

**Does Abstinence Work?**  
**Natural Methods Users and Consistency of Behavior**

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Extended Abstract  
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## *Introduction*

The percentage of couples using Natural Family Planning who experiment an unintended pregnancy is 25% (Trussel, 2004). The high percentage of failures in preventing a pregnancy can depend on a misuse of the method, but also on the difficulty to respect the abstinence rule regarding the fertile days of the cycle. When natural method is perfectly used, the percentage of couples failing in preventing a pregnancy decreases. The extent of decrease is linked to the specific natural method: 9% of couples using the calendar method experiment an unintended pregnancy, 3% when using the ovulation method, 2% using the sympto-thermal method, and 1% with post-ovulation intercourse (Kubba et al. 2000).

The aim of this paper is to assess consistency of behaviors for Natural Family Planning users. A detailed typology of behaviors of 'avoiders', i.e. couples who try not to have intercourse in the fertile window, will be presented, together with an analysis of determinants of temporary interruption of an avoiding behavior.

## *Data and Methods*

A Multinational Study on Daily Fecundability—MSDF—was conducted concerning 1,074 couples and 10,508 menstrual cycles, for which 752 pregnancies were detected. The couples involved must not have had any evident sign of sterility. They had expertise in Natural Family Planning (NFP) methods, as they were recruited from NFP centers. In total, eleven European centers were involved, plus one centre from Auckland (Colombo and Masarotto 2000; Colombo et al. 2006). At the entry into the study, women were asked about their own age and partner's age, time of marriage and previous pregnancies. For further details on other information collected at entrance, see Colombo and Masarotto (2000).

During the study, women daily recorded all the relevant information concerning their cycles in order to indirectly determine the ovulation-day by mucus quality and/or basal body temperature. Moreover, to estimate daily fecundability, investigators established that also intercourse had to be recorded daily. It was strictly required of couples not to use any contraceptive devices. The couples who had protected intercourse were dropped from the analysis.

Detailed prospective information on acts of intercourse is one of the most important feature of MSDF data. It is well known that recorded data on intercourse have to be preferred to reported data (James 1981; Udry 1993). According to Udry, "when the exact placement of each coital episode on a particular day or time of day is important, there is no substitute for daily reporting" as retrospective reports covering even only a week are highly unreliable for establishing a pattern of intercourse. Moreover, our recorded data are supposed to be of good quality for several reasons: the clinical context of the study; the feeling of trust between women and their instructors of NFP methods; the simultaneous daily recording of other information on the biology of the cycle, needed in order to identify a marker of ovulation.

In our study fertility intentions are not explicitly declared by couples. Thus some hypotheses in order to infer intentions from behaviors have to be made (Rizzi e Rosina, 2006; Rizzi, 2005). An avoiding behavior can change, and, at a certain moment, the couple can decide to have some episodes of intercourse in the fertile window. We will not study couples who obtain a pregnancy after this change, i.e. at the first cycle at risk of conception. However, for other couples we can determine if change in behavior is temporary or permanent. The latter will be considered as a

change in fertility intentions, while the former can be seen as a difficulty for the couple to follow the abstinence rule during the fertile period.

In the first part of the paper, we will study couple typologies according to the behavior adopted. We will focus on the sequence of cycles, distinguishing those at risk of conception, with episodes of intercourse in the fertile window, and those not at risk of conception. Then we will try to explain occurrence of a *discontinuation cycle* for an avoiding couple - i.e. a cycle with intercourse in the fertile window after a long sequence of cycles without acts of intercourse in the window - through use of a multivariate analysis. We will account for partners' age, the parity, the duration of marriage, the total amount of intercourse in the cycle, the length of the follicular phase - the latter variable can depend on woman's hormonal factors, which are associated to her sexual desire. Particularly, a GEE model (generalized estimation equation) will be estimated in order to account for the multilevel structure of data.

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