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The Most Powerful Predictor of Attitudes toward Homosexuality in Korea: Familism *versus* Protestantism

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Abstract:

Background and Objectives:

Many people have shown negative attitudes toward homosexuality (ATH) in Korea. A number of studies have been conducted to identify factors (*e.g.*, spirituality, Protestantism, familism, *etc.*) influencing the attitudes. In this study, we reverified the effects of the factors identified from previous studies and determined what the most powerful predictor was for the attitudes by means of regression analyses.

Methods:

We conducted online and offline surveys using a questionnaire which consists of 32 items on the attitudes, familism, religion, and so on in early 2021. The respondents were 720 Protestant or non-religious Koreans (152 non-religious men, 195 Protestant men, 159 non-religious women, and 214 Protestant women) aging from 19 to 64 years old.

Results:

Among the factors found in previous studies, we found gender, age, Protestantism, spirituality, familism, procreation, marriage, education experiences on gay issues or social interaction with gay people, sexism, and political ideology to be significant in determining the attitudes. Conducting the regression analyses, familism was the most powerful predictor in both Protestant and non-religious groups. Especially, familism was the greatest predictor for the male sample. For the female sample, instead, marriage and procreation as the practice of familism were more powerful than familism itself, and spirituality was also a powerful predictor.

Conclusion:

Familism was the strongest predictor of the attitudes among the non-religious and religious samples and male sample, whereas spirituality was the strongest among the female sample. In addition, Protestantism itself was not a significant predictor for either the male or female sample. Thus, we concluded that the strongest factor influencing negative attitudes would be traditional familism values.

Keywords: Homosexuality, Homosexual attitudes, Familism, Protestantism, Spirituality, Sexism.

1. INTRODUCTION

1.1. Brief History of Homophobia

The perpetuation of mankind is possible by means of procreation, and even the traits of an individual can be passed down from generation to generation by it [1]. Sex between a man and a woman is imperative to perpetuate the human race and pass on lineage [2, 3]. The idea that the perpetuation of the race and the preservation of the lineage should be achieved by means of sexual acts between married couples has been emphasized in both the East and the West since ancient times. For example, Confucianism in the East put great focus on passing on the lineage, and the purpose of marriage was to preserve family lineage [4]. During the ancient Greek era, Plato and Aristotle asserted that the chief purpose of marriage was to perpetuate the race and pass on lineage. This view was maintained even in Roman times. For instance, Romans condemned celibacy and encouraged married people to produce as many children as possible. Like Greek and Roman cultures, Judaism is teaching that procreation and childbearing are the duties of married men and women by God's command,

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which is stated in Genesis (1:28) as "be fruitful and multiply" [2, 5].

Such views in Judaism are passed directly to Christianity. The early Christian evangelist, Paul the Apostle, defined sex as a good and necessary act that needs to be followed as God's command for the generation of new life. For this reason, marriage became good, lawful, and a prerequisite for procreation. Also, Judeo–Christians were taught that marital sex is permissible only for procreative purposes and that any sexual act not intended for procreation is a sin [3, 6]. Likewise, male masturbation, coitus interruptus, and most contraceptive methods were strictly forbidden. Both Jewish and Christian leaders taught that male masturbation would cause the wrath of heaven; this teaching was based on Onan (Genesis 38:4–10), who was slain by God because of coitus interruptus or masturbation [5, 7].

Since Judaism and Christianity emphasized procreation, marital sex between a man and a woman is normative and considered to be the standard. Therefore, sex between men was an act of undermining norms or values [3]. It was strictly forbidden, because it did not follow God's will for populating the earth, as is mentioned twice in Leviticus (18:22 and 20:13). As a result, it was recognized until recently as a major threat requiring the death penalty in Christian culture [8 - 10]. It, however, has been secretly attempted by some men [3].

In the Judeo–Christian cultures, masturbation and homosexuality between men were considered to be murder and a crime because of that belief. In addition, they have long been considered to be pathological behaviors because of wasting semen, which would be not only a human seed but also an essential ingredient in the creation of a healthy life. In other words, people believed that the wasting of semen is the cause of all diseases, but marrying the opposite sex and having children are normal and natural and of the highest value [9]. The tendency to regard homosexuality as pathological or deviant was held by many psychiatrists even in the second half of the 20th century [10, 11].

1.2. The Previous Studies on Attitudes toward Homosexuality

Developments in science and technology have led to a growing interest in identifying the biological causes of homosexuality, and the existing view of homosexuality is now considered to be discriminatory. Recently, several studies have been conducted across various cultures to examine attitudes toward homosexuality [12, 13]. Most studies examining these attitudes tried to identify the factors that determine the base of discrimination in order to improve the understanding of homosexuality. The studies so far share very similar results, but the attitudes differ according to individual characteristics, such as gender, age, religion, and other factors. The main findings are summarized as follows.

First, a gender difference is evident in attitudes. In general, males tend to show more negative attitudes than females. A survey of 33 countries, including Korea, showed a clear distinction between men and women [12], and even the World Values Survey (WVS) data of 79 countries from 1999 to 2009 showed that women were more favorable to homosexuality

than men [14]. The survey of Korean adults conducted every five years from 1994 to 2014 also revealed that men showed more negative attitudes than women [11]. In surveys of Christian cultures, such as South America, North America, and Europe, women were more favorable to homosexuals than men when teenagers, college students, or middle-aged people were surveyed [15 - 19].

Second, age differences played a role in the ATH. Specifically, the older generation tended to display more negative ATH than the younger generation. The differences were similar in the survey of 33 countries, including Korea [12], and in the WVS data [14]. In the survey conducted in Korea from 1994 to 2014, the older respondents had more negative attitudes [11]. Most of the studies from Western countries also showed that senior citizens had more negative ATH [16 - 20].

Third, the experience of social interaction with gay people and education about gay issues influenced the ATH. People who have had more social interaction with gay people or more opportunities to receive education about homosexuality showed more positive ATH. Similar results were found in studies conducted in Hong Kong, Turkey, the United States, Canada, and European countries [15, 17, 18, 21 - 24].

Fourth, socioeconomic status (SES) was a factor influencing the ATH. For example, according to the WVS data, the lower income group viewed homosexuality more negatively than the higher income group [14].

Fifth, the ATH also differed according to the years of schooling. In general, the higher the schooling was, the more favorable the attitudes were. This difference was consistent across most countries in the survey of 33 countries, including Korea [12]. The WVS data showed similar results [14].

Sixth, political ideology was related to the attitudes. In general, the more conservative a political ideology was, the more negative the attitudes were in several countries of South America, North America, and Europe [15 - 18, 20].

Seventh, religious background played a major role in determining attitudes, and people who have strong religious beliefs often viewed homosexuality in a negative light. This was conspicuously observed in studies of Christians. In the survey of 33 countries, including Korea [12], and in studies of Christians and other religious believers in several countries of South America, North America, and Europe, religious people were more homophobic than non-religious people. Furthermore, among religious people, those who showed stronger spirituality had more negative ATH [16, 18 - 20, 24 - 26]. On the other hand, even within the same religion, the attitudes differed according to which denomination they belonged to or how much they believed in the orthodoxy of past doctrines. Among Christians, for example, the views of Protestants and Orthodox Catholics were different [11, 25, 26].

Eighth, traditional familism influenced the ATH. Specifically, the ATH differed according to whether people were married, had children, or endorsed traditional gender roles. For example, people living with a spouse displayed more negative ATH than those who had never married, were divorced, or were widowed. The attitudinal differences by

marital status were similar in the survey of 33 countries, including Korea [12]. The WVS data showed that the group who had children was more prejudiced against homosexuality than the childless group [14]. Studies showed that people who emphasize male superiority as in traditional societies were more negative about homosexuality [19, 22], and people who display strong sexism were more negative about homosexuality than those not [23].

1.3. The Current Study on the Homosexuality Issue in Korea

We have briefly reviewed the findings of recent studies of ATH from a variety of cultural backgrounds and countries. These studies shared similar findings, in that the attitudes depended on factors, such as gender, age, and religious background. For instance, Protestants were less favorable toward homosexuality than either Catholics or non-religious people in Korea [11]. However, there are very few studies that reveal how much each of these factors explains the discriminatory ATH. Korea has rapidly transformed into a culture emphasizing equality since the late 20th century [27, 28]. Sorry to say, anti-discrimination laws that included sexual minorities have not yet been passed in South Korea, because of strong opposition from pastors, professors, and activists of Protestant organizations, even though the laws had been proposed eight times from 2007 to 2020 [29, 30].

Therefore, we need to identify whether the discriminatory attitude of Protestants, who are the biggest opponents of sexual minorities in Korean society, would result from their religious beliefs or spirituality, traditional familism, or other factors. We conducted this study for the following two purposes. First, we wanted to reverify the effects of the factors found in prior studies on ATH, that is to check whether there were any differences in the attitudes depending on gender, spirituality, and so on. Second, we wanted to find out which factor would have the strongest influence on the attitudes. By using regression analyses, the explanatory power of each factor would be delineated. For this purpose, we limited this study to people with religious backgrounds of being either non-religious or Protestant.

2. METHODS

2.1. Respondents

The sample was 720 Koreans (347 men and 373 women) from 19 to 64 years old (Table **1**). The sample consisted of only non-religious (n= 311) and Protestants (n= 409). The mean age of the sample was 41.56 years (SD= 13.02). There were no age differences between the genders ($F < 1$) and religious backgrounds ($F < 1$). The years of schooling of the sample were all 12 years or more. The sample consisted of 11.8% high school graduates, 68.6% college students or graduates, and 19.6% graduate school students or graduates. There were no gender differences in the years (χ^2= 1.47, df= 2, *n.s.*), but the Protestants had slightly more years than non-religious people (χ^2= 14.90, df= 2, $p < .01$).

For the marital status, the ratio of people who had never been married was 37.6% (n= 271). There was no significant

difference between men and women in the ratio (χ^2= .06, df= 1, *n.s.*). The ratio was higher for the non-religious (43.4%, n= 135) than the Protestants (33.3%, n= 136; χ^2= 7.76, df= 1, $p < .01$). Among the sample, 42.4% of them had no children. There was no significant difference between men and women in the ratio of people who had no children (χ^2= .36, d= 1, *n.s.*) and no significant difference between Protestant and non-religious people (χ^2= 3.48, df= 1, *n.s.*). In SES (range: 0~10), the mean of the responses was 4.83 (SD= 1.74), and more than two-thirds of the sample answered between 4 and 6. There was no significant difference in SES between Protestants and non-religious people ($F < 1$).

2.2. Measures

Our questionnaire consisted of 32 items, which included nine items measuring ATH, seven items on demographic information, two items about traditional familism, five items on old-fashioned sexism, one item on political ideology, six items on intrinsic spirituality, and two items on gay issues. Among those items, we measured the ATH of the dependent measure in this study by the nine items from Youn [11]. The response format for them was a 5-point Likert-type scale ranging from 1 (strongly agree) to 5 (strongly disagree). The higher the total scores were (range, 9~45), the greater the general acceptance of homosexuality was. The internal consistency coefficient α(alpha)s for the nine items were .94 for the total sample (n= 720), .91 for Protestant men (n= 195), .93 for Protestant women (n= 214), .93 for non-religious men (n= 152), and .95 for non-religious women (n= 159).

Seven demographic questions measured the age, gender, religious background, years of schooling, marital status, number of children, and SES. For the religious background, "non-religious" were coded 0 while "Protestant" 1. Years of schooling were measured by asking if they were (1) primary school graduates (coded 1), (2) junior high school graduates (coded 2), (3) high school graduates (coded 3), (4) college students or graduates (coded 4), or (5) graduate school students or graduates (coded 5). Marital status was asked if they (1) had never married, (2) are married and currently living with their spouse, or (3) are married but currently living without a spouse (divorced, separated, or widowed). However, the marital status was coded in two ways: (1) "if they had ever been married or not" (never been married= 0; have been married= 1) and (2) "if they are currently living with their spouse or not" (without spouse= 0; with spouse= 1). The number of children was measured by a single item, "How many children do you have?" The response for this item was coded in correlations and regression analyses as: "no children (0)", "1 child (1)", "2 children (2)", "3 children (3)", and "4 or more children (4)". SES was measured by a single item on an 11-point Likert-type scale from 0 (economically very poor) to 10 (economically very rich).

Traditional familism was assessed by using two out of five items in the Familism Index [31]. They were "It's better for a person to get married than to go through life being single" and "It's better for a person to have a child than to go through life childless." The response format for them was a 5-point Likert-type scale [1 (strongly agree) to 5 (strongly disagree)] in Kim

and Wilcox [31] but a 7-point Likert-type scale [1 (strongly disagree) to 7 (strongly agree)] in this study. The higher the total scores were (range, 2~14), the higher the level of traditional familism was (*i.e.*, normative importance of marriage and childbearing). The internal consistency coefficient αs for the two items were .90 for the total sample (*n*= 720), .86 for Protestant men (*n*= 195), .93 for Protestant women (*n*= 214), .88 for non-religious men (*n*= 152), and .83 for non-religious women (*n*= 159).

We measured old-fashioned sexism by using five items from the Sexism Scale [32]. The scale responses ranged from 1 (strongly disagree) to 7 (strongly agree). The higher the total scores were (range, 5~35), the higher the level of old-fashioned sexism was (*i.e.*, endorsing traditional gender roles). The internal consistency coefficients αs for the scale were .66 for the total sample (*n*= 720), .68 for Protestant men (*n*= 195), .64 for Protestant women (*n*= 214), .65 for non-religious men (*n*= 152), and .65 for non-religious women (*n*= 159).

Political ideology was measured with a single item of "What is your political attitudes?" with responses from 1 (strongly conservative) to 6 (strongly liberal) in Diemer, Voight, Marchand, and Bañales [33]. However, participants in this study were asked to respond on an 11-point Likert-type scale [0 (strongly conservative) to 10 (strongly liberal)].

We measured spirituality by using the Intrinsic Spirituality Scale [34]. The scale assesses the degree to which spirituality functions as an individual's master motive, for both within and outside religious frameworks. The response format was on an 11-point Likert-type scale, ranging from 0 (strongly disagree) to 10 (strongly agree). The higher the total score was (range, 0~60), the higher the degree of spirituality was in their lives. The internal consistency coefficient αs for the scale was .98 for the total sample (*n*= 720), .97 for Protestant men (*n*= 195), .96 for Protestant women (*n*= 214), .94 for non-religious men (*n*= 152), and .92 for non-religious women (*n*= 159).

Two items measured the social interaction with gay people and education on gay issues. Participants in the Brownlee *et al.* [21] study were asked if someone close to them was homosexual and were asked to respond with "yes," "no," or "uncertain." However, participants in this study were asked "How many homosexuals are you close with?" and were asked to respond on a 7-point Likert-type scale with "none (coded 1)," "1 (coded 2)," "2~3 (coded 3)," "4~5 (coded 4)," "6~7 (coded 5)," "8~9 (coded 6)," "10 or more (coded 7)." The higher the numbers were, the closer the relationship with gay people was. Brownlee *et al.* [21] measured the amount of education about homosexuality by asking how much formal coverage was/is devoted to gay and lesbian issues in the Social Work program. However, our participants were asked "How much experience did you have in access to programs, education, or movies about homosexuality?" They were asked to respond on a 7-point Likert-type scale with "never (coded 1)," "once (coded 2)," "2~3 times (coded 3)," "4~5 times (coded 4)," "6~7 times (coded 5)," "8~9 times (coded 6)," or "10 times or more (coded 7)." The higher the scores were, the more positive the attitudes toward gay issues were.

2.3. Procedure

We collected data in the spring of 2021 with both offline and online approaches. All the data collection procedures were approved by our Institutional Review Board. Of the total sample (*n*= 720), 55.6% (*n*= 400) was recruited by the offline approach and 44.4% (*n*= 320) online.

For offline recruitment, we made direct contact with potential participants indiscriminately in the local community (*e.g.*, college campus, park, church, or community center) and with individuals by means of acquaintances. As soon as they were contacted individually, we asked about their age and religion first and then they were asked if they could participate in the survey. Those who volunteered to fill out the questionnaire were selected as study participants after confirming oral consent along with the study guidelines. The offline survey took less than 10 minutes to complete.

For online recruitment, we used two methods: a Google survey and a research panel (Embrain) in Korea. In the Google survey, the participants were recruited by means of postings, introducing the research on online bulletin boards and social media (*e.g.*, Facebook). This advertisement included the URL of the Google survey, and 46 people participated with no reward in the survey. In the Embrain panel method (pool of about 1.5 million members), 274 participants were recruited. They were paid about one dollar as a reward by Embrain. In both methods, the age and religious background were checked in advance as in the offline approach. That is, after presenting the questions about the age and religious background first, only those who were between 19 and 64 years old and were non-religious or Protestant could proceed to the next questions. Before responding to the questionnaire, the participants read the research explanation and confirmed that they agreed to participate in the survey. The online survey took approximately 10 minutes to complete.

3. RESULTS

3.1. Revalidation of Factors Affecting ATH

Factors affecting ATH in this study were divided into five sections. They are basic demographic variables (gender, age, years of schooling, and SES), religion factors (intrinsic spirituality and religious background), familism (traditional familism, procreation, and marriage), experience about homosexuality (social interaction with gay people and education on gay issues), and ideology (sexism and political ideology).

For gender, women showed more positive ATH than men [$F(1, 716) = 13.51$, $p < .001$] (Table **2**). Specifically, non-religious men (*M*= 31.14, *SD*= 9.25) were more negative about homosexuality than non-religious women [*M*= 35.67, *SD*= 8.92; $F(1, 309) = 19.31$, $p < .001$], but there was no gender difference between Protestant men (*M*= 26.26, *SD*= 9.55) and Protestant women (*M*= 27.07, *SD*= 10.51; $F < 1$).

Age showed a significant correlation with the attitudes. In general, the older the respondents were, the more negative their attitudes were. Specifically, the correlation was found when the sample was limited to the males (*r*= -.20, *p* < .001), females (*r*=

-.45, $p < .001$), non-religious ($r = -.32$, $p < .001$), or Protestants ($r = -.36$, $p < .001$). In addition, similar results were found in gender by groups with religious background (Tables **3** and **4**): Protestant men ($r = -.21$, $p < .01$), Protestant women ($r = -.48$, $p < .001$), non-religious men ($r = -.19$, $p < .05$), and non-religious women ($r = -.47$, $p < .001$).

Meanwhile, there was no significant correlation between SES and the attitudes in any specific group [*i.e.*, males ($r = -.00$, *n.s.*), females ($r = -.01$, *n.s.*), non-religious ($r = .05$, *n.s.*), or Protestants ($r = -.02$, *n.s.*)]. In addition, the results were similar for both Protestant men and women and for both non-religious men and women (Tables **3** and **4**).

Also, there was no significant difference in the attitudes according to the years of schooling: $F < 1$ (Table **2**). In general, we found no relationship between years of schooling and attitudes for males ($F < 1$), females ($F < 1$), and Protestants ($F < 1$) but the non-religious. That is, the more educated the non-religious respondents were, the more favorable their attitudes were: high school graduates ($M = 30.54$, $SD = 7.91$); college students or graduates ($M = 33.64$, $SD = 9.40$); and graduate school students or graduates [$M = 35.74$, $SD = 9.92$]; $F(2, 308) = 3.92$, $p < .05$].

For religious factors, spirituality (range 0~60) was higher in the Protestants than the non-religious [$F(1,718) = 983.44$, $p < .001$] (Table **5**). In general, the higher the spirituality was, the more negative the attitudes were. Specifically, we found a correlation between the spirituality and ATH in the males ($r = -.35$, $p < .001$), females ($r = -.56$, $p < .001$), non-religious ($r = -.24$, $p < .001$), and Protestants ($r = -.40$, $p < .001$). We also found the correlation for Protestant men ($r = -.30$, $p < .001$), Protestant women ($r = -.49$, $p < .001$), non-religious men ($r = -.17$, $p < .05$), and non-religious women ($r = -.31$, $p < .001$) (Tables **3** and **4**).

In addition, religious background showed a significant relationship with the attitudes. In general, Protestants showed more negative attitudes than non-religious people [$F(1, 716) = 85.91$, $p < .001$; Table **2**]. Specifically, Protestant men ($M = 26.26$, $SD = 9.55$) were more negative than non-religious men [$M = 31.14$, $SD = 9.25$; $F(1, 345) = 22.90$, $p < .001$], and Protestant women ($M = 27.07$, $SD = 10.50$) were more negative than non-religious women [$M = 35.67$, $SD = 8.92$; $F(1, 371) = 69.22$, $p < .001$]. However, when examining the attitudes with spirituality as a covariant, there was no significant difference in attitudes between the non-religious and the Protestants ($F < 1$).

Traditional familism showed significant relationships with the attitudes. In general, the greater the traditional familism was, the stronger the negative attitudes were. Specifically, the relationships were found when we limited the sample to the males ($r = -.47$, $p < .001$), females ($r = -.54$, $p < .001$), non-religious ($r = -.46$, $p < .001$), or Protestants ($r = -.49$, $p < .001$). The correlation was also found for Protestant men ($r = -.47$, $p < .001$), Protestant women ($r = -.51$, $p < .001$), non-religious men ($r = -.44$, $p < .001$), and non-religious women ($r = -.40$, $p < .001$) (Tables **3** and **4**). In addition, examining the attitudes with traditional familism as a covariant, the Protestants showed more negative attitudes than the non-religious [$F(1, 717) = 46.16$, $p < .001$].

The number of children had a significant correlation with attitudes ($r = -.37$, $p < .001$). Specifically, the correlation was found when we limited the sample to Protestant men ($r = -.26$, $p < .001$), Protestant women ($r = -.51$, $p < .001$), or non-religious women ($r = -.46$, $p < .001$) but not for non-religious men ($r = -.12$, *n.s.*) (Tables **3** and **4**). Also, according to the ANOVAs, those who had given birth to a child showed more negative ATH than those who had not [$F(1,718) = 98.115$, $p < .001$] (Table **2**). Specifically, the relationships were found even when we limited the sample to the males [having no child ($M = 30.85$, $SD = 8.95$) *versus* having one child or more ($M = 26.51$, $SD = 9.88$)], the females [having no child ($M = 36.65$, $SD = 8.70$) *versus* having one child or more ($M = 26.58$, $SD = 10.06$)], the non-religious [having no child ($M = 36.59$, $SD = 8.46$) *versus* having one child or more ($M = 30.75$, $SD = 9.25$)], or the Protestants [having no child ($M = 31.26$, $SD = 9.28$) *versus* having one child or more ($M = 23.72$, $SD = 9.43$)].

Marital status had a significant relationship with the attitudes. In general, those who had been married showed less favorable ATH than those who had never been [$F(1,718) = 103.31$, $p < .001$] (Table **2**). Specifically, the relationships were found even when we limited the sample only to men [never married ($M = 31.25$, $SD = 9.06$) *versus* married ($M = 26.71$, $SD = 9.71$)], women [never married ($M = 37.10$, $SD = 8.20$) *versus* married ($M = 26.83$, $SD = 10.23$)], the non-religious [never married ($M = 37.01$, $SD = 8.39$) *versus* married ($M = 30.72$, $SD = 9.14$)], or the Protestants [never married ($M = 31.63$, $SD = 8.98$) *versus* married ($M = 24.22$, $SD = 9.66$)]. The relationships were also found for Protestant men ($r = .44$, $p < .001$), Protestant women ($r = .43$, $p < .001$), non-religious men ($r = .19$, $p < .05$), and non-religious women ($r = .27$, $p < .001$) (Tables **3** and **4**).

Education on gay issues showed a significant correlation with the attitudes. In general, the more education on gay issues people had, the more positive their attitudes were ($r = .25$, $p < .001$). The correlation was found when we limited the sample to the non-religious ($r = .28$, $p < .001$), the Protestants ($r = .23$, $p < .001$), or the females ($r = 37$, $p < .001$) but not the males ($r = .08$, *n.s.*). Specifically, the correlation was found for Protestant women ($r = .34$, $p < .001$) or non-religious women ($r = .40$, $p < .001$) but not for Protestant men ($r = .11$, *n.s.*) or for non-religious men ($r = .10$, *n.s.*) (Tables **3** and **4**).

Social interaction with gay people showed a significant correlation with the ATH. In general, the more gay friends people had, the more favorable their attitudes were ($r = .26$, $p < .001$). The correlation was found when we limited the sample to the males ($r = .20$, $p < .001$), females ($r = .29$, $p < .001$), non-religious ($r = .30$, $p < .001$), or Protestants ($r = .24$, $p < .001$). Specifically, the relationship was found for Protestant men ($r = .21$, $p < .01$), Protestant women ($r = .26$, $p < .001$), non-religious men ($r = .24$, $p < .01$), and non-religious women ($r = .33$, $p < .001$) (Tables **3** and **4**).

Sexism showed a significant correlation with the ATH. In general, the higher the participants' sexism was, the more negative their attitudes were ($r = -.31$, $p < .001$). The correlation was found when we limited the sample to the males ($r = -.23$, $p < .001$), females ($r = -.35$, $p < .001$), non-religious ($r = -.44$, $p < .001$), or Protestants ($r = -.24$, $p < .001$). Specifically, the relationship was found for Protestant men ($r = -.19$, $p < .01$),

Protestant women (*r*= -.29, *p* < .001), non-religious men (*r*= -.35, *p* < .001), and non-religious women (*r*= -.46, *p* < .001) (Tables **3** and **4**).

Political ideology showed a slight but significant correlation with the ATH. In general, the more strongly the ideology was held, the more negative the attitudes were (*r*= .08, *p* < .05). However, we found a significance only when the sample was limited to the females (*r*= .16, *p* < .01) but not the males (*r*= .00, *n.s.*), the non-religious (*r*= .10, *n.s.*), or the Protestants (*r*= .06, *n.s.*). Specifically, the correlation was found for non-religious women (*r*= .26, *p* < .01) but not for Protestant men (*r*= .07, *n.s.*), Protestant women (*r*= .06, *n.s.*), or non-religious men (*r*= -.06, *n.s.*) (Tables **3** and **4**).

Table 1. Age (years) statistics of the study population (*N*= 720).

-	Non-religious			Protestants			Total		
	n	*M*	*SD*	*N*	*M*	*SD*	*n*	*M*	*SD*
Men	152	41.52	13.30	195	41.75	12.89	347	41.65	13.05
Women	159	40.96	12.70	214	41.87	13.24	373	41.48	13.00
Total	311	41.23	12.98	409	41.81	13.05	720	41.56	13.02

Table 2. Descriptive statistics for attitudes toward homosexuality scores [*M* (*SD*)].

-		*N*	*M*	*SD*
Gender	Men	347	28.40	9.71
	Women	373	30.74	10.73
Schooling	High school graduates	85	28.55	9.88
	College students or graduates	494	29.90	10.06
	Graduate school students or graduates	141	29.24	11.40
Religion	Non-religious	311	33.45	9.35
	Protestants	409	26.69	10.06
Marriage	Never been married	271	34.31	9.08
	Have been married	449	26.77	9.97
Procreation	No children	305	33.78	9.28
	Have children	415	26.55	9.96

Table 3. Correlations between factors affecting the attitudes across non-religious group.

Variable	1. ATH	2. Traditional Familism	3. Children	4. Sexism	5. Political Ideology	6. Spirituality	7. Education	8. Interaction	9. SES	10. Age
1.	-	-.443***	-.129	-.356***	-.062	-.176*	.101	.242**	-.002	-.197*
2.	-.401***	-	.254**	.262**	.087	.199*	-.087	-.198*	.128	.259**
3.	-.529***	.420***	-	.155	.155	.176*	.045	-.187*	.077	.652***
4.	-.463***	.447***	.382***	-	-.037	.373***	-.144	-.226**	-.081	.236**
5.	.269**	-.178*	-.033	-.153	-	.005	-.042	.058	-.019	.266**
6.	-.313***	.275***	.307***	.320***	.023	-	-.008	-.114	-.101	.271**
7.	.404***	-.410***	-.307***	-.433***	.210**	-.030	-	.281***	.148	.019
8.	.332***	-.334***	-.288***	-.357***	.209**	-.125	.422***	-	.099	-.027
9.	.100	-.075	-.108	-.240**	-.073	.033	.186*	.203*	-	-.219**
10.	-.475***	.482***	.727***	.415***	.008	.340***	-.227**	-.317***	-.218**	-

Note. 1) Names of the variables 1, 3, 4, 7, and 8 are as follows: 1. ATH (attitudes toward homosexuality), 3. Children (number of children), 4. Sexism (old-fashioned sexism), 7. Education (education experiences on gay issues), and 8. Interaction (social interaction with gay people).
2) All the categorical or ordinal variables (*i.e.*, gender, marital status, and years of schooling) are not included.
3) Coefficients above the diagonal represent correlations across male participants in non-religious affiliation group (*n*= 152); coefficients below the diagonal represent correlations across female participants in non-religious affiliation group (*n*= 159).
* *p* < .05, ** *p* < .01, *** *p* < .001.

Table 4. Correlations between factors affecting the attitudes across Protestant group.

Variable	1.ATH	2.Traditional Familism	3. Children	4. Sexism	5. Political Ideology	6. Spirituality	7. Education	8. Interaction	9. SES	10. Age
1.	-	-.470***	-.263***	-.193**	.073	-.302***	.110	.215**	.001	-.216**
2.	-.519***	-	.355***	.211**	.077	.447***	-.093	-.182*	.182*	.357***
3.	-.513***	.370***	-	.046	.095	.310***	-.136	-.076	.151*	.753***
4.	-.291***	.366***	.216**	-	-.110	.113	-.144*	-.115	.055	.079
5.	.064	-.228**	-.048	-.176**	-	-.022	.050	-.066	.129	.098
6.	-.495***	.436***	.281***	.097	-.099	-	.019	-.111	.035	.402***
7.	.346***	-.285***	-.265***	-.201**	-.024	-.149*	-	.389***	.050	-.109
8.	.266***	-.143*	-.272***	.018	.035	-.102	.319***	-	.072	-.142*
9.	-.053	.121	.163*	-.013	-.106	.015	-.011	-.006	-	.224**
10.	-.480***	.428***	.700***	.173*	-.001	.440***	-.288***	-.292***	.147*	-

Note: 1) Names of the variables 1, 3, 4, 7, and 8 are as follows: 1. ATH (attitudes toward homosexuality), 3. Children (number of children), 4. Sexism (old-fashioned sexism), 7. Education (education experiences on gay issues),and 8. Interaction (social interaction with gay people).
2) All the categorical or ordinal variables (*i.e.*, gender, marital status, and years of schooling) are not included.
3) Coefficients above the diagonal represent correlations across male participants in Protestant group (*n*= 195); coefficients below the diagonal represent correlations across female participants in Protestant group (*n*= 214).
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5. Descriptive statistics for intrinsic spirituality and traditional familism scores [*M* (*SD*)].

-	Non-religious			Protestants			Total		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
Intrinsic Spirituality	311	7.83	10.18	409	40.91	16.35	720	26.62	21.57
Traditional Familism	311	7.37	3.47	409	9.09	3.68	720	8.35	3.69

3.2. The Strongest Predictor of ATH

Among the above-mentioned factors, we examined which of them could be predictors or the strongest one that predicted the attitudes. For this purpose, we did stepwise regression analyses nine times [*i.e.*, total, non-religious, Protestant, male, female, non-religious male, non-religious female, male Protestant, and female Protestant groups (Table **6**)]. For convenience, the correlations between the study variables are shown only for the four groups based on religion and gender (Table **3** and **4**). Before conducting the regression, we first tested the multicollinearity between the variables. All the VIFs ranged from 1.00 to 1.55 in the nine stepwise analyses and so no study variables were removed. We dummy coded religion and gender (non-religious= 0, Protestant= 1, male= 0, female= 1) in the analyses. As shown in Table **6**, the results of the analyses were first introduced for the total sample, followed by non-religious and Protestant groups according to religion, males and females according to gender, non-religious male and female groups, and Protestant male and female groups.

Of the total sample, familism, spirituality, procreation (*i.e.*, number of children), sexism, social interaction with gay people, and education on gay issues were revealed to be significant predictors, whereas religion, age, gender, years of schooling, marital status, spouse status, SES, and political ideology were not. Among the predictors, the most powerful one was familism, which accounted for 27.3% of explanatory power, followed by spirituality 7.4%, procreation 3.1%, sexism 2.9%, social interaction with gay people 1.3%, and education on gay issues 0.6%.

For the non-religious, familism, sexism, marital status, and social interaction with gay people were significant predictors. Like the total sample, familism had the strongest power (21.9%), followed by sexism, marital status, and social interaction with gay people. However, unlike the total sample, spirituality, procreation, and education on gay issues were not significant in this sample.

For the Protestants, familism, procreation, spirituality, social interaction with gay people, and sexism were significant. Familism also had the highest explanatory power (24.9%), followed by procreation, spirituality, interaction with gay people, and sexism.

For the males, familism, spirituality, sexism, and social interaction with gay people were significant predictors. Familism showed the greatest explanatory power (22.7%) and spirituality the second. However, procreation and education on gay issues were insignificant.

For the females, spirituality, procreation, education on gay issues, familism, and sexism were significant. Unlike the total sample or the males, spirituality (31.6%) was the most important predictor. However, the explanatory power of familism (2.3%) was much lower than in the total or male sample. Procreation and education on gay issues, which were not significant in the males, appeared as significant predictors.

For the non-religious males, only two factors, familism and sexism, were significant, and familism showed the greatest explanatory power (19.6%). For the non-religious females, marital status, sexism, political ideology, education on gay issues, and spirituality were significant, but familism was not.

Unlike the non-religious males, marital status (28.3%) was the most powerful predictor, followed by political ideology, education on gay issues, and spirituality.

Table 6. Results of stepwise regression analyses on factors predicting attitudes toward homosexuality.

-	R	R^2	ΔR^2	B	F
(1) Total sample ($n = 720$)					
Traditional familism	.523	.273	.273	41.812	269.876
Spirituality	.589	.347	.074	42.792	190.904
Children	.615	.378	.031	43.204	145.191
Sexism	.630	.397	.029	46.045	117.787
Interaction	.640	.410	.013	43.343	99.318
Education	.645	.416	.006	41.868	84.552
(2) Non-religious sample ($n = 311$)					
Traditional familism	.467	.219	.219	42.728	86.418
Sexism	.544	.296	.077	47.894	64.764
Marriage	.563	.317	.021	48.000	47.476
Interaction	.571	.326	.009	45.662	36.997
(3) Protestant sample ($n = 409$)					
Traditional familism	.499	.249	.249	39.094	134.685
Children	.554	.307	.058	39.637	89.739
Spirituality	.579	.335	.029	42.328	68.100
Interaction	.593	.352	.017	39.555	54.876
Sexism	.602	.363	.011	41.660	45.886
(4) Male sample ($n = 347$)					
Traditional familism	.476	.227	.227	40.709	101.047
Spirituality	.516	.266	.040	41.328	62.382
Sexism	.533	.284	.018	44.401	45.455
Interaction	.545	.297	.013	41.787	36.162
(5) Female sample ($n = 373$)					
Spirituality	.563	.316	.316	38.255	171.730
Children	.679	.461	.145	41.347	158.482
Education	.709	.503	.041	36.714	124.304
Traditional familism	.725	.526	.023	40.063	101.912
Sexism	.731	.534	.009	42.391	84.181
(6) Non-religious male sample ($n = 152$)					
Traditional familism	.443	.196	.196	41.631	36.578
Sexism	.508	.258	.062	47.217	25.883
(7) Non-religious female sample ($n = 159$)					
Marriage	.532	.283	.283	41.072	62.024
Sexism	.600	.360	.077	46.590	43.915
Political ideology	.625	.391	.031	39.030	33.198
Education	.643	.413	.022	35.742	27.074
Spirituality	.658	.433	.021	34.576	23.405
(8) Male protestant sample ($n = 195$)					
Traditional familism	.470	.221	.221	38.767	54.802
Interaction	.488	.239	.017	36.045	30.074
(9) Female protestant sample ($n = 214$)					
Traditional familism	.519	.269	.269	39.372	77.952
Children	.623	.389	.120	40.415	67.079
Spirituality	.672	.452	.063	45.059	57.758
Education	.688	.473	.021	41.356	46.984

Note: Names of the variable are as follows: Children (number of children), Sexism (old-fashioned sexism), Education (education experiences on gay issues), Interaction (social interaction with gay people) & Marriage (if have ever been married or not).
All the Fs were significant at $p < .001$.

For the male Protestants, only two factors, familism and social interaction with gay people, were significant. As in most samples, familism showed the greatest explanatory power (22.1%). For the female Protestants, familism, procreation, spirituality, and education on gay issues were significant. Like the total sample and male Protestants, familism had the largest explanatory power, at 26.9%, followed by number of children, spirituality, and education on gay issues.

4. DISCUSSION

Korean society has sought to become an egalitarian society since the late 20th century; however, a negative sentiment persists toward sexual minorities. This may be influenced by particularly strong opposition from Korean Protestants. As mentioned earlier, antidiscrimination laws that included sexual minorities have not yet been passed, because of the strong opposition from the Protestants [29, 30]. We must identify major obstacles that keep Korea from becoming a truly equal society without discrimination. Putting it another way, we must examine whether the discriminatory ATH is related to the factors stated in previous studies (*e.g.*, religious background). Therefore, we designed this study with two purposes. The first was to reverify the effects of factors found in prior studies among a Korean sample. The second was to find out which factor would have the most meaningful effect on the ATH. For these purposes, we selected non-religious and Protestant Korean people who were from 19 to 64 years old as the study sample. The major findings of this study were as follows.

4.1. Factors Influencing ATH

For gender, most of the previous studies reported that women often showed more positive ATH than men. For example, gender difference tables were found in the surveys of Christian cultures across South America, North America, and Europe and in the survey of Korean adults conducted at five-year intervals from 1994 to 2014 [11, 12, 14 - 19]. Our study shows that men are more likely to have negative ATH than women among both the non-religious and the Protestants.

Regarding age, older generations tend to show more negative attitudes than younger ones. The age differences were similar in the surveys of various countries, including Korea [11, 12, 14, 16 - 20]. We found similar results even when the sample was limited to the males, females, non-religious, and Protestants.

For religious backgrounds, the Protestants, overall, showed more negative ATH than the non-religious. Such results were found in the surveys of several countries, including Korea [11, 12, 16, 18 - 20, 22, 24 - 27]. Similar results were found in this study that, specifically, both Protestant men and women showed more negative ATH than non-religious men and women.

For spirituality, those who had a stronger sense of spirituality had more negative ATH. These results were found in previous surveys from various cultures, including Korea [12, 16, 18, 19, 24 - 26]. We found comparable results when we limited the sample to males, females, non-religious, and Protestants in this study. In addition, people with a religious affiliation had higher spirituality than the non-religious [35],

and we found such results in this study. When we examined the attitudes between the non-religious and Protestants with spirituality as a covariant, there was no significant difference. We inferred that the factor determining the attitudes would be spirituality rather than Protestantism itself.

For familism, the higher traditional familism was, the more negative the attitudes were [19, 22]. We also found similar results when the sample was limited to either males, females, non-religious, or Protestants in this study. In addition, the Protestants showed more traditional familism than the non-religious. Therefore, by examining the ATH with traditional familism as a covariant, the Protestants showed more negative ATH than the non-religious, which suggests that traditional familism would be a more crucial factor for the ATH than Protestantism or spirituality.

For procreation, people who had given birth to one or more children showed more negative ATH than those who had not in previous surveys from other cultures [14]. We found similar results in this study when the sample was limited to males, females, non-religious, or Protestants, which implies that the practice of familism values, such as procreation, would determine the ATH.

For marriage, people who got married showed less favorable attitudes than those people who had never married in a previous study in 20 European countries [19]. We found similar results in this study when the sample was limited to either males, females, non-religious, or Protestants, which implies that the practice of a familism value, such as marriage, would determine the attitudes.

For sexism, previous studies reported that people who exhibit sexual discrimination had more negative ATH than those who did not [23, 36]. In general, sexists tend to have more negative attitudes than non-sexists [32, 36]. We found strong positive correlations between sexism and familism in this study.

For SES, people with low income had more negative attitudes than those with higher income in a previous study [14]. However, there was no difference in the attitudes according to their SES level in this study, perhaps because most of our respondents were in the middle class.

For educational level, the fewer the years of schooling were, the less favorable the attitudes in previous studies were [12, 14, 16, 17, 19, 37]. However, such results were found only when we limited the sample to the non-religious in this study, but not either the Protestants, males, or females, perhaps because the respondents in our survey were all high school graduates.

For political ideology, people who were more politically conservative showed more negative attitudes in previous studies [15 - 18, 20]. However, conservatism was significant only in the females, specifically, only for non-religious females in this study but not for the males, non-religious, and Protestants.

For the educational experience on gay issues, people with more opportunities to receive education about homosexuality through either programs, lectures, or movies showed more

favorable attitudes in previous studies [15, 17, 18, 21 - 24]. We found similar results in the females, non-religious, and Protestants in this study but not the males.

For social interaction with gay people, people who have had more social interactions with gay people, such as having social relationships with them, showed more positive attitudes in previous studies [15, 17, 18, 21 - 24]. Similar results were found in this study when the sample was limited to the males, females, non-religious, or Protestants, which implies that greater social interaction with gay people leads to more favorable attitudes, regardless of gender and religious background.

4.2. The Strongest Predictor of ATH: Familism or Protestantism?

So far, the effects of the study's variables on the ATH were revalidated, and we compared our results with those of the previous studies. We also did stepwise regression analyses with the variables to see which would be the strongest predictor of attitudes. In general, familism was the strongest predictor in the analyses. That is, familism showed the strongest influence on the attitudes across the total sample. Spirituality also was a significant predictor, but the explanatory power of spirituality was much weaker than that of familism. In addition, procreation as a practice of familism values was a significant predictor across the total sample, whereas marriage was not.

Similar results were found when the sample was limited to the Protestants. Specifically, familism was the most powerful predictor in the Protestants, and procreation was also a significant predictor, whereas marriage was not. Spirituality was a significant predictor for the group, but its predicting power was inferior to that of familism. Likewise, familism was the most powerful predictor in the non-religious. However, unlike the other groups, marriage was a significant predictor, whereas procreation was not in the non-religious. Neither spirituality nor religion was a meaningful predictor for the non-religious.

When we examined the importance of familism in both gender and Protestantism was the strongest predictor in the males. Specifically, it was the strongest predictor for both non-religious and Protestant men. However, neither marriage nor procreation, relating to the practice of familism, was a significant predictor in the males. On the other hand, familism was a significant predictor in the females, but its influence on the attitudes was relatively trivial when compared to that of spirituality. To be specific, familism was the strongest predictor for Protestant women but not for non-religious women. Instead, for the practice of familism, marriage was a significant predictor for non-religious women, whereas procreation was for Protestant women.

Sexism, which is positively related to traditional familism [38], was also shown as a significant predictor. It was significant in both the non-religious and Protestants, but the statistical power of sexism was much stronger in the non-religious than the Protestants. Specifically, sexism was a significant predictor for both non-religious men and women but not for either Protestant men or women.

According to the regression analyses, in general, Protestantism itself was not a significant predictor for either the males or females. Instead, spirituality was a significant predictor in the males, females, and Protestants but not in the non-religious. Specifically, it was significant only in both the non-religious and Protestant females but not in the non-religious or Protestant males. Also, spirituality seemed to be a more powerful predictor than familism only in the females, but looking into the data in more detail, familism appeared to be a more powerful predictor than spirituality in the Protestant females, whereas marriage appeared to be a more powerful predictor than spirituality in the non-religious females.

Education on gay issues was a significant predictor in the total sample, but its explanatory power was not great. Specifically, it was a significant predictor only in the females, not in the males, non-religious, or Protestants. Social interaction with gay people was also a significant predictor, even though its explanatory power was not strong. Specifically, it was significant only in the male Protestants but not in the male non-religious.

CONCLUSION

We have deduced a multitude of findings in this study, for instance, that Protestantism itself might not be a major predictor of ATH. However, there are some limitations in generalizing our findings. First, the sample consisted of either non-religious or Protestant people in order to verify the determinant power of Protestantism on the ATH. Second, most of the participants in this study were highly educated (all with 12 years or more), under 65 years old, and middle class. That is, our data did not include various vulnerable social groups. Despite the limitations, the major implication of this study was to find out the greatest factor that influenced the ATH. We found that the strongest factor influencing negative attitudes appears to be traditional familism values but not Protestantism or spirituality itself. In other words, sticking to traditional familism values and practicing these values by means of marriage and procreation were the most crucial factors that influenced the ATH among Korean people.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This survey research was conducted after getting approval from the IRB of the Chonnam National University (Korea). The IRB approval number is 1040198-210218-HR-024-01.

HUMAN AND ANIMAL RIGHTS

No animals were used in this study. All procedures performed in studies involving human subjects were in accordance with the ethical standards of the institutional and/or research committee and with the 1975 Declaration of Helsinki as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants of this study.

AVAILABILITY OF DATA AND MATERIALS

FUNDING

CONFLICT OF INTEREST

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