Substance Abuse and Religiosity

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Abstract
This study addresses the importance of substance abuse in regards to religiosity. Prior research (Hodge, Cardenas, & Montoya, 2001) indicates that both high spirituality and religious participation are predictors of low substance abuse. Other research in the past has shown that adolescents that scored high on the Alcohol Involvement scale tended to come from families that were not characterized as having a strong orientation to religion (McGue, Sharma, & Benson, 1996). For this study 5097 participants were analyzed utilizing data from the Relate Assessment, which analyzes factors that have impact on substance abuse. The results found that higher spiritual confirmation significantly predicted lower substance abuse while controlling for partner substance abuse, levels of commitment, religious orientation score, and happiness $p<0.01$, (Adj $R2 = .26$). To test if there is a difference between religiosity and gender, this study ran a 2 (gender) x 10 (religion) factorial ANOVA. Results indicated a significant difference among those that affiliate themselves with religion, and their gender $p<.001$. A Tukey HSD found that high frequency of practice and high intensity belief religious groups differed significantly from the others $F(1,9) = 4.31$, $p<.001$, $pb2=0.01$. We conclude that high religiosity can predict low substance abuse, as well as a difference in levels of religiosity among a variety of religious groups.

Keywords: Substance abuse, Religion, Spirituality

Substance Abuse and Religiosity

Past research has shown a relationship between substance abuse and religiosity. The idea behind substance use involves the definitions, and behavioral aspects from these past researchers. Starting with how substance abuse starts, which is the involvement with compulsive use of the drug (Koob & Moal, 1997). Many of the symptoms or criteria, involve individuals experiencing a loss of control over drug intake, as well as a narrowing of the number of different behavioral responses toward drug-seeking (Jaffe & Martin, 1990). Meaning that the more involved a person is with the drugs they consume; their tolerance increases and they continue to see after more drugs.

Research in the past has indicated that there was an impact between religion, and substance abuse. Religiosity being known as a multi-faceted object, incorporating cognitive, emotional, motivational, and behavioral aspects (Hackney & Sanders, 2003). Meaning that religion has a way of being involved in numerous aspects of our lives physically, and mentally. Pargament (2001) defined spirituality as a search for views that are deemed as sacred, these views served as the central function of religion, mostly "a search for significance in ways related to the sacred". With religion, different experiences are giving a new meaning, somehow a sacred meaning, as it is incorporated with feelings of the individual. Religion has shown to have an impact on substance use, and abuse. Particularly with young adults, and teenagers.

Adolescents that scored high on the Alcohol Involvement scale tended to come from families that were not characterized as having a strong orientation to religion (McGue, Sharma, & Benson, 1996). There was an inverse relationship between teens that were actively engaged in religious activities and substance use (Flory et al., 2004). It seems to be that religion provided a haven to those that want to avoid drug use, or are recovering from drug use. Religion is a protective factor against alcohol and other substance use for both white and black adolescents. The impact of religion and abstinence on white youth was on an individual level, whereas for black youth the influence of religion seems greatest at the group level (Wallace, Brown, Bachman, & Laveist, 2003). Religion affects individuals in different ways, but it still provides the same result; teenagers, and young adults that are more religiously involved tend to use less drugs, or completely remain abstinent. Religious service attendance, and frequency of prayer, were all significant predictors of problem drinking for black adolescents. Whereas the level of importance placed on religion, and religious fundamentalism were the significant predictors for white adolescents (Brown, Parks, Zimmerman, & Phillips, 2001).

There needs to be more research to better understand the mechanisms in how religion promotes abstinence of drugs. There has not been a study with a measurement of many different religious denominations in regards to how much each group abuses substances. This research hypothesized that there is a difference in the level of substance use from these 10 denominations for men and women. This is important to study because for example, Miller (1998) has indicated that analyzing this relationship is necessary before any firm conclusions can be made, noting that religion may provide protective mechanisms from of drugs. Would religion increase in promoting

abstinence or moderation? Can it provide time-occupying activities that require no drug use; as well as the values religion promotes in living a drug free life. This research hypothesized that higher scores on Religious Orientation from the RELATE Questionnaire (Busby, Holman, & Taniguchi, 2001) will significantly predicted lower substance abuse while controlling for partner substance abuse, levels of commitment, spiritual confirmation scale, and happiness. Partner attachment is important to consider in this research, since the RELATE Questionnaire (Busby, Holman, & Taniguchi, 2001) handles the potential influences relationships have on substance abuse. This experiment chose to control for partner substance abuse, levels of commitment, and spiritual confirmation because past research has repeatedly been shown that significant factors in the development of deviant behavior and substance use come from peer influences, (Hops, Andrews, Duncan, Duncan, & Tildesley, 2000).

Method

Participants

5097 Americans participated in this study from the Relate Survey data set (Busby, Holman, & Taniguchi, 2001). 3138 were females and 1959 were males. The age range was 18-79 (m= 30, SD= 9.89).

Materials and Procedure

An online survey developed by the RELATE Institute at BYU - Provo. Provides a way to analyze potential strengths, weaknesses, and problem areas in a relationship, making it easier to talk about problems areas and improve ourselves. A data set was analyzed and various hypotheses were tested to come up with the results. The RELATE model was developed by reviewing over 50 years of research that delineated the important premarital predictors of later marital quality and stability (Busby, Holman, & Taniguchi, 2001). The conceptual model for RELATE shows that the individual, familial, cultural, and couple contexts are constantly influencing one another in a reciprocal manner. Whenever two individuals form a relationship, their unique contexts interact with and influence one another. Each relationship is made up of multitudinous differences and similarities between the partners and contexts (Busby, Holman, & Taniguchi, 2001). This experiment used R 3.3.1 for Windows and RStudio Version 0.99.486 – © 2009-2015 a free statistical analysis software to analyze the data (RStudio Team, 2015).

Results

Table 1, and Figure 1 shows the results indicated that higher Religious Orientation significantly predicted lower substance abuse while controlling for partner substance abuse, levels of commitment, spiritual confirmation scale, and happiness $F(5,4983)=359$, $p<0.01$, (Adj $R2 = .26$). For the predictor variables, the variable p-values, and the standardized beta weights are: Partner substance abuse $p<.001$,

β=.201, Levels of commitment p<.001, β=.047, Spiritual confirmation p<.01, β=-.048, Religious orientation score p<.001, β=.413, Happiness scale p<.01, β=.037.

Table 2 shows the results of testing if there is a difference between religiosity and gender, this study ran a 2 (gender) x 10 (religion) factorial ANOVA (Figure 2). Results indicated a significant difference among those that affiliate themselves with religion, and their gender F(9,5011) = 4.3129, p<.001. A Tukey HSD found that high frequency of practice and high intensity belief religious groups differed significantly from the others F(1,9) = 4.31, p<.001, pb2=0.01.

Discussion

Based off the results, both hypotheses were supported. The first hypothesis was focusing on the idea that Religiosity will have an impact on the level of substance abuse for the individuals involved in this study. The second hypothesis focused on whether there were differences in the levels of substance use due to differences in religiosity among 10 different religious groups. Perhaps it is not the religion itself that promotes abstinence from drugs, but the life satisfaction that comes from being religious.

Cigarette smoking, chewing tobacco, marijuana, cocaine, regular alcohol use, binge drinking, injection drug, and steroid use were significantly associated with reduced life satisfaction (Zullig, Valois, Huebner, Oeltmann, & Drane, 2001). There seems to be a relationship between a decrease in life satisfaction, religiosity, and drug use. The less religious often experience a decrease in life satisfaction, and an increase in drug use. The negative consequences that come from past and future drug use, increase the motivation of "wanting a better life", the common reasons that have been cited by alcohol and other drug users for seeking recovery (Laudet, Savage, & Mahmood, 2002). When there is a reduction in life satisfaction engaging in various risk-taking behaviors related to health (e.g. tobacco, alcohol, and other drug abuse) individuals might respond in such a way as an attempt to improve their life satisfaction (Zullig, Valois, Huebner, Oeltmann, & Drane, 2001). There may be a biological factor attributing to this, as drugs increase chemical components in our brains, such as an increase of dopamine levels. Recent research from (Ferguson et al., 2016) found that from the fMRI images the regions of the brain that showed response to religious experience were part of the reward circuit of the brain, which is also the same region that responds to drugs, junk food, and sex.

With this research measuring 10 different denominations, the hypothesis that was conducted investigated that if there are different levels of substance use, then perhaps that would indicate different levels of religiosity. Perhaps there is an indirect effect on decreasing substance abuse between the variables of the level of religiosity, and life satisfaction. This research used the ranking of the intensity of religious beliefs (Figure 3), and practices from (Pew Research Center, 2009) to demonstrate what denominations are considered high intensity of beliefs, and high frequency of practice. At the individual level, religiosity shows modest positive correlations with life satisfaction (Stavrova et al., 2013). At the individual level, religious adherence is

associated with improved mental and physical health, marital stability, reduced incidences of criminal and delinquent activity, and lower rates of alcohol and drug abuse (Iannacone 1998). Income and religious belief positively predicted life satisfaction at an individual level while controlling for age, gender, and education. Also, the more religious individuals reported higher levels of life satisfaction than less religious individuals (Plouffe, & Tremblay, 2017). Could it be perhaps it is not religiosity that promotes abstinence of substance abuse, but the relationship that religiosity has on the increase of life satisfaction?

Limitations

The limitations of this study included not being able to measure Life satisfaction. The Relate Questionnaire does not include data or measurements for this variable.

Conclusion

It would be good to look in the future how each of the religious denominations were measured on collectivistic, and individualistic qualities in relation to substance use. To see if the policing of communities, as well as the support system is a factor on an individual's substance abuse. Future research should also find run a mediation analysis on whether life satisfaction, or level of religiosity is the reason for a decrease in substance abuse. This mediation analysis will be able to calculate the indirect effect on substance abuse.

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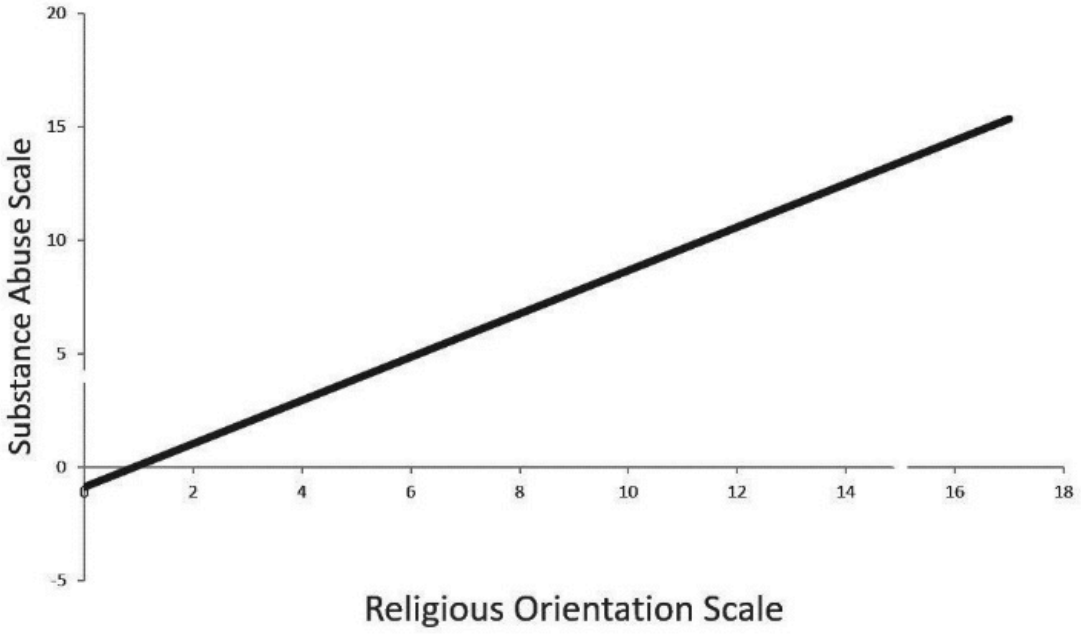

Figure 1. The higher the Religious Orientation score significantly predicted lower substance abuse (higher scores indicate lower use), while controlling for partner substance abuse, levels of commitment, spiritual confirmation scale, and happiness $p<0.01$

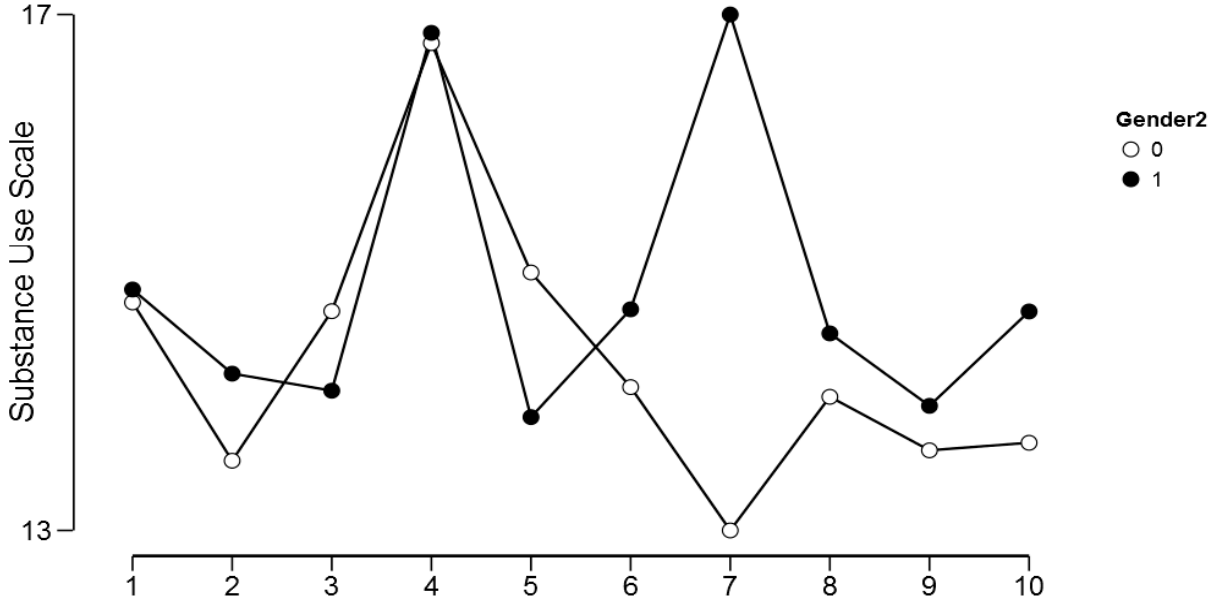

Figure 2. The influence of the ten different religious groups on substance use. 1=Protestant (Methodist, Lutheran, Episcopalian, Baptist, etc.), 2=Jewish, 3=Islamic, 4=Latter-day Saint (Mormon), 5= Buddhist, 6=Hindu, 7=Sikh, 8=Other, 9=None, 10=Eastern Orthodox Catholic.

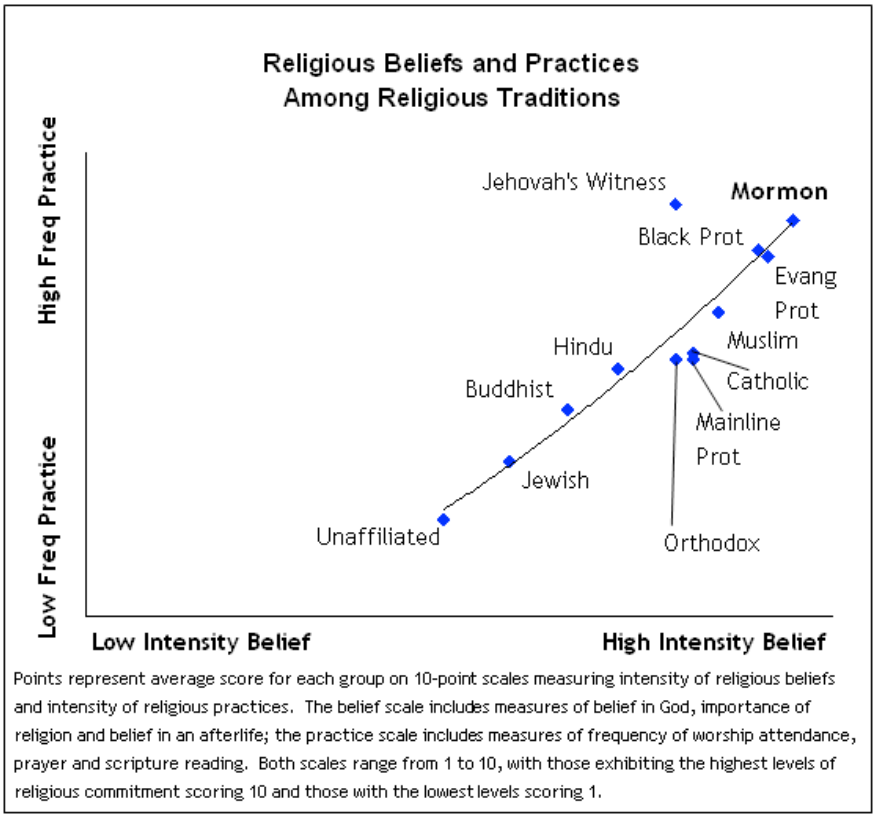

Figure 3. This chart demonstrates different religious denominations and where they stand on frequency of practice, and intensity of beliefs (Pew Research Center, 2009).

Table 1

Model Summary

Model	R	R^2	Adjusted R^2	RMSE	R^2 Change	F Change	df1	df2	p
1	0.515	0.265	0.264	1.983	0.265	1795	1	4983	< .001

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
1	Regression	7062	5	1412.469	359.0	< .001
	Residual	19604	4983	3.934		
	Total	26667	4988			

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
1	intercept	9.438	0.246		38.392	< .001
	Religious Orientation Score	0.205	0.009	0.413	23.865	< .001
	Spiritual Confirmation	-0.015	0.005	-0.048	-2.873	0.004
	Substance Use Partner Scale	0.402	0.027	0.202	15.138	< .001
	Commitment Scale	0.042	0.011	0.047	3.618	< .001
	Happiness Scale	0.038	0.013	0.037	2.919	0.004

Table 2

ANOVA - Substance Use Scale

Cases	Sum of Squares	df	Mean Square	F	p	η^2	η^2_p
Gender	11.75	1	11.753	3.072	0.080	0.000	0.001
Religions	7351.78	9	816.865	213.493	< .001	0.276	0.277
Gender ✻ Religions	148.52	9	16.502	4.313	< .001	0.006	0.008
Residual	19173.01	5011	3.826				

Note. Type III Sum of Squares

Post Hoc Tests

Post Hoc Comparisons -Religions

		Mean Difference	SE	t	p_{tukey}
1	2	0.940	0.219	4.288	< .001
	3	0.426	0.423	1.008	0.986
	4	-2.000	0.075	-26.598	< .001
	5	0.378	0.358	1.058	0.981
	6	0.405	0.496	0.816	0.997
	7	-0.182	1.384	-0.132	1.000
	8	0.536	0.127	4.229	< .001
	9	1.024	0.090	11.364	< .001
	10	0.629	0.097	6.513	< .001
2	3	-0.514	0.469	-1.095	0.976
	4	-2.940	0.216	-13.583	< .001
	5	-0.561	0.411	-1.364	0.906
	6	-0.535	0.536	-0.997	0.987
	7	-1.122	1.399	-0.802	0.997
	8	-0.404	0.239	-1.687	0.734
	9	0.085	0.222	0.381	1.000
	10	-0.310	0.225	-1.381	0.900
3	4	-2.426	0.421	-5.757	< .001
	5	-0.048	0.548	-0.087	1.000
	6	-0.021	0.647	-0.033	1.000
	7	-0.608	1.445	-0.421	1.000
	8	0.110	0.434	0.254	1.000
	9	0.598	0.424	1.410	0.888
	10	0.203	0.426	0.477	1.000
4	5	2.379	0.356	6.678	< .001
	6	2.405	0.495	4.858	< .001
	7	1.818	1.384	1.314	0.925
	8	2.536	0.122	20.784	< .001
	9	3.025	0.083	36.286	< .001
	10	2.629	0.090	29.115	< .001
5	6	0.027	0.606	0.044	1.000
	7	-0.561	1.427	-0.393	1.000
	8	0.158	0.371	0.426	1.000
	9	0.646	0.360	1.796	0.657
	10	0.251	0.361	0.694	0.999

Post Hoc Comparisons -Religions

		Mean Difference	SE	t	p_{tukey}
6	7	-0.587	1.468	-0.400	1.000
	8	0.131	0.506	0.259	1.000
	9	0.619	0.498	1.244	0.945
	10	0.224	0.499	0.449	1.000
7	8	0.718	1.388	0.518	1.000
	9	1.207	1.385	0.871	0.995
	10	0.811	1.385	0.586	1.000
8	9	0.488	0.132	3.706	0.005
	10	0.093	0.136	0.683	0.999
9	10	-0.395	0.103	-3.833	0.003

1=Protestant (Methodist, Lutheran, Episcopalian, Baptist, etc.), 2=Jewish, 3=Islamic, 4=Latter-day Saint (Mormon), 5= Buddhist, 6=Hindu, 7=Sikh, 8=Other, 9=None, 10=Eastern Orthodox Catholic.