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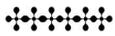
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The Influence of Family Dynamics on Contraceptive Use in Madagascar and the Ensuing Impact on Family Well-Being

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ABSTRACT

Introduction

While studies have shown a relationship between family dynamics and contraceptive use and between contraceptive use and family well-being, no empirical study has been conducted to test whether a relationship exists between family influence on contraceptive use and family well-being. The objective of this study is to explore whether there is such a relationship between family influence on contraceptive use and family well-being.

Methods

A survey was administered in the Vatovavy Fitovinany region of Madagascar, which has one of the lowest contraceptive prevalence rates in the country. The survey collected data on demographics, access to social services, socio-economic status, family dynamics, and knowledge and practice of family planning. Data were retained for 768 Malagasy couples in a binding relationship, such as marriage and civil union. Multiple regression was used to determine (1) the relationships between contraceptive use and two levels of family dynamics: spousal dynamics (communication and agreement within a couple) and extended family influence (communication and agreement between a couple and their parents) and (2) whether the two levels of family dynamics and contraceptive use were associated with four types of well-being: psychological, physical, intellectual, and economic.

Results

Fifty-seven percent of couples talk to, discuss with, and agree with each other on family planning decisions; 20.8% of couples talk to, discuss with, and agree with extended family on family planning decisions. Fifty-one percent of women use at least one method of contraception. About 96% of couples who have discussions do so with their spouse before others. There is evidence that while both spousal dynamics and extended family influence were associated with contraceptive use, spousal dynamics showed a stronger relationship. Analyses regarding well-being were inconclusive overall but suggest that spousal dynamics may also have a greater association with well-being than extended family influence.

Conclusion

We recommend increased support for family planning promotion and training that includes couples as a unit rather than women only. Also, family planning can be promoted during community outreach in order to increase understanding and acceptance within the community, which includes extended family members.

INTRODUCTION

The literature on family planning and development suggests that family dynamics are related to contraceptive use (e.g., DeRose, Dodoo, Ezech & Owuor, 2004, Libbus & Kridli 1997; Macht, 2008) and that contraceptive use impacts family well-being (e.g., Canning & Schultz, 2012; Gribble & Voss 2009; Smith, Ashford, Gribble & Clifton, 2009). Theoretically speaking, it should follow that family dynamics (in the context of contraceptive use) should affect family well-being. However, no empirical study has been conducted to test whether a relationship exists between family dynamics and family well-being, and consequently it is not clear how the first variable affects the second. The objective of this study is to address the above-mentioned gaps in the literature by exploring whether there is a relationship between family dynamics (family influence on contraceptive use) and family well-being.

Literature review

Family dynamics refer to at least two sets of interactions: spousal dynamics (interactions between the two members of a couple) and those between the couple and third parties, such as extended family members, which play a role in the couple's life (Marks, 1989).

Spousal communication and agreement are crucial for the functioning of family, allowing the couple to process and share information, ideas, and feelings and make decisions about important issues, including family planning, that ensure family stability (Esere, 2008; Hybels & Weaver, 2001; Noller & Fitzpatrick, 1990; Peterson, 2009). Spousal communication about family planning is part of the rational decision-making process in fertility plans and one of the factors associated with its approval (e.g., DeRose et al., 2004; Islam, Padmadas & Smith, 2006). In addition, agreement on fertility intentions, desired family size, family planning, and the achievement of reproductive goals is beneficial to the family (Meekers & Oladosu, 1996; Salway, 1994).

Research has shown that extended family influences the decisions of both individuals and couples within a society where extended kinship relations and lineage structures have a determining role in social interactions (Barnett, 1998; Char, Saavla & Kulmala, 2010; Darwish & Huber, 2003). Family planning decisions are also affected by extended family due to the nature of family dynamics (Char, Saavla & Kulmala, 2010). Reaching mutual agreement about family planning is very complex because of the roles of different actors such as the individual, couple, and people outside the family (e.g., Blanc et al., 1996; Bankole, 1995).

We define the use of family planning as informed decisions by an individual and by spouses to space, delay, or limit pregnancies to achieve optimal well-being for their family and community. Family well-being describes a multidimensional concept about an individual's and family's ability to function in the "broadest sense" (Sen, 1980; Sen, 1984; Sen, 1985). It represents various aspects of personal and family satisfaction in life such as the feelings of being prosperous or happy; health and nutrition; material wealth; and education. Studies suggest that the use of family planning results in better outcomes in well-being in terms of income, health, and education (Canning & Schultz, 2012; Gribble & Voss, 2009; Smith et al., 2009).

This research attempts to answer two important questions. First, how do family dynamics influence contraceptive use? Second, how are these influences and contraception decisions related to overall family well-being? We propose that in cultures where it is common for major family decisions to be influenced by actors beyond the couple, extended family influence is crucial to the use and choice of family planning. Use of family planning then has an effect on family well-being in terms of the level of the family's material wealth, education, health and nutrition, and especially in a spouse's perception of happiness and prosperity.

We present two hypotheses to guide our study. The first hypothesis tests the association between family dynamics and contraceptive use. More specifically, it explores the extent to which the couple's and family's interactions regarding the decision-making process is associated with the action of using contraception. Studies have found that spousal dynamics and extended family influence are each separately associated with contraceptive use (e.g., Meekers & Oladosu, 1996; Gebreselassie & Mishra, 2007). Family dynamics (spousal dynamics combined with extended family influence) should consequently facilitate the decision to use or not to use a contraceptive method. Therefore, we hypothesized that family dynamics would have a positive correlation with contraceptive use.

The second hypothesis relates to the association between contraceptive use and family well-being when family dynamics play a role in decision-making. We hypothesize that contraceptive use mediated by the presence of family dynamics should be positively associated with family well-being, which is measured by four concepts: psychological well-being (perception of poverty), intellectual and cultural well-being (whether children are sent to school), physical well-being (family health and nutrition), and economic well-being (material wealth/income).

Context

We chose the Vatovavy Fitovinany region of Madagascar to conduct our research. Madagascar is one of the poorest countries in the world, has one of the highest rates of birth and infant mortality, and provides unequal access to health care, economic well-being and public services. Like many developing countries in Africa, it continues to have a high fertility rate (5.2%) and a high rate of births occurring less than 36 months apart (INSTAT & ORC Macro, 2005). Although contraceptive use has increased from a national average of 27% in 2004 to 29.2% in 2008, regional differences exist (INSTAT & ORC Macro, 2005; INSTAT & IFC International, 2010). Based on the 2008-2009 Madagascar Demographic Health Survey (DHS), the current-use contraceptive prevalence rate in Vatovavy Fitovinany is among the lowest in the nation at 20.7% (INSTAT & IFC International, 2010). We believe many families do not fully discuss or agree upon fertility issues and that this lack of communication and agreement in turn negatively affects family well-being in Madagascar. Further, we believe couple interactions may be impacted by extended family influence, which has not been systematically measured in previous family planning studies in Madagascar.

METHODOLOGY

Data

We used DHS-recommended methodology for this research (ICF International, 2012). We designed a survey with five sections: demographics, access to social services, socio-economic status, family dynamics, and knowledge and practice of family planning. We used the indicators knowledge and practice of family planning using the DHS Phase III questionnaires (ICF International, 2012) as a model for our survey, adding questions specifically addressing communication and spousal agreement about family planning. In order to measure well-being, we drew from the indicators for characteristics of households from the DHS and indicators from *Assessing Household Poverty and Wellbeing, A Manual with Examples from Kutai Barat, Indonesia* by the Center for International Forestry Research (Cahyat, Gönner & Haug, 2007). We used the questionnaire from a study by Kanjanapan (1985) as a model for questions on family dynamics.

Data collection took place in all six districts of the Vatovavy Fitovinany region: Ifanadiana, Ikongo, Manakara, Mananjary, Nosy Varika, and Vohipeno. We selected 10% of communes and Fokontany in the region of Vatovavy Fitovinany. A minimum of 750 households consisting of married couples were required based on the size of the population and its demographic distribution inside the communes of the region. The questionnaire was pre-tested, then the research team, comprised of WISE Association staff, students from Toamasina University, and people who speak the dialect of the study region, surveyed 1055 households spread over 24 Fokontany.¹ Using census data, participants were randomly selected from three levels of stratification: commune, Fokontany, and household. The target population was couples living in residential households within the following age brackets: women age 18-49 and men age 18-64. They were randomly selected from the total population of couples, regardless of whether or not they had participated in family planning programs. Only couples in a binding relationship, such as marriage or civil union, were surveyed. Couples in a non-binding relationship were excluded from the study. Data were retained for 768 households that met the study criteria and completed the survey in full.

Figure 1. Map of Vatovavy Fitovinany and its six districts.



¹ The Fokontany is the smallest and lowest-level administrative unit in Madagascar.

Variables

Two predictor variables were utilized to test the first hypothesis, regarding the relationship between family dynamics and contraceptive use (table 1). Spousal dynamics measures spouse’s communication and agreement about family planning. Extended family influence measures the extent to which couples interact with extended family, in this case parents, regarding family planning. The criterion variable is contraceptive use, measured by whether or not the wife uses at least one method of contraception.

Table 1. Operationalization and Coding of Variables Used in Analyses for Hypothesis 1

Concept	Variable	Predictor (IV) or Criterion (DV) Variable	Operationalization	Coded as
Family dynamics	Spousal dynamics	Predictor	Spousal communication and agreement about family planning; whether or not they (1) talk about, (2) discuss, or (3) agree about family planning together	“Yes” to all three = 1 “No” to at least one = 0
	Extended family influence	Predictor	Couple’s interaction with extended family (parents) about family planning; whether or not they (1) talk about, (2) discuss, or (3) agree decision about family planning together	“Yes” to all three = 1 “No” to at least one = 0
Family planning	Contraceptive use	Criterion	Use of at least 1 modern contraceptive method	Yes = 1 No = 0

Table 2 summarizes the operationalization of variables used to test the second hypothesis, which links spousal dynamics and family well-being. Three predictor variables were used: contraceptive use, spousal dynamics, and extended family influence. All three variables were coded as in the first hypothesis. The concept of family well-being was divided into four categories of criterion variables: psychological, physical, intellectual/cultural, and economic well-being. Psychological well-being is based on the couple’s perception of their experience in poverty. Physical well-being was further divided into two sub-variables. The first is access to health care, based on whether the couples used the nearest health center, which on average was an hour’s walk away or more. The second is food security, based on the number of days in a year during which the family was forced to reduce their food intake. It is common for Malagasy families to reduce their food intake for some time depending on the season (for example, during the cyclone season or between harvests), but beyond a month likely indicates an unusual persistence of food insecurity. Intellectual well-being is based on whether the couple sends their children to school. Because they live in a remote area, families in Vatovavy Fitovinany must send their children away from home for schooling, which implies that the family considers education important and can afford to incur the costs related to lost labor and childcare during

school days. The last sub-category is economic well-being, also measured by two sub-variables: the number of rooms within a household and household annual income. The number of rooms within a household is an alternative measure of material well-being.

Analysis

To test the first hypothesis, multiple regression was used to determine how spousal dynamics and external family influence relate to contraceptive use. To test the second hypothesis, multiple regression was used to determine how spousal dynamics and external family influence relate to each sub-category of the criterion variables regarding family well-being (six variables in all). Data were analyzed using SPSS 18.

Table 2. Operationalization and Coding of Variables Used in Analyses for Hypothesis 2

Concept	Variable	Predictor (IV) or Criterion (DV) Variable	Operationalization	Coded as
Family planning	Contraceptive use	Predictor	Use of at least 1 contraceptive method	Yes = 1 No = 0
Family dynamics	Spousal dynamics	Predictor	Spousal communication and agreement about family planning; whether or not they (1) talk about, (2) discuss, or (3) agree about family planning together	“Yes” to all three = 1 “No” to at least one = 0
	Extended family influence	Predictor	Couple’s interaction with extended family (parents) about family planning; whether or not they (1) talk about, (2) discuss, or (3) agree about family planning together	“Yes” to all three = 1 “No” to at least one = 0
Well-being	Psychological	Criterion	Perception of experience of poverty	4 = Live a normal life 3 = Live with some difficulties 2 = Live with difficulties 1 = Poor
	Physical 1	Criterion	Access to health care: use of nearest health center	Yes = 1 No = 0
	Physical 2	Criterion	Food security: # of days where quantity of food was reduced	Reduction more than 90 days = 1; Reduction 30-90 days = 2; No food interruption = 3
	Intellectual	Criterion	Children sent to school	Yes = 1 No = 0
	Economic 1	Criterion	Number of rooms in household (continuous variable)	# of rooms
	Economic 2	Criterion	Combined household annual income; regressions run for each quartile (continuous variable)	1 st quartile: <239,398 Ar; 2 nd quartile: 239.399 - 640.000 Ar; 3 rd quartile: 640.001 - 1.828.250 Ar; 4 th quartile: >1.828.251

RESULTS

Tables 3 through 5 summarize the descriptive statistics of the data. The mean age of survey participants was 38 for husbands and 32 for wives. The mean number of children per household was three. Educational attainment was relatively low for both husbands and wives: while 80% of husbands and 67% of wives know how to read and write, more than half did not complete a primary school education (57% of husbands and 68% of wives).

Because the region is rural, the top five occupations of the participants include: farming (52.4%), other odd jobs that bring income to the family (19.1%), staying home (12%), fishing (4.3%), and civil servant (3.7%). The majority of participants (63%) claimed that they are poor and live in a state of vulnerability and 37.2% were above the acceptable threshold for reducing food intake. The mean of the number of days with reduced quantity of food to eat was 35.62.

Women get their family planning education at the basic health centers.² The average distance of the basic health centers from the residence of participants is 4 km, which is a walking distance of about one hour. However, distance was not the main factor preventing couples from using the health centers, according to the responses given by the participants. The three major reasons were: not sick (40.5%), inability to afford health care (21.5%), and absence of a health care professional (4.1%). Regarding family planning, most of the couples have knowledge about family planning (92% of husbands and 96% of wives), and 51% of wives have ever used a traditional or modern contraceptive method, compared to a national average of 60% of ever use among women in union (INSTAT & IFC International, 2010). The top methods of contraception ever used by wives include injection (61%), pill (25%),

Table 3. Mean and Percentage Distributions for Demographics and Education among Respondents

	M	SD	%
Demographics			
Age			
Husbands	38	11	
Wives	32	9	
# Children in home	3	2	
Education			
Can read and write			
Husbands			80
Wives			67
No degree			
Husbands			57
Wives			68

Table 4. Mean and Percentage Distributions for Indicators of Socioeconomic Status, Access to Social Services, and Knowledge and Practice of Family Planning

	M	SD	%
Socioeconomic status			
Household annual income			
<239,398 Ar			25
239,399 - 640,000 Ar;			25
640,001 - 1.828.250 Ar;			25
>1.828.251 Ar			25
No. rooms in household			
1			37.7
2			42.3
3			13.2
4			4.7
5			1.3
6			0.8
Occupation			
Farming			52.4
Other odd jobs to earn income			19.1
Stay home			12.0
Fishing			4.3
Civil servant			3.7
Perception of experience in poverty			
4 – Live a normal life			3.6
3 – Live with some difficulty			33.5
2 – Live with difficulty			14
1 – Poor			48.3
No. days reduced food intake in previous year	35.62	16.32	
Access to social services			
Distance from residence to CSB (km)	4	5.2	
Reasons for not using CSB			
Not sick			40.5
Inability to afford health care			21.5
Absence of health professionals			4.1
Knowledge and practice of family planning			
Know at least one family planning method			
Husbands			92
Wives			96
Wives' use of contraception			
Have used at least one method			51
Methods used			
Injection			61
Pill			25
Standard days method			11.3
Implant			11.1

² They are called Centres de Santé de Base (CSB). CSB I is staffed with a physician, whereas CSB II is staffed by a nurse or other health care worker.

standard days method (11.3%), implant (11.1%), and condom (3%).

Family dynamics is at the core of this research. We found that most of the discussion regarding family planning occurs between the couples. Nearly all of the couples (96%) said they first discuss this issue before seeking advice from others such as in-laws, friends, and neighbors. Only 4% said that they seek advice from others before discussing it with their spouses. The topics of discussion by priority include the experience of giving birth (78.4%), the practice of family planning (63.8%), and the desired number of children (46.3%).

The participants admitted that their parents are involved in family planning discussions and decisions at different levels depending on the issues. The topics of discussion by priority include the experience of giving birth (40.13%), the practice of family planning (27.46%), and the desired number of children (9.86%).

Hypothesis 1

We presented two hypotheses in this research. The first hypothesis stated that family dynamics should be positively associated with contraceptive use. We found that together, spousal dynamics and external family influence are significantly associated with contraceptive use. Spousal dynamics contributes more to the model with a moderate, positive relationship with contraceptive use ($\beta = .425, p < .001$), while external family influence has a negligible, positive association with contraceptive use ($\beta = .088, p < .01$).

Hypothesis 2

The second hypothesis stated that contraceptive use mediated by family dynamics should be positively associated with family well-being, which is measured by four concepts: psychological well-being, intellectual and cultural well-being, physical well-being, and economic well-being. Multiple regressions were performed to explore the extent to which spousal dynamics, extended family influence, and contraceptive use are related to each measure of family well-being. The results of the regressions are summarized in table 6.

Psychological well-being: Psychological well-being was measured by the couple’s perception of their experience in poverty. Psychological well-being has a weak, positive association to spousal dynamics ($\beta = .095, p < .05$) and contraceptive use ($\beta = .095, p < .05$). External family influence does not appear to have any relationship with psychological well-being in this model.

Table 5. Percentage Distributions for Family Dynamics

	%
Interaction between spouses regarding family planning	
Talk	65.8
Discuss	63.8
Agree	59.7
All three	57.0
Interaction between couple and parents regarding family planning	
Talk	30.5
Discuss	25.9
Agree	25.7
All three	20.8
Discuss with spouse first	96
Discuss with others first	4
Topics of discussion with spouse	
Experience of giving birth	78.4
Contraceptive use	63.8
Desired number of children	46.3
Topics of discussion with parents	
Experience of giving birth	40.13
Contraceptive use	27.46
Desired number of children	9.86

Table 6. Hypothesis 2, Multiple Regression Analyses Associating Variables of Family Dynamics with Measures of Well-being

		Criterion Variables								
		PSYCHOLOGICAL	PHYSICAL		INTELLECTUAL/ CULTURAL	ECONOMIC/ MATERIAL				
		Perception of experience in poverty	Access to health care	Food security	Send children to school	Number of rooms in house	Household annual income			
						1	2	3	4	
Predictor Variables	(1) Spousal dynamics	.095*	.018	-.018	.061	.086*	.246**	.047	-.221	-.063
	(2) Extended family influence	-.002	.099*	-.007	-.021	-.099*	-.004	-.034	.043	.025
	(3) Contraceptive use	.095*	.043	.035	.098*	.006	-.098	.040	-.075	.095

Notes. For Household annual income, 1= 1st quartile, under Ar239,399; 2= 2nd quartile, Ar239,399-640,000; 3= 3rd quartile, Ar640,001-1,828,250; 4= 4th quartile, over Ar1,828,250.

*p < .05

** p < .01

Physical well-being: Physical well-being was measured by whether the couple uses the nearest health center (access to health care services) and also by the number of days, above 30 days, that the family reduced its food intake (food security). Regarding access to health care, spousal dynamics and use of contraception were not found to be significant. Only external family influence demonstrated a significant, positive relationship to access to health care, though negligible (beta = .099, p < .05). Regarding food security, the model was found to be statistically insignificant and is not useful as a whole for determining the relationships between the predictor variables and this measure of well-being.

Intellectual and cultural well-being: Intellectual well-being was measured by whether couples send their children to school. While the regression model as a whole is significant (p < .01), spousal dynamics and family dynamics do not provide any unique contribution to the model. Contraceptive use has a statistically significant impact on whether children are sent to school, but the relationship is weak (beta = .098, p < .05).

Economic well-being: Economic well-being was measured by the number of rooms in the couple's house and by the household annual income. The number of rooms in the household has a negligible, positive association with spousal dynamics (beta = .086, p < .05) and a negligible, negative association with external family influence (beta = -.099, p < .05). Spousal dynamics are positively correlated to household annual incomes below 239,398 Ariary (beta = 0.246, p < .01), but not as mediated by extended family influence or contraceptive use.

DISCUSSION

The objective of this study was to explore whether family dynamics, particularly extended family influence, is associated with contraceptive use and family well-being. The study centered around

two main questions: First, how do family dynamics influence contraceptive use? Second, how are these influences and contraception decisions related to family well-being? By answering these questions, we hope to add to the body of literature discussing extended family influence on contraceptive use and the consequent effects on family well-being. An analysis of the relationship between family dynamics with respect to family planning and family well-being would give insight into how to strengthen the welfare of the family. By understanding the importance of family dynamics, support may be given to organizations that provide family planning education and services. Furthermore, these organizations may better understand the importance of including men or extended family in the planning procedures.

We hypothesized that in cultures where major family decisions are influenced by many outside actors, spousal dynamics, together with extended family influence, are crucial to the use and choice of family planning. Use of family planning would then have an effect on family well-being in terms of the spouse's psychological, physical, intellectual, and economic condition. This research specifically examines the case of a region of Madagascar; however, it may be considered a case study to represent other collectivistic cultures.

Relationship between family dynamics and contraceptive use

Our findings provide evidence that as couples communicate about and agree upon matters surrounding family planning, and as they communicate with extended family about the same matters, they are more likely to use contraception. However, extended family influence impacts contraceptive use to a lesser extent than communication between the couple. This research makes three important contributions to the family planning literature. First, it confirms the value of the role of spousal communication in family planning as mentioned in the previous research (e.g., Kamal & Islam, 2012).

Second, it shows that spousal communication in the area of family planning is a dynamic process, which has three stages from talking (sharing information or informing according to the meaning of talking or "miteny" in the Malagasy language), to discussion (sharing and defending one's point-of-view), and ending with decision (which is an agreement or disagreement about the issue). Both parties within a couple are involved in this process, as indicated in the responses from the participants: 57% acknowledged that they talked, discussed, and agreed to take action about family planning. This is a significant contribution to the literature because most findings in the literature mentioned the lack of intentional communication about family planning between spouses, especially in cultures where men dominate family decisions and women have less decision-making power.

Third, the findings show the importance of spousal dynamics over extended family influence in a collectivistic or kinship community like in Southeast Madagascar. Both the survey results and the regression analysis present an alternative understanding of extended family influence in the matter of family planning. The majority of participants (96%) said they talk and discuss family planning first as a couple before seeking advice from others, such as parents, in-laws, relatives, and friends, when necessary. Furthermore, 57% of the couples indicated that they participated in all three aspects of the spousal dynamics variable (talking, discussing, and agreeing with each other) compared to only 20.8% that participated in all three aspects of the extended family

influence variable (talking, discussing, and agreeing with their extended family). This supports the idea that couples have the last word regarding family planning, even in a collectivistic society where couples consult with their extended family, which includes parents and in-laws. It may be helpful to examine whether extended family influence has a greater impact on contraceptive use among couples who do not participate in all three aspects of spousal dynamics.

Also, the greater impact of spousal dynamics over extended family influence may be a result of generational shifts. The younger generation may have more access to information through radio, television, and posters that have campaigns about family planning, reducing the overall impact of extended family influence. In addition, the younger generation is more mobile than their parents, thus exposing them to more different forms of mass media; such exposure might affect their behavior and decision-making process. Future studies might consider exploring whether media and advertising dilute or enhance family influence on couples who are in the reproductive stage.

Relationship between family dynamics, contraceptive use, and family well-being

For hypothesis 2, we were interested in finding the relationship and mechanisms that relate family dynamics and contraceptive use to different dimensions of family well-being, including psychological, physical, economic, and intellectual and cultural. We found that of the three predictor variables (spousal dynamics, family dynamics, and contraceptive use), spousal dynamics appeared to make the greatest contribution to predicting general well-being. The indicators of well-being that call the most attention are the perception of experience in poverty, predicted by spousal dynamics and contraceptive use; access to health care, predicted by extended family influence; sending children to school, predicted by contraceptive use; the number of rooms in the house, predicted by spousal dynamics and extended family influence; and the household annual income among the poorest households, predicted by spousal dynamics.

Couples that communicate about family planning and use contraception are more likely to have a more positive perception of their experience in poverty. The results suggest that inter-spousal communication and agreement and contraceptive use are about equally useful in predicting the couple's perception of poverty. Even though Vatovavy Fitovinany is among the three poorest regions in the country, with a 90% poverty rate in 2010 (INSTAT, 2010) and third highest population (INSTAT, 2012), the responses from the participants showed that they acknowledged the advantages of practicing family planning for their family well-being. This is important because it shows that different family planning campaigns or programs conducted in the area have been well-received.

Couples who tended to communicate and agree with their extended family about family planning were more likely to utilize the nearest health center. It is unusual that contraceptive use is not more significantly related to accessing the nearest health center, given the relatively high percentage of women using contraception methods that require medical attention (for example, 61% receive injections). This study could not draw any conclusions about the connections between family dynamics, contraceptive use, and food security due to the non-significance of the model.

Using contraception may increase the likelihood that children will be sent to school, indicating a better potential for intellectual and cultural well-being; however, the relationship is very weak. Spousal dynamics and extended family influence do not appear to influence school attendance at all within this model.

Surprisingly, contraceptive use was not found to be significantly related to any measures of economic well-being, although it was found to be related to two measures that may be indirectly related to household economics (perception of experience in poverty and sending children to school). As the number of rooms in the household increases, it appears that couples are more likely to communicate and agree with family planning but less likely to communicate and agree with their extended family. Only communication and agreement within a couple appears to be related to higher household income, but only among the poorest households (under Ar 239,398 a year, or US\$0.30 a day³). This particular relationship is notably the strongest association among all the possible relationships tested for hypothesis 2.

Overall, there was weak evidence that spousal dynamics, extended family influence, or contraceptive use affect different measures of family well-being. The few associations found do not reveal any consistent trends. Other variables might provide more direct explanations of different aspects of well-being than whether or not families communicated about family planning. For example, household income likely affects the family's perception of their experience in poverty or their willingness to seek medical care, especially if they are far, cannot afford services, or cannot be guaranteed care. Similarly, the number of children in the household and their ages likely affect whether parents send their children to school. It may be helpful to further explore whether holding constant one or two possibly intervening variables better explains the relationships.

LIMITATIONS

A limitation of this study is that it examines general intervention by extended family members, regardless of whether the family members encourage or discourage the couple to utilize family planning services. Future analyses might examine contraceptive use among couples who may agree or disagree but are also specifically discouraged by extended family to use family planning. The study considers whether family dynamics and contraceptive use are related to individual indicators of well-being, and these indicators are measured at the present time period rather than some time after the family has chosen whether or not to use contraception.

We also recognize that this study focuses on couples within a binding relationship, which excludes the experiences of single men and women who also make decisions, with or without family influence, about family planning. Also, the study limits extended family to the couple's parents and does not measure possible influence of other extended family members, close friends, or neighbors.

³ The current rate of exchange used by the U.S. Embassy in Madagascar is US\$1 = Ar2,200.

CONCLUSION

Based on the findings regarding the link between spousal dynamics and contraceptive use, we recommend continued or increased financial and programmatic support of family planning services that involve both women and men in family planning promotion and education. Educational programs can emphasize the importance of spousal communication to encourage and sustain ongoing, intentional discussions focused on family planning between spouses so that it is not taken for granted. We also recommend promoting family planning during community outreach to capture a broader audience. Although spousal communication was a more significant indicator of family planning use than interactions with extended family, a sizeable percentage of study respondents said they involved other family members in family planning discussions. Furthermore, as previous studies have shown, one's *perception* of family planning acceptability in their family or social network influences family planning use. With greater understanding, comes greater acceptance. And with greater acceptance, comes greater use.

Because of the lack of strong evidence from our examination of the links between well-being, contraceptive use, and family dynamics, we cannot currently make decisive recommendations for programs or marketing campaigns regarding family planning among the studied population. However, because there is some evidence that spousal communication and agreement contribute to family welfare, we recommend further study that could provide more conclusive evidence.

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