THOU GOD SEEST ME:

AN INVESTIGATION INTO THE ROLE OF RELIGION AND SPIRITUALITY IN DEVIANT BEHAVIOURS IN YOUTH

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ABSTRACT

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Social scientists have debated whether religious involvement is associated with differences in deviant behaviours for over a century. Religious practices and beliefs are often associated with less deviant behaviours in young adults, such as less frequent drug use and law-breaking. Empirical results on these associations, though, have been mixed, possibly due to heterogenous measures. Recent literature has begun teasing apart religious practices (e.g., attending church) from spiritual beliefs (e.g., believing in higher powers) and exploring their unique associations with different outcomes. The present study tested the independent and interactive effects of religion and spirituality in predicting deviance. Religion was negatively associated with some types of deviance, the relationship remained significant even after controlling for covariates. Spirituality was not reliably associated with deviance. There was an interaction between religion and spirituality, where the combination of the two was associated with the lowest level of deviance. Further findings and implications are discussed.

Keywords: religion, spirituality, deviance

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I am a part of all that I have met;
Yet all experience is an arch wherethro'
Gleams that untravell'd world whose margin fades
For ever and forever when I move.
How dull it is to pause, to make an end,
To rust unburnish'd, not to shine in use!

Also, Austin and Jake.

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Introduction

There has been significant philosophical and theoretical debate about whether participation in organized religion has had the latent effect of social control to reduce deviant behaviours and encourage desirable behaviour (Cretacci, 2003; Stark & Bainbridge, 2013). Often, participation in organized religion, with their respective guiding tenets/principles, such as doing good to others, turning the other cheek, etc., is associated with increases in prosocial behaviours (Atkinson & Bourrat, 2011) and decreases in deviant behaviours (Stark & Bainbridge, 2013), an association which is not new (Ross, 1896). Theory and research, to date, in an attempt to evaluate whether religion is or is not a prohibitor of deviant behaviour, has garnered mixed support across measures of religion and deviance (Burkett & White, 1974; Hirschi & Stark, 1969; Kelly et al., 2015; Schroeder & Frana, 2009; Stark, 1996; Sturgis & Baller, 2012). What has yet to be considered in the study of religion and deviance is spirituality: something which is becoming more frequently paired with religion and treated as a separate construct to identify their unique and separate relationships with factors such as health (Koenig, 2012; Speed et al., 2020, 2022). The pairing of these concepts is collectively referred to as religious/spiritual or R/S. Spirituality, the belief in supernatural, transcendence, interconnectedness, or afterlife is a trait or belief often associated with religion (Pargament, 1999; Pargament et al., 2013) but is present and growing in nonreligious populations (McLaughlin et al., 2020; Pew Research Center, 2013, 2014b). Current literature on spirituality suggests it is associated with fewer deviant behaviours (DeBono et al., 2016; Giordano et al., 2008; Harris, 2003; Klanjšek et al., 2012; McLaughlin et al., 2020; Shariff & Rhemtulla, 2012; Shroff et al., 2021). There is a body of research to suggest that spirituality and its associated beliefs, which are often a part of religion, may

be responsible for the observed inconsistencies in religion and deviance research (Atkinson & Bourrat, 2011; DeBono et al., 2016; McKay et al., 2011; McLaughlin et al., 2020). The mixed results on religion and deviance, in contrast to the consistent findings on spirituality and deviance, call for a deeper dive into their separate and potentially overlapping roles in deviance.

Much of the early research on religion and deviance (Amoateng & Bahr, 1986; Hirschi & Stark, 1969) as well as more recent literature (Rivera et al., 2018; Schroeder & Frana, 2009; Stark, 1996; Sturgis & Baller, 2012) has focused on youth (with varying terminology: e.g., emerging adults, senior high school students, adolescents). This focus on youth and young adults is primarily because of their higher rates of deviant behaviours, which tend to trend downward into adulthood (Amoateng & Bahr, 1986; Bongers et al., 2003). While older literature has combined junior high and high school students (Hirschi & Stark, 1969) and more recent literature has focused more on high school samples (Sturgis & Baller, 2012; Vazsonyi & Pickering, 2003), none have attempted to explore the differences between younger and older adolescents in terms of religion, spirituality, and deviance. Exploring whether there are differences in associations between religion and deviance between younger and older adolescents may clarify past inconsistencies in findings.

The current study aimed to resolve previous inconsistencies and consolidate emerging theories on religion and spirituality into the religion-deviance literature. Developing a better understanding of how religion and spirituality are associated with deviance in youth can aid in the understanding of risk factors for deviance. A large proportion of the Canadian population consider themselves religious (65%; Statistics Canada, 2022a) and/or spiritual (43%; Angus Reid Institute, 2015), which highlights the

importance of understanding how these two concepts are associated with public concerns, such as engagement in deviant or criminal behaviour. With respect to research concerning religion or spirituality, these two concepts are frequently treated as having "uniformly positive effects," (Speed & Fowler, 2021, p. 125). While religion and spirituality may be associated with some positive outcomes, it is important, from a research perspective, to evaluate these concepts without making such broad assumptions. The present study explored the associations between religion, spirituality, and deviance, through both quantitative analyses, to evaluate the statistical association, as well as qualitative analyses, to generate meaningful theory from participants understanding of the role their beliefs and practices plays in their engagement in deviant behaviour. Separate measures of religion and spirituality, as well as including qualitative elements, have not been combined before in the current literature. The sample consisted of undergraduate students who were asked about their religious practices, spirituality, and deviant behaviours both in the last 5 years and around the age of 10. The goal of this was to collect data from similar time periods as previous studies, which often collect from senior high school students (roughly 17 – 18 years of age) and sometimes junior high (middle school, roughly ages 11 – 13 depending on country). The aim of the present research was to develop a more meaningful understanding of the relationships between religion, spirituality, and deviance from both a quantitative and qualitative perspective. The unique relationships between religion and spirituality are further discussed. Five research questions were addressed:

RQ1: How are religion and spirituality associated with deviance, when separated into binary categories (religious and spiritual [RS], nonreligious and spiritual [NRS], religious and nonspiritual [RNS], and nonreligious and nonspiritual [NRNS])?

RQ2: Does the religion-deviance association differ from the spirituality-deviance association?

RQ3: How does the prevalence and relationship between R/S and deviance change between childhood and young adulthood?

RQ4: How do participants believe their individual spirituality and religious practice has influenced their deviant behaviours in their lifetime?

RQ5: How do participants define their religion and spirituality?

The following sections will outline current theories of deviance, religion, and spirituality, how they are operationalized in research, and their respective possible interconnections.

Deviance

Deviant behaviours are, at their core, violations of a group's norms (Grattet, 2011; Jetten & Hornsey, 2013). Group norms vary across religions, societies, and cultures. Arguably, the largest of these groups are general social norms, often outlined by laws and statutes, and the violation of which are considered criminal offences (Ellis, 2002; Hirschi & Stark, 1969; Kelly et al., 2015; Rivera et al., 2018). When exploring deviance in relation to religion, deviance may be defined as violation of a religious group's norms (Barkan, 2006) *or* as a violation of societal norms (Kerley et al., 2011; Schroeder & Frana, 2009; Sturgis & Baller, 2012). For the purposes of assessing overall deviant behaviours, without convoluting analyses with potential intergroup differences, behaviours that violate societal norms are the most universally accepted form of deviance (Baier & Wright, 2001; Giordano et al., 2008; Kerley et al., 2011; Miller & Vuolo, 2018; Shariff & Rhemtulla, 2012). This approach is reflected in much of the research that

explored the potential relationship between religion and deviance (Kerley et al., 2011; Schroeder & Frana, 2009; Sturgis & Baller, 2012). Throughout this document, the use of "deviant," "deviance," or "deviant behaviours" specifically refers to the violation of North American laws or other socially significant deviant behaviours relevant to youth (truancy, plagiarism, deceit, and cheating in school). This definition of deviance has been chosen because it reflects the most common and widely accepted forms of deviance – crime or mostly universal "wrongs" (Baier & Wright, 2001; Giordano et al., 2008; Kerley et al., 2011; Miller & Vuolo, 2018; Shariff & Rhemtulla, 2012).

It is important to consider the crime/deviance landscape that currently exists in North America when discussing factors which may contribute to deviant behaviours. Overall, Canada's total crime rate (Criminal Code and traffic offenses) is down 11% since 2011 (Statistics Canada, 2022b) which is likely attributable to a better understanding of the predictors of crime, interventions targeting at-risk populations (Tonry, 2014), and changing laws that focus on rehabilitation rather than punishment (Bala et al., 2009). Our current understanding of factors that influence deviant behaviours have resulted in significant improvements in our crime/deviance landscape, however there is still much more we can learn (Tonry, 2014). While crime in general is down, some forms are up by a concerning amount (Statistics Canada, 2022b, 2022c). Between 2011 and 2021, police reported: drug impaired driving is up 267%, child pornography is up 441%, identity theft is up 357%, extortion is up by 297%, sexual violence against children is up 190%, criminal firearm use is up 102%, and sexual assault is up 41% (Statistics Canada, 2022b). While there are areas which have decreased significantly, such as overall Criminal Code violations (down 27%, 2011 to 2021) and breaking and entering crimes (down 38%; Statistics Canada, 2022b), rises in other areas remain concerning.

Cybercrime/cyber deviance, criminal violations committed online or through the use of technology, is also rising at an alarming rate. Out of 25 different categories of cybercrime listed by Statistics Canada (2022c), only 3 have gone down since 2014 (invitation to sexual touching, -12%; digital child pornography, -11%; and corrupting morals, -4.35%). It should be noted that the decrease in child pornography is in online or digital child pornography and is not contradictory to the aforementioned increase in overall child pornography. Notable increases, between 2014/2015 and 2021 include: an 8325% increase in other nonviolent violations, an 803% increase in indecent or harassing communications, a 786% increase in the non-consensual distribution of intimate images, a 586% increase in other violent violations, a 541% increase in the making or distribution of child pornography, a 528% increase in identity fraud, and a 363% increase in all violations (Statistics Canada, 2022c). Most of these crimes, both cyber and non-cybercrime, are likely noncontroversial in terms of being crimes, making the engagement in them a relatively good indicator of deviance. These jarring statistics show that there is still much progress to be made in understanding the influential factors of deviance, something that is crucial in reducing crime rates (Tonry, 2014).

Deviance is most often measured by the frequency of engagement in deviant behaviours (Baier & Wright, 2001; Burkett & White, 1974; Cochran & Akers, 1989; Ellis, 2002; Kerley et al., 2011; Shariff & Rhemtulla, 2012). There are numerous approaches to evaluating past deviance, such as reviewing criminal records manually (Yan & Cantor, 2019) or having participants self-report (Ellis, 2002; Vazsonyi et al., 2001). When framed appropriately, self-report questionnaires regarding criminal or deviant past do not appear to fall victim to social desirability bias any more than other measures do (Yan & Cantor, 2019). Both of these methods generally ask about a wide

range of offences and reduce them to a handful of categories (vandalism, alcohol and drug abuse, trespassing, assault, theft; Ellis, 2002; Vazsonyi et al., 2001). While "deviant acts" may include intergroup differences (i.e., attitudes towards issues such as premarital sex or childbearing), operationalizing deviance through the more widely accepted forms (crime, academic misconduct, etc.) will lead to a more meaningful understanding of how different factors are associated with the engagement in deviant behaviours.

What has led to reductions in crime in North America in the last few decades is debated (Tonry, 2014). The one aspect of the reduction in deviance/crime that is not as debated is the source of reduction; in other words, the reduction in some areas of crime or deviance does not appear to be a result of "… changes in policing or sanctioning policies." (Tonry, 2014, p. 1). Rather, the changes in deviance/crime appear to be the result of external factors, such as increased education, interventions targeting at-risk populations, and other influential factors (Tonry, 2014). Many socioeconomic factors of deviance are well known and established in the current literature: items such as being non-white in race, having low socioeconomic status, lower levels of education, being male, lower parental education, and living in highly populated areas are associated with more frequent deviant behaviours (Public Safety Canada, 2018; Schneider, 2004; Shader, 2001). Therefore, it is important to account for these demographic factors in research on deviance. Psychological factors, such as the dark tetrad (i.e., psychopathy, narcissism, Machiavellianism, and sadism), are also associated with differences in deviant behaviours (Alsheikh Ali, 2020; Ellen et al., 2021) and academic misconduct (Ternes et al., 2019). These other factors are beyond the scope of the present study. However, there are some implied relationships with deviance that remain underdeveloped or underexplored, such as the religion-deviance relationship.

Deviance in Youth

Literature exploring deviance and its relationship to religion has often focused on youth (Amoateng & Bahr, 1986; Hirschi & Stark, 1969; Rivera et al., 2018; Schroeder & Frana, 2009; Stark, 1996; Sturgis & Baller, 2012) likely because of their higher rates of deviance compared to older adults (Amoateng & Bahr, 1986; Bongers et al., 2003; Canadian Centre for Justice Statistics, 2015). While sampling adults is not unheard of (Sturgis & Baller, 2012), young adults tend to be favoured. Deviance rates in Canada follow a positively skewed trend in age, with crime accusations by age group peaking around 18 years at 14,000 per 100,000 population and trending down as age increases (Public Safety Canada, 2022). In other words, crime accusations and charges are highest during adolescence and young adulthood. These crime trends are similar in Ontario, though public data on this is not as readily available: youths aged 12 to 17 have a 9% higher rate of criminal charges than those 18+ (1663 per 100,000 compared to 1521 per 100,000, respectively; Canadian Centre for Justice Statistics, 2015). The most common violations made by youth are theft under $5,000, assault, mischief, and drug offences (Public Safety Canada, 2022). Crime, though, is not the only indicator of deviance amongst youth. School misconduct is also a valuable indicator and fits the definition of the present study, behaviours that are widely accepted as socially deviant (e.g., plagiarism, cheating), and the present sample, young adults in university.

Academic misconduct (such as plagiarism, cheating on academic testing, or having academic papers prepared by other people) is another form of deviance that is specific to those who are in school, concerns of which are on the rise because of new advances in artificial intelligence (Cotton et al., 2023; Susnjak, 2022). This form of deviance, although not criminal, still fits the mentioned definitions, that cheating or

plagiarising oneself through a degree is regarded as wrong at similar levels between university faculty and students (Wilkinson, 2009). For example, university students in an Australian university rated cheating on an exam as similarly "wrong," on average, as violent and abusive behaviour (Wilkinson, 2009). Given the high concern for academic misconduct with current changes in technology, the widely accepted view of cheating as "wrong," and the sometimes very high rates of cheating observed in university samples (Berry et al.'s 2006 sample of university students indicated 88.9% had cheated), it could be argued that academic misconduct is a useful proxy of deviant behaviours in youth samples.

Theories of Deviance

There are many theories that attempt to explain why individuals engage in deviant behaviours, all of which have been explored empirically in the context of deviant behaviours (Kroneberg & Kalter, 2012; Michaels & Miethe, 1989; Pratt et al., 2006) as well as cyber deviance (Back et al., 2018) and academic misconduct (DiPietro, 2010; Michaels & Miethe, 1989). Deterrence theory argues that deviant behaviours are deterred by an individual's perception of the severity of punishment and the likelihood of facing that punishment (Michaels & Miethe, 1989). The punishment severity for a stealing a chocolate bar is significantly less than robbing a bank and the likelihood of being caught doing the former is likely far less than the latter. This belief, at least in part, explains why petty theft is more common than bank robbing. Research on deterrence theory has supported this, suggesting that greater punishment severity and likelihood of being caught are significant predictors of deviant behaviour (Higgins et al., 2005; Michaels & Miethe, 1989). Deterrence theory, though, does not take into consideration the reward of bank robbing, compared to the reward of stealing a chocolate bar.

Rational choice theory argues that individuals make a choice that balances reward and punishment (DiPietro, 2010; Michaels & Miethe, 1989). Robbing a bank provides substantially greater gains than stealing a chocolate bar, though with an increased risk of being caught and greater punishment. This would help explain why, despite the high-risk nature of some forms of deviance, which have high chances of being caught and severe punishments, many people still choose to do these things. There have been some challenges empirically testing rational choice theory, largely concerning whether it can be appropriately empirically tested (Kroneberg & Kalter, 2012). Despite these challenges and concerns, rational choice theory has been explored and some support has been found for it in relation to cyber deviance (Higgins, 2007), academic misconduct (Alsuwaileh et al., 2016; DiPietro, 2010; Michaels & Miethe, 1989; Ogilvie & Stewart, 2010), and general deviance (Seipel & Eifler, 2010).

Social bond theory posits that there are four major social bonds that influence one's engagement in deviant behaviours: *attachment, commitment, involvement,* and *belief* (Michaels & Miethe, 1989; Schroeder, 2015). In other words, stronger social bonds in these areas will deter deviant behaviours. *Attachment* refers to the strength of bonds with family members, those with strong family bonds are less likely to engage in deviant behaviours. *Commitment* refers to the overall commitment to other aspects of life, such as work or education, where greater commitment is associated with lesser deviance. *Involvement* refers to the overall amount of time involved in an individual's commitments, like schoolwork, athletics, or other "conventional pursuits" (Durkin et al., 1999, p. 452). *Belief* refers to an individual's belief or acceptance of society's rules and definitions of what it is to be good, including respect for authority (or not being deviant; Durkin et al., 1999; Michaels & Miethe, 1989). Increases in any one of these areas are

expected to be associated with less deviant behaviours. The empirical research on this theory, to date, has found relatively consistent support for: drunk driving and binge drinking (Durkin et al., 1999, 2007), drug use (Dull, 1984), assault, school misconduct, and general deviance (Özbay & Özcan, 2006). Across this overall support, there is wavering support for the components of social bond theory (i.e., some bonds are more supported than others in different studies and types of deviance).

All of these theoretical frameworks hold merit and have their own unique and separate contributions to our understanding of deviance. While some authors argue that some of these theories are better than others (Michaels & Miethe, 1989), all of the discussed theories have a solid empirical foundation (Alsuwaileh et al., 2016; Back et al., 2018; Dull, 1984; Durkin et al., 1999, 2007; Higgins et al., 2005; Higgins, 2007; Kroneberg & Kalter, 2012; Michaels & Miethe, 1989; Ogilvie & Stewart, 2010; Özbay & Özcan, 2006; Pratt et al., 2006; Seipel & Eifler, 2010). Given this foundation, the present study was not aligned with a particular theory and did not attempt to "test" any of these theories; rather, the present study established itself atop the strong foundation presented by these theories and explored their implications in the context of religion and spirituality. In other words, these theories have strong support and, regardless of whether one is better than another, all provide some foundation to the present study's logic.

These theories provide context to the "why" people might engage in deviant behaviours and, unsurprisingly, all share commonalities with religion and its beliefs. Deterrence theory's argument, that the severity of punishment and likelihood of facing that punishment would deter deviance, is only strengthened when the individual believes in a higher power, such as God, which will punish them for all of eternity and is all-knowing. Rational choice theory's argument is similarly strengthened when the

punishment and risk of being caught are infinitely higher because an all-knowing God is monitoring individuals. Social bond theory, too, is strengthened in its concepts when an individual has a strong *attachment* to a higher power, is *committed* and *involved* with their religion, and holds strong *beliefs* in their religion and its moral code. These connections are not novel, and are often made in the literature (Durkheim, 2011; Durkin et al., 1999; Ross, 1896). It is, then, not surprising that religion is sometimes associated with less deviant behaviours (Ellis, 2002; Kelly et al., 2015; Klanjšek et al., 2012; Regnerus, 2008; Sturgis & Baller, 2012).

Religion

How religion is defined varies considerably from religion to religion, academic paper to paper (Hackett et al., 2012, 2017; Pargament et al., 2013; Speed & Fowler, 2016), scholar to scholar (Durkheim, 2011; Marx & Engels, 2012), and even dictionary to dictionary (Merriam-Webster, 2004; Stevenson, 2010). Further, religion's purpose and reason for existing is even debated: some claim that religion may just be a cultural parasite (Dawkins, 2008), while others claim it may be an adaptation or by-product of evolution (Pyysiäinen & Hauser, 2010), and others claim that religion is beneficial for humanity's wellbeing (Gruber, 2005). Unsurprisingly, this diversity of definitions creates diversity in the operationalization of religion and the outcomes of research. Research on religion is additionally plagued by many measurements of varying strengths, definitions, and uses, something which has been an issue for decades (Hill & Hood, 1999). It is, therefore, essential for research concerning religion to have thorough definitions for the purposes of interpretation, application, and replication.

Often, research on religion will use single index measures such as religious association (Ellis, 2002) or religious attendance (Hirschi & Stark, 1969; Shroff et al.,

2021; Stark, 1996) to "measure" engagement in one's religion. This is not to say that all research on religion fails to use thorough measures but, rather, that the construct of religion is easily treated as a single index. These measures do not capture the breadth of religious involvement: for example, a large proportion of those who attend church or associate with a particular religion do not engage in the other practices of that religion (Pew Research Center, 2014b).

Nearly 85% of the world's population (Hackett et al., 2012) and 65% of Canada's population (Statistics Canada, 2022a) consider themselves religious. Within these religious populations, there is significant intragroup variability in engagement in religious practices. For example, some Catholics may attend church twice a week, read the bible every night, and pray multiples times a day, while other Catholics may not do any of that but just identify with Catholicism. Despite 65% of Canadians identifying with a particular religion, only 16% of Canadians attend group religious activities each week, 29% feel that their religious beliefs are "very important" (as opposed to somewhat, not very, or not at all important), and 37% of Canadians report engaging in religious or spiritual activities once a month or more (Statistics Canada, 2021). Similarly, across all major religious groups in Canada, just 32% of those who identify with a specific religion attend religious services once a month or more (Statistics Canada, 2021), and surveys in the United States show that 28% of those who report no specific religious association still attend church once or twice a month (Pew Research Center, 2014b). These statistics highlight the importance of using a multi-index measure of religion, instead of simple attendance or religious association. Using any one of these items alone as an indicator of religiosity or religious involvement, then, is problematic. When considering the influence of religion on other factors, religion should be assessed as a sum of its parts (such as attendance,

religious identification, or individual religious activity) and not with a single indicator. Similarly, spirituality should also be assessed separate from religion because of its varying presence in nonreligious and religious populations, and because it captures the "belief" aspect of religion (Pew Research Center, 2013, 2014; Reker, 2003; Wilkins-Laflamme, 2022).

The current study approached religion from a pragmatic position: engagement in religious practices, such as reading scriptures or attending religious ceremonies, do not necessarily require a belief. Belief in higher powers or afterlife can be separate from engagement in religious activities and will be encompassed in the spirituality construct. This approach allows the capture of a more precise measurement of religious involvement, compared to simple attendance or association, which will not fall victim to the typical issues of single index religious practice measures. Other research has used similar conceptualizations and measurements of religious practice and spirituality (Cragun et al., 2015) or simply separate practice from belief without specific reference to spirituality (Miller & Vuolo, 2018).

Spirituality

Like religion, the definitions of spirituality are many and varied (Cragun et al., 2015; Pargament et al., 2013). Broadly, spirituality is defined as a belief in the supernatural, existence beyond the observable universe, afterlife and/or supernatural sanctions in relation to actions in the natural world, and an interconnectedness amongst living beings (Cragun et al., 2015; Howden, 1992; Pargament, 1999; Pargament et al., 2013). More specifically, it has been posited that spirituality is "… an individual's efforts to construe a broad sense of personal meaning within an eschatological context." (Piedmont, 2001, p. 5). Spirituality is sometimes an individual's attempt at understanding

and giving personal meaning to “death, judgment, and the final destiny of the soul and of humankind” (Oxford, 2022). On the surface, spirituality may be considered to be innately religious (i.e., believing in higher powers is equivalent to being religious) and many authors conflate these constructs. For example, Giordano and colleagues (2008), measured spirituality through closeness with God, which limits the measure to monotheism, and church attendance, which is a religious practice, not a spiritual belief. These sets of beliefs, on their own, are not explicitly religious, though, and one can hold spiritual beliefs without associating with a particular religion (Cragun et al., 2015).

As a result of the many definitions given to spirituality, there are also multiple methods of measuring spirituality. A well accepted method of operationally defining spirituality, with respect to the previous definitions, is through the three facets of the Spiritual Transcendence Scale (STS-24): *connectedness*, a belief that one is part of a larger reality, being part of those before and after oneself; *universality*, a belief that all life is united or related; and *prayer fulfilment*, a positive feeling that comes from personal experiences with transcendence, prayer, or meditation (Piedmont, 2001). It should be noted that personal transcendental experiences, whether they are through prayer, meditation, or other means, do not require a specific religion (Zhang et al., 2022). *Prayer fulfilment* refers to the feelings and experiences related to orienting oneself to another state of being through spiritual practices (Piedmont, 2001). Nonreligious spirituality has been previously measured through engagement in spiritual practices that exist outside of traditional religion (non-religious spiritual beliefs, experiences, and practices measure; Zhang et al., 2022). In addition to these definitions, spiritual beliefs can also include a more general belief in the supernatural, and life/judgment after death, such as in the Nonreligious-Nonspiritual Scale (Cragun et al., 2015). While there are many valid

measures of spirituality (Cragun et al., 2015; Howden, 1992; Piedmont, 2001), significant research continues to mistakenly use measures of religion as a measure of spirituality or conflate the terms (Giordano et al., 2008; Schroeder & Frana, 2009). There are many good measures of spirituality that fit the discussed definitions and do not conflate religion with spirituality (Cragun et al., 2015; Piedmont, 2001). This distinction is especially important considering rapidly growing non-religious spiritual populations (Lipka & Gecewicz, 2017; Pew Research Center, 2013, 2014b). The present study used the STS-24 (Piedmont, 2001) because of its established validity cross-culturally and its ability to capture spirituality as a separate construct from religious involvement (Piedmont et al., 2009).

Biaxial Spirituality-Religion Model

Researchers have begun to acknowledge the differences between the concepts of religion and spirituality (Hill et al., 2000; Ribaudo & Takahashi, 2008; Zinnbauer et al., 1997) due to the growing changes in R/S compositions in North America (Lipka & Gecewicz, 2017; Pew Research Center, 2013, 2014b; Statistics Canada, 2021, 2022a). Together, the concepts of religion and spirituality can be best visualized as biaxial: one can be religious and spiritual (RS), religious but not spiritual (RNS), not religious or spiritual (NRNS), or not religious and spiritual (NRS; see Figure 1). One can participate in religious practices without holding spiritual beliefs, and one can hold spiritual beliefs without partaking in religious practices. This 2x2 model can be captured through a simple yes/no measure (Are You Religious, Are You Spiritual; Reker, 2003) or a more detailed bidimensional continuum of religious practice and spiritual beliefs (Cragun et al., 2015).

Figure 1
The Spirituality-Religiosity Axis

As previously argued, religion may influence spirituality through the promotion of certain eschatological ideas, but religion itself is not spirituality. Religion can be conceptualized as a practice (e.g., attending religious services, reading scripture) whereas spirituality can be conceptualized as belief (e.g., higher powers, afterlife). On the surface, it might appear that these concepts go hand-in-hand, but a growing number of people are identifying with different combinations of these two (e.g., not religious but spiritual). Engaging in religious practices may encourage spirituality, given their nature, but this does not mean that all those who engage in religious practice are spiritual. In Canada, the religiously affiliated make up about 65% of the population (Statistics Canada, 2022a) and the number of those who are unaffiliated went up six-fold between 1971 and 2011 (4% to 24%; Pew Research Center, 2013). Similar to changes in the composition of religious populations, spirituality (Singleton, 2017) and spirituality without religion (NRS; Lipka &

Gecewicz, 2017; Pew Research Center, 2013, 2014b) are becoming increasingly prevalent. In the United States, those who identify as both religious and spiritual (RS) dropped from 59% to 48% between 2012 and 2017, those who identify as spiritual but not religious (NRS) rose from 19% to 27% in the same time period (Lipka & Gecewicz, 2017). Similarly, in Canada, the "spiritually uncertain" (similar in concept to NRS) are the largest group, making up an estimated 46% of the population in 2022, an 8% increase from 2018 (Korzinski, 2022). In both Canada and the US, the NRNS (when considering NRS, RS, and RNS) have remained relatively stable (Korzinski, 2022; Lipka & Gecewicz, 2017). In other words, those who are neither religious nor spiritual are not shifting their beliefs or practices much, but the religious and spiritual appear to be shifting away from organized religion and towards individual spirituality.

Despite the differences between religion and spirituality, there are many conceptual overlaps that should be addressed. Lay definitions of religion often *include* religious beliefs (i.e., belief in God(s), afterlife, etc.); lay definitions of spirituality vary considerably, sometimes including concepts that are entirely unrelated to belief in an afterlife, higher powers, etc. (Cragun et al., 2015). These overlaps and variations in lay definitions are why it is important to have precise definitions in scholarly literature on spirituality and/or religion, as well as specificity of language in measurements. For sake of clarity, precision, and future replication, the present study is operating from the following conceptualizations of religion and spirituality. Religion is religious practice (i.e., church attendance, reading scripture); spirituality is beliefs (i.e., belief in higher power, afterlife) and behaviours (i.e., transcendental experiences, meditation, out of body experiences). These definitions were offered to participants to ensure consistency. Despite the overlap in lay definitions, research consistently identifies significant differences

between the religious and the spiritual (Koenig, 2012; McLaughlin et al., 2020; Piedmont et al., 2009; Speed & Fowler, 2017; Zhang et al., 2022).

In further support of the distinction between religion and spirituality, some researchers have suggested that spirituality may represent the sixth factor of personality (Piedmont, 1999). While some argue that personality traits are considered relatively stable over long periods of time (Conley, 1985), more recent research has indicated that there is room for change in personality traits when significant changes in lifespan-development occur (e.g., major changes in career, family, or community; Roberts et al., 2008; Roberts & Mroczek, 2008). If we look at spirituality as a trait that is relatively stable, but which may change because of a significant life development change (e.g., a change in religious practice), we can see how religious practice and spirituality can have some interplay. For example, one who takes up new religious practices may, as a result, become more spiritual as they explore their newfound religion's eschatological approach; one who leaves or stops practicing a religion, after a lifetime of practice, may have developed a level of spirituality that fluctuates, depending on their reason for leaving. Those who have left their religions often, but not always, maintain their spiritual beliefs or attitudes (McLaughlin et al., 2020). With this support for spirituality as a personality trait, it is important to understand the factors which influence spirituality.

One's spirituality may be influenced through various religious factors, such as parental religiosity (Bridges & Moore, 2002) or religious involvement (Piedmont, 2001), as well as nonreligious factors, such as childhood development (Walker et al., 2009) and efforts to understand life and its meaning (Piedmont, 2001). The aforementioned decline in engagement in religious practice would suggest two things: previous generations engaged in more religious practices than their offspring, those offspring did not continue

to engage in religious practices when they were older. This decline in religious practices might have laid the groundwork for an equally spiritual but less practicing generation, providing a possible explanation to the changing R/S distribution in the population. This redistribution within the population also highlights the importance of examining associations at different time periods in adolescence, something the present study addresses.

Religion and Deviance

Research considering religion's role in social control and reducing deviance is not new (Hirschi & Stark, 1969; Ross, 1896; Ross, 1994; Stark, 1996; Stark et al., 1982), and an abundance of research has linked religious identification to lower rates of deviant behaviours compared to those with no identified religion (Ellis, 2002; Kelly et al., 2015; Klanjšek et al., 2012; Regnerus, 2008; Sturgis & Baller, 2012). However, there have been many inconsistencies in results across the literature on religion and deviance. For example, some studies suggest religious attendance is associated with less drug use, some do not find this but find support for religious attendance being associated with less vandalism (Ellis, 2002; Hirschi & Stark, 1969; Kerley et al., 2011; McLaughlin et al., 2020; Pickering & Vazsonyi, 2010). Some of these inconsistencies in findings may be due to issues with measurement in the study of religion (such as religious attendance as a metric of religiosity), as highlighted by Hill and Hood in 1999. Different theories have been put forward as a means of explaining these differences but also have inconsistent support (Miller & Vuolo, 2018; Sturgis & Baller, 2012; Welch et al., 1991). The core of these theories often propose that religion decreases deviance in some manner.

Broadly speaking, religion is expected to reduce deviant behaviours because many religions frown upon and discourage deviant behaviours (Miller & Vuolo, 2018). Those who are more religious have been found to report using fewer illegal drugs (Amoateng & Bahr, 1986; Cochran & Akers, 1989; Ellis, 2002) and overall lower deviance (a composite of the aforementioned categories of deviance; Baier & Wright, 2001; Klanjšek et al., 2012; Regnerus, 2008). However, attempts to explain the mechanism by which religion predicts deviance has been chaotic. These approaches included: sampling different regions of the United States (Burkett & White, 1974; Stark et al., 1982); comparing different regions of the United States (Stark et al., 1982); exploring different types of deviance (Burkett & White, 1974); using larger samples with different analytical techniques (logistic regression, least-squares regression; Cochran, 1989; Cochran & Akers, 1989); and even one of the original authors revisiting the work in light of updated research (Stark, 1996). Despite these efforts, many of the theories concerning religion and deviance have had mixed support (Klanjšek et al., 2012; Pickering & Vazsonyi, 2010; Rocheleau, 2021; Stark, 1996; Sturgis & Baller, 2012).

Two of the prevailing theories attempting to explain the religion-deviance relationship focus on understanding why religion reduces some forms of deviance. Essentially, the theories to date attempt to explain the reduction in deviance associated with religion but not necessarily the increases that are sometimes seen (Ellis, 2002). The moral community hypothesis suggests that the more involved someone is in a moral community (such as a religious one), the less they will deviate from that group's norms as a result of social influences (Stark et al., 1982; Sturgis & Baller, 2012). By its very nature, this proposition suggests that the religion-deviance relationship has less to do with religion, *per se*, and more to do with the community it creates and the "do no harm"

nature of religious groups. Many other groups discourage deviance in a similar fashion: schools, places of work, society in general, etc. so involvement in religious practice itself, compared to similar communities of likeminded morals, is likely not unique. This idea is reflected in the research, which has found mixed support using large, nationally representative samples (Sturgis & Baller, 2012) and smaller, but still relatively large, samples of highly religious populations (Welch et al., 1991). The anti-asceticism hypothesis argues that religion discourages *mala prohibita* (behaviours that are prohibited by law but not necessarily morally wrong, e.g., drug use) but does not discourage *mala in se* (behaviours that are morally wrong, e.g., murder, assault, theft; Miller & Vuolo, 2018). Essentially, the anti-asceticism hypothesis argues that religion reduces minor deviant behaviours but has no impact on major deviant behaviours because those are considered universally wrong (Sturgis & Baller, 2012).

As defined by Miller and Vuolo in 2018: "…religiosity may act as an informal social bond that discourages certain offenses, and a lack of this social bond may increase an individual's likelihood of engaging in such *mala prohibita* offenses," (p.3). This theory, too, is only partially supported when using nationally representative samples (Miller & Vuolo, 2018; Sturgis & Baller, 2012). It remains unclear which elements of religion, its practices, and spirituality are linked to which elements of deviance, or whether they are associated at all.

While logically sound, the fluctuating support for these theories may be a result of the operationalization of religion in the current literature. As discussed, research on religion in the social sciences has wrestled with methods of measurement (Hill & Hood, 1999). The field of religion and deviance has not been immune to this challenge. Miller and Vuolo (2018) aptly point out "… this line of work is not as explicit about the

operationalization of religiosity." (p. 19). Often, the measures of religion in this field look at attendance (Hirschi & Stark, 1969; Miller & Vuolo, 2018; Regnerus, 2008; Stark, 1996), religious identity, or self-reported religiousness (Cochran, 1989; Cochran & Akers, 1989; Ellis, 2002), or a combination thereof. While these measures may be adequate for some forms of empirical research, it could be argued that they do not capture the breadth of religion. For example, out of those who attend religious services weekly, only 61% report religion as being their source of guidance for right and wrong, which drops to 24% in those who attend once a month (Pew Research Center, 2014b). The methodology of past literature on this subject may point to the varying results that have been observed.

Meta-analyses of research exploring the connections between religion and deviance have attempted to consolidate findings, producing fairly consistent effect sizes of modest magnitude. Baier and Wright's (2001) reported mean effect size (r = -.12, SD = .09) was similar to the range reported by Kelly and colleagues in 2015 (r = -.16 to -.22), as well as Cheung and Yeung's (2011) reported average effect size (Z_r = -.17). However, the interpretability of these aggregate statistics is limited and possibly compounds the limitations of individual studies (Baier & Wright, 2001; Cheung & Yeung, 2011; Kelly et al., 2015). Kelly and colleagues (2015) collapsed measures of religiosity into one category but separated it from religious attendance (in other words, "religiosity" and "religious attendance" were treated as different predictors) and observed very similar negative associations between these variables and the deviance outcomes (alcohol use, delinquency, and drug use). Baier and Wright (2001) did not openly report or distinguish between religious measures in their meta-analyses, though they described what many looked like: belief in God, belief in the Devil, belief in supernatural sanctions, importance of religion, and how religious individuals considered themselves. Cheung and Yeung

(2011) separated research into measures of public religious practice (e.g., attendance at church) and private religious practice (e.g., spiritual experiences relating to a higher power), and noted stronger effect sizes between private religious practice and destructive behaviour in adolescents (similar conceptually to deviance) compared to public religious practice.

Meta-analyses of religion and deviance provide valuable information in terms of effect size, it seems that across religion, belief, attendance, and other measures, effects are fairly consistent. However, the combination of many measures, which may tap into similar constructs (religious practice may be associated with religious beliefs, but they may have different associations with other variables, such as deviance), may be problematic given the hundreds of measures of religion that are designed for many different purposes (Cragun et al., 2015; Hill & Hood, 1999). The idea that some measures of religion (such as simple attendance) may be tapping into other related constructs is not new (Hirschi & Stark, 1969; Ross, 1994) yet appears to be underexplored. The combination of measures of religion in meta-analyses neglects the question of *which* elements of religion are associated with deviance. It is worth exploring which factors of religion are more frequently or more strongly associated with deviance (e.g., practice compared to belief), similar to what Cheung and Yeung (2011) did but with less variation in measures.

Individual studies exploring religion and deviance have often used very different measures, such as frequency of attendance (Amoateng & Bahr, 1986), religious denomination (Ellis, 2002), belief in heaven, hell, or punishments by supernatural powers in “this world” (Harris, 2003), with differing strength of association with deviance. The many different measures of religion appear to be differentially associated with deviance

outcomes, despite Baier and Wright's (2001) suggestion that associations are not significantly different. For example, Amoateng and Bahr (1986) found that greater religious attendance was consistently associated with less marijuana use (illicit drug use for their sample) and that this differed across religious denominations. Ellis (2002) also found significant negative associations between self-rated religiosity (a scale of 0 – 100) and illicit drug use, though the associations were weak (r =< .13). Harris (2003) identified negative associations between "this-worldly supernatural sanctions" (higher powers punishing an individual in "this world") and deviance, which were different but similar in strength to the negative association between religious social bonding and deviance. Some research has suggested that there are no differences in academic misconduct have been identified across church attendance, gender, or academic achievement (Berry et al., 2006); whereas others have suggested belief in supernatural sanctions/afterlife punishment might be associated with less cheating (Shariff & Norenzayan, 2011). Ross (1994) found no valuable association between four types of religiosity (ritual/attendance; consequential/punishment; ideological/belief; and experiential/devotion) and deviance, concluding with a statement on the importance of distinguishing "unidimensional and multidimensional measures of religiosity in explaining deviance" (p. 80). The most consistent associations observed between the varying measures of religion and deviance are for drug and alcohol use (Amoateng & Bahr, 1986; Ellis, 2002) and theft (Ellis, 2002; Shariff & Rhemtulla, 2012). Similarly, differences between gender (Ellis, 2002; Harris, 2003), race, education, and age (Miller & Vuolo, 2018) have been noted previously in religion-deviance literature and should be treated as covariates.

Religion, Society, and Deviance

It is important to consider the structure of societal systems and their similarities to religious systems when handling deviant behaviours. There are many organizations and governmental bodies, such as police and judicial systems, that exist solely to reduce, prevent, or discourage deviant behaviours. These explicit systems have the manifest function of reducing these behaviours; other systems may have the latent function of reducing deviance, such as engagement in sports (Hastad et al., 1984) or participation in religious practice (whether religion has the latent or manifest function of reducing deviance is debated; Burkett & White, 1974; Cochran, 1989; Cretacci, 2003). Organized religion and their respective orthodoxies/sacred texts provide a framework that discourages deviance (Miller & Vuolo, 2018). In Christianity: "Do not commit adultery, do not kill, do not steal, do not bear false witness, defraud not, honour thy father and mother." (King James Bible, 2022, Mark 10:19); in the Quran: "… whoever takes a life … it will be as if they killed all of humanity." (Quran 5:32, the Clear Quran); and the Buddhist, Sikh, Hindu, and Jain concept of Ahimsa, which discourages harming others in any way (Subramuniyaswami, 2007). With the approach the current study is taking on religion (that religious practices are separate from spirituality) it could be argued the practice and attachment to these kinds of ideals are not significantly different than many legal systems.

Many modern legal systems have been developed based on religious values. Some legal systems remain closely aligned with religious values (Zartner, 2014) and others have strayed into more secular approaches but have remnants of religious values (University of Toronto, 2020). As a result, many legal systems discourage deviant behaviours that are equally discouraged by religions (e.g., murder, theft, assault, etc.). As

with every group, there are people within these societies who adhere to the laws and statutes and a minority who do not; just as there are people within religions who adhere to the scripture and a minority who do not. These two groups (those who are religious and those who are members of a society with laws), then, when other factors such as supernatural elements are left out, are quite similar and should not show differences in deviant behaviours. This idea is similar in concept the Burkett and White's (1974) research:

> The fact that Christian adolescents are no less likely than anyone else to engage in delinquent acts may mean that Christians are failing to live up to the implications of biblical morality, but on the other hand it could mean that their faith is a fairly effective influence, but that secular influences are equally effective in keeping many non-Christians from becoming delinquents. In other words, going to church and believing in God may help prevent delinquency, but so may participation in school athletics or Junior Achievement. (pp. 455-456).

Similar to the societal systems that punish wrongdoing, such as the judicial system, religions often have punishments embedded in their scripture (King James Bible, 2022, Isaiah 13:11; Quran, 18:87, the Clear Quran). This punishment is similar in concept – perhaps not severity – to the Canadian judicial system. Follow the rules and you enjoy freedom/heaven/paradise, break them and you may face punishments. What is more unique about this element, though, is that supernatural punishment is considered by some researchers to be a quality of spirituality and not religious practice (Cragun et al., 2015). This position, and other elements of spirituality, appear to be what contribute to the previously measured differences in religion-deviance. When comparing and contrasting

the qualities of these two groups (religion/religiously practicing and secular society), the unique differences arise in the punishment and beliefs (spirituality) rather than the practice and adherence.

Spirituality and Deviance

Research on deviance and the various components of spirituality has often found negative associations. For example, Harris (2003) found that belief in this-worldly supernatural sanctions (the belief that supernatural powers may sanction behaviours while an individual is still in "this world," as opposed to a supernatural realm of punishment) were associated with lower risk of deviance in adolescents. Ross (1994) found similar effects but for belief in afterlife supernatural sanctions. Shariff and Rhemtulla (2012) suggested that a nation's belief in heaven, hell, and belief in God were associated with changes in national crime rates across 67 countries from the 1980s through 2007 (belief in heaven/repentance associated with greater deviance; belief in hell/punishment associated with lesser deviance). A recent study on religious "dones,"—those who have separated from their previous religion—found that those who still hold spiritual beliefs engaged in less deviant behaviours than those who held none (McLaughlin et al., 2020). Piedmont (2001) found that each of the aforementioned elements of spirituality (connectedness, universality, prayer fulfilment) were all significantly associated with prosocial behaviours (r=.13, .18, .19, respectively). Prosocial behaviours are not the same as a lack of deviance but are often associated with less deviant or delinquent behaviours (Carlo et al., 2014). The current literature on spirituality, or components thereof, seems to support its association with lesser deviance.

Afterlife and Supernatural Monitoring

There are many environmental factors that may predict deviance, such as whether someone is watching, what repercussions exist, and who it may affect (Bateson et al., 2013; Cañigueral & Hamilton, 2019; Jetten & Hornsey, 2013). When people feel like they are being watched, they are less likely to engage in deviant behaviours, or more likely to engage in prosocial behaviours (Cañigueral & Hamilton, 2019; Bateson et al., 2013). This observed change in behaviour when participants feel they are being monitored has been given varying names: the watching eyes effect (Bateson et al., 2013), the silent observer effect (Allen, 1970), and the audience effect (Cañigueral & Hamilton, 2019) to name a few. Each of these effects have subtle differences (eyes watching participants, being primed with a silent observer in the room, or being watched by many) but yield similar results: a change, often an increase, in prosocial behaviours, or a decrease in deviant behaviours. Much of this research primes participants with a silent observer in the room, someone watching through a camera, or visualizations of eyes watching. Those who have beliefs in higher powers which monitor them may be primed throughout their everyday lives, influencing their behaviours at all times.

Those who are spiritual (NRS or RS) often believe in some form of afterlife, afterlife punishment (Cragun et al., 2015; Pew Research Center, 2014b), or deities who are watching (DeBono et al., 2016), which may predict the deviant behaviours of those who are highly spiritual. This understanding has, historically, been reflected in the literature. Hirschi and Stark's (1969) study on religion, spirituality and deviance found little to no relationship in church attendance and deviance but indicated that those who believe in supernatural sanctions may commit fewer deviant acts (p. 211). It has been

theorized that supernatural monitoring will "… activate cognitive architecture associated with reputation management…" (Atkinson & Bourrat, 2011, p.42). When someone feels they are being watched, they are less likely to engage in deviant behaviours (Jetten & Hornsey, 2013); if someone feels that they are always being watched *all the time*, it seems fair to reason that they would always be less likely to engage in deviance. Being watched by supernatural beings reducing deviance is reflected in the literature. When participants are primed with a "ghost in the lab," they are much less likely to cheat (Bering et al., 2005). In another experiment, which primed participants with a punishing god, participants were less likely to engage in deviant behaviours (compared to a forgiving god; DeBono et al., 2016). This finding may indicate that a specific nature of god (such as the specific nature of god that religion provides) may influence deviance differently than a nonspecific nature of god. Other research has found that greater belief in supernatural monitoring and supernatural punishment is associated with significantly less approval for deviant behaviours across 87 countries with religious practice held constant (Atkinson & Bourrat, 2011). There is a body of research exploring changes in human behaviours when being watched by other humans (Allen, 1970; Bateson et al., 2013; Cañigueral & Hamilton, 2019) and an even smaller field exploring supernatural-like observers (Atkinson & Bourrat, 2011; Bering et al., 2005; DeBono et al., 2016). Much of this research has yet to explore the joint and unique roles of religion and spirituality/beliefs in these effects. The theory that supernatural oversight and punishment may influence the engagement in deviant behaviours is well supported but underexplored in literature concerning spirituality. Spirituality, similar to religious practices, requires thorough measurement because of its challenging and varying conceptualization.

Connectedness, Universality, Prayer Fulfilment

The Spiritual Transcendence Scale (Piedmont, 2001) may serve as a good starting point for evaluating the associations and interplay between religion, spirituality, and deviance, while being mindful of the different ways of breaking down spirituality. Piedmont's (2001) ideas of *connectedness* (that an individual is a part of those before (ancestors) and after (successors) oneself), *universality* (that all life is united or one), and *prayer fulfilment* (positive feelings arising from spiritual experiences, such as meditation, prayer, or transcendence) have their own unique connections to prosocial behaviours (often associated with less deviant behaviours; Carlo et al., 2014). The correlations between prosociality and *connectedness* (r = .13), *prayer fulfilment* (r = .19), and *universality* (r = .18) become even stronger when these spiritual facets are grouped into a composite (r = .21; Piedmont, 2001). Self-transcendence (similar to prayer fulfilment) and dispositional awe (a feeling of awe that decreases self-salience and increases connectedness to others; conceptually similar to connectedness and universality) are associated with more prosocial tendencies (r = .36; r = .37, respectively; Rongmao et al., 2020). "Elevation" (another awe-like state, smaller in nature; conceptually similar to universality) is also associated with greater prosocial tendencies (r = .33; Landis et al., 2009). While greater prosocial behaviours (behaviours which benefit others) do not imply that one cannot also engage in deviant behaviours, research suggests that greater prosociality is associated with fewer deviant behaviours and may protect against deviance (Carlo et al., 2014).

It is not farfetched to reason that someone who is highly spiritual, who has strong belief in supernatural (deities may be watching; DeBono et al., 2016), supernatural sanctions (repercussions; Harris, 2003; Shariff & Rhemtulla, 2012), and an

interconnectedness amongst living beings (actions may affect others, karma; Tsang & Lowe, 2019), may be less likely to engage in deviant actions than the nonspiritual. There appears to be a strong foundation of research, both in theory and in the data, on spirituality and its role in deviance. However, it should still be noted that spirituality will not, as Piedmont (2001) puts it, "… provide final answers to our questions about the human psyche … rather … it is one of many potentially relevant and useful variables in the search for better theories and interventions," (p. 11). Given these connections, it is worth exploring the relationships between religion, spirituality, and deviant behaviours.

Spirituality, Religion, and Deviance

The earlier discussed theories of deviance (deterrence theory, rational choice theory, and social bond theory) share overlap with both religious practices and spiritual beliefs. Deterrence theory's argument that severity and likelihood of punishment are what deter deviant behaviours are better encompassed by spirituality than religion, using the current definitions (that spirituality is belief and religion is practice or association). Rational choice theory, too, is more aligned with spirituality than religion, where this belief in an all-knowing and punishing higher power will deter deviant behaviours more than attending church. Social bond theory, though, is seemingly split amongst the two. The *attachment*, *commitment*, *involvement*, and *belief* bonds may all be associated with specific religious practices and beliefs; however, in terms of spirituality, *attachment* to higher powers, *belief* in a higher moral code or high power's authority, as well as *commitment* and *involvement* in one's own spiritual beliefs may, too, be deterrents of deviant behaviours. In terms of theory, it seems that spirituality (which can be present in

both religious and nonreligious populations) may be the mitigating factor of deviance, or that it may play a larger role than religious practice alone.

Spirituality and deviance also change significantly throughout adolescence, which should be given consideration. Research on religion and deviance often focuses on youth (Burkett & White, 1974; Ellis, 2002; Hirschi & Stark, 1969; Stark, 1996) or adults (Kerley et al., 2011; Tsang & Lowe, 2019) but rarely looks at the changes from youth through early adulthood. R/S changes dramatically across development, which might play a role in the varying results in previous literature (Bridges & Moore, 2002; Bryant et al., 2003; Walker et al., 2009). There are many factors that influence a change in R/S across development and into adulthood: childhood abuse has been linked to either decline or decline and growth in R/S (Walker et al., 2009); parental beliefs about R/S significantly influence the beliefs of their offspring (Braswell et al., 2012); teenagers and young adults are becoming less religious and more spiritual over the last century (Singleton, 2017); first-year post-secondary students often see a decrease in religious practice and an increase in spiritual integration (Bryant et al., 2003); and North America as a whole is becoming less religious and more spiritual (Pew Research Center, 2013, 2014b; Statistics Canada, 2021; Wilkins-Laflamme, 2022). While much research has explored changes in R/S across development (Singleton, 2017; Walker et al., 2009), to our knowledge, no one has explored the changes in R/S' link between different forms of deviance across development. Miller and Vuolo (2018) explored this to some extent but used a limiting measure of deviance (marijuana use), data that is 20-30 years old, and treated belief/spirituality as belief in religion (excluding the nonreligious and spiritual). In other words, the way R/S is associated with deviance has been explored in adolescents and in

adults, but not in a single study comparing the changes of both R/S and multiple types of deviance at these two different points in life. Given the inconsistency in results in the religion-deviance literature, it is worth also considering how changing R/S may play a role in deviance.

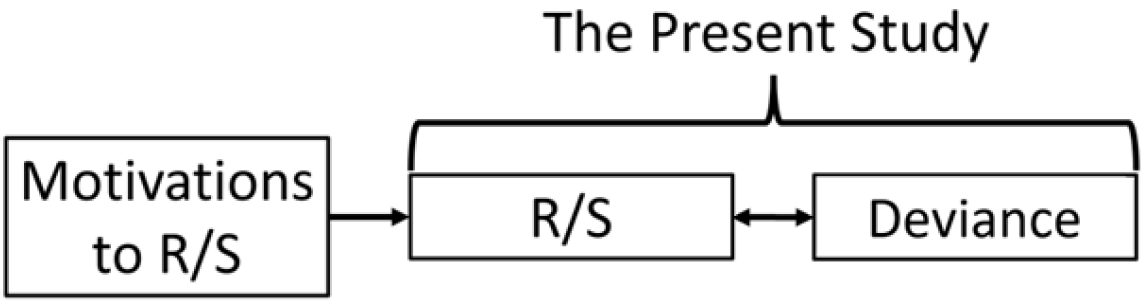
Religion and Spirituality Motives and Deviance

The motivations to participate in religious practices or start exploring spiritual beliefs may come hand in hand with a shift in deviant behaviours. Those that go through a shift between R/S (sometimes referred to as spiritual or religious transformations) often exhibit changes in personality traits and behaviours, often an increase in prosocial behaviours (Paloutzian, 2005). Those who seek out religion (Reiss, 2000), explore newfound spirituality (Davis et al., 2020), or make a shift between R/S categorizations (Davis et al., 2020; McLaughlin et al., 2020) are motivated to do so for a wide variety of reasons: psychedelic drug use (Davis et al., 2020), incarceration (O'Connor & Perreyclear, 2002), a lower desire for independence or vengeance, and high desires for honour and family (Reiss, 2000), are just a few examples. These motivations share some overlap with the engagement and disengagement in deviance behaviours. Psychedelic drug use, which is illegal in many countries, is a deviant behaviour as described by the present study but also strongly influential towards spiritual beliefs (even in atheists; Davis et al., 2020); incarceration is the result of deviant behaviour but may motivate individuals to seek out R/S (O'Connor & Perreyclear, 2002); and, as mentioned, those that go through a spiritual or religious transformation often exhibit changes in personality traits and behaviours, often reflected by an increase in prosocial behaviours (Paloutzian, 2005). While these motivations to R/S, and their respective contributions to deviance behaviours

(or lack thereof), are worthy of scientific enquiry, they are beyond the scope of the present study. The present study is concerned with the connections between R/S and deviance once R/S has been established (See Figure 2), which is further detailed in the following section.

Figure 2

The Scope of the Present Study in the Context of R/S Motivations



Qualitative Research

While the majority of literature concerning R/S and deviance has been quantitative, few have explored it from a qualitative perspective (Giordano et al., 2008; McLaughlin et al., 2020).

McLaughlin and colleagues (2020) explored different outcomes for those who had left religion ("religious dones"), which included drug use, but the express intent was not to explore deviance, and little was discussed with regards to drug use. Giordano and colleagues (2008) explored what role religion and spirituality played in desistance from crime across the lifespan, collecting data at different time points in offender's lives, starting at adolescence. While Giordano and colleagues (2008) provide an interesting approach, their definition of spirituality was Judaeo-Christian centered (e.g., "How close do you feel to God most of the time?", p. 10) and only applicable to those who are religious (e.g., "How often do you attend church services?", p. 10). Many of the theories

developed are generated out of the quantitative data and no one has yet asked individuals how they feel their religion and spirituality has influenced, altered, informed, prevented, or changed their engagement in deviant behaviours with the present definitions.

The use of qualitative methods is important for several reasons, many of which have been discussed up to this point. Religion and spirituality have significant variations in their definitions and usages both in the literature (Hill & Hood, 1999) and in layman's usages (Cragun et al., 2015). The connections between R/S, with its varying definitions, can vary both because of differences in the researcher's understanding of the terms *and* the participants' understanding. Including qualitative methods, such as asking participants to describe their R/S and its respective connections to their behaviours, can help establish a clearer link. In other words, if participants can describe their R/S and how it is associated with their behaviours, or lack thereof, this can generate valuable themes and theories that are not as constrained by measurement constructs, operationalization, or definitions compared to quantitative methods. In other research and research reviews concerning qualitative R/S literature, both the importance of these methods (Boston et al., 2001) and the high prevalence of qualitative articles (Flannelly et al., 2004) have been noted. It is, therefore, important to generate an understanding from the participants' perspectives on: (1) the meaning and understanding of religion and spirituality and (2) the perceived influence R/S has on the participant's deviant behaviours.

The Current Study

Religion, its scripture, and community discourage deviance in a similar fashion as society does with its laws and community; in other words, religion has a set of rules and associated punishments that parallel modern legal systems. These similarities raise questions about what elements of religion are associated with the sometimes-observed

differences in deviant behaviours when compared to the nonreligious. Previous research on the subject has broadly compared the nonreligious (NRS and NRNS) to the religious (RS, RNS). When grouped together, in this way (by religious/not religious), there are significant differences in spirituality. For example, Reker (2003) published data on the Spiritual Transcendence Scale that included self-categorization of spirituality and religion (i.e., Are you religious? Are you spiritual?). The mean spirituality scores were: NRNS, 75; RNS, 102; NRS, 121; and RS, 127 (Reker, 2003). The two religious groups (RS and RNS; M = 121.8) have a noticeably greater spirituality score than the nonreligious groups (NRS, NRNS; M = 99.5) when their means are combined. This highlights the issues of using religion as a predictor haphazardly and the need to consider spirituality in these contexts.

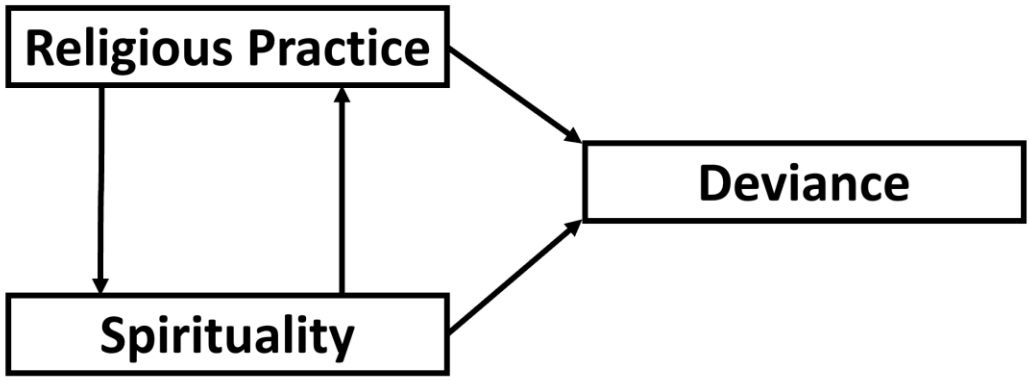
Spirituality has been associated with differences in deviance (DeBono et al., 2016; Harris, 2003; Schroeder & Frana, 2009; Shariff & Rhemtulla, 2012). As discussed, spirituality is something that is encouraged through religious practices but also exists independent of it – similar to exercise promoting health but health existing independent of it. As displayed in the data, those who are religious (whether they identify as spiritual or not) have a greater spirituality than those who are not religious (also irrespective of spirituality; Reker, 2003). Other research has also identified similarities in outcome variables between the NRS and RS (Zhang et al., 2022). Some researchers have suggested that there are no differences in academic misconduct across church attendance, gender, or academic achievement (Berry et al., 2006); whereas others have suggested belief in supernatural sanctions/afterlife punishment might be associated with less cheating (Shariff & Norenzayan, 2011). Given spirituality's association with greater prosocial behaviour (Landis et al., 2009; Piedmont, 2001; Rongmao et al., 2020) and fewer deviant

behaviours (Atkinson & Bourrat, 2011; DeBono et al., 2016; McLaughlin et al., 2020; Shariff & Rhemtulla, 2012), as well as its greater prevalence in those identifying as religious (Reker, 2003), it is worth exploring whether the previously observed religion-deviance relationship is accounted for by spirituality, and whether they interact.

The directionality of these relationships should also be considered. R and S may have some reciprocity as presently defined (frequent religious practice might foster spiritual belief; spiritual belief might encourage seeking out structured practice, such as religion; see Figure 3 for illustration). This reciprocity violates the assumption of unidirectionality in statistical mediation (Frazier et al., 2004; Wu & Zumbo, 2008). Statistical mediation was not used because a unidirectional relationship must exist between a predictor and mediator (Frazier et al., 2004; Wu & Zumbo, 2008) and the relationship between religion and spirituality is reciprocal (Pargament, 1999; Pargament et al., 2013; Zinnbauer et al., 1997). Despite this, R/S is expected to be predictive of deviant behaviours because of their respective influences on an individual's thought processes (afterlife punishment, higher powers monitoring them, etc.; Atkinson & Bourrat, 2011; Debono et al., 2016; Harris, 2003; Ross, 1994) and the social involvement of religious practices (attending church, practicing religion, etc.; Miller & Vuolo, 2018; Stark et al., 1982; Sturgis & Baller, 2012). While factors influencing R/S may be of interest in further research, the present study is primarily interested in how R/S predicts deviance regardless of the motivations to R/S.

Figure 3

The Reciprocity of R/S and Their Relationships to Deviant Behaviours



To develop a greater understanding of the connections between religion, spirituality, and deviance, the present study employed different methods of data collection and analysis. Participants, an undergraduate sample, completed both quantitative and qualitative measures of R/S and deviance, as well as responded to some of these measures retrospectively to compare potential differences across childhood and young adulthood. The present study aimed to address the following research questions and operationalize those questions into testable hypotheses:

RQ1: How are religion and spirituality associated with deviance, when separated into binary categories (RS, NRS, RNS, NRNS)?

RQ2: Does the religion-deviance association differ from the spiritual-deviance association?

RQ3: How does the prevalence and relationships between R/S and deviance change between childhood and young adulthood?

RQ4: How do participants believe their individual spirituality and religious practice has influenced their deviant behaviours in their lifetime?

RQ5: How do participants define their religion and spirituality?

H1: Non-spiritual groups (NRNS and RNS) will have higher self-reported scores of deviance, on average, than spiritual groups (NRS, RS).
H2: Non-religious groups (NRS and NRNS) will have higher self-reported scores of deviance, on average, than religious groups (RS, RNS).
H3a: Greater frequency of religious practices will predict lower scores of deviance after controlling for known demographic predictors of deviance (gender, socioeconomic status [SES], area of upbringing, parents' educations).
H3b: Frequency of religious practices will have a weakened relationship with deviance when a spirituality scale is added to the model.

Prior to addressing the main research questions and hypotheses of the study, preliminary analyses were conducted to provide convergent validity across the dichotomous and continuous measures of R and S. It was expected that (1) those who categorize themselves as religious will score higher on the STS than those who categorize themselves and non-religious and (2) those who categorize themselves as non-spiritual will score lower on the STS than those who categorize themselves as spiritual.

Methods

Participants and Procedure

The current study recruited undergraduate students from Trent University, in Peterborough, Ontario, Canada. Participants were recruited via an online recruiting platform for undergraduate students (SONA), poster, and email. Data collection occurred online via secure Qualtrics survey platform, to ensure anonymity. Multiple checks for honest and accurate responding served as post-collection exclusionary criteria and are detailed in the following section. Prior to participating, students were provided an overview of the study and a consent form. Students who agreed to participate were eligible to receive a bonus mark in participating classes. If a student withdrew, they were

still eligible for the bonus credit. The current study received approval from the Trent University Research Ethics Board (REB file number: 28158).

A-priori power analyses were calculated based on the median of previously reported effect sizes of religion and deviance research from a 2001 meta-analysis (Baier & Wright, 2001). Two-thirds of previously reported effect sizes ranged from r = -.05 to r = -.20 (Baier & Wright, 2001), the midpoint (r = -.125) was used. G*Power 3.1, a free software used for calculating sample size for desired power (Faul et al., 2009), indicated a minimum of 704 participants for a power of .80, with α = .05. To account for unusable data, and to improve power, the study recruited 743 participants.

Demographics

Basic demographics were collected from participants, as well as more specific demographics that are associated with criminality and deviance, to control for variation associated with these characteristics. Participants were asked for their gender, age, sexual orientation, race, parental socioeconomic status (participants were asked "What is your estimated annual household income of your family of origin?" and given income brackets), level of education, parental level of education, household income, and type of area where they grew up (sub/urban/metropolitan). Responses to these questions were optional and included an "I don't know" option.

The final sample (N = 653 after data cleaning) was primarily female (n = 529; 81.0%), not visible minorities (n = 482; 73.8%), nonreligious (n = 462; 70.8%), spiritual (n = 419; 64.2%), were 18 – 19 years old (n = 448, 68.6%; sample mean age = 20.23, SD = 4.95), had post-secondary educated parents (n = 450; 68.9%), had some college or university education (n = 487, 74.6%), and had a home population of 2500 to 100 000 (n = 326, 50%). Roughly the same number of participants reported an annual home income

of $50 000 - $100 000 (*n* = 230, 35.5%) and >$100 000 (*n* = 225, 34.5%; 70% total). About 10% (*n* = 65) of the sample reported engaging in religious practices once a week or more, a bit lower than Canada's 16% (Statistics Canada, 2021).

Measures

Honesty and Attention Checks

To encourage honest responding, an honesty primer and reflection were included. At the beginning of the survey, participants were presented with the following paragraph explaining the importance of honesty in research:

> We rely on participants to read the following questionnaire questions carefully and answer to the best of their ability. Put another way, the results of this study are only as good as the responses we receive from participants. We understand that it is sometimes difficult to give questionnaires complete attention throughout and to answer questions carefully and honestly. You can help us maximize the quality of our data and our results by responding honestly to the following questionnaire questions. Skipping a question is preferred to entering incorrect data. Thank you.

Participants were presented with two response options below the paragraph: *agree* or *disagree*. Those who chose *disagree* were removed from final analyses. At the end of the survey, a reflection on honesty was also included. Participants were asked "It is crucial to the integrity of research that recorded responses are honest. How do you feel about the data you have provided?" with the following possible responses: *I was honest, I was honest but do not use my data*, and *I was not completely honest*. Those who chose anything other than *I was honest* were removed from final analyses. Several attention check questions were included throughout the survey to ensure participants were reading

questions, all of which simply asked them to select a specific response (e.g., “Please select ‘Strongly Disagree’”). Those who failed more than one attention check were removed from final analyses. A set of honesty priming questions were also included, adapted from Vésteinsdóttir and colleagues (2019), which were not used in analyses, but rather to prime more honest responding.

Normative Deviance Scale (NDS)

The Normative Deviance Scale (Vazsonyi et al., 2001) is a well-established measure of deviant behaviours, consisting of 53 items and 8 outcomes (see Table 1 for Cronbach’s alphas): *vandalism* (4 items, example: “Have you ever intentionally damaged or destroyed property belonging to a school, college, or university?”), *alcohol* (4 items, “Have you ever lied about your age to buy alcohol before you turned 21?”), *drug use* (5 items, “Have you ever used ‘hard’ drugs such as crack, cocaine, or heroin?”), *school misconduct* (8 items, “Have you ever cheated on school/college/university tests?”), *general deviance* (16 items, “Have you ever been on someone else’s property when you knew you were not supposed to be there?”), *theft* (4 items, “Have you ever bought, sold, or held stolen good or tried to do any of these things?”), *assault* (7 items, “Have you ever hit or threatened to hit a person?”), and *total deviance*, a combination of all subscales (Vazsonyi et al., 2001, pp. 122-124).

Some minor changes were made to wording in this scale to ensure accuracy, honesty, and relevance. Legal drinking age in Canada is 19, however some students may be from other countries, so questions regarding legal age boundaries were adjusted accordingly. Survey items on the original scale are preceded with “*Have you ever…*” which may lead to less honest responding according to past research (Yan & Cantor,

2019). The text preceding items was changed, according to recommendations made by Yan and Cantor (2019), to use a forgiving tone ("*Almost everyone has probably committed vandalism at one time or another,*") and presupposing behaviours (i.e., "*how many times have you…"* as opposed to "*have you ever…*"; Yan & Cantor, 2019, p.495). In addition to these changes, a new section was added on *cyber deviance* (6 items). Questions in this subscale include: "*How many times have you knowingly used, made, or gave to another person 'pirated' media?*' and "*How many times have you engaged in cyberbullying?*" and were adapted from Lee (2018). This section was added because of its relevance to the sample and the aforementioned recent increases in cybercrime.

Possible responses to the NDS items range from "*no/never*" to "*10 or more* times," with 5 categories total, higher scores represent more engagement in deviant behaviours. Scores were averaged for each subscale. This scale was repeated for both childhood ("around the age of 10") and present day ("in the last 5 years"). This scale was chosen because of its ability to break down different types of deviance, some of which are more common in youth, for individual analysis and post-hoc tests. The present study observed much poorer reliability on the subscales than in Vazsonyi et al.'s (2001) study (a comparison is presented in Table 1), though the composite measure retained a high α of .89 and .91 for present day and childhood, respectively.

Table 1
Cronbach's Alphas for the NDS, Compared to Previous Research

		Present Study	
NDS Scale	**Vazsonyi et al. (2001)**	**Current**	**Childhood**
Vandalism	.84	.70	.71
Alcohol	.89	.67	.81
Drug Use	.89	.67	.67
School Misconduct	.76	.70	.72
General Deviance	.81	.66	.74
Theft	.83	.62	.63
Assault	.76	.47	.46
Total Deviance	.95	.89	.91
Cyber Deviance	n/a	.72	.67

Are You Religious/Are You Spiritual Scale

The Are You Spiritual/Are You Religious scale (AYS/AYR; Reker, 2003) is a simple yes/no/not sure scale that asks participants two questions: whether they are religious ("*Do you consider yourself to be a religious person (e.g., devoted to a specific religion, practice a religion, or hold specific religious beliefs)?"*) and whether they are spiritual ("*Do you consider yourself to be a spiritual person (e.g., believe in the supernatural, life after death, karma, or higher planes of consciousness)?*"). Four other 5-point Likert-scale questions (two for religion, two for spirituality) concern level of importance ("*How important is [religion/spirituality] to you?*") and frequency of engagement ("*How often do you engage in [religious/spiritual] practices?*"); however, these four additional questions were excluded because of their redundancy with other measures used in the present study. Using a simple measure of religion and spirituality (in conjunction with other measures) is common in R/S literature, with formatting very similar to this measure (Lipka & Gecewicz, 2017; Pew Research Center, 2013, 2014b; Reker, 2003; Zhang et al., 2022). Participants were presented the AYS/AYR scale twice:

once for present-day, and once for "around the age of 10." This scale was chosen because using more in-depth measures of retrospective spirituality and religiosity may be problematic. The AYR/AYS was simplified by reducing to a binary question ("not sure" is treated the same as "no") for the current study because of concerns with retrospective response accuracy for childhood R/S. More in-depth measures of R/S have also been included and this measure served as a binary format of R/S. This binary variable is useful in categorizing R/S groups because it is conceptually difficult to determine a point of non-spirituality or non-religion on continuous measures. This binary + continuous method was also employed by the original author (Reker, 2003) when evaluating the contrasted group validity, by reducing the measure down to the aforementioned questions and coding "*not sure*" as "*no*." The four groups (religious and spiritual [RS], not religious but spiritual [NRS], religious but not spiritual [RNS], not religious or spiritual [NRNS]) showed statistically significant differences in the original work in spirituality, with those rating themselves as "S" scoring higher in spirituality, regardless of "R" (Reker, 2003).

Spiritual Transcendence Scale (STS-24)

The Spiritual Transcendence Scale-24 (STS-24) is a well validated and highly regarded measure of spirituality (Kapuscinski & Masters, 2010; Piedmont, 1999, 2001). The STS-24 consists of three subscales: *universality* (6 items, "*All life is interconnected*."), *connectedness* (9 items, "*I still have strong emotional ties with someone who has died."*), and *prayer fulfilment* (9 items, "*The desires of my body do not keep me from my prayers or meditations*."; Piedmont, 1999). A composite score, *total spirituality*, consists of all items, though Cronbach's alpha was not reported for this metric in the original research (present study a = .94). The reliability of the STS-24 subscales was greater than the original research and a comparison table is presented

below (Table 2). Participants respond to each item on a 7-point Likert scale (strongly disagree to strongly agree) and these values are averaged across subscales, with higher scores representing greater spirituality. This scale provides a more in-depth look at spirituality than the AYS scale. The STS-24 displays strong cross-cultural validity (Kapuscinski & Master, 2010), internal consistency, face validity, and factorial independence (Piedmont, 1999, 2001). Participants were only presented with this scale for measuring present-day spirituality because retrospective responding has not been evaluated and recalling beliefs when one was a child may be inaccurate.

Table 2

Cronbach's Alphas for STS-24, Compared to Previous Research

STS-24 Scale	Piedmont (1999)	Current
Connectedness	.64	.71
Universality	.83	.92
Prayer Fulfilment	.87	.92
Total	*	.94

Note. *Piedmont (1999) did not calculate a Cronbach's Alpha for the STS-24 composite.

Religious Practices

A measure of religious practices was adapted from Pew Research Center's (2014a) Religious Landscape Study questionnaire. For both childhood (around the age of 10) and present day, participants were asked eight universal questions (not Judeo-Christian centered) about religious practices. This includes questions such as "*How often do you visit a house of worship (e.g., synagogue, church, temple, mosque, etc.)?*" and "*How often do you read scripture outside of religious services?*" Responses range from "*never*" to "*more than once a week,*" with 6 responses total. Responses are averaged to create a composite, with higher scores indicating more frequent religious practice. This

scale was repeated for childhood ("around the age of 10") and present day ("currently"). There are no explicit psychometrics for this scale (present study observed a = .92). Pew Research Center is a well-known public polling agency that collects data on various subjects, including religion and spirituality (Pew Research Center, 2022). Pew has developed a very thorough, nonpartisan survey to cover many attitudes and beliefs without being Judeo-Christian focused in wording, which is why this measure was chosen.

Qualitative Questions

Several qualitative questions were developed for the purpose of this study to improve the richness of data. In addition to the quantitative R/S variables, three questions were presented to the participants based on their responses. The first question (Q1) asked participants "*Why did you choose* [religious/not religious] *and* [spiritual/not spiritual]*? Please refer to your own understanding of "religious" and "spiritual" as much as possible.*" The square brackets indicate portions of the question that were changed based on responses to the AYR/AYS scale. The second set of questions (Q2), also dependent on responses, were: "*How would you describe changes in* [religiosity/spirituality] *between childhood and the present?"* or "*How have you explored or developed your* [religiosity/spirituality] *between childhood and the present?"* The question presented depended on the participant's response to the AYR/AYS in childhood and their response to the AYR/AYS in adulthood. For example, if a participant was religious and spiritual (RS) in childhood but NRS in adulthood, they were asked: (1) "*How would you describe changes in your religiosity or religious practices between childhood and the present?*" and (2) "*How have you explored or developed your spirituality between childhood and the present?*" The third question (Q3) was presented to all participants: "*Thinking back to*

the questions about deviant behaviours, do you feel your experiences with spirituality and/or religion have influenced whether or not you've engaged in these behaviours? If so, how?" The goal of the final question is to understand what role individuals believe religion and spirituality have played in their deviant behaviours, if at all. Very few studies have taken this approach in this area of research, and those that have – conflated religion and spirituality (Giordano et al., 2008).

Planned Analyses

The following section details the planned analyses for addressing research questions and hypotheses. Before these analyses were run, descriptive statistics and simple bivariate correlations were run to evaluate the prevalence and relationships between variables; multivariate and univariate assumptions of normality were also assessed. In case of significant violations of normality, the planned parametric tests were either substituted or supplemented (for the more complex factorial analyses of variance) with non-parametric equivalents.

Convergent Validity of R and S Measures

Preliminary analyses were conducted to provide convergent validity across the dichotomous and continuous measures of R and S. These were tested through 2 (R vs. NR) x 2 (S vs. NS) factorial ANOVAs, comparing the four R/S groups on Religious Practice scale scores for present day, and then on total STS-24 scores and STS-24 subscales for present day. Those who were religious were expected to score significantly higher on the Religious Practice scale than the non-religious; those who were spiritual were expected to score significantly higher on the STS-24 than the non-spiritual.

R/S Group Differences in Deviance (H1, H2, and RQ1)

A 2 (R vs. NR) x 2 (S vs. NS) factorial MANOVA was used to explore the independent and interactive effects of R and S self-categorizations on the eight NDS subscales. Self-categorization of present-day R and S were entered as predictors of all NDS outcomes "in the past 5 years" (*Vandalism*, *Alcohol*, *Drug Use*, *School Misconduct*, *General Deviance*, *Theft*, *Assault*, *Cyber Deviance*). Post hoc ANOVAs and t-tests using Bonferroni correction were run to explore between group differences for significant effects. Non-S groups (NRNS and RNS) were expected to have significantly higher deviance, on average, than S groups (NRS, RS; H1). Non-R groups (NRS and NRNS) were expected to have significantly higher deviance, on average, than R groups (RS, RNS; H2). No specific hypothesis was made regarding the S-R interaction.

Differences between Childhood and Present Day (RQ3)

An analogous 2 (R vs. NR) x 2 (S vs. NS) factorial MANOVA was run for the R/S self-categorizations and the eight NDS subscales in childhood, to see if the pattern of results differed for childhood versus present day measures. Differences in prevalence of the four R/S self-categorizations between childhood and present day were tested using Chi-square goodness-of-fit test. Differences in the NDS subscale and composite means between childhood and "past 5 years" were tested using a series of dependent samples t-tests, with a Bonferroni correction for multiple comparisons. No specific directional hypotheses were made for these comparisons.

Religion, Spiritualty, and Deviance Relationships (RQ2)

Bivariate correlations were examined between continuous measures of religious practice (for both present day and childhood), spirituality (STS-24 total and subscales for present day), and respective deviance measures (NDS subscales and composite for

present day and childhood). Analogous to R/S group differences predicted for H1 and H2, continuous religious practice and spirituality measures were expected to be negatively correlated with deviance.

Religion-Deviance Relationship Controlling for Covariates (H3a, H3b)

H3a and H3b were tested through hierarchical linear regression using composite NDS score "in the past 5 years" as the outcome variable. Demographic predictors that were significantly correlated with deviance at the bivariate level (among age, socioeconomic status, hometown population size, gender, whether or not one is a visible minority, education, and parental education) were entered into the model first, followed by scores on the religious practice measure (present day; H3a), and finally spirituality (STS-24 subscales; H3b). Religious practice was expected to predict significantly lesser deviance (NDS composite) after controlling for the demographic covariates of deviance (H3a). Religious practice was predicted to have an attenuated relationship with deviance when spirituality (continuous) is added to the model (H3b).

Qualitative Analyses (RQ4 and RQ5)

RQ4 and RQ5 are qualitative and were explored through qualitative thematic analysis (Braun & Clarke, 2012). RQ5, which sought to understand how participants described their own experiences with religion and spirituality, both as children and how it has evolved into present day, combined the answers from the first two qualitative questions ("Why did you choose [religious/not religious] and [spiritual/not spiritual]? Please refer to your own understanding of "religious" and "spiritual" as much as possible," and "How would you describe changes in [religiosity/spirituality] between childhood and the present?" or "How have you explored or developed your

[religiosity/spirituality] between childhood and the present?"). RQ4 sought to understand how participants felt that their beliefs and religious involvement influenced their deviant behaviour, if at all.

To analyze the resulting data, individual responses were pasted into a word document and reviewed by the author. Open, axial, and selective coding were used to reduce the responses into themes (Williams & Moser, 2019). An initial reading was performed, and general codes were developed for each research question (open coding). These codes were examined closely and, where appropriate, merged into a more concise list of codes (axial coding). This secondary code list was then tested against the data, by going through and recoding based on the new codes. Quotes matching these codes were extracted and overarching themes were identified (selective coding). These themes and their axial codes are discussed in the results.

Results

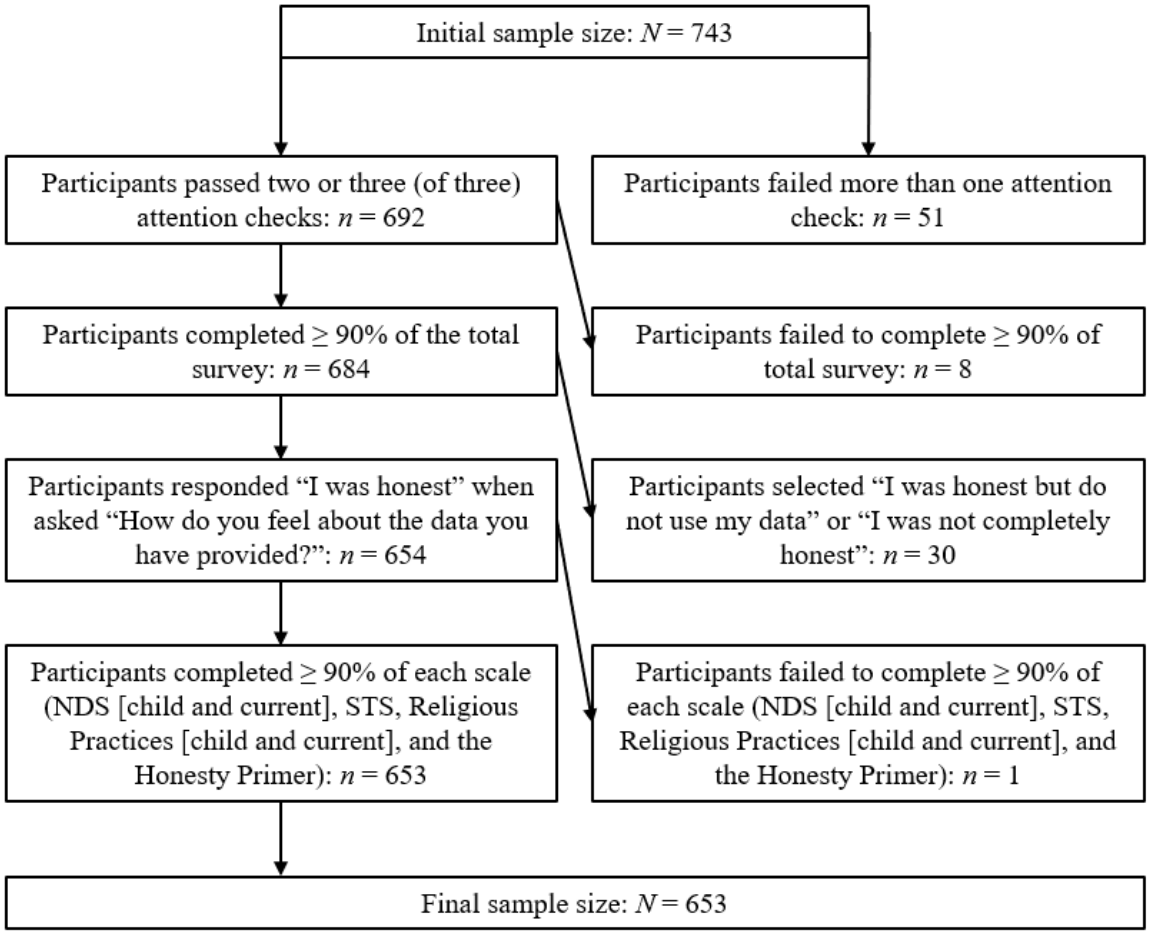
Data collection commenced in the Fall semester of 2022 at Trent University and concluded in the Winter semester of 2023. In total, 743 participants were recruited through SONA, an online recruiting platform at Trent University. Three attention checks were placed throughout the survey, which also took place online, to ensure participants were reading questions. A decision funnel method was used to eliminate participants based on a set of criteria (see Figure 4). Fifty-one (n = 51; 6.8%) participants failed more than one attention check and were removed from the sample; eight participants (n = 8; 1.0%) failed to complete ≥90% of the survey's content and were removed from the sample; thirty participants (n = 30; 4.0%) asked to have their data not used or indicated they were not honest at the end of the survey; one participant (n = 1; <1%) failed to

complete ≥ 90% of each individual scale and was removed. In total, 90 participants (n = 90; 12.1%) were removed during the data cleaning process, leaving a final sample of N = 653.

Research hypotheses and research questions are addressed in the order they have been numbered (i.e., H1 will be addressed first in this section), the respective measures are discussed prior to each hypothesis/RQ. Descriptive stats and the validity across measures of similar constructs (e.g., R categorization and religious practice) are assessed and discussed prior to the relevant hypotheses.

Figure 4

Flow of Participant Data Cleaning



Descriptive Characteristics (Present Day)

Descriptive characteristics of the study variables (present day) were explored to ensure that the data collected met expectations. This included: evaluating the frequencies of R/S groups (RS, NRS, RNS, NRNS) to ensure that the present sample matched previous studies, as well as the Canadian population; and ensuring the sample displayed similar characteristics in the scales as previous studies (similar *M* and *SD*, skewness in deviance, etc.).

R/S Self-Categorization

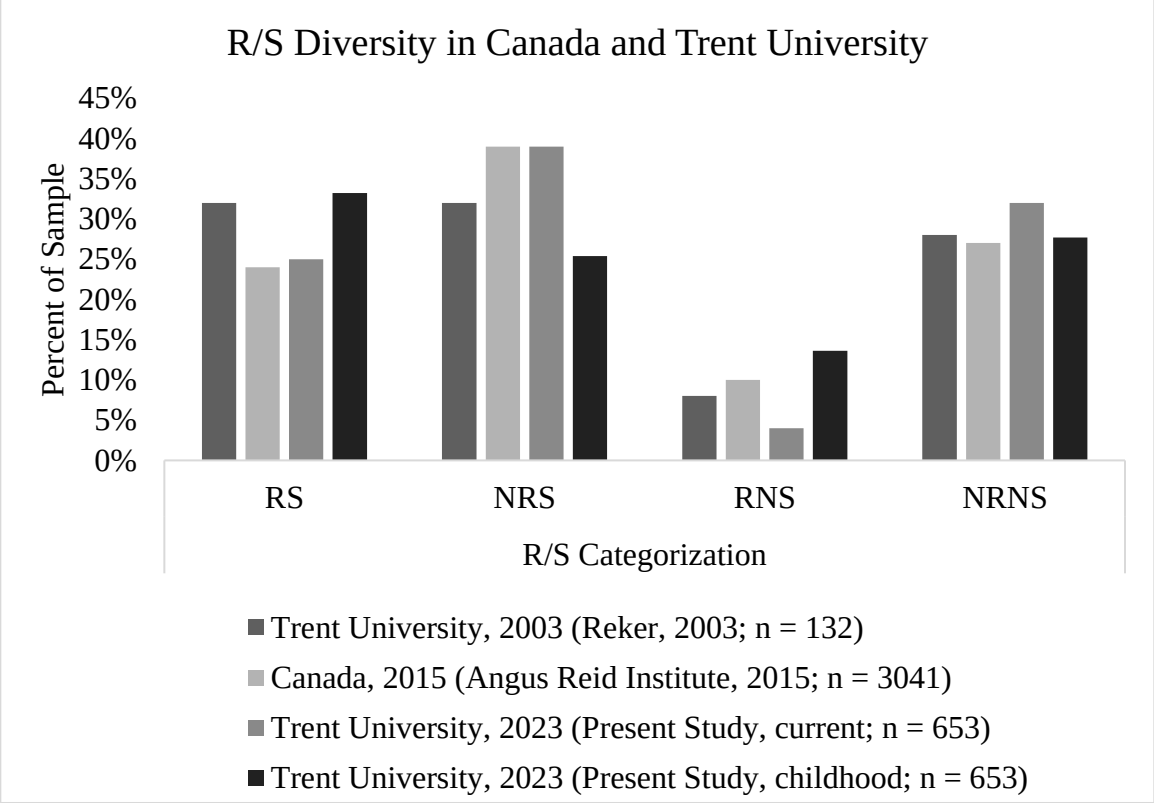
The *Are You Religious/Are You Spiritual* scale developed by Reker (2003), modified and used for categorizing participants into religious/nonreligious and spiritual/nonspiritual groups, resulted in the following proportions: RS (*n* = 163, 25%), RNS (*n* = 28, 4.3%), NRS (*n* = 256, 39.2%), NRNS (*n* = 206, 31.5%). A Chi-Square test of independence suggested that the observed distribution across R/S categorizations was significantly different from what might be expected by chance ($X^2[1, 653] = 52.64$, $p < .001$). Both RS and NRNS exceeded chance values (163/122.6, 206/165.6; observed/expected, respectively) and NRS and RNS were below chance values (256/296.4, 28/68.4, respectively).

The proportions of RS/NRS/RNS/NRNS in the current study were very similar to Canada's population (Angus Reid Institute, 2015) and close to Reker's original work (2003; see Figure 5). These proportions are as expected and not jarringly different in terms of distribution compared to the general population. A Chi-square goodness of fit test (comparing distribution of R/S in the present sample to the 2015 Angus Reid Institute data) was significant (X^2 [1, 653] = 26.6, $p < .001$), suggesting that the observed proportions were significantly different from the Canadian population. Post-hoc Z-tests

identified that the RNS group was significantly underrepresented (present study *n* = 28, expected *n* = 65) and the NRNS was significantly overrepresented (present study *n* = 206, expected *n* = 176). These results are not cause for concern for a few reasons. The Chi-square goodness of fit test is sensitive to large samples and may detect very small deviations from expected values (Bearden et al., 1982) and, visually, the present sample appears very similar in distribution to the Canadian population. Additionally, the data used for comparison (Angus Reid Institute, 2015) is from 2015, which might not reflect present rates of R/S in the Canadian population, something which has been changing dramatically for the last few decades in Canada (Pew Research Center, 2013), the US (Lipka & Gecewicz, 2017), and worldwide (Hackett et al., 2012, 2017).

Figure 5

R/S Diversity in Canada Compared to Present Study



NDS Scales

Means, standard deviations, and standardized skewness statistics for the NDS subscales are presented in Table 3. Participants' deviant behaviour in the past 5 years was substantially positively skewed, though this is expected given the sample (university students). The lowest skew statistic was in the *Alcohol* subscale (5.94, *SE* = .10) and the greatest skew statistic was in the *Theft* subscale (3354, *SE* = .10). The skewness statistic for the *Total Deviance* scale was 12.50 (*SE* = .10). Sample means for deviance in the past 5 years were quite low (see Table 3), however this finding was not unexpected. The present study did not anticipate high levels of deviance (the majority of which is operationalized through law breaking) amongst a university sample. These means, with the exception of *Cyber Deviance* (added to the NDS for the present study), are similar in value and slightly more skewed than previous research with similar populations (see Table 3; Vazsonyi et al., 2001). These distributions were expected, the sample is not inherently high-risk for assault or theft, for example. However, due to violated assumptions of normality, the planned parametric analyses involving the NDS scales were followed up by non-parametric tests.

Table 3

Descriptive Statistics of NDS for the Present Study and Past Research

	Present Study, current (N = 653)		**Vazsonyi et al. (2001)** (N = 1,302)
NDS Subscale (current)	***M* (*SD*)**	**Z Skew**	***M* (*SD*)**
Vandalism	1.24 (0.44)	25.00	1.52 (0.72)
Alcohol	2.37 (1.09)	5.94	2.70 (1.27)
Drug Use	1.72 (0.76)	11.46	1.94 (1.07)
School Misconduct	1.73 (0.59)	8.75	2.09 (0.91)
General Deviance	1.36 (0.32)	12.50	1.85 (0.74)
Theft	1.20 (0.44)	33.54	1.38 (0.64)
Assault	1.18 (0.32)	33.13	1.46 (0.66)
Cyber Deviance	1.34 (0.43)	18.23	*
Total Deviance	1.48 (0.35)	12.50	1.85 (0.70)

Note: Skewness *SE* for present study was .096. *The *Cyber Deviance* subscale was unique to this study; descriptive statistics are not available.

Religious Practice and STS-24 Scales

Means, standard deviations, and standardized skewness statistics for the STS-24 and religious practice (present day) scales are presented in Table 4. Across the entire sample, the distributions on religious practice were quite skewed, the distributions on the STS-24 were not as skewed, with the exception of the *Universality* subscale. The latter is likely a result of the largely non-religious nature of the sample. When looking at the skewness for only the sub-sample who self-categorized as R, religious practice scores were more normally distributed: the standardized skewness statistic changes from 15.34 to 2.02 (see Table 4). Similarly, skewness statistics on the STS-24 were calculated for the sub-sample who self-categorized as S, though this showed a slightly more skewed distribution than in the full sample. Regardless, given the non-normality in the full sample, as well as some sub-samples, non-parametric tests were used to test whether S

and NS, as well as R and NR, differed significantly in the STS-24 and the religious practices scales, respectively.

Table 4

Descriptive Statistics for STS-24 and Religious Practice Scales

Measure	Full Sample [1] (N = 653)		R only [2] (n = 191)	S only [3] (n = 419)
	***M* (*SD*)**		**Z Skew**	
STS-24, Prayer Fulfilment	3.39 (1.54)	1.69		- 2.03
STS-24, Universality	4.43 (1.44)	- 4.17		- 4.91
STS-24, Connectedness	4.38 (1.19)	- 2.66		- 4.54
STS-24, Total	4.03 (1.25)	- 1.66		- 3.34
Religious Practice	1.11 (1.17)	15.34	2.02	

Note: [1]SE = .096; [2]SE = .176; [3]SE = .119; R refers to present day religious categorization (binary); S refers to present day spirituality categorization (binary). Z-skew for overlapping categories was not included (e.g., RS and RNS include both R and S).

Convergent Validity of R and S Measures

Preliminary analyses were conducted to provide convergent validity across the dichotomous and continuous measures of religion and spirituality. This step is important to ensure that the grouping variables and the continuous variables are tapping into similar constructs. For example, those who indicate they are R should have significantly greater religious practice scores than those who are NR. Likewise, those who indicate they are S should have significantly greater STS-24 scores across all subscales compared to those who are NS. Given the non-normal distribution of the STS-24 and religious practice scales in the present sample, multiple Kruskal-Wallis tests were conducted to identify whether the groups (RS, NRS, NRNS, and RNS) differed significantly. Statistically significant differences were observed in both groups, with those who were R scoring significantly higher on the present-day religious practice scale (H [3] = 280.1, $p < .001$)

and those who were S scoring significantly higher on the STS-24 subscales and composite (*H*s > 65.3, *p*s < .001). Means and SDs for each scale and subscale, by grouping variable, are detailed in Table 5

Table 5

Means and SDs for STS-24 and Religious Practice by R/S

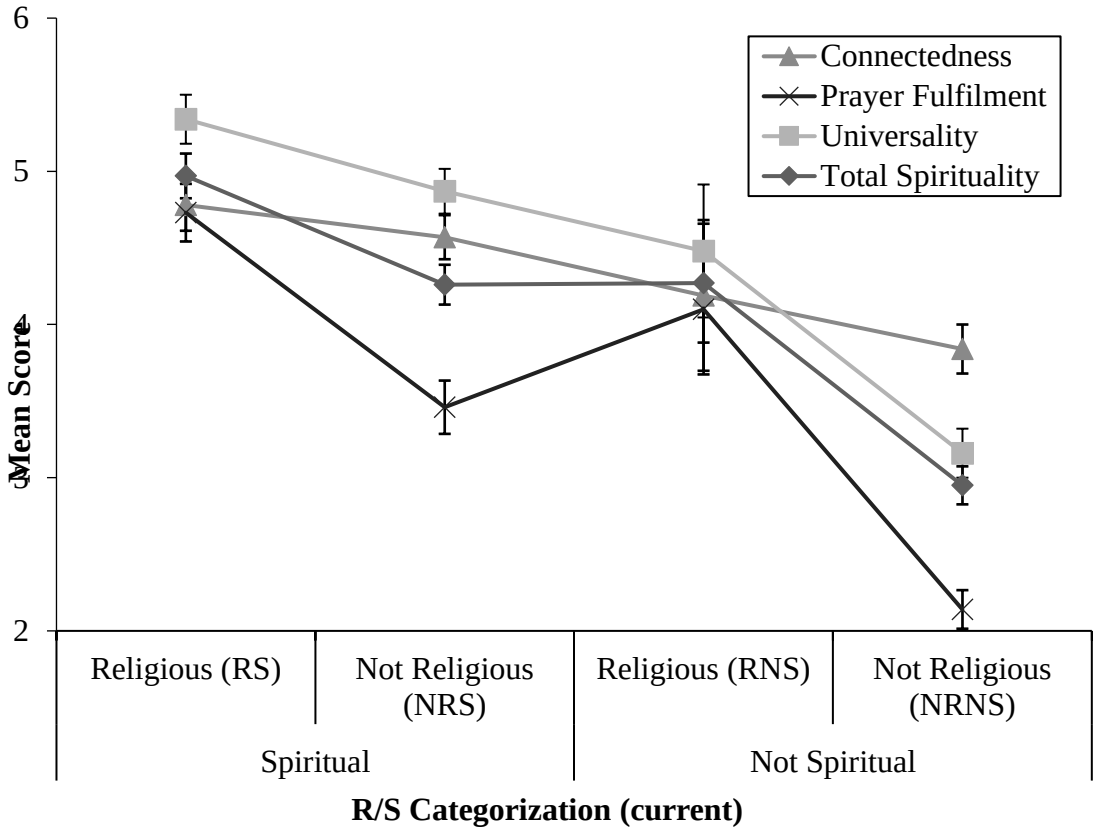
	Religious		Not Religious	
Scale	**Spiritual** (RS; *n* = 163)	**Not Spiritual** (RNS; *n* = 28)	**Spiritual** (NRS; *n* = 256)	**Not Spiritual** (NRNS; *n* = 206)
Prayer Fulfilment	4.73 (1.20)	4.10 (1.13)	3.46 (1.39)	2.14 (0.91)
Connectedness	4.78 (1.06)	4.19 (1.30)	4.57 (1.15)	3.84 (1.13)
Universality	5.34 (1.02)	4.48 (1.15)	4.87 (1.17)	3.16 (1.16)
Total Spirituality	4.97 (0.94)	4.27 (1.03)	4.26 (1.05)	2.95 (0.89)
Religious Practice	2.43 (1.31)	2.16 (1.01)	0.73 (0.65)	0.40 (0.39)

Participants' mean scores on the STS-24 and religious practice, by their R/S grouping, were mostly as expected. Post-hoc Dunn's tests with Bonferroni correction identified that total spirituality on the STS-24 was highest in those who were RS (*p*s < .05), lowest in NRNS (*p*s < .001), with NRS and RNS having similar levels (*p* = 1) and between RS and NRNS (*p*s < .001; Figure 6). The STS-24 subscale *Connectedness* was highest in RS, NRS, and RNS, but not significantly different from one another (*p*s > .10), those who were RS and NRS were significantly higher than NRNS (*p*s < .001; Figure 6). The STS-24 subscale *Universality* showed a similar trend to the composite spirituality scale (Figure 6), all groups were significantly different from one another (*p*s < .01) with the exception of NRS and RNS, who were not significantly different (*p* = .953; in order of highest to lowest: RS, NRS & RNS, NRNS). The STS-24 subscale *Prayer Fulfilment*

scores were highest in the RS and significantly different from the NRS and NRNS (*p*s < .01), followed by the RNS and NRS (*p*s < .05), and the NRNS (*p*s < .01; Figure 6). The expected differences amongst the continuous variables were mostly observed: those who indicated R (RS and RNS) scored significantly higher on the Religious Practice scale than those who were NR (*p*s < .001; NRS and NRNS; see Figure 7); those who were S (RS and NRS) scored significantly higher on the STS-24 than NRNS, but not necessarily higher than RNS.

Figure 6

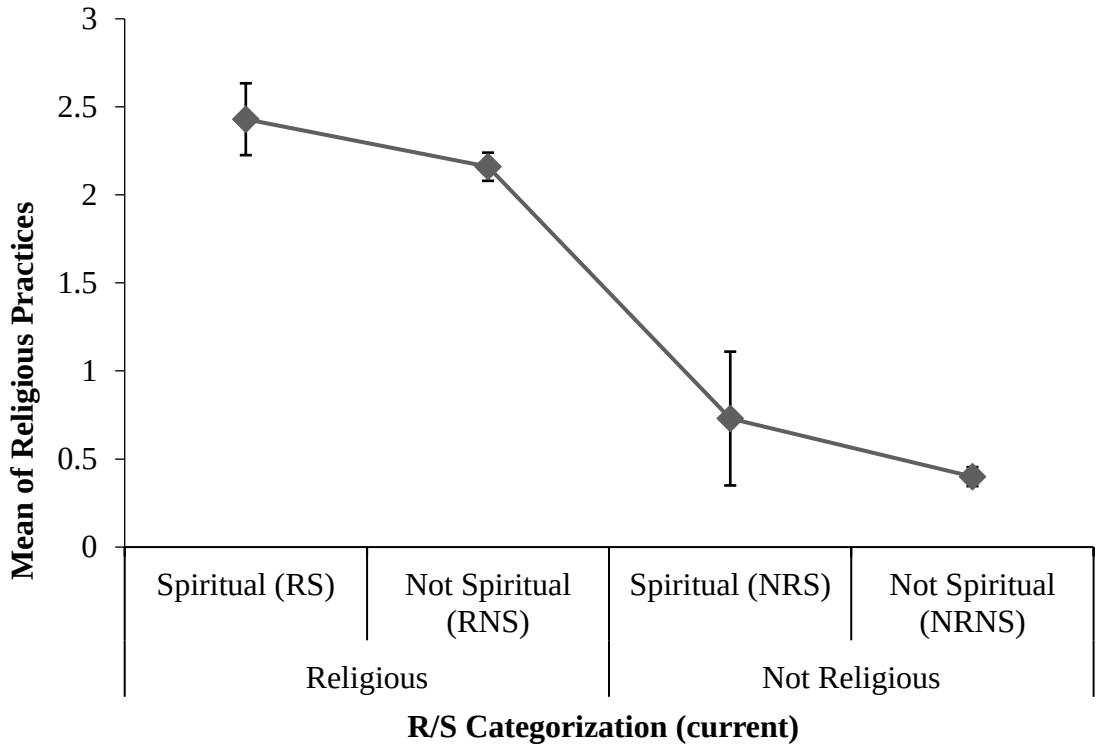
Mean Scores on STS-24 Subscales by R/S Categorization



Note: The X-axis for this chart is different from Figure 7. This chart progresses from spiritual (left) to non-spiritual (right) to illustrate the differences in means from S to NS. Error bars are 2 SE above or below the mean.

Figure 7

Mean Scores on the Religious Practice Measure by R/S Categorization



Note: The X-axis for this chart is different from Figure 6. This chart progresses from religious (left) to non-religious (right) to illustrate the differences in means from R to NR. Error bars are 2 SE above or below the mean.

R/S Group Differences in Deviance (Present Day, H1, H2, and RQ1)

H1 predicted that non-spiritual groups (NRNS and RNS, combined n = 234) will have higher self-reported scores of deviance, on average, than spiritual groups (NRS, RS, combined n = 419) measured at present day. H2 predicted that non-religious groups (NRS and NRNS, combined n = 462) will have higher deviance, on average, than religious groups (RS, RNS, combined n = 191) measured at present day. Interaction between R and S was also of interest (RQ1).

A 2 (R vs. NR) x 2 (S vs. NS) factorial MANOVA was used to test the independent and interactive effects of R and S self-categorizations on the eight NDS subscales "in the past 5 years". The factorial MANOVA consisted of present-day R and S as predictors of all NDS outcomes (*Vandalism*, *Alcohol*, *Drug Use*, *School Misconduct*, *General Deviance*, *Theft*, *Assault*, *Cyber Deviance*). Before calculating a factorial MANOVA for H1 and H2, the relevant assumptions were checked. Box's Test of Equality of Variance Matrices was significant (F [108, 32230.5] = 2.18, $p < .001$), indicating that the covariances of the DVs were not equal. Box's M may be sensitive to the sample size (N = 653), though this is likely overpowered by $p < .001$. There were no concerns for multicollinearity, with correlations ranging from r = .08 – .62 (M = .39, SD = .14). Note that the *Total Deviance* subscale was highly correlated with some subscales (r = .85 was the highest, correlated with the *General Deviance* subscale), but *Total Deviance* was not included in the factorial MANOVA. In addition to the violation of equality of variances, there were some concerns with multivariate normality observed. Pillai's Trace statistic was used for H1 and H2 because of these violations.

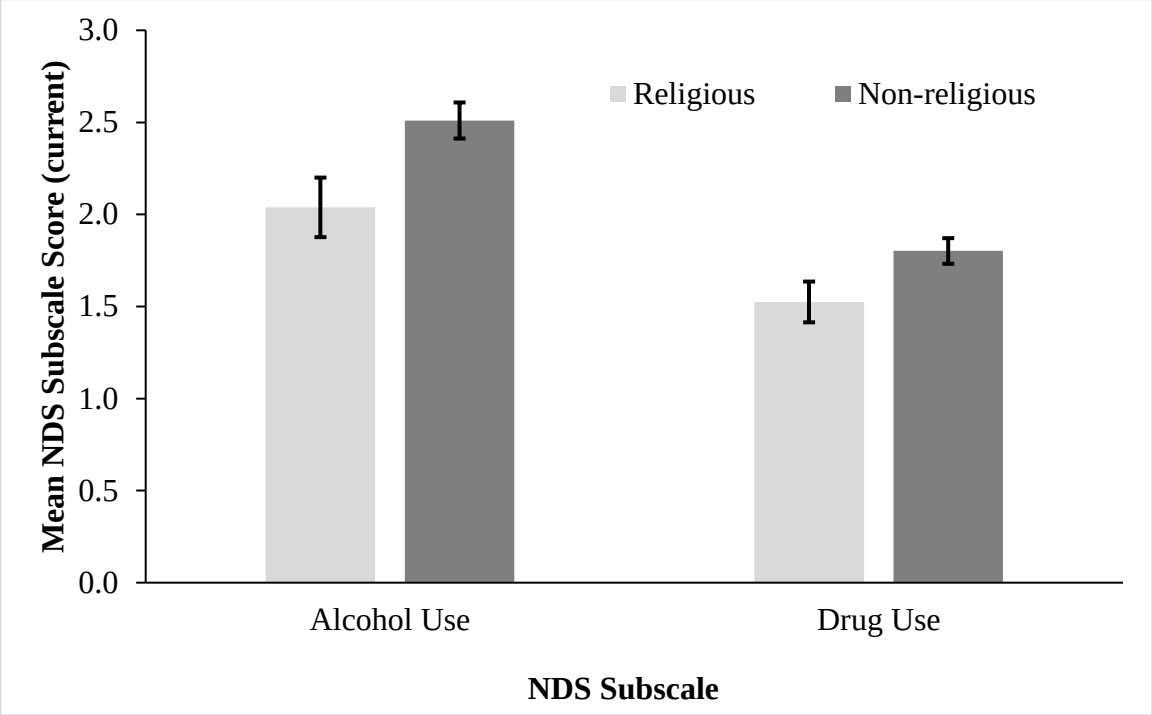
The factorial MANOVA indicated that the model for spirituality was not significant (Pillai's Trace = .009, F [8, 642] = 0.770, p = .63). The follow up between-subjects effects tests were non-significant for each subscale: *Vandalism* (F [1, 649] = 0.54, p = .46), *Alcohol* (F [1, 649] = 0.08, p = .78), *Drug Use* (F [1, 649] = 0.07, p = .79), *School Misconduct* (F [1, 649] = 1.72, p = .19), *General Deviance* (F [1, 649] = 0.8, p = .37), *Theft* (F [1,649] = .439, p = .51), *Assault* (F [1, 649] = 0.44, p = .51), and *Cyber Deviance* (F [1, 649] = 0.42, p = .52). Pairwise comparisons with Bonferroni's adjustment for multiple comparisons were also non-significant (ps > .19). Hypothesis 1 was not supported by either the omnibus MANOVA or the post-hoc t-tests; those who

indicated that they were spiritual were not significantly different in self-reported deviance than those who indicated that they were non-spiritual.

The factorial MANOVA indicated that the model for religiosity (R) was significant (Pillai's Trace = .043, F [8, 642] = 3.60, $p < .001$). Between-subjects tests indicated that *Alcohol* (F [1, 649] = 15.46, $p < .001$, $\eta_p^2 = .023$) and *Drug Use* (F [1, 649] = 5.34, $p = .021$ $\eta_p^2 = .008$) were significantly associated with present religious status (R vs. NR), though with small effect sizes. Pairwise comparisons, adjusted using Bonferroni's adjustment for multiple comparisons, indicated that those who categorized themselves as R had significantly lower drug use ($M = 1.59$, $SE = .08$, $p = .021$, $d = 0.37$) and deviant alcohol use ($M = 2.03$, $SE = .05$, $p < .001$, $d = 0.44$) than those who categorized themselves as NR ($M = 1.79$, $SE = .04$; $M = 2.51$, $SE = .05$; respectively; see Figure 8). Overall, hypothesis 2 was partially supported by both the omnibus MANOVA and post-hoc t-tests, with effect sizes ranging from very small ($\eta_p^2 = .008$) to medium ($d = 0.44$). Those who indicated that they were religious reported significantly less deviance in *Alcohol* and *Drug Use* subscales and overall than those who indicated they were non-religious.

Figure 8

NDS Subscale Means, by R Categorization



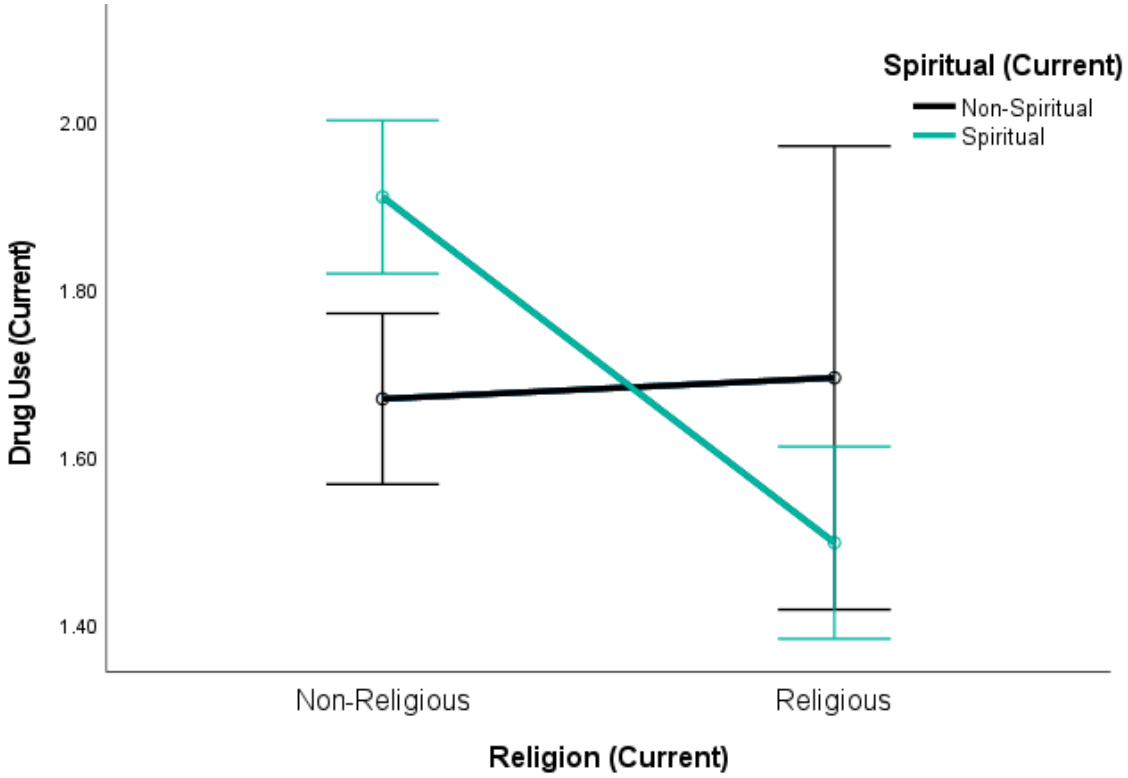
Note: Error bars are 2 *SE* above and below the mean.

A significant interaction between the two grouping variables (R/NR and S/NS) was observed (Pillai's Trace = .025, F [8, 642] = 2.03, p = .04). Being spiritual was associated with significant differences in deviance measures for those who were non-religious (Pillai's Trace = .032, F [8, 642] = 2.63, p = .008) but not those who were religious (F [8, 642] = 1.15, p = .33). Being religious had a stronger association with deviance in those who were spiritual (Pillai's Trace = .063, F [8,642] = 5.44, p <.001) than those who were non-spiritual (Pillai's Trace = .026, F [8, 642] = 2.17, p = .028). In other words, it appears that the religion and spirituality have differing associations with deviance depending on their combination.

Spirituality was associated with *more* drug use in the non-religious (NRS M = 1.91, SD = 0.80; NRNS M = 1.67, SD = 0.65; F [1, 649] = 11.93, $p < .001$, $\eta_p^2 = .02$), but unassociated with drug use in the religious (RS M = 1.49, SD = 0.72; RNS M = 1.69, SD = 0.98; F [1, 649] = 1.66, $p = .20$; see Figure 9).

Figure 9

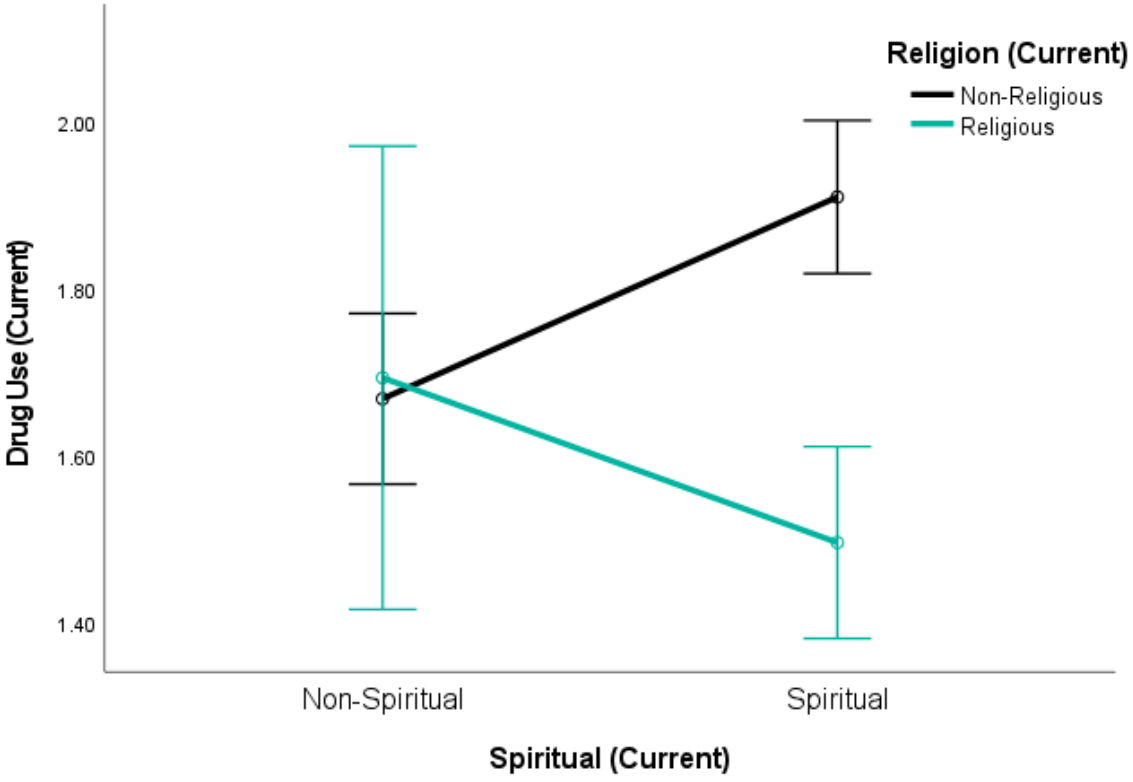
Religion and Spirituality Interactions, Spirituality on X-Axis, Drug Use, Current



Being religious was associated with less drug consumption in the spiritual (RS M = 1.49, SD = 0.72; NRS M = 1.90, SD = 0.80; F [1, 649] = 30.5, $p < .001$, $\eta_p^2 = .045$) but was not associated with drug use in the non-spiritual (RNS M = 1.69, SD = 0.98; NRNS M = 1.67, SD = 0.65; F [1, 649] = .028, $p = .867$; see Figure 10).

Figure 10

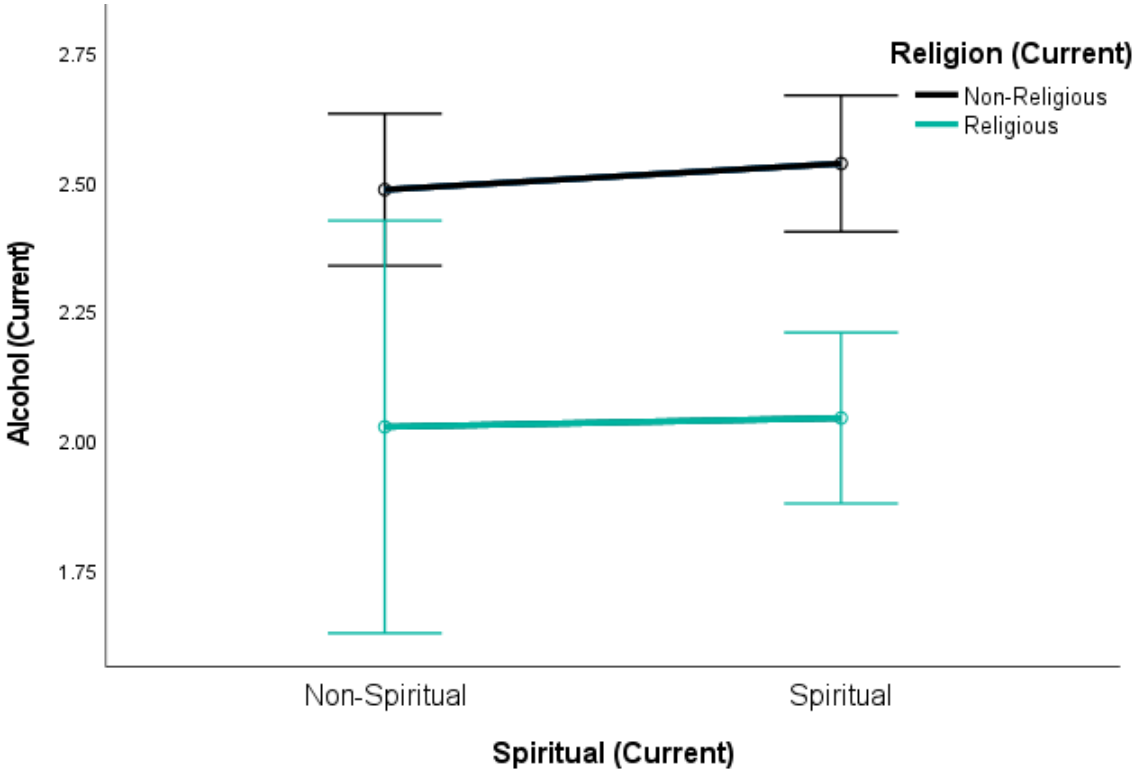
Religion and Spirituality Interactions, Religion on X-Axis, Drug Use, Current



Being religious was associated with less alcohol consumption in the spiritual (RS M = 2.04, SD = 1.10; NRS M = 2.53, SD = 1.07; F [1, 649] = 20.87, p < .001, η_p^2 = .031) and the non-spiritual (RNS M = 2.02, SD = 1.22; NRNS M = 2.48, SD = 1.03; F [1, 649] = 4.49, p = .034, η_p^2 = .007; see Figure 11), but the effect size was larger in the spiritual. Spirituality was not associated with alcohol consumption in either the religious or the non-religious.

Figure 11

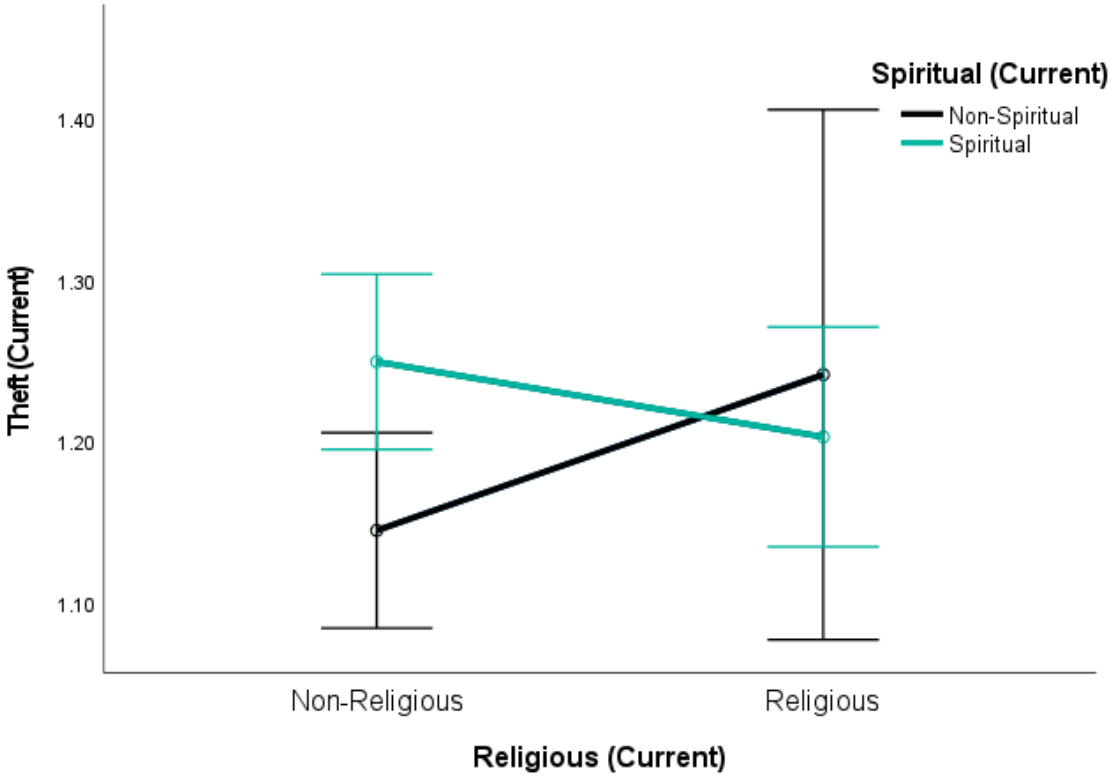
Religion and Spirituality Interaction, Alcohol, Current



Spirituality was also associated with *more* theft in the non-religious (NRS, *M* = 1.25, *SD* = 0.51; NRNS *M* = 1.14, *SD* = 0.31; *F* [1, 649] = 6.37, *p* = .012, η_p^2 = .01) but unassociated with theft in the religious (RS *M* = 1.20, *SD* = 0.46; RNS *M* = 1.24, *SD* = 0.54; *F* [1, 649] = .182, *p* = .67; see Figure 12). Being religious was not associated with theft in either the spiritual or the non-spiritual.

Figure 12

Religion and Spirituality Interaction, Theft, Current



These interactions suggest that the association between religion (or lack thereof) and deviant behaviours may change depending on spirituality. The patterns observed indicate an association between being religious and less self-reported deviance in alcohol and drug use, a difference which is greater in those who are also spiritual. However, oppositional patterns are identified in those who are non-religious, where those who are spiritual report *more* deviance in drug use and theft than those who are non-spiritual, a difference which is not seen in those who are religious.

A series of 4-group (RS, NRS, RNS, NRNS) Kruskal-Wallis H-tests and follow up post-hoc Dunn's tests with Bonferroni adjustment were used to complement the factorial MANOVA because of the violations of normality in the NDS. Similar patterns

of findings were observed. The Kruskal-Wallis H-tests indicated significant differences in *alcohol* (H [3] = 31.1, $p < .001$), *drug use* (H [3] = 41.6, $p < .001$), and *cyber deviance* (H [3] = 8.2, $p = .042$) across the four groups. Post-hoc Dunn's tests indicated that those who were RS reported significantly less deviant alcohol use and drug use compared to NRNS (ps < .001) and NRS (ps < .001). Post hoc Dunn's tests, after corrections, indicated no differences in mean ranks across groups for cyber deviance. The results observed in non-parametric tests were similar to the factorial MANOVA.

Descriptive Characteristics (Childhood)

Prior to evaluating RQ3, which includes multiple measures that require retrospective responding on the participants' behalf, the characteristics of the childhood measures were evaluated. Similar to the data from present day, the following sections explore the scores of the responses to the NDS, R/S categorization, and Religious Practice. The goal of these preliminary analyses was to ensure that those who were R as children reported higher Religious Practice scores, that R/S grouping was proportioned as expected, and to evaluate the degree of skewness in deviance data.

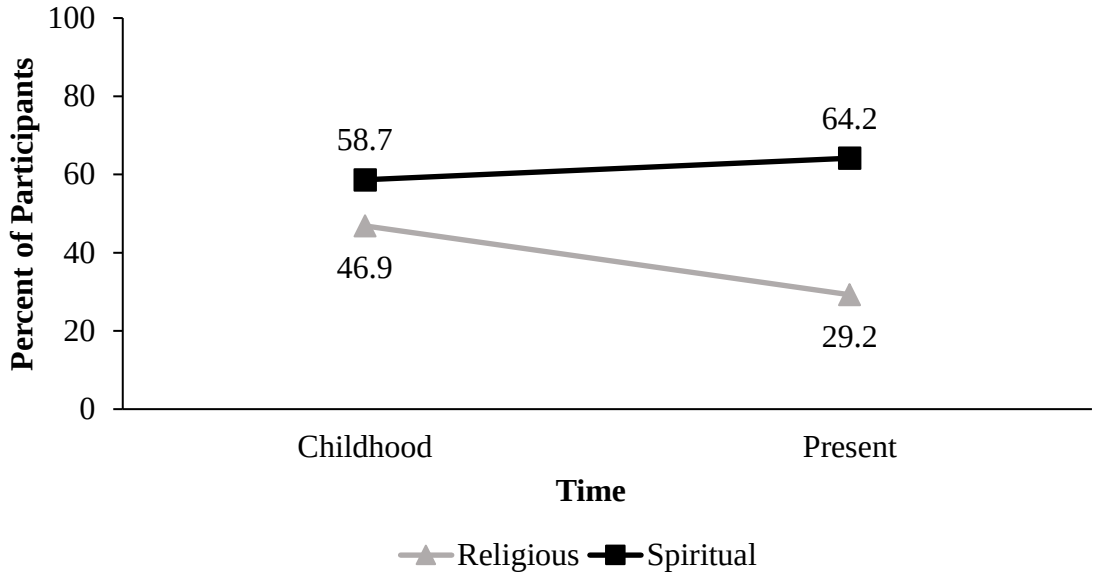
R/S Self-Categorization

The proportion of RS (n = 217, 33.2%), NRS (n = 166, 25.4%), RNS (n = 89, 13.6%), and NRNS (n = 181, 27.7%) in childhood were distributed as expected, with the majority of participants being either RS or NRNS. A Chi Square Goodness of Fit test suggested that the observed distribution across R/S categorizations was significantly different from what might be expected by chance (X^2[1, 653] = 35.70, p <.001). Both RS and NRNS exceeded chance values (217/179.5, 181/143.5; observed/expected, respectively) and NRS and RNS were below chance values (166/203.5, 89/126.5; respectively). The proportions were expected to vary significantly from one another.

Differences in prevalence of the four R/S self-categorizations between childhood and present day were tested using Chi-square goodness of fit test. The Chi-square goodness of fit test indicated that there were significant differences in R/S proportions between childhood and present day ($X^2 = 26.78$, $df = 3$, $p < .001$). Z-tests, comparing the frequency in childhood with the present-day frequencies, indicated all groups differed significantly (ps < .03). There was a significant decrease in both religious categories (RS, RNS, see Figure 13) and a significant increase in both non-religious categories (NRS, NRNS). Participants categorized themselves as more religious (n = 306, 46.9%) and less spiritual (n = 383, 58.7%) as children than they did as adults (n = 191, 29.2%; n = 419, 64.2%, respectively; see Figure 13). Fifty percent of participants who indicated that they were religious as children were no longer religious as adults (Δn between childhood R to present day NR = 155), compared to only 11% of the NR children who became R as adults (Δn between childhood NR to present day R = 40). Contrastingly, 45% of those who were non-spiritual as children became spiritual as adults (Δn between childhood NS to present day S = 122), and only 22% of those who were S as children became NS as adults (Δn between childhood S to present day NS = 86).

Figure 13

Changes in R or S Categorization from Childhood to Present



Note: Data points represent the percentage of participants in the respective category, which is more meaningful than participant sums for each category (e.g., 64.2% of participants indicated that they were presently spiritual).

NDS Scales and Religious Practice

Means, standard deviations, and standardized skewness for the NDS scales and religious practices in childhood are presented in Table 6. Participants' deviant behaviour in childhood was positively skewed, though this was expected given their age (around the age of 10). All data were extremely skewed, with the lowest standardized skewness being 13.05 in the *General Deviance* subscale, and the highest being 58.15 in the *Drug Use* subscale. The present study did not anticipate very high levels of deviance in this age range; however, this degree of skewness was also not expected. These skewness statistics are much greater than for present day. Similar to the skewness statistic for present day, religious practice was quite skewed when looking at the entire sample (Z skew = 7.22)

but was not significantly skewed for those who categorized themselves as religious (Z skew = 1.55, *SE* = .139, *n* = 306).

Table 6

Descriptive Statistics for Childhood NDS and Religious Practices

	Childhood (N = 653)	
Scale	***M* (*SD*)**	**Z Skew**
Vandalism	1.35 (0.53)	24.09
Alcohol	1.18 (0.60)	43.47
Drug Use	1.08 (0.31)	58.15
School Misconduct	1.63 (0.53)	13.63
General Deviance	1.48 (0.37)	13.05
Theft	1.21 (0.40)	37.77
Assault	1.20 (0.30)	32.09
Cyber Deviance	1.54 (0.66)	17.36
Total Deviance	1.39 (0.33)	18.82
Religious Practice	1.60 (1.29)	7.22

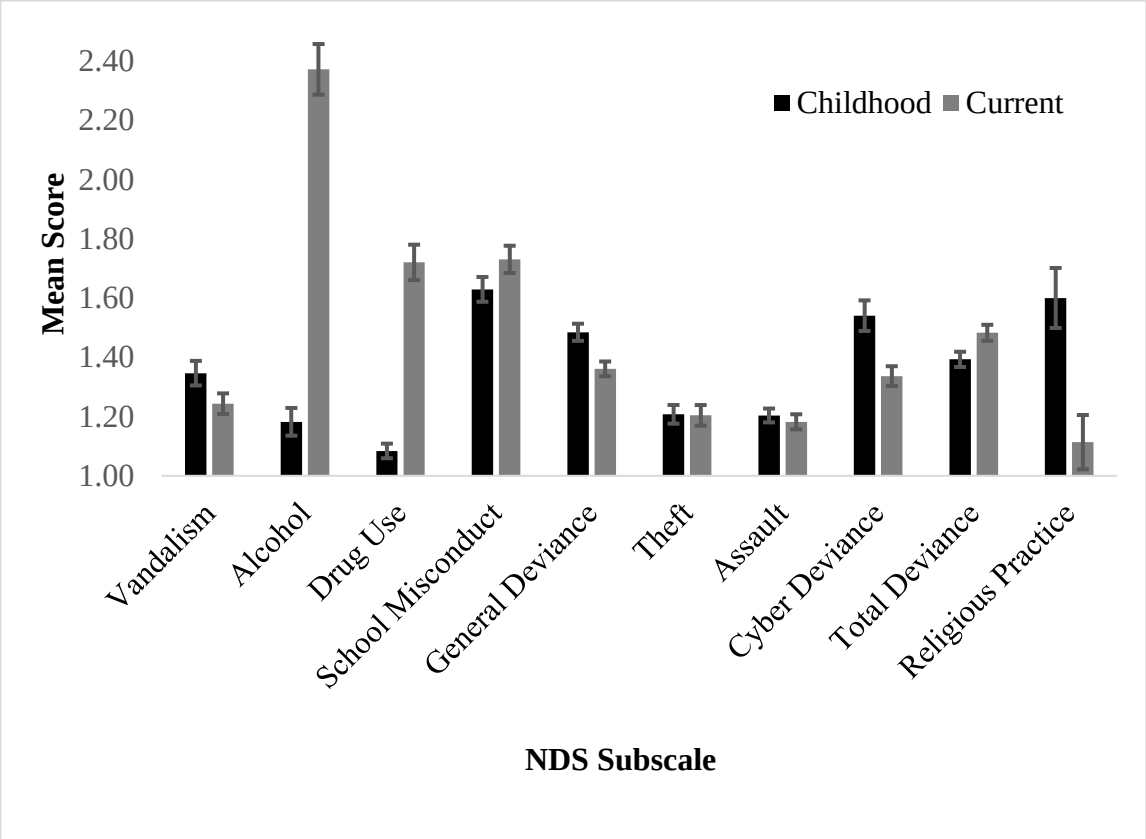
Note: Skewness *SE* = .096.

Differences in the NDS subscale and composite means, as well as religious practice, between childhood and present day were tested using a series of Wilcoxon signed rank tests (due to the non-normality of the NDS scales in both present day and childhood), with a Bonferroni correction for multiple comparisons. Most of the NDS subscales were significantly different between childhood and present day. *Vandalism* ($Z = 5.14$, $p < .001$, $d = 0.20$), *general deviance* ($Z = 8.29$, $p < .001$, $d = 0.32$), and *cyber deviance* ($Z = 9.20$, $p < .001$, $d = 0.36$) were all significantly higher in childhood than present day (see Figure 14). *Alcohol* ($Z = 18.7$, $p < .001$, $d = 0.73$), *drug use* ($Z = 17.2$, $p < .001$, $d = 0.67$), *school misconduct* ($Z = 4.86$, $p < .001$, $d = 0.19$), and *total deviance* ($Z = 7.02$, $p < .001$, $d = 0.27$) were all significantly lower in childhood than present day (see Figure 14). *Theft* and *assault* were not significantly different between childhood and

present day (*p*s > .76). Religious practices were significantly lower in present day compared to childhood ($Z = 11.9$, $p < .001$).

Figure 14

Means of NDS and Religious Practice by Time



Note: Most of these mean values come from skewed data. "1" is the equivalent of no reported deviance in any given category. Error bars are 2 SE above and below the mean.

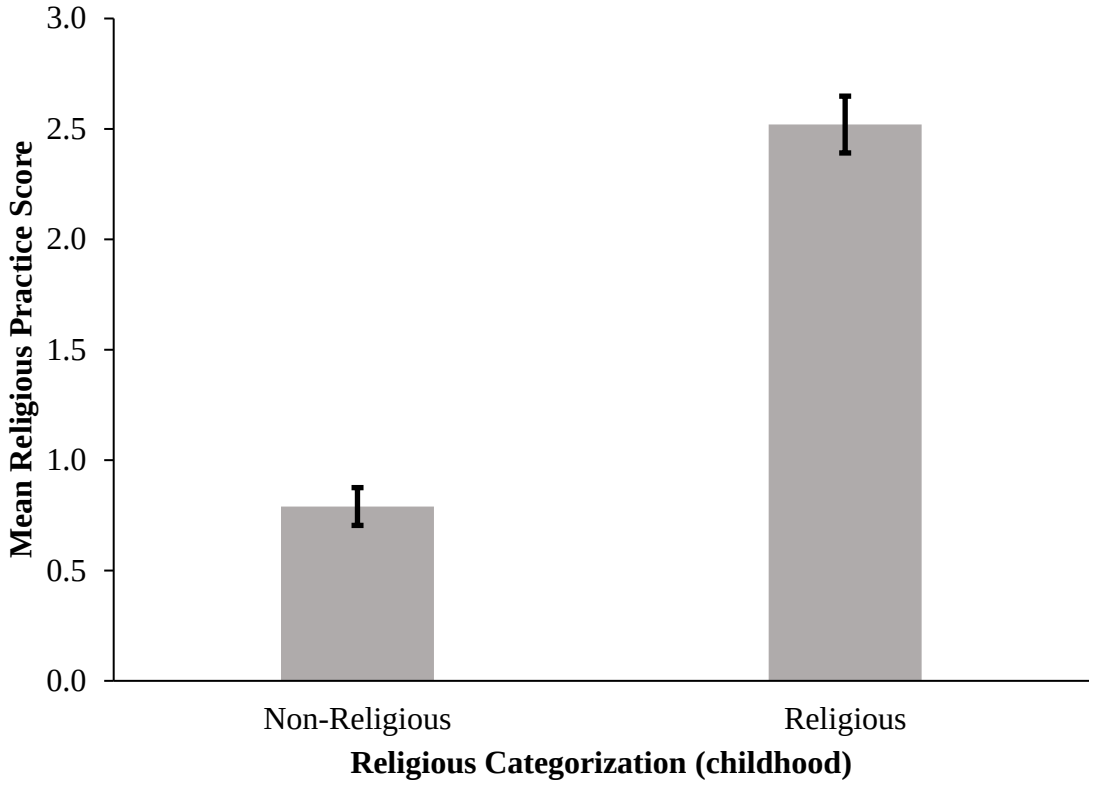
Convergent Validity of R Measures

Self-categorized R participants (in childhood) were expected to report significantly greater religious practices (in childhood) than those who were NR. Given the non-normality of religious practice scores in the NR group, a Mann-Whitney U test was used as a non-parametric alternative to an independent t-test. The test was significant; those who were R in childhood reported significantly more religious practices ($M = 2.52$,

SD = 1.12) than those who were NR (*M* = 0.79, *SD* = 0.80; *Z* = 17.75, *p* < .001; see Figure 15).

Figure 15

Differences in Religious Practices During Childhood, by R Categorization



Note: Error bars are 2 SE above and below the mean.

R/S Group Differences in Deviance (Childhood, RQ3)

A 2 (R vs. NR) x 2 (S vs. NS) factorial MANOVA was run for the R/S self-categorizations and the eight NDS subscales in childhood, to see if the pattern of results differed from that found for the present day. P-P and Q-Q plots indicated deviations from normality. Box's Test of Equality of Variance Matrices was significant (*F* [108, 442205] = 4.18, *p* < .001), indicating that the covariances of the DVs were not equal. Box's M may be sensitive to the sample size (*N* = 653), though this is likely overpowered by *p* <

.001. There were no concerns for multicollinearity, with correlations ranging from $r = .21 – .75$ (the highest being between *drug* and *alcohol*). Given the numerous violations of multivariate assumptions (normality, equality of variances), Pillai's Trace statistic was used when interpreting MANOVA results. The interaction between R and S was also of interest.

The factorial MANOVA indicated that the model for spirituality was not significant (F [8, 642] = 1.83, $p = .07$), nor was the model for religion (F [8, 642] = 1.60, $p = .12$), nor was the interaction between R and S (F [8, 642] = 1.39, $p = .20$). While the omnibus test was not significant, some interactions were observed in the post-hoc F tests. There were no significant main effects in post-hoc F tests for childhood religion (ps > .10). Those who were spiritual in childhood reported slightly more general deviance (M = 1.52, SD = .38) and school misconduct (M = 1.68, SD = .56) compared to the non-spiritual (M = 1.43, SD = .36; M = 1.57, SD = .49, respectively; ps < .05). Those who were spiritual engaged in more *cyber deviance* if they were not religious (NRS; M = 1.65, SD = 0.66) compared to the religious (RS; M = 1.48, SD = 0.65; F [1, 649] = 6.27, p = .013, $\eta_p^2 = .01$); being religious was not associated with cyber deviance in the nonspiritual. In other words, spirituality was associated with less cyber deviance when combined with religion, but more cyber deviance when it was paired with nonreligion (see Figure 16).

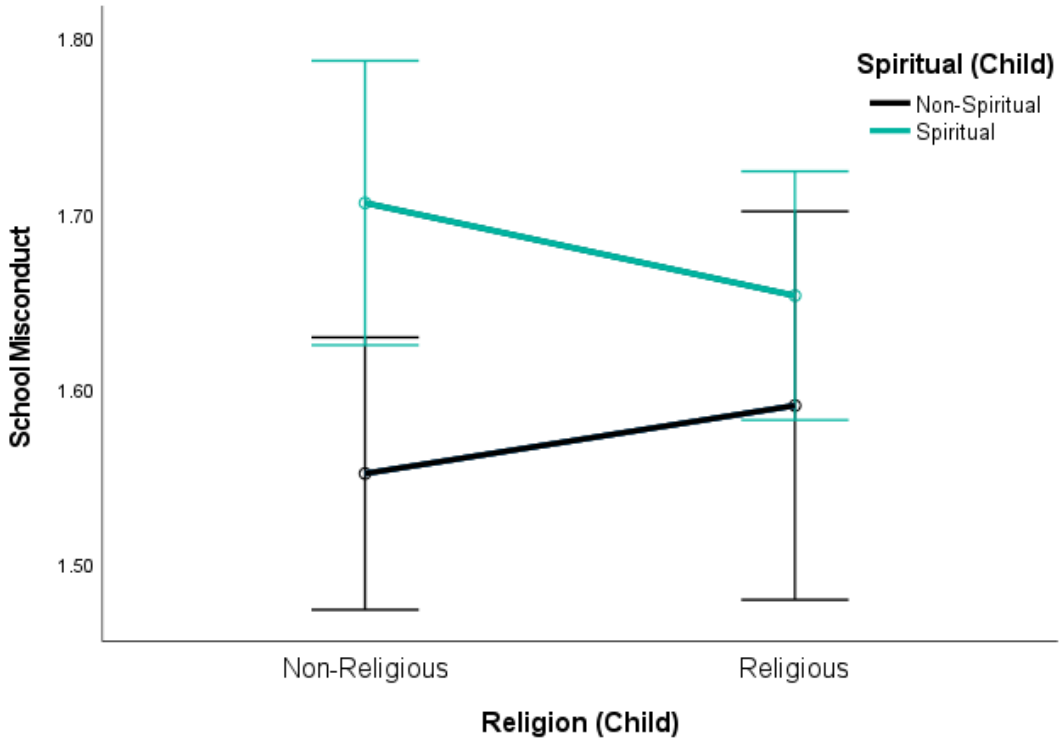
Figure 16

Religion and Spirituality Interaction, Cyber Deviance, Childhood

In those who were not religious in childhood, spirituality was associated with greater *school misconduct* (NRS; $M = 1.70$, $SD = 0.55$) compared to those who were not religious nor spiritual (NRNS; $M = 1.55$, $SD = 0.45$; F [1, 649] = 7.28, $p < .01$, $\eta_p^2 = .01$). In those who were religious, no differences in school misconduct were observed for the spiritual compared to the non-spiritual (see Figure 17).

Figure 17

Religion and Spirituality Interaction, School Misconduct, Childhood



A series of 4-group (RS, NRS, RNS, NRNS) Kruskal-Wallis H-tests and follow up post-hoc Dunn's tests with Bonferroni adjustment were used to complement the factorial MANOVA because of the violations of normality in the NDS. Some differences in findings were observed. The Kruskal-Wallis H-tests indicated significant differences across the four groups in *general deviance* (H [3] = 13.7, p = .003), *assault* (H [3] = 10.4, p =.016), and *cyber deviance* (H [3] = 11.4, p = .01), but not *school misconduct* (H [3] = 7.6, p = .05). Post-hoc Dunn's tests indicated that the differences between groups were mostly between the religious (RS and RNS) versus the nonreligious (NRS and NRNS), with religious participants reporting less *general deviance, assault,* and *cyber deviance* than the nonreligious (ps < .048). Spiritual but not religious (NRS) children reported

greater levels of deviance compared to the not religious or spiritual (NRNS) and the religious and spiritual (RS; *p*s < .04) in *cyber deviance*¸ *assault*, and *general deviance*.

The limited findings in the childhood factorial MANOVA provide some interesting conclusions and connections to the present-day data. While R/S was unassociated with most forms of deviance in childhood, the few associations observed follow similar trends: those who are religious do not appear to have distinguishable levels of deviance, those who are spiritual appear to have greater levels of deviance, and, most interestingly, religion seems to modify the association between spirituality and deviance. In other words, religion and spirituality, together, are associated with less deviance, but spirituality without religion is associated with greater deviance. No comparisons between the childhood association with deviance were made to the present-day associations with deviance due to the lack of significant findings in childhood. While this may be a limitation of the data collection method (retrospective), it may also indicate that these associations become more prominent in later adolescence, possibly when individuals develop more freedom to associate with R or S.

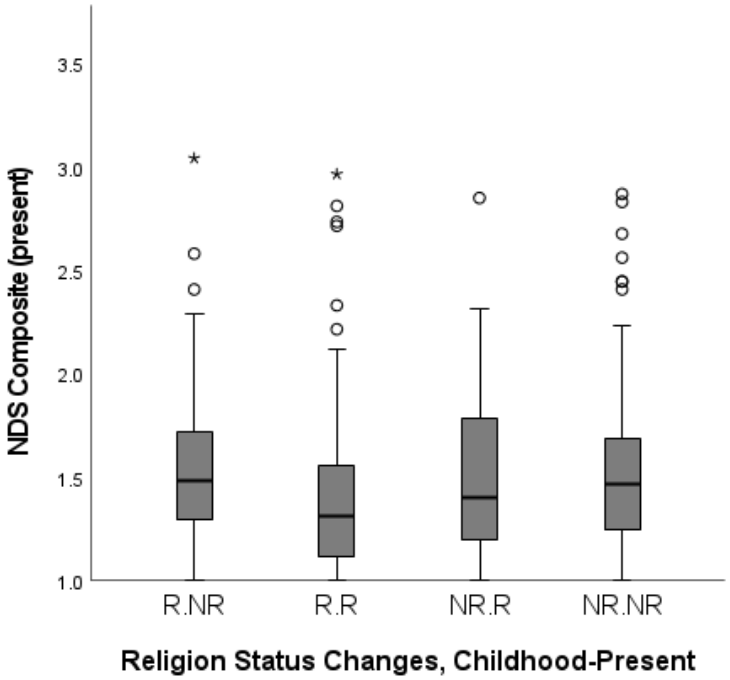
Post-hoc Analyses

A post-hoc test, inspired by the previous research question, explored the differences amongst four subsets: those who changed religious status from childhood to present day (hereafter referred to as R.NR, religious to nonreligious, $n = 155$, and NR.R, nonreligious to religious, $n = 40$) and those who maintained their nonreligious or religious status from childhood to present day (R.R, religious to religious, $n = 151$, and nonreligious to nonreligious, NR.NR, $n = 307$). A Kruskal-Wallis H test, with the aforementioned categories of changing religious statuses (R.R, R.NR, NR.R, and NR.NR) as the independent variable and the NDS composite for present day as the dependent

variable, was significant (H [3] = 25.45, $p < .001$). Post-hoc Dunn's tests were used to compare group differences. Those who found religion after having a nonreligious childhood (NR.R, $M = 1.51$, $SD = 0.33$) were not significantly different from those who were religious in both childhood and present day (R.R, $M = 1.39$, $SD = 0.37$, $p = .19$). However, those who lost their religion after childhood (R.NR, $M = 1.53$, $SD = 0.32$) reported significantly more deviance than those who maintained their religion (R.R, $M = 1.39$, $SD = .37$, $p < .0001$; see Figure 18). These findings suggest that the protective effect, hypothesized in other literature and theory (Miller & Vuolo, 2018; Sturgis & Baller, 2012), that religion provides over deviant behaviours may (1) not remain when an individual disconnects with that religion and (2) is present at a similar strength regardless of time involved in religion.

Figure 18

Mean NDS Composite Scores by Change in Religious Status



Note: Analyses were run with and without outliers – the results were nearly identical. Given the similarity of results, outliers were left in. Black horizontal lines represent the median.

A similar Kruskal-Wallis H test, with the aforementioned categories of changing religious statuses applied to spiritual status (S.S, *n* = 297, 45.5%; S.NS, *n* = 86, 13.2%; NS.S, *n* = 122, 18.7%; NS.NS, *n* = 148, 22.7%) as the independent variable and the NDS composite for present day as the dependent variable, was run. The test was not significant (*H* [3] = .58, *p* = .90) indicating that there are no differences in present day deviance across those who have always been spiritual (S.S, *M* = 1.49, *SD* = 0.36), have become (NS.S, *M* = 1.48, *SD* = 0.37) or lost (S.NS, *M* = 1.48, *SD* = 0.32) their spirituality, or have never been spiritual (NS.NS, *M* = 1.46, *SD* = 0.33). These findings, in addition to

previous findings, suggest that there may not be any significant differences across spiritual status in terms of present-day deviance.

Religion, Spirituality, and Deviance Relationships (RQ2)

A correlation matrix of all variables (scales, subscales) was generated to assess the relationships between variables. Categorical-continuous relationships are reported as point biserial correlation values, categorical-categorical are reported as Cramer's *V*, and continuous-continuous are reported as Pearson's *r* (Table 7). Cronbach's alpha is reported on the diagonal for scales. Correlations of interest are the religious practice and spirituality variables, demographic variables, and deviance variables.

R/S continuous scales were correlated with one another in an expected manner. Present-day religious practice and STS-24 scales were moderately to strongly correlated (.30 to .66). This was expected, as those who are religious are generally more likely to be spiritual than those who are nonreligious. This is further confirmed by the correlation between the prayer fulfilment subscale of the STS-24 and present day religious practice, which was the strongest out of the subscales and composite (.65). Childhood and present-day religious practices showed a strong correlation (.68). This relationship was also expected, being R in childhood establishes a foundation of R that may continue in young adulthood. Present-day spirituality measures (the STS-24 subscales and composite) were strongly inter-correlated (.52 to .93), confirming their substantial shared construct variance.

Relationships between religious practice and deviance measures were mixed. Child religious practice was not significantly correlated with any of the child deviance scales, but was negatively weakly correlated (-.08 to -.17) with some of the present-day deviance variables (*alcohol*, *drug*, and *total deviance*). Present-day religious practice was

negatively weakly to moderately correlated (-.17 to -.30) with most deviance subscales (*alcohol*, *drug*, *school misconduct*, *general deviance*, and *total deviance*), but not with *theft, assault*, *vandalism* or *cyber deviance*. These correlations provide valuable information about which types of deviance religious practice is associated (or not associated) with.

Spirituality variables had no significant associations with *total deviance* or with most NDS subscales for present day, with only few exceptions that had weak correlations (-.14 to .08). The STS-24 subscale *prayer fulfilment* was negatively correlated with *alcohol* and *school misconduct* for present day; the STS-24 subscale *universality* was positively correlated with present-day *theft*, but no other subscales of deviance. Lastly, the STS-24 composite was negatively associated with *alcohol*, though this was likely just a product of the *prayer fulfilment* subscale, as no others were correlated.

Correlations between demographic variables and deviance subscales were mostly as expected. Being female was weakly negatively correlated with childhood *vandalism, school misconduct, general deviance*, *cyber deviance,* and *total deviance*, as well as current *vandalism*. Age was weakly negatively correlated with present deviance scales (*vandalism, alcohol, school misconduct, general deviance, theft*, and *total deviance*). Being a minority was weakly positively correlated with childhood deviance (*vandalism, school misconduct,* and *theft*) but weak-moderately negatively correlated with present deviance (*alcohol, drug use, general deviance, theft,* and *total deviance*). Education was mostly unrelated to deviance, with the exception of a weak correlation with *drug use* and *school misconduct*. Having parents with greater education was weakly negatively associated with childhood deviance (*alcohol, drug use,* and *school misconduct*), as well as weakly negatively correlated with present *drug use*. Home income was weakly negatively

correlated with childhood *school misconduct* and weakly positively correlated with present *alcohol use*. Home population was weakly positively associated with childhood deviance (*vandalism, school misconduct, general deviance, theft, assault, cyber deviance,* and *total deviance*), weakly positively correlated with present day *assault*, and weakly negatively correlated with present day *alcohol* and *drug use*.

Table 7.1

Correlations and Cronbach's Alphas for All Variables

Variable	1	2	3	4	5	6	7	8
1. Gender (Female = 0)	--							
2. Age	-.05	--						
3. Visible Minority (1 = "yes")	-.08	.06	--					
4. Education	.04	.54**	-.11**	--				
5. Parental Education	-.05	-.16**	-.01	-.14**	--			
6. Home Population	-.07	-.01	.19**	-.03	.05	--		
7. Home Income	-.04	-.07	-.31**	.03	.20**	.03	--	
8. Child R/NR	-.06	.06	.21**	.05	.02	.04	-.15**	--
9. Child S/NS	-.01	.07	.14**	-.01	-.06	-.03	-.17**	.23**
10. Current R/NR	-.07	.01	.29**	-.09*	.01	.05	-.22**	.42**
11. Current S/NS	.07	.09*	.09*	.01	-.11**	-.02	-.19**	.11**
12. Childhood Rel. Practices	-.05	.08	.32**	-.02	.01	.05	-.23**	.66**
13. Current Religious Practices	-.08*	.16**	.35**	-.04	-.01	.08	-.26**	.39**
14. STS-24: Prayer Fulfilment	-.07	.17**	.22**	-.02	-.05	.04	-.20**	.27**
15. STS-24: Universality	.01	.13**	.12**	-.03	-.07	-.04	-.19**	.19**
16. STS-24: Connectedness	.01	.14**	-.06	.05	-.08*	-.08*	-.04	.09*
17. STS-24: Total	-.02	.16**	.14**	-.01	-.07	-.02	-.18**	.22**
18. NDSc: Vandalism	-.16**	.03	.10*	-.02	-.04	.09*	-.03	-.04
19. NDSc: Alcohol	-.07	-.03	-.06	-.02	-.11**	.00	.03	-.02
20. NDSc: Drug Use	-.01	.00	-.05	.02	-.09*	.01	.01	.00
21. NDSc: School Misconduct	-.17**	-.01	.12**	-.01	-.13**	.11**	-.08*	.01
22. NDSc: General Deviance	-.17**	.02	.08*	-.01	-.07	.12**	-.08*	-.04
23. NDSc: Theft	-.10**	.01	.10*	.06	-.06	.09*	-.05	.03
24. NDSc: Assault	-.13**	.04	.03	.08*	-.04	.10*	-.01	-.04
25. NDSc: Cyber Deviance	-.13**	-.12**	.02	-.04	.02	.10*	.00	-.07
26. NDSc: Total Deviance	-.18**	-.02	.08	-.01	-.09*	.12**	-.05	-.04
27. NDSp: Vandalism	-.09*	-.15**	-.05	-.10*	-.02	-.01	.03	-.03
28. NDSp: Alcohol	.03	-.14**	-.34**	.04	-.04	-.17**	.18**	-.09*
29. NDSp: Drug Use	-.02	-.01	-.23**	.09*	-.11**	-.08	.03	-.03
30. NDSp: School Misconduct	.08*	-.26**	.01	-.12**	-.07	.05	-.02	-.02
31. NDSp: General Deviance	.04	-.12**	-.15**	-.01	-.03	-.07	.05	-.03
32. NDSp: Theft	.01	-.11**	-.12**	-.03	-.01	.01	.00	.00
33. NDSp: Assault	-.08*	-.03	.00	.03	-.02	.07	.01	-.06
34. NDSp: Cyber Deviance	-.08*	-.04	-.03	.02	.02	.06	.00	-.07
35. NDSp: Total Deviance	.00	-.17**	-.17**	-.02	-.05	-.03	.05	-.06

Note: Table spans multiple pages, full table notes are on the following page.

Table 7.2

Correlations and Cronbach's Alphas for All Variables

Variable	9	10	11	12	13	14	15	16	17
9. Child S/NS	--								
10. Current R/NR	.15**	--							
11. Current S/NS	.33**	.30**	--						
12. Childhood Rel. Practices	.29**	.52**	.22**	.92					
13. Current Religious Practices	.20**	.70**	.33**	.68**	.92				
14. STS-24 Prayer Fulfilment	.24**	.53**	.49**	.43**	.66**	.92			
15. STS-24 Universality	.25**	.36**	.58**	.30**	.47**	.76**	.92		
16. STS-24 Connectedness	.19**	.18**	.31**	.18**	.30**	.52**	.60**	.71	
17. STS-24 Total	.27**	.45**	.55**	.37**	.58**	.91**	.93**	.74**	.94
18. NDSc: Vandalism	.03	-.06	.00	.01	-.04	.00	.01	-.05	-.01
19. NDSc: Alcohol	.05	-.02	.03	.02	-.01	.05	.03	.03	.05
20. NDSc: Drug Use	.03	-.02	.04	.00	.00	.04	.02	.00	.03
21. NDSc: School Misconduct	.10*	.01	.09*	.02	-.02	.03	.09*	.02	.06
22. NDSc: General Deviance	.10**	-.01	.03	.03	-.03	.03	.07	-.02	.04
23. NDSc: Theft	.04	-.02	.01	.05	.01	.06	.03	-.03	.03
24. NDSc: Assault	.05	.02	.01	.03	.02	-.01	.00	-.03	-.01
25. NDSc: Cyber Deviance	.02	-.13**	-.07	-.04	-.13**	-.09*	-.01	-.05	-.06
26. NDSc: Total Deviance	.09*	-.04	.02	.02	-.05	.01	.05	-.02	.02
27. NDSp: Vandalism	.03	-.01	.02	.03	-.07	.01	.04	.01	.02
28. NDSp: Alcohol	-.02	-.22**	-.04	-.17**	-.30**	-.14**	-.05	.03	-.08*
29. NDSp: Drug Use	.02	-.18**	.05	-.09*	-.20**	-.01	.03	.07	.03
30. NDSp: School Misconduct	.04	-.08	.04	-.06	-.18**	-.08*	.02	-.07	-.05
31. NDSp: General Deviance	.03	-.07	.04	-.05	-.17**	-.02	.07	.04	.03
32. NDSp: Theft	.03	-.01	.08*	.00	-.05	.05	.08*	-.02	.05
33. NDSp: Assault	-.05	.03	-.01	.03	.00	.00	.03	.00	.01
34. NDSp: Cyber Deviance	.04	-.07	-.04	-.03	-.07	-.07	.02	.00	-.02
35. NDSp: Total Deviance	.03	-.14**	.03	-.08*	-.22**	-.07	.04	.01	-.01

Note: Table spans multiple pages; NDSc refers to childhood measures; NDSp refers to present day measures. Cronbach's Alphas on diagonal. Categorical-continuous relationships are point biserial *r*, categorical-categorical are Cramer's *V*, and continuous-continuous are Pearson's *r*. *$p < .05$, **$p<.01$.

Table 7.3

Correlations and Cronbach's Alphas for All Variables

Variable	18	19	20	21	22	23	24	25	26
18. NDSc: Vandalism	.71								
19. NDSc: Alcohol	.30**	.81							
20. NDSc: Drug Use	.21**	.75**	.67						
21. NDSc: School Misconduct	.49**	.37**	.34**	.72					
22. NDSc: General Deviance	.61**	.37**	.31**	.66**	.74				
23. NDSc: Theft	.52**	.29**	.28**	.45**	.55**	.63			
24. NDSc: Assault	.47**	.21**	.29**	.37**	.54**	.42**	.46		
25. NDSc: Cyber Deviance	.38**	.25**	.23**	.47**	.63**	.43**	.46**	.72	
26. NDSc: Total Deviance	.69**	.54**	.50**	.80**	.91**	.66**	.64**	.75**	.91
27. NDSp: Vandalism	.49**	.19**	.13**	.24**	.38**	.31**	.34**	.30**	.42**
28. NDSp: Alcohol	.15**	.22**	.14**	.16**	.15**	.05	.07	.12**	.19**
29. NDSp: Drug Use	.21**	.20**	.23**	.21**	.19**	.19**	.12**	.16**	.25**
30. NDSp: School Misconduct	.29**	.10*	.08*	.44**	.40**	.25**	.28**	.38**	.44**
31. NDSp: General Deviance	.34**	.21**	.12**	.30**	.45**	.26**	.31**	.31**	.43**
32. NDSp: Theft	.23**	.17**	.13**	.21**	.31**	.40**	.29**	.27**	.35**
33. NDSp: Assault	.34**	.13**	.16**	.24**	.35**	.27**	.61**	.34**	.42**
34. NDSp: Cyber Deviance	.32**	.07	.09*	.26**	.42**	.30**	.47**	.60**	.48**
35. NDSp: Total Deviance	.41**	.23**	.18**	.39**	.48**	.34**	.40**	.46**	.53**

Note: Table spans multiple pages; NDSc refers to childhood measures; NDSp refers to present day measures. Cronbach's Alphas on diagonal. Categorical-continuous relationships are point biserial *r*, categorical-categorical are Cramer's *V*, and continuous-continuous are Pearson's *r*. *$p < .05$, **$p<.01$.

Table 7.4

Correlations and Cronbach's Alphas for All Variables

Variable	27	28	29	30	31	32	33	34	35
27. NDSp: Vandalism	.70								
28. NDSp: Alcohol	.30**	.67							
29. NDSp: Drug Use	.33**	.59**	.67						
30. NDSp: School Misconduct	.45**	.37**	.37**	.70					
31. NDSp: General Deviance	.57**	.55**	.44**	.58**	.66				
32. NDSp: Theft	.50**	.29**	.35**	.42**	.52**	.62			
33. NDSp: Assault	.40**	.09*	.19**	.32**	.34**	.35**	.47		
34. NDSp: Cyber Deviance	.45**	.14**	.17**	.39**	.43**	.36**	.62**	.70	
35. NDSp: Total Deviance	.68**	.65**	.66**	.77**	.85**	.63**	.50**	.62**	.89

Note: Table spans multiple pages; NDSc refers to childhood measures; NDSp refers to present day measures. Cronbach's Alphas on diagonal. Categorical-continuous relationships are point biserial *r*, categorical-categorical are Cramer's *V*, and continuous-continuous are Pearson's *r*. *$p < .05$, **$p<.01$.

Demographic Covariates of Deviance

Possible covariates for the NDSp composite and subscales were correlated (see Table 7) to determine their inclusion in the regression for H3a and H3b. The NDSp composite was used for H3a and H3b, so significant correlation with a single subscale was not considered enough to include in the model. Significant correlations with more than one subscale was the minimum criteria for including a covariate. Gender[1] was included because being female was significantly negatively correlated with four NDS subscales: *vandalism*, *school misconduct*, *assault*, and *cyber deviance*. Age was significantly negatively correlated with many of the NDS scales: *vandalism*, *alcohol*, *school misconduct*, *general deviance*, *theft*, and *total deviance*. *Drug use*, *assault*, and c*yber deviance* were not correlated with age. Being a visible minority was moderately negatively correlated with NDS scales: *alcohol*, *drug use*, *general deviance*, *theft*, and *total deviance* and was included. Participant education was excluded as a covariate because the sample consists entirely of undergraduate students, only $n = 74$ (11.3%) of whom have completed post-secondary education. Parent education was excluded as a covariate because it was only weakly associated with a single outcome variable, *drug use*. Home population was excluded as a covariate because it was only associated with one outcome variable, *alcohol*. Home income was also excluded as a covariate because it was only associated with one outcome variable, *alcohol*.

[1] Non-binary, other gender identities, and those who selected "prefer not to disclose" were excluded from this analysis because of very low *n* ($n = 21$, 3.2%). *Male* was coded as 0.

Religion-Deviance Relationship Controlling for Covariates (H3a, b)

A hierarchical regression with two steps was conducted, with the present day NDS composite as the outcome variable (See Table 8). In the first step, the relevant covariates were entered (*visible minority*, *age*, and *gender*) and the model was significant (F [3, 628] = 12.28, $p < .001$, $R^2 = .052$). In the second step, the *Religious Practice* scale was entered, which added a statistically significant change in total variance explained (F [4, 627] = 13.2, $p < .001$, $\Delta R^2 = .021$). The STS-24 subscales were not included in the next step of the regression as planned, because they were not significantly associated with the NDS composite. Hypothesis 3a was supported, greater religious practice predicted fewer deviant behaviours after controlling for the demographic covariates of deviance. Hypothesis 3b was not testable because of the STS-24's lack of association with deviance variables.

Table 8

Hierarchical Regression of Predictors of the NDS Composite (present)

	Variable	***Beta***	R^2	ΔR^2
Step 1			.052	
	Gender (1 = male)	-.052		
	Minority (1 = visible minority)	-.169**		
	Age (years)	-.158**		
Step 2			.073	.021
	Gender (1 = male)	-.062		
	Minority (1 = visible minority)	-.114*		
	Age (years)	-.135**		
	Religious Practice (current)	-.161**		

Note: Intercept not included because reported betas are standardized. * $p < .01$. ** $p < .001$.

Qualitative Analyses (RQ 4 and 5)

RQ4: How do participants believe their individual spirituality and religious practice has influenced their deviant behaviours in their lifetime?

RQ5: How do participants define their religion and spirituality?

Research questions 4 and 5 were aimed at understanding how participants described their religion, spirituality, and its relation to their deviant behaviours. These questions were explored through three qualitative questions (described in the methodology and labelled Q1, Q2, and Q3). Q1 asked participants to describe why they chose their specific R/S categorization; Q2 asked participants to describe changes or lack thereof in their R/S categorization; and Q3 and participants to describe whether they felt their R or S influenced their deviant behaviours, if at all. Response rates to these questions varied (Table 9) though this was not a limitation to the results (see Methodological Considerations, Qualitative Analyses).

Table 9

Response Rates for Qualitative Questions (n, percent in parentheses)

	Responses	
Question	**Total**	**> 10 Words**
Q1	490 (75)	465 (71)
Q2	319 (49) *	293 (45) *
Q3	585 (90)	488 (75)

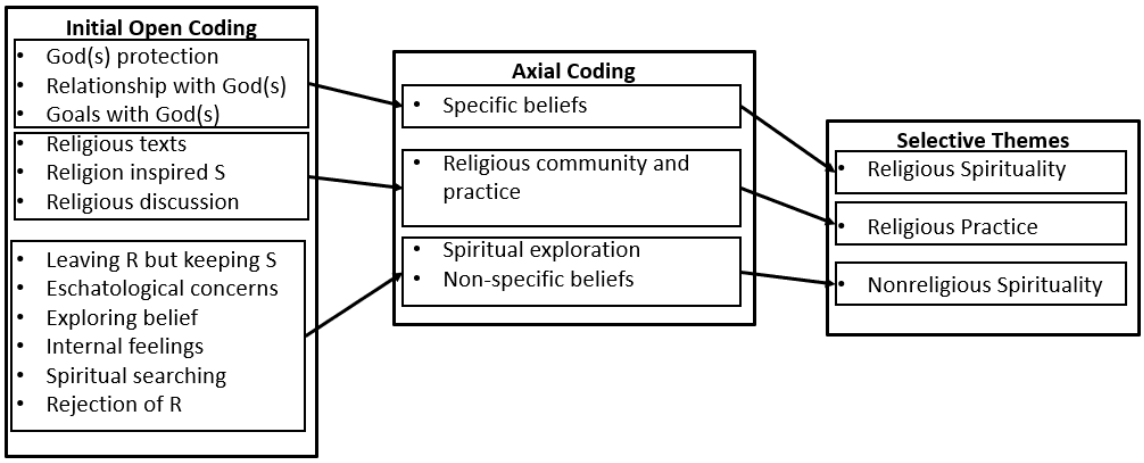
Note: * Q2 had two parts, one for each R and S, the values in this table represent the mean response rate between the two questions.

Qualitative Questions 1 and 2

Question 1 and Question 2 concerned participants' description of their R/S and how their R/S had changed since childhood. Qualitative thematic analysis (Braun & Clarke, 2012) was used to analyze the responses of participants, using open, axial, and selective coding (Williams & Moser, 2019). Given the large number of responses ($n >$ 290) for each qualitative question, not all answers were coded. Responses were randomized and explored until no new codes emerged. Responses to qualitative questions on why participants chose religious/not religious, spiritual/not spiritual, and why they changed R/S or stayed the same were reviewed using open coding and an initial code list of 12 codes was developed (see Figure 19). After testing this code list, some were collapsed into one another through axial coding, resulting in 4 codes. These 4 codes were further reduced, through selective coding, which resulted in three major emerging themes: *religious spirituality*, *nonreligious spirituality,* and *religious practice*. It should be noted that these are not the same as the grouping variables that were used in quantitative data collection.

Figure 19

The Process of Open, Axial, and Selective Coding for Definitions of R/S



Religious Spirituality. Many religious participants described their spirituality as being driven by their relationship with a God or gods, inspired by their religious practices, encouraged through their discussions with likeminded individuals, and coming from religious practices. Many derived a sense of safety and protection from these specific higher powers, whom they reported having a strong connection and relationship with, which also inspired them to respect the rules and boundaries set by their deities.

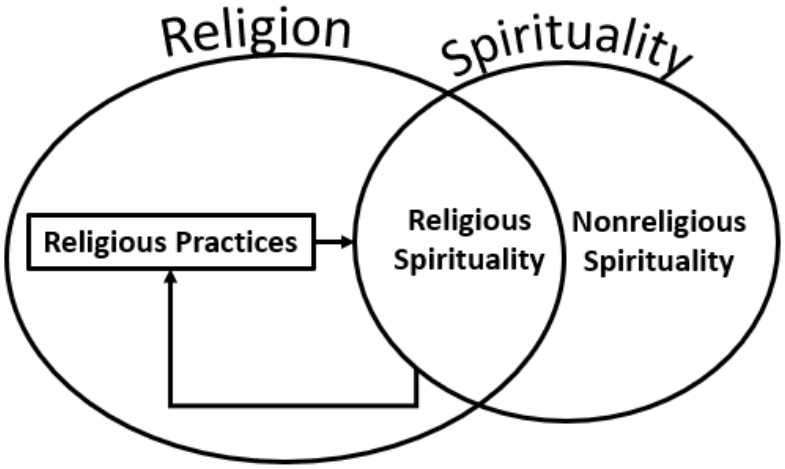
> [My religion and spirituality were explored] by studying scriptural texts, and spending time with like minded people sharing knowledge about scriptural passages and their experiences with the supernatural ... experience and time spent on divine things such as prayers, fasting, retreats and meditation. Sometimes these things are done alone and other times with others.

Religious spirituality, in its very essence, is spiritual beliefs (belief in god(s), afterlife, etc.) which are specific in nature (specific god(s), specific afterlife, etc.). In other words, religious spirituality adds specificity to spirituality, something that those who are

nonreligious do not have. This specific spirituality differs from the spirituality discussed in other parts of this thesis, which were more broad references to one's belief (see Figure 20).

Figure 20

Model of Religion and Spirituality Themes



Nonreligious Spirituality. Non-religious spirituality is a more free-flowing form of spirituality. Many non-religious spiritual individuals defined their spirituality as a search for meaning, understanding, or a general exploration. This form of spirituality is not bound by religious ideas, doctrines, practices, or relationships with deities, which is very explicitly stated by some individuals, but is sometimes inspired by past religious involvement. Many individuals indicated that they had turned away from religion but maintained their spirituality, similar to McLaughlin et al.'s (2020) idea of the "religious dones" or Batson's (1976) idea of religious quest. This, sometimes, arises as a broken relationship with a deity:

> I began going to a bible study/worship night but I struggled severely with my mental health and the idea that if there is a God, why am I still struggling so much? Does He not love me? Am I not worthy enough? The pandemic hit and I began to see a shift in who I thought was God; I did not see Him. I felt like I lost everything the minute I questioned my fundamental belief in Him. Instead of being religious, I am now spiritual. Do I still believe in God or a higher power? Yes, but I do not know to what degree.

Nonreligious spirituality is, essentially, the belief in higher powers, afterlife, interconnectedness, or other elements of spirituality, without the specificity of religion. In other words, nonreligious spirituality lacks a specific nature of belief, without specific guidance, direction, or others with a shared belief.

Religious Practice. Religious practice was the third emergent theme from participants' descriptions of their religion and spirituality. Religious practice refers to all of the religious elements that are not explicitly spiritual, such as religious community, scripture, and attending church. While many participants described their practice simultaneously with descriptions of their belief, practices stood out as a unique component of religion.

> As I grew older, I began to seek out and explore my own religion by reading various books and articles, attending lectures and seminars, participating in religious retreats and workshops, practicing meditations and mindfulness techniques and building meaningful relationships with peers and mentors who have similar interests.

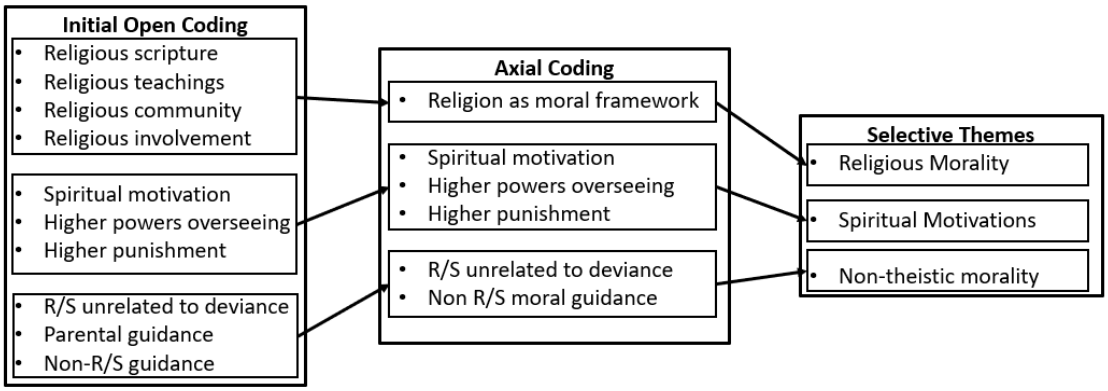
Overall, religious practices were described as important to many individuals and often described as a means of strengthening one's *religious spirituality* (connection with god(s), belief in afterlife, strength of beliefs).

Qualitative Question 3

Question 3 asked participants to reflect on if and how they felt their R/S influenced their deviant behaviours in their lifetime. Participants who reflected on their R/S status and its association with their engagement in deviance provided a unique insight into how the individual feels these ideas are connected. Qualitative thematic analysis (Braun & Clarke, 2012) and open, selective, and axial coding (Williams & Moser, 2019) was used to analyze the responses of participants. Given the large number of responses ($n > 488$) for each qualitative question, not all answers were coded. Responses were randomized and explored until no new codes emerged. Responses to qualitative questions on how an individual's religion and/or spirituality influenced their deviance were reviewed through open coding and 12 codes were identified (see Figure 21). After testing this code list, some were collapsed into one another through axial coding, resulting in 6 codes. These 6 codes were further reduced, through selective coding, which resulted in three major emerging themes: *religious morality*, *spiritual motivations*, and *non-theistic morality* (see Figure 22).

Figure 21

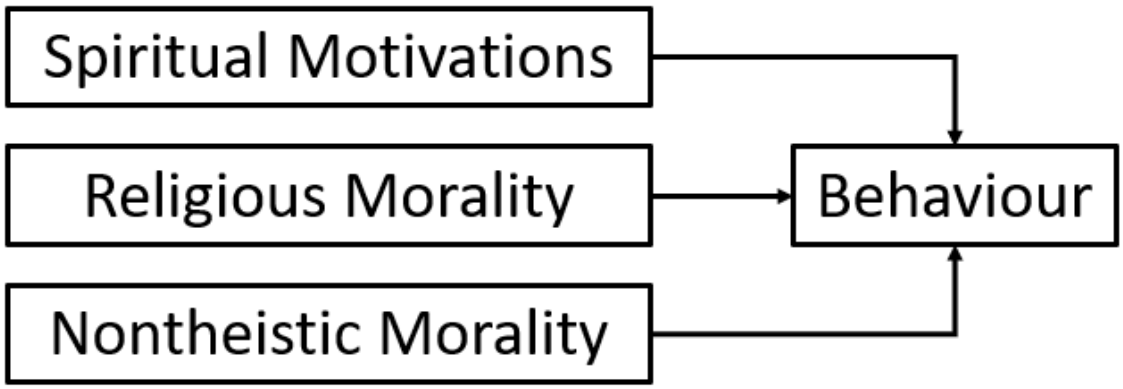
The Process of Open, Axial, and Selective Coding for R/S and Deviance



Religious Morality. Religious morality refers to specific moral motivations or conceptions based on an individual's religion. Many individuals indicated that religion and its teachings provide a moral framework for life through scripture "*... my recent experiences with spirituality/religion have lessened my deviant behaviours because of wrongful actions that are talked about in the Bible*," as well as religious community "*Not participating in deviant behaviors was frowned upon within our family and I believe some of that came from the religious community that we participated in at the time.*" Individuals often described religion as their day-to-day guidance on what is right and what is wrong, how to interact with and treat peers, as well as a responsibility to their relationship with deities and their religious community. In essence, religious morality refers to a set of guiding principles that an individual (1) derives from their religion or religious practices and (2) is motivated to follow based on religious community and relationships with god(s).

Figure 22

Model of Religion, Spirituality, and Deviance Themes



Note: The term "behaviour" is used instead of "deviance" because participants descriptions encapsulated influence of behaviours beyond deviance.

Spiritual Motivations. Spiritual motivations refer to the spiritual factors that individuals described as motivating their behaviours. In other words, spiritual motivations are motivations to behave a certain way because of spiritual commitments, beliefs, concerns, or relationships. For example, many individuals referred to their relationship with god(s) as a motivating factor for their behaviour "*God is all-knowing so even if I could hide my 'sins' from my family, God would know what I did.*" Other individuals referred to their concerns about the afterlife, though not always specific "*I believe that my own morals and goals and the possibility of a higher god influence my deviant behaviours.*" Spiritual motivations are driven by spiritual factors, such as higher powers, punishments, or connectedness amongst humanity, though they are not specifically religious.

Nontheistic Morality. Nontheistic morality was the third theme emerging from individuals' description of how religion and spirituality influenced their behaviours,

mostly from those who were neither religious nor spiritual. Nontheistic morality refers to the moral motivations that arise from non-religious and non-spiritual sources, though these sources were not always discussed by participants. For example, many individuals described their motivations to be nondeviant as *not* religious *nor* spiritual but did not elaborate on where their motivations came from.

> *No. I believe I was raised to be a good person and I rarely do anything deviant as I have strong morals and know what is right and wrong without the influence of religion or spirituality.*

While further elaboration on this theme could arise from individual interviews, the form of qualitative data collection used in this study limited the depth of this theme.

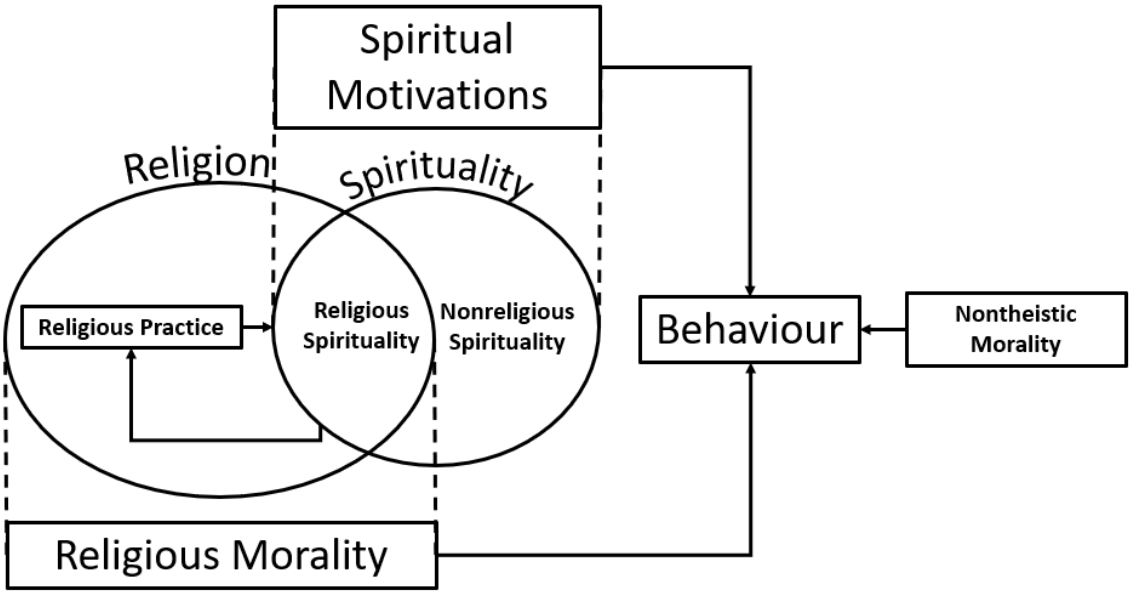
Resulting Model

The resulting thematic model (Figure 23) integrates and illustrates how the emergent themes work together to describe participants' religion, spirituality, and behaviour. *Religion* consists both of (1) nonspiritual components, such as practices and community and (2) spiritual components, such as a relationship with specific god(s) and belief in specific afterlives. *Spirituality* consists of both *religious spirituality*, defined in the previous sentence, and *nonreligious spirituality*, a belief in higher powers, afterlives, and other spiritual elements without the specificity provided by religion. *Religious morality* is derived from religion, both in terms of *religious spirituality* and *religious practice*. *Spiritual motivations* are drawn from both *religious spirituality*, such as the motivation to please specific god(s), and *nonreligious spirituality*, such as the fear of non-specific higher powers or afterlife. *Spiritual motivations* and *religious morality*, then,

influence an individual's behaviour. While these elements have been discussed individually, their respective connections in the presented model are discussed. Another source of behaviour motivation, *nontheistic morality*, was also identified and is discussed.

Figure 23

Integrated Thematic Model of Religion, Spirituality, and Behaviour



Religion and Religious Morality. There are many sources of morality, as previously discussed, but *religion* serves as a unique source, with two major components contributing to *religious morality*: *religious practices* and *religious spirituality* (Figure 24). While many identified the broader theme of religion (the "religion" portion of the Venn diagram) encouraging certain moral beliefs, "Being religious … entails being morally upright," others were more specific about the sources of moral guidance that was within their religion (the "religious practice" and "religious spirituality" portions of the Venn diagram). *Religious practices*, such as attending church, regularly interfacing with

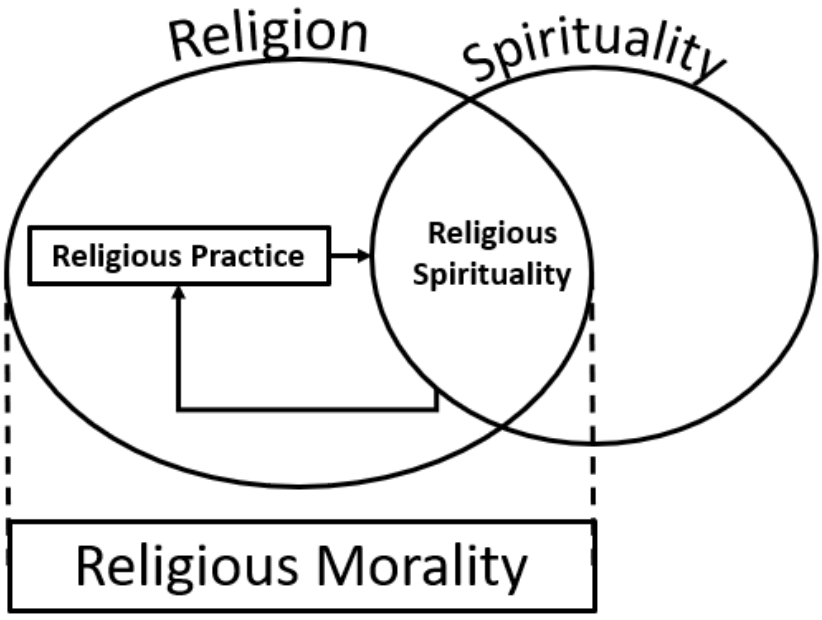
other members of a religion, attending camps and workshops as a part of religion, and reading scripture are just some of the ways individuals described their religion influencing their moral ideas. *Religious practices* influence ideas of morality, through reading scripture, attending church and learning about religion-specific morals, networking, and other means of practice. It is through these combinations of practice that both teach and encourage moral ideas and, to some extent, staying true to those ideas. *Religious spirituality*, on the other hand, encompasses belief, a relationship with a deity, a connectedness to specific higher powers. Through *religious spirituality*, these moral ideas are strengthened because of a deepened commitment to one's religion. In other words, *religious spirituality* encourages *religious morality* because the belief in a specific higher power, afterlife, etc., encourages and deepens the moral ideas learned from *religious practice*.

> *I am striving to have a relationship with God, there are certain things that I do my best not to do since it is unlawful to do them.*

When separated, *religious practice* can encourage moral ideas and *religious spirituality* can engrain these ideas, but together, *religious practice* and *religious spirituality* both teach and engrain moral ideas. *Religious morality*, as a result, influences behaviour.

Figure 24

Religion and Religious Morality Model



Religious Morality and Behaviour. *Religious morality* influences behaviours (Figure 25) by providing a schema of how individuals should interact with the world. Moral frameworks, such as the 10 Commandments in Christianity, arose in participants responses and were described as the guidelines by which they live their lives.

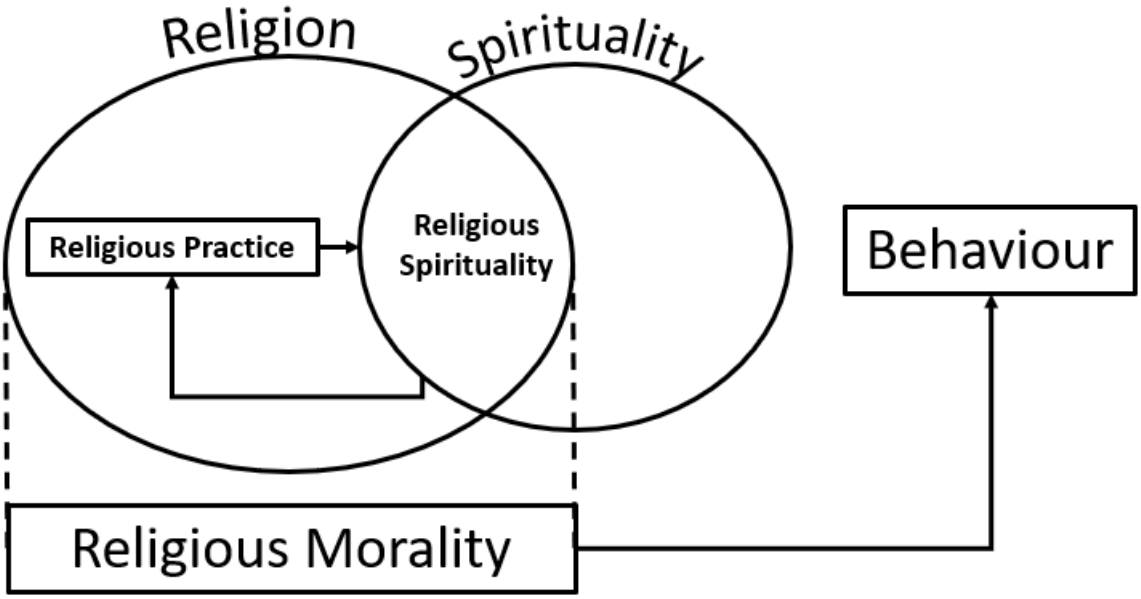
> *Growing up and living by the 10 Commandments has influenced my actions within the world. Deviant behaviours such as stealing or lying were heavily influenced by religion and to this day even though I may have broken the rules a couple of times I live by these morals.*

These constructs create a framework of what is right and wrong. The effect this framework has on behaviour is strengthened by the community and higher powers that one relates oneself to: *"... my religious community, and God would be disappointed in me if I did those things.*" *Religious morality*, effectively, modifies behaviour by the combined

moral framework and relationships (with deities and community) it is associated with. Moral frameworks are not explicit motivators, though, and many people have strong morals that they violate. Motivating factors, which is where much of the theory on deviance focuses on, ultimately decide how strict one follows their own moral frameworks, which is where *spiritual motivations* come into play.

Figure 25

Religious Morality and Behaviour Model

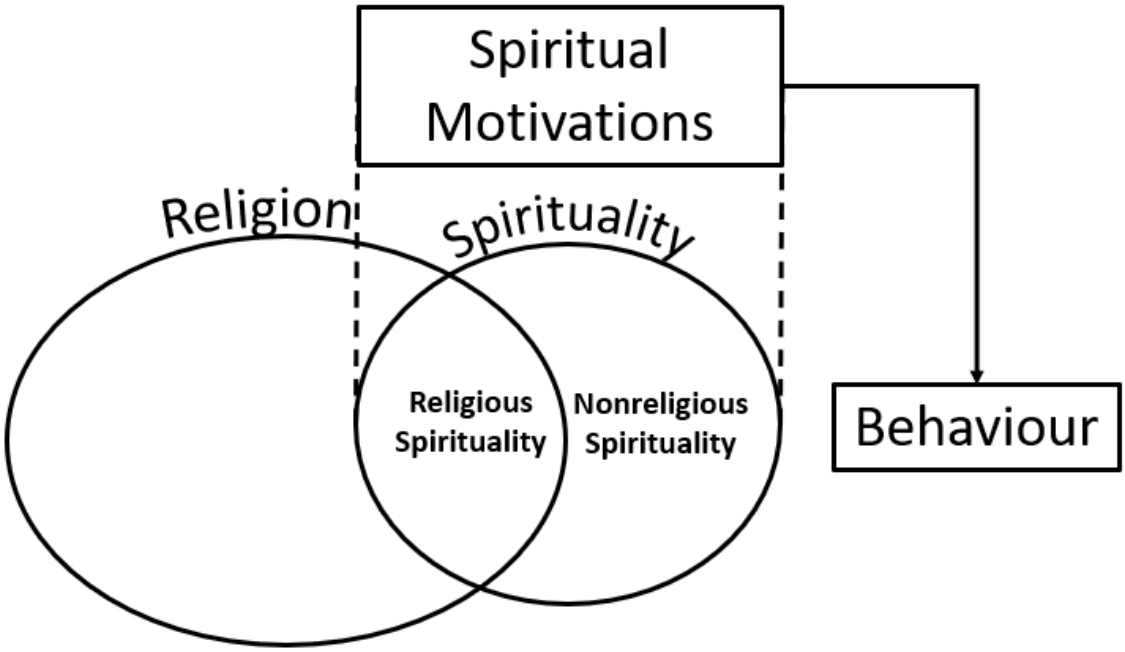


Spirituality and Spiritual Motivations. *Spiritual motivations* are spiritual factors (deities, higher powers, afterlife, etc.) that motivate or modify behaviour and are rooted in either *religious* or *nonreligious* sources. The former, *religious spirituality*, motivates behaviour through relationship with deities (note the overlap with *religious morality*, seen in Figure 23) or belief in a specific afterlife (e.g., Heaven/Hell). *Religious spirituality*'s connection with *spiritual motivations* exists through things such as fearing a punishing god, "*The worry of being watched by God and judged is always in mind*," or living up to a

god's image, *"…simply imagining what Christ would have done, if he were in a situation.*" The connection between *nonreligious spirituality* is similar, in that it modifies behaviour, but different because it is a more unguided source of motivation: "*I don't know I got into astrology and tarot and past lives and soul ties and shit like that, but I am not 100% convinced yet.*" In other words, *nonreligious spirituality* leads individuals to act differently but without the guidance provided by religion, often expressed as uncertainty: "*I am extremely superstitious and believe what goes around, comes around. I believe in interconnectedness, I am just unsure of how we are connected*," or a wandering exploration between different spiritual ideas: "*I read a lot about Tarot and watched a lot of videos about spiritual topics on YouTube.*" Though *nonreligious spirituality* was still described as a motivator of behaviour, despite this sometimes-described lack of direction: "*I believe that … the possibility of a higher god influences my deviant behaviours.*" Overall, spirituality, regardless of whether it is religious or nonreligious in nature, motivates a change in behaviour through concern for afterlife, relationship with or fear of deities, and a feeling of interconnectedness. *Spiritual motivators*, with the inclusion of *religious morality* and the overall model, leads to different effects on behaviour.

Figure 26

Spirituality and Spiritual Motivation Model



Spiritual Motivations, Religious Morality, and Behaviour. The full model, seen in Figure 23, identifies the unique role religion plays in motivating behaviour (or discouraging deviance). *Spiritual motivations* and *religious morality* both play a role in modifying behaviour. However, when *spiritual motivations* and *religious morality* occur together, that is, when one has morals derived from religion *and* spiritual guidance and motivation *from* that religion, the connection to behaviour is much stronger. Participants often described their religion as both a source of morals *and* their relationship with deities or beliefs in afterlife as concurrent modifiers of their behaviour:

> *At times when I do give in to engaging in deviant behaviours, I feel guilty and feel like I am not myself that something has taken over my moral reasonings. I feel deep regret after committing deviant behaviors because I know that these actions*

> *go against what I believe in. Recently, I have had the urge to go to confession and ask for forgiveness from God.*

Others described breaking free from religion as a motivator of rebellion.

> *I do not believe that my past religious experiences have influenced my behaviour however it did lead to more rebellion in my late teens – being able to do what I wanted rather than what 'Gods plan' for me was.*

Alone, *religious morality* serves as another source of moral ideas, not much different from other sources of morality. When paired with the specific *spiritual motivations* of religion, this morality is strengthened through both positive feelings (respecting or pleasing god(s), appreciation for the gift of life, looking forward to Heaven/paradise) and negative feelings (fear of punishment, guilt of disappointing or letting down god(s) or religious community). So, while *religious morality* might provide some moral framework, and *spiritual motivations* might provide a motivation to behave differently, it is when these two themes come together that individuals describe a clear and strong effect that their religion and spirituality has on their behaviours. The presented thematic model would suggest that those who are both religious and spiritual would have the strongest deterrent factors, compared to those who are only spiritual (only having the unguided *spiritual motivation*), those who are only religious (only having the *religious morality*), and those who are neither religious nor spiritual.

Nontheistic morality. *Nontheistic morality* was an additional theme identified as a factor of behaviour, which mostly emerged from those who indicated that neither religion nor spirituality had any influence on their behaviours. Some participants felt

quite strongly that their religion and spirituality played no role in their behaviours: "*MY EXPERIENCES WITH SPIRITUALITY DOES NOT EFFECT WHAT I DECIDE TO DO WITH MY LIFE*." Though, this did not achieve as much depth as other themes, which is partly due to the inability of the researcher to follow up with questions. Overall, *nontheistic morality* is a blanket theme that identifies participants' *other* sources of moral ideas and motivations.

Discussion

The primary purpose of the present study was to expand upon and clarify the associations observed between religion, spirituality, and deviant behaviours. To date, research on religion and deviance has had mixed results and inconsistent findings (Burkett & White, 1974; Hirschi & Stark, 1969; Kelly et al., 2015; Schroeder & Frana, 2009; Stark, 1996; Sturgis & Baller, 2012). Research on religion and deviance has sometimes found a negative association (greater religious commitment/involvement associated with less deviance), but the types of deviance vary. Research on deviance and spirituality has yielded more consistent findings, with spirituality and its components (e.g., believing in higher powers, afterlife) being more frequently associated with less deviance (Giordano et al., 2008; Harris, 2003; McLaughlin et al., 2020; Ross, 1994; Shariff & Rhemtulla, 2012). The primary purpose of this study was to clarify these connections and how they may interact with one another through a few different approaches. Religion can be thought of as having two separate components: practice or engagement and belief. The latter, belief, is often referred to as spirituality. Spirituality does not require religious involvement, one can hold beliefs that are nonspecific (e.g., agnostic theism). The present study used this approach, separating religion and

spirituality, to explore their separate and combined associations with deviant behaviour through a combination of dichotomous and continuous measures of religiosity and spirituality. It was expected that both religion and spirituality would be negatively associated with deviance; however, spirituality, a large part of religion but not unique to it, would be primarily responsible for the relationship between religion and deviance.

The secondary purpose of the present study was to explore the changes in religion, spirituality, and deviance between childhood and young adulthood. While substantial research has identified significant changes in deviant behaviours (Amoateng & Bahr, 1986; Bongers et al., 2003) and religion and spirituality (Bridges & Moore, 2002; Bryant et al., 2003; Walker et al., 2009) across development and young adulthood, very few have considered them together. To explore how changes in religion, spirituality across time would be differentially associated with deviance, participants responded to some measures for two time points: "around the age of 10" and currently. While not the primary purpose of the present study, this was still important to consider because of the changes in religion and spirituality across development (Bridges & Moore, 2002; Bryant et al., 2003; Walker et al., 2009), changes in deviance across development (Amoateng & Bahr, 1986; Bongers et al., 2003), and the lack of consideration of these differences in research concerning religion and deviance in youth and young adults.

The third purpose of this study was to augment the quantitative study of these associations using qualitative methodology. While some research on religion or spirituality and deviance has used qualitative methods (Giordano et al., 2008), qualitative research on these topics remains scarce. This portion of the study asked participants to describe their religion, spirituality, how they have developed them across their life, and

how they feel these ideas may (or may not) have influenced their deviant behaviours. This approach added valuable context to the quantitative data and the combined results are discussed.

Prevalence of Religion, Spirituality, and Deviance

The proportions of RS/NRS/RNS/NRNS in the current study were very similar to Canada's population (Angus Reid Institute, 2015). The largest group was NRS (39% in the present sample and in Canada), followed by NRNS (31.5% present sample, 27% Canada), then RS (25% present sample, 24% Canada), with RNS being the smallest group (4% present sample, 10% Canada). While Chi-square goodness of fit tests indicated there was a significant difference in NRNS and RNS proportions in the present sample compared to the Canadian population (Angus Reid Institute, 2015), the differences were minimal and it was likely due to Chi-square's high sensitivity to larger samples (Bearden et al., 1982). Alternatively, the Canadian population has had significant shifts in religion and spiritual identities in the past few decades, which might be why the Chi Square goodness of fit test indicated that there were differences between the present study's proportions and the Canadian population. Given Canada's rapidly changing religion and spirituality landscape towards declining levels of religion (Hackett et al., 2017; Pew Research Center, 2013), it is possible the Canada population data used for comparison is not current enough. Overall, R/S categorization was as expected with minor deviations from Canadian population. It is worth noting that the religious non-spiritual group (RNS) remained in analyses but the mean estimates were not as stable due to a much lower *n* compared to other groups. Results regarding RNS should be interpreted with caution,

other groups were much more robust, further discussion on this limitation is in the Methodological Considerations section.

The NDS subscales were significantly positively skewed, with very low levels of deviance observed. Some degree of positive skewness was expected given the sample (undergraduate university students), though the levels were quite extreme in the present study, with Z-skew scores as high as 33. Past research with comparable populations has also had similar skewness and means (Vazsonyi et al., 2001). The highest levels of reported present day deviance were in the alcohol (M = 2.37, SD = 1.10), school misconduct (M = 1.73, SD = .59), and drug use subscales (M = 1.72, SD = .76), a similar pattern was observed by Vazsonyi and colleagues (2001). Similarly, the lowest levels of deviance observed in the present study, assault (M = 1.18, SD = .32), theft (M = 1.20, SD = .44), and vandalism (M = 1.24, SD = .44), also matched Vazsonyi and colleagues (2001). Deviant behaviours in Canadian youth are not extremely high (Canadian Centre for Justice Statistics, 2015; Public Safety Canada, 2022), so deviance data was *conceptually* as expected: most undergraduate university students are not spending their evenings stealing, assaulting, and dealing drugs, so the majority of the sample were on the low-end of the NDS subscales and composite. Many undergraduate students do engage in heavy drinking (Bonar et al., 2021) and some drug use (Arria et al., 2017), which would explain the more frequently endorsed *alcohol* and *drug use* subscales. While the deviance data was "normal" in terms of the sample, it was not normally distributed. The lack of normal distribution introduced issues with some of the planned analyses, which were replaced or supplemented with non-parametric tests because of the extreme degree of non-normality. Similar patterns of results were observed in both parametric and

nonparametric tests, lending confidence to these findings. A note of caution is warranted regarding *Theft* and *Assault* variables: these subscales had the least variability in scores due to floor effects, and they also had the lowest reliabilities in the present sample (alphas of .62 and .47). The present study's quantitative results for these two variables should be interpreted cautiously, given these deviant behaviours were not adequately represented in the present sample.

Associations of Religion and Spirituality with Deviance

Religion and Deviance

Those who were religious were expected to report less frequent deviance on the NDS subscales and composite compared to the nonreligious (Hypothesis 2). This hypothesis was for the most part supported. Those who categorized themselves as religious or scored higher on religious practice measures reported less frequent deviant behaviours compared to the nonreligious. Not all types of deviant behaviours were significantly lower in the religious, though; those who were religious reported less problematic alcohol consumption and illicit drug use, with small-medium effect sizes (d = 0.44 and 0.37). Importantly, this association was corroborated using both dichotomous (R vs. NR groups main effect) and continuous measures (negative bivariate correlations between religious practices and deviant behaviours). Religious practices were significantly negatively correlated with overall level of deviance (r = -.22), as well as with alcohol use (r = -.30), drug use (r = -.20), school misconduct (r = -.18), and general deviance (r = -.17). Even after controlling for known predictors of deviance (age, gender, and whether one is a visible minority), the negative association between religious practices and overall level of deviant behaviours remained significant (support for

Hypothesis 3a). The small-medium effect sizes observed in the present study are comparable to previous literature on the religion-deviance relationship, which has identified a mean effect size of r = .12 (*SD* = .09; Baier & Wright, 2001) or d = 0.24 (*SD* = 0.18)[2]. In other words, the effect sizes observed in the present study ranged from below to above the average effect size in past literature.

Past literature on religion and deviance has primarily looked at drug or alcohol abuse (Amoateng & Bahr, 1986; Cochran & Akers, 1989; Harris, 2003; Rivera et al., 2018) or, when looking at more areas of deviance (such as theft, vandalism, etc.), has found greater associations with drug use (Ellis, 2002) compared to other types of deviant behaviours. Much of the existing literature has used stronger associations with drug or alcohol abuse as evidence for the anti-asceticism hypothesis, which states that religion deters *mala prohibita*, behaviours which are illegal but not morally wrong, more than *mala in se*, behaviours which are universally morally wrong (Miller & Vuolo, 2018; Sturgis & Baller, 2012). The present study observed similar findings as past literature that tested the anti-asceticism hypothesis: those who were religious (either binary or on a continuous scale) indicated significantly less drug and alcohol use compared to their nonreligious peers. In contrast, religion was not associated with more severe behaviours like theft, assault, or vandalism, which were already extremely low in this sample. The lack of association between religion and cyber deviance may have been related to the measurement itself (cyber deviance was an added subscale).

[2] Converted using an effect size conversion formula (Ruscio, 2008).

With respect to cyber deviance and school misconduct, it is possible that cyber deviance is not universally viewed as "wrong" by individuals because it is a relatively new form of deviance (compared to assault, theft, etc.). If a set of behaviours are not wholly viewed by a community (such as a religious community) as wrong (such as school misconduct or cyber deviance) its possible that these behaviours are less likely to be discouraged by engagement in that community. In other words, school misconduct and cyber deviance were of the weaker constructs in the NDS and their lack of association with religion may be due to their lack of fit with the present study's definition of deviance: widely accepted violations of group norms.

Spirituality and Deviance

Those who were spiritual were expected to report less frequent deviance compared to those who were nonspiritual (H1 and H3a), but this was not found. This null result was corroborated using both dichotomous (nonsignificant S vs. NS groups main effect) and continuous measures (nonsignificant bivariate correlations between STS-24 scales and deviant behaviours). In other words, both the factorial MANOVA and bivariate correlations failed to reach significance, indicating that spirituality alone is unassociated with deviant behaviours as measured in the present study. This finding was unexpected, given past literature that has identified consistently negative associations between spiritual components and deviant behaviours (Atkinson & Bourrat, 2011; DeBono et al., 2016; McKay et al., 2011; Shariff & Norenzayan, 2011). Direct comparison of effect sizes and statistical results of past literature with the present findings is challenging because no literature has explored spirituality (as defined in the present study) and its associations with deviance. However, the effect sizes observed in past literature that

explored the components of spirituality, such as belief in afterlife punishment, having a spirit (Atkinson & Bourrat, 2011), or having different views on the nature of god (DeBono et al., 2016; Shariff & Norenzayan, 2011), often range from small to small-medium. Significant associations, with the sample size of the present study, were expected given effect sizes observed in past literature. It is possible that the chosen operationalization of spirituality (a dichotomous variable and the STS-24) did not adequately capture the same elements of previous literature. For example, the STS-24 does not have explicit questions about the nature of god(s) or afterlife (Piedmont, 2001). Similarly, while the binary measure intended to capture *any* spiritual belief, it is possible individuals referred to lay definitions when reading the question, which are subject to significant variation and meaning (Cragun et al., 2015). It is possible that using a different measurement, such as the Nonreligious-Nonspiritual Scale (Cragun et al., 2015), may yield the expected outcomes.

To further understand these unexpected findings, the interaction of religion and spirituality and the qualitative model presented may explain why no differences were observed in the simple spiritual/nonspiritual comparisons. The interaction between R/S in the factorial MANOVA was significant, indicating that the association between spirituality and deviance was altered by religious status. While the main effects of spirituality in the factorial MANOVA were non-significant, the interaction of R and S were significant when predicting certain deviant behaviours. Overall, those who were spiritual *and* religious (RS) showed significantly lower levels of deviance than those who were spiritual but not religious (NRS) in the *drug use*, *alcohol use*, and *theft* subscales of the NDS. In the case of *alcohol*, there were differences in the non-spiritually religious

(RNS) and nonreligious (NRNS), though the effect size was much smaller ($\eta_p^2 = .007$) compared to the differences between the religious and spiritual (RS) and the nonreligious and spiritual ($\eta_p^2 = .031$). These findings suggest that spirituality is associated with less deviance only when combined with religion. These findings also suggest that the protective effects of religious practices are enhanced when combined with spiritual beliefs. While these interactions were not anticipated, they provided interesting and unique insight into the associations between R/S and deviance.

It appears that spirituality is associated with less frequent deviance, provided the structure or guiding nature of religion, but is relatively unassociated with deviance when an individual is nonreligious. One explanation for this finding might be in the liminality or unguided nature of "spirituality." Spirituality, on its own, refers to belief in higher powers, afterlife, interconnectedness, etc., but this belief is not guided. Comparatively, those who are religious *and* spiritual have the teachings of religion to guide their spirituality. This guidance provided by religious practice may give a greater cause to spirituality, which may have reciprocal effects on behaviour. These findings also line up with some past literature, which has identified differences in deviance in different ideas of the nature of god(s; DeBono et al., 2016; Shariff & Norenzayan, 2011). In other words, being aware of a god who is more punishing is associated with less deviance than being aware of a god who is more forgiving (DeBono et al., 2016; Shariff & Norenzayan, 2011). The idea of there being two distinct flavours of spiritual beliefs is also supported by the resulting qualitative model that emerged in the present study.

Qualitative Insights: "Being a Christian … is a relationship with God."

A novel objective of the present study was to develop an understanding of how participants viewed and described their own religion, spirituality, and how they felt deviant behaviours were (or were not) influenced by these beliefs and practices. There is plenty debate about how religion and spirituality should be defined (Hill et al., 2000; Hill & Hood, 1999; Pargament, 1999; Pargament et al., 2013) though very little research has used qualitative methods to understand how individuals define and relate these concepts. Further, no literature was found to have explored religion, spirituality, and deviance using qualitative methods. This objective was explored through two research questions, pertaining to how individuals define their religion and spirituality, how it has changed over their lifetime, and how they feel it has influenced their behaviours. The resulting data were analysed using thematic analysis and open, axial, and selective coding. The emerging themes and thematic model provide valuable insight into how religion and spirituality may influence behaviours.

Two forms of spirituality were identified amongst participant responses: *religious spirituality* and *nonreligious spirituality*. *Religious spirituality* refers to spiritual beliefs that are specific in nature (specific god(s), afterlives, etc.); *nonreligious spirituality* refers to spiritual beliefs that are nonspecific in nature (e.g., believing that there may be a god but not knowing *what* or *who* that god is). These forms of spirituality are similar, in that they both require a belief in certain spiritual elements, but different, in that *religious spirituality* is guided and *nonreligious spirituality* is less restrictive. In other words, *religious spirituality* has a framework of meaning applied to it, a higher power to worship, an afterlife to look forward to, and even the feeling of deities having a plan for

individuals (e.g., many participants referred to “God’s plan” for them). *Nonreligious spirituality* lacks this structure, often characterized by belief without a cause, uncertainty about beliefs, afterlife, or whether the higher powers that exist care about the individual. The structure that exists in *religious spirituality* was often described as coming from *religious practice*, which was the third theme emerging from participants’ descriptions of their religion and spirituality.

Religious practices refer to the non-spiritual elements of religion: attending religious services, reading scripture, and discussing faith with other people. These practices serve the purpose of strengthening one’s spirituality or connection with higher powers, through worship, commitment, and engagement. These practices also encourage the learning of what is expected from them by their religious community or what is required by their deities. These practices provide structure to spirituality, which is what helps differentiate *religious spirituality* and *nonreligious spirituality*.

Two major themes emerged from participants’ descriptions of the influence that religion and spirituality had on their deviance: *religious morality* and *spiritual motivations*. Of note, this was not presupposed, the question asked “Thinking back to the questions about deviant behaviours, do you feel your experiences with spirituality and/or religion have influenced whether or not you’ve engaged in these behaviours? If so, how?”. *Religious morality* refers to a set of morals, or behavioural norms, derived from religion, its practices, and beliefs (e.g., thou shall not kill). *Spiritual motivations* refers to the influence that spiritual beliefs have on behaviour (e.g., a fear of eternal punishment may discourage deviance). Separately, these constructs may have some influence on behaviour, but this relationship is weaker than when they are paired, which is consistent

with the observed interactions in the quantitative results. In other words, those who are spiritually motivated to behave a certain way but who lack the structure of religious morals (e.g., belief in higher power but not a specific one) are less inclined to alter their behaviour; similarly, those who hold religious morals without the spiritual motivations (e.g., knowing the sins of a religion but not believing in the associated deities or afterlife) are also less inclined to alter their behaviour based on religion or spirituality.

Taken together, these ideas of *religious spirituality*, *nonreligious spirituality*, *religious morality*, *religious practice*, and *spiritual motivations* provide a unique understanding of how these constructs may be related. Those who hold specific beliefs, guided by religion described greater deterrent effects of religion and spirituality than did those who only described religion or spirituality as a deterrent. Future research should aim to replicate and test these concepts. These themes and their respective connections may also help provide insight into the quantitative results of the present study, as well as provide some groundwork for future research.

Theories of Deviance Revisited

Deterrence theory, rational choice theory, and social bonding theory were all used to formulate hypotheses 1 – 3, where spirituality broadly defined (which can be present in both religious and nonreligious populations) was predicted to play a larger role in deviance than religious practice alone. However, the results of the present study call for a narrower interpretation of these theories, where deviance is associated with specific religious beliefs and morals, and not necessarily with unguided nonreligious spirituality. Deterrence theory posits that individuals are deterred from deviant acts based on the perceived punishment and the chance of that punishment (Michaels & Miethe, 1989). An

individual who is spiritual (believes in higher powers, afterlife, etc.) but not religious may not perceive the risks of the afterlife as seriously as someone who is also religious. For example, believing in an unspecified afterlife might not be as deterring as believing in a specific afterlife (e.g., eternal damnation to Hell). Rational choice theory posits that individuals are deterred from deviance based on the perceived punishment and risk of punishment in balance with the possible rewards of deviance (Michaels & Miethe, 1989). Rational choice theory can be thought of as a scale on which one balances the rewards of an action with the potential risks. The reward of stealing can be high, but so is the risk. In terms of religious and spiritual individuals, the "risk" side of the scale has the addition of violating the rules of one's religion or being punished by a higher power (in addition to earthly punishments; Harris, 2003). Those who are spiritual without the guidance of religion may not have the same weights of supernatural sanctions on their "risk" side of the scale, which may lead to a different balance of the risk/reward ratio of certain actions.

In addition to these two theories, social bonding theory posits that there are four major social bonds which influence one's engagement in deviant behaviours: *attachment*, which refers to one's bonds with family; *commitment*, which refers to one's commitment to other aspects of life, such as work or religion; *involvement*, which refers to one's involvement with commitments, such as religion or athletics; and *belief*, which refers to one's belief or acceptance of social rules and definitions of "right" and "wrong," as well as respect for authority (Michaels & Miethe, 1989). This theory, then, would explain why those who are committed, involved, and believe in their religious teachings should have even greater deterrence from deviant behaviours, compared to those who are spiritual but do not have religion. It is also possible that those who are spiritual but do not engage in

religion have fewer strong social bonds, or possibly have unmet social bonds, compared to their religious and spiritual peers.

Religion, Spirituality, and Deviance Across Development

A secondary objective of this study was to explore whether the prevalence and associations between religion, spirituality, and deviance changed across development, between childhood and young adulthood. This is an important consideration because many studies on religion, spirituality, and deviance focus on youth (Burkett & White, 1974; Ellis, 2002; Hirschi & Stark, 1969; Stark, 1996) or adults (Kerley et al., 2011; Tsang & Lowe, 2019) but no literature has explored whether there are different associations across time. If different associations between religion, spirituality, and deviance are observed across time, this should be considered when interpreting results of other research. To this end, measures of deviance, religious practices, and R/S self-categorization were administered twice in the present study, once for the present day and once for "around age 10".

Significant differences in R/S categorization were observed between childhood and present day. There was a significant decrease in religious status (RS and RNS) and a significant increase in both nonreligious categories (NRS and NRNS). Overall, participants were less religious (childhood R 64.2%; present day R 46.9%) and more spiritual (childhood S 58.7%; present day S 64.2%) in present day compared to their childhood. This was expected, as many young adults go through large shifts in their religious and spiritual statuses from childhood to young adulthood (Bridges & Moore, 2002; Bryant et al., 2003; Walker et al., 2009). This shift may also lend some support to previous findings of the liminality of S without R – a notable number of participants left

religion or became spiritual from childhood to present day. Fifty percent of participants who were R in childhood changed to NR in present day and 45% of participants who were NS in childhood became S in present day. These findings are also in line with national (Angus Reid Institute, 2015; Pew Research Center, 2013; Wilkins-Laflamme, 2022) and international (Hackett et al., 2012, 2017; Lipka & Gecewicz, 2017; Pew Research Center, 2014) trends of religion and spirituality, which indicate a significant shift away from religion and towards individual spirituality in recent years.

Frequency of deviance in childhood was much lower than levels of deviance in present day, which was expected. Similar to the low levels of deviance in present day measures, the same participants are not of particular high risk for deviant behaviours and the rates of youth criminal offending are quite low in Canada (Canadian Centre for Justice Statistics, 2015; Public Safety Canada, 2022). The present study tried to account for these potentially low levels by using a measure that captures more "normal" deviant behaviours in childhood, such as school misconduct or cyber deviance. Overall, the levels of deviance in childhood were lower than present day and low in general, which was expected. It should be noted that these data were heavily skewed, similar to the present day data, and the results should be taken with a similar caution.

Similar to the present day findings, results of the parametric tests indicated that there were no differences in deviance between spiritual and nonspiritual children. Unlike the present day findings, no significant main effects were observed in religious compared to the nonreligious children. While the omnibus tests were not significant, some interactions in post-hoc tests were. Specifically, spirituality was associated with lower cyber deviance and school misconduct but only among the religious compared to the non-

religious. Given the non-normality of the NDS data, these parametric results should be taken with caution and will not be discussed at length because of their limitations. Nonparametric tests were used to confirm the findings of the factorial MANOVA, but the findings were different: those who were religious reported less *cyber deviance*, *assault* and *general deviance* compared to the nonreligious, those who were spiritual reported greater levels of *cyber deviance*¸ *assault*, and *general deviance* than the nonspiritual. Some similarities to the present day findings were observed. Those who were, as children, spiritual *and* religious (RS) reported significantly less *cyber deviance* than those who were not spiritual but religious (RNS), though effect sizes were very small ($\eta_p^2 = .01$). Overall, the inconsistency in findings for childhood should be interpreted with caution and cannot be adequately compared to the present day findings.

Two post-hoc tests were conducted, which explored the associations between changes in R/S statuses and deviance in present day. The goal of these tests was to explore whether the associations between R/S are different for those who have remained R or S compared to those who are no longer R or S, or those who have become R or S. There were no differences between lifelong religious participants (religious in childhood and present day, R.R) and participants who are newly religious (not religious in childhood, religious in present day, NR.R). Those who lost their religion since childhood (religious in childhood, not religious in present day, R.NR) were significantly more deviant overall than those who maintained their religion (R.R). These findings suggest that religion's deterrence of deviance may not require a long commitment and have more to do with how the individual presently defines themselves. In other words, religion may deter deviance similarly in those who are newly religious and lifelong religious. Similar

tests for changes in spirituality were conducted, though no differences were observed across the lifelong spiritual (spiritual in childhood and present day, S.S), those who became spiritual (not spiritual in childhood, spiritual in present day, NS.S), those who lost their spirituality (spiritual in childhood, not in present day, S.NS), and those who were never spiritual (NS.NS).

Qualitative Insights

The qualitative themes identified in the present study are not entirely consistent with the findings in childhood data. Though, this is more likely due to the limitations of the childhood data, and further testing of this specific model is required. The present study relied on retrospective responding of childhood deviance and adult memory of childhood events is often sparse and negative memories are less likely to be stored (Howe, 2013). It is possible participants' recollection of frequencies of deviant behaviours in childhood was not accurate. With that being said, it is possible that the concepts of *religious morality* and *spiritual motivations* had not fully set into participants' beliefs and concepts at a young age. For example: children, even if they understand the morals taught by their religion (*religious morality*) and are motivated to some degree by their spirituality (*spiritual motivations*), may not fully comprehend or understand the risks of their actions or seriousness of consequences. It is well established, both in legal and psychological literature, that children have underdeveloped brains and struggle to understand the gravity of some offences and the consequences (Corrado & Mathesius, 2014; Haines et al., 2021; Mercurio et al., 2020). It is reasonable to assume that religious morals or spiritual beliefs are not significantly different in terms of discouraging rules and potential punishments, which children may not fully comprehend and be deterred by. The

presented qualitative model is still worth exploring in children and may be more rigorously tested through research that specifically intends to test it in children.

Methodological Considerations

Sample Size and Characteristics

The size of the present sample (N = 653), after data cleaning, was just below what was required (N = 704) for the desired power (.80, α = .05). In a 2001 meta-analysis of 60 studies on religion and deviance, studies that had more racial diversity, smaller sample size, and which were more religiously based showed stronger deterrent effects of religion (Baier & Wright, 2001). Sample size was a limitation in the present study, falling into the smaller range of the aforementioned meta-analysis (the smallest being < 100, the largest being > 24,000). Fortunately, Trent University has a racially diverse student population, very close in proportions to Canada's diversity (Rahman & Murdoch, 2015; Statistics Canada, 2016), and this was reflected in the data. It is possible some of the findings would have been different with a more suitable population (such as one more inherently deviant or more at risk for deviant behaviours).

The sample was mostly female (n = 529, 81%) and, in North America, females are generally less deviant than males (Kobayashi et al., 2008). A one-way ANOVA was used to explore any gender differences (non-binary genders excluded because of small sample size). Significant differences were found in subscales but not in the overall deviance measure. Of the significant differences, effect sizes were very small (η^2 = -.001 – .008). These trivial differences were considered non-problematic given their small effect sizes.

Measures

Are You Religious/Are You Spiritual. While plenty of current literature (McLaughlin et al., 2020; Reker, 2003; Speed & Fowler, 2021) and national social surveys (Pew Research Center, 2013, 2014; Smith et al., 2018; Wilkins-Laflamme, 2022) use some basic form of self-categorization of R/S, others have identified potential issues with it (Bryant et al., 2003). Bryant et al. (2003) "identified a substantial overlap between religious behavior and spiritual self-perceptions that was even more pronounced than … anticipated" (p. 738). While the present study used other methods of measuring R/S beyond simple self-categorization, the overlap was still examined in a similar manner: Bryant et al. (2003) found that self-categorizing as both R and S had a correlation of $r = .60$, $p < .01$; the present study found this correlation to be $r = .30$, $p < .01$. Some correlation between R and S is expected, as there are many religious and spiritual (RS) individuals, so this is believed to be normal.

Another potential issue with self-categorization that arose was due to error. Bryant et al. (2003) also pointed out that the overlap they identified between R and S categorization may be a result of first-year undergraduate students not fully understanding the subtle differences between R and S. This concern about participant understanding of the differences between R and S is not unique to this study and has been addressed more recently by others (Cragun et al., 2015). In order to ensure participants had some idea of what the present study meant by R and S, brief descriptions were provided. Below is an example of these descriptions:

1. Do you consider yourself to be a religious person (e.g., devoted to a specific religion, practice a religion, or hold specific religious beliefs)?
2. Do you consider yourself to be a spiritual person (e.g., believe in the supernatural, life after death, karma, or higher planes of consciousness)?

The present study aimed to separate *religious practices* (R) from *belief* (S). However, the wording of question 1 includes "… hold specific religious beliefs," which does not clearly articulate the differences that the present study hoped to capture with the R/S self-categorization. It is worth noting that this might not be as large of a concern as it initially seems, because: those who are RS would still respond "yes" to both questions; those who are NRS would still respond "no" to R and "yes" to S; those who are NRNS would still respond "no" to both questions; *but* those who are RNS may *not* respond "yes" to R. Overall, though, these potential limitations with R/S categorization are of minimal concern with the other religion and spiritual measures in place.

One methodological strength in R/S measurements in the present study is the convergent validity of R/S categorization with the religious practice and STS-24 scales. Those who categorized themselves as religious were predicted to score higher on the religious practice measure than those who were not religious. This was supported with a reasonable effect size ($\eta^2 = .50$). Similarly, those who categorized themselves as spiritual were predicted to score higher on the STS-24 scale than those who were not spiritual. This, too, was supported with a small to moderate effect size on each subscale ($\eta^2 = .10 - .34$). This approach, the combination of more than one religiosity and spirituality scale, is recommended for future literature. Including multiple measures of religion and spirituality may help identify specific differences in association between R/S and

outcomes. At a minimum, using multiple measures of both R and S adds to the strengths of a given study in a field where there are hundreds of different measures of the same constructs.

Normative Deviance Scale. The Normative Deviance Scale (NDS) resulted in data that was more positively skewed than anticipated, though skewed data using this scale is not irregular when looking at normal populations (Vazsonyi et al., 2001). While the data for the NDS were non-normal for both childhood and present day, nonparametric tests that are robust to these violations of normality were used where appropriate. Results, especially with regards to childhood data, should be taken with caution.

The NDS weights each item the same which, when creating a composite of deviance, may be problematic. For example, the *alcohol* subscale focuses on irresponsible alcohol use, which may be considered deviant, but likely less deviant that the *theft* subscale, which includes an item that asks about stealing cars. Weighting alcohol use the same as stealing a car might worsen the floor effect already observed in the data. Future research should give greater consideration to exploring different types of deviant behaviours separately, without weighting "very" deviant behaviours, like car theft, the same as "less" deviant behaviours, such as petty theft. With that being said, some analyses in the present study used the subscales of the NDS, which would not be as susceptible to this issue.

Spiritual Transcendence Scale. The STS-24 is a well-established measure of spirituality (Kapuscinski & Masters, 2010; Piedmont, 1999, 2001), though it is not without its faults. One aspect of spirituality that was expected to play a role in deviant behaviours was a belief in supernatural punishment, which is not entirely captured by the

STS-24 and there are not explicit questions about it. There are items in the STS-24 that may indirectly measure this (e.g., “I believe that death is a doorway to another plane of existence”), but this cannot be evaluated with the current data. Despite this limitation, the AYR/AYS scale included afterlife punishment in its definitions, so it was not entirely unmeasured in the present study.

The *prayer fulfilment* subscale of the STS-24 also presented some issues. While the name of the subscale might suggest a religious practice (prayer) the items are focused more on spiritual behaviours and experiences (e.g., “When in prayer or meditation, I have become oblivious to the events in this world,” or “I have had a spiritual experience where I lost track of where I was or the passage of time.”). Despite this, this subscale, which is also a part of the spiritual composite (*total spirituality*), was significantly higher in those who were *R* but not *S* (the opposite of what was expected) compared to other groups. The other subscales did not show this same trend, and this may have been a result of the low number of people who categorized themselves as RNS (n = 25, 4%).

Piedmont (2001) also identified an overlap, which was missed prior to data collection of the present study, between *prayer fulfilment* (a spiritual subscale) and religious behaviours, such as reading scripture (r = .39), praying (r = .24), and attending church (r = .28). The present study found much higher correlations between the *prayer fulfilment* subscale and items evaluating scripture reading (r = .51, p <.01), prayer (r = .60, p <.01), and church attendance frequency (r = .50, p <.01). Unsurprisingly, the correlation between *prayer fulfilment* and the *religious practices* scale was high (r = .66), which is much stronger than its correlations with the other STS-24 subscales (r = .30 – .47). While these correlations are high, some correlation was anticipated because, as

discussed, religious practices may foster spirituality, so those who engage in more religious practices will see increases in their spiritual beliefs. This direction, though, cannot be implied from the current data. It is possible that *religious spirituality* and *non-religious spirituality* are a further subdivision of R/S, which should be considered in future research. A scale, such as the Non-religious Non-spiritual Scale (NRNSS; Cragun et al., 2015), which better separates religiosity and spirituality, may have been more appropriate for the present study's goals. The STS-24 was not used beyond correlations in the present study because of its lack of correlation with deviance variables. It is possible other spiritual measures may yield different correlations and be more appropriate for the planned analyses of the present study. With that being said, the present study did not use the STS-24 beyond bivariate correlations, so it does not impact the results or findings.

The conceptualization of deviance, in the present study, was different in nature than the conceptualization of spirituality. Deviance, as presently defined and measured, is entirely behavioural (i.e., what the participant has done, is doing, or does). Spirituality, as presently defined and measured, is largely attitudinal (i.e., what the participant believed or believes), though some items in the STS-24 are behavioural. This comparison of deviant behaviours to spiritual beliefs might yield different results than a comparison between attitudes towards deviance (a belief/idea) and spiritual beliefs (also a belief/idea). Similarly, different results may be found when examining spiritual practices (a behaviour) and deviant behaviours (also a behaviour). Future directions should focus on exploring whether there are significant differences between spiritual beliefs and practices, deviant beliefs and behaviours, and whether there are differences when examining beliefs compared to behaviours.

Retrospective Correlational Design

Retrospective responding may have introduced issues in the measurements on both deviance and R/S. The present study relied on participants' recollection of their religion, spirituality, and deviant behaviours as children and in the last few years. This might not have resulted in accurate data because participants may have responded in more socially desirable ways or genuinely could not recall their religious practices, spiritual beliefs, or their deviant behaviours. While this form of measurement is less accurate and lends risk to less honest responding, the present study was limited in time. It was not feasible to follow and evaluate deviance from childhood to young adulthood because of time constraints. Therefore, results for childhood and developmental trends should be interpreted as tentative only. Future research that wishes to replicate or expand on this might aim to use more reliable forms of operationalizing deviance (such as school or criminal records), religious practice (such as considering parental input), and spiritual beliefs (such as collecting data at different time points in life).

The present study was correlational, which means that the findings cannot imply causation. While there is plenty of theory to suggest that religion and spirituality deter, prevent, or change deviant behaviours, this cannot be tested with the presented methodology. The present study can only explore the associations between R/S status, religious practices, and deviant behaviours, but is unable to explore any potential causal relationships.

Qualitative Analyses

Response rates for the three qualitative questions varied significantly, which might be a result of a responding bias. The first qualitative question, which asked participants to describe why they chose their R/S categorization, had a response rate of 75% (n = 490). The second set of qualitative questions, which asked how a participant's R or S had changed or grown since childhood, had a lower response rate: 58% (n = 382) for spirituality and 39% for religion (n = 256). The third qualitative question asked participants to describe how they felt R/S had influenced their deviant behaviours, if it had at all, and had a very high response rate of 90% (n = 585). These response rates decline anywhere from 2.6% to 14.5% when excluding responses under 10 words (e.g., "no thanks," or "I don't know"). These response rates might magnify the response bias already present in the study. For example, those who signed up for the study may be more "rooted" in religion or spirituality, and those who are in-between or uncertain may be less likely to sign up. Further, those who are most strongly rooted in their R/S (e.g., a strong atheist or a devout Christian) may be more likely to voice their opinions to these questions. Despite this, there was more than enough qualitative content to reach theoretical saturation and there is likely little difference between 200 and 600 responses.

Qualitative analysis is praised for the rich, deep, and meaningful data that it often generates through various forms of data collection, such as individual or group interviews. The present study used an approach that resulted in data that was not as rich as other methods because it did not allow for follow up questions. It is also possible that the other content of the study (questionnaires regarding religion and spirituality, deviance, etc.) may have primed participants to respond a certain way. The sheer number of

responses provided a good surface-level analysis of the themes. In other words, the themes generated here are still valid but could benefit from a more in-depth approach in order to strengthen the connections and definitions.

Researcher Reflexivity

When conducting qualitative analyses, it is important to consider the background of those who are interpreting the data. These backgrounds can heavily influence the identified themes, concepts, codes, and other emerging information. In my analyses of the qualitative portion of this study, I did my best to separate my personal experiences, beliefs, and knowledge from the analyses. My personal religious and or spiritual experiences may have influenced my interpretation of the data. Another potential influence on my interpretation of the qualitative data of this study was the theory and literature I read prior to conducting the analyses, much of which is discussed in the literature review of this thesis. Mindful of these factors, I coded the qualitative section and tested these codes carefully and more than once. When I arrived at a set of themes, and an overall model, I discussed this with members of the lab to get feedback on my interpretation and minimize my own personal biases. Reflecting on this process, it is clear that my understanding and approach to religion and spirituality influenced my interpretation of the data. For example, I identified themes that were consistent with my literature review (religious practice, spirituality, etc.). The aim of the qualitative portion was to learn from the participants, how they (1) defined and (2) felt their R/S influenced their behaviours. It is possible, and likely, that my understandings have influenced my interpretation of the data. Other analysts, with different backgrounds, may come to different conclusions. Despite these efforts, there is no way to truly remove all personal

biases on the interpretation of qualitative data. This does not discredit or undermine the value of the data, though. What has been extracted from the responses provides deep, rich, and valuable data on how laymen both (1) define religion and spirituality and (2) feel their beliefs/practices influence their behaviours.

Conclusions and Future Directions

The present study contributes to the literature in a number of ways which may guide future research. The quantitative results of this study add to our understanding of the associations between religion, spirituality, and deviance and the qualitative results of this study add valuable context from those who are religious and spiritual. The results also contribute to previous proffered theories of religion and deviance.

The present study found associations between religion and deviance, which reflects past findings (Kelly et al., 2015; Ross, 1994) and challenges others (Hirschi & Stark, 1969). Both binary self-categorizations as religious/nonreligious and measuring religion as religious practice were significantly associated with deviance (greater religious practice or being religious associated with less deviance). Religion was a stronger predictor of deviance when it was combined with spirituality. This may help explain inconsistent past findings in religion-deviance literature. When analyzing differences in deviance between the religious and nonreligious, differences in spirituality in the religious sample may result in different outcomes. For example, a highly spiritual religious sample may be significantly less deviant than the less spiritual nonreligious sample. On the other hand, a low-spiritual religious sample may not have many differences in deviance compared to a low-spiritual nonreligious sample. Support for some theories on religion and deviance was also observed. The anti-asceticism hypothesis argues that religious

involvement discourages *mala prohibita*, things prohibited by law but not morally wrong (e.g., drug use) but does not have any effect on *mala in se*, things that are morally wrong (e.g., murder). The present study identified significant differences in *mala prohibita* behaviours (drug use, alcohol abuse) but did not identify any interpretable differences in *mala in se* behaviours (assault). The moral community hypothesis posits that the more involved someone is in a community with certain morals (such as a religion), the less likely they are to deviate from those morals. The present study observed similar findings in qualitative themes, though quantitative data did not necessarily support this theory because there were no observed differences in religion-specific morals (i.e., religions do not always forbid alcohol and drugs, which was where most differences were observed). This pattern of quantitative support is quite similar to Sturgis and Baller's findings (2012).

Findings on spirituality and deviance were novel and not observed in past literature: those who were spiritual (both on a continuous measure and self-categorization) were not significantly different from the nonspiritual at the bivariate level. However, there was a significant R/S interaction: spirituality was associated with less deviance when it was combined with religion. The initial approach of this study was to understand spirituality's connection with deviance in the context of religion and nonreligion. The present study adds a fresh perspective to the literature on spirituality and religion. Both the quantitative and qualitative findings suggested that there may be two forms of spirituality: nonreligious and religious. The former being a less guided, nonspecific form of belief, which may have less impact on behaviours; the latter being a guided form of spirituality, which provides an individual with greater meaning,

relationships with deities, and an afterlife to look forward to. These unique forms of spirituality may have differing influences on behaviours, though the present study was unable to explore them beyond the data that was collected.

Future research on religion and spirituality should explore the differences between religious and nonreligious spirituality by developing measures that capture both types of spirituality. This might be done through the use of principal components analysis with other spiritual scales, with these components in mind. Those who are religiously committed appear to have a more guided spirituality, with more meaning and direction, compared to those who are not religiously committed. Identifying how these constructs differ through the development and validation of new measures may help explain some of the underexplained associations between religion and deviant behaviours.

The author of the study puts forth a model that is developed from the experiences and perspectives of the participants. This model might help explain the connections between religion, spirituality, and deviance. This model is also the first qualitative model that attempts to explain the connections between religion, spirituality, and deviance. While the quantitative analyses conducted in the present study were consistent with this model, they were not confirmatory, and the model should be explored through dedicated research. Future research may aim to explore the proffered concepts of *religious morality* and *spiritual motivation* through more in-depth qualitative analyses, that are not constrained by the use of online collection, as well as quantitative analyses. While the model proposed should be tested with targeted measures in a more diverse sample, it provides an exciting framework for future research.

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Appendices

Appendix A

SONA Description

The purpose of this research is to explore the connections between religious practices, spirituality, and deviant behaviours in childhood and young adulthood. The overarching goal of this research is to understand what role religion and its practices, and spirituality, plays in deviant behaviours. You do not need to be religious or spiritual to take part in this study. Students will complete an online questionnaire on a mobile device or computer. It is estimated that the questionnaire will take one hour to complete. If you would like more information about this study, please contact Jordan MacDonald: [removed] or [phone number removed].

Appendix B

SONA Invitation Sent to Students

Transcendental Transgressions: Spirituality, Religious Practice, and Deviance

Principal Investigator: Jordan MacDonald
Department of Psychology
Trent University
[removed]
[removed]

Supervisor: Dr. Geoff Navara
Department of Psychology
Trent University
geoffnavara@trentu.ca
(705) 748-1011 ext. 7539

PURPOSE: The present study is being completed as part of the thesis requirement for Jordan MacDonald's master's degree. This study explores the connections between religious practices, spirituality, and socially deviant behaviours in childhood and young adulthood. The overarching goal of this research is to understand what role religion and its practices, and spirituality, plays in deviant behaviours.

DESCRIPTION OF THE STUDY: As a participant, you will be asked to complete a questionnaire consisting of a variety of psychological measures. At the beginning of the questionnaire, you will receive a demographic form to complete (e.g., age, gender identification, ethnicity, etc.). Next, you will be asked to complete several measures that assess your religiosity, frequency of religious practices, spirituality, and engagement in deviant behaviours at two different time periods in your life: childhood and the last few years. You **do not** need to be religious to participate in this study. The majority of questions will be Likert scales (e.g., agree, disagree, strongly disagree, etc.) but some will also be opened ended and allow for you to respond freely. The questionnaire is hosted online, and you can complete it from home. It is estimated that the questionnaire will take approximately one hour to complete.

BENEFITS: You will be an active member of the research process and will experience the study procedure from recruitment to debriefing. This experience is especially beneficial for participants who may anticipate a career in research. You are encouraged to ask the research team member questions about the research process. You will also receive a brief summary of the research process which can help show what happens "behind the scenes" in psychological research. If you are interested in the results of this study, please contact the Principal Investigator.

HOW TO PARTICIPATE: You can sign up to participate in this study through SONA. Your participation is entirely voluntary, and you can withdraw at any time.

This study has been approved by the Trent University Research Ethics Board (file no. 28158). If you have any concerns about the ethics compliance of this study, you can contact the compliance officer Jamie Muckle, jmuckle@trentu.ca, 705-748-1011 ext. 7896.

Appendix C

Letter of Informed Consent and Confidentiality Statement

Transcendental Transgressions: Spirituality, Religious Practice, and Deviance

Principal Investigator: Jordan MacDonald
Department of Psychology
Trent University
jordanmacdonald@trentu.ca
[phone number removed]

Supervisor: Dr. Geoff Navara
Department of Psychology
Trent University
geoffnavara@trentu.ca
(705) 748-1011 ext. 7539

PURPOSE: The present study is being completed as part of the thesis requirement for Jordan MacDonald's master's degree. This study explores the connections between religious practices, spirituality, and socially deviant behaviours in childhood and young adulthood. The overarching goal of this research is to understand what role religion and its practices, and spirituality, plays in deviant behaviours. You do **not** need to be religious or spiritual to take part in this study.

DESCRIPTION OF THE STUDY: As a participant, you will be asked to complete a questionnaire consisting of a variety of psychological measures. At the beginning of the questionnaire, you will receive a demographic form to complete (e.g., age, gender identification, ethnicity, etc.). Next, you will be asked to complete several measures that assess your religiosity, frequency of religious practices, spirituality, and engagement in deviant behaviours at two different time periods in your life: childhood and the last few years. The majority of questions will be Likert scales (e.g., agree, disagree, strongly disagree, etc.) but some will also be opened ended and allow for you to respond freely. The questionnaire will take place online, which can be done from home. It is estimated that the questionnaire will take approximately one hour to complete.

BENEFITS: You are an active member of the research process and will experience the study procedure from recruitment to debriefing. This experience is especially beneficial for participants who may anticipate a career in research. You are encouraged to ask the research team member questions about the research process. You will also receive a brief summary of the research process which can help show what happens "behind the scenes" in psychological research. If you are interested in the results of this study, please contact the Principal Investigator.

FORESEEABLE RISKS: Although there are no known harms associated with participating in this study, there is a small possibility that you may experience an emotional reaction when completing the questionnaire. There are questions about engagement in deviant behaviours both in childhood and the last few years, which may be

distressing to some. However, the amount of distress experienced by completing the study's questionnaire should be minimal. Remember that you also have the right to take a break, not answer a question, or withdraw from the study without consequence.

CONFIDENTIALITY: Your questionnaire data will never be linked to your name or any personal information. The data will not be revealed to anyone by the research team unless they are required to do so by law (e.g., declarations of harm to self/others, etc.). No identifiable information will ever appear in any reports, presentations, or publications that use the study data. All members of the research team have been trained in research ethics and are required to maintain confidentiality.

PARTICIPATION: Participation in this study is completely voluntary and you have the right to withdraw from the study at any time without penalty or consequence. You may also skip any questions that you find uncomfortable. If you choose to withdraw from the study before your questionnaire responses are submitted, your data will be immediately deleted. Please note that if your questionnaire responses have been submitted, there will be no ability to identify which data is yours for deletion.

INFORMATION STORAGE: Electronic questionnaire data will be hosted on the servers of the survey hosting company Qualtrics. Qualtrics servers are both anonymous and secured/encrypted (via Transport Layer Security and an Intrusion Detection System). Qualtrics will not make this data available to any party unless required by a valid court order, search warrant, or subpoena. All data collected via Qualtrics will be securely transferred and the data will be stored on Trent's encrypted cloud storage system (OneDrive). During data analysis, researchers will store study data on a password protected computer in a secure lab room. All electronic files will be encrypted, and researchers will destroy the data five years after the last publication or presentation of the findings.

CONFLICT OF INTEREST: The researchers have no commercial interest in completing this study. Any raw data collected through this study and any subsequent publications, presentations, and reports are the property of and are managed by the researchers exclusively.

STATEMENT OF CONSENT: The research study and procedures have been explained to me and any questions have been answered to my satisfaction. The potential harms have been explained to me and I also understand the benefits of taking part in this study. I know that I may ask now, or in the future, any questions that I have about the study or the research procedures. I understand that this project has received approval from the Trent University Research Ethics Board (REB file number: 28158). After reading this letter of consent, I willingly agree to participate in the study and having the data collected/stored as outlined in this document. I have additionally been emailed a copy of this informed consent and confidentiality statement for my records.

If you have any questions about the study, you may contact Jordan MacDonald or Dr. Geoff Navara using the contact information listed at the beginning of this document. If you have any questions about the ethics of the study, you may contact the compliance

officer, Jamie Muckle, at the Trent University Research Office at (705) 748-1011 ext. 7896.

Below are some health care resources. If participating in this study prompts any psychological distress, I encourage you to contact one of the supports listed below. If your psychological distress is urgent, please call 9-1-1 or go to your nearest hospital.

Trent Counselling Services
705-748-1386
Blackburn Hall Suite 113

Trent Student Health Services
705-748-1481
Blackburn Hall Suite 111

I. M. Well
1-877-234-5327 (24/7)
App available on Android/iPhone

4 County Crisis
705-745-6484

Therapy Assistance Online (TAO)
https://www.taoconnect.org/

Good2Talk
1-866-925-5454

We rely on participants to read the following questionnaire questions carefully and answer to the best of their ability. Put another way, the results of this study are only as good as the responses we receive from participants. We understand that it is sometimes difficult to give questionnaires complete attention throughout and to answer questions carefully and honestly. You can help us maximize the quality of our data and our results by responding honestly to the following questionnaire questions. Skipping a question is preferred to entering incorrect data. Thank you. If you consent to participate in this study, please click continue to begin the questionnaire.

Appendix D

Demographics

1. What is your gender?
    a. Male
    b. Female
    c. Nonbinary
    d. Other (please specify)
    e. Prefer not to disclose

2. What is your age?
    a. Number only textbox

3. Do you identify as a visible minority (persons who are non-Caucasian in race or non-white in colour)?
    a. Yes
    b. No

4. What is your highest level of education?
    a. High school or less
    b. Some college or university
    c. Completed college
    d. Completed undergraduate degree
    e. Completed a professional degree (e.g., BEd, LLB, MD)
    f. Completed a graduate degree (e.g., MA, MSc, PhD)

5. What is the highest level of education your parents/guardians/influential adults have completed?
    a. High school or less
    b. Some college or university
    c. Completed college or university degree

6. What was your religion *around the age of 10*?
    a. Agnostic Atheist (Do not believe there is a God or Gods, cannot be 100% sure)
    b. Agnostic Theist (Believe there is a God or Gods, cannot be 100% sure)
    c. Buddhist
    d. Christian
    e. Gnostic Atheist (100% certain there is no God or Gods)
    f. Hindu
    g. Jewish

h. Muslim
i. Sikh
j. Other (please specify)
k. None

7. What is your religion *currently*?
    a. Agnostic Atheist (Do not believe there is a God or Gods, cannot be 100% sure)
    b. Agnostic Theist (Believe there is a God or Gods, cannot be 100% sure)
    c. Buddhist
    d. Christian
    e. Gnostic Atheist (100% certain there is no God or Gods)
    f. Hindu
    g. Jewish
    h. Muslim
    i. Sikh
    j. Other (please specify)
    k. None

8. Approximately how many people live in your area of residence (if you are a student from out of town, please answer according to your hometown).
    a. < 2500 (rural)
    b. 2500 – 100 000 (urban)
    c. > 100 000 (metropolitan)

9. What is your estimated annual household income of your family of origin?
    a. < $10 000
    b. $10 001 - $25 000
    c. $25 001 - $50 000
    d. $50 001 - $100 000
    e. > $100 000

Appendix E

R/S Placement (Childhood)

The following questions will require you to recall your experiences and beliefs around the age of 10.

1. Around the age of 10, did you consider yourself to be a religious person (e.g., devoted to a specific religion, practiced a religion, or held specific religious beliefs)?
2. Around the age of 10, did you consider yourself to be a spiritual person (e.g., believed in the supernatural, life after death, karma, or higher planes of consciousness)?

Possible responses: *yes*, *no*, *not sure*

Appendix F

Qualitative Questions on Religion in Childhood

1. Why did you choose [RELIGIOUS/NOT RELIGIOUS] and [SPIRITUAL/NOT SPIRITUAL]? Please refer to your own understanding of “religious” and “spiritual” as much as possible. Remember that data collection is anonymous, please do not include any identifying information in your response.

Participants saw one of two options from the parentheses, depending on their previous choice. Qualtrics, the surveying platform, was programmed to select either religious/not religious and spiritual/not spiritual depending on the participants answer to the previous question.

Possible responses: textbox, free response, 300-word limit.

Appendix G

Honesty Priming Questions

1. **I sometimes twist the truth in my favor when answering survey questions.**
2. **I contemplate whether my responses to survey questions make me look bad in the eyes of others.**
3. I don't care what others may think of my answers to survey questions.
4. **When I answer questions about my behavior, I think about how others behave.**
5. I answer survey questions conscientiously.
6. I try to give an accurate description of myself in surveys.
7. **It matters to me what others think of my responses to survey questions.**
8. I am honest in my responses to survey questions.
9. I answer survey questions irrespectively of what others may think of my answers.

Possible responses: *never*, *seldom*, *sometimes*, and *often*

Bold indicates reverse coded items.

Appendix H

Normative Deviance Scale (NDS; Childhood)

Now we would like to ask you about activities and behaviors in which you may or may not have been involved. Almost everyone has probably committed an act of deviance or even crime at one time or another. Please how many times you engaged in the following acts *around the age of 10*. We would like to remind you that the data collected here is anonymous and will never be linked to any identifying information beyond what is collected in this survey.

Possible responses: *no/never*, *once/one time*, *2 – 5 times*, *6 – 9 times*, and *10 or more times*.

Around the age of 10, how many times did you:

VANDALISM

1. Smashed bottles on the street, school grounds, or other areas?
2. Intentionally damaged, destroyed, or defaced property that did not belong to you?
3. Slashed or in any way damaged seats on a school bus, in a movie theater, or something at another public place?
4. Committed acts of vandalism?

ALCOHOL

5. Got drunk (intentionally) just for the fun of it?
6. Lied about your age to buy alcohol before you turned the legal age?
7. Had an older brother/sister or friend buy alcohol for you?

DRUG USE

8. Used tobacco products (e.g., cigarettes, chew, snuff etc.)?
9. Used marijuana (grass, pot)?
10. Used illegal drugs such as crack, cocaine, or heroin?
11. Gone to school when you were drunk or high on drugs?
12. Sold any illegal drugs such as crack, cocaine, or heroin?
13. Please select 6 – 9 times.

SCHOOL MISCONDUCT

14. Cheated on school tests (e.g., cheat sheet, copy from neighbor, used test banks, etc.)?
15. Been sent out of a classroom because of "bad" behavior (e.g., inappropriate behaviors, cheating etc.)?
16. Been suspended or expelled from school?
17. Stayed away from school/classes when your parent(s) thought you were there?

18. Intentionally missed classes over a number of days for "no reason," just for fun (e.g., there was no family emergency)?
19. Run away from home and stayed out all night?
20. Been in trouble at school so that your parents received a phone call about it?
21. Skipped school (pretending you are ill)?

GENERAL DEVIANCE

22. Intentionally disobeyed rules at school or home?
23. Been on someone else's property when you knew you were not supposed to be there?
24. Failed to return extra change that you knew a cashier gave you by mistake?
25. Tried to deceive a parent or teacher to your advantage (e.g., lying about something to avoid getting in trouble)?
26. Let the air out of the tires of a car or bike?
27. Lied about your age to access a website for adults (e.g., pornography websites)?
28. Made nuisance/obscene/prank telephone calls?
29. Avoided paying for something (e.g., movies, bus or subway rides, food, etc.)?
30. Used fake money or other things in a candy, coke, or stamp machine?
31. Shaken/hit a parked car just to turn on the car's alarm?
32. Broken things around the house?
33. Stayed out all night without informing your parents where you were?
34. Had the police called on you for something you have done?
35. Been arrested?
36. Spent time in a prison, jail, or juvenile detention center?
37. Been convicted of or pled guilty to any charges?

THEFT

38. Stolen, taken, or tried to take something worth $10 or less (e.g., newspaper, pack of gum, mail, money, etc.)?
39. Stolen, taken, or tried to take something worth more than $10 (e.g., leather jacket, car stereo, bike, money, etc.)?
40. Stolen or tried to steal a motor vehicle (e.g., car or motorcycle)?
41. Bought, sold, or held stolen goods or tried to do any of these things?

ASSAULT / BULLYING

42. Hit or threatened to hit a person?
43. Used force or threatened to beat someone up if they didn't give you money or something else you wanted?
44. Been involved in gang fights or other gang activities?
45. Beaten someone up so badly they required medical attention?
46. Carried a knife, razor, switchblade, club, bat, gun, or any other object you could use as a weapon (e.g., pepper spray, etc.)?

47. Carried a knife, razor, switchblade, club, bat, gun, or any object you could use as a weapon with the intention of using it in a fight?

CYBERDEVIANCE

48. Knowingly used, made, or gave to another person "pirated" media (e.g., movies, TV shows, or music)?
49. Knowingly used, made, or gave to another person a "pirated" copy of commercially sold computer software (e.g., Adobe Photoshop or Call of Duty)?
50. Intentionally posted or sent mean or hurtful messages to another person online?
51. Accessed another person's computer account or files without their knowledge or permission?
52. Tried to guess another person's password to get into their computer account or files?
53. Viewed pornographic, obscene, or offensive materials online?

Appendix I

Religious Practices (Childhood)

Around the age of 10, how often did you:

1. Attend religious services (aside from weddings and funerals)?
2. Pray, outside of religious services?
3. Participate in prayer groups, scripture study groups, or religious education programs (such as Sunday school)?
4. Read scripture outside of religious services?
5. Meditate?
6. Share your faith with non-believers or people from other religious backgrounds?
7. Share your views on God and religion with religious people?
8. Visit a house of worship (e.g., synagogue, church, temple, mosque)?

Possible responses: *More than once a week*, *Once a week*, *Once or twice a month*, *A few times a* year, *Seldom*, *Never*

Appendix J

R/S Placement (Present)

The following questions are about you in the present day, please respond accordingly. Remember that data collection is anonymous, please do not include any identifying information in your response.

1. Do you consider yourself to be a religious person (e.g., devoted to a specific religion, practice a religion, or hold specific religious beliefs)?
2. Do you consider yourself to be a spiritual person (e.g., believe in the supernatural, life after death, karma, or higher planes of consciousness)?

   Possible responses: *yes*, *no*, *not sure*

Appendix K

Qualitative Questions on Changes in Religious Practices

Remember that data collection is anonymous, please do not include any identifying information in your responses.

1. *How would you describe changes in your religiosity or religious practices between childhood and the present?
2. *How would you describe changes in your spirituality between childhood and the present?
3. ** How have you explored or developed your religiosity between childhood and the present?
4. ** How have you explored or developed your spirituality between childhood and the present?

* Questions were only be presented to participants who selected a different option for young adulthood. E.g., if they selected “yes” to religious in childhood but “no” to religious in young adulthood. This was done through Qualtrics similar to the previous programmed question.

** Questions were only be presented to participants who selected the same option for childhood and young adulthood.

Possible responses: textbox, free response, 300-word limit.

Appendix L

Normative Deviance Scale (NDS; Present)

Now we would like to ask you about activities and behaviors in which you may or may not have been involved. Almost everyone has probably committed an act of deviance or even crime at one time or another. Please how many times you engaged in the following acts *in the last 5 years*. We would like to remind you that the data collected here is anonymous and will never be linked to any identifying information beyond what is collected in this survey.

Possible responses: *no/never*, *once/one time*, *2 – 5 times*, *6 – 9 times*, and *10 or more times*.

In the last 5 years, how many times did you:

VANDALISM

1. Smashed bottles on the street, school grounds, or other areas?
2. Intentionally damaged, destroyed, or defaced property that did not belong to you?
3. Slashed or in any way damaged seats on a school bus, in a movie theater, or something at another public place?
4. Committed acts of vandalism?

ALCOHOL

5. Got drunk (intentionally) just for the fun of it?
6. Lied about your age to buy alcohol before you turned the legal age?
7. Bought alcohol for a brother/sister or friend?

DRUG USE

8. Used tobacco products (e.g., cigarettes, chew, snuff etc.)?
9. Used marijuana (grass, pot)?
10. Used illegal drugs such as crack, cocaine, or heroin?
11. Gone to school or work when you were drunk or high on drugs?
12. Sold any illegal drugs such as crack, cocaine, or heroin?

SCHOOL MISCONDUCT

13. Cheated on school/college/university tests (e.g., cheat sheet, copy from neighbor, used test banks, etc.)?
14. Been sent out of a classroom because of "bad" behavior (e.g., inappropriate behaviors, cheating etc.)?
15. Been suspended or expelled from school/college/university (for reasons other than academic performance in courses)?
16. Stayed away from school/classes when your parent(s) thought you were there?

17. Intentionally missed classes over a number of days for "no reason," just for fun (e.g., there was no family emergency)?
18. Run away from home and stayed out all night?
19. Been in trouble at school so that your parents received a phone call about it?
20. Skipped school/work (pretending you are ill)?

GENERAL DEVIANCE

21. Violated traffic laws (e.g., using a cellphone while driving, disobeying stop signs, speeding)?
22. Been on someone else's property when you knew you were not supposed to be there?
23. Failed to return extra change that you knew a cashier gave you by mistake?
24. Tried to deceive a cashier to your advantage (e.g., flash a larger bill and give a smaller one)?
25. Let the air out of the tires of a car or bike?
26. Lied about your age to get into a nightclub/bar?
27. Made nuisance/obscene telephone calls?
28. Avoided paying for something (e.g., movies, bus or subway rides, food, etc.)?
29. Used fake money or other things in a candy, coke, or stamp machine?
30. Shaken/hit a parked car just to turn on the car's alarm?
31. Broken things around the house?
32. Stayed out all night without informing your parents about your where abouts?
33. Been pulled over by the police for something other than speeding?
34. Been arrested?
35. Spent time in a prison, jail, or juvenile detention center?
36. Been convicted of or pled guilty to any charges other than a minor traffic violation?

THEFT

37. Stolen, taken, or tried to take something worth $10 or less (e.g., newspaper, pack of gum, mail, money, etc.)?
38. Stolen, taken, or tried to take something worth more than $10 (e.g., leather jacket, car stereo, bike, money, etc.)?
39. Stolen or tried to steal a motor vehicle (e.g., car or motorcycle)?
40. Bought, sold, or held stolen goods or tried to do any of these things?

ASSAULT

41. Hit or threatened to hit a person?
42. Used force or threatened to beat someone up if they didn't give you money or something else you wanted?
43. Please select 2 – 5 times.
44. Been involved in gang fights or other gang activities?
45. Beaten someone up so badly they required medical attention?

46. Carried a knife, razor, switchblade, club, bat, gun, or any other object you could use as a weapon (e.g., pepper spray, etc.)?
47. Carried a knife, razor, switchblade, club, bat, gun, or any object you could use as a weapon with the intention of using it in a fight?

CYBERDEVIANCE

48. Knowingly used, made, or gave to another person "pirated" media (e.g., movies, TV shows, or music)?
49. Knowingly used, made, or gave to another person a "pirated" copy of commercially sold computer software (e.g., Adobe Photoshop or Call of Duty)?
50. Intentionally posted or sent mean or hurtful messages to another person online?
51. Accessed another person's computer account or files without their knowledge or permission?
52. Tried to guess another person's password to get into their computer account or files?
53. Engaged in cyberbullying (the use of social media to threaten, harm, demean, or otherwise hurt another person)?

Appendix M

Religious Practices (Present)

Currently, how often do you:

1. Attend religious services (aside from weddings and funerals)?
2. Pray, outside of religious services?
3. Participate in prayer groups, scripture study groups, or religious education programs (such as Sunday school)?
4. Read scripture outside of religious services?
5. Meditate?
6. Share your faith with non-believers or people from other religious backgrounds?
7. Share your views on God and religion with religious people?
8. Visit a house of worship (e.g., synagogue, church, temple, mosque)?

Possible responses: *More than once a week*, *Once a week*, *Once or twice a month*, *A few times a* year, *Seldom*, *Never.*

Appendix N

Spiritual Transcendence Scale 24 (STS-24)

When you answer the items in this questionnaire, we'd like you to think about "spirituality" and "spiritual" in the specific, SUPERNATURAL sense. By "SUPERNATURAL" we mean having to do with things which are beyond or transcend the material universe and nature. God, gods, ghosts, angels, demons, sacred realms, miracles, and telepathy are all supernatural by this specific definition.

Please rate how strongly you agree or disagree with the following statements:

1. Although dead, images of some of my relatives continue to influence my current life.
2. I meditate and/or pray so that I can reach a higher spiritual plane of consciousness.
3. I have had at least one "peak" experience.
4. I feel that on a higher level all of us share a common bond.
5. All life is interconnected.
6. There is a higher plane of consciousness or spirituality that binds all people.
7. It is important for me to give something back to my community.
8. I am a link in the chain of my family's heritage, a bridge between past and future.
9. I am concerned about those who will come after me in life.
10. I have been able to step outside of my ambitions and failures, pain, and joy, to experience a larger sense of fulfillment.
11. Although individual people may be difficult, I feel an emotional bond with all of humanity.
12. I still have strong emotional ties with someone who has died.
13. I believe that there is a larger meaning to life.
14. I find inner strength and/or peace from my prayers or meditations.
15. I believe that death is a doorway to another plane of existence.
16. I believe there is a larger plan to life.
17. Sometimes I find the details of my life to be a distraction from my prayers and/or meditations.
18. When in prayer or meditation, I have become oblivious to the events of this world.
19. I have experienced deep fulfillment and bliss through my prayers or meditations.
20. I have had a spiritual experience where I lost track of where I was or the passage of time.
21. The desires of my body do not keep me from my prayers or meditations.
22. Although there is good and bad in people, I believe that humanity as a whole is basically good.
23. There is an order to the universe that transcends human thinking.
24. I believe that on some level my life is intimately tied to all of humankind.

Possible responses: *strongly agree, agree, moderately agree, unsure, moderately disagree, disagree, strongly disagree.*

Appendix O

Qualitative Questions on Deviance and R/S

1. Thinking back to the questions about deviant behaviours, do you feel your experiences with spirituality and/or religion have influenced whether or not you've engaged in these behaviours? If so, how? Remember that data collection is anonymous, please do not include any identifying information in your response.

   Possible responses: open ended, 300-word limit.

Appendix P

Honesty Reflection

1. It is crucial to the integrity of research that recorded responses are honest. How do you feel about the data you have provided?

Possible responses: *I was honest*, *I was honest but do not use my data*, and *I was not completely honest*.

Appendix Q

Research Participation Feedback Form (Debrief)

Transcendental Transgressions: Spirituality, Religious Practice, and Deviance

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Thank you for collaborating in this research study with us. Your participation has helped add to our understanding of the role that religion and spirituality plays in deviance. By participating in this study, you have contributed towards the advancement of the growing field of religion and spirituality research, sometimes abbreviated as R/S research.

This study is being conducted by Mr. Jordan MacDonald in the Department of Psychology at Trent University. The Research Ethics Board at Trent University has approved this study. If you have any questions or concerns, please feel free to contact either Jordan MacDonald or Dr. Geoff Navara.

If you are interested in being notified about the results of the study, such as publications and presentations, please email the Principal Investigator.

Below are some health care resources. If participating in this study has prompted any psychological distress, I encourage you to contact one of the supports listed below. If your psychological distress is urgent, please call 9-1-1 or go to your nearest hospital.

Trent Counselling Services
705-748-1386
Blackburn Hall Suite 113

Trent Student Health Services
705-748-1481
Blackburn Hall Suite 111

I. M. Well
1-877-234-5327 (24/7)
App available on Android/iPhone

4 County Crisis
705-745-6484

Therapy Assistance Online (TAO)
https://www.taoconnect.org/

Good2Talk
1-866-925-5454

Appendix R

Summary of the Research Process (presented to participants after debrief)

The research process typically begins with the selection of a topic of interest. Upon finding a topic, we often conduct a literature review to learn about what research has already been conducted in this area. This literature review also allows us to examine what has not been studied. Given that the goal of research is to expand our knowledge on a topic, we often wish to pursue specific areas of a topic that lack clarity or have not been researched before. From our review of the literature, we develop one or more research questions. As mentioned previously, these questions represent particular parts of the topic that we believe should be researched more thoroughly. Upon the proposal of these questions, we enter into arguably the most difficult stage of the research process – designing the method in which the research questions will be investigated.

The type of research that we decide to conduct will depend wholly on the needs of the research question(s). When deciding what method to use moving forward, our ultimate question is this: What research method would best answer our research question? Take, for example, the following research question: *Does escitalopram reduce depression symptomatology to a greater extent than fluoxetine?* There are many different ways that we could approach this question, but not all of them would be appropriate to our needs. We could use a more traditionally qualitative design (e.g., a case study) to provide an in-depth analysis of a patient's experience with both medications. The advantages of this method are that we are provided with rich data that may also incorporate the patient's perspective and experiences. While this method has its strengths, it does not provide us with the ability to generalize and make a conclusive statement about the efficacy of escitalopram.

If we are hoping to make a broader statement about the medication, a more quantitative approach may be more appropriate. An experiment may be the most effective way to answer our question; it will allow us to examine the efficacy of an escitalopram-medicated group as compared to both a fluoxetine-medicated group and a control group. Participants will have their depression symptomatology measured both before and after they begin taking the medication to determine if the medication has reduced the amount of symptoms that they experience. By using random assignment and exclusionary criteria, we hope to eliminate any "noise" caused by natural variability and instead arrive at a conclusion which solely involves a direct comparison of the medications.

After we have decided on our method, we must formalize this by submitting an ethics protocol to the institutional Research Ethics Board (REB). The ethics protocol is a document that outlines the specific details of our research plan. Some questions that you should be prepared to answer are:

- What is the purpose of our research?
- How do we plan to answer our research question(s)?
- How will we measure our variables of interest?
- How will we analyze the data that we collect?
- What are the benefits/dangers of participating in our research?

The ethics protocol is a vital part of the research process. The REB is responsible for balancing the need for socially and academically beneficial research with the protection of participants. No study may begin without the approval of the institutional REB.

If our research design is approved by the REB, we may begin the data collection process. This begins with the recruitment of participants. In some cases, participants are recruited from the institution that the researcher belongs to. That being said, some studies require that participants are recruited externally. In the case of the sample research question, we would likely want to recruit our participants from a nearby hospital or mental health institution. After the participants have been recruited, we can begin to collect data from our participants.

Qualitative studies generally make use of either interviews or focus groups to generate rich data about the topic. In a quantitative study, the participants typically complete physiological, behavioural, or written measures. For our example study, this might involve the completion of a pre-intervention measure of depression symptomatology (e.g., a questionnaire such as the Beck Depression Inventory). Following this, we would have the participants begin to take the
medication assigned to their group. After a set amount of time (e.g., three months), participants would complete the same questionnaire to determine the number of symptoms that they
experience post-intervention.

Now that we have our data, what do we do with it? The next step in the research process is a bit less glamorous than the others. This step is known as data entry. In a qualitative study, this might involve the transcription (i.e., audio to text) of interviews or focus groups. Conversely, data entry in a quantitative study typically involves transferring the information from our measures into a spreadsheet hosted by a program such as SPSS, R, or Excel. In our example, we will need to input each participant's answers on the pre- and post-intervention depression questionnaires into a collective spreadsheet.

Following data entry, we begin our next step: data analysis. This is an exciting time in the research process, as it entails us "making sense" of the data that we have collected. If we had used a qualitative method such as thematic analysis, we might begin by coding our "data" (e.g., the transcribed interviews/focus groups) and searching for themes that appear in the text. In contrast, most quantitative methods involve the use of various statistical procedures to search for the answers to our research question(s). It is important to note that, while a number of different types of analysis will be employed to "explore" the data set, we will have selected one or more specific statistical technique(s) to answer our research question(s). In our example, we would use a one-way ANOVA to determine if escitalopram is more effective at reducing depression symptoms than fluoxetine.

The final step in the research process will involve a written report of some kind. If you are an honours/graduate student, this might come in the form of a thesis or a dissertation. As a researcher or academic, you are more likely to deliver a journal article or a community report as your final product. This final step in the research process is

incredibly important; it represents the culmination of your efforts as a researcher and is vital to the distribution of knowledge. In
accordance with the scientific method, these reports should be (a) transparent, (b) informative, and (c) situated within prior research.

Although this summary has obviously simplified the research process, it does capture many of its main elements. While challenging at times, scientific research is deeply rewarding and helps shape the world around us. If you have any questions regarding the research process, please feel free to contact me at jordanmacdonald@trentu.ca.