CONTRACEPTIVE USE IN NICARAGUA: A CROSS-SECTIONAL SURVEY COMPARING SOCIAL ATTITUDES, ACCESS, EDUCATION, AND MODERN CONTRACEPTIVE USE IN WOMEN OF REPRODUCTIVE AGE IN RURAL AND URBAN CLINICS


UC DAVIS SCHOOL OF MEDICINE, SACRAMENTO, CA, USA

BACKGROUND

Unplanned births are a major public health problem in Nicaragua. In 2001, 48% of Nicaraguan births were unplanned (1) compared to 23% in the United States (2). The United Nations Population Fund (UNFPA) set aside $7.8 Million for sexual and reproductive health and education for Nicaraguan youth from 2013-2017 (3). Our study aimed to assess current social attitudes, access, education, and use of modern contraceptives of female patients in specific urban and rural clinics affiliated with our MEDICOS (Medical Inter-Cultural Opportunities for Students) global health partnership with UNAN (National Autonomous University of Nicaragua).

We hypothesized that women living in urban settings would report more access, education, and use of modern contraceptives, as well as more accepting attitudes and beliefs concerning modern contraceptive methods compared to women living in rural areas.

RESULTS

We conducted a cross-sectional study comparing social attitudes, access, education, and use of modern contraceptives in Nicaraguan women of reproductive age (18-49 years old) in rural and urban clinics and hospitals. These clinics were located in and around León, Totogalpa and Sabana Grande, Nicaragua and were affiliated with UNAN or MEDICOS. By convenience sampling, 207 women were selected to complete surveys from May 11th to June 5th, 2015; 110 women were from rural regions and 97 women were from urban regions. Medical students and translators administered the surveys orally in English. The survey responses were de-identified with collection of only broad demographic data, and oral informed consent was obtained from participants. UC Davis IRB and the Director of UNAN-León approved the study. Statistical analysis was done using chi square tests to evaluate the association between categorical variables, and we considered p<0.05 as significant.

Figure 1: Access to contraceptive methods, personal experience. “My partner is willing to use contraceptive methods to prevent or delay pregnancy” (Rural=150, Urban=94) *** Significant at p-value <0.0001

Figure 2: Percent agreement to “I have options to choose from when I can get birth control” *** Significant at p-value = 0.0001

Figure 3: Comparison of level of highest education, significant at p-value = 0.0001

Figure 4: Familiarity with contraceptive methods, stratified by education level

Figure 5: Current contraceptive use. Use of Nuvaring, implant, hormonal IUD, emergency contraception, female condoms, diaphragm and spermicides were not reported and therefore not included above. Note: Urban=85, Rural=96

Figure 6: Reproductive health knowledge assessed by: “I know where I can obtain birth control” and “I am comfortable with the way in which birth control should be used”.

Figure 7: Attitudes and beliefs. Assessed by percent of participants who agreed with the following: Partner influence, Religion influence, Comfort avoiding a doctor, BC improves quality of life, BC helps reach life goals, BC helps improve quality of life. "Life goals: Using birth control improves my quality of life" * Significant at p-value <0.05.

DISCUSSION

As expected, we found that rural women reported less access to clinics and pharmacies near their homes (Fig 1, p<0.001). When we looked at all women with higher education, urban women still reported more access to pharmacies and clinics (p<0.001) while there was no difference in women with lower education (Fig 2), indicating that both education and location likely play a role in access to contraceptives.

Urban women did report significantly higher formal education (Fig 3, p<0.01), and more familiarity with several different types of contraceptive methods (Fig 4, p<0.05). However, aside from familiarity with female condoms there was no significant difference in familiarity with other modern contraceptive methods. Furthermore, there was no significant difference between contraceptive methods in current use (Fig 3) or reported reproductive health knowledge (Figure 6). These findings suggest that reproductive health education efforts may be reaching women in both urban and rural communities equally.

Our data showed minimal differences in attitudes and beliefs between rural and urban women. The only significant difference found was in the belief that their partner should decide on birth control (Fig 7, p<0.05). However, when stratified by education level this disappeared (Figure 8) suggesting that the regional differences in attitudes and beliefs were influenced by education not location.

Limitations: Convenience sampling of women in clinics or hospitals limited our study’s generalizability. In addition, unmet need was not directly addressed in the survey. However, our data gives us insight into the climate of contraceptive use in clinics our MEDIOS program serves.

METHODS

We conducted a cross-sectional study comparing social attitudes, access, education, and use of modern contraceptives in Nicaraguan women of reproductive age (18-49 years old) in rural and urban clinics and hospitals. These clinics were located in and around León, Totogalpa and Sabana Grande, Nicaragua and were affiliated with UNAN or MEDICOS. By convenience sampling, 207 women were selected to complete surveys from May 11th to June 5th, 2015; 110 women were from rural regions and 97 women were from urban regions. Medical students and translators administered the surveys orally in Spanish. The survey responses were de-identified with collection of only broad demographic data, and oral informed consent was obtained from participants. UC Davis IRB and the Director of UNAN-León approved the study. Statistical analysis was done using chi square tests to evaluate the association between categorical variables, and we considered p<0.05 as significant.

ACKNOWLEDGEMENTS

Funding was provided by the Medical Student Research Fellowship, UC Davis School of Medicine. We would also like to thank Michael Lawson, MD, Jason Auriemma, MD, Nathan Hitzeman, MD, Alberto Odor, MD, Melissa Chen, MD, MPH, UNAN, and the numerous physicians we worked with during our stay in Nicaragua.

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