

Considering Personal Religiosity in Adolescent Delinquency: The Role of Depression, Suicidal Ideation, and Church Guideline

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Despite an impressive array of studies on the subject, relatively little has been explored regarding the causal structures that may connect personal religion and adolescent delinquency. The premise behind this study is that religiosity is linked with delinquency mainly indirectly through an impact on different intervening factors. This hypothesis found support from an extensive survey of teenagers in an evangelical church. Personal religiosity affects depression/suicidal ideation and endorsement of church instruction, which subsequently determine the propensity to substance use and criminal misdemeanor behavior involvement. Besides, overall, the study finds deterrent effects of intrinsic religiosity, doctrinal orthodoxy, and vertical faith on adolescent delinquency. Extrinsic religiosity leads to increased substance use and criminal misdemeanor, while horizontal faith brings about a mixed pattern of causal effects.

While issues related to adolescent delinquency have long been on the research agenda, the last couple of decades have seen religion become the subject of increasing research in relation to delinquency. One of the most studied issues in this area was the problem of personal religion's importance to delinquent behavior, which has produced inconsistent evidence. Some researchers claimed that the impact is spurious while others tout its protectiveness.

Hirschi and Stark (1969), for example, asserted that involvement in delinquent behavior is unrelated to religious practice. This research is recognized as having set researchers on a scientific course for the study of linkage between religiosity and delinquency, and their view was echoed in the follow-up studies by Higgins and Albrecht (1977) and Richard, Bell, and Carlson (2000). More recently, Cretacci (2003) examined whether religious commitment affects delinquency indirectly by increasing social bonding. The effects were found to be independent of social bonding. In a similar manner, arousal theory for delinquency asserts that individuals are different in their demand for stimulation, and those who require low levels of stimulation find

a home in church and thus display little deviance (Ellis, 1987). That is, covariation between religiosity and reduced delinquency is spurious, due mainly to the effect of low levels of sensation seeking that most religious people demand.

In opposition to this view, other researchers have argued that religiousness is a deterrent to substance use. For instance, Johnson, Larson, Li, and Jang (2000) reported that church attendance is negatively related to drug use, drug sales, and non-drug related crimes. The research of Jaynes (2001) and Hadaway, Elifson, and Peterson (1984) showed that religious activity and personal salience of religion to the respondent relate to low levels of drug and alcohol use. Also germane to the present study is the research of Corwyn and Benda (2000) who discovered that an increase of personal religiosity was a significant predictor of lower levels of hard drug use. Religiosity here meant the practice of a religion that is internalized, cognitively oriented, and treated by individuals as a way of communicating with God. Consonantly, Simons, Simons, and Conger (2004) suggested that as for substance abuse, religious youth are also at less risk for criminal activities than their non-religious peers primarily due to their commitment to traditional values and having peers who hold the same values. Windham, Hooper, and Hudson (2005) paid attention to the buffering effect of religious involvement: religious beliefs reduce the hopelessness some adolescents feel that can lead to criminal and violent behavior.

The researchers thank V. Bailey Gillespie and Ed Boyatt who not only allowed us to use the Valuegenesis data but also offered valuable support for and comments on this study. Correspondence should be made to Chang-Ho C. Ji, School of Education, La Sierra University, 4500 Riverwalk Parkway, Riverside, CA 92515, cji@lasierra.edu.

Two observations may be drawn from the foregoing review of related literature. First, a relation to adolescent religiosity seems as yet far from conclusive as demonstrated by the lack of consensus on the importance and directionality of religion's influence on delinquency. In particular, possibly except for that of Cretacci (2003) and Windham, Hooper, and Hudson (2005), little systematic work exists on the agency or means by which a religiosity effect is generated in conjunction with youth delinquency. Second, hand in hand with this lack of knowledge has often gone an underdeveloped exposition of personal religiosity in the literature. Research has been rather cursory, mostly using simplistic measures of religious commitment or personal devotion such as church attendance and individual prayer. Potential causal effects of religious motivation, doctrinal belief, and directionality of faith have not as yet been clearly documented.

This study intends to fill this research gap by adopting a multidimensional approach to religiosity in exploring how religiosity associates with the probability of youth involvement in drug, tobacco, and alcohol use (hereafter substance use) and violent and criminal behavior (hereafter criminal misdemeanor). In the process, it gives special attention to two potential intermediating factors, depression and suicidal ideation (hereafter depression/suicidal ideation) and endorsement of church instruction on drugs and popular cultural behaviors that adolescents manifest, in order to investigate how personal religiosity affects adolescent delinquency. For religiosity, we utilize three attributes known to be effective in researching personal religion: religious motivation, doctrinal orthodoxy, and faith maturity. In light of Allport and Ross (1967), those who are extrinsically motivated use their religion as a means for other purposes, while people who are intrinsically motivated live their religion as an end in itself and seek a personal, meaningful relationship with God. Doctrinal orthodoxy is generally construed as "the acceptance of well-defined, central tenets of" a particular religion (Fullerton & Hunsberger, 1982, p. 318). Benson, Donahue, and Erickson (1993) developed a theory of vertical and horizontal faith maturity. Vertical faith is defined as one's linkage with God while horizontal faith relates to one's relationship with others, including behavioral manifestations of social service and justice.

Endorsement of Church Instruction

For hypothesis development, our research into religiosity and delinquency follows two theoretical directions. One direction is reflective of the perspective of social control and learning; the other bears upon the linking role that depression/suicidal ideation takes between religiosity and delinquency.

The approach pertaining to social control and learning theories of delinquency deems the potential effects of conventional religion (intrinsic religiosity, vertical faith, and doctrinal orthodoxy) as the outcome of social control that church institutes (cf. Benda & Corwyn, 1997). Religion is here viewed as an integrative mechanism that serves to retain social order and hierarchy and promotes traditional moral values and beliefs. Those who interact and identify themselves with church are thus expected to learn conventional norms and behavioral models from the church (Akers, 1985), and these learned values entail behavioral patterns disposing them toward certain prescribed conduct and abstinence from deviant activities.

In this vein, it is important to notice that many evangelical churches embrace the tenet that Christianity should be redemptive in nature for the purposes of restoring human beings to the image of God and that mental, physical, and spiritual health form a core group of values that are essential aspects of Christian philosophy.¹ Individuals are instructed to be at their best physically and mentally because the body is the temple of God. Similarly, they are taught to refrain from substances that may be injurious to their bodies and mental health such as drugs, tobacco, and alcohol. Besides, the faith statements of many churches instruct congregants about peace and love toward other human beings, about concern for the perennial violence and conflict in the world, and about opposition to various forms of abuse, exploitation, and crime. The statements also call upon their members to influence society as a whole toward the dominion of brotherly love and reconciliation.

To our perspective, adolescents who internalize religion, hold fast to orthodox doctrines, and see their "vertical" relationship to God as their highest goal are likely to identify church as the earthly viceroy of the heavenly figure and the principal social group that teaches them behavioral norms and moral values. They may faithfully embrace the church credo of abstinence and temperance in relation to drugs, popular culture,

and violence, which next encourages them to abstain from substance use and criminal behavior. Possibly, for these adolescents, the church credo is internalized and becomes critical for personal reasons; they do their best to closely abide by the church standards rather than base their behaviors on non-religious guidelines or what other adolescents around them do or believe. This point of view finds empirical support in the research demonstrating that people who are religious utilize their commitment to religious beliefs in making decisions, allowing them to focus on positive actions and to avoid behaviors prohibited or condemned by the church (Jackson & Coursey, 1988).

On the other hand, individuals with extrinsic religiosity are reported to be selfish and self-seeking, primarily caring about maximizing their wants and desires by means that do not cause adverse consequences (Batson, Schoenrade, & Ventis, 1993). Their perspectives and daily lives may not be easily influenced by the guidelines set up by church because they conform to what church supports or to what is believed normal by a religious community solely when such action meets their utilitarian needs. Ordinarily, there is little investment in religion beyond what they might be able to gain from keeping the standards in the future. This self-serving and opportunistic alignment is unlikely to dovetail with the idea of unconstrained support for church instruction that tends to highlight abstinence from the pursuit of superfluous personal pleasure as well as conformity and individual sacrifice within the church and community.

Lastly, horizontal faith is likely to be positively associated with approval of church instruction. The presumption behind this expectation is that those who closely relate their faith to other human beings recognize that drugs and violent culture engender a variety of forms of physical and mental breakdown at the individual level and conflict and violence at the societal level. This awareness helps them consent to the church's conservative stance on drugs and popular culture, in turn lessening the likelihood of substance use and criminal misdemeanor.

Depression and Suicidal Proclivity

Our second approach takes depression and suicidal proclivity as a means by which to explain the connection between religiosity and delinquency. Teenagers frequently experience

excessive stress and anxiety in the course of their psycho-social development and, thus, invoke a variety of coping strategies to deal with depression and suicidal proclivity (Britton, 2004; Hasking & Oei, 2007). Here, we endorse the anticipation that adolescents are less likely to fall into delinquency the greater the extent to which they are conventionally religious. This idea derives from the report that religious people are rather skillful at developing positive coping methods due to their relationship with God and a sense of spiritual connectedness with others that gives them collaborative social coping skills (Pargament, Ano, & Wachholtz, 2005). In contrast, those who have a diffident relationship with God and tension with the church reportedly adopt more counterproductive strategies such as self-discontent, interpersonal disruption, and delinquent behaviors like violence, alcoholism, and substance use.

Indeed, empirical researchers have often observed an inverse relationship between conventional religiosity and depression/suicidal ideation. Miller and Gur (2002) and Nooney (2005) found that personal devotion and frequent church attendance lead to lower levels of suicidal ideation and fewer attempts at suicide. According to Poloma and Pendleton (1991), personal prayer matters in increasing happiness and life satisfaction. Other studies associated depression with personal religiosity. For instance, Wright and Frost (1993) found that religiously intrinsic people who feel their religion give their lives meaning tend to experience depression to a lower degree than those who do not give much thought to their religion. In regards to doctrinal and vertical faith, Greening and Stoppelbein (2002) contended that adolescents who have strong faith in basic church doctrines report themselves to be at little risk for depression or attempted suicide; Salsman and Carlson (2005) noticed that students who incorporate religion into their lives, with God as the focus, are less likely to be depressed than do those who do not.

The foregoing review of literature connotes that intrinsic religiosity, orthodox belief, and vertical faith have positive effects on reducing the probability of developing depression and suicidal ideation. If such is the case, it is important to recall that depression has been known to generate risky drug behaviors like sharing drug injection equipment (Stein, Solomon, Herman, Anderson, & Miller, 2003). Smoking is related to depressive symptoms as well (Goodman &

Capitman, 2000). Weisner (2003) also found a firm linkage between depression and delinquent behavior. These findings may lead to a research hypothesis, once the findings are put together with the evidence of a close religiosity-depression linkage: intrinsic, orthodox, vertical religiosity contribute to a lower likelihood of delinquency by decreasing depression and suicidal proclivity.²

Differently, research has found that extrinsic religiosity is positively correlated with anxiety and the feelings of insecurity, often making individuals vulnerable to depression and suicidal temptation (Baker & Gorsuch, 1982; Hackney & Sanders, 2003). This position is in line with Milevsky and Levitt's findings (2004) that extrinsic believers are likely to feel sad more often than intrinsic and that this gap is especially distinctive during the adolescent period when compared to other developmental stages. These findings suggest that when it comes to adolescent delinquency, extrinsic religiosity, if not being detrimental in itself, is unlikely to provide the protective barrier that comes with the personal commitment of youth with intrinsic religiosity, doctrinal orthodoxy, and vertical faith. Be that as it may, extrinsic religiosity would be hypothesized to increase substance use and criminal misdemeanor because it augments the extent of depression and suicidal ideation that adolescents may have.

Finally, a person with strong horizontal faith is expected to experience a high level of depression, as suggested by Salsman and Carlson (2005) who noted that horizontal faith causes more psychological stress than does vertical faith. For those with horizontal faith, religion is largely concerned with other people. When these people confront the pain and suffering around them and feel unable to improve or change the condition, depression may result, exacerbating anxiety, distress, and suicidal ideation. Additionally, much of adolescent self-worth is tied up in interpersonal relationships of many kinds; youth with strong horizontal faith may put more focus on relationships with other people and invest more of their self-worth in this effort as compared to those with weak horizontal faith. Hence, if they are let down by others, disappointment would develop easily and quickly among those with strong horizontal faith.

To summarize, our discussion elicits three research hypotheses that can be depicted in a diagrammed path model as seen in Figure 1.

First, youth with high levels of intrinsic religiosity, doctrinal faith, and vertical faith would be found to have low levels of substance use and criminal misdemeanor because they faithfully embrace the church life-style standards that disallow those delinquent behaviors and less often experience depression and suicidal temptation. Second, for the opposite reasons, those whose religious orientation is primarily extrinsic may be more susceptible to involvement in delinquency. Third, horizontal faith may not be simply tied to a set of clear-cut effects. Horizontal faith is hypothesized to engender delinquency by increasing adolescent depression and suicidal ideation, yet this adverse effect would be offset by its positive impact on endorsement of the church credo of conservative lifestyle

Methodology

Sample

The questionnaire survey that provided the database for this article involved sixth to twelfth grade students who were enrolled in the schools affiliated with an evangelical church in the United States and Canada. As of 2005, the church's membership numbered close to 13 million baptized adult members worldwide, and it is reportedly one of the fastest growing Protestant churches. This church is distinguished from other churches by its espousal of the separation of church and state and the rigidity with which it upholds the particulars of their eschatological worldview (Lawson, 1998). These peculiarities notwithstanding, the church is similar to many mainstream evangelical churches in terms of their support for other Christian tenets. They hold most conventional evangelical beliefs such as the Trinity, the virgin birth of Jesus Christ, salvation through Christ's atoning death on the cross, repentance of sins, the second coming of Jesus, and resurrection and eternal joy in heaven. Also, the church as a whole is conservative on matters of morality and ethics, including endorsement of modest dress and healthy life style, avoidance of premarital sexual intimacy, disengagement from some forms of contemporary entertainment, and restriction on homosexuality. Given these facts, much of the findings from the present church are probably generalizable to other evangelical churches, though they may not necessarily stand beyond the conservative churches.

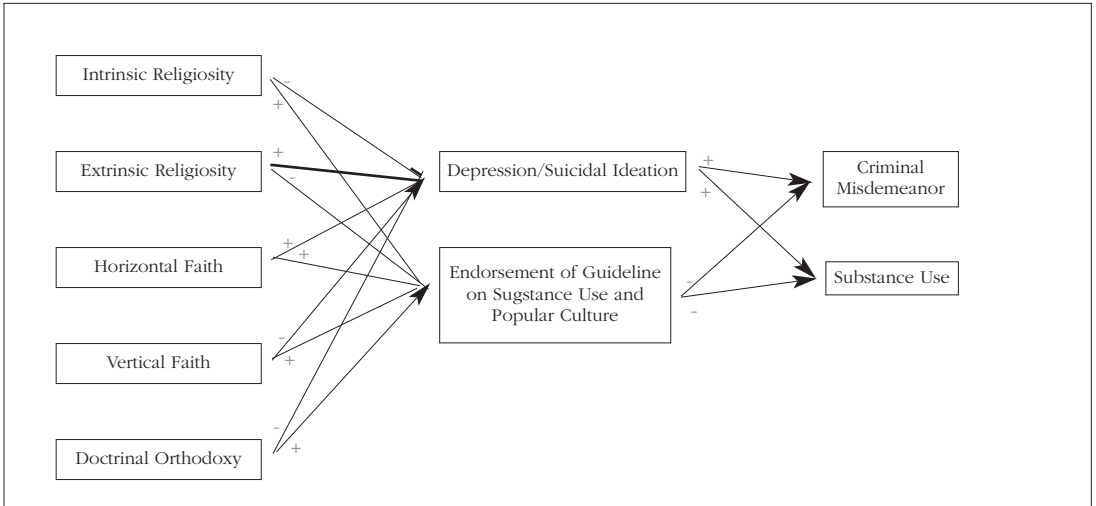


Figure 1. The Hypothetical Model for the Impact of Religiosity on Adolescent Delinquency

The headquarters of the church supported the survey and named it the Valuegenesis research (cf. Gillespie, Donahue, Boyatt, & Gane, 2004). For the survey, during the 2000 school year, a sample of about 30% of the 1,050 schools affiliated with the denomination was chosen by a stratified-random method which ensured proportional representation of school type, size, and geographical location.³ Each selected school appointed a survey administrator who oversaw the entire process of surveying all pupils in grades six through twelve. Subsequently, approximately 21,000 questionnaires were sent, 16,000 of which were completed and returned to the surveyors. At each school, the survey took place in a classroom setting according to the guidelines offered by the surveyors so that the students received as identical and consistent a survey setting as possible. The survey was made up of 396 items related to various aspects of family, school, church, life-style, and religion. Of the 396 items, this study utilized 67 items related to doctrinal orthodoxy, faith maturity, and religious orientations along with delinquency, depression, suicide attempt, endorsement of church instruction on drugs and popular culture, and other relevant variables. The final database available for this study ended up with 11,481 respondents.⁴

Endogenous Variables

The endogenous variables were comprised of depression/suicidal ideation, endorsement of the church credo of conservative lifestyle, and delinquent behavior. To measure delinquency, we

used eight “at-risk” items in the survey dealing with use of various substances and criminal misdemeanors. The respondents were asked “How many times, if ever, during the last 12 months did you do each of the following?” The options given were: “1) *never*, 2) *1-2 times*, 3) *6-9 times*, 4) *10-19 times*, 5) *20-39 times*, or 6) *40 or more times*.” Responses to the eight items were subjected to a principal components factor analysis with direct oblimin rotation to examine their factor structures. Factor loadings > .40 and eigenvalue > 1.00 were used as cutoff points to interpret the strength of each scale item and cluster of items. The top tier of Table 1 presents the results. Five and three items loaded on the first and second factors, subsequently named the Substance Use and Criminal Misdemeanor Scales, respectively. The one-factor solution explained 47% of the total variance, and the two factors combined explained 64% of the variance. The correlation for the two factors was .32. Cronbach coefficient α for the criminal misdemeanor and substance use items were .62 and .86, respectively. For the analysis, we computed the means of the two groups of items for substance use and criminal misdemeanor scores

Endorsement of church standards on lifestyle, as given in the middle tier of Table 1, was measured by referring to seven survey items related to how much adolescents agree or disagree with the church standards that require self-restraint in consuming alcohol and drugs, wearing jewelry, listening to rock music, and playing violent video games. Adolescents’ attitudes toward these

Table 1

Summary of Items and Factor Loadings for Two-Factor Solution for the Delinquent Behavior Questionnaire and One-Factor Solution for the Parental Strictness Questionnaire (N = 11,481)

Item	Factor Loading		<i>b</i>
	1	2	
Delinquent Behavior			
How often, if ever, in the last year			
did you have five or more drinks in a row?	.91	-.05	.80
did you drink alcohol (beer, wine, liquor) alone or friends?	.89	-.02	.78
did you use marijuana (grass, pot)?	.87	-.02	.75
did you use tobacco?	.79	-.01	.62
did you use cocaine (crack, snow, coke)?	.54	.07	.32
did you get in trouble at school?	-.08	.84	.67
did you hit or beat up someone?	-.02	.83	.66
did you take something from a store without paying for it?	.37	.48	.47
Endorsement of Church Guideline			
One should not watch movies in movie theaters.	.87	-.17	.70
One should not wear jewelry.	.82	.01	.68
One should not listen to rock music.	.81	.05	.69
One should not play violent video games.	.60	.16	.44
One should not use tobacco.	-.05	.91	.80
One should not drink beer or liquor.	.11	.86	.81
One should not use illegal drugs.	-.05	.84	.68
Parental Monitoring			
How often do your parents or guardians limit			
the amount of time spent playing video games?	.82		.66
the amount of time you can spend watching TV?	.77		.59
the types of music you listen to?	.74		.55
the amount of time spent on the internet?	.72		.52
If your parents found out that you had been drinking,	.48		.32
how upset would they be?			
<i>Note:</i> Boldcase values indicate higher factor loadings; extraction method: principal component analysis; rotation method: direct oblimin with Kaiser normalization.			

standards were tapped with 5-point Likert scales with 1 = “*I definitely disagree*” and 5 = “*I definitely agree*.” Using the same extraction and rotation methods as for delinquent behavior, a two-factor solution offered the clearest extraction, accounting for 69% of the total variance. A first factor was comprised of four items and named Endorsement of Popular Culture Standards Scale; a second factor included three items and was labeled Endorsement of Drug Standards Scale. Corrected item-total correlation was .30, and Cronbach’s coefficient α was .78 and .84 for the Endorsement of Popular Culture and Drug Standards Scales, in the order given. The drug and popular culture standards endorsement

scores corresponded to the means of the three and four items, respectively.

The extent that adolescents experience depression and attempt to commit suicide was tapped based on two items measuring the frequency of depression and suicide attempts. A first question asked “How often did you feel sad or depressed during the last month?” The responses could be “1) *Not at all*; 2) *Once in a while*; 3) *Some of the time*; 4) *Most of the time*; 5) *All of the time*.” A second one asked “Have you ever tried to kill yourself?” The respondents could choose from “1) *No*; 2) *Yes, once*; 3) *Yes, twice*; 4) *Yes, more than two times*.” For hypothesis testing, responses to these two items were transformed to standardized values, and then the mean of the two

standard scores was used as the index score of depression/suicidal ideation.

Exogenous Variables

The principle exogenous variables included faith maturity, intrinsic and extrinsic religiosity, and doctrinal orthodoxy. For faith maturity, the 5-point items in the survey were taken from the 12-item Faith Maturity Scale (Benson, Donahue, & Erickson, 1993; Ji, 2004). Ji, Pendergraft, and Perry (2006) conducted a validity study on the same 12 Valuegenesis items and found they yielded a two-factor solution of vertical and horizontal faith maturity. The seven items loaded on the first factor plus the five items loaded on the second factor were named Vertical and Horizontal Faith Maturity Subscales, respectively. The mean scores of the five and seven items were then calculated for use as the scores of horizontal and vertical faith, in the order specified.

In the survey, the doctrinal faith score came from the mean of eight 6-point Likert scale items in the survey pertaining to general Protestant beliefs. Their factor structure was also examined by Ji and his colleagues, and the results showed a clear single-factor solution. On the other hand, the measures of intrinsic and extrinsic religiosity were derived from the Religious Orientation Scale developed by Allport and Ross (1967). The measure of intrinsic religiosity was grounded in nine 5-point Likert scale items in the survey, for which the factor analysis by Ji and his colleagues clearly pointed to a one-factor solution. The same authors also assessed the factor structure of eleven 5-point scale items related to extrinsic religiosity. The results, unlike those for intrinsic religiosity, suggested a three-factor solution; five items were found to load on the first factor while three items each loaded on the second and third factors. The factors were labeled Uncommitted, Social, and Personal Extrinsic Religiosity, respectively. For the analysis, however, we used a composite extrinsic religiosity score instead of three subscale scores, since ongoing analyses by the lead author have failed to detect distinct merits of trichotomous division of extrinsic religiosity in studying youth behaviors. Moreover, there are unresolved theoretical questions related to what "uncommitted" religiosity measures and stands for. For the analysis, we computed the means of eight, nine, and eleven orthodoxy, intrinsic, and extrinsic religiosity items, in the order given, to get their composite scores.

Apart from these primary variables, our analysis also takes into account parental monitoring. Studies have documented parental attention, strictness, and early intervention as critical for reducing the chances that adolescents would engage in delinquent behaviors and associate with deviant friends (Simons, Simons, & Conger, 2004). The Valuegenesis data contained a battery of five items very similar in form and content to those that have become standard in measuring parental oversight of adolescent lifestyle. Those questions asked teenagers how often their parents or guardians limited the amount of alcohol they consumed and the amount of time they spent watching television, listening to music, playing violent video games, and using Internet. The response options ranged from "1) *Never*" to "4) *Often*." Principal components factor analysis with direct oblimin rotation, as summarized in the bottom tier of Table 1, pointed to the unity of the items making up this scale; all items loaded on a single factor (eigenvalue = 2.56; Cronbach's $\alpha = .76$). For the analysis, the mean of these five items was used as an estimate of parental monitoring of adolescent delinquent behavior.

Results

Descriptive Analysis

Table 2 displays the mean statistics for the total sample, including standard deviations. In general, mean scores on the religiosity factors tended to be near their mid-points for answer range. One exception was in the area of orthodoxy; the samples were highly orthodox in their beliefs in basic doctrines. Besides, they appeared to be slightly more intrinsically oriented than extrinsically, and their faith maturity was more vertical than horizontal. The nominal difference in mean score between extrinsic and intrinsic religiosity probably betokens the fact that, to the average respondent, the two attributes were not necessarily viewed as mutually exclusive. The fact that the mean vertical faith score was also only slightly higher than the mean horizontal score posits that the samples were relatively well balanced between the two forms of faith maturity.

With respect to intervening, endogenous variables, endorsement of church instruction on drugs and popular culture showed means of 4.50 and 2.38, respectively. Since the means could range from 1 to 5, these values indicate that the adolescents' support for church's restriction on tobacco, alcohol, and illegal drugs are quite

Table 2

Descriptive Statistics of Religiosity, Depression/Suicidal Ideation, Endorsement of Church Guideline, and Delinquent Behavior (N = 11,481)

Variables	<i>M</i>	<i>SD</i>	Min.	Max.
Intrinsic Religiosity	3.62	.66	1.00	5.00
Extrinsic Religiosity	3.22	.46	1.00	5.00
Horizontal Faith Maturity	2.98	.79	1.00	5.00
Vertical Faith Maturity	3.69	.76	1.00	5.00
Doctrinal Orthodoxy	5.68	.49	1.00	6.00
Depression/Suicidal Ideation	1.94	.70	1.00	5.00
Endorsement of Church Guideline: Substance Use	4.50	.93	1.00	5.00
Endorsement of Church Guideline: Popular Culture	2.38	1.00	1.00	5.00
Parental Monitoring	2.68	.78	1.00	5.00
Delinquent Behavior: Substance Use	1.34	.88	1.00	7.00
Delinquent Behavior: Criminal Misdemeanor	1.82	1.02	1.00	7.00

strong, yet their view of following popular culture in some areas conflicts somewhat with the church stance on jewelry, music, movies, and video games. When at-risk factors are considered, the depression/suicidal ideation recorded a mean of 1.94. Specifically, the means of suicidal attempt and depression were 1.26 and 2.62, in the order specified, signifying that the samples typically got depressed “once in a while” during an ordinary month and many respondents attempted “at least once” in their life to kill themselves.⁵ Parental oversight had a mean of 2.68, a value remarking that the parents “sometimes” got upset at their children’s drinking and limited the amount of time that the children spent on video, Internet, and television. Finally, the average scores for substance use and criminal misdemeanor were 1.34 and 1.82, respectively, indicating that roughly “once a year,” the samples drank alcohol, used illegal drugs, and engaged in wrongful behaviors.

Hypothesis Testing and Model Respecification

Viewing the results, we noticed that the fit of the baseline model (Model 1) was overall acceptable with chi-square (df) = 2631.15 (20), NFI = .92, and CFI = .92. The NNFI of .79 clearly indicated a great degree of necessity to improve the goodness-of-fit statistics of the model, however. In reviewing the univariate test statistics for the fixed parameters, the two large increments were noticed to associate with the effects of parental oversight on endorsement of popular culture and substance use standards. We made the decision to free up the two parameters. This

decision was also justified based on Simons, Simons, and Conger’s study (2004) that showed the saliency of parental factors to children’s attitudes toward church and its doctrines.

The fit of this revised model (Model 2) was better with chi-square (df) = 1451.63 (18), NFI = .96, and CFI = .96 than was the case for the baseline model, satisfying the guideline of .95 for adequate models (Hu & Bentler, 1999). Yet, a NNFI of .86 was still inadequate. Besides, one path not specified in Model 2 was noticed to be an essential component of the causal structure: the direct effect of horizontal faith on criminal misdemeanor. Adding this path to the model (Model 3) yielded elevation of goodness-of-fit statistics to chi-square (df) = 1159.14 (17), NFI = .97, and CFI = .97. Also, the NNFI value of .91 in this model was now deemed acceptable.

Apart from horizontal faith, readers may be interested in the direct effects of the other religiosity variables. Reviewing the results, we found that five religiosity paths might be crucial: the direct effects of intrinsic, extrinsic, vertical, and orthodox religiosity on substance use, and of vertical faith on criminal misdemeanor. This led to one additional modification (Model 4) in that the extension specified the effect of the four religiosity variables on substance use and vertical faith on criminal misdemeanor. The goodness-of-fits for this model, however, were virtually the same as or at best only slightly superior to the ones produced by Model 3, chi-square (df) = 900.26 (12), NFI = .97, CFI = .97, and NNFI = .90. Accordingly, no further specifications were thought compulsory, and Figure 2 depicts the

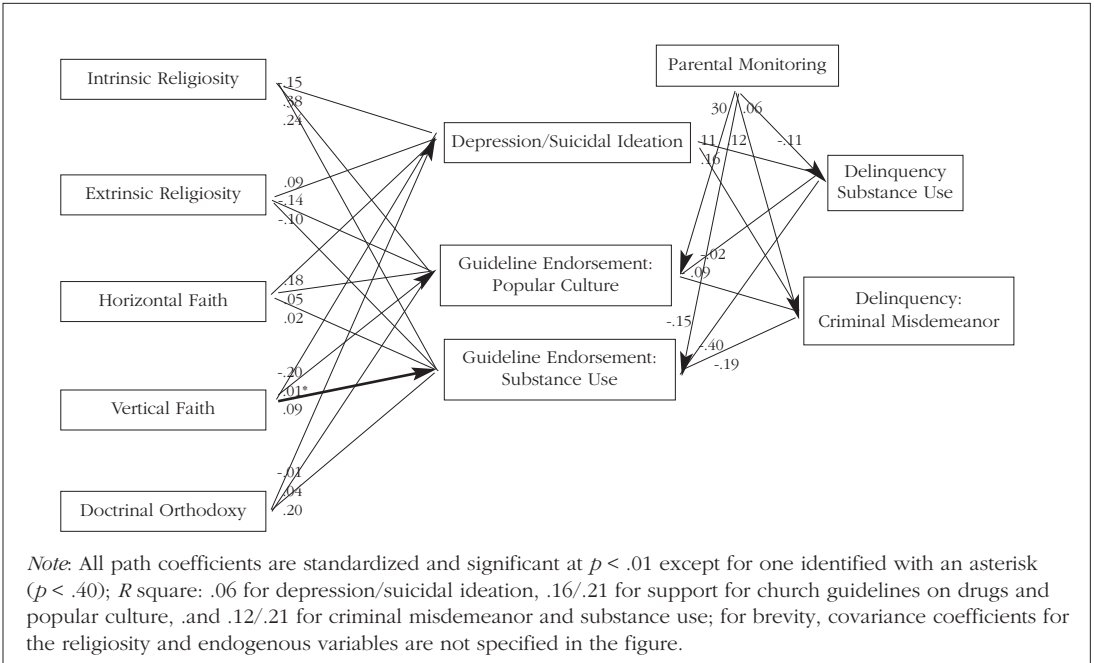


Figure 2. The Revised Path Model (Model 3) Estimating the Impact of Religiosity on Adolescent Delinquent Behavior (Chi-square = 1159.14, $df = 17$, NFI = .97, NNFI = .91, CFI = .97)

results of Model 3 as our final model for hypothesis testing.

The results in Figure 2 largely corresponded to our research hypotheses. Of the 26 causal paths, 25 were significant. Only one path failed to reach traditional levels of significance, a path related to the effect of vertical faith on approval of popular culture standards. Specifically, the extent that youth experienced depression/suicidal ideation tended to decrease as their intrinsic religiosity, vertical faith, and doctrinal orthodoxy increased, while horizontal faith and extrinsic religiosity increased the probability of developing the same trait. The inclination to endorse church instruction on drugs and popular culture also tended to be augmented when the extent of intrinsic religiosity, doctrinal orthodoxy, and vertical and horizontal faith increased. Extrinsic religiosity, however, was noted to influence teenagers to turn away from the church stance on drugs and popular culture. In the second half of the model, depression/suicidal ideation increased the frequency of involvement in substance use and criminal misdemeanor, whereas both criminal misdemeanor and substance use were less likely to take place as the extent to which teenagers endorsed church instruction on drugs and popular culture increased. Horizontal

faith was also noticed to deter youth involvement in criminal misdemeanor.

In addition, parental monitoring had a strong bearing on youth endorsement of church instruction. This finding was expected in that youth with strict parents have been previously known to show high levels of obedience and conformity to standards of adults and social institutions (Lamborn, Mounts, Steinberg, & Dornbusch, 1991). Parental monitoring was also found to keep youth away from substance use, whereas it was poised to foster their proclivity to be involved in criminal behaviors. This view is in keeping with two lines of prior findings: a collection of studies that documented a deterrent effect of parental discipline on youth drinking, smoking, and drug use (Miller & Volk, 2002) and the other array of research showing that parental discipline can boost criminality and violence when it becomes excessive (Patterson, Forgatch, Yoerger, & Stoolmiller, 1998).

Discussion and Conclusion

We began by hypothesizing that personal religiosity indirectly affects youth delinquency via depression/suicidal ideation and endorsement of church instruction on drugs and popular culture.

The empirical evidence is supportive of our hypotheses. To repeat the findings on depression and support for church guidelines, teenagers with intrinsic, orthodox, and theocentric religion are less likely to get depressed and more likely to endorse church guidelines than those not so associated. The results provide a different story in relation to extrinsic religiosity, one that is opposite to the one for intrinsic, orthodox, and vertical faith religiosity. An increase in extrinsic religiosity leads to increases in depression and suicide attempts, while it decreases the chances of youth endorsement of church guidelines. Further, the effect of horizontal mode of faith maturity on depression/suicidal ideation is significant in the positive direction, while it expands the radius of personal support for religion to the scope of church tenets on drugs and popular culture. In addition, our findings give weight to the expectation that increased depression/suicidal ideation and decreased endorsement of church standards relate to increased engagement in substance use and criminal misdemeanor.

For the direct effect of religiosity, direct influence of horizontal faith was added to the initial models at the respecification stage to assess whether it has direct bearings on criminal misdemeanor. Its impact was significant in the negative direction, the direction that signifies teenagers with higher horizontal faith would be less involved in criminal misbehavior. Those who care for their fellow men and women and the world around may be aware of the destructive nature of violent and criminal behaviors and accordingly want to reduce violence and crime by resorting to church and religion.

This particular finding may seem to betray the notion that the influence of religiosity on delinquency is essentially indirect through moderators such as depression, suicidal impulse, and endorsement of church instruction. Yet, although this flow of evidence toward direct effects of religiosity corrects our thesis to some extent, we must bear in mind that the finding comes along with critical limitations because the analysis fails to yield any strong, meaningful effects of intrinsic, extrinsic, vertical, and doctrinal faith. Moreover, even horizontal faith makes no significant impact on substance use, which runs counter to the case for criminal misdemeanor. These caveats together appear to rule out chances for a general theory of uniform impact of personal religiosity across different forms of delinquent behavior.

One way to further support the indirect-effect thesis is to estimate how well the endogenous variables are explained by the religiosity variables in combination relative to the one for non-religiosity factors. For substance use, readers may recall that in Model 4 four religiosity variables (intrinsic, extrinsic, vertical, and doctrinal) coalesced into an array of variables with depression/suicidal ideation, parental oversight, and endorsement of the church standards. In Model 4, this coalescence explained 22% of the total variance. Regarding misdemeanor, this value was reduced to 14% when horizontal and vertical faith were allied with parental monitoring and the same endogenous variables. The corresponding *R*-square values from Model 2, in that no direct religiosity effect was specified, were 21% and 11% for substance use and criminal misdemeanor, respectively. From this comparison, we can deduce that vertical, intrinsic, extrinsic, and doctrinal religiosity variables accounted for only 1% of the variance in substance use, whereas 21% was explained by depression/suicidal ideation, parental monitoring, and endorsement of church instruction. With respect to criminal misdemeanor, 10% of the variance was based on these non-religiosity factors, while we could explain only 3% of the variance in criminal misdemeanor by referring to the religiosity variables together. At this point, it is worthwhile reporting that, in Models 1-4, the five religiosity variables in combination accounted for 6%, 16%, and 21% of the variance of depression/suicidal ideation and support for church standards on drugs and popular culture, in the order given, values much greater than their corresponding ratios for substance use and criminal misdemeanor. In sum, the evidence lends credence to the view that the eminence of religiosity effect is determined not so much by its direct impact on delinquency but largely on the basis of how its components relate to mediating factors such as depression/suicidal ideation and endorsement of church standards.

For a supplementary note, an accumulating body of evidence, as stated above, has said that parent-related factors are behind decreased delinquency among religious individuals. This article may shed some light, albeit limited, on this issue because we are now able to estimate the contributions that parental oversight makes in comparison to depression/suicidal ideation and endorsement of church instruction. In Figure 2, the standardized coefficients and their indexes of

determination (the squares of p) indicate that attitude toward church standards on substance use is more powerful than the other variables in accounting for adolescent delinquency. Specifically, the sizes of variance that is explained by parental monitoring was near zero percentage to 1%. These ratios are much smaller than the 4-16% for endorsement of church guidelines on drugs and substances, though roughly compatible with the 0-1% for endorsement of the popular cultural standards and the 1-3% for depression/suicidal ideation. That is, endorsement of the church code for drugs and other substances may be practically more relevant to youth delinquency than parental oversight. This result points, in amplified terms, to attitude toward a church's conservative stance on lifestyle in general as a particularly critical cause of the decrease of substance use and criminal misdemeanor among those affiliated with evangelical Christianity.

To conclude, the evidence presented here bespeaks an effect that religiosity has on adolescent delinquency that is potent via its impact on depression/suicidal ideation and approval of church instruction. Once religiosity resolves the extent of depression/suicidal ideation and embracement of church instruction on lifestyle, reduced depression/suicidal ideation and increased commitment to the guidelines next lower the chances of adolescent delinquency. Specifically, our data point to at least three avenues whereby personal religiosity shapes youth involvement in substance use and criminal misdemeanor. First, intrinsic religiosity, vertical faith, and doctrinal orthodoxy lessen the probability of adolescent delinquency by reducing their depression/suicidal ideation and promoting support for church standards on lifestyle. Second, extrinsic religiosity facilitates the spread of delinquency as it increases the likelihood of depression/suicidal ideation and decreases support for church guideline on those delinquent behaviors. Third, horizontal faith has mixed effects on delinquency. It cuts back the likelihood of delinquency as it promotes their commitment to church instruction; at the same time, horizontal faith is conducive to increased delinquency as it augments the probability of experiencing depression/suicidal ideation.

Notes

1. References to this stance can be found in the faith statement of most evangelical churches such as the Southern Baptist (<http://www.sbc.net>), Southern

Methodist (<http://www.southernmethodistchurch.org>), and Seventh-day Adventist Churches (<http://www.adventist.org>).

2. It can also be presumed that depressed adolescents are more likely to be drawn to conventional religion as compared to non-depressed adolescents; thus depression should be considered a determinant of religiosity rather than vice versa. People indeed often use religion to cope with depression (Koenig, 2009). But religious coping is particularly widespread among religious population (Pargament, Ano, & Wachholtz, 2005). Non-religious individuals may turn to religion when coping with anxiety and stress, but this reliance generally does not last long because depression diminishes over time in the majority of people. Hence, it seems more reasonable to suggest depression as a mediator between religiosity and delinquency rather than being considered as a predictor or precursor of personal religiosity (Wink, Dillon, & Larsen, 2005).

3. The items covered in this study include the following Valuegenesis survey items: 1-12 for faith maturity; 61-62 and 69-74 for doctrinal orthodoxy; 129-135, 140, and 142-144 for endorsement of church standards on drugs and popular culture; 202 and 203 for depression and suicide attempt; 221-228 for delinquent behavior; 311-329, 338, and 457 for intrinsic and extrinsic religiosity; and 180, 182, and 185-187 for parental monitoring of drinking and popular culture.

4. See Ji, Pendergraft, and Perry (2006) for the sample's age, gender, and ethnic composition.

5. For referential purposes, 9% of the respondents marked "once" on the suicide-attempt questionnaire item, followed by 4% for "more than two times" and 3% for "twice." That is, 16% of the present samples attempted to commit suicide "at least once" in their life, a rate roughly compatible with the national data reporting that 20% of high school students seriously consider suicide or attempt each year (see <http://www.minddisorders.com/Py-Z/Suicide.html>).

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