

THE QUEST FOR DESIRED PROPORTION OF CHILDREN AND ITS IMPACT ON FAMILY PLANNING

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Abstract

The desire for a male child has a great influence over fertility behaviors, the family planning decisions continue to be shaped by the preference of a son. However, less attention has been paid to the relationship between the quest for the desired proportion of children and the undesired children produced in this pursuit. Within the cultural framework of Balochistan, the quest for the desired proportion of children is deeply entangled in historical, traditional, and societal expectations. This research paper explores the multifaceted dimensions of the quest for the desired proportion of children and its profound impacts on family planning within the distinct socio-cultural context of Balochistan.

The data indicates that the respondents view both sons and daughters as key parts of a family, but a majority of them desire more male children in proportion. Moreover, the data indicates

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less interest of respondents to continue childbearing when the desired number of girls are not produced. However, it tends to express a strong desire or intention to continue childbearing in the hope of producing a male child, if there is low proportion of male children or when the desired number of male children are not produced. Data further reveals that the tendency to stop childbearing if all the desired number of children are girls or all are boys is not dependent on educational level, income, family type, or gender.

A quantitative research method was employed for this study. A questionnaire consisting of closed-ended questions was designed to obtain the data from respondents. Data from 242, male and female respondents from Balochistan was collected through an online platform. Similarly, descriptive and analytical approaches were adopted to assess the data. Pearson's Chi-squared and Welch Two Sample t-test were conducted for statistical analysis and explanation of the study. The study suggests that although population policies that reduce family size are essential, but also imperative are policies that could empower women and reduce the desire and race for male children, by focusing on gender-neutral family planning, which directly affects the population growth.

Keywords: Desire, Son Preference, Family Size, Fertility, Couple, Population, Family planning

1. Introduction

The desire for a male child is rooted within cultural, social, and historical contexts globally. It has a great influence over fertility behavior decisions. The inherent preference for a male child has profound implications not only on individual families but also on broader societal structures (Gupta, 2014). Investigating preference for sons has remained a focus of research in the fields of development economics and demography. Son preference has long been linked to increased rates of female death, peculiarly high rates of male population growth, and higher fertility. Previous studies have revealed a strong correlation between family size and son preference (Zaidi and Morgan 2016).

Family planning decisions continue to be shaped by the preference of a son (Bongaarts and Guilimoto 2015). However, less attention has been paid to the relationship between the quest for the desired proportion of children and the undesired children produced in this pursuit. Within the cultural framework of Balochistan, the quest for the desired proportion of children is

deeply entangled in historical, traditional, and societal expectations. This research paper explores the multifaceted dimensions of the quest for the desired proportion of children and its profound impacts on family planning within the distinct socio-cultural context of Quetta, Balochistan.

1.1 Objectives

- To explore the multifaceted dimensions of the quest for the desired proportion of children.
- To investigate how the desire for a male child shapes family planning choices.
- To suggest strategies for gender-neutral family planning

By exploring these objectives, this study aims to provide insights into the complexities surrounding the quest for a desired proportion of children and its implications on family planning decisions and contributes to the discourse on more inclusive and equitable approaches to address the preference for the desired proportion of children within this specific cultural context of Quetta Balochistan.

1.2 Need for study

Son preference poses a hurdle to accomplishing the 2030 Sustainable Development Goals of "no poverty," "good health and well-being," and "gender equality,". Son preference is most prevalent in the Middle East, North Africa, East Asia, and South Asia. (Arnold, 1997). The diversity of different countries where preference for sons is present indicates that, despite the prevalence, no single theoretical foundation can comprehensively explain the phenomenon. Thus, it's important to look into the different dimensions of son preference in order to alert policymakers to potential obstacles for accomplishing these objectives. An incorrect understanding of the dynamics underlying son preference may have unforeseen implications and mislead policy analysis.

Therefore, in order to prevent misunderstandings, it is crucial to take into account conditions unique to each country when looking into son preference and consider country-specific contexts when

investigating son preference to avoid misinterpretation (Jayaraman et al. 2009).

Research indicates that there may be a latent demand for sons in Pakistan, which provides more evidence that the present estimates of son preference may be underreporting actual trends (Bongaarts, 2013). Therefore, if son preference is not taken into account in population policy, it may be difficult to meet objectives and may even lead to new issues. This resonates with the experiences of other nations where son preference led to unexpected consequences because it was not taken into account as a significant factor in population policy (Zaidi and Morgan, 2016).

1.3 Theoretical framework

Various theoretical frameworks have been utilized to comprehend the influence of son preference. This study relies on the empowerment framework in the investigation of son preference and its impacts on family planning.

1.3.1 Empowerment Framework

Theories that emphasize women's empowerment-like the Empowerment Approach-highlight the significance of giving women the power to question conventional gender norms and make knowledgeable decisions about family planning. This thorough theoretical framework offers a sophisticated understanding of son preference and its effects on family planning by integrating social, economic, demographic, politics, law psychological, health-related, and policy perspectives. Designing successful treatments and policies to address the complicated issue of son preference in many cultural contexts.

Ester Duflo, co-winner of the 2019 Nobel Prize in Economics and the second woman in history to receive the honour after Elinor Ostrom in 2009 stated: "Throughout their lives, even before birth, women in developing countries are treated differently than their brothers".

Unfortunately, women everywhere experience discrimination on a daily basis based only on their gender. This includes issues like high rates of abortion for female fetuses and infant mortality, as well as restrictions on their access to education and other rights. Moreover, women's daily struggles are exacerbated in developing nations, where they continue to be marginalized, mistreated, and regarded as having "an inferior social status by customary or formal law" (Cohen, 2006).

Gender includes social norms and expectations that govern the conduct of men and women, as well as what society expects of each gender and how the sexes relate to one another (Barker et al., 2011). In societies like Balochistan, women are primarily valued for their reproductive function and are thus confined to the household due to the societal norms, and institutional framework. This upholds long-standing patriarchal attitudes and prejudices about women, which continue to impede women's empowerment in the modern era.

The social components of son preference tend to evolve more slowly than individual fertility choices. Such social and structural contests both produce and perpetuate power relations between men and women. However, if one assumes that gender is relational and structural, along with the power relationship that accompanies it, one can examine how gender is socially constructed and perhaps bring about change in the power dynamics between men and women. Duflo (2011) notes that greater female engagement in the labor force and better rates of education can increase women's status in society. Moreover, research also indicates that increases in women's status in society and economic development can go hand in hand.

2. Literature Review

Inclination towards valuing male children over female children has been a widespread and persistent phenomenon in different societies and countries including Pakistan. A comprehensive literature review on the existing research on son preference is

provided in the following. This includes the underlying factors, potential interventions, and consequences.

2.1 Historical and cultural context

In Pakistan including other parts of the world cultural practices and traditional beliefs contribute to the continuation of son preference. This phenomenon is deeply rooted within historical and cultural settings (Yacoub, 2001). Researchers have explored the impacts of patriarchy, historical practices and cultural norms shaping attitudes towards female and male children.

Laws also penalize anyone who conducts abortions for purposes other than preserving the mother's life or health (Singh et al. 2020). The medical-legal community in Pakistan is reluctant to offer abortion services and post-abortion care due to the country's severe abortion regulations and religious sensitivities, which could result in penalties. Tsui et al. (2011) state that although the prevalence of contraception is still low in Pakistan, one in four births are unplanned, hence abortion is viewed as a fallback

option when contraception fails. Islamic law forbids abortion unless it is necessary to save the mother's life or maintain her health. Scholars are very reluctant to recommend abortion, even in extreme cases like rape, incest, fetal abnormality, or social and economic grounds (Azmat et al. 2012).

2.2 Demographic Inclinations

Studies have also examined the demographic variables to understand the prevalence of son preference. Researchers have investigated the child mortality rate, the sex ratio at birth and the overall gender composition in populations. For example, the skewed sex ratio in Pakistan has been researched indicating the prevalence of potential sex-selective practices and son preference (NIPS and ICF, 2013).

According to demographic estimates, son preference has resulted in 60–100 million women being "missing," primarily in South and East Asia (Jayachandran 2017). Unnaturally high male-to-female sex ratios have resulted from these women's absence,

mostly in China and India. Given that son preference has a negative impact on female mortality and population composition, China removed the "one-child policy" in 2015 and India outlawed sex-selective abortions in 2001 (Attané, 2016).

2.3 Sex Ratio

In China and India, for instance, where there are 111 and 115 men for every 100 females, respectively, sex ratios show a preference for sons (UNPD, 2019). These are far more than the 105 men for every female which is the projected sex ratio worldwide. While discrimination against girls is widespread, the sex ratio in Pakistan is 109 males for every 100 females, which is less persuasive in depicting the prevalence of son preference (NIPS and ICF, 2019). This suggests that although there may be a preference in Pakistan for sons, households may not be able to implement this preference due to limitations like the lack of sex-selective technologies and cultural and religious disinclination to abortions (Bongaarts 2013).

Policymakers in Pakistan suggest lowering the fertility rate from 3.6 children per woman (NIPS and ICF 2019: 83) to 2.2 children by 2030, as stated in the National Action Plan (Ministry of

National Health Services, Regulations and Coordination 2018). The national plan suggests raising the prevalence of contraception from 34% (NIPS and ICF, 2019) to 60% in order to accomplish this goal. Son preference, though, could make accomplishing these objectives difficult.

2.4 Socioeconomic Factors

Socioeconomic factors influencing son preference have been well-researched. The impacts of urbanization, income and education on attitudes toward gender is also explored across different regions and communities and the disparities contribute to variation toward son preference (Bongaarts 2013). Studies show that the prevalence of son preference is more common in elderly women (those over 30 years old). Previous generations may have preferred sons' but younger generations prefer fewer children, in part because of the increased opportunity cost associated with having more children. This tendency may reflect a shift in generational experiences. Studies also suggest that son preference does not significantly vary according to education

level. Women with higher levels of education may be better able to exercise their right to son preference through access to and knowledge of sex-selective technologies (Zaidi and Morgan 2016).

2.5 Regional Aspects

According to Guilmoto (2009), Families in developing nations choose to have sons because of their ability to increase household income from agricultural labor. The Food and Agricultural Organization of the United Nations (2021) reports that 39% of the workforce works in the agriculture industry, which is primarily located in rural areas (FAO, 2021). The desire for sons is still based on financial security because boys are still expected to be the breadwinners in urban regions.

The provinces of Gilgit Baltistan, Balochistan, and Sindh have the highest regional prevalence of son preference. Son preference is also more common in rural parts of these provinces. This is consistent with past research showing that son preferences are

highly prevalent in Pakistan. Using data from the Pakistan and Demographic Health Surveys, for instance, Saeed (2015) reports that a greater proportion of households strongly wish to have solely sons or more sons than daughters.

2.6 Consequences of Son Preference

Son preference still has strong cultural, historical, and financial roots, making it a complicated and diverse topic (UNICEF, 2021). This review of the literature emphasizes the importance of having a comprehensive understanding of the issue, taking into account both its global consequences and its presence in Pakistan. Son preference has effects that go beyond disparities in population. Its effects on women's general well-being, mental health, and physical health have all been studied (Ministry of National Health Services, Regulations and Coordination 2018). Son choice can also affect inheritance patterns, economic systems, and family dynamics. Promoting gender equality and overcoming the ingrained prejudices connected to son preference requires ongoing study and evidence-based approaches.

3. Research Methodology

A quantitative research method was employed for this study. The total sample size was 242 respondents. A questionnaire consisting of closed-ended questions was designed to obtain the data from respondents. The questionnaire was finalized after pre-testing and reliability tests. After pre-testing the unnecessary items and vague words were replaced by simple and easy ones in the questionnaire. Data from 242, male and female respondents from Balochistan was collected through an online survey. Similarly, descriptive and analytical approaches were adopted to assess the data. Pearson's Chi-squared and Welch Two Sample t-test were conducted for statistical analysis and explanation of the study.

4. Results and Discussion

Table 1: Socio-economic status

Category	Frequency (f)	Percentage (%)
Age (In complete years)		
21-30	92	38.0

31-40	98	40.4
41 - Above	52	21.4
Gender		
Male	185	76.4
Female	57	23.5
Type of family		
Nuclear	46	19.5
Joint	176	72.7
Extended	20	8.26
Education		
Graduates	92	38.0
Undergraduate	98	40.4
Other	52	21.4
Annual family income		
100000-200000	40	16.5
200001-300000	52	21.4
300001-400000	68	28.0
400001-500000	82	33.8

f=number of respondents, %= percentage

Table (1) reveals the socio-demographic characteristics of respondents. Out of the total, the majority of the respondents (40.4%) were from the age group category 31-40. All of the respondents' age was above 20 years. The participation of male respondents was higher (76.4%) than female respondents. This is

because of an unequal gender balance in the sample. The study also indicates that the majority (72.7%) of the respondents were from joint families. Data further explains that almost one-third (33.8%) of the respondent's annual family income was within the category between 400001-500000 PKR per month.

Table 1.1

Tendency to stop childbearing for girls - Pearson's Chi-squared

<i>Variables for girls</i>	<i>X-squared</i>	<i>Df</i>	<i>p-value</i>
<i>Gender</i>	2.7863	2	0.2483
<i>Type of family</i>	9.1579	6	0.1649

Note: If the P score is less than or equal to 0.05, we reject Ho.

The null hypothesis H₀ is that there is no difference in gender/type of family of those who will stop childbearing if all the desired children are girls. Alternative hypothesis H₁ is that there is a difference in gender/type of family of those who will stop childbearing if all are girls. The above table shows that the p-value is greater than 0.05 in both Gender and Type of family, hence we do not reject the null hypothesis and conclude that the

gender and type of family do not contribute to the decision to stop childbearing if all of the desired children are girls. We say that this behavior does not depend on gender and type of family.

Table 1.2

Tendency to stop childbearing for girls - Welch Two Sample t-test

<i>Variable for girls</i>	<i>t Value</i>	<i>Df</i>	<i>p-value</i>
<i>Income</i>	0.38549	14.695	0.7054
<i>Education</i>	1.8673	15.318	0.0811

Note: *If the P score is less than or equal to 0.05, we reject Ho.*

Null hypothesis H0 is that there is no difference in income/education of those who will stop childbearing if all the desired children are girls. Alternative hypothesis H1 is that there is a difference in income/education of those who will stop childbearing if all are girls.

In the above table the independent sample t-test conducted at a 95% confidence level, shows that the p-value is greater than 0.05 in both income and education, hence we do not reject the null hypothesis and conclude that the income and level of education do not contribute to the decision to stop childbearing if all of the desired children are girls.

Table 1.3

Tendency to stop childbearing for boys- Pearson's Chi-squared

<i>Variables for girls</i>	<i>X-squared</i>	<i>Df</i>	<i>p-value</i>
<i>Gender</i>	2.8662	2	0.3382
<i>Type of family</i>	8.1469	6	0.2517

Note: If the P score is less than or equal to 0.05, we reject Ho.

The above table shows that the p-value is greater than 0.05 in both Gender and Type of family, hence we do not reject the null hypothesis and conclude that the gender and type of family do not contribute to the decision to stop childbearing if all of the desired children are boys.

Table 1.4

<i>Variable for boys</i>	<i>t Value</i>	<i>Df</i>	<i>p-value</i>
<i>Income</i>	-0.62407	24.437	0.5384
<i>Education</i>	-0.13237	32.913	0.8955

Tendency to stop childbearing for boys - Welch Two Sample t-test

Note: If the P score is less than or equal to 0.05, we reject Ho.

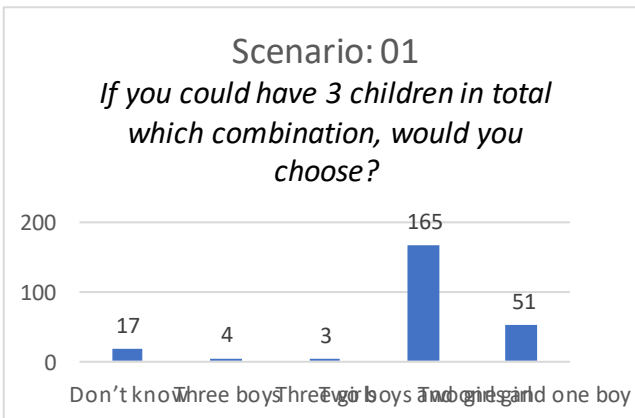
Null hypothesis H₀ is that there is no difference in income/education of those who will stop childbearing if all the desired children are boys. Alternative hypothesis H₁ is that there

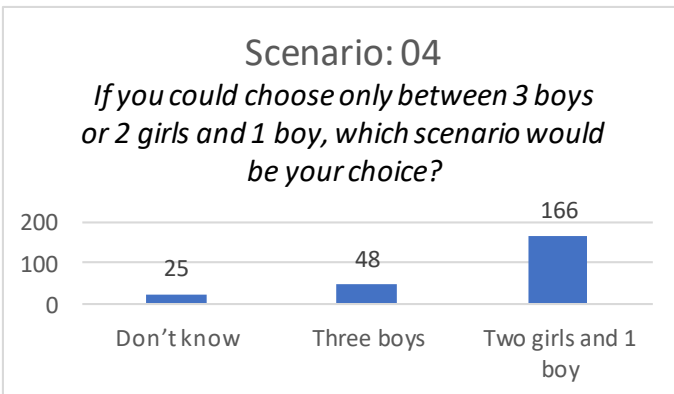
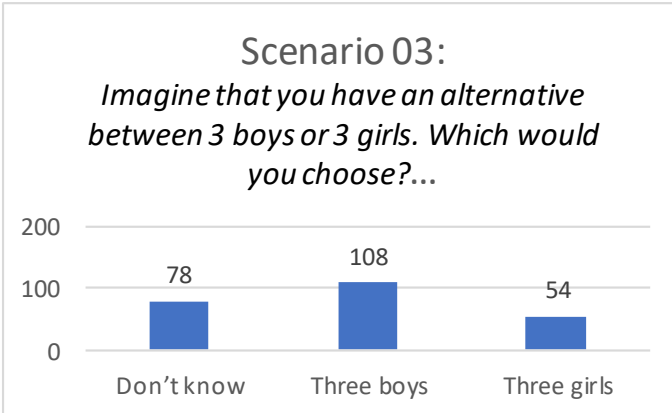
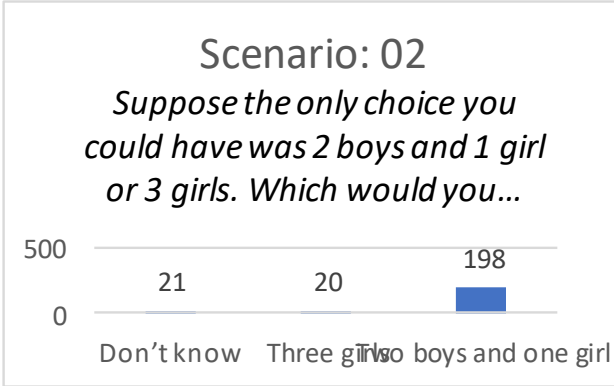
is a difference in income/education of those who will stop childbearing if all are boys.

In the above table the independent sample t-test conducted at a 95% confidence level, shows that the p-value is greater than 0.05 in both income and education, hence we do not reject the null hypothesis and conclude that the income and level of education do not contribute to the decision to stop childbearing if all of the desired children are boys.

Table 1.5

Desired Gender Proportion of Children





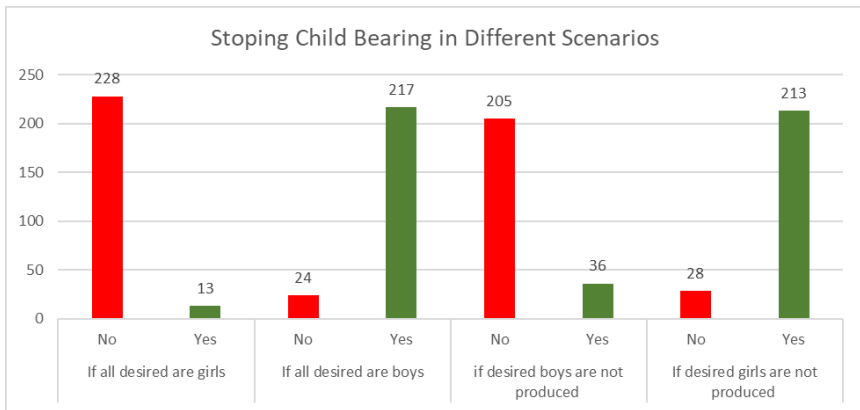
In this study, four scenarios were given to see the attitudes of respondents toward the desired gender proportion of children in a family. The data indicates that the respondents view both sons and daughters as key parts of a family. When couples plan to have more than one child, they accept the birth of a daughter while they wait for a son to be born. However, the vast majority of the respondents chose more boys over girls. People do not prefer to have further children when their choice for sons is fulfilled, even if they have not met their ideal family size or number of daughters. Son preference could affect homes in two ways. First, families may choose to have more children in order to meet their son's preference. Second, having sons earlier will result in smaller families with a higher proportion of boys than bigger families.

Let's say that an area has N households. A child has a 0.5 chance of being male or female at birth. Half of the households that try have a son on the first attempt and then stop having children, whereas the other half have a daughter and then try again. This

keeps up until the remaining desired number of male children is met. People with the unmet desired number of male children might have larger numbers of members compared to families that could have a noticeably higher percentage of sons in the earlier attempts.

Table: 1.6

Stopping childbearing in different scenarios



Data reveals that respondents stop childbearing if they produce their desired number of boys and tend to express a strong intention of continued childbearing when the desired number of boys is not produced. However, data shows lesser interest in

continuing childbearing if the desired number of girls is not produced.

Moreover, respondents with a small number or low proportion of sons are more likely than others to continue childbearing. While respondents with more sons than daughters were generally less likely than those with more daughters than sons to continue childbearing. In order to have sons, couples who have only daughters may choose to bear more children even after meeting the desired number of total children, which would increase their family size. Conversely, couples with earlier-born sons can have less children.

5. Conclusion

This study contributes to a better understanding of the relationship between the desired proportion of gender preference for children and its impacts on family planning, offering insights for policy-making and interventions. A quantitative research method was employed for this study. Similarly, descriptive

analysis, Pearson's Chi-squared, and Welch Two Sample t-test were conducted for statistical analysis and explanation of the study.

The data indicates that the respondents view both sons and daughters as key parts of a family, but a vast majority of them desire more male children in proportion. Moreover, the data indicates less interest of respondents to continue childbearing when the desired number of girls are not produced. However, respondents tend to express a strong intention to continue childbearing in the hope of producing a male child, if there is low proportion of male children or when the desired number of male children are not produced. Data further reveals that the tendency to stop childbearing if all the desired number of children are girls or all are boys is not dependent on educational level, income, family type or gender.

Even if there are fewer daughters overall than desired, people may choose to stop having children once their preference for sons is met. On the other hand, people might keep having kids (i.e.,

girls) in order to reach desired son targets. This shows that Pakistan despite having an observed sex ratio between 107 and 109, the country has one of the highest desired sex ratios globally. Due to social, legal, religious, and cultural barriers to sex-selective abortion in Pakistan, sex ratios are unable to adequately reflect the unexpressed preference for the desired proportion of children, as evidenced by the excess of desired over observed sex ratio. The study suggests that although population policies that reduce family size are essential, but also imperative are policies that could empower women and reduce the desire and race for male children, by focusing on gender-neutral family planning, which directly affects the population growth.

6. Recommendations

Son preference stems from a combination of cultural, religious, socioeconomic, and traditional values. A wide range of interventions, including awareness campaigns, educational programs, and legislative moves are needed to deal with son preference. The study suggests that although population policies

that reduce family size are essential, but also imperative are policies that could empower women and reduce the desire and race for male children, by focusing on gender-neutral family planning, which directly affects the population growth. There is a need to highlight the value of both genders within families by ensuring gender-neutral attitudes and policies for inheritance, property rights, and other aspects that treat sons and daughters equally and prohibit discrimination against daughters in areas such as education, employment, and healthcare. This will create a more conducive environment for valuing daughters equally and thus, helping in controlling population growth.

Further, it is suggested to:

- Make education more accessible to and continued for women including greater safety and mobility for women.
 - Make paid market activities more accessible and continuous for women, especially in the formal sector.
- This helps them save for retirement and lessens the

perception that families must rely on their sons for old-age insurance.

- Minimize the amount of money that is transferred from the bride's family to the groom's family in the marriage market through dowries or wedding costs.
- Minimize the gender disparity in inheritance, allowing girls to inherit on par with sons, who presently receive larger shares.

References

- Arnold, F. (1997). 'Gender Preferences for Children'. *DHS Comparative Studies*, 23. Calverton, MA: Macro International Inc.
- Attané, I. (2016). 'The end of one child per family in China?' *Population Societies*, (7): 1–4. <https://doi.org/10.3917/popsoc.535.0001>
- Azmat, S.K., M. Bilgrami, B.T. Shaikh, G. Mustafa and W. Hameed (2012). 'Perceptions, interpretations and implications of abortions: A qualitative inquiry among the legal community of Pakistan'. *European Journal of Contraception Reproductive Health Care*, 17(2): 155–63. <https://doi.org/10.3109/13625187.2011.637585>
- Barker, G., Contreras, M., Heilman, B., Singh, A., Verma, R. & Nascimento, M. (2011).
Evolving Men Initial Results from the International Men and Gender Equality Survey (IMAGES), p.102.
- Bongaarts, J. (2013). 'The implementation of preferences for male offspring'. *Population and Development Review*, 39(2): 185–208. <https://doi.org/10.1111/j.1728-4457.2013.00588.x>
- Bongaarts, J., and C.Z. Guilmoto (2015). 'How many more missing women? Excess female mortality and prenatal sex selection, 1970–2050'. *Population and Development Review*, 41(2): 241–69.
- Cohen, M. F. (2006). *The Condition of Women in Developing and Developed Countries*, pp.261–273.
- Duflo, E. (2011). *Women's Empowerment and Economic Development*, w17702, Cambridge,

- MA: National Bureau of Economic Research, p.w17702, Available Online:
<http://www.nber.org/papers/w17702.pdf> [Accessed 29 March 2020].
- Food and Agricultural Organisation (FAO) (2021). *Pakistan at a Glance*. <https://www.fao.org/pakistan/our-office/pakistan-at-a-glance/en/#:~:text=According%20to%20the%20Labour%20Force,percent%20to%20the%20country's%20GDP>
- Guilmoto, C.Z. (2009). The sex ratio transition in Asia. *Population and Development Review*, 35(3): 519–49. <https://doi.org/10.1111/j.1728-4457.2009.00295.x>
- Gupta (2014) Where have all the brides gone? Son preference and marriage in India over the twentieth century. *The Economic History Review*, 67(1): 1–24.
- Jayachandran, S. (2017). Fertility decline and missing women. *American Economic Journal: Applied Economics*, 9(1): 118–39. <https://doi.org/10.1257/app.20150576>
- Jayaraman, A., V. Mishra, and F. Arnold (2009). ‘The relationship of family size and composition to fertility desires, contraceptive, adoption, and method choice in South Asia’. *International Perspectives on Sexual and Reproductive Health*, 35(1): 29–38. <https://doi.org/10.1363/3502909>
- Ministry of National Health Services, Regulations and Coordination (2018). *Action Plan (2019–24)*. Islamabad: Government of Pakistan. Retrieved from <http://phkh.nhsrsrc.pk/sites/default/files/2020-12/Pakistan20Action20Plan20for20Implementation20of20CCI20Recommendations202019-24.pdf>
- National Institute of Population Studies (NIPS) and ICF International (2013). *Pakistan Demographic and Health Survey 2012–13*. Islamabad and Rockville, MA: NIPS and ICF.

- National Institute of Population Studies (NIPS) and ICF International (2019). *Pakistan Demographic and Health Survey 2017–18*. Islamabad and Rockville, MA: NIPS and ICF.
- Saeed, S. (2015). 'Toward an Explanation of Son Preference in Pakistan'. *Social Development Issues*, 37: 17–36.
- Singh, S., A. Sundaram, A. Hossain, M.C. Puri, Z. Sathar, C. Shekhar, A.M. Moore (2020). 'Abortion service provision in South Asia: A comparative study of four countries'. *Contraception*, 102(3): 210–19.
<https://doi.org/10.1016/j.contraception.2020.05.015>
- Tsui, A.O., J. Casterline, S. Singh, A. Bankole, A.M. Moore, A.K. Omideyi, K.M.J.G. Shellenberg (2011). 'Managing unplanned pregnancies in five countries: perspectives on contraception and abortion decisions'. *Global Public Health*, 6(suppl. 1): S1–S24.
<https://doi.org/10.1080/17441692.2011.597413>
- UNICEF (2021). 'UNICEF global databases, based on DHS, MICS and other national surveys, 2007-2017. Child marriage'. Retrieved from: <https://data.unicef.org/topic/child-protection/child-marriage/>
- United Nations Population Division (2019). *World Population Prospects: 2019 Revision*. New York: UNPD.
- Yacoub, A.A.A. (2001). *The fiqh of medicine: Responses in Islamic jurisprudence to developments in medical science*. London: Ta-Ha Publishers.
- Zaidi, B., and S.P. Morgan (2016). 'In the pursuit of sons: Additional births or sex-selective abortion in Pakistan?' *Population and Development Review*, 42(4): 693–710.
<https://doi.org/10.1111/padr.12002>