

# Attitudes about Infertility Interventions among Fertile and Infertile Couples

## ABSTRACT

**Background.** There has been marked progress in the development of infertility interventions. This paper reports attitudes about 11 interventions for infertility.

**Methods.** Face-to-face interviews were conducted with each member of 185 infertile and 90 presumed fertile couples in southeastern Michigan.

**Results.** Seven of these interventions were generally viewed favorably and four were generally viewed negatively, regardless of the couple's fertility status. Infertile couples viewed all interventions, except for adoption, more favorably than did fertile couples. Multidimensional scaling was used to cluster the interventions according to similarity in endorsement. These clusters form a continuum from interventions that allow only one member of the couple to be a biological parent to the most noninvasive techniques. All clusters remain roughly equidistant from adoption, in which neither member of the couple is a biological parent.

**Conclusions.** Interventions that produce a child who is biologically related to only one member of the couple were viewed most negatively. Members of couples who were receiving fertility treatment made finer discriminations among infertility interventions than did individuals who had not received treatment. (*Am J Public Health*. 1992;82:191-194)

L. Jill Halman, RN, PhD, Antonia Abbey, PhD, and Frank M. Andrews, PhD

### Introduction

Over the last 40 years, there has been marked progress in the development of interventions available to couples having fertility problems. This progress has been followed by criticism and debate concerning the moral and ethical issues involved in the use of these interventions. As early as 1951, infertility interventions were the subject of debate. The use of artificial insemination with donor's sperm was criticized at that time for its possible negative effects on the husband's ability to properly raise and care for the resultant child.<sup>1</sup> With the board certification of infertility specialists in 1973, increased research resulted in the availability of more highly technical and varied interventions.<sup>2</sup> These techniques and their acronyms, such as in vitro fertilization (IVF) and gamete intrafallopian transfer (GIFT), are making their way into everyday conversation; their appropriateness, acceptability, and ethical implications are being discussed and debated by many individuals, organizations, and religious groups.

Little empirical research has been conducted to explore what the public thinks about the interventions available today and how acceptable these interventions are to them. This paper reports such data. Our findings should have relevance for those health professionals involved in treating and working with people with fertility problems.

### Methods

In this cross-sectional study, married couples were asked their attitudes about 11 infertility interventions. Both husbands and wives in 275 couples in southeastern Michigan were interviewed in 1988. One hundred

eighty-five couples recognized that they had a fertility problem and were actively trying to solve it. One hundred sixty-one of these couples were recruited from nominations made by infertility specialists. Nine couples were volunteers from support groups (i.e., RESOLVE and the Endometriosis Association), and a few were marriage license applicants, volunteers recruited through newspaper advertisements, and other study participants. Ninety presumed fertile couples were interviewed. Forty-two were recruited by nominations made by infertility specialists who had presumed fertile gynecologic patients within their practices and by nominations made by obstetricians/gynecologists; 33 were recruited from marriage license applicants; and a few couples were volunteers recruited through newspaper advertisements and other study participants.

All study participants met the criteria of being married, White, and middle class,\* and having no previous children by either member of the couple. Infertile cou-

\*Middle class was defined as having at least a high school education and an annual family income in the approximate range of \$20 000 to \$100 000. Our respondents had an average education of 2.5 years of college and an average family income of \$45 000.

L. Jill Halman and Frank M. Andrews are with the School of Public Health, Department of Population Planning and the Institute for Social Research, University of Michigan. Antonia Abbey is with the Department of Community Medicine, Wayne State University, and the Institute for Social Research, University of Michigan.

Requests for reprints should be sent to L. Jill Halman, RN, PhD, Institute for Social Research, Ann Arbor, MI 48106-1248.

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TABLE 1—Favorability toward Infertility Interventions

	Infertile <sup>a</sup>				Fertile			
	Wives	Husbands	Paired t test	Couples	Wives	Husbands	Paired t test	Couples <sup>b</sup>
Male hormones	4.7	4.3	***	4.5 (342)	4.1	3.8	*	4.0 (166)***
Artificial insemination with husband's sperm	4.6	4.3	***	4.5 (368)	4.1	4.1	NS	4.1 (176)***
Progesterone suppositories <sup>c</sup>	4.5	4.3	NS	4.4 (306)	4.0	3.8	NS	4.0 (153)***
Drugs to stimulate ovulation	4.6	4.1	***	4.4 (364)	3.9	3.7	NS	3.8 (166)***
Tying cervix <sup>c</sup>	4.4	4.0	***	4.3 (276)	3.9	3.7	NS	3.8 (142)***
In vitro fertilization	4.2	4.0	**	4.1 (363)	3.8	4.0	NS	4.0 (176)
Adoption	4.1	4.0	*	4.0 (369)	4.2	4.4	NS	4.3 (179)***
Artificial insemination with husband's and donor's sperm mixed	2.6	2.4	NS	2.5 (355)	2.2	2.4	NS	2.3 (170)*
Artificial insemination with donor's sperm	2.5	2.3	*	2.4 (369)	2.0	2.3	*	2.1 (177)***
Surrogacy (wife's ova, husband's sperm)	2.2	2.0	NS	2.2 (365)	1.9	2.3	***	2.1 (179)
Surrogacy (surrogate's ovum, husband's sperm)	1.9	2.0	NS	2.0 (367)	1.7	2.0	***	1.8 (179)

Notes. Numbers in columns are mean scores; number of cases is in parentheses. The scale ran from 5 (favorable) to 1 (unfavorable). NS = not significant.  
<sup>a</sup>Infertile couples are defined as those couples who have seen an infertility specialist.  
<sup>b</sup>Mean scores of infertile couples were compared with mean scores of fertile couples using the Student t test to determine the significance of differences.  
<sup>c</sup>15% or more of the total respondents stated they did not know enough about these interventions to state an opinion.  
\*P ≤ .1.  
\*\*P ≤ .05.  
\*\*\*P ≤ .01.

ples met the additional criteria of having seen an infertility specialist, feeling they were having a difficult time having a baby, and not yet having completed the most advanced infertility treatments (e.g., IVF). Although our study originally used trying to have a child for 12 months or longer as a criterion to define fertility problems, we found that several couples had already sought treatment from infertility specialists before 12 months had elapsed. For the purposes of this data analysis, it was believed that couples who had already been involved in discussions and decision making with their physicians about infertility interventions should be included with the other infertile couples to give a more accurate picture of attitudes about infertility interventions among couples presented with this problem. Presumed fertile couples met the additional criteria of the wife's having a regular menstrual cycle and having no known gynecological problem that would affect the couple's fertility status. Eighty one percent of the referred and eligible couples participated in this study.

One-hour face-to-face interviews were conducted separately with each member of the couple.

Individual members of couples were asked, "People have different opinions about various methods for having a child.

Please tell me how you feel about the possibility of *your* using each of the following methods, *if it were needed*. . . ." The 11 infertility interventions measured include artificial insemination with the husband's sperm (AIH), artificial insemination with a donor's sperm (AID), artificial insemination using both the husband's and a donor's sperm mixed together (AIH&D), hormones used to stimulate ovulation in women, hormones used to increase the sperm count in men, progesterone (a specific hormone) vaginal suppositories used to prevent miscarriage, tying the cervix to prevent miscarriage, in vitro fertilization (IVF), adoption, surrogate mother with husband-donated sperm and wife-donated ova (S/W), and surrogate mother with husband-donated sperm and the surrogate's ovum (S/S). Attitudes were measured on 5-point Likert-type scales, with options ranging from strongly opposed to personal use of a particular intervention (1) to strongly in favor of personal use of a particular method (5).

## Results

In this study we examined the interventions and procedures that the fertility-problem couples had received at the time of the interview. The most frequent intervention used for women was the prescrip-

tion of medications to stimulate ovulation. Adoption was currently being or had previously been considered by 20% of all fertility-problem couples and was the most commonly mentioned intervention by men. Endometriosis was a relatively common problem for the female respondents: 19% stated that they had had or were scheduled to have surgery for it and 14% stated that they had taken or were receiving medication for it. The second most common intervention reported by men was artificial insemination with the husband's sperm. Twenty percent of the men stated that they had used or were currently using this intervention.

## Attitudes about Interventions

Table 1 contains respondents' attitudes about the various fertility interventions. It shows that S/S, S/W, AID, and AIH&D were viewed the most unfavorably by both fertile and infertile couples. It is noteworthy that most of these interventions allow only one member of the couple to be a known biological parent of the child. Although a couple using S/W would be known biological parents, the fetus would be carried by another woman. The remaining seven interventions are generally viewed favorably by both sets of couples. The lower acceptability of IVF among the acceptable interventions may

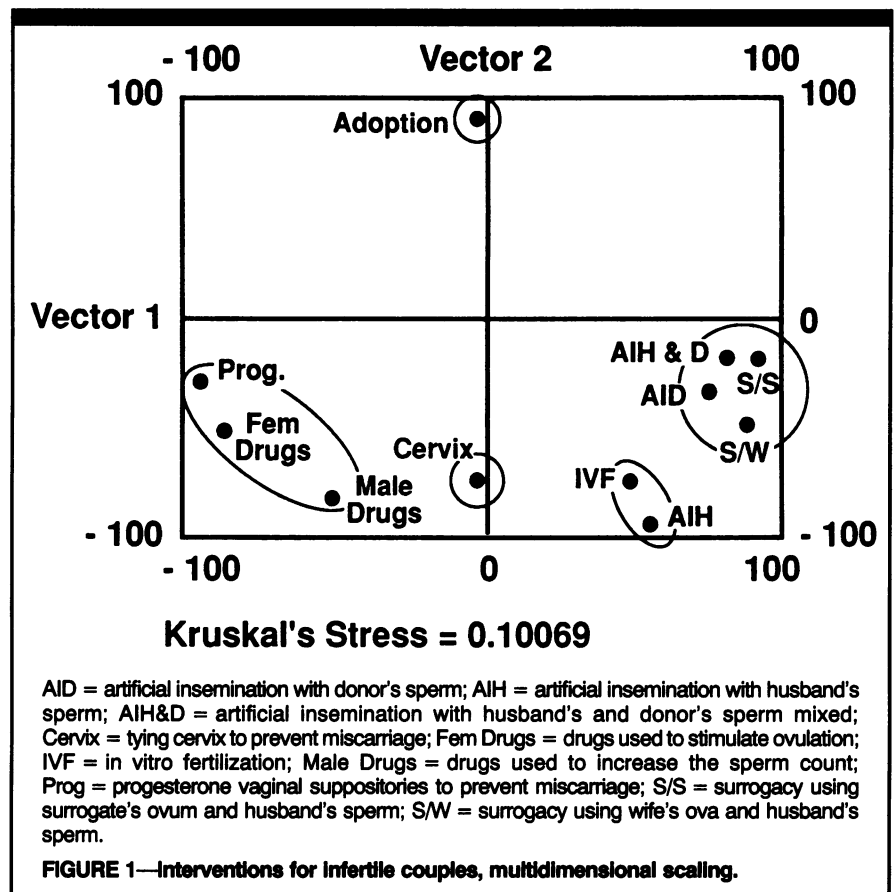
be due to the newness of this intervention or to the high cost, which is generally not covered by third-party payors. Infertile couples were more favorable toward all interventions, except for adoption, than were fertile couples. The Student *t* test shows a significant ( $P \leq .01$ ) difference between the infertile couples' mean scores and the fertile couples' mean scores, except for IVF, AIH&D, S/W, and S/S. Adoption was the most acceptable alternative for fertile couples, whereas it was seventh for infertile couples.

As can be seen in Table 1, infertile wives and husbands showed the same hierarchical ranking of acceptability of infertility interventions, although the wives were generally more favorable toward the use of interventions. Fertile husbands and wives generally showed agreement within couples for acceptability of infertility interventions, except for male hormones, AID, S/W and S/S.

Figure 1 shows the structure of infertile couples' attitudes about 11 infertility interventions. These results were generated by applying multidimensional scaling to a matrix of correlation coefficients that reflect similarities of endorsements. In the figure, small distances between interventions imply high similarity in patterns of endorsement, and large distances imply low similarity (i.e., independence) in patterns of endorsement.\*\* As can be seen in Figure 1, infertile couples show five clusters according to similarity of endorsement: (1) interventions in which only one member of the couple is a known biological parent, or another person is involved (S/S, S/W, AID, and AIH&D); (2) IVF and artificial insemination with husband's sperm (AIH); (3) temporary tying of the cervix to prevent miscarriage; (4) hormone medications; and (5) adoption.

Figure 2 shows multidimensional scaling results for fertile couples. Fertile couples showed less discrimination among the 11 techniques than the infertile couples did, with three clusters being depicted: (1) interventions in which only one member of the couple is a known biological parent, or another person is involved (S/S, S/W, AID, and AIH&D); (2) adoption, and (3) the remaining six interventions. All interventions, for both the infer-

\*\*To select the appropriate dimensional solution, one should assess how well the configuration approximates the actual data. This can be measured by Kruskal's stress coefficient, which is .10 and .07 (i.e., "fair" to "good") for the two-dimensional solutions of Figures 1 and 2, respectively.



tile and fertile couples, are about equidistant from adoption. By comparing the results shown in Figures 1 and 2 with those in Table 1, we can see that 10 interventions also approximate a continuum across the diagram, moving from interventions viewed more negatively to those viewed more favorably.

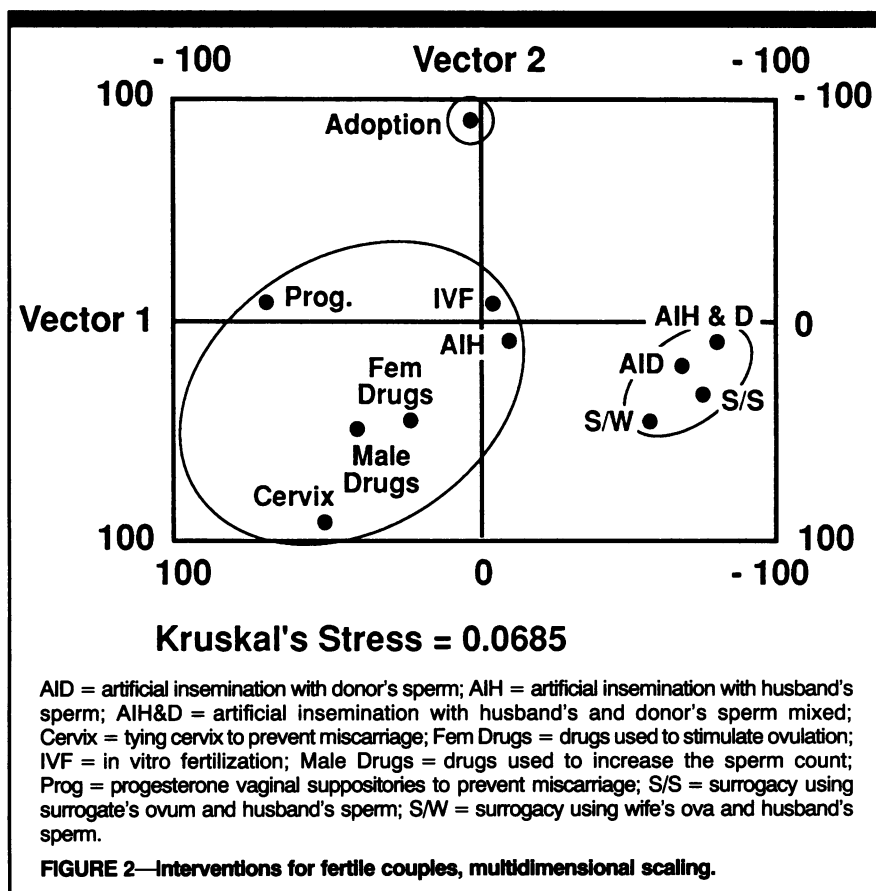
### Discussion

Comparing the frequency of the procedures and interventions used among the infertile couples with the acceptability of various infertility interventions, we can see that, in the aggregate, couples are using interventions that are generally the most acceptable to them. Adoption is the one intervention that is inconsistent with this. Although adoption was frequently pursued by infertile couples, it was the least acceptable of the interventions that infertile couples felt they could use. This result may have been influenced by the respondents who participated in this study. Couples who strongly prefer to be the biological parents of their child may be the couples who seek treatment from an infertility specialist (our primary source of referral for infertile couples). Although the couples in this study may have proceeded

with investigation of adoption to assure themselves of success in eventually having a child, they may not yet have been ready to accept this as their ultimate intervention.

Comparing infertile couples to fertile couples, we see that the infertile couples viewed all interventions, except for adoption, more favorably than did the fertile couples. The explanation for this may be the same as stated in the previous paragraph, but a different explanation is also possible. Some couples in our pretest who adopted after receiving infertility treatment spoke about not seriously considering adoption as an intervention initially because they had not considered it an alternative treatment. It is known that surprise and shock are among the first emotions felt by couples when they suspect they may be infertile.<sup>3,4</sup> It may be that knowledge of infertility comes as such a surprise to some people that they do not recognize all the options available to them and instead focus only on seeing an infertility specialist.

Both fertile and infertile couples viewed interventions in which only one member of the couple is a biological parent the most negatively. This attitude may be explained by members of the couple



preferring equity in relation to the child; that is, if both parents are unable to have a child biologically, then perhaps it is better to have neither be a biological parent and to adopt a child instead.

The multidimensional scaling shows that within their clusters, infertility interventions seem to follow a continuum from those that allow only one member of the couple to be a known biological parent to those that allow both spouses to be biological parents. These 10 interventions are

roughly equidistant from adoption, presumably because neither member of the couple would be a biological parent with that intervention.

Future research is necessary to determine the extent to which the pattern of attitudes found here is representative of that in the general population. These findings have implications for health care providers regarding the reluctance that couples experiencing fertility problems may have, at least initially, to accept some in-

terventions required for the couple to conceive. These findings could serve as a general guide for ease of acceptance of certain interventions and for the degree of emotional support some couples may require in order to make an informed decision about the use of a particular technique. Couples may benefit by having the alternative of adoption addressed and given legitimacy as an acceptable intervention from the onset of infertility treatment. The finding that infertile couples had more favorable attitudes than did fertile couples toward various interventions suggests that when couples are confronted with more information and personal necessity, their attitudes about infertility interventions become more positive. □

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