Extended Abstract: An analysis of social media discourse on fertility intentions.

The decision to have a child is one of the biggest choices an adult can make. This decision is influenced by a complex range of factors, although trends within population level fertility can be predicted through understanding more about the fertility intentions of the individuals (Mencarini et al., 2015). Fertility intentions refer to an individual's desire to have a child (Zhu et al., 2022). Intentions can be defined within the context of fertility desires, attitudes, and behaviours, and can a positive or negative impact on an individual's fertility (Preis et al., 2020). It refers to both the number and the timing of intended children. The Total Fertility Rate (TFR) has been declining globally for the past century (Bhattacharjee et al., 2024). This decline was anticipated by many demographic theories, although population level fertility was expected to stabilize at around 2 children per woman (Morgan, 2003). As the 20th Century has progressed, the TFR of many populations have declined to below replacement level (Aitken, 2022, Lee & Mason, 2014). Fertility polices help to ease some of the concern over the population composition. Such policy has been made in alignment with fertility intention theories (Gray et al., 2022).

Having a child was historically believed to be grounded in the expectation of a return on labour later in their life and the added security a child would provide during old age (Caldwell, 1976; Schultz, 1973; Thomson, 2015). Becker's seminal theory of fertility presented fertility as a rational, economic decision (Doepke, 2015; Lee, 2015; Becker, 1960). In the paper he argues that parents can derive utility from both child quality and quantity, whereby higher quality children have a higher value than a high quantity of children. (Becker, 1960). The Value of Children (VOC) theory critiqued early fertility theories for overlooking the broader social, emotional, and psychological factors influencing fertility (Friedman et al., 1994). VOC theory posits that a child's value, alongside the traditional economic contributions, includes emotional and social security they provide. Children help to cultivate a sense of community and identity for the parents (Friedman et al., 1994; Weston et al., 2004). Fertility intentions have also sought to be understood through the Theory of Planned Behaviour (TPB) (Ajzen, 1991; Ajzen & Klobas, 2013). In this theory, the decision to have a child is informed by 3 different beliefs: behavioural beliefs, normative beliefs and control beliefs (Ajzen & Klobas, 2013). The interaction between these factors forms the intention of an individual, which informs the fertility behaviour. The stronger the intention, the stronger their likelihood the individual will behave accordingly.

Previous theories have overlooked how external and sociocultural factors affect fertility intentions. Raybould et al. (2023) found that the Covid-19 pandemic altered the fertility intentions of UK respondents because of four major concerns: being unwell with the virus during pregnancy, indirect costs of the pandemic on financial security and lifestyle, a sense of lost time and experience due to the pandemic and a poorer perception over the state of society (Raybould et al., 2023). Zhang et al. (2022) surveyed university students across China revealing 35% of female participants indicate that their fears of children were associated with the labour and delivery process (Zhang et al., 2022). The study concluded that the level of anxiety and fertility intentions are inversely related, with higher self-rated anxiety corresponding to lower fertility intentions. (Zhang et al., 2022). This study indicated that rational theories of fertility do not consider that women may have personal factors which

influence their fertility intentions including increased anxiety around childbirth (Zeng et al., 2023; Zhang et al., 2022).

The media has been identified as an important influence on fertility intentions and outcomes (Ning et al., 2022). A study by Ning et al (2022), found that the consumption of new media negatively influences fertility intentions, whilst traditional media had no effect (Ning et al., 2022). The focus of this current paper will be TikTok. TikTok is a video sharing platform, which experienced an unprecedented increase in activity with the beginning of the global pandemic during 2020. It is estimated to have approximately 1 billion global users per month, the majority of which are young users (Montag et al., 2021). Therefore, it may reveal further insight into the fertility discourse of younger people within the population and highlight some negative intentions suitable for further study.

Data and Methodology

In approaching this study, there was an initial investigation into what method of searching for content on the TikTok platform would be most appropriate. For the purposes of this study a new TikTok account was created to mitigate the impact of the algorithm. The first approach used the search bar within Tik Tok, using the term "child free". This resulted in content which was not ordered in a systematic way: consecutive videos had significant discrepancies in their relevance to the topic; and statistics were not ranked. Therefore, using key terms only would not be appropriate for this study. However, the key term search did display a range of videos with suitable hashtags. From these videos three relevant hashtags were identified. These hashtags were: #childfree, #childfreebychoice and #childfreetiktok. For the 3 identified hashtags, #childfree had 60,100 posts, #childfreebychoice had 31,200 and #childfreetiktok had 14,200 posts.

Data was collected from TikTok videos across 3 separate dates. For each video identified, a video ID was given, the hyperlink, total number of likes, and comments at the time of observation were recorded. The style of content and any fertility related themes were noted. Once collected, the sample comments were reviewed and any videos with ambiguity were rewatched. Of the 150 videos watched across the hashtags, 44 of the videos were excluded due to being duplicated in one or more of the hashtags. Duplicates were identified through comparing the hyperlinks of the videos. An additional 22 videos were also excluded from further analysis as they were not related to the topic of fertility intentions. Such videos included discourse on the sterilisation process or parody style videos which didn't discuss a theme. Using the refined sample, the comments were reviewed once more, and the videos were grouped into similar topics. These groupings were then refined into themes. For each video, the themes were binary coded, with a maximum of 3 themes per video. The binary code produced a count for each theme across the videos and formed the quantitative basis of the study.

Results

For the 84 videos identified as relevant, they had been watched over 51,667,600 times and had 789,793 comments. The primary data collected lead to the identification of 12 key themes or influences over someone's decision to not have a child (Table 1). The videos were made by child free people and parents. There was no clear relationship identified between the number of times theme was observed and the number of comments and likes it

received. Typically, the like count and number of times observed were positively related to one another. However, the statistical significance of these relationships was not tested.

Videos under the 'Free time' theme included discussions over the lack of autonomy over how time is spent when children are involved and the lack of choice in activities. The theme of 'Financial constraint' explored how childcare, child- friendly activities and health care appointments are expensive. Videos featuring the topic of the 'Gender divide' expressed concerns over the division of labour associated with parenting, the inequality between the sacrifices made between men and women and the different reactions between a childfree woman vs man. The theme of 'Physical consequences of pregnancy and labour' had videos which detailed the expected and unexpected symptoms of pregnancy, lasting changes to a body as well as reactions to obstetric procedures. Another health theme identified was concerns over mental health. Creators discussed how they didn't not think that they could have a child due to their poor current mental health and their experience with anxiety and depression. Others spoke about generational trauma and their own childhood experiences as a contributing factor to their decision to not have children.

'Parenthood not being seen as attractive' included videos where the children were misbehaving in social settings, the unglamourous side to parenthood and not wanting to deal with the physical responsibilities of having a child. Some videos featured creators explaining they never had an urge to have children, didn't change their mind with time and lived a very fulfilling life without children. 'Lifestyle envy' featured vdeos where creators were expressing jealousy for those who lived a life which was child free or resentment that they cannot do the same things due to their children. Some videos cited the reason that they were choosing not to have children was due to 'Environmental concerns' or the state of the world. Videos were placed in the 'Other' category when they would not explicitly be able to fit into one of the others, but the reason mentioned was a valid negative intention. Such reasons included not wanting to compromise current lifestyle and hobbies as well as discussion on how they do not think that the traditional reasons to have children such as to have someone to look after you is no longer a justifiable reason to have children anymore.

Discussion

The analysis of the sample of Tik Tok videos signify that there is continued and diverse discourse around negative fertility intentions on social media. The methodology and data collected revealed twelve themes within the video samples, nine of which diverge from our traditional line of questioning of fertility intentions. The identification of these themes indicates that there is a changing discourse on social media, which has moved away from the assumption that the default is that everyone wants a child. From this study, it is difficult to determine if these reasons are novel due to being developed through the use and increasing prevalence of social media, or if these reasons have always been existent within fertility discourse, and social media has helped to bring this discussion to the forefront of popular culture. Deciphering this relationship holds potential for future research. Social media is famed for its un-filtered outlook into the lives of others. Individual experiences and narratives have been shown to be more persuasive to audience compared to formal reports (Ning et al., 2022). Therefore, the candid nature at which some parents are sharing their experience to social media with, may be contributing to the deterrence of some people from having children all together. This may also be driving the increasing anxiety and

hesitation that some people are experiencing in relation to the physical sides of pregnancy and labour. Videos about obstetric procedures or newborn health were explained or visually demonstrated, viewing these videos outside of the context of being pregnant may cause more anxiety to the process of getting pregnant and as a result could delay childbearing. Furthermore, the realistic parenthood content can form a stark contrast to the glamour of the lives of many of the child free creators.

However, while the results of this study point to new reasons for not wanting children, some caution should be applied. Despite trying to design a method which would represent the most relevant discourse, the presence of an algorithm within the app may mean that the videos which were suggested are the results of being suitable for going viral rather than being most representative of the fertility intention discussion on TikTok. The theme of 'No urge', was not the most identified topic, even though it had a high level of engagement, implying that the popularity of this theme may be influenced by video style rather than due to agreement with the content. Furthermore, the data lacks longitudinal potential as there is no demographic information available on either the content creator or those who interact with the video. As a result, we are not able to see if there is a tangible difference between the fertility intentions of those who engaged with the content and those who did not.

Conclusion

Insight into current discourse surrounding fertility intentions is essential for understanding how to effectively address the concerns which contribute to negative fertility intentions. This study shows that personal preference, health statuses and fears play a significant role in social media discourse. These topics have not been widely explored in theory or surveys but appear central to the conversation. The findings of the study indicate that research could extend the themes used in the surveying and reporting of fertility intentions. It also highlights a need to explore the role of social media in the cultivating and contributing to the fertility intention discussion and the effect it could have on future cohorts.

Table 1 A table depicting the key themes identified within the sample. Includes the number of times identified within the sample, the total number of likes for videos within the theme and the total number of comments ((#childfree, 2024; #childfreebychoice, 2024; #childfreetiktok, 2024)

Key Theme	Description of theme	Number of times identified	Total number of Likes	Total number of comments
Concern for free time	Free time or autonomy over how their time is spent	13	9,407,300	169,777
Doubts about parenting abilities	Doubts about their parenting abilities	2	1,276,700	9,849
Environmental concerns	Concerns over the state of the world/ environmental conditions	2	683,700	33,220
Financial constraint	Mention of the costs associated with having children.	9	6,542,600	67,292
Gender divide	Expression of concerns over gender inequality or the division of labour of parenting	5	3,205,400	36,438
Lifestyle envy	People expressing jealousy for those who are child free	5	4,053,600	62,890
Mental health concerns	Expression of concern due to generational trauma or poor mental health	8	2,707,800	46,678
No urge for children	No urge to have children or does not like children	10	7,522,600	174,450
Other	Do not want to compromise on current lifestyle, traditional reasons to have children are not long an excuse.	12	4,976,300	95,582
Parenthood not seen as attractive	Parenthood is not seen as attractive, or expressed a dislike for having to deal with a child	22	13,604,400	201,523
Physical consequence of having children	Concerns related to the physical consequences or medical procedures associated with labour or childbirth.	17	13,498,100	113,803
Reassurance of childfree lifestyle	Positive affirmations and reassurance from those who lived / are living a child free like and their lack of regrets	10	6,477,500	118,969

References

#childfree. (2024). TikTok.

#childfreebychoice. (2024). TikTok.

#childfreetiktok. (2024). TikTok.

- Aitken, R. J. (2022). The changing tide of human fertility. *Human Reproduction, 37*(4), 629-638. https://doi.org/10.1093/humrep/deac011
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. https://doi.org/https://doi.org/10.1016/0749-5978(91)90020-T
- Ajzen, I., & Klobas, J. (2013). Fertility intentions: An approach based on the theory of planned behavior. *Demographic Research*, *S16*(8), 203-232. https://doi.org/10.4054/DemRes.2013.29.8
- Becker, G. S. (1960). An economic analysis of fertility. In *Demographic and economic change in developed countries* (pp. 209-240). Columbia University Press.
- Bhattacharjee, N. V., Schumacher, A. E., Aali, A., Abate, Y. H., Abbasgholizadeh, R., Abbasian, M., Abbasi-Kangevari, M., Abbastabar, H., Abd ElHafeez, S., Abd-Elsalam, S., Abdollahi, M., Abdollahifar, M.-A., Abdoun, M., Abdullahi, A., Abebe, M., Abebe, S. S., Abiodun, O., Abolhassani, H., Abolmaali, M., . . . Vollset, S. E. (2024). Global fertility in 204 countries and territories, 1950–2021, with forecasts to 2100: a comprehensive demographic analysis for the Global Burden of Disease Study 2021. *The Lancet*, 403(10440), 2057-2099. https://doi.org/https://doi.org/10.1016/S0140-6736(24)00550-6
- Caldwell, J. C. (1976). Toward A Restatement of Demographic Transition Theory. *Population and Development Review*, 2(3/4), 321-366. https://doi.org/10.2307/1971615
- Doepke, M. (2015). Gary Becker on the quantity and quality of children. *Journal of Demographic Economics*, *81*(1), 59-66. Friedman, D., Hechter, M., & Kanazawa, S. (1994). A Theory of the Value of Children. *Demography*, *31*(3), 375-401. https://doi.org/10.2307/2061749
- Götmark, F., & Andersson, M. (2020). Human fertility in relation to education, economy, religion, contraception, and family planning programs. *BMC Public Health*, 20(1), 265. https://doi.org/10.1186/s12889-020-8331-7
- Gray, E., Reimondos, A., Lazzari, E., Breunig, R., Steinhauser, R., Zhang, Y., Biddle, N., & Gray, M. (2022). IMPACTS OF POLICIES ON FERTILITY RATES. https://doi.org/10.13140/RG.2.2.34063.25760
- Lee, R. (2015). Becker and the Demographic Transition. *J Demogr Economics*, 81(1), 67-74. https://doi.org/10.1017/dem.2014.9
- Lee, R., & Mason, A. (2014). Is low fertility really a problem? Population aging, dependency, and consumption. *Science*, 346(6206), 229-234. https://doi.org/10.1126/science.1250542
- Mencarini, L., Vignoli, D., & Gottard, A. (2015). Fertility intentions and outcomes: Implementing the Theory of Planned Behavior with graphical models. *Advances in Life Course Research*, 23, 14-28. https://doi.org/https://doi.org/10.1016/j.alcr.2014.12.004
- Montag, C., Yang, H., & Elhai, J. D. (2021). On the Psychology of TikTok Use: A First Glimpse From Empirical Findings. *Front Public Health*, *9*, 641673. https://doi.org/10.3389/fpubh.2021.641673
- Morgan, S. P. (2003). Is low fertility a twenty-first-century demographic crisis? *Demography*, 40(4), 589-603. https://doi.org/10.1353/dem.2003.0037
- Ning, C., Wu, J., Ye, Y., Yang, N., Pei, H., & Gao, H. (2022). How Media Use Influences the Fertility Intentions Among Chinese Women of Reproductive Age: A Perspective of Social Trust. *Front Public Health*, *10*, 882009. https://doi.org/10.3389/fpubh.2022.882009
- Preis, H., Tovim, S., Mor, P., Grisaru-Granovsky, S., Samueloff, A., & Benyamini, Y. (2020). Fertility intentions and the way they change following birth- a prospective longitudinal study. *BMC Pregnancy and Childbirth, 20*(1), 228. https://doi.org/10.1186/s12884-020-02922-y
- Raybould, A., Mynarska, M., & Sear, R. (2023). "The future is unstable": Exploring changing fertility intentions in the United Kingdom during the COVID-19 pandemic. *Perspectives on Sexual and Reproductive Health*, 55(4), 229-238. https://doi.org/https://doi.org/10.1111/psrh.12248
- Schultz, T. W. (1973). The Value of Children: An Economic Perspective. Journal of Political Economy, 81, S2 S13.
- Thomson, E. (2015). Children, Value of. In J. D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (Second Edition) (pp. 498-501). Elsevier. https://doi.org/https://doi.org/10.1016/B978-0-08-097086-8.31063-7
- Weston, R., Qu, L., Parker, R., & Alexander, M. (2004). It's not for lack of wanting kids: A report on the Fertility Decision Making Project. AIFS.
- Zeng, T., Li, B., Zhang, K., Chen, Y., Yuan, M., Wu, M., Zhao, H., Zhu, Z., & Ju, D. (2023). The association between childbirth-related fear, childbirth readiness, and fertility intentions, and childbirth readiness as the mediator. *Reprod Health*, 20(1), 62. https://doi.org/10.1186/s12978-023-01607-x
- Zhang, C., Wei, L., Zhu, Y., Teng, L., Zhang, W., Xu, J., Qin, M., Jiang, N., Alias, H., & Wong, L. P. (2022). Fertility intentions among young people in the era of China's three–child policy: a national survey of university students. *BMC Pregnancy and Childbirth*, 22(1), 637. https://doi.org/10.1186/s12884-022-04873-y
- Zhu, C., Yan, L., Wang, Y., Ji, S., Zhang, Y., & Zhang, J. (2022). Fertility Intention and Related Factors for Having a Second or Third Child Among Childbearing Couples in Shanghai, China. Front Public Health, 10, 879672. https://doi.org/10.3389/fpubh.2022.879672