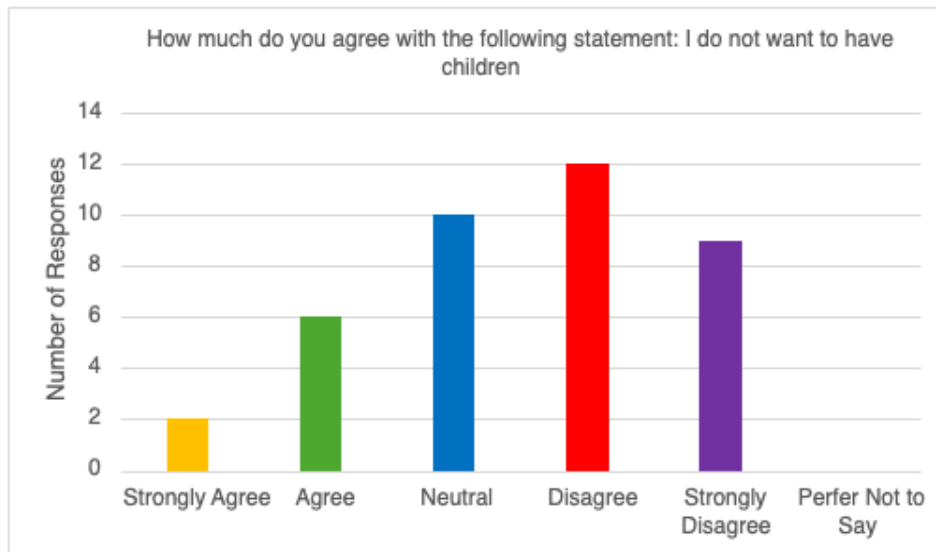**Figure 6**
Desire to have children

How much do you agree with the following statement: I want to have children

(Bar chart: Strongly Agree = 8, Agree = 13, Neutral = 12, Disagree = 4, Strongly Disagree = 2, Perfer Not to Say = 0; y-axis "Number of Responses")

Figure 7
Desire to not have children

How much do you agree with the following statement: I do not want to have children

(Bar chart: Strongly Agree = 2, Agree = 6, Neutral = 10, Disagree = 12, Strongly Disagree = 9, Perfer Not to Say = 0; y-axis "Number of Responses")

Figure 8 indicates whether participants were uncertain about having children. The majority disagreed with the statement, suggesting that many have already made a decision regarding their plans for future parenthood.

Figure 9 presented a question aimed at understanding the motivations behind the decision to have children. The graph indicates that the loss of independence was a contributing factor in this decision.

Figure 10 aimed to understand whether parenthood was a topic the age cohort considered and whether it was deemed important to discuss. The majority response
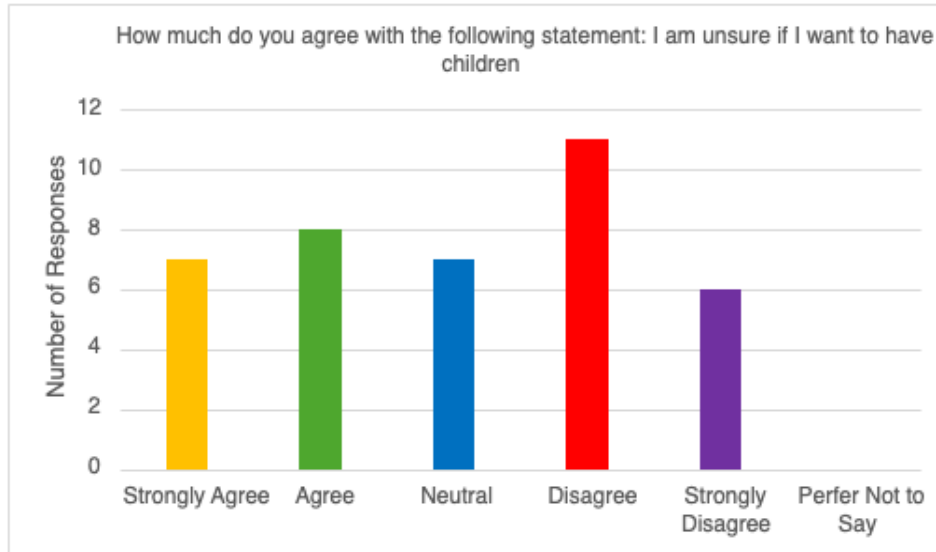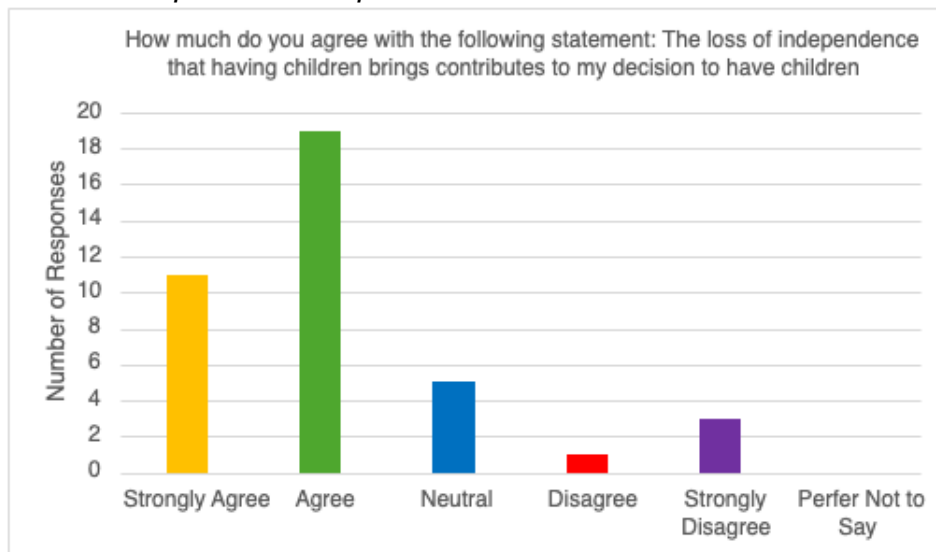
Figure 8
Unsure about having children

How much do you agree with the following statement: I am unsure if I want to have children

Figure 9

Loss of independence impacts decision to have children

How much do you agree with the following statement: The loss of independence that having children brings contributes to my decision to have children

indicates that our participants did not believe they needed to contemplate parenthood at their current age.

Figure 11 was designed to ascertain whether participants experienced fear and/or anxiety related to pregnancy. The graph reveals that the majority of our participants strongly agree with this statement.

Figure 12 asked if our participants had feelings of fear/anxiety surrounding birth. The majority of responses indicated that they strongly agreed with this statement.

Figure 13 delved further into the theme of anxiety and fear, this time focusing on parenthood. The graph indicates that the majority strongly agreed with the statement.
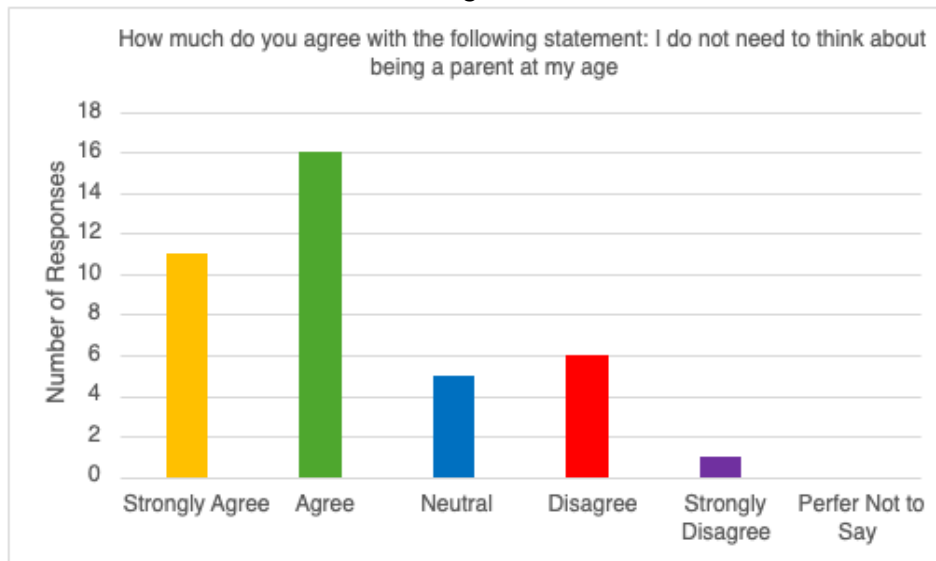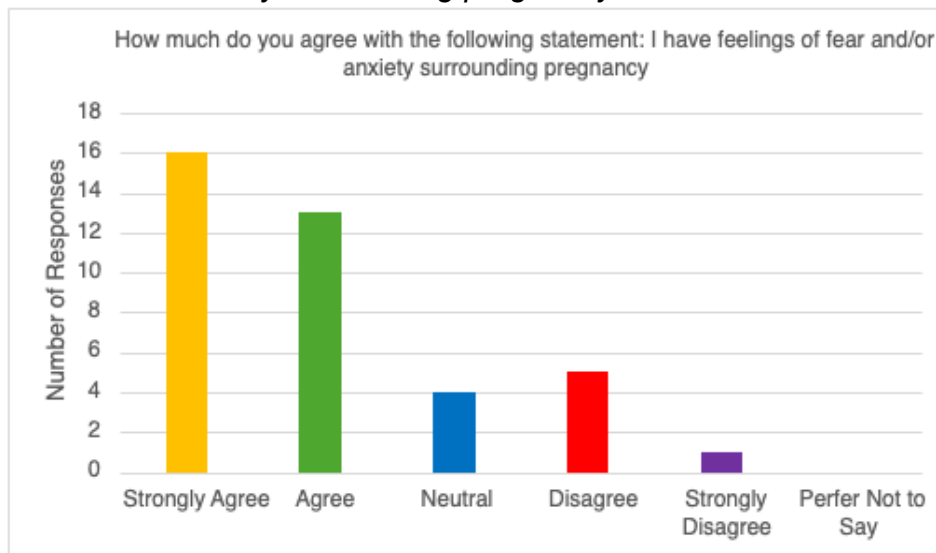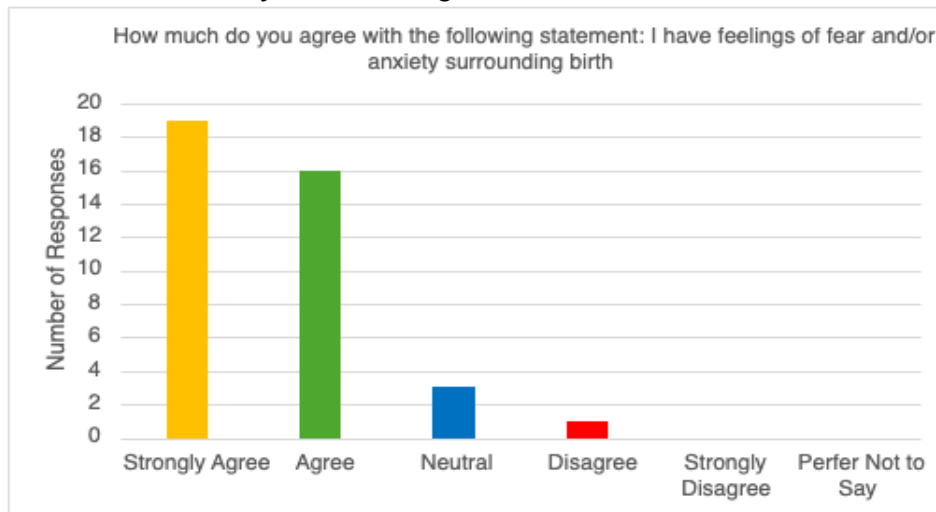
Figure 10

Do not need to think about having children

How much do you agree with the following statement: I do not need to think about being a parent at my age

Figure 11
Fear and/or anxiety surrounding pregnancy

How much do you agree with the following statement: I have feelings of fear and/or anxiety surrounding pregnancy

Figure 14 illustrates the level of skepticism among participants regarding the social media content they consume. The majority responded, "Somewhat often" to the question, with the fewest opting for "Rarely," and none selecting "Never."

Figure 15 depicts the responses of our participants regarding the extent to which their personal beliefs are influenced by what they consume on social media. The majority indicated "Somewhat often," while the fewest responses were for "Very often," and none selected "Never."

Figure 16 illustrates the responses of participants regarding whether they have gained new information from the content they encounter on social media. The predominant response was "Strongly agree," whereas "Neutral" received the fewest responses. Notably, no participants opted for "Disagree" or "Strongly disagree."

Figure 12

Fear and/or anxiety surrounding birth

Figure 13

Fear and/or anxiety surrounding parenthood
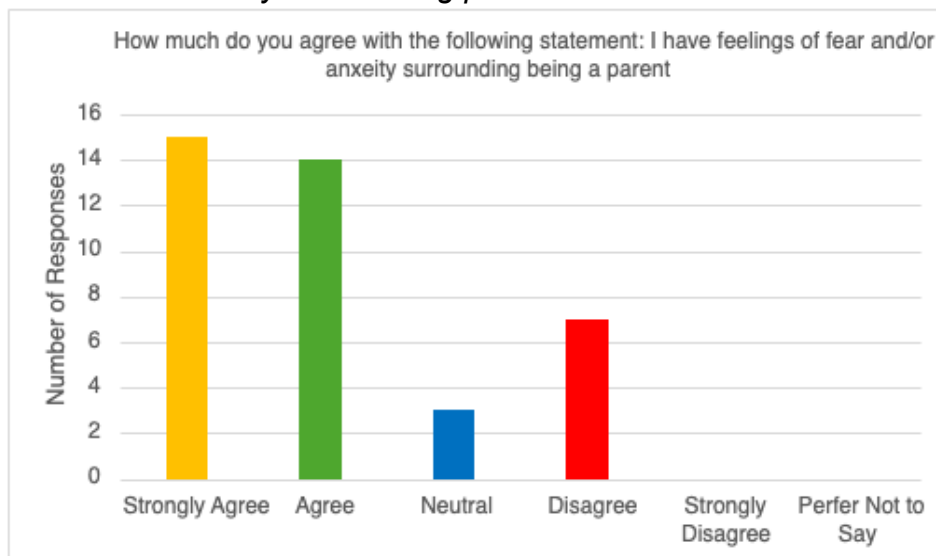
The following statistical analysis incorporates correlation matrices to examine the relationship between two variables. These results were found to be statistically significant, providing valuable insights into the relationships among variables relevant to our topic. Interestingly, there was no discernible relationship between sexual orientation, religion, or relationship status, suggesting that these demographic variables do not influence attitudes towards parenthood.

Figure 17 displays the correlation matrix indicating a moderate positive correlation (r = 0.546) between beliefs about social media, skepticism towards social media, and learning from social media with one's stance on having kids (p = < 0.001). These three aspects were grouped into a continuous variable labelled 'critical of social media". These findings

Figure 14
Skepticism towards information learned on social media
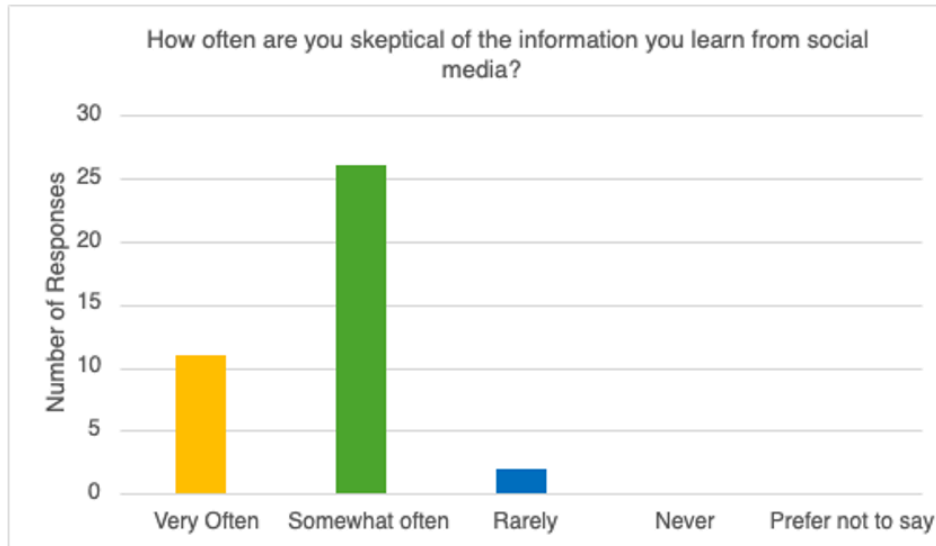
Figure 15
Social media influencing personal beliefs
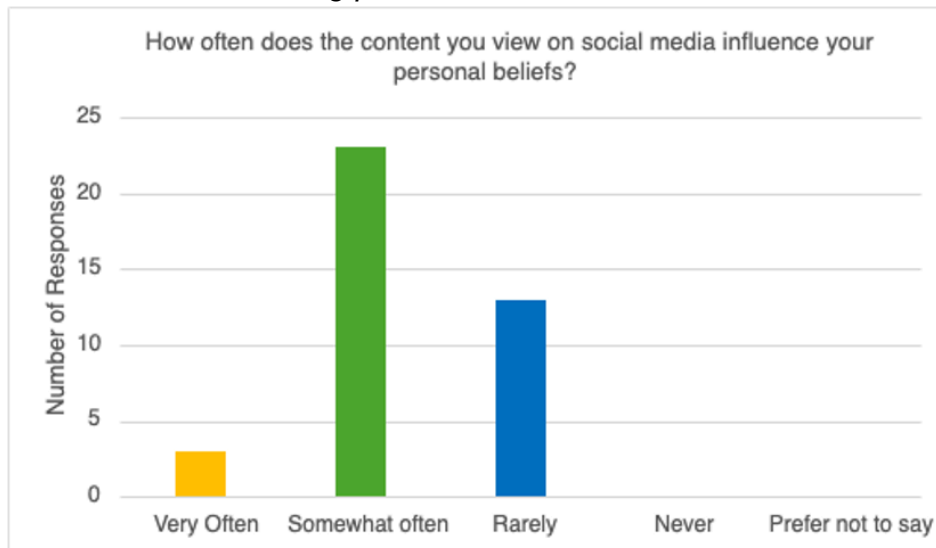
suggest that regardless of whether participants believe or doubt what they see on social media, it influences their perspective on future parenthood. This aligns with our research, emphasizing the significant impact of social media on attitudes towards parenthood.

Figure 18 presents a correlation matrix examining the relationship between family structure and seeking parenthood-related topics on social media. This finding is particularly intriguing as it reveals a positive correlation (p = 0.048), specifically with single-family structures and blended-family structures. Notably, these unconventional family structures demonstrate this association with seeking parenthood content online. It is crucial to take into account the r-value (r =0.319), suggesting a weak positive

correlation between these two variables. Despite its weakness, this correlation remains significant

Figure 16
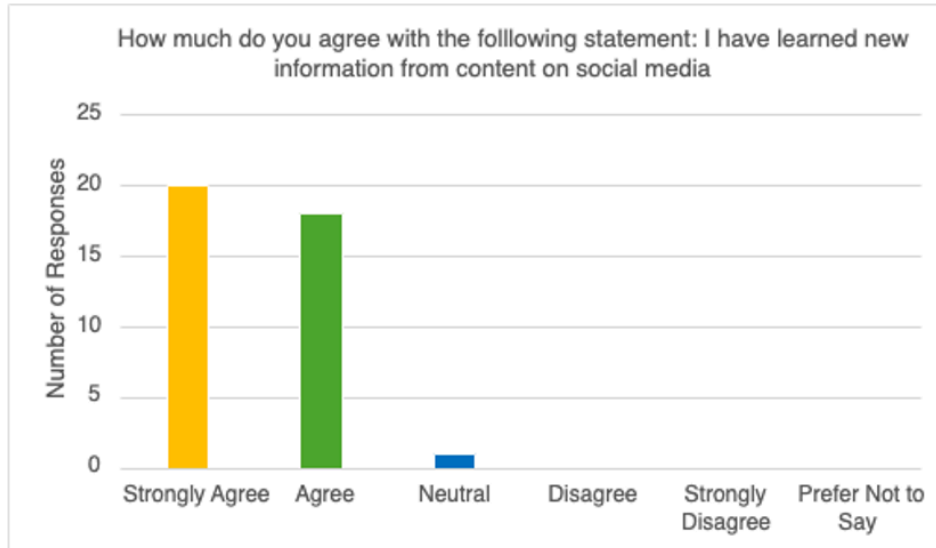*Learned new content from social media*

Figure 17
Social media and stance on having children

		Critical of Social Media	Stance on having children
Critical of Social Media	Pearson's r	-	
	p-value	-	
Stance on having children	Pearson's r	0.546	-
	p-value	< .001	-

for our research, as the observed relationship is unlikely to have occurred by chance alone. This suggests that one's family structure may influence the type of content actively sought online.

Figure 19 illustrates the correlation between fear of birth and various social media platforms. The data indicates a weak negative correlation (r = -0.383) between fear of birth and certain social media platforms (p = 0.016), notably TikTok and Instagram. This suggests that as fear of birth increases, usage of these platforms tends to decrease slightly. While this relationship isn't strong, it remains significant for our analysis.

Figure 20 presents the correlation matrix, highlighting a moderate positive correlation among beliefs about social media, skepticism towards social media, learning from social media, and fear of birth (p = 0.008). The results indicate that irrespective of participants' beliefs or doubts regarding social media content, it shapes their perspective on birth. This finding aligns with our research, emphasizing the substantial influence of social media on attitudes towards birth.

Figure 21 indicates a strong positive association between fear of pregnancy and fear of birth (p<0.001), alongside a moderate positive correlation between fear of parenthood and fear of pregnancy (*p* = 0.036). These correlations reveal an interdependence, suggesting that these fears tend to strengthen each other. This finding aligns directly with our research, emphasizing the interconnected nature of parental fears. Despite the latter correlation being weak, it still underscores the interrelatedness of these fears.

A correlation matrix examining the relationship between family structure and fear of parenthood, as seen in Figure 22, reveals interesting findings. The Pearson's correlation

Figure 18
Family structure and seeking parenthood-related content on social media

		Family Structure	Seeking Parenthood-related Content
Family Structre	Pearson's r	-	
	p-value	-	
Seeking Parenthood-related Content	Pearson's r	0.319	-
	p-value	0.048	-

Figure 19
Fear of birth and social media platforms

		Fear of birth	Social Media Platform
Fear of birth	Pearson's r	-	
	p-value	-	
Social Media Platform	Pearson's r	-0.383	-
	p-value	0.016	-

coefficient (r = -0.418) suggests a moderate negative correlation between these variables. This indicates that participants from different family backgrounds may experience differing levels of fear regarding parenthood. Furthermore, the correlation is statistically significant (*p* = 0.008), underscoring the importance of considering familial contexts in understanding attitudes towards parenthood.

The independent samples t-test is used to compare the means of two distinct groups to examine if there exists statistical evidence supporting significant differences in their respective population means. Notably, as shown in Figure 23, there is a significant divergence observed in social media platform usage between genders, meaning that there is strong evidence suggesting that the average use of social media platforms differs between males and females.

Figure 24 presents the use of a t-test to compare the mean attitudes towards social media between two distinct groups: individuals critical of social media and those from blended family backgrounds. The results highlight a contrast between these groups,

indicating potential differences in social media criticism based on family structure. Notably, the negative statistic suggests that the mean attitude towards social media in the blended family group is lower than that in the non-blended family group.

Qualitative Results

To better understand the rhetoric surrounding parenthood on social media, we employed 2 open-ended questions to ascertain what the themes and messages surrounding parenthood are.

Survey question 4 asked, "On which social media sites do you see more media surrounding parenthood?" The bar graph in Figure 21 shows that TikTok and Instagram were the most mentioned social media sites, with 21 and 19 mentions respectively. YouTube received 11 mentions, while Facebook and X received the fewest moentions.

Figure 20
Fear of birth and social media

		Fear of birth	Critical of Social Media
Fear of birth	Pearson's r	-	
	p-value	-	
Critical of Social Media	Pearson's r	0.419	-
	p-value	0.008	-

Figure 21
Fear of pregnancy and fear of birth and fear of parenthood

		Fear of Birth	Fear of Pregnancy	Fear of Parenthood
Fear of Birth	Pearson's r	-	-	-
	p-value	-	-	-
Fear of Pregnancy	Pearson's r	0.635	-	-
	p-value	< .001	-	-
Fear of Parenthood	Pearson'r	0.281	0.336	-
	p-value	0.083	0.036	-

Other social media sites not included in this graph such as Pinterest and Snapchat were not mentioned by any participants in response to this question.

Themes of Parenthood Content

Question 5 of the survey asked participants to describe the themes and messages of parenthood-related content that they view on social media. We provided examples of potential responses for participants including "positive/negative depictions of pregnancy, parenthood, and marital conflict." Out of 39 participants we received 38 responses to

this question which were divided into 7 main categories. The first 3 categories include positive themes, negative themes, and mixed themes. Due to the ambiguity and open-endedness of this question, some participants provided specific parenthood-related topics or listed types of parenthood-related content rather than describing thematic categories of parenthood-related content. These responses were categorized into the 4 remaining groups and include common parenting topics, social media issues, parenting lifestyle content, and other parenthood-related topics. 2 responses were excluded for irrelevance and invalidity.

Figure 26 shows the number of times each theme appeared within participant responses. Each theme and category will be defined below.

Figure 22
Family structure and fear of parenthood

		Family Structure	Fear of Parenthood
Family Structure	Pearson's r	-	
	p-value	-	
Fear of Parenthood	Pearson's r	-0.418	-
	P-value	0.008	-

Figure 23
Social media platform and gender

		Statistic	df	p
Social Media Platform	Student's t	2.22	37.0	0.032

Positive Themes

Out of 38 responses, 13 responses contained answers relating to positive themes of parenthood content. Only responses that explicitly used the word 'positive' were categorized under this theme. Within this theme, eight respondents specifically mentioned positive depictions of parenthood, while only one participant mentioned positive depictions of pregnancy. Other examples of responses that were considered positive themes include:
- "Positive family dynamics…"
- "Positive themes"

Negative Themes

Next, six participants mentioned negative themes within their responses. Only responses that explicitly used the word 'negative' were categorized under this theme. Within this theme, 5 participants specifically mentioned negative depictions of

pregnancy, and only one participant mentioned negative depictions of parenthood. An example of a response that discusses negative themes is:

- "TikTok viral list of reasons to not have kids for women is a prominent message… negative depictions of pregnancy include women's self-esteem going down due to physical changes to their body."

Mixed Themes

Only four participants mentioned mixed themes surrounding parenthood within their responses. This category consists of responses that use the word "mixed" or "negative and positive" to indicate a blend or a variety of different portrayals of parenthood. Mixed themes point to participants being exposed to a well-rounded sample of narratives surrounding parenthood. An example of responses that were considered mixed themes include:

- "I see both negative and positive sides of pregnancy and parenthood. Sometimes it can be more bad than good just because things that are abnormally bad are more interesting and viral."
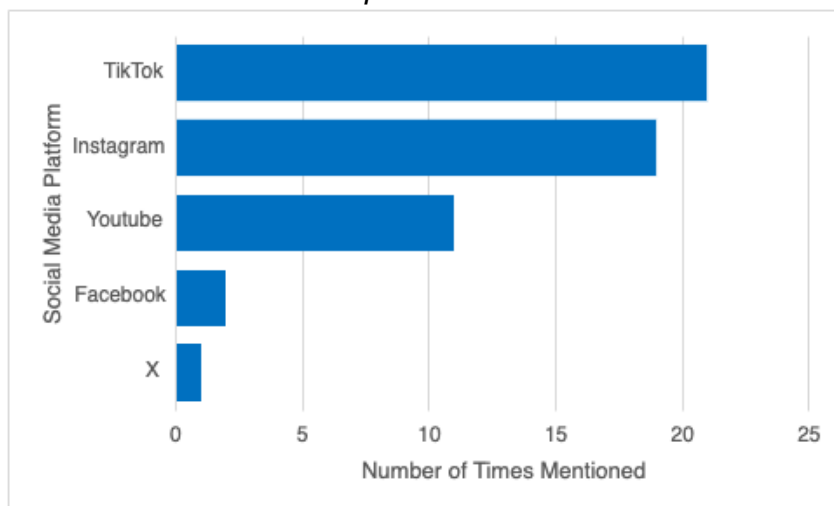
Figure 24
Critical of social media and having a blended family

		Statistic	df	p
Critical of Social Media	Student's t	-2.30	37.0	0.027

Figure 25
Social media sites where parenthood content is viewed

Note: The total count in Figure 25 exceeds the population size due to the participants being able to list as many relevant answers in their responses.

General Parenting Topics

General parenting topics were mentioned by nine participants within the 38 responses. This category consists of responses that mention general parenting topics, in that they are not explicitly positive or negative and are commonly discussed in the parenthood sphere online. Based on the types of responses that were given most frequently, three subcategories were identified: parenting tips/advice, parenting styles, and parenting challenges/struggles. An example of a response mentioned parenting tips/advice is:

- "Tips for parents, facts about pregnancy/newborns, life with young children, positive messages for mothers."

Figure 26
Themes in parenthood-related content online
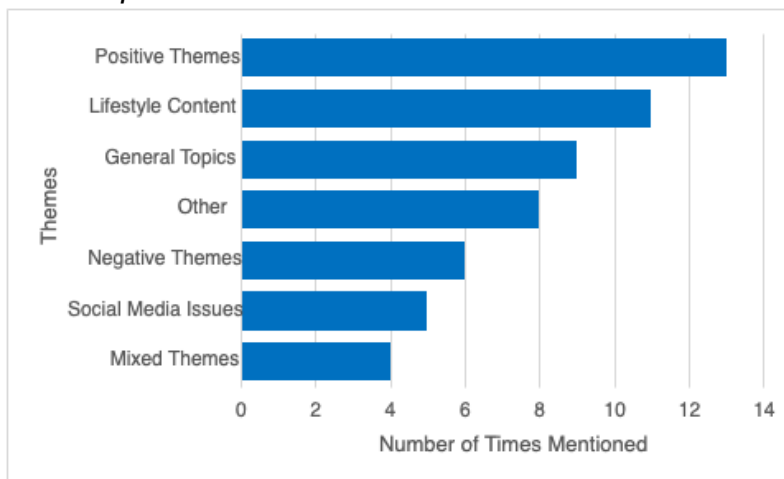
Note: The total count in Figure 26 exceeds the population size due to the participants being able to list as many relevant answers in their responses.

An example of a response that was considered under types of parenting styles include:
- "Gentle parenting, Montessori parenting…"
A response that was considered to be parenting challenges/struggles is:
- "... Struggles of single parenthood…"

Social Media Issues
In total, five participants mentioned social media issues within their responses. This category demonstrates the ethical and moral concerns that participants have about parenthood content on social media. Under this category, participants address the problems that can arise from performing parenthood on an online public sphere. Examples of responses that discuss social media issues include:
- "... If they are not exploiting their child for views then it's typically about expecting children."
- "... on instagram I see a lot of moms and families glamorizing being a mom and using it more as a means to make money and make themselves look good."

Parenting Lifestyle Content

Lifestyle content appeared 11 times among the responses to this question. This category consists of responses that listed popular video formats of parenthood content rather than thematic or topical responses. These responses were not explicitly positive or negative but rather listed different types of parenting lifestyle content that are popular online. Examples of answers that discussed parenting lifestyle content include:

- "Tiktok would usually have things like 'cooking for my toddler', or 'a day in the life of a *insert age here* mother'"
- "Family vlogs"
- "... pregnancy hospital stories"

Other Parenthood-Related Topics

Finally, eight participants mentioned other parenthood-related topics, which is a category that consists of topics that were mentioned less than three times. Out of 39 responses, two participants discussed feminism and parenthood, including "familial gender roles of women" and "feminist perspectives on parenthood." In addition, two participants viewed parenthood content related to abortion, and one participant viewed parenthood content related to miscarriage. One participant discussed seeing a lack of male representation in parenthood content online, claiming that "rarely any men post about performing household duties or roles related to post childbirth." Another participant mentioned "'sad beige' toy memes," which point to the trend of neutral coloured toys and decor for children that prioritize parents' desire for aesthetic harmony rather than the children's development or preferences (Stechyson, 2022). Responses that were irrelevant to the topic of parenthood were not included in this category.

These themes and categories demonstrate the variety of different narratives surrounding parenthood that undergraduate students are exposed to on social media. Although there is an abundance of content surrounding parenthood online, we can assume that these are the most salient and influential topics for undergraduate students. Positive themes were the most popular category among parenthood-related content on social media with 13 mentions. However, negative themes and social media issues both contradict the positive themes and have a combined total of 11 mentions. Overall, undergraduate students have observed a myriad of different themes and topics surrounding parenthood online.

Discussion

Stance on Having Children

Firstly, our research revealed that most participating students feel that social media has influenced their stance on having children. This finding supports our research question as it concerns a direct relationship between social media and an attitude towards parenthood. Interestingly, the majority of participants agreed that social media has increased their contemplation on whether to have kids. This indicates a potential for attitudes to fluctuate and change according to what is viewed on social media. According to social learning theory, human behaviour is learned through the observation and imitation of others and is continuously altered in response to negative or positive reinforcements (Bandura, 1977). Positive and negative online reinforcements take the form of views, likes, shares, and comments that possess the ability to affect a larger audience (Deaton, 2015). Our qualitative data demonstrated that there are a variety of

conflicting representations of parenthood presented online. Therefore, we contend that undergraduate students are learning, imitating, and internalizing certain attitudes towards parenthood presented on social media.

Despite the majority of respondents indicating that social media has prompted them to consider their stance on having children more, much of our sample also firmly claims to want children in the future. Considering these findings in conjunction, it is likely that participants' desire for children is unstable or has been built upon parenthood content viewed on social media. These conflicting attitudes reflect the variety of opposing themes and messages surrounding parenthood on social media. Our qualitative data revealed that positive themes including positive depictions of parenthood were most commonly mentioned among respondents. However, negative themes and social media issues provided contradicting representations of parenthood and were also brought up by respondents. Berger & Milkman (2012) conducted a study on what makes content online go viral, finding that virality is partially associated with physiological arousal. Content that evokes high levels of positive or negative emotion resonates most with people online (Berger & Milkman, 2012). Both positive and negative themes can alter an individuals' attitudes and behaviours towards parenthood, as virality can serve as positive reinforcement. Therefore, the myriad of representations of parenthood online are likely causing undergraduate students to contemplate their stance on having children as new media is consumed. Attitudes towards parenthood are continuously altered in a fashion similar to what Bandura's (1977) social learning theory posits.

Social comparison theory can help explain why social media causes undergraduate students to think more about their stance on having kids. Social media adds another layer to social comparison theory as individuals compare their thoughts and ideas to others within the online sphere. Previous research has consistently found that social media is associated with social comparisons around body image and self-esteem (Lewallen & Behm-Morawitz, 2016). In particular, previous research has observed a connection between social media use, upward social comparison and negative affect (Lewallen & Behm-Morawitz, 2016). Our qualitative data demonstrates the sheer magnitude of different types of parenthood-related content, from family vlogs to memes. There is an abundance of differing attitudes and opinions that individuals likely compare themselves to. However, we can only assume that social comparisons made in relation to parenthood-related content online may influence or reinforce undergraduate students' attitudes towards parenthood. Further research is required in order to determine if individuals actively make comparisons to others online when consuming parenthood-related content.

Interest in Parenthood

Next, our study revealed that parenthood-related content continues to reach participants despite their lack of interest and failure to seek it out. This finding may suggest that parenthood-related content possesses a dominating presence within online spaces and intrudes participants' feeds unwillingly. However, O'Brien (2023) contradicts these results by highlighting the algorithmic systems embedded within most social media platforms. In order to filter out the excessive amounts of content available online, networks often tailor an individual's feed based on their likes, comments, and overall engagement with previous content (O'Brien, 2023). Consequently, it is likely that our

participants have inadvertently or passively interacted with parenthood-related content, prompting algorithms to prioritize similar material onto their feeds. They may watch parenthood-related content without actively interacting through likes or comments. Alternatively, participants may be feeding the algorithm by interacting with content that is implicitly related to parenthood. One of the categories found in our qualitative data was parenthood lifestyle content, which includes family vlogs, day-in-the-life videos, and storytime videos. These videos may not center conversations around parenthood directly, but they showcase various depictions of parenthood and families. Regardless, parenthood content is being consumed and evaluated in ways that can influence their personal perceptions. Future research should investigate normative online behaviours in relation to personal beliefs, values, and opinions surrounding parenthood.

Our study also found that the majority of participants do not feel that they need to think about being a parent given their age. This finding suggests that undergraduate students as an age cohort are collectively uninterested in parenthood, or simply not yet ready to consider parenthood in their lives. Previous research has consistently found that this stage of life is not characterized by considerations of parenthood (Peterson et al., 2012; Sørensen et al., 2016). In Western societies, postponing childbirth is increasingly common, and university students often report wanting children later in life (Peterson et al., 2012; Sørensen et al., 2016). Thus, respondents may claim to be currently disinterested in parenthood while still wanting children in the future.

Fear and Anxiety

Our research has found that respondents strongly agree with the statement that they experience fear and/or anxiety surrounding pregnancy, birth, and parenthood. We explored these fears and/or anxieties by asking respondents how much they agree with statements regarding having feelings of fear and/or anxiety related to pregnancy, birth, or parenthood. All three of these statements were surveyed separately, however, the majority of respondents strongly agreed with all three questions. Fear of birth and fear of pregnancy were strongly positively correlated. Furthermore, fear of parenthood and fear of pregnancy were also strongly positively correlated. This means that participants who were fearful of birth often had fears surrounding pregnancy, and those who feared parenthood were also likely to fear pregnancy. These findings are consistent with literature on adults' perspectives on pregnancy and birth (Fenwick et al., 2009). It is important to note that many studies researching the topic of fear of birth and pregnancy focus on those who may already be pregnant rather than young adults who do not yet have children. Given the little research that has been done on young adult's opinions on pregnancy, birth, and parenthood, and our survey results pointing towards there being a fear, it can be assumed that younger adults share the same fear as those who are older or already expecting a child.

Our research has shown that young adults are likely to have feelings of fear and/or anxiety surrounding the whole experience of parenthood, from pregnancy through the course of parenthood. Volková & Dušková (2015) emphasize this finding in a study that uncovered specific fears in emerging adulthood, one of them being fears regarding becoming a parent. Each new phase of parenthood is associated with different challenges and changes (Karimi et al., 2021), which can explain respondents reporting fears surrounding each stage of becoming a parent. We observed that fear of one

aspect of parenthood can increase fear in other phases of parenthood, which may be influenced by the threats to one's freedom and independence. Our research found a positive correlation between fear of parenthood and loss of independence which reflects the existing literature on this topic. A study by Laney et al., (2015), discovered that becoming a mother was associated with experiencing a sense of self-loss.

Interestingly, our research has found that wanting children is positively associated with the fear of pregnancy, birth, and parenthood. This reflects the existing literature on attitudes towards parenthood, where university students also reported high levels of wanting kids (Peterson et al., 2012; Sørensen et al., 2016). Although respondents tend to fear the process of becoming a parent and parenthood itself, they still desire to have children. There is very little academic literature on fearing the process of becoming a parent while also still having future parental desires. Most of the current literature is in the form of magazines, blogs, and newspaper articles. Our research finding opens the opportunity for more research to be done in this area and provides a foundation for the nuanced feelings individuals can have towards parenthood. Further research should analyze conflicting feelings towards parenthood and how social media may influence these contradicting attitudes.

Skepticism and Influence

Despite the majority of respondents stating that they are skeptical towards what they learn on social media somewhat often, they also responded similarly when asked if social media influences their personal beliefs. This finding is directly related to our research question as it underscores how social media can influence personal beliefs and attitudes towards parenthood. Most significantly, participants acknowledged that social media can change their personal beliefs even after considering their skepticism towards social media. Thus, we can assume that undergraduate students incorporate information learned on social media using critical thinking and media literacy skills. Social comparisons and positive and negative reinforcements likely help individuals evaluate what to believe online. Valsesia et al., (2020) discovered that the number of individuals that an influencer is following can be an indicator of trustworthiness and credibility for viewers and marketers. Further research should examine how micro-interactions on social media can serve as negative and positive reinforcements as viewers consume information online.

Regardless of skepticism towards social media, almost all respondents reported that they had learned new information from social media in the past. A study by Vraga & Tully (2019), found that individuals who were more news literate and valued media literacy were more skeptical towards the quality of information on social media. In contrast, Moravec et al., (2018) examined fake news on social media, uncovering that individuals could not distinguish fake news from real news, and were highly prone to confirmation bias. In terms of parenthood content, it is likely that undergraduate students believe and value content that they already agree with. However, parenthood-related content online is dissimilar to misinformation in that content that confronts individuals' beliefs is not wrong or fake. For example, a person who plans to have children but is exposed to negative depictions of pregnancy cannot deem these depictions false or distorted. Therefore, undergraduate students often cognitively

evaluate information consumed on social media before deciding to incorporate the information into their personal beliefs.

We grouped together the questions about skepticism, having learned new information from social media, and having social media influence personal beliefs. These three questions were found to be positively correlated with fear of birth. Perhaps the skepticism towards social media combined with the openness towards learning from social media leads undergraduate students to be more cautious and wary of childbirth. This association suggests that social media content related to childbirth is salient for undergraduate students. Unfortunately, there is a lack of academic literature concerning social media's influence on negative attitudes towards childbirth, and parenthood in general.

Demographic Considerations

Given the wide variety of demographic characteristics represented by our respondents, we find it paramount to discuss in detail the influence that certain demographic characteristics appear to have, or do not have, on topics related to our research. To begin, our research shows that there is a significant difference in social media usage across genders. Female respondents were found to spend more time daily on social media when compared to their male counterparts, which is consistent with current literature (Twenge & Martin, 2020). Additionally, female respondents report using a larger variety of social media apps compared to male respondents. Specifically, only female respondents reported using Pinterest, although, no female respondents reported coming across parenthood-related content on Pinterest. Furthermore, male respondents reported less use of TikTok than female respondents. This finding has significant implications for our research as TikTok was reported as the app where respondents most frequently came across parenthood-related content. Considering TikTok's popularity amongst females and the abundance of parenthood-related content on TikTok, it can be assumed that females encounter parenthood-related content more frequently than males. Unfortunately, there has been no recent academic research that analyzes how male adolescents generally conceptualize parenthood.

Additionally, an interesting finding that our research uncovered was that sexual orientation, religion, and relationship status were insignificant when compared to attitudes relating to birth, pregnancy, and parenthood. To explain, differences in sexual orientation, religious affiliation, and relationship status among our respondents was not significantly related to any parenting attitudes. Existing literature emphasizes that queer individuals think about whether or not they want kids to a similar degree as their straight counterparts (Pralat, 2015). However, differences occur as queer individuals must consider potential paths to parenthood in ways that heterosexual couples do not (Pralat, 2015). In terms of religious affiliation, our findings are inconsistent with current literature that recognizes religion as an indicator for desiring children and viewing parenthood as one's duty (Yancey & Emerson, 2018). Surprisingly, we found that religious affiliation was not correlated with believing that everyone should have children. This finding may have been influenced by the high number of respondents who identified as having no religious affiliation.

Finally, the type of family structure that respondents grew up in correlated strongly with feelings of fear surrounding parenthood. Additionally, family structure was positively

correlated with seeking parenthood-related content on social media. The specific family structures that were associated with seeking parenting-related content on social media include the single-parent family structure and the blended family structure. This demonstrates that the family structure that one grew up in can impact how much parenthood-related content one seeks out on social media. Interestingly, individuals who grow up in these types of nontraditional family structures seek parenthood-related content on social media. Perhaps this finding demonstrates that individuals who desire this type of content are seeking structure or "normalcy" within online representations of families. A study by Gibson found that YouTube bereavement vlogs served as "channels of emotional supply" for viewers, which demonstrated how many aspects of life are now mediatized (2016). Similarly, individuals from single-parent and blended families may derive pleasure or comfort from positive family representations online.

Conclusion

Summary of Findings

Our research supports our initial hypothesis by demonstrating that social media does indeed influence undergraduate students' perceptions of parenthood. Our participants indicated that social media content influences their personal beliefs, with social media directly impacting their contemplation towards having kids. We found that the majority of our participants have feelings of fear and/or anxiety regarding pregnancy, birth, and parenthood. Furthermore, these feelings were significantly associated with wanting children in the future. Our study reveals that regardless of whether people are interested in parenthood-related content, they are still consistently exposed to it and influenced by what they view. Interestingly, we also found that one's sexual orientation, religion, and relationship status, are unrelated to their attitudes towards parenthood. Lastly, our research also reveals that social media presents both positive and negative depictions of parenthood, as there is a myriad of different types of parenthood-related content. In terms of pregnancy and birth, participants reported seeing more negative depictions, while parenthood content was more positive in comparison. Overall, social media impacts attitudes towards parenthood regardless of skepticism, personal interest, or religious affiliation.

Limitations

Despite best efforts, no study is without limitations. Firstly, the theories used for this research do not directly focus on social media interactions. Rather, social learning theory and social comparison theory are grounded in the evaluation, comparison, and imitation of the behaviours one witness (Festinger, 1954; Bandura, 1977). Nonetheless, behaviours on social media can be similarly observed and used as positive or negative reinforcements.

Secondly, the generalizability and reliability of our study is in question. Given that fatherhood is underrepresented throughout social media, men may not be exposed to as much relevant parenthood-related content online. This reflects our sample population, as only eight men (20.5%) completed our survey. Men may have been uninterested in participating in a study on parenthood because parenthood itself is stereotypically a feminine domain (McHale & Huston, 1984). Additionally, with only 39 participants in total and a highly homogenous sample population, results are not

generalizable beyond North American undergraduate students. Our sample consists only of undergraduate students, underrepresenting men, sexual minorities, and other gender minorities. Furthermore, the use of convenience sampling signifies that our results may not be replicable. Nevertheless, these findings are still compelling, especially when looking at a generation of future parents who are strongly connected to social media. This study is the first of its kind within social psychological research and can inform future studies that aim to explore the relationship between social media and parenthood.

Lastly, we cannot definitively measure a relationship of causation between social media and participants' perceptions of parenthood. There is a myriad of other factors that can influence attitudes towards parenthood in conjunction with social media such as adverse life experiences, skewed depictions of parenthood online, and other forms of media. In addition, existing attitudes towards parenthood may be unchanged or simply reinforced by content viewed on social media. Future research should examine the interdependent relationship between social media and personal values and beliefs.

Significant Insights and Contributions

Our study provides noteworthy findings regarding the relationship between social media and perceptions of parenthood. We address the gap in research on how social media impacts attitudes towards parenthood, drawing these socially significant topics together. Our findings contribute to this field by revealing various important implications of exposure to parenting content on social media. For example, our findings shed light on the previously unaddressed fear that undergraduate students have towards pregnancy, birth, and parenthood. This concern should be followed over time to see the true implications of exposure to negative parenthood content on social media alongside pre-existing fear and anxiety.

Moreover, our findings indicate that exposure to parenting content on social media may be unavoidable. The majority of participants reported that they come across parenthood-related content even though they are not interested in it. This demonstrates that parenthood is a prevalent subject within social media content. This is an extremely important finding since it suggests that parenting content on social media is ubiquitous. Our research findings, which highlight a link between exposure to parenting content and perceptions of parenthood, suggest a significant influence on how society views and understands parenthood. Future research should consider these findings and evaluate the potential risks of such permeating social media content.

Final Thoughts

In conclusion, this research aided in filling the gaps in existing literature by focusing on the relationship between social media and perceptions of parenthood. Social media has been on the uprise; therefore, understanding how our ideologies and perceptions are shaped by social media is essential. Despite the limitations of this study, our findings are important to consider when evaluating how social media influences individuals' personal values and beliefs. While these findings may not apply to the general population, this group of undergraduate students demonstrates the undeniable influence of social media, which should be further explored in relation to other populations. Future research should aim to explore the specific messages social media

content spreads, regarding parenthood for both women and men. Additionally, future research should include a longitudinal study to evaluate how perceptions change from one point in time to another, potentially revealing a clearer understanding of causal relationships. We hope this research inspires others to consider the influence social media has on their perceptions of parenthood. We anticipate that future research will build on our findings and reveal more about this fascinating phenomenon.

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