

# Cross-National Variation in Aggregate Levels of Life Satisfaction of Gay Men

By

Hannah Morris

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Director of Thesis: Melinda Kane

Major Department: Sociology

This project examined the cross-national variation in aggregate levels of life satisfaction of gay men. Using data from the Gay Happiness Index, the World Values Survey, the European Values Study, the International Lesbian, Gay, Trans, and Intersex Association (ILGA), and other secondary sources, I analyzed the determinants of life satisfaction for gay men in 76 countries. Aggregate levels of life satisfaction for gay men were expected to be influenced by the same determinants of life satisfaction for the general population, which included cultural factors such as a country's dominant religion, level of religiosity, and gender equality and socio-political factors such as a country's level of democracy and economic development, as supported by existing literature. Factors unique to the population, however, could also influence aggregate levels of life satisfaction of gay men. Specifically, I expected aggregate levels of public opinion toward gay men and country-level legislation dealing with the criminalization, recognition, and protection of sexual minority populations to significantly influence national-levels of life satisfaction among gay men. Several ordinary least squares (OLS) regression models were used to analyze the data. Aggregate levels of life satisfaction for the general population, as ascertained by the World Values Survey and the European Values Study, were used to better understand

what factors may be unique determinants of the life satisfaction of gay men. This study took something traditionally viewed with a microsociological lens and brought it to the macrosociological stage by analyzing cross-national variation in aggregate levels of life satisfaction within the cultural and socio-political context. The results of this study helped to identify the factors that influence life satisfaction for sexual minority groups, and they should prove useful for policy makers who aim to increase country level life satisfaction and increase the life quality of sexual minority populations.



Cross-National Variation in Aggregate Levels of Life Satisfaction of Gay Men

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Hannah Morris

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By

Hannah Morris

Approved By:

Director of Thesis: \_\_\_\_\_

Melinda Kane, PhD

Committee Member: \_\_\_\_\_

Colin Campbell, PhD

Committee Member: \_\_\_\_\_

Joseph G. Lee, PhD

Committee Member: \_\_\_\_\_

Susan Pearce, PhD

Chair of the Department of Sociology: \_\_\_\_\_

Kristen Myers, PhD

Dean of the Graduate School: \_\_\_\_\_

Paul J. Gemperline, PhD

To Nanny.

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## STATEMENT OF PROBLEM

Happiness<sup>1</sup> and life satisfaction are what we all strive to attain. Though what makes each of us happy may differ individually, we all desire to live lives with which we are satisfied. Researchers have been examining individual differences in life satisfaction for many years, but there has been a growing interest in collective levels of life satisfaction as well. Organizations like Our World in Data, the Organisation for Economic Co-operation and Development (OECD), and the United Nations (UN) continually gather information on life satisfaction throughout the world, assess differences cross-nationally, and create recommendations on how to improve life satisfaction across the globe. In nations where life satisfaction is low, poverty, inequality, lack of freedom, and poor health are common (Ortiz-Ospina and Roser 2013). Recently, many countries such as Italy, the UK, Germany, and Canada have used reports of life satisfaction and other national-level metrics to create policy change and to evaluate the efficacy of programs related to health, governance, economy, the environment, and society (Bache, Reardon and Anand 2015). This indicates the practical importance of evaluating life satisfaction on a national level.

Researchers who examine cross-national variance in life satisfaction have found an array of factors, both cultural and socio-political, that are determinants for life satisfaction in the general public. Some of the cultural influences that have been associated with life satisfaction are religion, religiosity, and gender equality. Some of the socio-political influences that have been associated with life satisfaction are level of democracy and economic development. For example,

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<sup>1</sup> For the purpose of this study, happiness and life satisfaction are used interchangeably. Some researchers argue that these two concepts differ significantly and should not be used interchangeably (Ackerman 2018), but others indicate that the responses of happiness and life satisfaction questions are closely related and are often combined when making happiness, life satisfaction, or social well-being indices (Ortiz-Ospina & Roser 2013). For linguistic variability, the terms are used interchangeably, however, life satisfaction is the more appropriate academic term based on the construction of the dependent variable (Gay Happiness Index, which is based on Diener et al.'s Satisfaction with Life Scale).

the “happiest countries” seem to have some similar characteristics, such as booming economies, good health, and political freedom (Helliwell, Layard and Sachs 2019).

There is ample research on the general life satisfaction of varying nations and societies; however, there is little research that cross-nationally examines the life satisfaction among sexual minorities, and the variation which may exist in life satisfaction cross-nationally. Due to data limitations at this time, it is only possible to examine life satisfaction of gay men, rather than the broader sexual minority community. The size of the gay community is difficult to ascertain due to issues defining the population, methodology issues, and issues with consistent questioning over time (Gates 2011). Concealment of one’s sexual orientation is another issue when trying to estimate the size of the gay population (Pachankis and Branstrom 2019). Studies based in the United States suggest that approximately 2.2%, or around 2.5 million, men identify as gay (Gates 2011). Proportionally, this would indicate that approximately 172 million people worldwide identify as gay.<sup>2</sup> This population spans across the globe, in every corner of every nation. Despite a general growing acceptance of the community in many nations, gay men in many countries continue to face discrimination and violence. Rampant violence against gay men in nations like Russia have gained media attention and have brought attention to some of the horrible realities that many members of the gay community face. Government sanctioned violence toward gay men is still very alive and well, as indicated by Mapp and Gabel (2017). The gross mistreatment of sexual minorities is such a blatant transgression against humanity and a violation of the *Universal Declaration of Human Rights* that organizations all around the world, including the United Nations, has called for a global campaign against homophobia<sup>3</sup> and transphobia<sup>4</sup>

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<sup>2</sup> At this time, there are no credible estimations of the global gay population

<sup>3</sup> Homophobia – hatred or prejudice toward homosexuals (UN Free & Equal 2019)

<sup>4</sup> Transphobia – hatred or prejudice toward transgender or transsexual people (UN Free & Equal 2019)

(Tahmindjis 2005; *UN Free and Equal* 2019). Sexual minorities should have their rights protected because they are humans, but also because equal rights for minorities (specifically, gay men) is associated with the life satisfaction of the general population (Berggren, Bjornskov and Nilsson 2017). This is additional motivation to conduct this type of research.

Despite the differences in lived reality, at least some determinants of life satisfaction should presumably be the same for both the general population and gay men. What sets gay men apart from the general population, however, is that they are stigmatized socially and legally. Therefore, the general population's aggregate social attitudes towards gay men and the legislative status of same-sex relations may affect aggregate-level life satisfaction for gay men differently than the general population.

To assess this presumption, I investigated whether the established determinants of life satisfaction for the general population, including cultural and socio-political factors, also affect cross-national variation in aggregate levels of life satisfaction for gay men. Additional factors that I expected to impact the population, such as social attitudes towards homosexuality and legislation regarding homosexuality, were also analyzed to see if a relationship exists. While the ideal study would examine aggregate life satisfaction among the larger LGBTQ+ population, my study examines gay men due to lack of data regarding life satisfaction on other sexual minorities. As a point of comparison, I also examined cross-national variations in aggregate levels of life satisfaction of the general population. The specific research objectives orienting this project are:

- To assess whether determinants of life satisfaction for the general population predicted in the literature also apply to the life satisfaction of gay men
- To determine if social attitudes and legislation also affect life satisfaction of gay men

## REVIEW OF THE LITERATURE

Life satisfaction can be measured in a variety of ways. Frequencies of behaviors, like smiling, or the reporting of factors associated with overall well-being, such as income, can be used to determine satisfaction, and are considered “experiential” reports of life satisfaction. Alternatively, subjective reports can be taken to be more of the overall “emotional” report of life satisfaction. Some researchers have combined these factors into a variety of indices that assess life satisfaction and overall well-being (Neugarten, Havighurst and Tobin 1961). These various measurements can be useful in determining the nuanced differences in individuals’ life satisfaction. National levels of life satisfaction are most commonly created by taking the average subjective report of life satisfaction in a representative sample (“Life Satisfaction” 2017). An advantage of the subjective measure is that it allows for cultural differences in conceptualization and experience of factors commonly associated with happiness and life satisfaction (Ortiz-Ospina and Roser 2013). In a cross-national analysis, this is beneficial because an indicator associated with satisfaction in one country may not be an indicator for satisfaction in another (e.g., how many times someone has smiled in the past week). In this way, cross-national variation based on the subjective reports of life satisfaction can be more easily examined with fewer cultural discrepancies.

Very few studies have considered variance in cross-national life satisfaction for minority groups, particularly, sexual minorities. This literature review section is dedicated to the creation of a logical pathway from research discussing determinants of life satisfaction for the general population to the hypothetical predictions for determinants of life satisfaction for gay men. Despite the differences in lived reality, many determinants of life satisfaction should presumably be the same for both the general population and gay men. What sets gay men apart from the

general population, however, are that they are stigmatized socially and legally. Considering the general population's aggregate social attitudes towards gay men and the legislative status of homosexuality are factors that may affect aggregate-level life satisfaction for gay men differently than the general population.

### *Determinants of Life Satisfaction for the General Population*

In 2012, the first World Happiness Report was published by the United Nations. This report allowed scholars and legislators around the world one of the most in-depth looks into global happiness. The annual report ranks countries by level of happiness and breaks down each ranking of happiness into explanatory factors. So, what is the happiest country, and why are its citizens so darn happy? Northern European countries continually take the lead in happiness. In the 2019 report, Finland ranked number one, with an average 7.769 happiness rating (10-point scale). On the other side of the coin, South Sudan had an average score of 2.853 (Helliwell, Layard and Sachs 2019). Logically, since Finns are not biologically different from citizens of other nations, like those in South Sudan, we must ask what about the national or cultural context is different between these nations? The "happiest countries" seem to have some similar characteristics, such as booming economies, good health, and freedom.

Research that examines cross-national variance in life satisfaction has found an array of factors, both cultural and socio-political, that can be used as correlates for life satisfaction in the general public. Some of the cultural influences that have been associated with life satisfaction are religion, religiosity, and gender equality. Some of the socio-political influences that have been associated with life satisfaction are level of democracy and economic development.



*Cultural determinants.* Though many individual-level studies indicate that religion and religiosity are positively associated with life satisfaction (Okulicz-Kozaryn 2010), national-level analyses are not quite as clear-cut. This is comprehensively illustrated in *The Handbook of Religion and Health* (2001), which provides a comprehensive review of all studies that had been conducted on religion and health at the time. Many of the studies are inconclusive on whether or not religion or religiosity are correlated with life satisfaction on a national level. Several studies, however, have indicated that religiosity's correlation to life satisfaction is context dependent, and that, more specifically, in religious countries, religious people report higher life satisfaction (Okulicz-Kozaryn 2010; Ngamaba and Soni 2017; Stavrova, Fetchenhauer and Schlosser 2013; Adamczyk and Pitt 2009). Though the research is still unclear on whether or not countries that are more religious or are predominantly one religion or another report higher life satisfaction, many researchers postulate that both "believing and belonging" in conjunction affect life satisfaction, and that this combination may be more critical for understanding life satisfaction than either one on their own.

Studies have also indicated that gender equality has a strong association with average reported life satisfaction (Veenhoven 2015), and that nations with greater gender equality are more likely to report high life satisfaction (Inglehart et al. 2008; de Looze et al. 2017). In addition, more "masculine"<sup>5</sup> societies have lower average reported life satisfaction (Steel et al. 2017; Arrindell et al. 1997). Unfortunately, the lack of literature in this area suggests that more

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<sup>5</sup> Hofstede asserts that nations have a collective sense of common values, beliefs and norms and that there are six dimensions (power distance index, uncertainty avoidance index, individualism/collectivism, masculine/feminine, long term orientation/short term normative orientation, and indulgence/restraint) of national culture that definitively distinguish one nation from another. The dimension of masculine versus feminine describes whether a given society prefers more "masculine" traits, like achievement, assertiveness, and success, or more "feminine" traits, such as cooperation and focusing on the quality of life (see "The 6 Dimensions of National Culture" 2019 and Hofstede 2011).

research needs to be conducted to understand the relationship that may exist between gender equality and national levels of life satisfaction.

*Socio-political determinants.* Since 1981, happiness has been on the rise in many countries around the world, and researchers suggest that democratic nations report higher life satisfaction (Inglehart et al. 2008; Rahman and Veenhoven 2018; Myers and Diener 2018; Böhnke 2007). Much life satisfaction research surrounding socio-political factors derives theoretical guidance from Inglehart's work on postmaterialism, which describes how people shift their focus from daily survival to self-actualization in societies where materialistic needs have been met (Inglehart 2016). The theory, and much of the research built off it, indicate that postmaterialistic nations report higher levels of life satisfaction. Some researchers note that the social wellbeing of a nation, specifically life satisfaction, relies heavily on the political and economic institutions, and will naturally rise and decline with the stability of these institutional factors (Inglehart et al. 2008). Nations with more liberal governance and more of a "social democratic welfare regime" report higher levels of life satisfaction (Radcliff 2001). In times of economic decline, however, nations with good governance and democratic traditions tend to recover more quickly (Turner 2018). These institutional factors can have a curious effect on happiness and life satisfaction, however. This has been illustrated by post-communist countries, where happiness has risen, presumably due to political and social liberalization, but life satisfaction has decreased, due to economic instability (Inglehart et al. 2008).

In addition, research has shown that wealthier nations tend to report higher levels of life satisfaction (Veenhoven 2015; Steel et al. 2017; Deaton 2008; Böhnke 2007). Something worth noting, however, is that it has also been found that economic development has a greater effect on life satisfaction in poor nations (Veenhoven 2015; Rahman and Veenhoven 2018; Deaton

2008). Other researchers postulate that life satisfaction can ebb and flow with economic development and stability (Inglehart et al. 2008; Turner 2018). In sum, research is inconclusive on to what extent economic development, specifically gross domestic product (GDP), impacts life satisfaction on a national level.

### *Determinants of Life Satisfaction for Gay Men*

Though not much research exists on the determinants of life satisfaction specifically for gay men, many determinants should presumably be similar to those of the general population since gay men are embedded in the same larger cultural and socio-political climate as the general population in a nation. However, additional factors should be included in the examination of life satisfaction for gay men, including social attitudes towards gay men and legislation regarding sexuality. These factors should be considered because they structurally stigmatize<sup>6</sup> gay men, which could impact their life satisfaction (Hatzenbuehler 2016; Verkuyten 2008; Panckankis and Branstrom 2018). The little research that does exist examining cross-national variation in life satisfaction of gay men uses an attitudinal measure based on how gay men perceive the general public's attitudes of them (Berggren, Bjornskov and Nilsson 2016). I would argue that there is a substantial difference between how the general population reports their opinions and how a subgroup assumes the general population feels based on the subgroup's experiences.

*The gay community in a national context.* Though the size of the gay population is unknown, global estimates indicate that this population is around 172 million. Despite being such a significant part of the world population, however, there is still much to learn about the

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<sup>6</sup> Structural stigma- when social institutions, practices, and norms limit opportunities for success for marginalized groups (Hatzenbuehler 2016)

population. In 2011, the United Nations (UN) passed a resolution that protected the rights of individuals based on sexual orientation and gender identity and they commissioned their first study focused on LGBTQ+ issues. The UN's efforts since the passing of the resolution have brought to light the many issues that sexual minorities face around the globe ("10 Ways the U.N. Has Protected LGBTQ Human Rights" 2017). There is still dramatic cross-national variation in the treatment of sexual minorities. For example, in 2010, Argentina recognized same-sex marriages and India decriminalized same-sex relationships, but Uganda also further restricted freedoms of gay people by passing their 'anti-homosexuality' bill. So, while some nations are progressing toward inclusivity, others are still persecuting sexual minorities (Ottosson 2010). The countless human rights atrocities that have taken place in recent history have illustrated the kind of daily obstacles sexual minorities face. A day in the life of a gay man in Eastern Europe depicts the kind of horrible actions that are committed against sexual minorities:

*"I was kidnapped and kept for 12 days in a basement .... [they] put a black plastic bag over my head and put a gun to my head. They made me call the other guy and tell him to come the car. Then they kidnapped him as well"* (Ingber 2019).

This is the kind of violence to which gay men around the world are subjected. Human Rights Watch has noted that gay propaganda laws, such as those implemented by Russia, have increased stigma, harassment, and violence against sexual minorities (Bochenek and Knight 2018). In this way, the national context may affect the life satisfaction of gay men. Because gay men have population-specific obstacles to happiness, such as negative attitudes towards them and legal obstacles, it is important to take these matters into consideration when assessing determinants of life satisfaction for gay men.

*Population-specific determinants.* As gay men become more visible, so has the research on social attitudes towards sexual minorities. Globally, views towards gay men have become more accepting within the past 50 years or so, though it is not fully understood why that is the case, why some countries have become more accepting than others and why attitudes towards gay men remain heterogenous when cross-analyzing countries (Roberts 2018; Jackle and Wenzelburger 2014; Smith, Son and Kim 2014). Adamczyk's (2017) work illustrates that there is significant cross-national variation in attitudes toward homosexuals. Other research indicates that the life satisfaction of ethnic minorities is negatively impacted by negative social attitudes (Verkuyten 2008). This lower level of life satisfaction holds even with other factors such as income, education, health, and gender being held constant, which suggests that being a minority comes with additional factors that influence life satisfaction (Verkuyten 2008). It is not out of the question to assume that being a sexual minority would also carry additional factors that could influence life satisfaction, including how life satisfaction of gay men would be negatively impacted by negative social attitudes toward homosexuals.

Legislation could also impact the life satisfaction of gay men. Research indicates that when legislation provides autonomy to an oppressed group, the life satisfaction of that group increases. This is illustrated by the effect that legislation regarding abortion and contraceptive access had on women's life satisfaction (Pezzini 2005). Though legislation regarding sexuality around the world has also become increasingly more accepting and tolerant in the past few decades, many nations still consider same-sex acts illegal (Frank, Camp and Butcher 2010). The increasing concern for global human rights has resulted in a surge in the analysis of sexuality-related legislation. For example, in 1969, 138 United Nations (UN) member nations had laws that criminalized homosexuality, and in 2018 only 70 UN member nations had laws that

criminalized homosexuality, which is nearly a 50% reduction; however, some nations, like Russia, have increased regulations on ‘anti-propaganda laws’ that essentially continue to criminalize gay men and have encouraged violent acts against gay men (Mendos 2019). In this way, the treatment of gay men is intricately intertwined with social attitudes towards them and the legislation that exists in a country. The literature about oppressed minorities and the lived reality of gay men are the primary motivators behind including both social attitudes and legislation in this study in addition to the established determinants of life satisfaction found for the general population.

## RESEARCH METHODOLOGY

Most cross-national surveys use random or stratified probability samples with inclusion criteria to gather a sample that is most representative of the target population (Hubbard et al. 2016). One limitation of most existing cross-national data is that these samples do not provide accurate representations of sub-populations (e.g., institutionalized individuals, ethnic minorities, rural respondents, poor respondents, etc.) unless these small subgroups have been strategically oversampled. This can be problematic for groups of different ethnicities, races, and other demographic categories that experience social stratification (Wheeler 2015). Though some surveys, like the World Values Survey (WVS), employ stratified sampling methods, they do not account for sub-populations based on sexual identity (World Values Survey *Fieldwork and Sampling*). In this way, very few (if any) global research studies accurately reflect the life satisfaction for sexual minorities. This is problematic, especially with life satisfaction research, since sexual minorities experience life far differently than their heterosexual counterparts all around the world.

The study sample analyzing the aggregate levels of life satisfaction for gay men consisted of 76 countries, with the exception of the analyses that examined the cultural factors, where 71 countries were analyzed due to missing data on gender inequality. The overarching, broad question that this study was trying to address is what are the social determinants that best explain cross-national variation in aggregate levels of life satisfaction among gay men? Aggregate levels of life satisfaction for the general population were analyzed for the same sample to help provide an understanding of what factors are uniquely influential in the gay life satisfaction models. The research questions this study aims to answer are:

- Are the social determinants of life satisfaction for the general population, as predicted by existing literature on life satisfaction, the same for gay men?
- Do factors such as social attitudes towards gay men and legislation regarding sexuality affect life satisfaction for gay men?

In order to examine these questions, I used several secondary sources to create one comprehensive dataset. The Gay Happiness Index (2015) served as the source for aggregate levels of life satisfaction for gay men. The World Values Survey (2010-2014), wave 6, was used for the attitudinal measure, religiosity measure, and aggregate levels of life satisfaction for the general population. The European Values Study (2008) was used to supplement the World Values Study to increase sample size (see discussion below). The International Lesbian, Gay, Bisexual, Trans and Intersex Association's *State-Sponsored Homophobia Report* (2010) served as the source for the legislative variables. The CIA World Factbook (2019) and the *Global Gender Gap Report* (2010) served as the sources for the cultural determinants. *Freedom in the World* (2010) and The World Bank (2010) served as the data sources for the socio-political variables. Country-level data was used from all sources, resulting in a sample size of 76 countries, except in the case of the models using the cultural factors, where the sample size was limited to 71 due to missing data.

#### *Dependent Variable Sources*

*Gay Happiness Index.* The Gay Happiness Index was published in 2015 and it reports several measurements of perceived social attitudes, perceived social behaviors, and self-reported life satisfaction for gay men in 126 different countries. The data was gathered as an online survey on PlanetRomeo.com, a gay dating site. Over 115,000 men took part in the survey.



Though this data was collected by a convenience sample, this is the only known data source that reports the life satisfaction for any sexual minority population. The dependent variable for this project is the percentage of a country's respondents that reported high level of life satisfaction on a combined life satisfaction scale. The scale was comprised of five 7-point scale life satisfaction questions<sup>7</sup>, which researchers at PlanetRomeo.com averaged, and separated into three categories of equal range, low, medium, and high life satisfaction, which was reported as the gay happiness index for each country in the database. The percentage of total respondents for each category are reported in the original dataset. For the purpose of this study, I only used the high life satisfaction percentages for each country. This served as the dependent variable for the models examining aggregate levels of life satisfaction for gay men. (Countries with fewer than 20 respondents were dropped from the analysis.)

*World Values Survey.* The World Values Survey (WVS) is a global project that aims to assess people's values and beliefs on key topics and issues and how those beliefs and values may change over time. Since the survey began in 1981, several "waves" have taken place, which have gathered information from almost 100 nations. The World Values Survey is considered one of the most important cross-national surveys and is often used to help academics, policy makers, and international organizations better understand how nations differ around the world ("Who We Are" 2019; "Fieldwork and Sampling" n.d.). The most recent published wave is wave 6, which

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<sup>7</sup> The Gay Happiness Index was constructed by researchers at PlanetRomeo.com based on Diener et al.'s Satisfaction with Life Scale (SWLS) (1985); The index includes five questions, each with a 7-point scale (1. In most ways my life is close to my ideal; 2. The conditions of my life are excellent; 3. I am satisfied with my life; 4. So far I have gotten the important things I want in life; 5. If I could live my life over, I would change almost nothing). The possible range of scores once combined are 5 (low satisfaction)-35 (high satisfaction). The average score was calculated for each individual. To capture country's level of life satisfaction, PlanetRomeo used the classification of three categories of equal range – high, medium, and low (cut-off point is not specified by PlanetRomeo). The number of respondents for each category in a specific country was divided by the total number of respondents for each country to get the percentage of respondents in the low, medium, and high categories. This study only analyzes the percentage of respondents that reported high life satisfaction. See Appendix C for questions used in index.

was collected from 2010-2014. This wave took representative samples from 60 countries. The general population's life satisfaction was created using the question, "All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are "completely dissatisfied" and 10 means you are "completely satisfied" where would you put your satisfaction with your life as a whole?" Responses for each country were aggregated to provide one average score for each country. This served as the dependent variable for the models examining aggregate levels of life satisfaction for the general population.

### *Independent Variables Sources*

*World Values Survey.* The variables I used from the World Values Survey for independent variables are religious attendance and attitudes towards homosexuals.<sup>8</sup> The questions that were used in this analysis are:

*Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between, using this card:*

*Homosexuality – 10-point scale (1=never justifiable, 10= always justifiable)*

*Apart from weddings and funerals, about how often do you attend religious services these days?*

*More than once a week*

*Once a week*

*Once a month*

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<sup>8</sup> There are two attitudinal measures available in the World Values Survey and the European Values Study – one measuring openness to having a gay person as a neighbor and one measuring the justification of homosexuality. Both were used in analyses, but the justification measure proved easier for interpretation without significant differences in results. Additionally, these measures cannot be used together due to concerns about multicollinearity and the variables essentially capturing the same underlying concepts (0.90). Tables showing results using the neighbor question are available upon request.

*Only on special holy days*

*Once a year*

*Less often*

*Never, practically never*

Though the WVS reports individual-level data, I aggregated the scores for all participants in each country to have one average score for each country. The social attitudes measure was constructed by taking answers from all respondents from a country and averaging their scores so that each country has a score between 1 and 10. For the religiosity measure, answers for attending service weekly (2) or more than once a week (1) were combined to create a score of 1 (religious) and all other responses (3-7) were combined to create a score of 0 (not religious). The final religiosity score for each country was constructed by taking the answers from all respondents from a country and averaging their scores so that each country had a score between 0 (not religious) and 1 (religious).

*European Values Study.* The European Values Study (EVS) is practically identical to the World Values Survey, but it is limited to countries in Europe. I used the EVS, in addition to the WVS, to increase the country sample size from 60 countries to 76 countries. The most recently published data was collected in 2008. Though this is two years earlier than the beginning of the Wave 6 of the World Values Survey, I used this data because the social attitude questions used in the EVS are the same used in the WVS and the 2008 wave was the wave released in closest time proximity to the WVS wave I used. The data collection is very similar to the WVS, so the EVS offers minimal data issues when used to supplement the WVS to increase the sample size. In cases where a country is both in the EVS and the WVS, the scores from the WVS were used because the data was published more recently.

*ILGA laws.* The International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA) conducts an annual report on *State-Sponsored Homophobia*. In this report, sexuality laws are reported for each nation. The general categories reported are whether same-sex activity is criminalized, if same-sex marriages are legally recognized, and if protections against discrimination exist for sexual minorities. The information provided by ILGA in the annual report comes from a variety of reputable sources, such as ILGA representatives across the globe, human rights organizations, and the United Nations. The *State-Sponsored Homophobia Report* that this study used as a reference is from 2010. Though some of the laws may have changed between 2010 and the writing of this defense, the year 2010 was selected because it would capture the status of laws prior to the data collection in World Values Survey wave 6.<sup>9</sup> The 3 variables that were created using this report are: (1) whether the laws in the country decriminalize same-sex activity; (2) whether same-sex marriages are recognized;<sup>10</sup> and (3) whether sexual minorities are legally protected from discrimination (unequal rights and protections based on sexual orientation – including constitutional protections and legal protections against hate crimes and work-based discrimination; country needs at least one type of protection to be considered “yes”). All three of these variables were dichotomous (0=no, 1=yes). For a list of each country’s status, see Appendix B.

*The CIA World Factbook.* The country’s dominant religion and the percentage of adherents to the dominant religion are gathered from the CIA World Factbook (2019). The CIA World Factbook is an official reference guide produced by the Central Intelligence Agency of the

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<sup>9</sup> Countries from the European Values Study (2008) use the laws found in the *State Sponsored Homophobia Report* from 2008.

<sup>10</sup> Analyses using same-sex union (not just marriage) recognition were also examined, but due to high levels of correlation, limiting the variable to only marriage recognition proved more statistically sound. Analyses using the broader recognition variable can be provided upon request.

United States of America, which has information on 267 world entities. The CIA World Factbook includes information that ranges from demographic information, to geographic, economic, and even leadership (“Welcome to the World Factbook” 2018). This source reports an ordered listing of religions by adherents for each country. The religion with the greatest reported adherents is the variable of interest and was used to develop a nominal variable with a series of dummy variables. The information provided is the most recent on file, which is reported at different points in time for each country, so not all information is from a specific year. Due to the limited sample size of this study, religions with small cell sizes were combined into broader religious categories (e.g., Buddhist and Hindu religions were combined into a broader “East Asian Religions” category). For the purpose of trying to capture the concept of “believing and belonging,” I also reported the percentage of adherents reported for each country’s dominant religion. In events where the most common religion reported is “none,” I used the most common recognized religion that is provided.

*World Economic Forum.* Gender equality is reported in the *Global Gender Gap Report of 2010*, which is produced by the World Economic Forum. This report evaluates the level of gender disparity in each country, based on an index that quantifies the economic participation and opportunity, educational attainment, health and survival, and political empowerment for men and women in a given society. The components of the index are gathered from various official sources, which are described in the *Country Profiles* section of the report (Hausmann, Tyson and Zahidi 2010).<sup>11</sup> The 2010 report includes scores for 134 countries. For the purpose of this study,

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<sup>11</sup> The components used in the construction of the Global Gender Gap Index can be found in the *Country Profiles* section of *The Global Gender Gap Report 2010*. Data sources used are the World Economic Forum, the World Bank, the Inter-Parliamentary Union, the World Health Organization, the United Nations, and the OECD. The overall score for each country is created by combining the truncated scores of four subindexes (Economic Participation & Opportunity, Educational Attainment, Health & Survival, and Political Empowerment), with an equality benchmark set at 1 (Hausmann, Tyson & Zahidi 2010).

the index score for each country is taken as reported by the World Economic Forum as a continuous variable for gender equality for each country (continuous between 0 and 1, where 0=complete inequality and 1=complete equality).

*Freedom House.* Level of democracy is provided by Freedom House's annual survey, *Freedom in the World 2010*. This annual report categorizes countries as free, partially free, or not free. These classifications are created by experts who evaluate each country based on its political rights and civil liberties ("Methodology" 2012). There are several methods employed to confirm interrater reliability.<sup>12</sup> The 2010 report includes 194 countries and 15 territories. The ratings are used to establish a nominal variable with a series of dummy variables for each country. The categories used are Not Free (0), Partially Free (1), and Free (2).

*The World Bank.* The World Bank is an organization comprised of five institutions, with 189 member countries. The World Bank offers financial assistance and advice for nations around the globe, driven by the goals to reduce worldwide poverty and invest in opportunity. To make many of the financial decisions, the World Bank collects and analyzes a large amount of national-level financial data ("Who We Are" 2019). For the purpose of this study, economic development was captured by the World Bank's GDP per capita reported data for the year 2010 in constant 2010 US dollars. The GDP per capita was used by taking the logarithm of the GDP per capita as reported by The World Bank as a continuous variable for each country.

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<sup>12</sup> Freedom House employs a combination of on the ground research, interviews with local contacts, news articles, reports from nongovernmental organizations, government reports, and a variety of other sources to gather information on the freedom status in each country. Expert advisors and regional specialists then work with the analysts to establish the level of freedom in each nation. For more information on the information that is gathered by Freedom House to assess level of freedom, please see *Freedom in the World 2010* ("Methodology" 2012).

### *Variable Overview*

In Table 1, I have presented a summary of the variables of interest. How the variables were measured and the source from which the information originated are noted. Several variables were aggregated from individual-level data. I analyzed a total of 76 countries (with the exception of the models including the gender equality variable, which had a sample size of 71 due to missing data). All independent variables were used in both the gay life satisfaction and the general life satisfaction models.

### *Data Analysis*

I used STATA version 15 to conduct the statistical analyses. The sample was first limited to only countries that had data for the gay life satisfaction variable, and then was further limited to countries that had the population-specific and socio-political variables, creating a sample of 76 countries. The sample was further restricted on models that included the cultural factors, due to missing data (see Appendix A for a complete list of countries). I utilized ordinary least squares (OLS) models to examine the relationships between the national-level characteristics and the dependent variables, life satisfaction for gay men and life satisfaction for the general population. Each dependent variable had its own series of models, with my primary focus on the results of the gay life satisfaction models (the results of the general life satisfaction models serving as bases for comparison). I used ordinary least squares (OLS), which can be used to predict outcomes when using one or more independent variables, to conduct the analyses. OLS assumes that the relationship between the predictor and outcome variable is linear, there is no multicollinearity, there is no endogeneity, the error terms are normally distributed, and the error terms are consistent for all observations (Wilson, Keating, and Beal 2016). OLS regression was

appropriate because the relationship between the national-level independent variables and controls and the impact they have on aggregate life satisfaction is essentially linear and my models approximated the remaining assumptions. Due to the limited sample size, several models were used based on the grouping of independent variables – cultural factors, socio-political factors, and population-specific factors – and two combined models including all significant variables. Finally, I included two models introducing interaction terms. The predicted outcomes of these analyses were:

- Aggregate life satisfaction among gay men is associated with the same factors found to predict general life satisfaction within the existing literature
- Nations with more accepting social attitudes towards gay men have higher aggregate levels of life satisfaction among gay men
- Nations with supportive legislation regarding sexuality have higher aggregate levels of life satisfaction among gay men
- The unique factors that affect gay life satisfaction may or may not also affect life satisfaction for the general population



## RESULTS

Though the focus of this study is the determinants of aggregate levels of life satisfaction for gay men, parallel models were run with aggregate levels of life satisfaction for the general population as the dependent variable. This is to serve as a baseline for comparison with the results of the gay life satisfaction models, which can help us understand what variables have a unique influence on gay life satisfaction. All independent variables are the same in the theory specific models for both dependent variables; however, the models that combined significant variables from previous models and the interaction terms models vary, since significance in the initial OLS models varied. Descriptive statistics can be found in Table 2 (please note that general life satisfaction and gay life satisfaction are measured on different scales)<sup>13</sup> and a correlation matrix can be found in Table 3.

### *Life Satisfaction for Gay Men*

I conducted several OLS regression models to establish the determinants of aggregate levels of life satisfaction of gay men (Table 4). The first model included the cultural variables (religiosity, dominant religion, and gender equality), which indicated that Muslim and Orthodox nations had significantly lower aggregate life satisfaction for gay men in comparison to Protestant/Other Christian countries. Nations with greater gender equality also had significantly higher levels of aggregate life satisfaction among gay men. In contrast, level of religiosity did not appear to be a significant predictor of life satisfaction of gay. The sociopolitical model (column 2), which included measures of log GDP per capita and levels of democracy, indicated

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<sup>13</sup> While not ideal, the difference in measurement of general life satisfaction and gay life satisfaction is less of a concern in this study, because the primary focus is on gay life satisfaction, and the inclusion of general life satisfaction is just to investigate what variables have a unique influence on gay life satisfaction.

that log GDP per capita had a significant positive impact on aggregate life satisfaction for gay men, whereas countries that are not free report significantly lower levels of life satisfaction for gay men, in comparison to countries that are free. Population-specific indicators (attitudes and laws) showed that societal-wide attitudes toward gay men had a significant positive association with levels of life satisfaction for gay men, but the legislative measures did not have any significant association with aggregate levels of life satisfaction of gay men (see Table 4 for specific results).

Based on these results, I constructed two combined models that included the significant variables from the previous models (Table 5). Two combined models were constructed because of concerns about potential multicollinearity due to high correlations between societal attitudes towards gay men and both log GDP per capita (0.78) and gender equality (0.68). The first combined model included dominant religion, level of democracy, and attitudes towards gay men. Variables that remained significant in this model include being an Orthodox nation (negative association) and attitudes towards gay men (positive association). The second combined model included religion, log GDP per capita, gender equality, and level of democracy. Variables that remained significant in this combined model include being a Muslim nation (negative association), log GDP per capita (positive association), and gender equality (positive association). Level of democracy lost significance in the combined models. The adjusted r-squared values suggest that the first combined model explains more of the variation in aggregate levels of life satisfaction among gay men (r-squared=0.72 vs. r-squared=0.59).

I also conducted analyses including interaction terms in combined models (Table 6). The first interaction term I introduced examined the percentage of people that adhere to the nation's

dominant religion.<sup>14</sup> The concept of “believing and belonging” captures the notion that not only being a religious adherent, but also being part of the dominant religious group have a combined effect. I interacted the percentage of adherents in the dominant religion with societal attitudes toward homosexuality to see what effect “believing and belonging” may have had in conjunction with attitudes towards gay men on gay men’s life satisfaction. When I added this term, the relationship was found to be insignificant (model 1). Additionally, I interacted the legislative measures and the attitudinal measure, in order to see if the influence of societal attitudes differs depending on the legislative context. Of these terms, the only one I found to be significant was the interaction between attitudes and marriage recognition, which was negative (model 2).<sup>15</sup> This negative interaction suggests that attitudes matter less in countries with marriage laws.

### *Life Satisfaction for the General Population*

I conducted several OLS regressions to assess the determinants of aggregate levels of life satisfaction of the general population (Table 7). My goal by examining cross-national variation in aggregate levels of life satisfaction for the general population was to evaluate whether the determinants of aggregate gay life satisfaction were unique or if they reflected predictors of general life satisfaction. The cultural, sociopolitical, and population-specific models included the same variables as the analyses for gay life satisfaction. The cultural model indicated Muslim nations were significantly less likely to report high life satisfaction. In contrast, nations that had greater gender equality were significantly more likely to report higher levels of life satisfaction.

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<sup>14</sup> The variable of percentage of adherents to dominant religion and religiosity were not able to be used in the same analyses due to significant correlation to each other, because these measures are assessing the same underlying features. I used religiosity in the general measures because it captures everyone, but to capture the concept of “believing and belonging,” I needed to capture the percentage of adherents to the dominant religion.

<sup>15</sup> I examined several other interaction terms, including, attitudes and religion, attitudes and level of democracy, and attitudes and percentage of religious adherents. None of these other interactions were significant. Results including all interaction terms are available upon request.

Level of religiosity and other dominant religions were not found to be significant predictors of life satisfaction in this model. The sociopolitical model indicated that log GDP per capita had a significant positive impact on life satisfaction for the general population, but level of democracy did not have a significant influence over life satisfaction. Population-specific indicators showed that attitudes toward gay men had a significant positive association with levels of life satisfaction for the general population. Generally, the models overlap (except for the difference in significance of level of democracy and gender equality), but the models appear to better explain variation in cross-national life satisfaction for gay men better than for the general population.

Similar to the analyses of gay life satisfaction, I constructed two combined models that included the significant variables from the previous models (Table 8). Two models had to be constructed because gender equality and log GDP per capita were very highly correlated with the attitudes measure. The first combined model included dominant religion and attitudes towards gay men. The only variable that maintained significance in this model was attitudes towards gay men. The second combined model included dominant religion, gender equality, and log GDP per capita. Variables that remained significant in this combined model include being a Muslim nation (negative association) and log GDP per capita (positive association). The adjusted r-squared values indicate that both models account for approximately the same amount of variation in cross-national aggregate levels of life satisfaction for the general population (r-squared=0.41 for both models). The r-squared values indicate that the models for gay life satisfaction have greater explanatory power than the models for general life satisfaction.

I also applied the same interaction terms to the general life satisfaction models; however, the interaction terms were not significant. (Interaction term results can be supplied upon request).

## DISCUSSION

In this study, I used factors that existing research has found to be associated with determinants of life satisfaction for the general population (cultural, socio-political, and population-specific factors), and I examined whether these factors also influenced the life satisfaction of gay men, in addition to population-specific measures. Using cross-national, aggregate data, I was able to examine how the national context may shape aggregate levels of life satisfaction for both gay men and the general population.

Findings for the determinants of life satisfaction for the gay population demonstrate at least some support for all three models (cultural, socio-political, and population specific), and the results appear to be relatively stable across the models. Religious denomination is a significant predictor of life satisfaction for gay men, perhaps because more conservative, traditional, and dogmatic religions (e.g., Islam and Orthodox Christianity) are often critical of non-heterosexual relationships (Ireland 2013). Gender equality is also a significant predictor of life satisfaction for gay men, perhaps because countries with greater gender equality are typically more liberal, accepting, and open to new ideas (Veenhoven 2015; Inglehart, Norris, and Welzel 2002); this may contribute to a more positive environment for gay men and greater aggregate life satisfaction. In addition, log GDP per capita is a significant predictor of aggregate levels of life satisfaction of gay men, perhaps because greater economic development allows for citizens to focus on finding ways to improve their life satisfaction, rather than focusing on getting basic needs met, which benefits gay men as well (Inglehart, Foa, Peterson, and Welzel 2008). While level of democracy appears to matter in the preliminary results, the significance goes away in the combined model, indicating that the underlying factors driving the significance are captured by other factors in the combined model. Social attitudes regarding homosexuality are significantly

influential on the life satisfaction of gay men, perhaps because the social context helps to determine the rights allowed to this group on a societal-level, and the perceived public opinion can impact well-being on an individual-level and can act as a structural stigma that all gay men in that national context must face.

The interaction examining “believing and belonging” and attitudes did not help explain variation across countries in aggregate levels of life satisfaction for gay men, but the interaction between attitudes and marriage recognition did. The interaction between “believing and belonging” and attitudes did not significantly impact gay life satisfaction, which was a bit surprising, but may be attributed to how I captured this variable. Societal attitudes have less influence on life satisfaction among gay men in nations with marriage equality. While the attitudinal measure was expected to positively influence the life satisfaction of gay men based on the literature, and does in terms of its direct effect (Verkuyten 2008), the negative relationship between the interaction of attitudes and marriage recognition and life satisfaction was an unanticipated finding. Perhaps societal attitudes towards homosexuality affect life satisfaction among gay men less when marriage equality is achieved. As the least common form of legal protection, marriage laws may demonstrate the most hospitable legal environments of all possible environments, lessening the impact of attitudes.

In the initial models examining life satisfaction of the general population, dominant religion, gender equality, log GDP per capita, and attitudes were significant predictors of aggregate life satisfaction for the general population. In the combined models, attitudes appeared to explain about the same level of variance in the combined models as dominant religion and log GDP per capita (gender equality lost significance). When comparing the gay life satisfaction models to the general life satisfaction models, there are some similarities and differences. Some

variables sharing significance in the preliminary models were religious denomination, societal attitudes, log GDP per capita, and gender equality. A difference in the preliminary models was that level of democracy was significant in the socio-political model for gay life satisfaction; however, that factor lost significance in the combined models. Areas of overlap in the combined models included religion, log GDP per capita, and attitudes. Surprisingly, gender inequality did not have a significant impact in the combined general life satisfaction model. Perhaps this difference is because in societies with greater gender equality and more women in power, there is usually greater tolerance regarding gender and sexuality, so gay men may have more direct benefits in a more gender equitable society. The fact that attitudes towards gay men were found to influence life satisfaction for both gay men and the general population is an unexpected finding of this study. While this somewhat supports Berggren et al.'s findings that minority rights affect general life satisfaction (2017), I was only expecting that the cultural and socio-political factors would be similar between the gay life satisfaction and general life satisfaction models, not the population-specific factors. Attitudes towards gay men predicting life satisfaction for gay men as well as for the general population can have positive implications. This may indicate that the efforts of various organizations, such as the United Nations, to increase the protection and acceptance of the gay population could, in fact, not only improve the lives of the gay population, but also the general population.

Overall, these findings indicate that my models were better suited at predicting aggregate levels of life satisfaction for gay men, rather than the general population, based on the r-squared values of the models. The models predicting aggregate gay life satisfaction indicated that there is some support for the cultural, socio-political, and population-specific factors; whereas, the

models predicting general life satisfaction indicated that the cultural and socio-political factors did not predict life satisfaction any better than the population-specific factors.

While these results offer some novel insight on aggregate gay life satisfaction, an area where research is lacking, there are limitations that should be taken into consideration when interpreting these findings. First, the data source for the dependent variable is not optimal and offers its own set of limitations, such as a limited sample size using a convenience sample, the inability to de-aggregate data, and its limitation to only including gay men. In addition, several of the selected variables were highly correlated, so due to concern of multicollinearity, a few variables could not be used in the same models together.



## ANTICIPATED SIGNIFICANCE

Scholars often find themselves asking how their work will be considered significant or contribute to academia in a meaningful way, especially when their research is focusing on minority populations. For this study, there are several factors that make this research worthwhile. First, this study is the only study thus far to examine mean country-level social attitudes towards gay men, legislation about gay men, *and* aggregate life satisfaction for gay men cross-nationally. This brings a typically microsociological topic to the macrosociological stage, with implications potentially affecting large institutions and individuals. In addition, this research, hopefully, helps to bring to light the need for a more robust dataset that looks at life satisfaction for sexual minorities. Overall, this study aimed to analyze what factors influence aggregate levels of life satisfaction of gay men, which is notable in a scholarly way and the implications are potentially meaningful in regard to policy development.

Though it is a bit cliché, gay rights are human rights. For many years, global pressure has increased to elevate the equality of sexual minorities around the world. This has been codified by the United Nations extending the *Declaration of Human Rights* to include individuals of varying sexual orientations and gender identities (Human Rights Watch 2016). Though some countries have improved equality substantially, many countries still lag behind. Social attitudes toward gay men and legislation about same-sex relationships still vary cross-nationally, and so do average life satisfaction ratings of gay men. In an ideal world, the push for the equality of sexual minorities would take hold in all countries and all humans, regardless of their sexuality, or other social labels, would have guaranteed rights and have the ability to live life to the fullest. Until then, it should be the resolve of social scientists everywhere to bring to light inequalities that still exist, create a path to address those inequalities, and to help those experiencing the inequality.

This study could have a few positive implications. I think the results can be interpreted to help support efforts to increase acceptance of the gay population. In addition, these findings could help researchers and policy makers include attitudes toward gay men (and other minorities) as metrics to include when assessing life satisfaction and happiness of their communities/nations.

## REFERENCES

- Ackerman, Courtney. 2019. "Life Satisfaction Theory and 4 Contributing Factors (Incl. SWLS Scale)." *Happiness and SWB*. Retrieved October 27, 2019 (<https://positivepsychology.com/life-satisfaction/>).
- Adamczyk, Amy and Cassady Pitt. 2009. "Shaping Attitudes about Homosexuality: The Role of Religion and Cultural Context." *Social Science Research* 38(2):338–51.
- Adamczyk, Amy. 2017. *Cross-National Public Opinion about Homosexuality: Examining Attitudes across the Globe*. Oakland, CA: University of California Press.
- Anon. n.d. "About." *UN Free and Equal*. Retrieved May 5, 2019 (<https://www.unfe.org/about/>).
- Anon. 2012. "Methodology." *Freedom House*. Retrieved November 22, 2019 (<https://freedomhouse.org/report/freedom-world-2010/methodology>).
- Anon. 2017. "10 Ways the U.N. Has Protected LGBTQ Human Rights." *Human Rights Campaign*. Retrieved September 30, 2019 (<https://www.hrc.org/blog/ten-ways-the-united-nations-has-protected-lgbtq-human-rights>).
- Anon. 2017. "Life Satisfaction." *OECD Better Life Index*. Retrieved (<http://www.oecdbetterlifeindex.org/topics/life-satisfaction/>).
- Anon. 2018. "Welcome to the World Factbook." *Central Intelligence Agency*. Retrieved November 22, 2019 (<https://www.cia.gov/library/publications/the-world-factbook/>).
- Anon. 2019. "The 6 Dimensions of National Culture." *Hofstede Insights*. Retrieved October 13, 2019 (<https://www.hofstede-insights.com/models/national-culture/>).
- Anon. 2019. "Who We Are." *The World Bank*. Retrieved November 22, 2019 (<https://www.worldbank.org/en/who-we-are>).
- Anon. 2019. "Who We Are." *World Values Survey*. Retrieved November 22, 2019 (<http://www.worldvaluessurvey.org/WVSContents.jsp>).
- Anon. n.d. "Fieldwork and Sampling." *World Values Survey*. Retrieved (<http://www.worldvaluessurvey.org/WVSContents.jsp?CMSID=FieldworkSampling>).
- Anon. n.d. "Definitions." *UN Free and Equal*. Retrieved July 21, 2020 (<https://www.unfe.org/definitions/>).
- Arrindell, Willem A. et al. 1997. "Dimensions of National Culture as Predictors of Cross-National Differences in Subjective Well-Being." *Personality and Individual Differences* 23(1):37–53.

- Bache, Ian, Louise Reardon, and Paul Anand. 2015. "Wellbeing as a Wicked Problem: Navigating the Arguments for the Role of Government." *Journal of Happiness Studies* 17(3):893–912.
- Berggren, Niclas, Christian Bjørnskov, and Therese Nilsson. 2016. "What Aspects of Society Matter for the Quality of Life of a Minority? Global Evidence from the New Gay Happiness Index." *Social Indicators Research* 132:1163–92.
- Berggren, Niclas, Christian Bjørnskov, and Therese Nilsson. 2017. "Do Equal Rights for a Minority Affect General Life Satisfaction?" *Journal of Happiness Studies* 19(5):1465–83.
- Bochenek, Michael Garcia and Kyle Knight. 2018. "Russia: 'Gay Propaganda' Law Endangers Children." *Human Rights Watch*. Retrieved May 5, 2019 (<https://www.hrw.org/news/2018/12/12/russia-gay-propaganda-law-endangers-children>).
- Böhnke, Petra. 2007. "Does Society Matter? Life Satisfaction in the Enlarged Europe." *Social Indicators Research* 87(2):189–210.
- de Looze, M. E., T. Huijts, G. W. J. M. Stevens, T. Torsheim, and W. A. M. Vollebergh. 2017. "The Happiest Kids on Earth. Gender Equality and Adolescent Life Satisfaction in Europe and North America." *Journal of Youth and Adolescence* 47:1073–85.
- Deaton, Angus. 2008. "Income, Aging, Health, and Well-Being Around the World: Evidence from the Gallup World Poll." *Journal of Economic Perspectives* 22(2):53–72.
- Diener, Ed, Robert A. Emmons, Randy J. Larsen, and Sharon Griffin. 1985. "The Satisfaction With Life Scale." *Journal of Personality Assessment*, 49(1):71-75.
- Frank, David John, Bayliss J. Camp, and Steven A. Boutcher. 2010. "Worldwide Trends in the Criminal Regulation of Sex, 1945 to 2005." *American Sociological Review* 75(6):867–93.
- Freedom House. 2010. *Freedom in the World 2010*. Retrieved ([https://freedomhouse.org/sites/default/files/Freedom\\_in\\_the\\_World\\_2010\\_complete\\_book.pdf](https://freedomhouse.org/sites/default/files/Freedom_in_the_World_2010_complete_book.pdf)).
- Gates, Gary J. 2011. "How Many People Are Lesbian, Gay, Bisexual, and Transgender?" *The Williams Institute* 1–8.
- Hatzenbuehler, Mark L. 2016. "Structural Stigma: Research Evidence and Implications for Psychological Science." *American Psychologist* 71(8):742–51.
- Hausmann, Ricardo, Laura D. Tyson, and Saadia Zahidi. 2010. *The Global Gender Gap Report*. World Economic Forum. Retrieved ([http://www3.weforum.org/docs/WEF\\_GenderGap\\_Report\\_2010.pdf](http://www3.weforum.org/docs/WEF_GenderGap_Report_2010.pdf)).
- Helliwell, J., Layard, R., and Sachs, J. (2019). *World Happiness Report 2019*, New York: Sustainable Development Solutions Network.

- Hofstede, Geert. 2011. "Dimensionalizing Cultures: The Hofstede Model in Context." *Online Readings in Psychology and Culture* 2(1).
- Hubbard, Frost, Yu-chieh Lin, Dan Zahs, and Mengyao Hu. 2016. "Sample Design." *Cross-Cultural Survey Guidelines*. Retrieved (<https://ccsg.isr.umich.edu/index.php/chapters/sample-design-chapter>).
- Human Rights Watch. 2016. "UN Makes History on Sexual Orientation, Gender Identity." *Human Rights Watch*. Retrieved March 11, 2019 (<https://www.hrw.org/news/2016/06/30/un-makes-history-sexual-orientation-gender-identity>).
- Ingber, Sasha. 2019. "Activists Say 40 Detained And 2 Dead In Gay Purge In Chechnya." *NPR*. Retrieved May 5, 2019 (<https://www.npr.org/2019/01/14/685192372/activists-say-40-detained-and-2-dead-in-gay-purge-in-chechnya>).
- Inglehart, Ronald Franklin, Pippa Norris, and Christian Welzel. 2002. "Gender Equality and Democracy." *Comparative Sociology* 1 (3-4): 321-345.
- Inglehart, Ronald Franklin. 2016. "Postmaterialism." *Encyclopædia Britannica*. Retrieved November 4, 2019 (<https://www.britannica.com/topic/postmaterialism>).
- Inglehart, Ronald, Roberto Foa, Christopher Peterson, and Christian Welzel. 2008. "Development, Freedom, and Rising Happiness: A Global Perspective (1981–2007)." *Perspectives on Psychological Science* 3(4):264–85.
- Ireland, Patrick R. 2013. "A Macro-Level Analysis of the Scope, Causes, and Consequences of Homophobia in Africa." *African Studies Review* 56(2):47-66.
- Jäckle, Sebastian and Georg Wenzelburger. 2014. "Religion, Religiosity, and the Attitudes Toward Homosexuality—A Multilevel Analysis of 79 Countries." *Journal of Homosexuality* 62(2):207–41.
- Koenig, Harold George, Michael E. McCullough, and David B. Larson. 2001. *Handbook of Religion and Health*. Oxford: Oxford University Press.
- Mapp, Susan, and Shirley Gatenio Gabel. 2017. "Government Abuses of Human Rights." *Journal of Human Rights and Social Work* 2:1-2.
- Mendos, Lucas Ramon. 2019. *State-Sponsored Homophobia Report*. International Lesbian, Gay, Bisexual, Trans and Intersex Association. Retrieved ([https://ilga.org/downloads/ILGA\\_State\\_Sponsored\\_Homophobia\\_2019\\_light.pdf](https://ilga.org/downloads/ILGA_State_Sponsored_Homophobia_2019_light.pdf)).
- Myers, David G. and Ed Diener. 2018. "The Scientific Pursuit of Happiness." *Perspectives on Psychological Science* 1–11.
- Neugarten, B. L., R. J. Havighurst, and S. S. Tobin. 1961. "The Measurement of Life Satisfaction." *Journal of Gerontology* 16(2):134–43.

- Ngamaba, Kayonda Hubert and Debbie Soni. 2017. "Are Happiness and Life Satisfaction Different Across Religious Groups? Exploring Determinants of Happiness and Life Satisfaction." *Journal of Religion and Health* 57(6):2118–39.
- Okulicz-Kozaryn, Adam. 2010. "Religiosity and Life Satisfaction across Nations." *Mental Health, Religion and Culture* 13(2):155–69.
- Ottosson, Daniel. 2010. "State-Sponsored Homophobia." *ILGA* 1–61.
- Ortiz-Ospina, Esteban and Max Roser. 2013. "Happiness and Life Satisfaction." *Our World in Data*. Retrieved (<https://ourworldindata.org/happiness-and-life-satisfaction>).
- Owen, Julio Videras and Christina Willemsen. 2008. "Democracy, Participation, and Life Satisfaction." *Social Science Quarterly* 89(4).
- Pachankis, John E. and Richard Bränström. 2019. "How Many Sexual Minorities are Hidden? Projecting the Size of the Global Closet with Implications for Policy and Public Health." *PLoS One* 14(6):1-12.
- Pezzini, Silvia. 2005. "The Effect of Womens Rights on Womens Welfare: Evidence from a Natural Experiment." *The Economic Journal* 115(502):C208–227. Retrieved ([www.jstor.org/stable/3590378](http://www.jstor.org/stable/3590378)).
- Radcliff, Benjamin. 2001. "Politics, Markets, and Life Satisfaction: The Political Economy of Human Happiness." *American Political Science Review* 95(4):939–52.
- Rahman, Amanina Abdur and Ruut Veenhoven. 2018. "Freedom and Happiness in Nations: A Research Synthesis." *Applied Research in Quality of Life* 13(2):435–56.
- Roberts, Louisa L. 2018. "Changing Worldwide Attitudes toward Homosexuality: The Influence of Global and Region-Specific Cultures, 1981–2012." *Social Science Research* 1–68.
- Smith, Tom W., Jaesol Son, and Jibum Kim. 2014. "Public Attitudes towards Homosexuality and Gay Rights across Time and Countries." *NORC and The Williams Institute* 1–29.
- Steel, Piers, Vasyl Taras, Krista Uggerslev, and Frank Bosco. 2017. "The Happy Culture: A Theoretical, Meta-Analytic, and Empirical Review of the Relationship Between Culture and Wealth and Subjective Well-Being." *Personality and Social Psychology Review* 22(2):128–69.
- Stavrova, Olga, Detlef Fetchenhauer, and Thomas Schlösser. 2013. "Why Are Religious People Happy? The Effect of the Social Norm of Religiosity across Countries." *Social Science Research* 42(1):90–105.
- Tahmindjis, Phillip. 2005. "Sexuality and International Human Rights Law." *Journal of Homosexuality* 48(3-4):9–29.

- Turner, Bryan S. 2018. "(I Can't Get No) Satisfaction: Happiness and Successful Societies." *Journal of Sociology* 54(3):279–93.
- Veenhoven, Ruut. 2015. "Social Conditions for Human Happiness: A Review of Research." *International Journal of Psychology* 50(5):379–91.
- Verkuyten, Maykel. 2008. "Life Satisfaction Among Ethnic Minorities: The Role of Discrimination and Group Identification." *Social Indicators Research* 89(3):391–404.
- Wheeler, Lorey. 2015. Retrieved  
(<http://cyfs.unl.edu/cyfsprojects/videoPPT/f37671cb8959f017530b26f07c384799/151120-Wheeler.pdf>).
- Wilson, Keating, and Mary Beal. 2016. *Regression Analysis: Understanding and Building Business and Economic Models Using Excel*. 2<sup>nd</sup> ed. New York: Business Expert Press.

Table 1. Variable Overview.

Variable	Measurement	Source	Notes
<b>Cultural Variables</b>			
Religion	Nominal	CIA World Factbook	Religions with the greatest number of adherents; Catholic (1), Protestant/Other Christian (2), Muslim (3), Orthodox (4), and Other (5) categories
Percent of Adherents	Continuous	CIA World Factbook	Percentage of adherents to dominant religion
Religiosity	Continuous (aggregated)	WVS/EVS	“Apart from weddings and funerals, about how often do you attend religious services these days?”; 1 (more than once a week) – 7 (never, practically never); reverse coded for analysis; answers of 1 and 2 was recoded as 1=religious and answers of 3-7 was recoded as 0=not religious; the country average was then used as the variable of analysis
Gender Gap	Continuous	World Economic Forum	Reported as in Global Gender Gap Report; 0=complete inequality, 1=complete equality
<b>Socio-political Variables</b>			
Freedom	Nominal	Freedom House	As reported by Freedom House as Free (2), Partially Free (1), or Not Free (0)
Economy	Continuous	The World Bank	GDP per capita in continuous 2010 USD; used as reported
<b>Population-specific Variables</b>			
Attitudes	Continuous (aggregated)	WVS/EVS	“Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between – homosexuality” (1=never justifiable, 10=always justifiable); country averages are used
Legislation	Dichotomous	ILGA State-Sponsored Homophobia Report	Three dichotomous measures: homosexuality criminalized (0=no, 1=yes), marriage recognized (0=no, 1=yes), existence of non-discrimination laws (0=no, 1=yes)
<b>Dependent Variables</b>			
Life Satisfaction for Gay Men	Continuous	Gay Happiness Index	Percentage of respondents that reported high life satisfaction
Life Satisfaction for General Population	Continuous (aggregated)	WVS/EVS	“All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are “completely dissatisfied” and 10 means you are “completely satisfied” where would you put your satisfaction with your life as a whole?”; country aggregate is used



Table 2. Descriptive Statistics.

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Life Satisfaction of the General Population	7.01	.72	5.23	8.51
Life Satisfaction of Gay Men	41.18	15.82	10	75
Level of Religiosity of the General Population	.26	.21	.02	.87
Dominant Religion - Catholic	.35	.48	0	1
Dominant Religion - Protestant/Other Christian	.18	.39	0	1
Dominant Religion - Muslim	.21	.41	0	1
Dominant Religion - Orthodox	.17	.38	0	1
Dominant Religion - Other	.10	.31	0	1
Percent of Adherents to Dominant Religion	66.53	23.32	10.7	99.8
Country's Log GDP Per Capita	9.28	1.24	6.37	11.56
Gender Equality Measure	.70	.06	.55	.85
Level of Democracy - Not Free	.15	.36	0	1
Level of Democracy - Partly Free	.24	.43	0	1
Level of Democracy - Free	.60	.49	0	1
General Population's Attitudes Towards Gay Men	3.75	1.99	1.13	8.47
Same-Sex Acts Decriminalized	.87	.34	0	1
Anti-Discrimination Protections	.60	.49	0	1
Same-Sex Marriage Recognition	.10	.31	0	1
<b>Variable</b>	<b>Frequency</b>			
Religion				
Catholic	27			
Protestant/Other Christian	14			
Muslim	16			
Orthodox	13			
Other	8			
Democracy				
Not Free	12			
Partly Free	19			
Free	47			

Table 3. Pearson's Correlation Matrix.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Life Satisfaction for the General Population	1.00																		
2. Life Satisfaction of Gay Men	0.67***	1.00																	
3. Religiosity	-0.07	-0.14	1.00																
4. Dominant Religion - Catholic	0.40***	0.42***	0.12	1.00															
5. Dominant Religion – Protestant/Other Christian	0.18	0.31**	-0.00	-0.34**	1.00														
6. Dominant Religion - Muslim	-0.18	-0.54***	0.22	-0.37***	-0.24*	1.00													
7. Dominant Religion - Orthodox	-0.42***	-0.32**	-0.26*	-0.33**	-0.21	-0.23*	1.00												
8. Dominant Religion - Other	-0.09	0.07	-0.15	-0.25*	-0.16	-0.17	-0.15	1.00											
9. Percent of Adherents to Dominant Religion	-0.02	-0.32**	0.31**	-0.00	-0.25*	0.33**	0.09	-0.24*	1.00										
10. Log GDP Per Capita	0.46***	0.63***	-0.41***	0.28*	0.26*	-0.42***	-0.19	-0.03	-0.36***	1.00									
11. Gender Equality Measure	0.38***	0.59***	-0.42***	0.15	0.46***	-0.54***	-0.01	-0.14	-0.28*	0.52***	1.00								
12. Level of Democracy – Not Free	-0.30**	-0.41***	0.04	-0.31**	-0.11	0.49***	0.00	-0.03	0.14	-0.37***	-0.24*	1.00							
13. Level of Democracy – Partially Free	-0.11	-0.26*	0.24*	-0.16	-0.19	0.30**	0.07	0.01	0.12	-0.43***	-0.29*	-0.24*	1.00						
14. Level of Democracy - Free	0.32**	0.54***	-0.24*	0.37***	0.24*	-0.63***	-0.06**	-0.02	-0.21	0.65***	0.43***	-0.53***	-0.70***	1.00					
15. Attitudes Towards Gay Men	0.61***	0.84***	-0.30**	0.40***	0.38***	-0.50***	-0.34**	-0.03	-0.35**	0.78***	0.68***	-0.41***	-0.39***	0.65***	1.00				
16. Same-Sex Acts Decriminalized	0.20	0.33**	-0.46***	0.28*	-0.02	-0.49***	0.17	0.00	-0.10	0.35**	0.45***	-0.28*	-0.23*	0.40***	0.33**	1.00			
17. Anti-Discrimination Protections	0.33**	0.42***	-0.29**	0.37***	0.18	-0.43***	-0.13	-0.07	-0.18	0.64***	0.48***	-0.53***	-0.27*	0.63***	0.56***	0.48***	1.00		
18. Same-Sex Marriage Recognition	0.25*	0.40***	-0.04	0.11	0.28*	-0.17	-0.15	-0.11	-0.08	0.30**	0.35**	-0.14	-0.19	0.27*	0.44***	0.13	0.21	1.00	

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001

Table 4. OLS regression models on aggregate levels of life satisfaction for gay men.

Variable	Cultural Model	Sociopolitical Model	Population-Specific Model
Religiosity	-0.95 (-15.86, 13.95)		
Dominant Religion (ref=Protestant/other Christian)			
Catholic	3.84 (-3.90, 11.59)		
Orthodox	-12.51 (-24.37, -0.65)*		
Muslim	-14.83 (-25.07, -4.60)**		
Other	1.23 (-10.42, 12.87)		
Percent of Adherents to Dominant Religion	-0.03 (-0.16, 0.10)		
Gender Equality	102.41 (33.00, 171.81)**		
Log GDP Per Capita		6.28 (3.38, 9.18)***	
Level of Democracy/Freedom (ref=free)			
Not Free		-10.94 (-20.40, -1.49)*	
Partly Free		-4.60 (-12.54, 3.34)	
Attitudes toward Homosexuality			6.75 (5.41, 8.10)***
Same-Sex Relations Decriminalized			4.85 (-1.96, 11.66)
Same-Sex Protections			-3.99 (-9.36, 1.37)
Marriage Recognition			1.85 (-5.46, 9.16)
Constant	-23.76 (-78.26, 30.74)	-14.00 (-43.01, 15.01)	14.06 (7.86, 20.26)
Adjusted R <sup>2</sup>	0.52	0.42	0.69
N	71	76	76

Beta coefficients are provided with significance notated by asterisks (\*p<0.05, \*\*p<0.01, \*\*\*p<0.001)

Confidence intervals (95%) located in parenthesis beside each coefficient

Table 5. Combined models using significant variables from previous models examining life satisfaction for gay men.

Variable	Combined Model 1	Combined Model 2
Dominant Religion (ref=Protestant/other Christian)		
Catholic	1.85 (-3.79, 7.49)	2.91 (-4.05, 9.86)
Orthodox	-9.66 (-18.10, -1.23)*	-8.19 (-19.84, 3.46)
Muslim	-5.45 (-13.21, 2.30)	-12.08 (-20.94, -3.22)**
Other	1.90 (-5.94, 9.73)	2.01 (-8.29, 12.31)
Gender Equality <sup>a</sup>		79.92 (20.13, 139.71)**
Log GDP Per Capita <sup>a</sup>		3.43 (0.76, 6.10)*
Level of Democracy/Freedom (ref=free)		
Not Free	2.11 (-5.56, 9.79)	-5.13 (-14.93, 4.68)
Partly Free	4.24 (-1.73, 10.21)	0.97 (-6.65, 8.60)
Attitudes toward Homosexuality	5.66 (4.13, 7.19)***	
Constant	20.81 (11.13, 30.49)***	-42.54 (-86.27, 1.19)
Adjusted R <sup>2</sup>	0.72	0.59
N	76	71

<sup>a</sup>Have high multicollinearity with the attitudinal measures, so are not used in the same combined models as the attitudinal measures

Beta coefficients are provided with significance notated by asterisks (\*p<0.05, \*\*p<0.01, \*\*\*p<0.001)

Confidence intervals (95%) located in parenthesis beside each coefficient

Table 6. Combined model for effects on life satisfaction of gay men with interaction terms.

<b>Variable</b>	<b>Model 1</b>	<b>Model 2</b>
Dominant Religion (ref=Protestant/Other Christian)		
Catholic	1.67 (-4.11, 7.46)	2.35 (-3.11, 7.82)
Orthodox	-10.60 (-19.57, -1.63)*	-7.94 (-16.15, 0.26)
Muslim	-5.77 (-13.68, 2.14)	-3.30 (-10.92, 4.31)
Other	2.14 (-5.83, 10.11)	3.31 (-4.33, 10.96)
Percent of Adherents to Dominant Religion	0.07 (-0.13, 0.28)	
Level of Democracy/Freedom (ref=free)		
Not Free	2.29 (-5.51, 10.10)	3.51 (-3.95, 10.96)
Partly Free	4.42 (-1.65, 10.49)	5.45 (-0.33, 11.30)
Attitudes toward Homosexuality	6.73 (3.38, 10.07)***	6.30 (4.63, 7.98)***
Marriage Recognition		36.23 (9.90, 62.56)**
Attitudes X Percent of Adherents to Dominant Religion	-0.02 (-0.06, 0.03)	
Attitudes X Marriage		-5.37 (-9.54, -1.20)*
Constant	15.93 (-0.63, 32.48)	16.61 (6.69, 26.53)***
Adjusted R <sup>2</sup>	0.71	0.74
N	76	76

Beta coefficients are provided with significance notated by asterisks (\*p<0.05, \*\*p<0.01, \*\*\*p<0.001)

Confidence intervals (95%) located in parenthesis beside each coefficient

Table 7. OLS regression models on aggregate levels of life satisfaction for the general population.

Variable	Cultural Model	Sociopolitical Model	Population-Specific Model
Religiosity	-0.35 (-1.16, 0.46)		
Dominant Religion (ref=Protestant/other Christian)			
Catholic	0.24 (-0.18, 0.66)		
Orthodox	-0.14 (-0.79, 0.50)		
Muslim	-1.00 (-1.56, -0.45)***		
Other	-0.17 (-0.81, 0.46)		
Percent of Adherents to Dominant Religion	0.01 (-0.00, 0.01)		
Gender Equality	3.83 (0.07, 7.59)*		
Log GDP Per Capita		0.25 (0.10, 0.41)**	
Level of Democracy/Freedom (ref=free)			
Not Free		-0.21 (-0.71, 0.30)	
Partly Free		0.07 (-0.36, 0.49)	
Attitudes toward Homosexuality			0.23 (0.14, 0.32)***
Same-Sex Relations Decriminalized			0.04 (-0.41, 0.49)
Same-Sex Protections			-0.07 (-0.43, 0.29)
Marriage Recognition			-0.06 (-0.55, 0.42)
Constant	4.20 (1.25, 7.15)**	4.71 (3.16, 6.27)***	6.19 (5.78, 6.60)***
Adjusted R <sup>2</sup>	0.38	0.19	0.33
N	71	76	76

Beta coefficients are provided with significance notated by asterisks (\*p<0.05, \*\*p<0.01, \*\*\*p<0.001)

Confidence intervals (95%) located in parenthesis beside each coefficient

Table 8. Combined models using significant variables from previous models examining life satisfaction for the general population.

<b>Variable</b>	<b>Combined Model 1</b>	<b>Combined Model 2</b>
Dominant Religion (ref=Protestant/other Christian)		
Catholic	0.22 (-0.14, 0.59)	0.30 (-0.10, 0.69)
Orthodox	0.21 (-0.30, 0.73)	0.14 (-0.44, 0.72)
Muslim	-0.35 (-0.85, 0.16)	-0.74 (-1.24, -0.25)**
Other	-0.11 (-0.62, 0.40)	-0.11 (-0.69, 0.47)
Gender Equality <sup>a</sup>		3.16 (-0.21, 6.53)
Log GDP Per Capita <sup>a</sup>		0.14 (0.01, 0.28)*
Attitudes toward Homosexuality	0.19 (0.10, 0.28)***	
Constant	6.26 (5.69, 6.82)***	3.46 (1.01, 5.90)**
Adjusted R <sup>2</sup>	0.41	0.41
N	76	71

<sup>a</sup>Have high multicollinearity with the attitudinal measures, so are not used in the same combined models as the attitudinal measures

Beta coefficients are provided with significance notated by asterisks (\*p<0.05, \*\*p<0.01, \*\*\*p<0.001)

Confidence intervals (95%) located in parenthesis beside each coefficient

APPENDIX A: Sample Countries

Albania	Lithuania
Algeria	Luxembourg
Argentina	Macedonia
Armenia	Malaysia
Australia	Malta
Austria	Mexico
Azerbaijan	Moldova
Belarus	Montenegro
Belgium	Netherlands
Bosnia-Herzegovina	New Zealand
Brazil	Nigeria
Bulgaria	Norway
Chile	Pakistan
China	Peru
Colombia	Philippines
Croatia	Poland
Cyprus	Portugal
Czech Republic	Romania
Denmark	Russia
Ecuador	Serbia
Estonia	Singapore
Finland	Slovakia
France	Slovenia
Georgia	South Africa
Germany	South Korea
Ghana	Spain
Greece	Sweden
Hungary	Switzerland
Iceland	Taiwan
India	Thailand
Ireland	Tunisia
Japan	Turkey
Jordan	Ukraine
Kazakhstan	United Kingdom
Kosovo	United States
Kyrgyzstan	Uruguay
Latvia	Uzbekistan
Lebanon	Zimbabwe



## APPENDIX B: Review of ILGA Laws

Country	Same-Sex Act Decriminalized	Anti-Discrimination Protections	Same-Sex Marriage Recognized
Albania	Yes	Yes	No
Algeria	No	No	No
Argentina	Yes	Yes	No
Armenia	Yes	No	No
Australia	Yes	Yes	No
Austria	Yes	Yes	No
Azerbaijan	Yes	No	No
Belarus	Yes	No	No
Belgium	Yes	Yes	Yes
Bosnia H	Yes	Yes	No
Brazil	Yes	Yes	No
Bulgaria	Yes	Yes	No
Chile	Yes	No	No
China	Yes	No	No
Colombia	Yes	Yes	No
Croatia	Yes	Yes	No
Cyprus	Yes	Yes	No
Czech Republic	Yes	Yes	No
Denmark	Yes	Yes	No
Ecuador	Yes	Yes	No
Estonia	Yes	Yes	No
Finland	Yes	Yes	No
France	Yes	Yes	No
Georgia	Yes	Yes	No
Germany	Yes	Yes	No
Ghana	No	No	No
Great Britain/UK	Yes	Yes	No
Greece	Yes	Yes	No
Hungary	Yes	Yes	No
Iceland	Yes	Yes	No
India	Yes	No	No
Iraq		No	No
Ireland	Yes	Yes	No
Italy	Yes	Yes	No
Japan	Yes	Yes	No
Jordan	Yes	No	No
Kazakhstan	Yes	No	No
Kosovo	Yes	Yes	No
Kyrgyzstan	Yes	No	No
Latvia	Yes	Yes	No
Lebanon	No	No	No
Lithuania	Yes	Yes	No
Luxembourg	Yes	Yes	No
Macedoni	Yes	No	No
Malaysia	No	No	No
Malta	Yes	Yes	No
Mexico	Yes	No	Yes
Moldova	Yes	No	No
Montenegro	Yes	No	No
Netherlands	Yes	Yes	Yes
New Zealand	Yes	Yes	No
Nigeria	No	No	No
Norway	Yes	Yes	Yes
Pakistan	No	No	No
Peru	Yes	No	No
Philippines	Yes	No	No
Poland	Yes	Yes	No
Portugal	Yes	Yes	No
Romania	Yes	Yes	No
Russia	Yes	No	No
Serbia	Yes	Yes	No
Singapore	No	No	No
Slovakia	Yes	Yes	No
Slovenia	Yes	Yes	No
South Africa	Yes	Yes	Yes
South Korea	Yes	No	No
Spain	Yes	Yes	Yes
Sweden	Yes	Yes	Yes
Switzerland	Yes	Yes	No
Taiwan	Yes	Yes	No
Thailand	Yes	No	No
Tunisia	No	No	No
Turkey	Yes	No	No
Ukraine	Yes	No	No
United States	Yes	Yes	Yes
Uruguay	Yes	Yes	No
Uzbekistan	No	No	No
Zimbabwe	No	No	No

## APPENDIX C: Satisfaction with Life Scale

Instructions: Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree
- 1 - Strongly disagree

\_\_\_\_ In most ways my life is close to my ideal.

\_\_\_\_ The conditions of my life are excellent.

\_\_\_\_ I am satisfied with my life.

\_\_\_\_ So far I have gotten the important things I want in life.

\_\_\_\_ If I could live my life over, I would change almost nothing.

*The Satisfaction with Life Scale created by Diener et al. (1985)*

