

UCSF

UC San Francisco Previously Published Works

Title

Attitudes of California Registered Nurses About Abortion

Permalink

<https://escholarship.org/uc/item/1dt1f786>

Journal

Journal of Obstetric Gynecologic & Neonatal Nursing, 49(5)

ISSN

0884-2175

Authors

Swartz, Alicia

Hoffmann, Thomas J

Cretti, Elizabeth

et al.

Publication Date

2020-09-01

DOI

10.1016/j.jogn.2020.06.005

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Attitudes of California Registered Nurses About Abortion

Alicia Swartz, Thomas J. Hoffmann, Elizabeth Cretti, Candace W. Burton, Meghan Eagen-Torkko, Amy J. Levi, E. Angel Aztlan, and Monica R. McLemore

Correspondence

Monica R. McLemore, PhD, MPH, RN, FANN, University of California, San Francisco, 2 Koret Way, N431H, San Francisco, CA 94143.
monica.mclemore@ucsf.edu

Keywords

abortion
contraception
nurses
sexual and reproductive health

ABSTRACT

Objective: To describe attitudes about abortion among registered nurses (RNs) licensed in California and to determine if demographic characteristics were associated with these attitudes.

Design: Cross-sectional, one-time survey.

Setting: Online between 2015 and 2017.

Participants: Nurses with active RN licenses in California ($N = 2,500$).

Methods: An anonymous survey was sent to a random sample of 2,500 RNs with active California licenses between 2015 and 2017 to assess their personal and professional demographic characteristics and their attitudes toward abortion. Using scores on the Abortion Attitudes Scale, we dichotomized participants into proabortion and antiabortion categories. We used chi-square tests to determine differences based on demographic characteristics.

Results: Data from 504 RNs licensed in California are included in this analysis. Most respondents identified as female ($n = 462$, 92%), older than 50 years of age ($n = 379$, 75%), married ($n = 364$, 72%), White ($n = 354$, 70%), and Christian ($n = 322$, 64%). They were more likely to have negative attitudes toward abortion care if they identified as Christian ($p < .001$) and more positive attitudes if they identified as White ($p < .001$) independent of identifying as Christian.

Conclusions: Respondents had a complex range of attitudes about abortion. In some cases, these attitudes aligned and/or conflicted with stated religious orientation. This study highlights the demographic characteristics that are associated with the attitudes and beliefs about abortion among RNs licensed in California.

JOGNN, 49, 475–486; 2020. <https://doi.org/10.1016/j.jogn.2020.06.005>

Accepted June 2020

Alicia Swartz, PhD, MSN, PNP, is an assistant professor, School of Nursing, California State University, East Bay, CA, and a pediatric nurse practitioner, Roots Community Health Center, Oakland, CA.

Thomas J. Hoffmann, PhD, is an associate professor, Department of Epidemiology and Biostatistics, University of California, San Francisco, CA.

(Continued)

The authors report no conflicts of interest or relevant financial relationships.

The World Health Organization (2011) defined sexual and reproductive health (SRH) as follows:

A state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its function and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capacity to reproduce and the freedom to decide if, when and how often to do so. (p. 4)

Contextualizing the nursing role and abortion within SRH has long been the focus of international work, given the prevalence of unsafe abortion, decreased access to

reproductive health services, and gender inequality (Langer et al., 2015). The earliest study on the attitudes of registered nurses (RNs) about abortion care in the United States was published in 1968 (Fonseca, 1968).

In the decade between 1970 and 1980, RNs were surveyed concurrently with Gallup polls of the general public to determine their attitudes, beliefs, and knowledge regarding a wide range of ethical topics, including abortion, contraception, circumcision, and sterilization (Sandroff, 1980). In a large ($N = 12,500$) population-based survey of RNs' attitudes, beliefs, and knowledge about SRH care and abortion care, Sandroff (1980) found that RNs held more liberal views about abortion than the general population. At that time, 20% of the general population believed abortion was never morally justified, whereas only 12% of

The attitudes of registered nurses about abortion are not known.

RNs felt this way. Furthermore, 8 of 10 RNs surveyed felt comfortable providing information about birth control options (Sandroff, 1980).

According to estimates from 2016, the United States had more than 4.1 million licensed RNs (National Council of State Boards of Nursing, 2016), and approximately 392,485 were actively licensed in California, including those in advanced practice roles (California Board of Registered Nursing [CA BRN], 2016). In California, three state laws (AB2348, AB980, and AB154) were passed in 2012 and 2013 that significantly expanded nursing practice and patient access to abortion and contraception services. AB2348, which was passed in 2012, granted RNs the authority, under standardized procedures, to initiate and provide hormonal contraception without the need for the woman to see a prescribing clinician for up to 3 years. This expanded the existing scope of practice of California RNs to provide no-cost contraceptives for a year under the 1997 Family Planning, Access Care, and Treatment program (Parker et al., 2017).

The other two laws, AB980 and AB154, which were passed in 2013, removed multiple infrastructural and regulatory barriers to the provision of abortion care and allowed advanced practice registered nurses (APRNs) to provide first-trimester aspiration abortions. These laws were grounded in evidence from a 6-year noninferiority study to assess the safety, efficacy, and perceived competence and confidence of APRNs in the provision of abortion care (Levi et al., 2018; Weitz et al., 2013; Weitz et al., 2014).

All three of these practice-expanding laws were enacted without any assessment of RN skills or current attitudes, beliefs, or knowledge about SRH, abortion, or contraception care. To begin the essential work necessary to understand the capacity of California RNs to support the reproductive life goals of their clients, we conducted a statewide, multidimensional survey. The aims of this analysis were to describe attitudes about abortion among RNs licensed in California and to determine if demographic characteristics were associated with these attitudes.

Elizabeth Cretti, MPH, MSN, ANP-BC, is a charge nurse, Women's Options Center, Zuckerberg San Francisco General, San Francisco, CA.

Candace W. Burton, PhD, RN, AFN-BC, AGN-BC, FNAP, is an assistant professor, Sue and Bill Gross School of Nursing, University of California, Irvine.

Meghan Eagen-Torkko, PhD, CNM, APRN, is an assistant professor, School of Nursing and Health Studies, University of Washington, Bothell, WA.

Amy J. Levi, PhD, CNM, WHNP-BC, FAAN is the Leah Albers Endowed Professor of Midwifery, School of Nursing, and the Vice Chancellor for Academic Affairs, University of New Mexico, Albuquerque, NM.

E. Angel Aztlan, PhD, CNM, WHNP-BC, is a clinician, Family Planning Associates, Chicago, IL.

Monica R. McLemore, PhD, MPH, RN, FAAN, is an associate professor, Department of Family Health Care Nursing, University of California, San Francisco, CA.

Methods

Design

We used a cross-sectional survey descriptive design. Licensed RNs in California were eligible to participate if they worked for pay at any time in California between 2015 and 2017. This study was approved by the institutional review board of the University of California, San Francisco (#12-09212).

Setting

At the time of the survey administration, 392,485 RNs held active licenses in the CA BRN database. Contact information, including home address, is available for purchase from the CA BRN for research purposes. We applied no exclusion criteria other than lack of employment in California as an RN at the time of survey administration.

Sample

We received active license data from the CA BRN as two Excel spreadsheets, and we imported the data into SPSS Statistics (Version 24). We removed duplicate license data, and, in total, 334,295 RNs were eligible for the study. Of these, we removed 58,148 from the eligible count because they reported primary RN active licenses out of state ($n = 56,563$) or out of country ($n = 1,585$). We used the random number generator function to select a sample of RNs from all 58 counties of California. Counties were weighted using Family Planning, Access Care, and Treatment data (Chabot et al., 2011) and randomly sampled on the basis of the proportion of people of reproductive age who lived in the county. Finally, we identified a random sample of 2,500 RNs to receive our survey.

Procedures

In Phase 1 of the study (August 2014–December 2014), we completed beta testing of the survey questions with a sample of 25 expert RNs who provided SRH services and abortion care to determine the time necessary to complete the survey, which averaged between 15 and 20 minutes. In Phase 2 (June 2015–September 2016), we mailed paper copies of the survey to the address of record for the random sample of 2,500 RNs. We obtained written informed consent from individuals who returned the survey on paper. This second mailing included the Web link for those who wanted to complete the survey online and a self-addressed stamped envelope for return of the paper copy. Respondents who completed the online survey received a \$5 gift card after they completed the survey. Those who completed the survey on paper were provided a separate

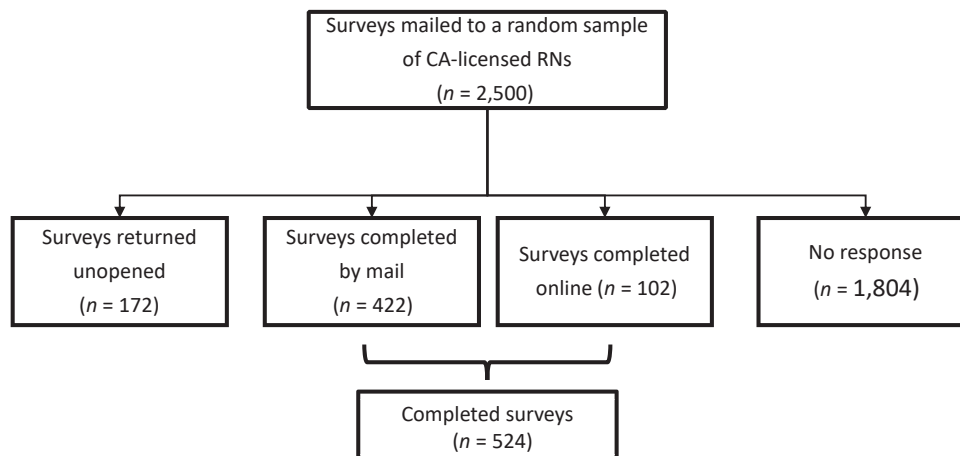


Figure 1. Data collection process.

demographic sheet that only included contact information for gift card distribution. To maintain confidentiality, personal identification information was separated from the survey results before data entry. Four research assistants worked on this project, and the lead graduate student researcher mailed the survey, received and logged the survey, and mailed the gift cards; the other three only worked on the entry of deidentified data.

The online survey was developed using the Qualtrics platform (Qualtrics, 2019), which was available to the study team behind the university firewall. The platform is compliant with Health Insurance Portability and Accountability Act regulations and has been approved by the institutional review board. The survey was anonymous, and no Internet protocol addresses were tracked. The survey had to be completed in one setting, and no identifying information was collected. The first page of the survey was the electronic informed consent, and if the potential participant did not agree to participate or did not meet study criteria, the screen would show a thank you message with no option to progress. In Phase 3 (January 2017–April 2017), a follow-up postcard was sent to RNs who did not return the original survey. The process for data collection is shown in Figure 1.

Measures

The final survey included the following domains: personal demographics, including religious beliefs; professional demographics; and attitudes and beliefs about abortion. These were adapted from extant measures to be more applicable to this study. We selected the questions to measure personal and professional demographics from

two validated instruments: the CA BRN Survey of Registered Nurses (CA BRN, 2016) and the National Nursing Workforce Survey (Insight Policy Research, 2008), which were obtained from the primary investigator who participated in the development of both surveys. The CA BRN survey was originally used in 1977 and has been continuously administered every year since then. We used questions from the 2008 version of this survey. The National Nursing Workforce Survey has been used in six waves of RN surveys in California (1990, 1993, 1997, 2004, 2006, and 2008). For personal demographics, we used all five questions from the CA BRN survey, including the one related to racial/ethnic identity. For professional demographics, we used all 33 questions about educational preparation, salary, location of work, continuing education, and principal job/position to determine how this sample of RNs was different from or similar to RNs who are routinely surveyed by the CA BRN.

Religious orientation. To ensure congruence with other surveys of non-nurse health care providers, we assessed religious orientation with response options including “Christian,” “Jewish,” “Muslim,” “Spiritual,” “Agnostic,” “Atheist,” and “Other” (Dodge et al., 2016); the likelihood of providing SRH care and clinical services; and comfort with and knowledge about abortion, contraception, and family planning (Dodge et al., 2016). The following five additional true/false items from the Sandroff (1980) study were included in the survey: (a) “I try to carry my religious beliefs through all aspects of my life”; (b) “My approach to my life is entirely based on my religion”; (c) “My approach to life is based on moral/ethical

principles, not on the values of organized religion"; (d) "Abortion is morally wrong"; and (e) "I do not support abortion for others."

Attitudes about abortion. The questions used to evaluate RN abortion attitudes came from the Abortion Attitudes Scale (AAS; Ben Natan & Melitz, 2011; Sloan, 1983). The AAS is a 14-item self-report questionnaire with items scored on a six-point Likert scale that ranges from *strongly agree* to *strongly disagree*. The items in the scale include (a) "The Supreme Court should strike down legal abortions in the United States," (b) "Abortion is a good way of solving an unwanted pregnancy," (c) "A mother should feel obligated to bear a child she has conceived," (d) "Abortion is wrong no matter what the circumstances are," (e) "A fetus is not a person until it can live outside its mother's body," (f) "The decision to have an abortion should be the woman's," (g) "Every conceived child has the right to be born," (h) "A pregnant woman not wanting to have a child should be encouraged to have an abortion," (i) "Abortion should be considered killing a person," (j) "People should not look down on those who choose to have abortions," (k) "Abortion should be an available alternative for unmarried and/or pregnant teenagers," (l) "Persons should not have the power over the life or death of a fetus," (m) "Children of unmarried people should not be brought into the world," and (n) "A fetus should be considered a person at the moment of conception."

The AAS was scored after a total was calculated for all items (with Items 1, 3, 4, 7, 9, 12, and 14 reverse scored). Sloan (1983) categorized AAS scores in five categories: 70 to 56 strong proabortion, 55 to 44 moderate proabortion, 43 to 27 unsure, 26 to 16 moderate antiabortion, and 15 to 0 strong antiabortion. During the original testing of the AAS, the Cronbach's alpha estimate of internal consistency reliability was 0.92, and confirmation of five hypotheses supported the instrument's construct validity (Sloan, 1983). Psychometric testing of the scale was conducted with self-described antiabortion respondents (lower scores) and proabortion respondents (higher scores); thus, the scale was developed specifically to dichotomize individuals based on their responses. The original scale uses the language of "prolife"/"proabortion"; however, we use the modifier of "antiabortion" for a more accurate descriptor for the category. For simplicity of interpretation, we dichotomized the AAS scale halfway within the previously categorized "unsure" category, such that less than or equal to 35

was considered antiabortion and greater than 35 was considered proabortion.

A small amount of data were missing on the AAS questions. We excluded 19 respondents who did not answer any AAS questions and one respondent who answered only 3 of 14 AAS questions. The demographic data of the excluded respondents were compared with those included in the analysis. Twenty-nine respondents did not answer between one and three AAS questions. We scaled their scores (AAS_{raw}) so that the final scores were out of the same possible total as individuals who responded to all questions. Specifically, the minimum unscaled score is $AAS_{raw,min} = k$, the maximum unscaled score $AAS_{raw,max} = 6k$, and the final scaled score is $AAS_{min} + (AAS_{raw} - AAS_{raw,min}) / (AAS_{raw,max} - AAS_{raw,min}) \times (AAS_{max} - AAS_{min})$.

Analysis

Research assistants double entered data from the returned paper surveys into an SPSS Statistics (Version 24) database and verified the accuracy of the double-entered data by comparing the two databases. The verified data were then merged with data from the online Qualtrics survey for analysis by one of the authors (M.R.M.). Statistical analysis were conducted in R (R Core Team, 2020).

We calculated descriptive statistics and frequencies and percentages for personal and professional characteristics of the respondents. Chi-square tests were used to determine associations between demographic variables (gender, age, race/ethnicity, religious orientation, and prelicensure education) and our dichotomized AAS previously described. We used a Poisson regression model with a robust variance estimate (Zou, 2004) to test if demographic variables were independently associated with the AAS. Sensitivity analysis to ensure that the excluded data were missing at random was performed using the Fisher exact test (due to small cell counts) to test for any association of the demographic variables with the 20 excluded respondents who answered three or fewer AAS questions as previously described. Statistical significance levels were set at $p < .01$, with a Bonferroni correction for the 5 demographic variables tested.

Results

Of the 2,500 surveys mailed in Phase 2, 422 surveys were completed and returned via U.S. mail, 172 were returned unopened, and 102 were

completed online. After Phase 3, there was a 21% response rate ($n = 504$), which was similar to the response rates of other California statewide surveys of RNs (CA BRN, 2016; [Insight Policy Research, 2008](#)). Sensitivity analysis of the missing data in the 20 responses that were excluded confirmed that excluded respondent surveys did not differ significantly from those included in the analysis with regard to demographic data (all with $p > .10$). Descriptive statistics of the main demographic characteristics are shown in [Table 1](#).

Demographic Characteristics

The median age category of the survey respondents was 55 to 59 years; only 5.6% ($n = 28$) were younger than age 40 years, and most identified as women. Completed surveys were received from RNs in all 58 counties in California. More than 43% ($n = 218$) of the respondents were born in California. The sample was racially diverse; 70.2% ($n = 354$) identified as White, whereas 27.6% ($n = 139$) identified their race/ethnicity in one of the remaining 19 distinct categories. Most respondents were married with children, and 81.5% ($n = 411$) had at least one pregnancy; 25.0% ($n = 126$) reported personal histories of one or more abortions.

The demographic characteristics of our respondents are similar to the demographic characteristics reported for California RNs in the 2016 Survey of Registered Nurses (CA BRN, 2016), which showed that the general population of CA-licensed RNs had a mean age of 45 years and nearly half identified as White. Our respondents were older with a median age category of 55 to 59 years, which was slightly older than the estimates for the general population of RNs in California (CA BRN, 2016).

Professional characteristics. As shown in [Table 1](#), most of the sample had education at the associate's degree/diploma program and baccalaureate levels ($n = 405$, 80.4%). Almost half of the respondents worked as hospital-based staff RNs, whereas 12.1% ($n = 61$) worked in entry-level, middle, or senior management positions; even fewer were in charge nurse roles or reported employment as patient care coordinators, case managers, or discharge planners. In addition, fewer than one tenth of the participants also had APRN certification and worked in both roles as an RN and an APRN. The majority ($n = 335$, 66.5%) of the respondents reported caring for patients of reproductive age at least once a month.

Most respondents who reported being proabortion were White, and most who reported being antiabortion identified as Christian.

Religious orientation and beliefs. As shown in [Table 2](#), 91.6% ($n = 472$) of respondents reported "religious or spiritual orientation," and most identified as Christian. With regard to the importance of religion in their lives, more than half ($n = 300$, 59.5%) of the respondents answered *true* to "I try to carry my religious beliefs through all aspects of my life," less than one fourth ($n = 112$, 22.2%) answered *true* to "My approach to my life is entirely based on my religion," and most ($n = 419$, 83.1%) answered *true* to "My approach to life is based on moral/ethical principles, not on the values of organized religion." Last, respondents overwhelmingly did not believe that abortion was morally wrong (see [Table 3](#)).

Attitudes About Abortion

Individual item analysis. Item responses to the AAS survey are shown in [Supplemental Table S1](#). Most ($n = 397$, 78.8%) respondents agreed that "Abortion is wrong no matter what the circumstances are." In addition, most agreed that abortion should not be illegal ($n = 402$, 79.8%). Although 66.4% ($n = 335$) agreed that abortion is a good way to solve an unintended pregnancy, the same proportion ($n = 335$, 66.5%) agreed that abortion should be considered killing a person. Respondents agreed that a woman should feel obligated to bear a child she has conceived ($n = 359$, 71.2%), but 337 (66.8%) agreed that a fetus is not a person until it can live outside of its mother's body. Two hundred seventy-one respondents (53.8%) agreed that every conceived child has the right to be born; however, most ($n = 397$, 78.7%) agreed that a pregnant woman who does not want a child should be encouraged to have an abortion.

AAS proabortion and antiabortion scores by demographic characteristic. The scores of the AAS were evenly distributed and interpreted in this analysis as high scores ($n = 324$) that represented strong beliefs in support of abortion and low scores ($n = 180$) that represented strong beliefs against abortion. We analyzed associations between demographic characteristics and the dichotomized AAS scores to understand variations in AAS scores (see [Table 4](#)). We found no statistically significant

Table 1: Demographic Characteristics of Participants (N = 504)

Characteristic	Frequency	Percentage	State of California ^a
			Percentage
Gender			
Female	462	91.7	88
Male	37	7.3	12
Missing	5	1.0	
Age			
29 years and younger	2	0.4	8.7
30 to 34 years	13	2.6	12.9
35 to 39 years	13	2.6	10.8
40 to 44 years	45	8.9	12.5
45 to 49 years	49	9.7	11.1
50 to 54 years	87	17.3	10.5
55 to 59 years	93	18.5	11.3
60 to 64 years	100	19.8	12.3
65 years and older	99	19.6	10
Missing	3	0.6	
Marital status			
Married	364	72.2	67.4
Married with children	307	60.9	
Married without children	57	11.3	
Divorced/widowed/separated	88	17.5	13.3
Divorced	67	13.3	
Widowed	14	2.8	
Separated	7	1.4	
Single, never married	35	6.9	19.3
Living with partner	15	3.0	—
Missing	2	0.4	
Race/ethnicity			
White/Caucasian/European/Middle Eastern	354	70.2	49.8
African American/Black/Caribbean	69	13.7	9.1
Asian/Pacific Islander	35	6.9	8.8
Hispanic/Latina	31	6.2	7.9
Other ^b	4	0.8	11.9
Missing	11	2.2	2.5
Prelicensure nursing education			
Associate's degree program	209	41.5	42.7
Baccalaureate program	196	38.9	44.5
Diploma program	64	12.7	6
Other	17	3.4	6.8

(Continued)

Table 1: Continued

Characteristic	Frequency	Percentage	State of California ^a
			Percentage
Accelerated baccalaureate program	16	3.2	—
Missing	2	0.4	
Professional nursing employment setting			
Hospital staff nurse	231	45.8	
Hospital-based nursing management	113	22.4	
Charge nurse	52	10.3	
First-line management	18	3.6	
Middle management	33	6.5	
Senior management	10	2.0	
Patient care coordinators, case managers, or discharge planners	27	5.4	
Advanced practice registered nurses	33	6.5	
Other ^c	84	16.7	
Missing	16	3.2	

Note. — = data not available for comparison.

^aCalifornia representative sample of registered nurses from the California Board of Registered Nursing, 2016 Survey of Registered Nurses. Retrieved from <https://www.rn.ca.gov/pdfs/forms/survey2016.pdf>. ^bOther includes 15 categories of race/ethnic groups. ^cOther includes 14 additional categories of nursing professions.

associations with group (pro-/antiabortion) based on age, gender, or educational preparation. Race and ethnicity were collapsed into two categories of White ($n = 352$) and others ($n = 141$). White respondents were statistically more likely to be in the proabortion category than those of all other races. Respondents who identified as Christians ($n = 322$) were more likely to have lower AAS scores (antiabortion) than all other religious options collapsed into non-Christian ($n = 176$).

To determine whether identification as White was independent of identification as Christian, we fit a multivariable regression. We noted almost no change in the ratio of proabortion when the univariate regression models for Christian identification (0.564, 95% confidence interval [CI] [0.500, 0.636]) and White (1.333, 95% CI [1.120, 1.587]) were compared with the multivariate model with both Christian (0.564, 95% CI [0.500, 0.637]) and White (1.330, 95% CI [1.130, 1.567]), which indicated that both contribute independently to proabortion categorization. We also noted that the interaction term between White and Christian was not significant ($p = .16$).

Discussion

Overall, most of our respondents were supportive of abortion, and their attitudes about abortion were influenced by demographic characteristics. Specifically, respondents proportionately had more negative attitudes toward abortion care if they identified as Christian and more positive attitudes toward abortion if they identified as White. In comparison to a previous survey of RNs' attitudes about abortion, our respondents were less supportive of abortion ($n = 324$, 64.3%) than those who responded to the Sandroff survey in 1980 ($n = 11,000$, 88%).

On the basis of individual survey item analysis, we found that the respondents had conflicting attitudes about abortion. These findings are consistent with the evidence from previous studies that showed that RNs' opinions vacillate when confronted with providing what they perceive as ethically challenging care, including abortion care (Janiak et al., 2018; Lipp, 2011; McLemore et al., 2015). For example, most of our respondents did not believe abortion to be inherently morally wrong; however, most agreed that abortion was wrong in any circumstance and should be illegal.

Table 2: Religious Orientation of Participants (N = 504)

Characteristic	Frequency	Percentage	State of California ^a
			Percentage
Religious orientation			
Christian	322	63.9	63
Other ^b	71	14.1	28
Spiritual	46	9.1	—
Agnostic	37	7.3	5
Atheist	22	4.4	4
Missing	6	1.2	

Note. — = data not available for comparison.

^aState of California comparison data from the Pew Charitable Trust Religious Landscape Study from 2014. Retrieved from <http://www.pewforum.org/religious-landscape-study/state/california/>. ^bOther includes Jewish, Muslim, Hindi, and people who selected other.

Prior researchers (Kade et al., 2004; Marek, 2004) who measured RNs' attitudes toward abortion used different measures than the AAS; therefore, the findings are not directly comparable. In the study conducted in California (Marek, 2004), the reason for the abortion mattered to RNs and therefore influenced their attitudes toward abortions; this was not assessed in the instruments we used. For example, in labor and delivery settings (Marek, 2004), 95% of RNs would participate in abortion for fetal demise, 77% would participate if the fetus had anomalies that were incompatible with life, and 37% would participate if the fetus had serious but nonlethal anomalies. In another study, Kade et al. (2004) used mixed methods (survey and open-ended questions) to elicit information from physicians and managers about RNs' attitudes but did not collect data from RNs who provided direct clinical care. The findings indicated that RNs served as the primary barrier to the provision of abortion services in Massachusetts. In addition, in their study in California of advanced practice clinicians, Hwang et al. (2005) found that certified nurse-midwives were more likely to want training to provide medication abortion ($n = 42\%$) than nurse practitioners ($n = 24\%$) or physician assistants ($n = 23\%$). More respondents wanted training in the provision of abortion if they had proabortion attitudes, were familiar with different types of abortion (aspiration, medication, and induction), and spent at least one third of their time providing care to women of reproductive age (Hwang et al., 2005). Taken together, findings from studies of RNs' attitudes about abortion are limited in their

consistency, and more work is needed to elucidate the relationships among abortion attitudes and the provision of abortion care by RNs.

Limitations

There are several limitations to this study, including the cross-sectional and descriptive design and self-reported data from a single state. The low response rate, which is consistent with other RN survey response rates, is also skewed toward an older demographic of RNs, which limits the study findings. In addition, the AAS does not measure the provision of care or any actions RNs may or may not perform, which may be distinct from attitudes about the provision of abortion. The survey did not specifically ask about exposure to evidence-based abortion content, either in formal training or during on-the-job training. Last, it should also be noted that we surveyed the extant RN workforce and not students and trainees.

Health Policy Implications

In a recent qualitative study of 22 U.S. state and local health department maternal and child health or family planning division employees, researchers identified clear barriers to providing legally required access to abortion services mandated by law within public health agencies. These barriers included specific state laws that supported or restricted access to abortion, mandates driven by Title X funding, and agency leadership (Berglas et al., 2020). Given that RNs frequently encounter patients of reproductive age and are experts in health assessment and

education, it has been hypothesized that RNs could be better deployed to provide SRH services and assist people with the achievement of their reproductive life goals, specifically through the reduction of unintended, unwanted, and mistimed pregnancies (Parker et al., 2017; Taylor & James, 2011). However, some researchers found that RNs and other staff are themselves the primary barriers to the provision of clinical services associated with SRH, including abortion care (Gallagher et al., 2010; Leeman & Espey, 2005; Lindstrom et al., 2011). Our data show some of the complexity of measuring and interpreting abortion attitudes of RNs, which should be carefully considered given the legislative changes (AB2348, AB980, and AB154) made in California to improve access to abortion care by expanding the SRH scope of practice of RNs. To meet this need, more research is needed to describe if and how RNs' attitudes toward abortion care influences their willingness to provide abortion care.

Understanding current attitudes about abortion among nurses informs planning for education, workforce development, and other training needs.

Clinical Implications

Our findings have two unique clinical implications. First, if RNs in California are expected to be engaged in supporting a public health-based reproductive life course planning approach to reduce unintended, unplanned, or mistimed pregnancy, significant work needs to be done to understand the facilitators and barriers to their engagement. Second, California RNs have been granted the opportunity to improve access to abortion and the provision of contraception, but it remains unknown if they are willing or have interest in improving access. If the intent of legislators is to improve access, better understanding of the barriers to that access that may be specific to RNs is needed. Without that understanding, it

Table 3: Assessment of Religious Beliefs (N = 504)

Item Responses to Religious Beliefs	Frequency	Percentage
I try to carry my religious beliefs though all aspects of my life.		
True	300	59.5
False	180	35.7
Missing	24	4.8
My approach to my life is entirely based on my religion.		
True	112	22.2
False	359	71.2
Missing	33	6.5
My approach to my life is based on moral/ethical principles, not on the values of organized religion.		
True	419	83.1
False	71	14.1
Missing	14	2.8
Abortion is morally wrong.		
True	101	20.0
False	394	78.2
Missing	9	1.8
I do not support abortion (for others).		
True	134	26.6
False	241	47.8
Missing	129	25.6

Table 4: Chi-Square Analysis of Dichotomized Abortion Attitudes Scale (AAS) by Demographic Characteristics

Categoric Characteristic	AAS Score Category		Test Statistic	
	Proabortion (<i>n</i> = 324)	Antiabortion (<i>n</i> = 180)	Pearson Chi-Square	<i>p</i> Value
Education Level (<i>n</i> = 502)				
Bachelor's degree or higher	142	87	0.7	.41
Associate's degree or lower	180	93		
Race/ethnicity (<i>n</i> = 493)				
Non-White	73	68	12.3	.00045
White	243	109		
Religion (<i>n</i> = 498)				
Non-Christian	157	19	73.1	.000001
Christian	162	160		
Gender (<i>n</i> = 499)				
Male	24	13	0.0	1.0
Female	298	164		
Age (<i>n</i> = 501)				
44 years and younger	42	31	1.5	.23
45 years and older	281	147		

Note. Bold values indicate statistical significance.

is difficult to fully use the unique positioning and expertise of RNs to improve SRH, particularly in reproductive-aged people, and to adequately prepare and support the nursing workforce in the provision of this care.

From a clinical perspective, our findings suggest a number of possible pathways to ensure women's access to abortion care in the setting of often complex and intersecting RN opinions about the procedure. First, RN opinions in our study were highly nuanced and conditional on a number of factors, but RNs are often asked to identify simply whether or not they object to participation in abortion care. There may be an opportunity for a more detailed discussion at hire or afterward of whether that participation would ever be acceptable, or under which circumstances, with the possible effect of identifying more RNs who would be willing to participate in abortion care.

Second, our findings highlight the importance of teaching values clarification in pre- and post-licensure nursing programs. For example, our respondents supported abortion in seemingly

contradictory conditions, which suggests that time spent with guided values clarification could be of benefit to the RNs to identify their own beliefs about abortion and women's health care and to more clearly delineate which circumstances, if any, might represent moral distress for them. This negotiation between individual conscience and patient responsibility arises in many circumstances besides abortion (e.g., near viability infant resuscitation, end-of-life care, informed refusals, and withdrawal of treatment and medical assistance in dying). The opportunity to develop these skills in relationship to an individual's own moral conscience is an important part of nursing education (Lamb et al., 2019; National Academies of Science, Engineering, and Medicine [NASEM], 2018; Willis et al., 2008).

Finally, this could be an opportunity for doctorally prepared and other APRNs to contribute leadership in the intersections of individual RNs and patient responsibility. Although substantial resources and research exist on conscience and abortion provision, very little has been extended to the role of the RN in inpatient and outpatient settings. As abortion practice continues to

evolve, with an increased proportion of medication abortion in the outpatient setting (Kohn et al., 2019; NASEM, 2018) and a potential increase in inpatient abortions given the prevalence of laws to severely restrict permissible settings for procedural abortion (NASEM, 2018; Roberts et al., 2018), there is a need for guidance for RNs, policy makers, and institutions to better clarify the role of RNs in the provision of that care. This could take the form of policy development, translational research with RNs to identify best practices for the identification and negotiation of the complex feelings many have on abortion, online or other required modules to clarify the extant abortion laws in a given state, or many other options.

Conclusion

RNs in California have varying and conflicting attitudes and beliefs about abortion. Our findings highlight areas for further investigation in the relationship between attitudes about abortion and the expansion of nursing practice and contribute insight to support the planning for education, workforce development, and other training needs given the expansion of clinical practice afforded by the California AB2348, AB980, and AB154 laws. As with any ethical issue, opinions on participation in abortion care will vary significantly from nurse to nurse. Our findings suggest that rather than the dichotomous presentation of pro-abortion/antiabortion that dominates the public discourse on the topic, many RNs exist in a liminal space in which their desire for patient care may intersect with their personal beliefs and that addressing a lack of knowledge about abortion and a lack of experience negotiating potentially conflicting opinions and responsibilities may be helpful for these RNs. If the goal is to care for patients, particularly women, then support for RNs in that care, including assisting them in clarifying their opinions and helping them find ways to provide care in situations that are not morally congruent for them, is a crucial role for educators, institutions, and nursing leadership.

Acknowledgment

Supported by the National Center for Advancing Translational Sciences, National Institutes of Health (NIH), through UCSF-CTSI Grant Number UL1 TR000004. Contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIH. An additional grant from an anonymous foundation supported the work of Dr. McLemore and Ms. Cretti.

The authors thank Kate Mercer-Murray, Ifeoma Okwu, and Chana Herzig Felkai for data entry.

Supplementary Material

Note: To access the supplementary material that accompanies this article, visit the online version of the *Journal of Obstetric, Gynecologic, & Neonatal Nursing* at <http://jognn.org> and at <https://doi.org/10.1016/j.jogn.2020.06.005>.



REFERENCES

- Ben Natan, M., & Melitz, O. (2011). Nurses' and nursing students' attitudes toward late abortions. *International Nursing Reviews*, 58(1), 68–73. <https://doi.org/10.1111/j.1466-7657.2010.00840.x>
- Berglas, N. F., Wingo, E., Woodruff, K., & Roberts, S. C. M. (2020). Approaches, barriers, and facilitators to abortion-related work in U.S. health departments: Perspectives of maternal and child health and family planning professionals. *BMC Public Health*, 20(1), 299. <https://doi.org/10.1186/s12889-020-8389-2>
- California Board of Registered Nursing. (2016). *2016 survey of registered nurses*. <https://www.nr.ca.gov/pdfs/forms/survey2016.pdf>
- Chabot, M. J., Lewis, C., & Thiel de Bocanegra, H. (2011). *Access to publicly funded family planning services in California, fiscal year 2006-07*. University of California, San Francisco. https://bixbycenter.ucsf.edu/sites/bixbycenter.ucsf.edu/files/2011_Access_Family%20Planning_FY0607_0.pdf
- Dodge, L. E., Haider, S., & Hacker, M. R. (2016). Attitudes toward abortion among providers of reproductive health care. *Women's Health Issues*, 26(5), 511–516. <https://doi.org/10.1016/j.whi.2016.06.005>
- Fonseca, J. (1968). Induced abortion: Nursing attitudes and action. *American Journal of Nursing*, 68(5), 1022–1027.
- Gallagher, K., Porock, D., & Edgley, A. (2010). The concept of "nursing" in the abortion services. *Journal of Advanced Nursing*, 66, 849–857. <https://doi.org/10.1111/j.1365-2648.2009.05213.x>
- Hwang, A. C., Koyama, A., Taylor, D., Henderson, J. T., & Miller, S. (2005). Advanced practice clinicians' interest in providing medical abortion: Results of a California survey. *Perspectives in Sexual & Reproductive Health*, 37(2), 92–97. <https://doi.org/10.1363/psrh.37.092.05>
- Insight Policy Research. (2008). *The national sample survey of registered nurses*. <https://insightpolicyresearch.com/projects/national-sample-survey-registered-nurses/>
- Janiak, E., Freeman, S., Maurer, R., Berkman, L. F., Goldberg, A. B., & Bartz, D. (2018). Relationship of job role and clinic type to perceived stigma and occupational stress among abortion workers. *Contraception*, 99(6), 517–521. <https://doi.org/10.1016/j.contraception.2018.07.003>
- Kade, K., Kumar, D., Polis, C., & Schaffer, K. (2004). Effect of nurses' attitudes on hospital-based abortion procedures in Massachusetts. *Contraception*, 69(1), 59–62. <https://doi.org/10.1016/j.contraception.2003.08.009>
- Kohn, J. E., Snow, J. L., Simons, H. R., Seymour, J. W., Thompson, T. A., & Grossman, D. (2019). Medication abortion provided through telemedicine in four U.S. states. *Obstetrics and Gynecology*, 134(2), 343–350. <https://doi.org/10.1097/AOG.0000000000003357>

- Lamb, C., Evans, M., Babenko-Mould, Y., Wong, C. A., & Kirkwood, K. W. (2019). Conscience, conscientious objection, and nursing: A concept analysis. *Nursing Ethics, 26*(1), 37–49. <https://doi.org/10.1177/0969733017700236>
- Langer, A., Meleis, A., Knaul, F. M., Atun, R., Aran, M., Arreola-Ornelas, H., ... Frenk, J. (2015). Women and health: The key for sustainable development. *The Lancet, 386*(9999), 1165–1210. [https://doi.org/10.1016/S0140-6736\(15\)60497-4](https://doi.org/10.1016/S0140-6736(15)60497-4)
- Leeman, L., & Espey, E. (2005). "You can't do that 'round here'": A case study of the introduction of medical abortion care at a University Medical Center. *Contraception, 71*, 84–88. <https://doi.org/10.1016/j.contraception.2004.07.017>
- Levi, A., Goodman, S., Weitz, T., AbiSamra, R., Nobel, K., Desai, S., ... Taylor, D. (2018). Training in aspiration abortion care: An observational cohort study of achieving procedural competence. *International Journal of Nursing Studies, 88*, 53–59. <https://doi.org/10.1016/j.ijnurstu.2018.08.003>
- Lindstrom, M., Wulff, M., Dahlgren, L., & Laslos, A. (2011). Experiences of working with induced abortion: Focus group discussions with gynaecologists and midwives/nurses. *Scandinavian Journal of Caring Science, 25*, 542–548. <https://doi.org/10.1111/j.1471-6712.2010.00862.x>
- Lipp, A. (2011). Stigma in abortion care: Application to a grounded theory study. *Contemporary Nurse, 37*(2), 115–123. <https://doi.org/10.5172/conu.2011.37.2.115>
- Marek, M. J. (2004). Nurses' attitudes toward pregnancy termination in the labor and delivery setting. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 33*, 472–479.
- McLemore, M. R., Kools, S., & Levi, A. J. (2015). Calculus formation: Nurses' decision-making in abortion-related care. *Research in Nursing and Health, 38*(3), 222–231. <https://doi.org/10.1002/nur.21655>
- National Academies of Science, Engineering, and Medicine. (2018). *The safety and quality of abortion care in the United States*. <http://www.nationalacademies.org/hmd/Reports/2018/the-safety-and-quality-of-abortion-care-in-the-united-states.aspx>
- National Council of State Boards of Nursing. (2016). *Active RN licenses. A profile of nursing licensure in the U.S.* <https://www.ncsbn.org/6161.htm>
- Parker, E. C., Kong, K., Watts, L. A., Schwarz, E. B., Darney, P. D., & Thiel de Bocanegra, H. (2017). Visits to registered nurses: An opportunity to increase contraceptive access in California. *Nursing Research, 66*(4), 286–294. <https://doi.org/10.1097/NNR.0000000000000229>
- Qualtrics. (2019). *Qualtrics* [Computer software]. <https://www.qualtrics.com>
- R Core Team. (2020). *R: A language and environment for statistical computing* (Version 4.0.0) [Computer software]. R Foundation for Statistical Computing. <https://www.R-project.org>
- Roberts, S. C. M., Upadhyay, U. D., Liu, G., Kerns, J. L., Ba, D., Beam, N., & Leslie, D. L. (2018). Association of facility type with procedural-related morbidities and adverse events among patients undergoing induced abortions. *Journal of the American Medical Association, 319*(24), 2497–2506. <https://doi.org/10.1001/jama.2018.7675>
- Sandroff, R. (1980). Is it right? 12,500 nurses speak out. How do your colleagues view abortion, sterilization and birth control? *RN Journal, 43*, 24–30.
- Sloan, L. A. (1983). Abortion Attitude Scale. *Health Education, 14*(3), 41–42.
- Taylor, D., & James, E. A. (2011). An evidence-based guideline for unintended pregnancy prevention. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 40*(6), 782–793. <https://doi.org/10.1111/j.1552-6909.2011.01296.x>
- Weitz, T. A., Taylor, D., Desai, S., Upadhyay, U. D., Waldman, J., Battistelli, M. F., & Drey, E. A. (2013). Safety of aspiration abortion performed by nurse practitioners, certified nurse midwives, and physician assistants under a California legal waiver. *American Journal of Public Health, 103*(3), 454–461. <https://doi.org/10.2105/AJPH.2012.301159>
- Weitz, T. A., Taylor, D., Upadhyay, U. D., Desai, S., & Battistelli, M. (2014). Research informs abortion care policy change in California. *American Journal of Public Health, 104*(10), e3–e4. <https://doi.org/10.2105/AJPH.2014.302212>
- Willis, D. G., Grace, P. J., & Roy, C. (2008). A central unifying focus for the discipline: Facilitating humanization, meaning, choice, quality of life, and healing in living and dying. *Advances in Nursing Science, 31*(1), E28–E40. <https://doi.org/10.1097/01.ANS.0000311534.04059.d9>
- World Health Organization. (2011). *Integrating poverty and gender into health programmes: A sourcebook for health professionals. Module on sexual and reproductive health*. <https://apps.who.int/iris/handle/10665/206996>
- Zou, G. (2004). A modified Poisson regression approach to prospective studies with binary data. *American Journal of Epidemiology, 159*(7), 702–706. <https://doi.org/10.1093/aje/kwh090>