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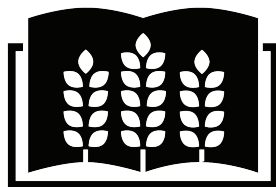
# Attitudes toward the Amish Held by Nursing and Social Work Students at a Midwestern University

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**Abstract:** As Amish populations increase and move across North America, the likelihood grows that healthcare professionals will come into contact with them. No studies have been conducted to examine contact frequency with or attitudes of healthcare providers toward the Amish. The aims of this study were to examine attitudes toward the Amish among nursing and social work students attending a Christian liberal arts university in a Midwestern state, and, to determine the relationship between students' cultural awareness, their knowledge of the Amish, their contact with the Amish, and their attitudes toward the Amish. The participants were anonymously surveyed using the Revised Attitudes toward the Amish questionnaire (RATA), the Multicultural Awareness Survey (MAS), a Brief Knowledge of Amish Culture questionnaire, and a demographics form which included questions about contact frequency. One hundred and forty-four students completed the survey (n = 106 nursing students; n= 40 social work students). Contact frequency was significantly correlated with knowledge of Amish culture ( $p < .001$ ). Students who were more aware of other cultures had a significantly more tolerant attitude toward the Amish ( $p < .001$ ). These university students had more tolerant attitudes toward the Amish when they had a higher level of multicultural awareness and more knowledge of the Amish culture itself. Educators may help students become more tolerant toward patients of other cultures by identifying strategies to increase students' awareness of and knowledge about those other cultures. [Abstract by authors.]

**Keywords:** Revised Attitudes towards Amish questionnaire; Multicultural Awareness Scale; contact frequency; contact hypothesis; attitudes toward patients; prejudice



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## INTRODUCTION

Healthcare providers' attitudes toward their patients impact the way they care for the sick, wounded, and suffering. Negative attitudes may lead to poorer quality of care (Courtney, Tong, and Walsh 2000) including discriminatory actions that put patients at risk (Burnes, et al. 2019), and inequitable healthcare access (van Puymbrouck, Friedman and Feldner 2020). Caregivers' negative attitudes are influenced by patients' personal characteristics, their own approaches to care, and their personalities, education, and work experiences (Rush et al. 2017).

Studies too numerous to fully review here have been conducted regarding attitudes of healthcare professionals toward various types of patients. Selected studies of nurses or nursing students have included those conducted regarding their attitudes toward care of elderly patients (Burnes et al. 2019; Alshehry, Almazan, and Alquwez 2020; Cheng 2022), patients dealing with substance use disorders (Crothers and Dorrian 2011; Wedin, et al. 2022), patients that are obese (Darling and Atav 2019; de los Angeles Rodríguez-Gázquez, Ruiz-Iglesias, and González-López 2019; Thompson, et al. 2021), patients with physical disabilities (Smeltzer, et al. 2018; van Puymbrouck, Friedman, and Feldner 2020), those struggling with mental health issues (Weare, et al. 2019; Boukouvalas, et al. 2020), and patients of different cultures, ethnicities and religions (Tosun and Sinan 2020; Gungor, Tosun and Prosen 2021; Zalewska-Puchala, Bodys-Cupak and Majda 2022). Despite these studies and more, research of nursing and social work students' attitudes toward peoples of other religions and ethnicities is rare. This presents a notable gap in the literature, especially since training of nursing and social work students in diversity and cultural competence is common.

### The Amish Population

The Amish are of particular interest to healthcare workers because the Amish population is increasing faster than almost any other religious or nonreligious group in North America, doubling approximately every 20 years (Donnermeyer, Anderson, and Cooksey 2013). In 2000, they numbered about 178,000 and, according to the U.S.

Religion Census, numbered 320,625 adherents in 456 counties in 2020 (Grammich, et al. 2023, 88). Their significant growth is attributed to a high fertility rate, approximately five to eight children per woman (Colyer, et al. 2017; Wasao, Anderson, and Mpoly 2021) and a high rate of retention, i.e. most children who are raised Amish join the church through baptism as adults (Donnermeyer 2015; McConnell 2019).

As the Amish increase in numbers and move to new places, it becomes more likely that healthcare professionals will come in contact with them. Because of increased opportunities for interactions between 'English' (non-Amish) and Amish, 'English' healthcare professionals need to be aware of Amish cultural beliefs and customs. No studies have been conducted to examine contact frequency with or attitudes of healthcare providers toward the Amish. No studies have measured nursing students' and social work students' attitudes toward the Amish.

### Attitudes toward Populations in Healthcare

A population's "culture" consists of values, beliefs, traditions, rituals, norms, behaviors, and attitudes shared among members of the same group and passed down from generation to generation (Hall 2017). Multicultural awareness is the consciousness that persons are different and that difference may be because their cultural backgrounds are dissimilar. Multicultural awareness is heightened through increased knowledge of and contact with people of other cultures (Baltes, Hernandez, and Collins 2015).

An attitude is a "settled way of thinking or feeling about someone or something, typically one that is reflected in a person's behavior." ("Attitude", Google Online Dictionary). The Contact Hypothesis (Allport 1954) theorizes that positive attitudes can be improved by repeated interactions with persons of other races or ethnicities. Contact may be indirect (reading about or seeing images of) or direct (face-to-face interactions with individuals or groups). Contact may be brief or prolonged; superficial or in-depth; and evaluated on a gamut from positive to negative. The more frequent contact with a specific ethnicity or religious group, the greater the knowledge and understanding of the 'others' (Zalewska-Puchala, et al. 2022). For example, Abrams and colleagues (2018) found that undergraduate students in the

western United States with closer relationships with Muslims had more positive attitudes toward Muslims.

Healthcare professionals interact regularly with diverse people. Those interactions plus other experiences shape attitudes and opinions. Influencing factors include age, gender, political orientation, and relationships with persons of different cultures (van Puymbrock, et al. 2020). Witnessing or overhearing colleagues make negative comments about patients may lead to negative stereotyping, which could perpetuate bias or deleterious attitudes (Thompson, et al. 2021). Nurses who have Amish patients should understand the religious beliefs and underpinnings of the Amish culture (Fisher 2002).

Knowledge and attitudes influence the quality of care that healthcare professionals (HCPs) provide. Good care events guided by a good attitude are often facilitated by respectful and empathetic encounters (Wedin, et al. 2022), by providers with higher levels of education (Boukouvalas, et al. 2019; de Los Angeles et al., 2020), and by those who choose to spend time with people different than themselves (Latner, et al. 2008). For example, school nurses who spent more time working with overweight children had more positive weight attitudes (Thompson, et al. 2021). Clinicians that learned from their disabled patients taught other clinicians and increased their knowledge, awareness, and sensitivity (Smeltzer, et al. 2018).

## STUDY CONCEPT AND METHODS

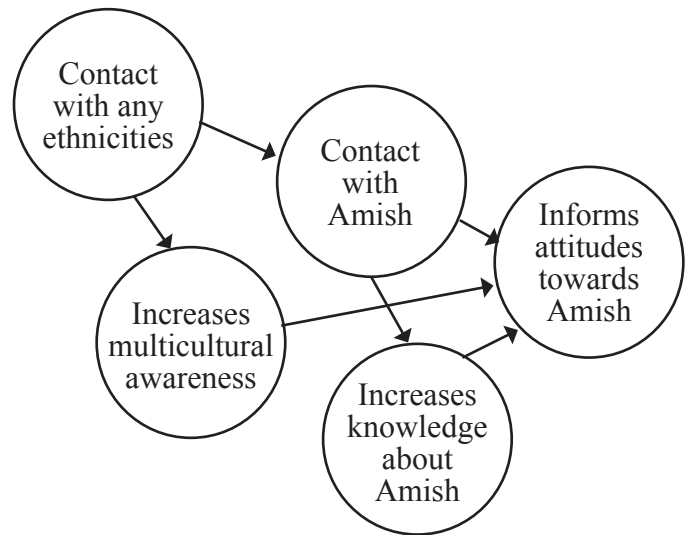
### Purpose

The aims of this study are 1) to examine the attitudes toward the Amish of nursing and social work students attending a Christian liberal arts university in the Midwestern United States; and 2) to determine the relationships between their cultural awareness, knowledge of, contact with, and attitudes toward the Amish.

### Conceptual Model

Based on our review of the literature, a conceptual model was designed to guide this study. The following hypotheses are illustrated by the model in Figure 1.

**FIGURE 1: CONCEPTUAL MODEL: CONCEPTS INCLUDED IN ATTITUDES TOWARD AMISH MODEL: CONTACT, KNOWLEDGE, AND MULTI-CULTURAL AWARENESS**



- More contact with any ethnicity leads to more tolerant attitudes toward the Amish;
- More contact with the Amish increases knowledge of the Amish culture;
- More contact with the Amish leads to more tolerant attitudes toward the Amish;
- More multicultural awareness leads to more tolerant attitudes toward the Amish;
- More knowledge of the Amish culture leads to more tolerant attitudes toward the Amish.

### Research Questions

1. What is the relationship between students' contact frequency and their knowledge of the Amish culture?
2. What is the relationship between students' multicultural awareness and their attitudes toward the Amish?
3. What are nursing students' and social work students' attitudes toward Amish per age, gender, religion, education level (year in university, and graduate vs. undergraduate students)?
4. What is the relationship between students' contact frequency and their attitudes toward the Amish?

5. What is the relationship between students' knowledge of Amish culture and their attitudes toward the Amish?

## Methods

### *DESIGN*

A cross-sectional, correlational design was used to guide the methods of this study. Surveys were employed to systematically investigate students' opinions of the Amish.

### *SETTING*

A convenience sample of nursing and social work students was drawn from Malone University, a Christian liberal arts school in northeastern Ohio where the co-authors teach. About 1,300 students attend Malone. It is located in a city only 30 minutes driving time from the largest Amish settlement in the United States. Approximately 60,000 Amish live in Northeast Ohio. This proximity provides students with potential exposure to the Amish and occasions to interact with them. This also affords healthcare providers, including students, chances to care for Amish patients and families.

### *RECRUITMENT*

One researcher (LW) visited each class of undergraduate and graduate nursing students and undergraduate social work students after being granted permission from the University IRB, Department Directors, and individual faculty impacted by the study. The students were then approached at the beginning of a class period, given an explanation of the study, and asked to complete the survey. Social work students enrolled in online social work courses were contacted by email and completed the surveys online.

### *MEASURES*

The survey included the Revised Attitudes toward the Amish questionnaire (RATA) and the Multicultural Awareness Survey (MAS), a brief Knowledge of Amish Culture questionnaire, and a demographics form with questions about the

participant's contact with people of other cultures and with the Amish. Permission was granted from the developers of the RATA questionnaire and the MAS to use their questionnaires in this study.

The RATA questionnaire contained 16 items that, when completed, measured participants' opinions about the Amish on a continuum of critical to tolerant. This instrument used positive statements and avoided loaded words to measure prejudices and attitudes from a multifactor perspective (Anderson and Decker 2020). It was previously used with university students and the general population living in proximity to several Amish settlements (Anderson and Decker 2020). The RATA questionnaire used a 5-point Likert scale of 1 to 5, ranging from strongly disagree to strongly agree with an 'uncertain' option in the middle. Scores could range from 16 to 80. Several items were reverse-scored. Higher scores indicated a more tolerant attitude toward the Amish.

The 9-item MAS was developed in Malaysia and tested on full-time undergraduate students at a public institution of higher education. Item analysis and factor analysis were performed to establish the reliability of the MAS. The end reliability coefficient of the MAS was 0.72. This reliability value demonstrated that the nine items were internally consistent in assessing one's self-awareness of people with multiple ethnic backgrounds (Awang-Rozaimie, et al. 2011). According to Awang-Rozaimie and colleagues (2011), multicultural awareness is crucial in a multicultural society in order to decrease racist sentiments, ethnocentrism, and stereotyping. In the estimation of these authors, the MAS is fitting to measure an appreciation of cultural dissimilarities in a multicultural society (p. 1180). In this study, participants were asked to complete all nine questions on a 5-point Likert scale of 1 to 5, from strongly disagree to strongly agree. Scores could range from 9 to 45. Higher scores indicated higher awareness of other cultures.

The 8-item Knowledge of Amish Culture questionnaire was developed by the authors based on a literature review and personal knowledge of the Amish culture. Items had response options of yes/no/do not know or never/sometimes/always/do not know.

**TABLE 1: FREQUENCIES OF CORRECT AND INCORRECT RESPONSES ON THE BRIEF KNOWLEDGE OF AMISH QUESTIONNAIRE, COMPARING NURSING STUDENTS TO SOCIAL WORK STUDENTS**

Statement	Nursing Students		Social Work Students	
	Correct n (%)	Incorrect n (%)	Correct n (%)	Incorrect n (%)
Amish [children] receive formal education through high school. (false)	51 (50.0)	51 (50.0)	26 (66.7)	13 (33.3)
All Amish live on farms. (false)	56 (54.4)	47 (45.6)	21 (53.8)	18 (46.2)
Amish allow researchers to study their genetics. (true)	8 (7.8)	95 (92.2)	0 (0.0)	39 (100)
Amish permit blood transfusions. (true)	10 (9.8)	92 (90.2)	1 (2.6)	37 (97.4)
Amish eat only organic food. (false)	47 (46.1)	55 (53.9)	16 (41.0)	23 (59.0)
Amish resist childhood vaccinations. (sometimes)	40 (38.8)	63 (61.2)	9 (23.1)	30 (76.9)
Amish women are more likely to die from breast cancer than non-Amish women. (true)	24 (23.1)	80 (76.9)	3 (7.7)	36 (92.3)
All adult Amish speak Pennsylvania German & English. (true)	26 (25.0)	78 (75.0)	10 (25.6)	29 (75.4)

**DATA COLLECTION**

The first page of the hard copy survey was an informed consent form and included directions regarding participation. All participants were assured anonymity. No signatures were collected. An envelope was left for the faculty member to gather the surveys and to seal them inside the provided envelope. The sealed envelope was taken from the classroom to the department office by the faculty at the end of the class. The researcher collected the envelope from the faculty/department administrative assistant. Participants were offered a chance to win one of three \$25 gift cards by emailing the Nursing School's Administrative Assistant to confirm their participation. That Assistant then randomly picked three different names and dispersed the gift cards accordingly.

**DATA ANALYSIS**

Data were coded and entered into an EXCEL file. From there, the information was transferred into and analyzed using SPSS, Version 27. Descriptive and inferential statistics were used to evaluate frequencies, means, difference of means, and correlations.

**RESULTS****Demographics**

Of the 146 surveys that were collected, two were unusable as the respondents were not over 18 years of age. Of the 144 total, 104 (72.9%) were nursing and 40 (27.1 %) social workers. The respondents' ages were slightly skewed with a range from 18-64 with a mean of 23.79 years. 82.6% were female with 17.4% male. Freshmen made up 17.4%, sophomore 20.1%, juniors 28.5%, seniors 21.5%, and Master of Nursing 12.5%. The race/ethnicity of the participants was 6.3% African American/Black, 2.1% Asian, 87.5% White-NonHispanic, and 4.2% Other. This closely matched the racial composition of the University. When asked about religious affiliation, 94.4% chose Christian, 0.07% Muslim, and 4.9% stated no religious affiliation.

**Contact with Amish**

Participants were asked about contact with other ethnicities with the assumption that more frequent contact with other ethnicities would translate to more multicultural awareness. Only 1.4% of the respondents indicated they never had contact with other ethnicities; 4.9% rarely, 24.5% sometimes, and 69.2% often. The participants were asked the

**TABLE 2: COMPARISON OF DIFFERENCES OF MEANS BETWEEN BRIEF KNOWLEDGE OF AMISH CULTURE QUESTIONNAIRE AND DEMOGRAPHIC VARIABLES**

Variable	Knowledge of Amish					
		N	%	Mean (SD)	t/F	p
<b>Gender</b>	Female	119	82.6	2.44 (1.45)	0.37	0.713
	Male	25	17.4	2.32 (1.38)		
<b>Age</b>	<20	43	29.9	2.26 (1.54)	0.44	0.725
	20-29	76	52.8	2.46 (1.38)		
	30-39	15	10.4	2.73 (1.44)		
	40>	9	6.2	2.44 (1.51)		
<b>Program</b>	Nursing	105	72.9	2.50 (1.49)	-1.08	0.283
	Social Work	39	27.1	2.32 (1.28)		
<b>Education</b>	Graduate	18	12.5	2.56 (1.46)	-0.44	0.663
	Undergraduate	126	87.5	2.40 (1.44)		
<b>Religion</b>	Christian	134	93.0	2.40 (1.43)	0.233	0.101
	Muslim	1	0.07	NA		
	None	7	4.9	3.14 (1.57)		
<b>Race</b>	Asian	3	2.1	2.00 (1.00)	0.127	0.287
	Black	9	6.2	1.56 (1.42)		
	White	126	87.5	2.48 (1.44)		
	Other	6	4.2	2.50 (1.38)		
<b>Contact with Amish</b>	Never	29	20.1	1.52 (1.30)	10.52	<.001*
	Rarely	53	36.8	2.36 (1.26)		
	Sometimes	35	24.3	2.43 (1.31)		
	Often	27	18.7	3.48 (1.42)		
<b>Watch Amish Reality TV</b>	Never	75	52.1	2.47 (1.44)	0.18	0.836
	Rarely	53	36.8	2.42 (1.59)		
	Sometimes	14	9.7	2.21 (0.89)		
	Often	0	0.0	0.00 (0.0)		

t/F = t-test for difference of means of two groups; F is ANOVA difference of means of more than two groups

types of contacts they had with other ethnicities. Family/relatives were 49.3%, neighbors 50.7%, classmates 89.6%, friends 7.9%, tourism 52.8%, church 8.3%, work 11.8% and other 4.2%.

The students were also asked about their frequency of contact with the Amish. Twenty percent of the students indicated they never had contact with the Amish; 36.8% rarely, 24.3% sometimes, and 18.8% often. Types of contacts with the Amish were also queried: 19.4% had contact

with Amish patients, 13.2% with family of Amish patients, 16% had Amish neighbors, 4.9% had Amish relatives, 4.9% had Amish friends, 28.5% encountered the Amish as tourists, 9.7% as Amish co-workers, and 11.8% in stores, neighborhoods, etc. Since there have been several Amish-themed reality shows on television (TV), participants were asked if they watched those programs. Over half (52.8%) indicated they never watched Amish reality shows, rarely 37.3%, sometimes, 9.9% and often was 0%.

**Knowledge of Amish Culture**

In Table 1, frequencies of correct to incorrect responses comparing nursing students' to social work students' knowledge of Amish culture and lifestyle are displayed. The scale's internal consistency was 0.61, an acceptable reliability.

The sample mean was only 2.42 (SD 1.45). The scores ranged from 0 correct to 6 correct answers. Nursing students' mean was 2.5 (SD 1.49) and social work students' mean was 2.2 (SD 1.28). Nursing students had more frequent correct answers on the health related questions. The high percentages of incorrect answers for both groups could be attributed to the fact that many participants admitted they did not know the correct answer, verified by the low sample mean.

**TABLE 3: FREQUENCIES OF RESPONSES TO THE NINE STATEMENTS OF THE MULTICULTURAL AWARENESS SCALE\* (MAS), COMPARING NURSING STUDENTS TO SOCIAL WORK STUDENTS**

Statement	Nursing Students						Social Work Students					
	Disagree		Uncertain		Agree		Disagree		Uncertain		Agree	
	n	%	n	%	n	%	n	%	n	%	n	%
I believe my culture to be different from the others around me.	49	47.1	20	19.2	35	33.6	14	35.9	7	17.9	18	46.2
There are times when racial statements should be ignored.	69	66.4	18	17.3	17	16.3	28	71.8	10	25.6	1	2.6
It is important to identify immediately the ethnic group of a person we meet or communicate with.	50	47.6	30	28.6	25	23.9	13	34.3	15	39.5	10	26.3
I discourage people from using racial and ethnic slurs or insult[ing] statements or behavior.	2	1.9	6	5.8	96	92.3	0	0	3	7.7	36	92.3
I understand and accept that family is defined differently by different cultures (e.g. extended family members, fictive kin, godparents).	2	2	3	2.9	100	95.2	0	0	1	2.6	38	97.4
I accept and respect that male-female roles in families may vary significantly among different cultures.	5	4.8	8	7.7	91	87.5	0	0	4	10.3	35	89.8
I understand that age and seniority must be considered in interactions with individuals and families.	7	5.8	11	10.5	87	82.9	1	2.2	6	15.4	32	82.1
I accept that religion and other beliefs may influence people’s reactions.	1	1	4	3.8	100	95.2	0	0	1	2.6	38	97.4
I accept and respect that customs and beliefs about daily life are applied differently from culture to culture.	4	3.9	5	4.8	96	91.5	0	0	2	5.1	37	94.9

“Disagree” and “Agree” aggregate both “strongly” disagree/agree and (just) disagree/agree responses.

\* Awang Rozaimie, et al. (2011, p.1186).

Table 2 displays the difference of means on the Brief Knowledge of Amish Culture questionnaire per demographic variables. The only statistically significant variable was contact with the Amish; participants who claimed to be most often in contact with the Amish had the highest mean on the knowledge questionnaire, significantly different than the other groups’ contact levels ( $p < .001$ ).

**Multicultural Awareness**

The Multicultural Awareness Scale was not specific to Amish culture but rather to one’s awareness of other cultures in general. The scale’s internal consistency was acceptable at 0.61. Scores ranged from 11 to 45. The sample mean was 33.98

(SD 3.91), with nursing students’ mean of 33.61 and social work students’ mean just slightly higher at 34.97. The difference of means was not significant ( $p = .63$ ). The frequencies of the answers to the MAS items, comparing nursing students to social work students, are displayed in Table 3. Over two-thirds of the participants disagreed with the phrase that racial statements should be ignored (nursing 66.4% and social work 71.8%). Only about one-quarter of the students (23.9% and 26.3% respectively) believed it important to immediately identify the ethnicity of a person upon meeting. The MAS was significantly associated with participants’ religious affiliation ( $t = .777$ ;  $p < .001$ ); participants who claimed no religious affiliation had the lowest MAS mean score. Cultural



awareness was not significantly correlated with knowledge of the Amish ( $r = .146$ ;  $p = .081$ ).

**Attitudes toward the Amish**

In Table 4, the frequencies of the RATA questionnaire statements, combining ‘strongly disagree’ with ‘disagree’ and ‘strongly agree’ with ‘agree’ are provided. The scale’s internal consistency for this sample was 0.71. Scores ranged from 37 to 71 of a possible 80. The sample mean was 54.2 (SD 6.23). The mean score for nursing students was 53.6 and for social work students slightly higher at 55.7.

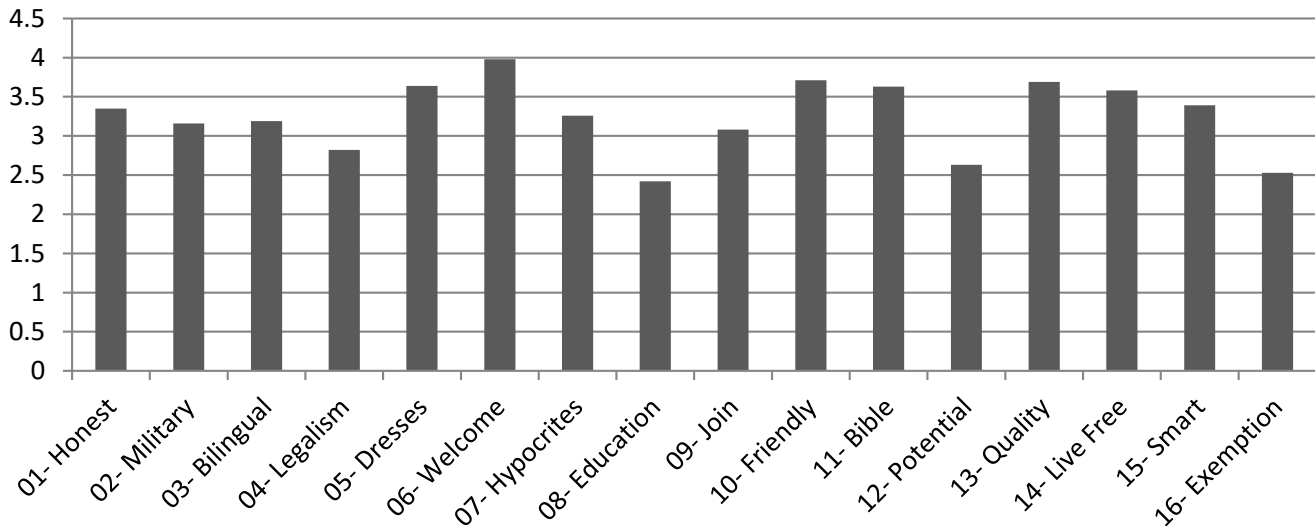
Combined item means (nursing students with social work students) of the RATA questionnaire statements are displayed in Figure 2. The lowest mean (2.42), on the side toward critical attitude, was the statement, “Education of Amish children should have to meet the same minimum state standards of other U.S. school.” The second lowest mean (2.53), toward the critical side of attitude, was on the statement, “On a religious basis, the Amish have received exemptions from Social Security and laws regarding child labor, work safety, and zoning. In general, I feel they should be held to the same standards as anyone else.” The highest mean (3.98), toward the tolerant side of the scale, was for the statement, “If a group of Amish families move into my community, I would be there to welcome them.” The second highest mean (3.71) was for the statement, “When I see Amish in public places, they seem friendly.”

The correlation between RATA questionnaire score and MAS score was moderately strong and statistically significant ( $r = .302$ ;  $p < .001$ ). RATA questionnaire scores were not significantly correlated with contact frequency (ANOVA .170;  $p = .171$ ), nor the students’ age, education level, religion, ethnicity, or academic major. Female students were significantly more tolerant toward Amish than males ( $t = .380$ ;  $p < .001$ ). RATA questionnaire scores were trending toward significance with the correlation between attitudes toward the Amish and knowledge of Amish culture ( $r = .159$ ;  $p = .059$ ). See Table 5.

**DISCUSSION**

This is the first known study that used the RATA questionnaire to examine the attitudes of nursing and social work university students toward the Amish. The mean RATA questionnaire score of 54.2 for the students indicated that they were, as a whole, above the median on the tolerant side of the scale but could improve in their level of tolerance toward the Amish culture. This score was higher than that found among 98 university students in Missouri (Anderson and Decker 2020). Their mean score was only 43.2 (personal communication, June 27, 2022), indicating neutrality on the critical to tolerance scale. The nursing students’ attitudes were not significantly different from the social work students’ attitudes ( $p = .066$ ) even though nursing students had more contact

**FIGURE 2. MEANS OF EACH ITEM ON RATA QUESTIONNAIRE (NURSING STUDENTS’ AND SOCIAL WORK STUDENTS’ COMBINED) (LIKERT SCALE 1 TO 5: CRITICAL TO TOLERANT)**



**TABLE 4: FREQUENCIES OF RESPONSES OF 16 STATEMENTS OF THE RATA\* QUESTIONNAIRE, COMPARING NURSING STUDENTS TO SOCIAL WORK STUDENTS**

Statement	Nursing Students						Social Work Students					
	Disagree		Uncertain		Agree		Disagree		Uncertain		Agree	
	n	%	n	%	n	%	n	%	n	%	n	%
Amish are generally honest people.	4	3.8	49	47.6	50	48.5	0	0	16	41	23	59
Even if Amish are a peace church, as Americans, the Amish should not object to military service if their country calls them.	39	37.5	41	39.4	24	23.1	14	35.9	21	53.8	4	10.3
The Amish learn two languages, English and German, and in this regards, are a good model for school children today.	11	10.6	57	54.8	36	34.6	4	10.3	21	53.8	14	35.9
The Amish religion is excessively legalistic.	15	14.4	72	69.2	17	16.4	3	7.7	27	69.2	9	23.1
Especially in warmer weather, the full dresses and bonnets Amish women are required to wear bothers me.	70	68.6	19	18.6	13	12.8	28	71.5	7	17.9	4	10.3
If a group of Amish families move into my community, I would be there to welcome them.	2	1.9	20	19.4	81	78.6	2	5.1	3	7.7	34	87.2
It's kind of hypocritical for Amish to hire someone to drive them but not own cars themselves.	59	57.3	22	21.4	22	21.4	22	56.4	11	28.2	6	15.4
Education of Amish children should have to meet the same minimum state standards of other U.S. schools.	13	12.5	34	32.7	57	54.8	6	15.4	17	43.6	16	40
I would be supportive if someday a child of mine wanted to join the Amish.	24	23.1	50	48.1	30	28.9	6	15.4	12	30.8	21	53.9
When I see Amish in public places, they seem friendly.	6	5.8	20	19.2	78	75	5	12.8	7	17.9	27	69.2
I feel Amish would be better off if they did not take the Bible literally.	57	55.4	40	38.8	6	5.9	25	64.1	13	33.3	1	2.6
Amish are really limiting their potential by not allowing their children to go beyond 8th grade.	21	20.2	36	34.6	47	45.2	10	25.6	11	28.2	18	46.1
If a product is Amish-made, to me, that generally means it is of high quality.	8	7.7	26	25	70	67.3	3	7.7	9	23.1	27	69.2
As long as the Amish aren't bothering anyone else, they should be given room to live how they please, even if that means their people have fewer opportunities in life.	5	4.9	28	27.5	69	67.7	4	10.3	9	21.1	26	66.7
The Amish, on average, are just as smart as anyone else.	10	9.6	44	42.3	50	48.1	5	12.8	11	28.2	23	59
On a religious basis, the Amish have received exemptions from Social Security and laws regarding child labor, work safety, and zoning. In general, I feel they should be held to the same standards as anyone else.	8	7.7	46	44.2	50	48.1	7	17.9	21	53.8	11	28.2

“Disagree” and “Agree” aggregate both “strongly” disagree/agree and (just) disagree/agree responses.

\*Anderson & Decker, 2020.

**TABLE 5: DIFFERENCES OF MEANS ON MAS AND RATA QUESTIONNAIRE WITH DEMOGRAPHIC VARIABLES**

Variable	n	MAS			RATA Questionnaire			
		Mean (SD)	t/F	p	Mean (SD)	t/F	p	
Gender	Female	119	34.14 (3.98)	1.1	0.275	55.05 (5.81)	3.8	<.001*
	Male	25	33.20 (3.51)			50.08 (6.56)		
Age	<20	43	33.86 (3.84)	1.48	0.222	52.21 (6.28)	2.05	0.109
	20-29	76	33.61 (4.27)			54.88 (6.09)		
	30-39	15	35.00 (3.80)			55.60 (6.92)		
	40>	9	36.11 (3.18)			54.89 (4.81)		
Program	Nursing	105	33.61 (4.24)	1.88	0.063	53.60 (6.15)	1.86	0.066
	Social Work	39	34.97 (2.62)			55.74 (6.19)		
Education	Graduate	18	33.94 (2.88)	0.04	0.968	55.83 (4.19)	-1.21	0.229
	Undergraduate	126	33.98 (4.05)			53.94 (6.43)		
Religion	Christian	134	34.28 (3.30)	0.777	.001*	54.35 (6.07)	0.37	0.691
	Muslim	1	34.00 (0.00)			55.00 (0.00)		
	None	7	28.57 (9.03)			52.29 (9.36)		
Race	Asian	3	32.33 (2.08)	0.43	0.732	54.00 (2.65)	0.13	0.944
	Black	9	35.11 (3.44)			54.88 (4.39)		
	White	126	33.94 (4.04)			54.21 (6.38)		
	Other	6	33.83 (2.04)			52.83 (6.59)		
Contact with Amish	Never	29	32.93 (5.18)	1.31	0.275	52.50 (5.63)	1.7	0.171
	Rarely	53	33.81 (3.73)			53.64 (6.18)		
	Sometimes	35	33.49 (3.46)			55.11 (7.13)		
	Often	27	34.78 (3.08)			55.78 (5.27)		
Watch Amish Reality TV	Never	75	34.13 (3.20)	0.16	0.850	54.24 (6.45)	0.14	0.869
	Rarely	53	33.74 (5.02)			53.81 (6.38)		
	Sometimes	14	33.86 (2.74)			54.71 (4.70)		
	Often	0	0 (0.00)			0 (0.00)		

t/F = t-test for difference of means of two groups; F is ANOVA difference of means of more than two groups

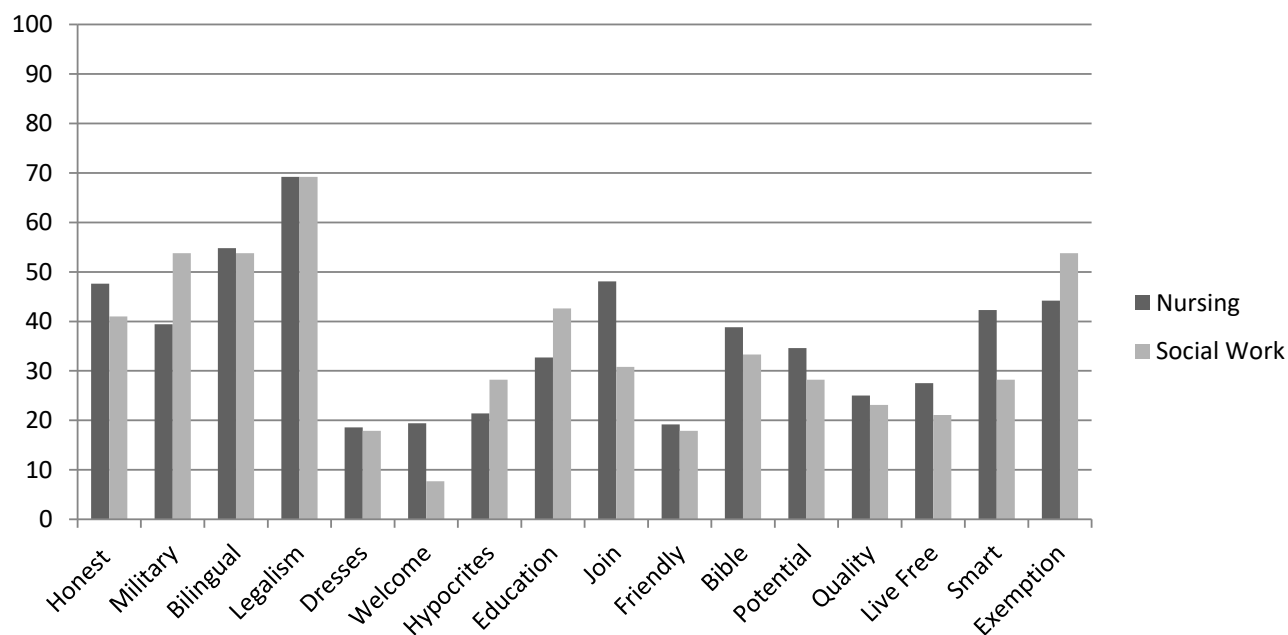
with the Amish, particularly with patients or families of patients.

Specific to gender, the female students were significantly more tolerant toward the Amish than male students ( $p < .001$ ). This was similar to Abrams et al. (2018) findings that female university students had more positive attitudes toward Muslims than males ( $p = .282$ ). There was no statistically difference of means between those who were Christians or non-Christians. Though not statistically different, older students and graduate students had a more tolerant attitude than did undergraduate students. This could be explained by

the fact that graduate students were usually older than undergraduates, with possibly broader life experience (Darling & Atav 2019 p 144). (Results should be interpreted cautiously because only 17% of the students were male, only 5.6% were non-Christians, and only 12.5% were graduate students.)

In this study, the researchers examined the relationship between university students' frequency of contact with the Amish and their knowledge of the Amish culture. Many respondents lacked knowledge about Amish ways of living even though many lived less than 60 minutes' drive

**FIGURE 3: FREQUENCIES OF “UNCERTAIN” RESPONSES ON THE RATA QUESTIONNAIRE (NURSING STUDENTS COMPARED TO SOCIAL WORK STUDENTS)**



from two of the largest Amish settlements in the world. The hypothesis that more contact led to more correct knowledge of the Amish culture was supported. However, only two statements garnered more than 50% correct answers. Students' lack of knowledge may have been because of the relative self-isolation of Amish communities. Understandably, nursing students had higher percentages of correct answers on the health-related questions than the social work students. Students with more knowledge of the Amish culture had a more tolerant attitude toward the Amish.

The frequency and types of contact between students and other ethnicities and between students and the Amish were examined. Over two-thirds of students had contact with people of other ethnicities, mostly as classmates or as tourists. Less than half of the students had occasional or frequent contact with the Amish, mostly as tourists. Less than a fifth, mainly nursing students, had contact with Amish patients and their families. The hypothesis that more contact led to more tolerant attitudes was not supported, similar to findings of 107 university students in Indiana using the original Attitudes toward Amish questionnaire (Byers and McGuigan 2017). This study examined the frequency of contact but not its quality; that is, not its length, closeness of relationship, or whether contacts were considered negative or pos-

itive. This factor lessened the importance of these findings (Zalewska-Puchala et al. 2021 p 142). McGuigan and Scholl (2007) found that participants who had “deep” contact with the Amish had more knowledge of that way of life but it did not affect their attitudes. More than knowledge was needed to influence attitudes (p. 2654).

The researchers wanted to know if students' awareness of other cultures in general correlated with their attitudes toward the Amish, more specifically. Social work students exhibited slightly more multicultural awareness but not to the level of significant difference. Interestingly, only a third of the nursing students and slightly less than half of the social work students believed their culture to be different from others around them. This was in contrast to the finding that almost 90% of the students had classmates and relatives of different ethnicities. Perhaps they did not see the ‘other ethnicity’ as culturally different. On the other hand, these students readily agreed that family structure, gender roles, age, and religious beliefs were perceived differently in different cultures and these differences should be taken into account when interacting. Students who were more aware of other cultures had a more tolerant attitude toward the Amish. The research findings indicated that more cultural learning should be encouraged. The danger was in the potential for *superficial* knowledge

of culture(s) to increase stereotyping and solidify bias (Patallo 2019).

The importance of continuing to learn about one's self and others was obvious in this study; many of the students were 'uncertain' about their knowledge, attitudes, and opinions. See Figure 3. The frequency of the response option 'uncertain' or 'do not know' was often elevated. This indicates that the students were honest in their responses, were willing to admit their lack of knowledge or had not yet established an opinion. For example, one-third of the respondents indicated they were uncertain about the need to "immediately identify the ethnicity of a person we meet or communicate with." Almost 70% of the students indicated they were uncertain of the statement, "Amish are excessively legalistic." Almost 50% would not agree or disagree with the statement, "Amish are generally honest people." Many of them had already indicated they had limited contact with the Amish so rather than making a supposition, they declared their uncertainty. This indicates that these students are not close-minded. They have not formed an opinion and are willing to keep learning. That willingness in and of itself is a good attitude.

### **Strengths & Limitations**

This study had several strengths and limitations. Due to the geographic location of the university, the potential to be aware of the Amish culture was great. Many students had the opportunity to interact with the Amish, even if it was only in while shopping. Another advantage was that student participants were from both nursing and social work backgrounds. Both student sets had the potential to interact with the Amish in healthcare settings. Next, the participants varied in age and years in school, with freshmen through seniors in both disciplines and masters nursing students. Including these two groups increased the sample size and also the levels of life experiences. Lastly, the strength of this study increased with the use of two different questionnaires (RATA and MAS).

One limitation of the present study was that the majority of the sample was composed of female students. It should be noted that the imbalance in gender proportions was consistent with the gender ratio of healthcare providers. Another limitation was that respondents to this survey were volunteers; their knowledge and attitudes

may or may not reflect the student body of the university. The university students were from a Christian university in the Midwestern United States. Generalizability of the findings to students in other academic fields where there were more variability might be limited. Knowledge and attitudes of students in this University may not reflect those of students from other educational institutions. Responses were self-reported and might be biased. Future research is needed to address these issues.

### **Implications for Nurses**

The nursing curriculum where the research was conducted has a cross-culture course as well as a clinical cross-culture immersion requirement. However, due to the proximity of the Amish, many students chose not to study in this location. More intentional content coverage is needed to expand students' knowledge of the Amish culture. Clinical sites have lately been limited due to COVID-19, but as the infection numbers decrease, the plan is for all students to have a clinical experience in the cross-cultural course or in the community nursing course. This change will allow additional comparative studies to examine attitudes toward the Amish.

### **Implications for Social Workers**

The social work faculty at the University where the study was conducted shared that they too wanted to be more intentional about including content about the Amish in their curriculum. Students could be placed in internships where they could work with the Amish. Faculty also plan to invite the Amish, and healthcare professionals who have worked with the Amish, as guest speakers. The Amish themselves and professional social workers on staff of local agencies could enlighten students on issues the Amish face. Following the potential change in curriculum, resurveying students might indicate changes to their knowledge and attitudes of the Amish culture.

### **Implications for Amish and Plain Anabaptists**

As the Amish population increases, it is vital that healthcare practitioners gain a greater understanding of the values and practices of the Amish.

Since the Amish have begun working in more industrial/professional occupations, having fewer children, are more accepting of outside insurance, and sometimes accepting government aid, it is important for healthcare professionals to have greater insights into the changes occurring within the Amish culture (Anderson and Potts 2020). With understanding comes acceptance. Understanding and acceptance build trust. This trust can lead to a more tolerant attitude among healthcare providers.

### Recommendations for Future Research

Based on this research study, the researchers wish to make several recommendations for future research related to attitudes and healthcare among the Amish. First of all, the generic RATA questionnaire is not particularly helpful in learning about attitudes of healthcare personnel toward the Amish. These researchers propose the development of a health-specific attitudes questionnaire; a survey that has statements more pertinent toward health and healthcare rather than statements about politics, education, or religion. For example, what are nurses' attitudes toward the Amish who prefer to not have their children immunized? Or, what are surgeons' attitudes toward the Amish who opt out of skin grafting for third degree burns? Or, what are midwives' attitudes toward the Amish who choose to conceive children who are likely to be born with a genetic disorder? The Amish and other plain people are invited to contact the researchers with suggestions of value-based, health-based statements that might be used in a future attitudes' questionnaire.

Next, future research with healthcare professionals currently working with Amish patients is recommended. This could be hospital personnel or community-based healthcare providers. In conjunction with that study, it is suggested that a study to compare attitudes toward the Amish among healthcare professionals in several different hospitals, in several different geographical locations be conducted.

Last, but certainly not least, it is recommended that a study to measure or qualify how attitudes toward the Amish impact caring for the Amish be done. Do healthcare professionals' negative or critical attitudes toward plain people cause them to provide care of lesser quality? How could quality of care be measured? Would plain peoples be

willing to share experiences during which they felt healthcare personnel stigmatized them or neglected their care?

### CONCLUSION

This study was undertaken to pursue an area of research where little information has been previously gathered. From a cultural perspective there has been a general understanding that healthcare outcomes can be improved when healthcare professionals are aware of the cultural values of the communities in which they serve. The goal of the study was to measure healthcare students' cultural awareness of and attitudes toward the Amish and their culture. The long-term goal will be to promote cultural understanding of the Amish in educational institutions that train future healthcare workers and in healthcare facilities that care for plain peoples.

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