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Cultural adaptation among Hispanic women as related to awareness and acquisition of emergency contraception

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Abstract

Background—The study was conducted to examine the relationship between cultural adaptation (acculturation), contraceptive use, personal history of induced abortion, and emergency contraceptive (EC) awareness and acquisition among a sample of young sexually active Hispanic women.

Study Design—A total of 959 Hispanic women between 16 and 24 years of age (mean 20.71 years $\pm$ 2.42 SD) completed a survey containing questions on EC acquisition and awareness, acculturation, contraceptive used at last intercourse, and history of induced abortion. Data were analyzed using logistic regression analyses.

Results—Acculturation ($p=.017$), income ($p=.024$), and education ($p<.001$) were positively associated with awareness of EC. Additionally, acculturation ($p=.003$) and a history of an induced abortion ($p=.026$) were positively associated with acquisition of EC.

Conclusions—Educational programs should make an effort to include Hispanic women with lower acculturation levels as increasing their knowledge about EC use and its mechanism of action may greatly reduce the number of unplanned pregnancies in this population.

Keywords

Emergency contraception; Hispanic; acculturation; cultural adaptation

1. Introduction

In 2006, the United States FDA approved the pharmacy availability emergency contraceptive (EC) medication for women 18 years of age or older. A new one-dose formulation was approved in July 2009 and is now available in pharmacies to women at least 17 years of age [1]. While increasing availability of EC through pharmacy access has the potential to reduce rates of unintended pregnancy, the impact of this increased availability has not been examined in the Hispanic population. This deficiency is important as 76% of pregnancies among Hispanic women in the United States are unplanned [2].

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Research conducted before the FDA approval of EC in pharmacies indicates that Hispanic women are less likely to be aware of or have accurate knowledge of EC compared to Caucasian women [3]. Further, a multi-ethnic study including Hispanic women found that more education, the use of contraception, and a history of abortion predicted awareness and knowledge of EC [4]. The same study found that a willingness to use EC was predicted by a higher income. In addition, receiving counseling from a health care provider about EC usage has been found to be a strong predictor of EC use. However, while Hispanic women in the United States are more likely to receive counseling about EC than women from other ethnic groups [4], they still report less awareness of EC compared to women from other ethnic groups [5,6]. This suggests that the counseling Hispanic women in the United States are receiving is ineffective. Cultural barriers, such as language, are likely partially responsible for this problem. Therefore, examining cultural barriers is essential to understanding EC use among Hispanic women.

Cultural adaptation, or acculturation, is a concept that describes the extent to which an individual from a non-dominant ethnic group (e.g., Hispanic) adopts different aspects of the culture of the dominant ethnic group (Caucasian) [7,8]. Individuals generally fall into one of three types of acculturation: highly acculturated, bicultural or low in acculturation. A highly acculturated individual is someone who has adopted many of the values, beliefs, and traditions—including language—of the dominant culture, a bicultural individual has adopted some beliefs of the dominant culture while at the same time retaining values from their own culture, and an individual with a low level of acculturation has adopted few to none of the values of the dominant culture.

A literature search did not reveal any previous research that examined the relationship between acculturation and EC. Therefore, it is not known whether differences in knowledge and use of EC exist among individuals with three different levels of acculturation. However, language is one of the strongest indicators of acculturation and previous research has found that obtaining information about EC is more difficult for Spanish-speaking women than for English-speaking women [9]. Given that information is related to knowledge and knowledge is associated with EC use, it is likely that EC use among the Hispanic population is related to acculturation.

In this study, we examined the relationship between acculturation and EC since the changes in FDA recommendations for increased pharmacy access to EC. We predicted that more acculturated, sexually active young Hispanic women would be more likely to report hearing about EC (awareness) or to have obtained EC (acquisition) than less acculturated, sexually active young Hispanic women. In addition, given previously identified associations in the literature, we examined contraceptive type at last intercourse and history of induced abortion along with other demographic factors to predict EC awareness and acquisition.

2. Methods

Data for the present study were collected between June 1, 2008, and May 29, 2009, as part of a larger, ongoing cross-sectional study. Women between 16 and 24 years of age who were patients in one of five University of Texas Medical Branch (UTMB) family planning clinics in southeast Texas were screened for eligibility for the main study. Those unable to understand English or Spanish were excluded from participation. During the recruitment period captured in the present study, approximately 80% of those meeting eligibility criteria agreed to participate and provided written informed consent. From available refusal data, women who refused to participate did not differ significantly by age ($p = .966$) from participants. Women were reimbursed \$5 for their time. All procedures and measures were approved by the UTMB Institutional Review Board.

A total of 2091 women completed the survey. As this study focuses on sexually active women of Hispanic origin, participants who were not Hispanic or who had never engaged in sexual intercourse were excluded from analysis. The final sample for analysis included 959 participants.

Demographic data including age, ethnicity, marital status, clinic site, and education level were collected. Contraception use at last intercourse was included to evaluate EC usage differences according to risk of pregnancy. Contraception type was grouped according to method efficacy as none (no pharmacological or barrier method used), barrier method (condoms), cyclic hormonal contraception (oral contraceptive pills, transdermal patch, vaginal ring), or long-term contraception (depot medroxyprogesterone acetate injection, implantable hormonal contraception, intrauterine device). Participants also responded whether they had never been pregnant, never had an induced abortion, or if they had one or more induced abortions. Questions regarding EC included awareness of the existence of EC and the acquisition of EC for personal use (have you ever purchased or has anyone ever purchased EC for you to use).

Four items from the language portion of the widely employed Short Acculturation Scale for Hispanics [10] measured acculturation. The items assessed were language spoken as a child, language spoken at home, language thought in, and language spoken with friends. Cronbach's alpha was used to determine the reliability of the scale for our sample ($\alpha = .961$). The response scale ranged from *Only Spanish* (1) to *Only English* (5). Higher scores indicated higher levels of language acculturation. Scores on each item were summed and then the summed scores were divided into three groups: low acculturation (scores between 2–9), bicultural (scores between 10–14), and high acculturation (scores between 15–20).

Descriptive statistics were derived using SPSS 17.0 for Windows (Chicago, IL). Specifically, means (M), standard deviations (SD), correlations, and reliability tests were calculated. For all variables, missing data were less than 5% with the exception of income, which was 13.2%. Additional cases were excluded automatically by SPSS during analyses due to missing data.

Binary logistic regression models were developed to examine the relationship between acculturation, contraceptive type, history of induced abortion, and the two EC outcome variables. Specifically, the logistic model examined the ability of the variables to predict awareness of EC and the acquisition of EC. Additionally, we included the demographic variables age, education, income, and marital status in the initial model to examine and control for their influence on the EC variables. We also included clinic site in the initial models to control for any clinic differences in education and counseling. A more parsimonious model was created after eliminating variable paths that were statistically non-significant. A two-sided significance level of .05 was used to indicate statistical significance. Odds ratios, 95% confidence intervals, and levels of significance are reported for the final model.

3. Results

The mean age of the sample was 20.71 ± 2.42 SD years of age. Over one half had an income less than \$15,000 per year (Table 1). Of the sample, 54.0% reported awareness of EC and 11.9% reported having acquired EC. Most of the participants had low acculturation levels (41.8%), while 22.0% were bicultural and 36.2% had high levels.

A logistic regression model was estimated to simultaneously examine the relationships between acculturation, contraceptive type, a history of induced abortion, demographic variables, and the EC outcome variables. The model results indicated that acculturation,

income and education significantly predicted awareness of EC among our sample. Specifically, higher acculturation ($p=.017$), income ($p=.024$), and education ($p<.001$) were positively associated with awareness of EC (Table 2). Contraceptive type ($p=.358$), history of induced abortion ($p=.444$), age ($p=.747$), clinic site ($p=.246$), and marital status ($p=.711$) did not significantly predict awareness of EC and were therefore removed from the model. Additionally, we found that acculturation ($p=.003$) and history of induced abortion ($p=.026$) were positively associated with acquiring EC (Table 3). Contraceptive type ($p=.376$), age ($p=.065$), income ($p=.379$), education ($p=.148$), clinic site ($p=.391$), and marital status ($p=.366$) were non-significant; therefore these variables were removed from the model. In the final models, acculturation predicted both EC outcome variables, education and income predicted awareness of EC, and history of induced abortion predicted acquiring EC.

4. Discussion

The current study highlights the influence of acculturation on the awareness and acquisition of EC among young sexually active Hispanic women in the United States. We observed, as predicted, that highly acculturated women were more likely to be aware of the existence of EC as compared to bicultural and low acculturated women. In addition, highly acculturated and bicultural women were more likely to obtain EC for personal use as compared to low acculturated women. We are unaware of other studies that have examined the relationship between acculturation and EC use among Hispanic women in the United States. However, this finding was not surprising given that language currently spoken is one facet of acculturation and previous researchers have found that solely Spanish-speaking women have less knowledge of EC and are less likely to use EC [3].

In contrast with previous studies [4], contraceptive type or history of induced abortion did not predict awareness of EC. This may be due to differences that exist between our sample and the sample of the previous study. Specifically, our sample was younger and was composed solely of Hispanic women. Future studies should examine where these Hispanic women are getting information about EC and the reliability of these sources.

We also found that history of induced abortion did predict the acquisition of EC. Specifically, among the young women who have been pregnant, those who reported undergoing a previous induced abortion were more likely to have obtained EC than those women who had not undergone a previous induced abortion. Our findings make sense when considering previous research which suggests that women who have undergone an abortion are more likely to receive EC counseling and women who receive counseling are more likely to use EC [4]. Our study results lend further support to the idea that young sexually active Hispanic women may not receive counseling about EC until after they are faced with an unwanted pregnancy and have made the decision to undergo an induced abortion. Counseling about EC at routine office visits has the potential to help young sexually active Hispanic women avoid this situation altogether.

There are several limitations to our findings. First, the design of this study was cross-sectional and correlational, therefore no causal conclusions can be drawn. Moreover, variables such as gravidity, parity, currently desiring a pregnancy, or attitude toward an unplanned pregnancy which may influence the use of and counseling about EC, were not included in the questionnaire. Further, the majority of the current sample was of Mexican ethnic origin which limits the generalizability of the findings to other geographical regions of the United States. While 67% of Hispanics living in the United States are of Mexican origin [11] caution should be taken in applying these findings to other populations of Hispanic women.

A major strength of this study is the large sample size of Hispanic participants. Furthermore, the multi-site conduct of the trial enabled us to sample from a large, diverse population across southeast Texas who were receiving equivalent care according to the standardized UTMB treatment guidelines established for all of the regional clinics. Thus, the current findings are generalizable across Texas. Further, this study provides a preliminary look into the role of acculturation in EC awareness and acquisition among Hispanic women. Future research should examine the relationship between acculturation, counseling, and all methods of contraception.

It is generally accepted that young Hispanic women in the United States are at great risk for unintended pregnancies. It is also thought that educating this group of women about EC use and its mechanism of action will increase the intention and willingness to use EC in the future [12,13], thereby reducing unplanned pregnancies. This study provides more support for the importance of increasing awareness and use of EC among young sexually active Hispanic women in the United States. We would further suggest that health care providers and other educators be sensitive to the level of acculturation of their Hispanic patients when determining who should be counseled. Our findings indicate that less acculturated Hispanic women are significantly less aware of the existence of EC as a contraceptive option and less likely to intend to use EC as compared to bicultural and highly acculturated Hispanic women. This indicates the need to focus on effectively delivering information about EC to this group. Further, given the low overall awareness and acquisition of EC among Hispanic women that we and others have found [3,4], a greater understanding of the level of acculturation of Hispanic patients will allow us to tailor interventions to increase both the knowledge and use of EC and decrease the rate of unintended and unwanted pregnancies among this population.

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Table 1

Demographic characteristics of the sample (N=959)

	N (%)
Education	
Currently in high school	139 (15.0)
Did not complete high school	283(30.5)
High school equivalency or more	505 (54.5)
Marital status	
Single, never married	407 (42.5)
Married or living with partner	492 (51.4)
Separated, divorced, or widowed	59 (6.2)
Income	
< \$15,000 per year	482 (57.9)
\$15,000 to \$29,999 per year	238 (28.6)
≥\$30,000 per year	112 (13.5)
Contraceptive type at last intercourse	
None	318 (33.4)
Condoms	229 (24.1)
Cyclic hormonal contraception	200 (21.0)
Long-term contraception	204 (21.5)
History of induced abortion	
Never been pregnant	234 (24.4)
Never had an abortion	472 (49.2)
One or more abortions	253 (26.4)

Frequencies that do not sum to total represent missing data.

Table 2

Logistic regression model for EC awareness (N=798)

Predictor	β	SE β	p value	Exp (β)	95% CI for Exp (β)
Constant	.98	.22	<.001	2.67	
Education ^a			<.001		
Currently in HS	-.76	.28	.007	.47	.27-.81
Did not complete HS	-.62	.18	<.001	.54	.38-.76
Income ^b			.024		
< \$15,000 per year	-.63	.23	.007	.53	.34-.84
\$15,000 to \$29,999 per year	-.58	.25	.022	.56	.34-.92
Acculturation ^c			.017		
Low acculturation	-.41	.18	.025	.67	.47-.95
Bicultural	-.51	.20	.011	.60	.40-.89

^aReference group = High school equivalency or more.^bReference group = $\geq$ \$30,000 per year.^cReference group = High acculturation.

Table 3

Logistic regression model for obtaining EC (N=940)

Predictor	β	SE β	p value	Exp (β)	95% CI for Exp (β)
Constant	-2.12	.22	<.001	.12	
Abortion ^a			.003		
Never been pregnant	-.21	.28	.438	.80	.46–1.40
Never had an abortion	-.65	.25	.01	.52	.32–.85
Acculturation ^b			.003		
Bicultural	.94	.27	.001	2.57	1.50–4.39
High acculturation	.57	.27	.032	1.76	1.05–2.96

^aReference group = Has had one or more induced abortions.

^bReference group = Low acculturation.