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Third-child Fertility Intention in Morocco: Analysis of Determinants Using a Gender-intersectional Approach

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Abstract

Morocco has witnessed profound socio-economic and cultural transformations as a result of urbanization and industrialization. Although access to education and employment is unequal between men and women, the decline in fertility has triggered social mutations ranging from the lessening of the patriarchal system to the empowering of women. Each woman's experience of gender inequality is different, depending on how her gender intersects with other factors such as disability, social class, age, place of residence, degree of autonomy and so on. These intersections create a unique experience of exclusion and marginalization, which has an impact on the risks and experiences that shape her fertility intentions. The gender-intersectional approach highlights the relationships between women's social identities well beyond gender and the multidimensional nature of risk and exclusion concepts. Women who belong to a marginalized group such as those with a low level of education or a low wealth quintile, for example, are subject to increased discrimination and exclusion, particularly in terms of access to employment, education or health services. We used data from the latest National Population and Family Health Survey (NPFHS) held in 2018. The results show that the intention of transition to the third child occurs among women who are illiterate, inactive, victims of violence and have little decision-making power regarding their employment opportunities. In terms of spatial analysis, the transition to a third child occurs among women who live in an unequal relationship with their partners. However, this relationship is stronger in rural areas, where the perception and value of children is still high.

Keywords: Fertility intentions, gender, intersectionality, Morocco, NPFHS 2018

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Introduction

A growing number of countries in the global South, particularly in North Africa, have almost completed their fertility transition, with fertility levels approaching those of the global North. The major changes in couples' behavior are due to socio-economic and cultural developments that are sometimes significant, but often also due to effective family planning policies. Morocco, with fertility today at around 2.4 children per woman (Ministry of Health 2018), is a case in point. This country has undergone a rapid and irreversible demographic transition since the 1960s, going from 7 children per woman in 1962 to 4 in 1992 to almost reach the emblematic level of 2.1 children per woman in 2014 according to the latest population census (HCP[1] 2014). This sustained decline in fertility has been explained by a number of factors, including so-called proximate determinants (Davis and Blake 1956; Bongaarts 1978; Bongaarts and Potter 1983).

Indeed, after adjusting for infant and child mortality, which has been falling steadily, it is late marriage for both men and women that will play the key role in the decline (Ayad and Azelmat 1999; Courbage 1996). The age at first marriage in Morocco rose dramatically between 1960 and 2018, from 17.5 to 25.5 for women, a gain of 8.2 years. The same is true for men, whose average age at first marriage rose from 24 to 31.9 between the two dates, a difference of 7.4 years. This increase affected both urban and rural populations, and at almost similar levels. As age at first marriage cannot increase indefinitely in Moroccan society, which encourages marriage and the founding of a family, and prohibits extra-marital procreation, the diffusion of contraception has become the most prevalent form of birth control (Drioui and Bakass 2022b). The prevalence rate is rising steadily: 72% of women of reproductive age were using contraception in 2018, and the majority of users had chosen a modern method (80%), 60% of whom opted for the pill. Contraceptive couples represented just 36% in 1987 and 19.5% in 1980. Yet this factor has only been able to play this role largely thanks to family planning programs, which have provided couples with accessible, affordable and acceptable contraceptive methods (Bakass and Ferrand 2013).

Although modern contraceptive methods have been widely introduced in the majority of low-fertility countries, the desire to have children remains shaped by both societal norms and individual decisions (Kerstin 2011; Régnier-Loilier and Perron 2016). In terms of inequality in Morocco, women are the main victims of multiple and intersectional discrimination in access to education, employment and health (NHDO[2] 2017; Sadik, El Moutaouakil and Bourma 2019). Measuring women's empowerment Sadik, El Moutaouakil and Bourma (2019) find that Morocco ranks poorly in terms of women's economic empowerment. At the individual level, Ewerling et al. (2017) constructed a composite indicator of women's empowerment (SWPER index) covering 34 African countries, including Morocco. This indicator comprises

[1] Haut Commissariat du Plan translated by [High Commission for Planning]
[2] National Human Development Observatory

three dimensions: women's attitudes to domestic violence, participation in decision-making and social independence.

Based on the scores obtained for each dimension, the authors were able to classify countries according to the tertiles of the dimensional indicators. Higher values represent the highest average level of women's empowerment. Thus, Morocco was ranked in the category with the highest level of women's empowerment in the social independence dimension (11th among 34 countries). However, the scores obtained for the other two dimensions (attitudes towards domestic violence and participation in decision-making) place Morocco among the countries with a low level of women's empowerment (31st and 27th rank for the two areas respectively).

The fertility intention study offers a number of advantages, namely that it not only provides information on the ultimate desire to have children during a specific period, but also identifies the factors that influence this desire (Kerstin 2011). One of the main factors influencing the desire for fertility is the socio-economic transformation of society, which is reflected in the higher costs of raising more children (Golub, Ivkov-Dzigurski and Simeunovic 2023).

However, several factors contribute to the formation of intentions, namely: the conjugal and economic situations of couples (Régnier-Loilier and Vignoli 2009; Golub, Ivkov-Dzigurski and Simeunovic 2023), the institutional and legal context (Régnier-Loilier and Vignoli 2011), the number of children already born alive (Régnier-Loilier 2006), and the adequacy/inadequacy between the family project and other activities (Bongaarts 2001). Also, fertility intentions depend positively on the degree of religiosity (Preis et al. 2020; Bein, Gauthier and Mynarska 2017). Preis et al. (2020, 2) show that the more religious women are, the more likely they are to want a child and the shorter their inter-reproductive interval was. Thus, *women who were highly religious, more educated and who had already given birth were less likely to report a lower number of desired children after childbirth, compared with their prenatal report*. According to Bein, Gauthier and Mynarska (2017), this positive link between religion and fertility is supported by the valorization of traditional gender roles. Intentions can be positive or negative. A positive intention translates into the desire to have (another) child in the future, while a negative intention translates into the desire to not have or no longer have a child (Régnier-Loilier, and Vignoli 2011). Nouhou (2016) had found a link between women's reproductive aspirations and contraceptive experience in Burkina Faso. Indeed, women who wanted children (which are not quantified) were 0.5 times less likely to use contraception than those who wanted few offspring.

The domination relationship can even transcend simple gender inequality and incorporate other dimensions of domination that can mutually intersect and act on demographic phenomena. As shown by McDonald (2020), motherhood for Swiss women is associated with a wage penalty that is influenced by employer discrimination, particularly for young mothers. This could affect both their reproductive behavior in having few or no children, and their fertility aspirations. On the other hand, persistent unemployment negatively affects women's fertility intentions, and this relationship is also gendered in the sense that male unemployment affects fertility intentions more than female unemployment, as men are seen as the family's sole provider (Busetta, Mendola and Vignoli 2019). In a context of low fertility, Mills et al. (2008) argue that less educated Italian and Dutch women have lower fertility intentions, due to the perceived costs of child-rearing and low labor market participation for women. Educated women in these two countries therefore enjoy a certain degree of autonomy, enabling them to break with traditional gender roles. What's more, the number of live-born children in both countries makes it difficult to reconcile work and home life, which in turn reduces the desire to have (another) child.

Fertility patterns in Morocco have evolved considerably over recent decades. The main changes have been a drop in fertility (women have fewer children on average), a rise in the age at first marriage and an increase in contraceptive prevalence among married women (Safir 2000), and an improvement in the status of women. This change has brought mutations to family institutions. Indeed, the family has undergone profound changes in both its configuration and organization. The traditional role of the father as family provider, the preference for the male sex in the family to perpetuate the lineage, and the position of the eldest son as the privileged inheritor are changing in favor of an economic system dominated by wage-earning and cultural changes (HCP 2005; D'addato 2006). This mutation is associated with women's education, considered an important factor in the decline in fertility (D'addato 2006).

There are few, if any, studies on fertility intentions in Morocco. Concerning fertility preferences, Drioui and Bakass (2021, 2022a) have confirmed the major role of women's empowerment and increasingly egalitarian gender relations in reducing the ideal number of children. The authors add that consolidating women's access to both educational and economic resources will, on the one hand, strengthen their social independence, their participation in decision-making within the family sphere and their rejection of domestic violence, and on the other, enable them to adhere to fertility norms based on smaller family size. In the Moroccan context, where fertility is close to replacement level, do couples want to have another child when they've already had two? To what extent do couple relationship characteristics determine fertility intentions, and do they differ by place of residence? Our aim is to see to what extent short-term intentions deviate from the societal (or dominant) norm of around 2 children per woman.

Fertility intentions and the transition to the third child: a literature review

According to Bocquier, intentions refer to the fact that individuals consider the implications of their actions before deciding whether or not to adopt a given behavior (Bocquier 2006 : chap. 9). While fertility desires reflect the desire to procreate when all obstacles are ignored, fertility intentions emphasize action, commitment and planning, and are often limited by an individual's socio-economic situation (Miller 2011). In other words, intentions can be seen as desires constrained by reality, and constitute a crucial link by which individuals transform their desire for fertility into actual procreative behavior (Chen and Yip 2017; Miller 1994).

There is abundant literature on fertility intentions (Kapitany and Spéder 2012). In Italy, a study by Rinesi (2009) shows that the desire to transition to a third child is supported more by demographic and socio-economic variables. For Testa and Toulemon (2006), it is the number of children born alive and age that play a predominant role in this desire. The fact of being in a union and the perception of gender within the couple are factors that facilitate the formation of fertility intentions (Quesnel-Vallée and Morgan 2003 ; Symeonidou 2000). On the other hand, educational level, housing conditions and stable employment are all socio-economic factors that facilitate the formation of fertility projects (Toulemon and Testa 2005 ; Symeonidou 2000; Toulemon and Tesla 2006). Employment status, poor housing conditions and financial support from the state also have a significant impact on fertility intentions (Golub, Ivkov-Dzigurski and Simeunovic 2023). The institutional framework (flexible or strict laws) in terms of fertility has an impact on the formation of fertility intentions (Kapitany and Spéder 2012). Indeed, almost a fifth of Shanghai residents would intend to have a second child if the law on birth control were eased (Merli, Morgan and Festy 2011). The level of economic uncertainty is negatively related to the level of fertility (Wang and Zhong 2022), which delays the onset of parenthood and therefore affects fertility intentions. These authors found that a one-unit increase in the level of economic uncertainty leads to a fall in the total fertility rate by 0.3146 children per woman. However, for Begal and Mills (2011), the intention to have a second child in Europe is influenced by labor market characteristics, job control and women's work-life conciliation. Snopkowski and Nelson (2021) have shown that in Indonesia, couples where women practice Hinduism, live in Java and have more children are less likely to have a preference for more children in the future than their husbands rather than having the same number.

Life circumstances can be different in rural and urban areas. This is what can shape fertility intentions differently in the sense that urbanized environments often play a key role in explaining the diffusion of new trends and changes in social behavior (Riederera and Buber-Ennserb 2019). With regard to the theory of mentality change, Wang and Zhong (2022) have shown that China's cultural transition has played an

inhibiting role in the relationship between economic uncertainty and fertility levels, leading couples to delay entry into parenthood in case of economic uncertainty, thus reducing the desire to have children. For Riederera and Buber-Ennserb (2019), norms and attitudes towards parenthood are more important in rural than in urban areas, as opinions on the traditional family are stronger in rural contexts.

Couple characteristics also influence the desire for more children (Kolawole et al. 2020). Indeed, these authors found that polygamous couples who do not use contraception are more likely to want more children than their monogamous, contraceptive-using counterparts in Nigeria. However, the lack of analysis of fertility intentions within a gender and intersectional framework prompts us to further study this subject, particularly in the case of Morocco, for two reasons. The first is that the study by Loudghiri, Fazouane and Zaoujal (2020) took into account discrimination against women (young girls) in relation to their fertility by focusing on just one dimension of discrimination (access to education). This study shows that women whose young daughters experience discrimination in access to education are more likely to have high fertility. However, women's experiences are sometimes shaped by multiple and intersectional discriminations in terms of access to education, employment and healthcare. The second is that although Morocco has seen a decline in fertility, women's integration into the job market doesn't seem to be following this downward trend, due to their low qualifications and the precarious and marginal nature of their employment (Paterno, Gabrielli, and D'Addato 2008). Job creation in urban areas does not seem to be meeting the increase in the active population, and it seems logical to further investigate the disconnection between women's level of education and the rural environment in the fertility decline as proven by Sajoux and Chahoua (2012). A study by D'addato (2006) shows that women who live in rural areas and have a low level of education are more likely to have a third child. This study does not consider the couple's relational characteristics, the disconnection between women's level of education and the rural environment in reproductive behavior, or the specificity of each environment in shaping fertility intentions. So, we can deepen our fertility studies through gender-intersectional analysis for this reasons given above.

Methodology

Data sources and target populations

We use data from the latest National Population and Family Health Survey (NPFHS) held in 2018. This is a sample survey, representative at the national level, regionally and by place of residence (Ministry of Health, 2018). Data were collected from 15,022 households, with a response rate of 98.9%. The number of women aged between 15 and 49 for whom the "woman" questionnaire was fully completed was 9,969, with a response rate of 99.5%.

The NPFHS 2018 contains several strands of questions covering respondents' socio-demographic characteristics (such as place of residence, age, literacy and schooling, marital status, etc.), their reproductive history, access to pre- and post-natal healthcare, knowledge and use of contraception and questions also on childbirth. A section has also been devoted to reproductive preferences, with questions on women's fertility intentions, such as the desire to have additional children and ideal family size. Other question modules are dedicated to husband characteristics and violence against women.

As the aim of this study is to identify the factors explaining married women's intentions, measured by the desire to have an additional child, the target population selected will consist firstly of all married women of reproductive age (15-49) and then of women who have achieved exactly two children in order to highlight the determinants of the transition to a third child in Morocco. This choice of the second target population is made especially as 43.2% of women have 1 to 2 children (Ministry of Health 2018). This then constitutes the dominant fertility norm in Moroccan society. They number 8,060 and 2,104, respectively, and represent 92.2% and 23.2% of the total number of women surveyed.

Variable of interest

The dependent variable is fertility intention, measured here by the desire to have an additional child and based on the question "Would you like to have another child?". Four modalities are proposed in the database:

- Having another child
- Stop having children
- Can't get pregnant
- Undecided or don't know

In this study, we remove women who can't get pregnant and we group women who want to have an additional child with those who haven't decided yet or don't know. Thus, our variable will be of the binary type, indicating whether the woman intends to have another child or not.

Explanatory variables

Variable mapping enabled us to select the explanatory variables described in Table 1 below. These variables are of various orders:

- **Variables on sociodemographic characteristics:** age of woman, economic activity of woman, educational level of woman, place of residence;

- **Variables on couple relationship characteristics:** duration of union after last child's birth;
- **Variables on household characteristics:** household standard of living, household size, number of children under age six in the household;
- **Variables on coercive control:** degree of female autonomy, decision-making power, experience of domestic violence, contraceptive culture.

Table 1: Selected explanatory variables, NPFHS 2018

Variables	Notation	Modalities	Comments
Socio-demographic characteristics of the woman			
Current woman's age	AgeWom	Continuous variable	
Woman's level of education	Educ_W	1: No education 2: Primary 3: Preparatory/ middle 4: Secondary 5: University	
Woman's employment status	Work	1: Never worked 2: Work/already worked	A woman's employment status provides information on whether she already has, currently has or does not have an income-generating activity
Place of residence	Place_resid	1: Rural 2: Urban	
Women's perception of health status	Percept_health	1: Improved 2: No change 3: Deteriorated	
Relationship characteristics			
Duration of marriage after birth of last child	Durat_marr	1: 0-2 years 2: 3-5 years 3: 6 year and over	Provides information on the risk of exposure to sexual intercourse and therefore pregnancy, it shows a woman's ability to manage her body. As Samia et al. (2006) point out, women use modern

			contraception to space and limit the number of children they have.
Household characteristics			
Household wealth quintile	WealthIndex	1: Poorest 2: Poor 3: Middle 4: Rich 5: Richest	Provides information on household standard of living.
Household size	Size_hh	1: 4 at most 2: more than 4	
Number of children under six in household	Child_num	1: Zero children 2: One child 3: Two or more children	
Coercive control			
Women's degree of autonomy in social life	Degree_autonomy	1: Low 2: Medium 3: High	This variable reveals the construction of power within the household. It refers to strategies put in place to restrict a woman's freedom to perform certain tasks outside the household, such as not wanting to go out alone (W537_E), asking permission to go out (W537_B), or requiring to be consulted only by a female health worker (W537_F). Low degree of autonomy is when a woman experiences at least two simultaneous trials of great hindrance in asking permission: she does not go out alone or is concerned about being cared for by a female agent. Medium degree is when a woman encounters only one of the three obstacle events (permission to go out, not wanting to go out alone, or looking for a

			female caregiver). High degree is when a woman encounters none of these three restrictions.
Decision-making on employment opportunities for women	Decision_making	1: Single women makes decision 2: Husband/other makes decision 3: Both (wife and husband) make decision 4: Does not intend to work 5: Currently working	Decision-making power over a woman's economic resources provides information on her level of participation and influence within the family.
Victim of violence	Violence	1: Yes 2: No	
Contraceptive culture	Culture	1: Never used 2: Recent use 3: Frequent use	Contraceptive culture refers to the habits and behavior adopted by women who regularly mine contraceptive methods (Nouhou 2016). It is also a way of considering contraception as a means of life management by the woman.

Table 2: Results of collinearity test between explanatory variables included in regression models

	Married non-pregnant women	Married non-pregnant women with exactly two children
Variable	**Variance Inflation Factor (VIF)**	**Variance Inflation Factor (VIF)**
Number of children under six in household	2.35	3.02
Duration of marriage after birth of last child	2.27	2.79
Household wealth quintile	2.02	2.05
Place of residence	1.80	1.75
Woman's level of education	1.53	1.56
Current woman's age	1.41	1.67
Women's degree of autonomy in social life	1.27	1.31

Woman's employment status	1.23	1.33
Household size	1.14	1.14
Decision-making on employment opportunities for women	1.09	1.12
Women's perception of health status	1.05	1.05
Victim of violence	1.03	1.05
Contraceptive culture	1.03	1.05
Moyenne VIF	**1.48**	**1.61**

As the dependent variable is qualitative and binary, logistic regression will be used to identify the net effects of each explanatory variable in the model. Intersectional analysis will be used to highlight inequalities in social relations of domination within women.

A test of multi-colinearity between the explanatory variables was carried out using the VIF (Variance Inflation Factor) indicator, which indicates a multi-colinearity problem when a VIF has a value greater than or equal to 10 and/or when the average of the VIFs is greater than or equal to 2 (Chatterjee, Hadi and Price, 2000). The results, shown in the table below, allowed us to keep all the initial explanatory variables with mean VIF values no greater than 2 (Table 2, above).

Results

Socio-demographic and economic characteristics of women

Table 3 below shows that the majority of the women analysed are aged between 30 and 39, and married between 20 and 29. In addition, more than half of the women were from urban areas (61.03% and 54.94% for both populations), illiterate (29.94% and 42.20% for both populations) or with primary education (30.89% and 27.64% for both populations) and inactive (75.71% and 79.62% for both populations). The table also shows that around 17.17% (respectively 21.31%) of women live in extreme poverty, 21.54% (respectively 20.67%) are middle class, while 20.97% (respectively 17.57%) belong to the richest class. Almost a sixth of women (14.05% and 12.05% for both populations) were victims of violence. The majority of women had no decision about their new employment opportunities, with 22.86% (respectively 22.07%) of women asking their husbands for permission to work. However, this table sheds light on the different situations of women and the different forms of discrimination that intersect. Firstly, women are excluded from the job market shown by their high level of unemployment (75.71%, respectively 79.62%) and their low level of education (29.94%, respectively 42.20%). They are victims of gender-based inequalities, 14.05% respectively, 12.05% having suffered domestic violence, with their husband holding economic power over them and their own future employment choices.

Table 3: Socio-demographic and economic characteristics of women

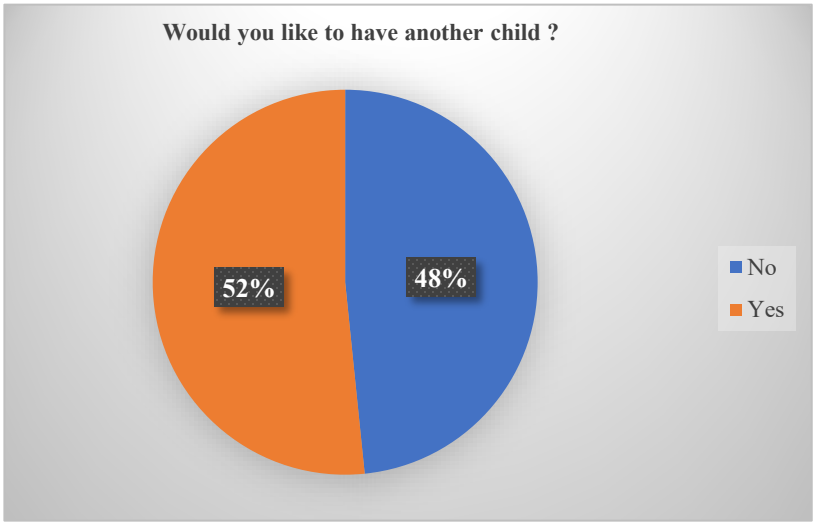
Socio-demographic and economic characteristics of women		Married non-pregnant women with exactly two children (P1)		Married non-pregnant women (P2)	
		N	%	N	%
Age	15-19	9	0.43	197	2.44
	20-29	825	39.21	2214	27.47
	30-39	869	41.30	3080	38.21
	40-49	401	19.06	2569	31.87
Place of residence	Rural	820	38.97	3632	45.06
	Urban	1 284	61.03	4428	54.94
Level of education	No educational	630	29.94	3401	42.20
	Primary	650	30.89	2228	27.64
	Preparatory/middle	388	18.44	1229	15.25
	Secondary	254	12.07	709	8.80
	Higher	182	8.65	493	6.12
Employment status	Work/ already worked	511	24.29	1643	20.38
	Never	1 593	75.71	6417	79.62
Household wealth quintile	Poorest	361	17.17	1715	21.31
	Poorer	427	20.30	1768	21.97
	Middle	453	21.54	1664	20.67
	Richer	421	20.02	1488	18.49
	Richest	441	20.97	1414	17.57
Contraceptive culture	Never used	338	16.08	1765	21.91
	Recent use	421	20.03	1547	19.21
	Frequent use	1343	63.89	4724	58.88
Decision-making for her own employment opportunities	Individual woman makes decision	127	6.04	534	6.63
	Husband/other makes decision	481	22.86	1779	22.07
	Both make decision	337	16.02	1303	16.17
	Does not intend to work	905	43.01	3629	45.02
	Currently working	254	12.07	815	10.11
Degree of autonomy in social life	Low	357	16.97	1556	19.31
	Medium	685	32.56	2799	34.73
	High	1062	50.48	3705	45.97
Perception of her own health status	Improved	228	10.84	849	10.53
	No change	1255	59.65	4739	58.80
	Deteriorated	610	28.99	2450	30.40
Duration of marriage after birth of last child	0-2 years	640	30.24	2166	26.87
	3-5 years	705	33.51	2354	29.21
	6 years and over	759	36.07	3540	43.92
Number of children under six in household	Zero children	598	28.42	2830	35.11
	One child	738	35.08	3282	40.72
	Two or more children	768	36.50	1948	24.17
Household size	4 at most	1397	66.40	2886	35.81
	More than 4	707	33.60	5174	64.19
Victim of violence	Yes	305	14.50	971	12.05
	No	1799	85.50	7089	87.95

Source: *developed by the authors from NPFHS data, 2018*

Fertility intentions and the transition to a third child

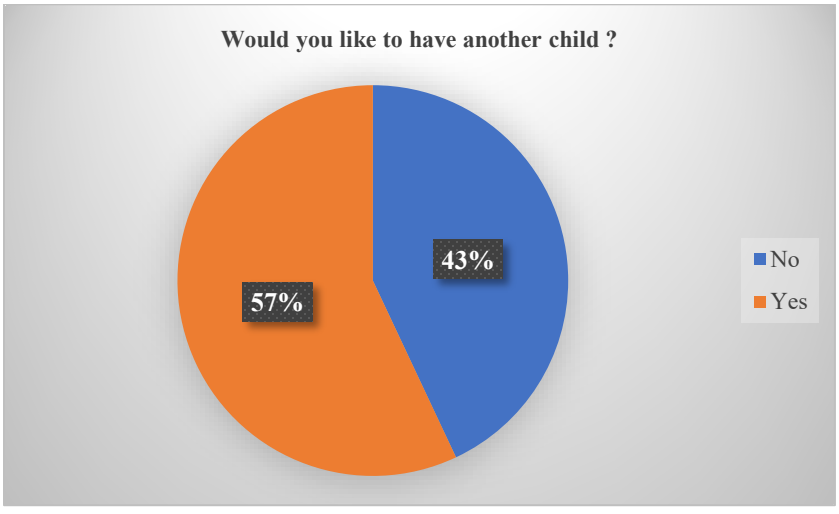
The graphs below (1 and 2) show that more than half of Moroccan women (52%) with exactly two children intend to have an additional third. In contrast, almost half of married women who are not pregnant at the time of the survey (43%) intend to have another child.

Graph 1 : Fertility intentions for married non-pregnant women with exactly two children



Source: developed by the authors from NPFHS data, 2018

Graph 2 : Fertility intentions for married non-pregnant women



Source: *developed by the authors from NPFHS data, 2018*

Impact of inequalities in women's social relations of domination on their fertility intentions

In Table 3, above, we see two trends. On the one hand, women living in urban areas, who have a contraceptive culture and who have a preparatory/medium level of education or higher, are less likely to want an additional child than women living in rural areas, those who have never used modern contraception, and who are illiterate. On the other hand, these are women who try to have symmetry in decision-making power over their employment opportunities with their partners (they decide together with their husbands) or it's the spouse who makes the decisions, or, in the worst case, they have no intention of working. Similarly, women who perceive their health status as declining (for married non-pregnant women), who have one or more children under the age of six in the household, who have lived together for three to five years since the birth of the last child, are more likely to want to have an additional child than women who try to make the decision alone, who have no children under the age of six, and who have lived together for less than two years since the birth of the last child. Moreover, a woman's age and number of live-born children (for married non-pregnant women) are revealing factors in fertility intentions. Indeed, older women are more likely to declare their intention to have another child than younger women. The same applies to the number of children born alive to a woman. Given the similarity of the results, we will present the results for all women in general (before the last column), providing a global overview of the result.

A careful look at the Table 4 reveals the multiple discriminations that can overlap and shape fertility intentions. These discriminations can be of various kinds: deprivation of access to education, deprivation of access to employment, deprivation of access to health care and violence against women. Indeed, gender-based discrimination is still present in Morocco, affecting women more than men (NHDO 2017), which exposes them to violence in both private and public spaces that can affect both their reproductive behavior and their intentions. Compared with women who have experienced violence, those who have not are 1.2 times more likely to want an additional child. This is justified by the fact that these women benefit from a favorable environment that enables them to better develop their lives. Given that the majority of women are illiterate, education has become a factor of social exclusion for women, and consequently a source of discrimination against them. More educated women are between 23% and 31% less likely to want another child. Women who are initially excluded from the education system are also excluded from the job market due to their low qualifications. They have difficulty in accessing appropriate private healthcare because of their low incomes, which worsens their health status. Women who feel their health has deteriorated are 23% less likely to want another child.

Also, a woman's degree of autonomy and decision-making power are factors in her fertility intentions. Women's emancipation plays a role in shaping their fertility intentions. Women with medium or high

autonomy are respectively 24% and 25% less likely to want another child. Similarly, women who feel that their husbands have decision-making power over their future employment opportunities are 1.97 times more likely to want another child. Women who do not intend to seek new job opportunities are 1.44 times more likely to want another child. These gender inequalities attenuate the male-female relationship and place women in the background of development. The duration of union after the birth of the last child, the number of children under the age of six in the household, the woman's age, the number of children born alive and the contraceptive culture also determine fertility intentions. Women who have lived together for 3 to 5 years after the birth of their last child are 1.50 times more likely to want another child. Similarly, having one child or two or more children under the age of six increases the risk (1.60 or 1.32 respectively) of wanting another child. For women, adopting a contraceptive culture is a strategy to reduce the risk of having another child.

Table 4: Logistic regression of fertility intentions

	Married non-pregnant women	Married non-pregnant women with exactly two children
Place of residence		
Rural	1	1
Urban	0.812**	0.775*
Current woman's age		
Age group	0.475***	0.552***
Woman's level of education		
No educational	1	1
Primary	1.013ns	1.069ns
Preparatory/middle	0.773**	0.755*
Secondary	0.689***	0.583***
University	0.766*	0.588**
Woman's employment status		
Work	1	1
Never	1.108ns	1.387**
Number of children born alive		
Total children born alive	0.325***	
Contraceptive culture		
Never used	1	1
Recent use	0.299***	0.346***
Frequent use	0.191***	0.212***
Decision-making on employment opportunities for women		
Single women makes decision	1	1
Husband/other makes decision	1.965***	2.516***
Both make decision	1.683***	2.544***
Does not intend to work	1.437***	1.890***
Currently working	1.366*	1.726*
Women's degree of autonomy in social life		
Low	1	1
Medium	0.755***	1.106ns
High	0.746***	1.032ns
Household wealth quintile		

Poorest	1	1
Poorer	0.901^{ns}	1.007^{ns}
Middle	0.910^{ns}	0.979^{ns}
Richer	0.954^{ns}	1.060^{ns}
Richest	0.832^{ns}	0.887^{ns}
Women's perception of health status		
Improved	1	1
No change	1.048^{ns}	0.984^{ns}
Deteriorated	0.773**	0.799^{ns}
Duration of marriage after birth of last child		
0-2 years	1	1
3-5 years	1.501***	1.939***
6 years and over	1.087^{ns}	1.544**
Number of children under six in household		
Zero children	1	1
One child	1.600***	1.991***
Two or more children	1.319*	1.968***
Household size		
4 at most	1	1
More than 4	1.013^{ns}	0.927^{ns}
Victim of violence		
Yes	1	1
No	1.237**	1.389**
chi2	4684.0	434.4
wald		
Exponentiated coefficients ^{ns} $p < 1$, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$		

Residential disparity in the impact of inequalities in women's social relations of domination on their fertility intentions

Analysis of fertility intentions can be further enriched at the residential level to see to what extent couple relationship characteristics determine fertility intentions and differ by place of residence. To answer this, we chose women in transition to a third child. Table 5, below, shows that inequalities are not homogeneous between places of residence. In rural areas, women living in wealthy households, whose husbands will decide for them once a new job opportunity presents, or in the worst case have no intention of working, who have lived together for three years or more since the birth of their last child, and who have more than one child under the age of six, show the greatest intention of having another child. Partner communication also increases wanting an additional child.

Women who adopt a contraceptive culture are less likely to want an additional child. However, in urban areas, intentions are more pronounced among women who have the same level of education as their husbands, or who are less educated than their husbands. They have lived together for 3 to 5 years since the birth of their last child; they have more than one child under the age of six; they live in a relationship where the husband decides on their future employment opportunities; or they have no intention of working and

are not exposed to violence. Conversely, intentions are less pronounced among women with a contraceptive culture, who feel that their health has deteriorated, and who live in a household with an average or wealthy (or even extremely wealthy) standard of living.

Urban women's difficulty in reconciling domestic and professional duties forces them to make choices, altering the male-female relationship that was already unequal. The highly competitive and demanding urban job market (due to qualifications) pushes women towards maternity, reducing their potential. The costs of child-rearing, the effects of violence and the costs associated with women's health act as a calculating factor in the formation of fertility projects. Households with an average to very high standard of living are 53% to 70% less likely to want another child, while women who feel that their health has deteriorated are 37% less likely to want an additional child. This result suggests that wealthy households target child quality rather than quantity (Becker and Lewis 1973). Thus, Atake and Gnakou (2019) show that women living in wealthy households have a lower ideal fertility size than those living in poor households, valuing child labor as a medium- and long-term income earner.

The fact that women are less educated than their husbands, and still live in a patriarchal relationship (where the man dominates everything), increases the risk of wanting another child. In fact, women whose husbands decide on their new employment opportunities are 2.60 times more likely to want another child, while those less educated than their husbands are 1.71 times more at risk. In rural areas, where the value of children is still prevalent, the fact that a woman has one child or more than two children under the age of six intensifies the desire for an additional child by 4.36 to 4.94 times or having been married for 3 to 5 years after the birth of the last child increases it by 2.12.

Table 5: Logistic regression of fertility intentions of married non-pregnant women with exactly two children by place of residence

	Rural	Urban
Age difference between spouses	0.992^{ns}	1.006^{ns}
Difference in educational between spouses		
Wife more educated than husband	1	1
Both (wife and husband) have the same level of education	1.087^{ns}	1.565^{***}
Wife less educated than husband	1.293^{ns}	1.714^{***}
Contraceptive culture		
Never used	1	1
Recent use	0.332^{***}	0.412^{***}
Frequent use	0.206^{***}	0.267^{***}

Decision-making on employment opportunities for women		
Single women makes decision	1	1
Husband/other makes decision	3.318***	2.598***
Both make decision	3.164***	2.526***
Does not intend to work	2.280**	2.010**
Currently working	2.414ns	1.129ns
Women's degree of autonomy in social life		
Low	1	1
Medium	0.846ns	0.761ns
High	0.732ns	0.741ns
Household wealth quintile		
Poorest	1	1
Poorer	0.992ns	0.552ns
Middle	1.053ns	0.474*
Richer	2.020*	0.423**
Richest	1.074ns	0.304***
Women's perception of health status		
Improved	1	1
No change	1.235ns	0.891ns
Deteriorated	1.127ns	0.626**
Duration of marriage after birth of last child		
0-2 years	1	1
3-5 years	2.123***	1.662***
6 years and over	1.885*	1.129ns
Number of children under six in household		
Zero children	1	1
One child	4.360***	2.175***
Two or more children	4.943***	2.447***
Victim of violence		
Yes	1	1
No	0.982ns	1.840***
chi2	104.6	218.4
wald		
Exponentiated coefficients ns p < 1, * p < 0.10, ** p < 0.05, *** p < 0.01		

Conclusion

Morocco has almost achieved its fertility transition process due to the profound socio-economic and cultural transformations within society as a result of urbanization and industrialization. Planning policies are widespread in both urban and rural areas. Although access to education and employment for men and women is unequal, to women's disadvantage, the decline in fertility has triggered social changes ranging from the lessening of the patriarchal system's effects to the process of women's empowerment.

Our study analyzed, according to the gender-intersectional approach, not only exclusion from education, paid employment and health, the fertility intentions of women in general, but also the intentions of women who have exactly two children to want an additional child. This category is relevant because it is the dominant norm in the country. Finally, we also analyzed fertility intentions according to the disparity in place of residence of women with exactly two children.

The results show that, despite the diversity of Moroccan women's fertility behavior, the vast majority of factors influencing fertility intentions are similar. Comparing fertility intentions according to place of residence highlighted social inequalities in relational characteristics affecting gender relations. The transition to the third child is so strong among marginalized social groups, namely rural, illiterate women who have never worked, and whose husbands have a strong say in their employment opportunities. Having children under the age of six, living in a union for more than three years since the birth of the last child, and living in an environment conducive to non-violence, are all ways of desiring an additional child.

Regarding residential disparities, we note that in urban areas, given the high cost of child rearing and the limited participation of women in the labor market, the relationship between household wealth and fertility intentions is negative, because of economic uncertainty for both men and women in urban areas, leading to a postponement of reproductive behaviors and attitudes, particularly for women, despite their higher level of education. Here again, the couple's relational characteristics have a negative impact on the social relationships that influence fertility intentions. In rural areas, the perception of the value of children still remains, so that an increase in the standard of living corresponds to an increase in the demand for children. Whatever the type of analysis, the adoption of a contraceptive culture is not only a strategy to avoid unwanted pregnancies, but also to encourage intentions to this effect. The presence of children under the age of six is also a means of stimulating fertility intentions.

This study also has limitations in that it lacks data on women's religiosity. However, it is accepted that the degree of religiosity positively influences reproductive behavior and hence fertility intentions (Bein, Gauthier and Mynarska 2017; Preis et al. 2020). Given that the desire for children could be a prerequisite for considering parenthood, birth does not depend solely on fertility intentions but on circumstances that may facilitate, postpone or even abandon these intentions. It is therefore necessary to complement studies of fertility intentions with their realization, postponement, or abandonment.

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