KAP study of infertility among Saudi couples

Mostafa A. Abolfotouh
Professor & Section Head - Biobanking
King Abdullah International Medical Research Center
Riyadh, Saudi Arabia
Infertility is defined as the failure of a couple to conceive a pregnancy after trying to do so for at least one full year.

It has a huge psychological burden on the infertile couple especially the women.

It may lead to depression or even suicidal tendencies, and much other psychological pathology.
Background (Cont.)

• Increasing the level of knowledge may help in decreasing the incidence of infertility by avoiding the risk factors that might lead to it.

• It may also help the society understand and empathize with the infertile couple which eventually might lead to decreasing the psychological burden of the subject at hand.
Objectives

- To assess knowledge of infertile & fertile Saudi subjects on infertility.
- To assess attitude of infertile & fertile Saudi subjects towards infertility and its social consequences.
- To identify infertile subjects' expectations of success rate of IVF.
- To determine the practices of infertile Saudi subjects to promote their fertility before attending IVF clinic.
Methodology

Study Design:
Comparative cross-sectional study.

Study Setting:
King Abdul Aziz medical city, Riyadh, Saudi Arabia
1. IVF (In Vitro Fertilization) unit.
2. Outpatient clinic.
Study sample

Sample Size

- 269 (IVF)
- 104 (OP)
**Study subjects & Sampling Technique**

- Based on 25% of good knowledge in a previous study, with confidence limit of 95%, and level 5% precision, an estimated sample size was 277 subjects.

- Subjects were allocated from outpatients at KAMC during period between 24\textsuperscript{th} June-4\textsuperscript{th} July, 2012, and their accompanying who were willing to participate in the study.

- All infertile patients who attended IVF clinic (n=104) during the same period of study.
Data collection method

• A previously validated interview questionnaire,

1. Demographical data (age, gender, occupation, marital state, etc).
2. Knowledge about infertility. (15 factual statements)
3. Attitudes towards infertility. (7 attitudinal statements)
4. Attitude towards social consequences of infertility. (6 attitudinal statements)
5. IVF Patients’ characteristics (type of infertility, previous IVF trials, and patient’s expectations of success rate of IVF, and previous practices done to improve fertility).
Results
Sociodemographic Characteristics
Sociodemographic characteristics of the IVF patients and fertile outpatients

- **Gender (N=373)**
  - Male: 74%
  - Female: 26%
  - P<0.001*

- **Age (35.05±10.05 yrs)**
  - 15-24: 11%
  - 25-39: 61%
  - 40-59: 25%
  - ≥60: 3%
  - P=0.001*

- **Origin (N=373)**
  - Urban: 93%
  - Rural: 7%
  - P=0.833

- **Education (N=373)**
  - ≥2ndry: 68%
  - < 2ndry: 32%
  - (P=0.122)

- **Occupation (N=373)**
  - Employed: 61%
  - Unemployed: 16%
  - Student: 17%
  - Home maker: 6%
  - No answer: 6%
  - (P<0.001*)

- **Monthly Income (N=373)**
  - <1,500: 23%
  - 1,500-3,000: 42%
  - >3,000: 29%
  - No answer: 6%
  - P<0.001*

* denotes statistical significance p<0.05
Infertility-related characteristics of IVF patients

Type of visit (N=99)
- First: 27%
- Follow-up: 73%

Type of Infertility (N=99)
- 1ry: 53%
- 2ry: 47%

Type of Infertility (N=99)
- Male: 36%
- Female: 30%
- Both: 5%
- Unknown: 29%

Affected person(s) (N=99)
- Male: 36%
- Female: 30%
- Both: 5%
- Unknown: 29%

Diagnosis in Men (N=45)
- Oligospermia: 32%
- Azospermia: 7%
- Teratospermia: 3%
- High semen viscosity: 1%
- Low semen volume: 2%
- Hyperprolactinemia: 4%

Diagnosis in Women (N=54)
- Unexplained: 21%
- Vaginal septum: 1%
- Fallopian tube block: 5%
- Anovulation: 12%
- Endometriosis: 3%
- Polycystic ovary: 9%

Expected success rate for conception by IVF? (N=92)
- >75%: 28%
- 25%-74%: 58%
- <25%: 14%
1. Level of Knowledge
Level of Knowledge about factors effecting infertility

- Poor (<50%): 1%
- Average (50-75%): 40%
- Good (>75%): 59%
Knowledge of factors that may affect sterility
Common misconceptions

<table>
<thead>
<tr>
<th>Service/Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contraceptive pills</td>
<td>67.8%</td>
</tr>
<tr>
<td>Intrauterine devices</td>
<td>79.6%</td>
</tr>
<tr>
<td>Black Magic</td>
<td>85.8%</td>
</tr>
<tr>
<td>Djinns/Supernatural causes</td>
<td>80.7%</td>
</tr>
<tr>
<td>Vigorous Exercise</td>
<td>80.4%</td>
</tr>
</tbody>
</table>
Level of Knowledge

Outpatient
- Poor (<50%): 1%
- Average (50-75%): 62%
- Good (>75%): 37%

IVF Patient
- Poor (<50%): 2%
- Average (50-75%): 50%
- Good (>75%): 48%

P=0.035

Mean scores:
- Outpatient: 41.68 +/- 1.05
- IVF Patient: 45.91 +/- 1.71
2. Level of Attitude
A. Attitude towards infertility
Level of Attitude towards infertility

- Negative (<50%): 5%
- Neutral (50-75%): 76%
- Positive (>75%): 19%
Attitude towards infertility

<table>
<thead>
<tr>
<th>Attitude</th>
<th>IVF</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infertility is a disease</td>
<td>53.9</td>
<td>44.9</td>
</tr>
<tr>
<td>Infertility is a handicap</td>
<td>15.3</td>
<td>40.5</td>
</tr>
<tr>
<td>Infertility is a simple problem</td>
<td>49</td>
<td>42.4</td>
</tr>
<tr>
<td>Society obligation to help</td>
<td>86.4</td>
<td>93.3</td>
</tr>
<tr>
<td>Problems conceiving again</td>
<td>68.3</td>
<td>87.9</td>
</tr>
</tbody>
</table>
Level of Attitude towards infertility

**Outpatient**

- Positive (>75%): 77.0%
- Negative (<50%): 17.1%
- Neutral (50-75%): 5.9%

Mean: 66.3 +/- 11.73

**IVF unit**

- Positive (>75%): 75.0%
- Negative (<50%): 1.0%
- Neutral (50-75%): 24.0%

Mean: 69.68 +/- 10.77

P=0.006
B. Attitude to social consequences of infertility
Attitude towards social consequences of infertility

- Negative (<50%): 20%
- Neutral (50-75%): 14%
- Positive (>75%): 66%
Attitude to social consequences of infertility

- Favor divorce: 38.5% (p=0.001)
- Re-marriage: 62.5% (p<0.001)
- Fertility drugs: 68.4% (p=0.003)
- Test tube baby: 70.3% (p<0.001)
- Child adoption: 60.6% (p>0.05)

IVF and OP comparison:
- Favor divorce vs. OP: 57.6% (p<0.001)
- Re-marriage vs. OP: 86.2% (p=0.003)
- Fertility drugs vs. OP: 87.5% (p<0.001)
- Test tube baby vs. OP: 92.4% (p<0.001)
- Child adoption vs. OP: 71.5% (p>0.05)
Social consequences of infertility

- Infertile women is ground for divorce: 30.9%
- Infertile woman is a valid reason for remarriage: 84.0%
- Infertile man is ground for divorce: 56.7%

Chart shows:

- 100%: Male
- 100%: Female

- 30.9% Infertile women is ground for divorce
- 84.0% Infertile woman is a valid reason for remarriage
- 56.7% Infertile man is ground for divorce
Level of Attitude towards social consequences

**Outpatient**
- 22% negative (<50%)
- 64% neutral (50-75)
- 14% positive (>75%)

**IVF unit**
- 14% negative (<50%)
- 71% neutral (50-75)
- 15% positive (>75%)

- $61.22 +/- 15.81$

- $P = .149$
Attitude of IVF patients towards infertility related issues

Primary Preference for Treatment

- Female: 89.6% Ob/Gyn specialist, 10.4% Healer/Sheikh
- Male: 100% Ob/Gyn specialist
Whom to blame for infertility?

- Husband: 3.3% (Male), 3.1% (Female)
- Wife: 3.3% (Male), 9.2% (Female)
- Both: 25.1% (Male), 21.9% (Female)
- None: 68.4% (Male), 66.3% (Female)
Percentage mean score of patients’ knowledge on and attitude towards infertility and its social consequences

<table>
<thead>
<tr>
<th>Score Type</th>
<th>IVF Clinic</th>
<th>Outpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Knowledge Score</td>
<td>45.9%</td>
<td>41.7%</td>
</tr>
<tr>
<td>Mean Attitude Score</td>
<td>69.7%</td>
<td>66.0%</td>
</tr>
<tr>
<td>Mean Social consequences Score</td>
<td>61.2%</td>
<td>64.1%</td>
</tr>
</tbody>
</table>

Significance levels:
- *P* = 0.035**
- *P* = 0.006**
- *P* = 0.149
3. Patients’ expectations of IVF success rate
Patients’ expectations of IVF success rate:

- 58% (≥75%)
- 28% (25-74%)
- 14% (<25%)
**Outcome of IVF trials**

- **Failure**: 81.3%
- **Normal Baby**: 12.1%
- **Twin**: 3.7%
- **Abortion**: 2.8%

[Bar chart showing IVF outcomes]
4. Practices by IVF patients to improve fertility
Practices by IVF patients to improve fertility

- Ruqia: 65% Male, 65% Female
- Alternative Medicine: 55% Male, 55% Female
- Exercising: 50% Male, 50% Female
- Eating Certain Foods: 40% Male, 40% Female
- Quit Smoking: 30% Male, 30% Female
- Over-counter Medications: 20% Male, 20% Female
- Stop Drinking Alcohol: 10% Male, 10% Female

Legend:
- Blue: Male
- Red: Female
Conclusion

- People with limited knowledge about fertility may engage in ineffective behaviors that could delay seeking effective interventions.
- These findings have implications for health care providers regarding the reluctance that couples experiencing fertility problems may have, at least initially, to accept some interventions required for the couple to conceive.
- Compared with fertile outpatients, patients with infertility showed significantly more favorable attitudes toward infertility and various interventions, such as IVF or fertility drugs.
Recommendations

- Public education campaigns should be directed toward correcting erroneous beliefs about the risk factors associated with infertility.
- Special emphasis should be placed on directing IVF patients to the correct knowledge and healthy practices and helping them seek medical advice as their only preference for treatment.
- Future research is necessary to determine the extent to which the pattern of attitudes found here is representative of that in the population facing infertility as well as in the general population.
Thank you