

The Time Dynamics of Unmet Need: An Example from Morocco

By Charles F. Westoff and Akinrinola Bankole

Context: Data on fertility and family planning among a sample of women interviewed at two points in time can show whether women initially in need of a method fulfill that need, and whether contraceptive use and fertility intentions are fulfilled over time.

Methods: Longitudinal data on unmet need for contraception and on fertility were compiled from a panel survey of Moroccan women interviewed for both the 1992 and 1995 Demographic and Health Surveys. Transitions into and out of categories of need (for limiting or spacing births) were examined, as well as how well women were able to fulfill their fertility and contraceptive intentions in the three years between the surveys.

Results: Unmet need declined by about 43% over a three-year period among a sample of women interviewed both in 1992 and 1995. While 29% of women in need were still in need three years later (mostly to limit births), 35% had adopted a method by 1995, and another 36% had moved into the "other, no need" category, which includes women trying to get pregnant and infertile women. Religious objections or the husband's opposition were the obstacles to using contraceptives that were most difficult to overcome.

Conclusions: The results underscore the importance of studying unmet need in a longitudinal perspective, which is the only research design that permits evaluating transitions in planning status over time. International Family Planning Perspectives, 24(1):12–14 & 24, 1998

Estimates of unmet need for family planning derived from fertility and family planning surveys have now become standard statistics. The measure has become popular in policy and program circles for its usefulness as an indicator of the market for services, and for assessing future demand and the potential for fertility reduction.

All existing estimates of unmet need are cross-sectional, however, and thus do not take into account changes over time. Although repeat surveys of different samples of women permit a view of aggregate changes in the proportions of women who are in need of contraception,¹ we still cannot determine what happens to women in need. Do they become pregnant or do they

become contraceptive users? What fraction remain in need? Do nonusers with an unmet need for spacing births adopt contraception when they reach their desired number of children or do they shift into the category of having an unmet need for limiting births? Of special interest is the subsequent behavior of women in need who said they did not intend to use a method, for one reason or another. We are concerned with what prevents women from using a method, and which of these impediments are the least intractable.

Data and Methods

Transitions over time in contraceptive needs and fertility intentions can only be investigated with a longitudinal research design; the 1995 Morocco Demographic and Health Survey (DHS)² incorporated a longitudinal panel that permits such an analysis. A subsample of approximately half of the women who were initially interviewed in the 1992 Morocco DHS were reinterviewed in 1995 (3,324 women who were aged 15–46 in 1992), in addition to 1,429 new respondents aged 15–17 and other new women in the selected households. No attempt was made to locate women from households from the original sample that had moved during the period between the surveys.

The analysis reported in this article is

based on a subset of 1,682 women of the total of 3,324 who were interviewed twice. We arrived at this final sample after removing cases suspected to be incorrect matches (because of gross inconsistencies in their reported ages or numbers of children) and excluding women who were not married to the same partner at both times. Compared with women who could not be successfully located and reinterviewed, those who could were younger, were better educated, were more likely to reside in cities and had fewer children.

Several modifications of the standard measure of unmet need have been recently proposed, and are incorporated here; the rationales for these changes are described elsewhere.³ Briefly, in defining unmet need, the new algorithm excludes the intentions of pregnant or amenorrheic women who stated that they either wanted more children or had used a method in the past and intended to resume use. (Other analyses of the Morocco data have shown the reported planning status of the last pregnancy among pregnant or amenorrheic women to be very unreliable.⁴) The reproductive intentions of all women are substituted instead. In an analysis of data from 19 countries, use of this revised definition typically reduced the proportion of women with an unmet need for contraception from an average of 25% to 21%.⁵

Unmet Need and Subsequent Births

According to the new measure, the proportion of Moroccan women in need of contraception declined substantially between 1992* and 1995, from 21% to 12%, which represents a decline of roughly 43% over the period.[†] Conversely, the proportion of women who were using a method increased over the three-year period from 46% to 56%.

A very high proportion (84%) of women who were classified in 1992 as being in need of methods to space births gave birth in the subsequent three years or were cur-

*Applying the standard definition of unmet need to the reinterview sample indicates that 18.8% of these women would have been in need of contraception in 1992, compared with 21.3% derived from the revised definition. The higher level of unmet need with the new measure reflects the resulting reduction in the need for methods to space births and an increase in need for those used to limit births. The latter increase is due largely to the new definition's reliance on calculating need based on the desire for another child, rather than the standard definition's focus on whether the preceding birth (or current pregnancy) was wanted, a change that shifts the frame of reference to a higher parity.

†Using the standard definition of unmet need would reduce the magnitude of the decline from 1992 to 1995—the proportion in need would decline from 18.8% in 1992 to 13.6% in 1995.

Charles F. Westoff is professor of sociology and demographic studies at Princeton University, Princeton, NJ. Akinrinola Bankole is senior research associate at The Alan Guttmacher Institute, New York. The authors would like to acknowledge the financial support of the Andrew Mellon Foundation, The Rockefeller Foundation and the Demographic and Health Surveys (DHS), Macro International. Comments from Ann Blanc at DHS are also acknowledged.

Table 1. Percentage distribution of married Moroccan women, by contraceptive status in 1992, according to contraceptive status in 1995

1995 status	Unmet need, 1992 (N=358)	Currently using, 1992 (N=770)	Other, 1992 (N=554)
Unmet need	28.5	4.7	12.4
Currently using	35.2	77.0	37.0
Other	36.3	18.3	50.5
Total	100.0	100.0	100.0

Note: See note to Figure 1.

rently pregnant at the time of the interview (see Figure 1). This high proportion was not unexpected, however, because all of these women said in 1992 that they intended to have another child and were only hoping to delay a pregnancy. Even most of the women who in 1992 were using a method to space that pregnancy would have interrupted use in the period between the surveys to become pregnant.

Notably, among the women who were classified in 1992 as having an unmet need for contraception to limit births, 58% had given birth by 1995 or were currently pregnant. These were essentially fecund women who wanted no more children but were not practicing contraception (a total of 15% of the reinterview sample in 1992). By definition, most of those births would have been unwanted, although changes of mind certainly occur. However, only one-third of these births were actually reported, in retrospect, as unwanted. (The tendency to redefine a birth as wanted, which occurs quite frequently and increases with time since the birth, is one reason why the measure of unmet need was modified.) Even among women who were using a method in 1992 and wanted no more children, 25% gave birth over the three-year period, but less than half (46%) of these women said the birth had been unwanted at the time of conception.

Transitions in Planning Status

Our analysis focuses on the transition of women through the different categories of contraceptive need and use. The basic cross-classification (Table 1) shows the changes in three categories of women between 1992 and 1995: those with an unmet need for contraception, current users and "all others" (i.e., those who were not using a method because they were trying to become pregnant, were pregnant or amenorrheic and either wanted more children or had used contraceptives and intended to resume use, or were infecund). This analysis concerns only the classification at the time of each survey and ignores

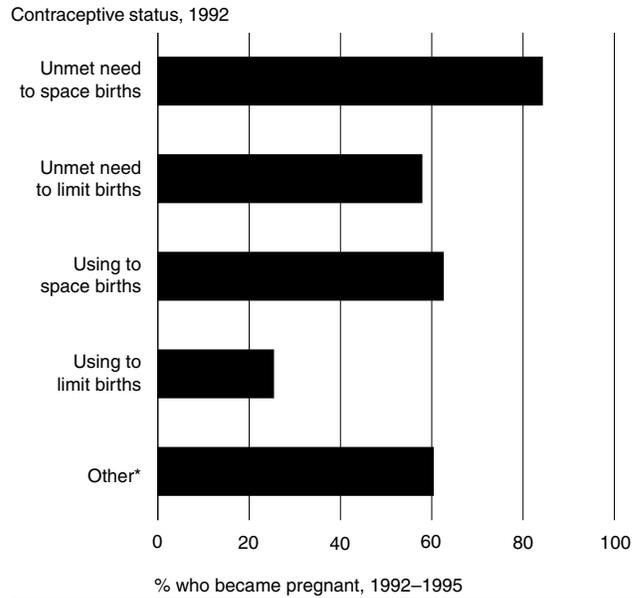
women's experiences during the three-year interim period; it is thus analogous to examining two snapshots of the same individual's reproductive status, one in 1992 and one in 1995.

Most of the women classified in 1992 with an unmet need for contraception had moved into the current user category or the "other" nonuser category in 1995. However, 29% remained in the unmet need category. Most of the women who were using a method in 1992 remained in that category three years later (77%); very few users stopped practicing contraception and moved into the unmet need category (5%). Just over half (51%) of women in the "other" nonuser category were still there three years later (mostly infecund women and those who still wanted more children soon), while 37% had moved into the user category.

Table 2 shows a more detailed picture of these transitions. Here, we disaggregate both the women in need of contraception and users of contraceptives into spacing and limiting categories. Almost all contraceptive users in 1992 remained users in 1995. The most serious concern involves women who in 1992 were classified as having an unmet need (either for spacing or for limiting) and who were classified as having an unmet need for limiting births in 1995. Although these women accounted for only 5% of all married women, they will contribute most of the unwanted fertility: Two-thirds of these women had had at least one birth in the three-year interval between surveys, compared with nearly half of women overall. Moreover, 20% of such women reported 2-3 births over the period, compared with 7% of all women in the sample. Two-thirds of women who were in need at both surveys had never used any method of contraception.

What distinguishes these women from others who subsequently be-

Figure 1. Percentage of married women who became pregnant between 1992 and 1995, by contraceptive status in 1992, Morocco



*In this and subsequent tables, "other" includes women not using a method who were not in need because they were trying to become pregnant, because they were currently pregnant or amenorrheic and either wanted more children or had used contraceptives previously and intended to resume use, or because they were infecund.

came users? Those who shifted from being in need to using a contraceptive method tend to be younger, to live in cities, to have some formal education, to have more exposure to mass media, and to have used a method in the past. When we examined all of these variables simultaneously in a regression analysis to determine the likelihood that contraceptive need would be fulfilled, only past use and education independently predicted the transition to current use.

Intentions for Future Use

An important finding from our earlier work on unmet need was that a high proportion of women in need did not intend to practice contraception in the future.⁶ In Morocco in 1992, two out of five women in need were in this category. Among

Table 2. Transitions in unmet need and contraceptive use categories, expressed as percentage distribution of need and use in 1992, by need and use in 1995

1995 status	Unmet need, 1992		Currently using, 1992		Other, 1992 (N=554)
	For spacing (N=114)	For limiting (N=244)	For spacing (N=283)	For limiting (N=487)	
Unmet need					
For spacing	7.9	4.5	3.2	0.2	5.4
For limiting	15.8	26.2	3.9	3.1	7.0
Current use					
For spacing	17.5	5.7	35.7	7.2	17.3
For limiting	19.3	28.7	31.1	75.8	19.7
Other	39.5	34.8	26.1	13.8	50.5
Total	100.0	100.0	100.0	100.0	100.0

Note: See note to Figure 1.

Figure 2. Percentage of women in need of contraception in 1992 who did not intend to use a method but had done so by 1995, by reason for original intention



these women, 38% changed their minds and began contraceptive use between 1992 and 1995, while 62% did not.⁷

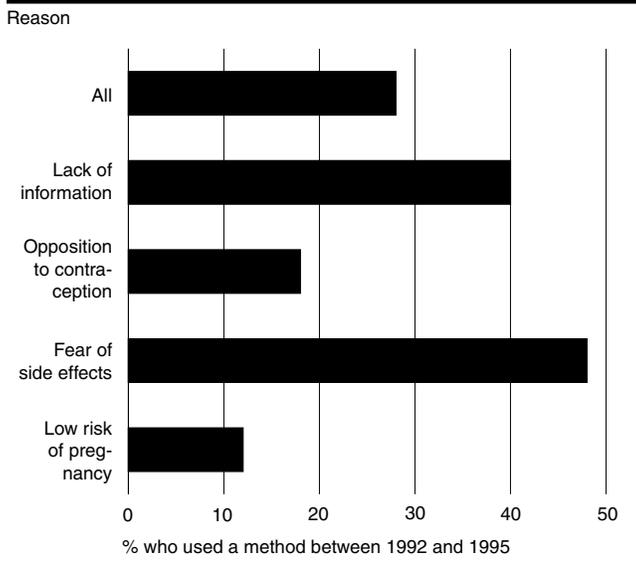
In 1992, all women who had no intention of using a method were asked why this was so. Most responded that they felt ambivalent about the timing of their next birth. The next most common responses were that they lacked information about methods or had health concerns, that they or their husband opposed contraception, that they feared side effects and that they had other reasons for not practicing contraception.

We exploited the longitudinal design of the Morocco DHS to examine the extent to

apply to all women with unmet need, whereas the need for limiting births is clearly the more important subcategory. However, if we were to focus on intentions about future use among women in need for limiting only, the number of observations would be reduced further. Thus, to avoid even smaller sample sizes, we relaxed the definition of unmet need and examined intentions about future use among the 42% in the sample who, in 1992, wanted no more children, were not practicing contraception and did not intend to use a method in the future.

Figure 3 presents the proportions of these

Figure 3. Percentage of women in need of contraception to limit childbearing in 1992 who did not intend to use a method but had done so by 1995, by reason for original intention



which these reasons were “overcome” in the ensuing three years. Figure 2 shows the percentage of women who in 1992 did not intend to practice contraception, but who used a method between 1992 and 1995, classified by their stated reason for not intending to do so. Clearly, opposition to contraception (mainly for religious reasons and partner’s objections) was the most difficult reason to overcome, and a fear of side effects was the weakest impediment to eventual use.

These conclusions are based on small numbers of women, however. Moreover, the results

women who used a method between 1992 and 1995, by the reason they originally offered for not intending to do so. Since women who wanted no more children tend to be older, on average, a higher proportion are at a relatively low risk of pregnancy—that is, they have difficulty conceiving or have sex infrequently—and fewer are ambivalent about their intentions. Thus, their profile of reasons for nonuse differs from that of all nonusers (Figure 2). Although the numbers are still relatively small, the same conclusions hold: Women who were op-

posed to use for religious reasons (or whose husbands opposed use) in 1992 were the least likely to have become users by 1995, and those who were concerned about side effects were the most likely to have done so.

Discussion and Conclusions

The availability of data from a national longitudinal study made it possible to track Moroccan women who were classified in 1992 as having an unmet need for family planning over the following three years. A high proportion—58%—of those who were classified as having an unmet need for limiting births in 1992 had reported one or more births between 1992 and 1995 or were currently pregnant at the 1995 interview. Moreover, 25% of women who were using a contraceptive method in 1992 (mostly the pill) and who wanted no more children reported a birth in the ensuing three years. Even granting changes of mind, these are strong indications of unwanted fertility.

Nearly 29% of women in need of contraception in 1992 were still classified as being in need three years later; the fact that many of these women in persistent need wanted to limit births is a serious concern. Although the group still in need for limiting births constitutes only 5% of the total reinterview sample, they will contribute most of the unwanted fertility. Almost all (97%) of these women were without formal education, and two-thirds had never practiced contraception.

Our analysis revealed opposition to use for religious reasons or because of husbands’ objections to be the most intractable reason for nonuse. In contrast, fear of side effects and lack of information were the most easily surmounted obstacles, as women citing these reasons were the most likely to be persuaded to adopt family planning.

References

- Westoff CF and Bankole A, *Unmet Need: 1990–1994*, DHS Comparative Reports No. 16, Calverton, MD: Macro International, 1995.
- Azelmat M, Ayad M and Housni EA, *Enquête de Panel sur la Population et la Santé (EPPS) 1995*, Rabat, Morocco, and Calverton, MD, USA: Macro International, 1996.
- Westoff CF, Unmet need revisited, paper presented at the International Union of the Scientific Study of Population Conference, Jacó, Costa Rica, May 14–16, 1997.
- Bankole A and Westoff CF, The consistency and predictive validity of reproductive attitudes, *Journal of Biosocial Science*, 1998, forthcoming.
- Westoff CF, 1997, op. cit. (see reference 3).
- Westoff CF and Bankole A, 1995, op. cit. (see reference 1).
- Curtis SL and Westoff CF, Intention to use contraceptives and subsequent contraceptive behavior in Morocco, *Studies in Family Planning*, 1996, 27(5):239–250.

(continued on page 24)

Time Dynamics of Unmet Need...

(continued from page 14)

Resumen

Contexto: Los datos sobre fecundidad y planificación familiar entre una muestra de mujeres entrevistadas en dos momentos diferentes pueden indicar si la mujer que inicialmente tenía necesidad de usar un método pudo satisfacer esa necesidad, y si sus intenciones de fecundidad y de uso anticonceptivo fueron satisfechos.

Métodos: Se recopilaron datos longitudinales sobre necesidades anticonceptivas insatisfechas y sobre fecundidad, extraídos de una encuesta de panel realizada entre mujeres de Marruecos entrevistadas para las Encuestas Demográficas y de Salud de 1992 y 1995. Se examinaron los cambios registrados en cada categoría de necesidad (para limitar o espaciar los nacimientos), así como la forma en que la mujer podía satisfacer sus intenciones de fecundidad y anticonceptivas, durante los tres años que transcurrieron entre una encuesta y otra.

Resultados: La necesidad insatisfecha disminuyó en aproximadamente un 43% durante el período de tres años entre las dos encuestas. En tanto que el 29% de las mujeres aún se encontraban con la necesidad tres años más tarde (en la mayoría de los casos para limitar los na-

cimientos), el 35% había adoptado un método para 1995 y otro 36% se cambiaron a la categoría de "otro, o ninguna necesidad", la cual incluye a aquellas mujeres que trataban de quedar embarazadas y a las mujeres infértiles. Se identificaron como los principales obstáculos para el uso de anticonceptivos, las objeciones de tipo religioso o la oposición del marido.

Conclusiones: Los resultados hacen hincapié en la importancia que tiene la perspectiva longitudinal en el estudio de la necesidad insatisfecha. El diseño longitudinal es el único enfoque de investigación que permite evaluar las transiciones entre las categorías de planificación y de intenciones reproductivas a través del tiempo.

Résumé

Contexte: Les données relatives aux questions de fécondité et de planning familial dans un échantillon de femmes interviewées à deux reprises dans le temps peuvent indiquer si celles qui présentaient initialement un besoin de méthode contraceptive répondent à ce besoin et si les intentions de pratique contraceptive et de fécondité se réalisent dans le temps.

Méthodes: Une enquête à échantillon constant de femmes marocaines interviewées lors des Enquêtes démographiques et de santé de

1992 et 1995, a permis la compilation de données longitudinales relatives au besoin non satisfait de contraception et à la fécondité. Les entrées et sorties des catégories de besoin (pour limitation ou espacement des naissances) ont été examinées, de même que la capacité des femmes à réaliser leurs intentions de fécondité et de contraception durant l'intervalle de trois années entre les enquêtes.

Résultats: Le besoin de contraception non satisfait a baissé d'environ 43%, sur une période de trois ans, dans un échantillon de femmes interviewées en 1992 puis, de nouveau, en 1995. Si 29% des femmes ayant exprimé un besoin de contraception en 1992 ressentaient toujours ce besoin trois ans plus tard (principalement de méthodes pour limiter les naissances), 35% avaient adopté une méthode en 1995 et les 36% restants étaient passés dans l'autre catégorie, «sans besoin», comprenant les femmes prêtes à avoir un enfant ou stériles. Les objections religieuses et l'opposition du mari représentaient les obstacles à l'utilisation de contraceptifs les plus difficiles à surmonter.

Conclusions: Les résultats soulignent l'importance de l'étude longitudinale, le seul dessin de recherche permettant d'évaluer les changements de statut en matière de planification avec le temps.