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Does Age Influence Knowledge and Attitudes about Intrauterine Devices?

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Background

- Intrauterine devices (IUDs) are considered “top tier” birth control, including for adolescent and nulliparous women.
- Usage in the U.S. has increased but lags far behind that of other similar countries.
- Barriers to IUD usage include patient attitudes and lack of education, both of which fuel persistent misinformation and lack of awareness.
- Disparities in contraceptive knowledge by age and race and in contraceptive use by race and ethnicity have been previously documented.
- There have been no published studies to date looking at the attitudes patients have about IUDs depending on age.

Objective

- Primary objective: Are there differences in attitudes and beliefs about IUDs based on age?
- We hypothesized that older women may be more familiar with the negative outcomes of earlier models of the IUD and therefore may hold more negative attitudes toward IUDs.

Materials and Methods

- We investigated women’s attitudes through a paper survey completed privately and anonymously.
- Exclusion criteria:
  - No English
  - <14 years old
  - Previously completed
  - Declined
- Survey Questions:
  - Sexual, contraceptive, and obstetric history
  - Socioeconomic questions
  - Familiarity with and feelings about IUD
  - Statements to agree/disagree with on a 5-point Likert scale, gauging opinions and accuracy of knowledge about IUD (see Figure 1)
  - Statistics: we performed an exploratory bi-variable analysis using t tests and chi square to determine which of the aspects of IUD knowledge or attitude differed by participant age.

Results and Discussion

- Response Rate: 38% (521 surveys/1366 individual women approached)
- Overall IUD usage in sample:
  - 25% of sample had used an IUD (110/445), and 66% of those had a positive experience (73/110)
  - 43% felt IUD was reliable (181/421)
  - Mean self-reported IUD knowledge: 5.5 (on 1-10 scale)

Figure 2 (below): Demographics of Respondents

<table>
<thead>
<tr>
<th>Age</th>
<th>n (%)</th>
<th>Race</th>
<th>n (%)</th>
<th>Education Level</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-20</td>
<td>26 (5%)</td>
<td>White</td>
<td>231 (46%)</td>
<td>Grade school/Some H.S.</td>
<td>17 (4%)</td>
</tr>
<tr>
<td>21-34</td>
<td>296 (58%)</td>
<td>Black</td>
<td>212 (42%)</td>
<td>H.S/Diploma/GED</td>
<td>99 (19%)</td>
</tr>
<tr>
<td>35-50</td>
<td>125 (25%)</td>
<td>Asian</td>
<td>35 (7%)</td>
<td>Any College</td>
<td>279 (54%)</td>
</tr>
<tr>
<td>&gt;50</td>
<td>61 (12%)</td>
<td>Other</td>
<td>26 (5%)</td>
<td>Any Graduate School</td>
<td>120 (24%)</td>
</tr>
</tbody>
</table>

- Self-rated knowledge 1-10: Mean (SD)
  - 5.6 (+/− 2.98)
  - 5.3 (+1.95)
  - 6.0 (+2.2)

- IUD reliability OR: (reference)
  - 257 (0.5 – 1.29)
  - 311 (0.56 – 1.85)
  - 328 (0.58 – 1.89)

- “IUD insertion requires surgery,” OR: (reference)
  - 494 (0.51 – 1.63)
  - 923 (0.28 – 3.31)
  - 47.4 (10.2 – 2.15)

- “Hormonal birth control is safe and effective.” OR: (reference)
  - 3.64 (1.97 – 6.69)
  - 2.51 (1.42 – 4.44)
  - 1.005 (0.62 – 1.76)

Figure 3 (below): Prior Pregnancy

- Ever used IUD Y = n (%) Y – 0 (0%) Y – 74 (29%) Y – 21 (18%) Y – 12 (24%) p-value 0.009
- IUD reliability (Y) – Positive n (%) (Y) – 13 (20%) (Y) – 106 (44%) (Y) – 45 (41%) (Y) – 20 (44%) p-value 0.025
- “IUD insertion requires surgery,” D – Negative n (%) D – 8 (53%) D – 174 (70%) D – 35 (80%) p-value 0.046
- “Hormonal birth control is safe and effective.” A – Agree n (%) A – 2 (13%) A – 123 (52%) A – 52 (47%) A – 16 (37%) p-value 0.012

- We then performed regression analysis to assess for confounding by other demographic factors using analysis of variance, logistic regression, or ordinal logistic regression as appropriate for continuous, 2 level, and 3 level outcomes, respectively.

Conclusions and Next Steps

- We found no significant differences in what women think or know about IUDs based on age.
- Study limitations include voluntary nature of the survey and use of the Jefferson OB-GYN waiting area as representative of the population at large (the question of external validity).
- If attitudes about IUDs differ, perhaps specific contraception counseling interventions can be created to target these beliefs.
- Areas for further research within survey data include investigations into several possibly significant differences between black and white respondents, as well as survey results related to provider trust, sources of birth control information, and health literacy.

References

2. Dehlendorf, Sara Edwards, Lisa Perriera, MD, MPH, and Rebecca Mercier, MD, MPH. Department of Obstetrics and Gynecology, Thomas Jefferson University, Philadelphia, PA

Figure 4 (below): Differences between age groups did not retain statistical significance when accounting for confounding factors, such as education level, gravidity, and parity, with the one exception that women aged 21-34 were significantly more likely to be nulliparous than their younger counterparts to agree with the statement “Hormonal birth control is safe and effective.”

Outcome

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<tr>
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<th>&gt;50</th>
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<td>Self-rated knowledge 1-10: Mean (SD)</td>
<td>3.4 (reference)</td>
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