

Zen

MENTAL HEALTH

In June 2001 and again in February 2007, newspapers headlined the findings of a nationwide study by Express Scripts that ranked Utah first in the nation for the use of antidepressant drugs such as Prozac, Zoloft, and Paxil (Express Scripts, 2001; Express Scripts, 2008; Goodman, 2001; Thalmann, 2001). Another study, published by Mental Health America, found Utah to have the highest occurrence of depression in the United States (Mental Health America, 2008).

These studies have led many observers to wonder why Utah leads the nation in mental health illnesses such as depression and anxiety as well as in antidepressant use. Unfortunately, these studies examined only the rates of incidence and not the reasons why Utah is the leader in these areas.

Previous to these studies, there had already been some suspicion that Utah had a higher rate of Prozac use than the national average (Jensen & Jensen, 1999). Discussions surrounding this issue pointed to what some consider to be the overburdened lifestyle of members of The Church of Jesus Christ of Latter-day Saints, Utah's dominant religion. Some

speculated that Utah's high rate of antidepressant use was connected to Latter-day Saint women specifically, claiming the LDS ideology creates a culture of perfectionism that leads to higher levels of stress, depression, and anxiety disorders (Goldman, 2008).

The large majority of scientific research on mental health among Latter-day Saints, however, clearly shows that LDS women are no more likely to have mental illnesses than members of other religions (Judd, 1999). So it seems strange that Utah, with the majority (at least 60%) of its population comprising members of the LDS Church, would rank number one in the nation in depressive symptoms and antidepressant use.

The purpose of this chapter is twofold: first, to further investigate depression levels among Latter-day Saints across the United States and compare them to national data to see if there are significant differences, and second, to identify factors that are significantly related to depression among Latter-day Saints.

MENTAL HEALTH AND RELIGION: THE LATTER-DAY SAINT CASE

The relationship between religion and mental health has been discussed among social scientists and laypeople alike for some time. Though the religious life has generally been held in high regard for thousands of years, during the past two hundred years some social theorists and therapists have questioned the benefits of religion in the lives of individuals, families, communities, and nations. The opinions of social scientists and mental health professionals are mixed concerning the impact of religion on mental health. Sigmund Freud (1989) described religion as "the universal obsessional neurosis of humanity" (p. 55). More recently, Albert Ellis (1980), creator of Rational Emotive Theory and Therapy, stated: "Religiosity is in many respects equivalent to irrational thinking and emotional disturbance. . . . The elegant therapeutic solution to emotional disturbance is quite

unreligious. . . . The less religious they are, the more emotionally healthy they will be” (Ellis as cited in Bergin, 1983, p. 170).

On the other hand, the American philosopher and psychologist William James defended humankind’s relationship with God when he stated: “We and God have business with each other; and in opening ourselves to His influence our deepest destiny is fulfilled. The Universe, and those parts of it which our personal being constitutes, takes a turn for the worse or for the better in proportion as each one of us fulfills or evades God’s commands” (1902, pp. 516–17).

Although history provides examples of religious belief and practice that have led to ill health and even destructive behavior, the great majority of recent research studies have reported the relationship of religion and mental health to be positive (Larson et al., 1992). This relationship holds true for most measures of religious affiliation, belief, and practice in relation to a variety of measures of mental health.

Various measures of mental health among Latter-day Saints have been studied in detail. Daniel K Judd edited a book entitled *Religion, Mental Health, and the Latter-day Saints*, wherein the affiliation, beliefs, and practices of various samples of Latter-day Saints were examined with respect to measures of mental health, including depression, suicide, drug use, perfectionism, and family affection. Although many anecdotal descriptions argue otherwise, the research indicates that Latter-day Saints report either the same or lower incidences of mental illness as those of other religious faiths and those who claim to not believe in God or who do not practice any form of religion (Jensen, Jensen, & Wiederhold, 1993; Judd, 1999).

With this background in mind, our first objective was to probe how depression rates among LDS men and women living in the United States compared to the national average. This objective was accomplished by comparing depression levels between Latter-day Saint men and women and women from the National Study of Families and Households (NSFH). As an

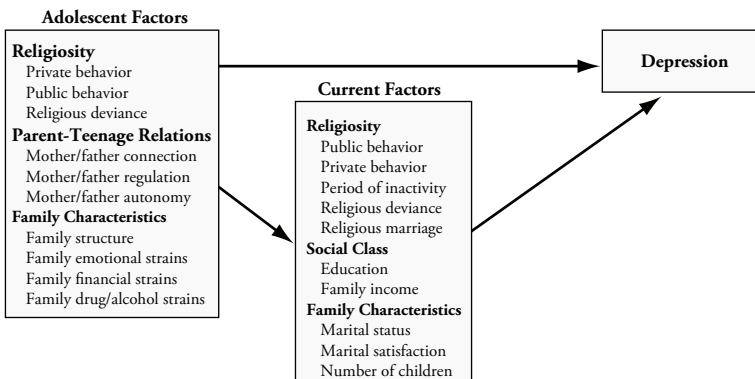
additional assessment, we compared the LDS rates of depression to those estimated by the American Psychiatric Association and the National Mental Health Association for the nation as a whole.

PREDICTING DEPRESSION AMONG LATTER-DAY SAINTS

Our second objective was to develop and test a multivariate model predicting depression among Latter-day Saints. Figure 1 presents the conceptual model of the hypothesized factors, taken from the literature, that are believed to influence depression. For example, previous research has revealed that adult religious experiences, including affiliation, church attendance, and private religious experience, are relevant when assessing mental health (Schnittker, 2001; Cadwallader, 1991; Murphy et al., 2000; Ellison, 1995; Mirola, 1999; Doxey, Jensen, & Jensen, 1997; Genia & Shaw, 1991; Watson et al., 1988; Jensen et al., 1993).

Although previous studies are not unanimous, the majority have found that higher religiosity is associated with lower frequency of depression. Given the focus of this paper, as well as earlier research, we included several measures of religiosity in the model. We also added religiosity during the respondent's adolescence to the model, because feelings of religious

Figure 1. Conceptual Model Predicting Depression among Members of the LDS Church



inadequacy or limited self-worth created in youth may persist into adulthood.

Socioeconomic factors, including educational attainment and family income, provide some understanding of psychological well-being (Reading & Reynolds, 2001; Miech & Shanahan, 2000; Miech et al., 1999; Lloyd & Turner, 1999). People with higher education are more likely to recognize the symptoms of depression and to seek treatment. Higher family income is often obtained from employment that provides medical insurance covering treatment for mental illness, and if not, provides the means to pay for treatment. Because of this previous research support, both of these factors were included in the model predicting depression.

Marital status and marital satisfaction have also been linked to depression. Married men and women have been reported to have lower rates of depression (Waite & Gallagher, 2000). Among the married, those experiencing higher marital satisfaction tend to have less depression.

One area that has been specifically tied to marital satisfaction and depression is that of marital roles. Whisman and Jacobson (1989) found that “husbands and wives in relationships in which the wife was depressed showed greater inequality in decision making and dissatisfaction with the distribution of decision making and household tasks; wives additionally indicated greater dissatisfaction with the distribution of childrearing responsibilities” (p. 177).

Assh and Byers (1996) suggested that the quality of the “marital exchange” is also important to happiness in marriage. Women who experienced greater rates of displeasing marital exchanges ranked higher in their daily dysphoric mood, higher in marital dissatisfaction, and higher in global depression (p. 549).

Others have also found a salient relationship between marital satisfaction and depression (Gotlib & Whiffen, 1989;

Earle et al., 1998;). We therefore included measures of both marital status and marital satisfaction in our model.

In addition, we added the factor of family size, because fertility among LDS families tends to be significantly higher than the national average (3.4 children as compared to 2.1). Hypothetically, supporting and caring for a large family adds to a parent's stress and subsequent depression. We also added whether or not the person had been married in an LDS temple, because a temple marriage is an indicator of high religiosity among LDS members.

Research has also shown that family structure during adolescence is related to depression later in life. Children of divorced parents or children who grow up without both parents in the home are more at risk for adult depression (Amato, 1991; Ross, 2000). In addition, parenting practices such as connection, regulation, and psychological autonomy have both direct and indirect effects on child and young adult depression (Barber, 1997; Barber, 2002; Gray & Steinberg, 1999). Adults who grew up closely connected to their parents and had parents who set rules, monitored their behavior, dispensed discipline when appropriate, and encouraged them to develop their own beliefs, values, and principles have been found to experience less depression. Therefore, family structure and parental connection, regulation, and psychological autonomy were included in our model predicting depression.

Family emotional and financial strains in childhood and teenage years are also connected to mental health outcomes in adulthood. Adults who were raised in homes with family violence, excessive criticism, or shaming were prone to higher levels of depression as adults (Kessler & Magee, 1994; Robertson & Simons, 1989; Mizell, 1999). Thus, we included whether or not the young adult recalled his or her family being stressed over financial problems, family members' emotional problems, or family members' alcohol or drug addictions while the young adult was growing up.

In summary, Figure 1 shows the various measures of religiosity, family structure, parenting practices, and family stresses in adolescence that were included in the model predicting depression among members of the LDS Church.

Data from three studies were used to complete the two objectives. The first set of data came from a study of men and women who served missions for the LDS Church. The second set of data was collected in the year 2000 from a sample of 4,000 LDS men and 2,000 LDS women who did not serve a mission. The details of the data collection for these two studies are reported in Appendix A.

The third data set came from the second wave of the National Study of Families and Households (NSFH2) collected in 1992–1994 (Sweet & Bumpass, 1996). This was a five-year follow-up survey that included personal interviews with 10,007 of the original 13,007 primary respondents who were surveyed in Wave 1 (1987–88). Data for Wave 1 (NSFH1) were collected from a sample of 13,007 people drawn from a noninstitutionalized U.S. population. It included adults from a main cross-section of 9,637 households.

The Center for Epidemiological Studies Depression Scale (Radloff, 1977) was used to measure depression. This widely used scale consists of 12 questions that reflect symptomatic manifestations of depression. These questions include: “On how many days during the past week did you (1) feel bothered by things that usually don’t bother you? (2) feel that you could not shake off the blues, even with help from your family or friends? (3) have trouble keeping your mind on what you were doing? (4) feel depressed? (5) feel that everything you did was an effort? (6) feel you could not get going? (7) feel fearful? (8) sleep restlessly? (9) feel lonely? (10) feel sad? (11) not feel like eating; your appetite was poor? (12) talk less than usual?” The answers ranged from 0 to 7 (days per week), with higher numbers indicating a greater level of depression.

Religiosity was conceptualized as having four dimensions: private religiosity, public religiosity, religious deviance, and history of church activity. These dimensions were measured for the adolescent and young adult years.

Private religiosity, an indicator that measures intrinsically motivated religious behavior, was determined by responses to the question, "During the past year, how often did you do the following: (1) read the scriptures by yourself, (2) pray privately, (3) think seriously about religion." The possible responses for ranged from (1) not at all to (7) every day.

Public religiosity, which measures extrinsically motivated religious behavior, was ascertained from responses to the question, "How often in the past year did you attend (1) sacrament meeting, (2) Sunday School, (3) priesthood/Relief Society meeting." Responses were ranked from (1) never to (6) almost every week.

Religious deviance comprised six items. Each respondent was asked, "During the last year, how often have you done the following: (1) taken things that did not belong to you, (2) smoked or used chewing tobacco, (3) watched R-rated movies, (4) viewed pornography in books or magazines or on the Internet, (5) drunk alcohol (beer, wine, etc.), (6) used drugs like marijuana, heroin, cocaine, etc." Response categories ranged from (1) never to (5) ten or more times. All six items were combined to measure religious deviance during the adult years, while items 3, 4, and 5 were combined to measure deviance during the adolescent years.

Finally, history of church activity was measured by the following question: "Have there ever been periods of one year or more since your baptism (which generally occurs at age eight) when you did not attend church at least once a month?" Respondents indicated yes or no.

Family structure while the respondent was growing up was determined by asking, "During your high school years, which parent(s) did you mostly live with?" Potential responses

included: both a mother and father in the same household, only a mother, a mother and stepfather, only a father, a father and stepmother, or other. We recoded these responses into two dummy variables: those who grew up with both parents versus those in the other five categories.

Marital status was determined by asking, "Which best describes your marital status?" Response categories were (1) never married, (2) cohabiting (living with a partner in an intimate relationship), (3) married, first marriage, (4) married but separated, (5) divorced, (6) remarried, and (7) widowed. These categories were combined into three dummy variables: married, single, and divorced/separated.

Marital satisfaction was ascertained from asking married respondents the following question: "Compared with other couples you know, how satisfied are you with your marriage?" The range of responses for both questions was (1) very dissatisfied to (5) very satisfied.

Family size was assessed by asking, "How many children do you have?"

Type of marriage was measured with the question, "What type of ceremony did you have for your current marriage?" Response categories were (1) temple ceremony, (2) civil ceremony, and (3) civil ceremony followed by a temple sealing. These three response categories were coded into dummy variables.

Three scales were used to assess the parent-child relationship during adolescence. These scales were adapted from widely used adolescent inventories and measure the degree to which parents supported and controlled their child. Parental connection was determined by responses to four of ten questions originally developed by Shaefer (1965) and tested by Barber, Olsen, and Shagle (1994).

Parental regulation identified the level of behavioral control that each parent gave to his or her child. It was determined by responses to questions about parental awareness in five areas

Table 1. Scores on the Center for Disease Control's Depression Scale, by Sex and Religious Affiliation

	Men		Women	
	National (n = 2,170)	LDS Served Mission (n = 1,893) No Mission (n = 332)	National (n = 2,915)	LDS Served Mission (n = 1,400) No Mission (n = 570)
"On how many days during the past week did you . . ."				
Feel bothered by things that usually don't bother you?	1.29	0.81	1.73	1.12
Feel that you could not shake off the blues, even with help from family and friends?	0.79	0.45	1.25	0.63
Have trouble keeping your mind on what you were doing?	1.08	1.27	1.46	1.26
Feel depressed?	1.05	0.63	1.51	0.84
Feel everything that that you did was an effort?	1.22	1.48	1.49	1.48
Feel you could not get going?	1.10	1.02	4.55	1.33
Feel fearful?	0.58	0.47	0.88	0.54
Sleep restlessly?	1.49	1.37	1.79	1.61
Feel lonely?	0.93	0.73	1.29	4.05
Feel sad?	1.04	0.77	1.53	1.12
Not like eating; your appetite was poor?	0.74	0.41	1.19	0.47
Talk less than usual?	0.82	0.59	0.99	0.54
Scale mean	1.01	0.83	1.39	1.00
		1.12		1.11

of their children's lives (Dornbusch et al., 1987; Barber et al., 1994).

Psychological control focuses on parents' encouragement of their teenagers to trust the teens' own thoughts, ideas, and feelings. It was measured by four of the eight questions originally used by Barber et al. (1994) in their study of parental use of psychological controlling behavior. Three questions were used to assess the level of family emotional, financial, and addictive strains in adolescence. The items used to calculate these factors are presented in Appendix B.

Educational attainment was measured by asking, "Circle the highest grade or year of school that you have completed." Response categories ranged from (1) none to (6) graduate/professional school.

Family income information was obtained by the question: "What was your total family income from all sources for 1998 (before taxes)?" Response categories ranged from (1) under \$10,000 to (8) over \$100,000.

LDS AND NATIONAL RATES OF DEPRESSION

Looking at Table 1, we see that the returned-missionary men have significantly less depression than their non-returned-missionary counterparts. The returned-missionary men are also lower than men in the national sample. Men in the national sample reported an average of just over one day per week with one or more symptoms (1.01) as compared to 0.83 for the returned-missionary men.

Similar findings appeared for the women in the three samples. Because young women in the LDS Church are not generally encouraged to serve a mission like the young men are, the non-returned-missionary women more accurately represent the majority of LDS women. However, like the men, LDS women who do serve missions have significantly higher religiosity levels than the average LDS woman (see Chapter 2). These returned-missionary women also revealed the lowest rate

Table 2. Covariance/Correlation Matrix (Returned/Missionary Men)

Indicator	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Current factors																					
Depression		-.171	.152	-.019	-.109	.053	.084	.016	-.354	.005	-.033	.092	-.093	-.050	-.050	-.025	.073	.060	.208	.173	.012
Private religiosity	.139		.555	.157	.069	-.079	.026	-.022	-.193	.457	-.059	-.372	.103	.058	.029	.012	-.006	.003	.057	-.000	.168
Public religiosity	-.181	.457		-.017	.054	-.137	-.025	-.024	-.061	.112	.072	-.122	.052	.029	.028	.025	-.044	-.028	-.082	-.065	-.020
Religious deviance	-.022	.126	-.019		-.046	.089	-.018	-.007	.137	-.590	-.312	.958	-.085	-.083	-.178	-.190	.095	.114	.132	.068	.391
Educational attainment	-.142	.061	.070	-.059		-.029	-.069	-.004	.536	.109	.046	-.023	-.005	.003	.012	.029	-.030	-.026	-.020	-.046	-.023
Periods of inactivity	.136	-.140	-.355	.222	-.081		-.002	.008	.059	-.141	-.114	.019	-.045	-.029	-.047	-.040	.032	.024	.067	.071	.075
Single	.244	.052	-.074	-.051	-.219	-.013		-.003	-.317	.004	.006	-.010	-.000	-.001	-.000	-.002	.004	.002	.017	.010	-.001
Divorced/Separated	.123	-.118	-.185	-.055	-.036	.138	-.029		-.004	-.004	-.008	.023	-.005	-.002	-.001	.000	.003	-.001	.008	.002	-.003
Family income	-.191	-.071	-.033	.072	.315	.069	-.417	-.015		-.278	-.036	.046	.048	-.062	-.016	-.016	-.032	.007	-.121	-.168	-.059
Adolescent factors																					
Private religiosity	.004	.230	.082	-.420	.087	-.222	.008	-.019	-.092		.641	-.139	.193	.140	.197	.205	-.079	-.087	-.013	.009	-.189
Public religiosity	-.037	-.045	.081	-.340	.056	-.275	.015	-.056	-.018	.440		.018	.120	.080	.135	.129	-.073	-.058	-.156	-.113	-.283
Religious deviance	.090	-.251	-.120	.917	-.025	.041	-.025	.145	.020	-.084	.017		.015	.039	.025	.024	-.040	-.053	-.015	.001	-.213
Father's connection	-.154	.118	.087	-.138	-.008	-.161	-.002	-.057	-.036	.197	.188	.020		.128	.190	.097	-.137	-.068	-.165	-.117	-.156
Mother's connection	-.103	.082	.061	-.167	.006	-.127	-.004	-.020	-.057	.177	.155	.067	.368		.093	.117	-.038	-.117	-.115	-.076	-.075
Father's regulation	-.092	.037	.053	-.322	.025	-.188	-.002	-.007	-.013	.224	.235	.038	.492	.297		-.075	-.080	-.066	-.166	-.140	-.205
Mother's regulation	-.053	.018	.053	-.387	.067	-.180	-.010	.000	-.015	.24	.253	.041	.284	.423	.715		-.048	-.062	-.121	-.088	-.152
Father's psych. control	.165	-.010	-.100	.208	-.075	.156	.022	.046	-.033	-.110	-.156	-.074	-.432	-.147	-.280	-.190		.089	.131	.106	.122
Mother's psych. control	.141	.004	-.067	.260	-.067	.119	.009	-.019	.008	-.124	-.128	-.103	-.222	-.471	-.241	-.256	.397		.113	.083	.100
Family emotional strains	.202	.038	-.080	.125	-.021	.140	.040	.047	-.053	-.008	-.142	-.012	-.224	-.193	-.251	-.207	.242	.216		.417	.397
Family financial strains	.162	-.000	-.061	.062	-.047	.144	.023	.010	-.071	.005	-.099	.001	-.153	-.123	-.203	-.146	.188	.152	.318		.267
Family drug/alcohol strains	.011	.110	-.019	.362	-.024	.154	-.001	-.020	.026	-.110	-.252	-.167	-.207	-.124	-.303	-.255	.221	.187	.308	.200	

of depression symptoms among the three women's samples, with an average of one day per week (see Table 1). The LDS women who had not served a mission reported a higher rate of depression than the returned-missionary women, with 1.11 days per week, but they had a lower rate of depression than the same age of women in the national NSFH study (1.39).

Another way we assessed depression rates among Latter-day Saints and others in the United States was by comparing our data to estimates taken from various mental health agencies. In 1990 Robins and Regier estimated that 19 million adults suffered from clinical depression. The American Psychiatric Association (1998) estimated that 17 million adults were affected by depression. The National Mental Health Association (1999) also estimated that 17 million adults had clinical depression. These estimates suggest that one in ten American adults suffers from depression.

Using the standard scoring of four of the twelve symptoms occurring most days of the week from the depression scale in our study (the Center for Epidemiological Studies Depression Scale), we found that over 9% of the adults in the NSFH sample were depressed (which is close to the estimates from the mental health associations) and about 8% of the LDS men and women with lower religiosity experienced depression as compared to only 4% of the male returned missionaries and 6% of the female returned missionaries.

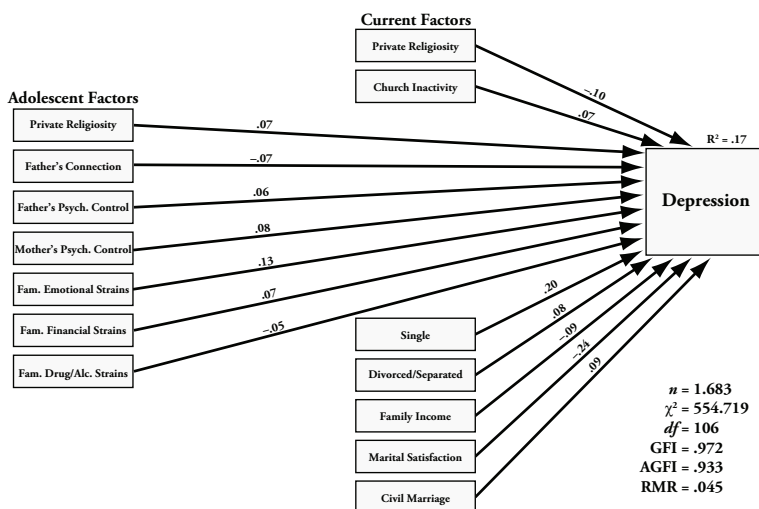
PREDICTING DEPRESSION AMONG LDS MEN AND WOMEN

Our second objective was to identify factors related to depression among members of the LDS Church. We accomplished this objective by testing the multivariate model presented in Figure 1. We estimated the model for eight separate groups in order to isolate the effects of sex, marital status, and religiosity on depression. This also allowed us to add marital satisfaction, number of children, and type of marriage ceremony to the model for those who were married.¹

Table 3. Structural Model Fit Indicators, by Sex, Marital Status, and Missionary Service

Fit Indicators	Men				Women			
	All		Married		All		Married	
	Mission	No	Mission	No	Mission	No	Mission	No
Sample size	1683	277	1285	167	1218	476	813	352
Chi-square	554	218	532	214	432	368	403	406
Degrees of freedom	106	106	132	132	106	106	132	132
S ² /df ratio	5.2	2.1	4.0	1.6	4.1	3.5	3.1	3.1
Goodness of fit index	.972	.938	.968	.914	.970	.941	.960	.922
Adjusted goodness of fit index	.933	.853	.927	.805	.929	.859	.915	.804
Standardized root mean squared	.045	.073	.043	.068	.031	.076	.036	.100

Figure 2. Model of Significant Estimates for Predicting Depression among Returned-Missionary Men



Across all models, the most consistent finding is the strong link between family emotional strains experienced as a teenager and adult depression. These results illustrate the long-term effect of family stress on teenagers. Those LDS men and women who had a family member with severe emotional problems reported greater depression as an adult. This effect was observed in all eight samples.

These results confirm previous studies about the long-term effects of family emotional trauma on children. In addition, family emotional stress and financial stress caused by the addiction of a family member to alcohol or drugs also made a contribution to explaining depression in three of the eight samples. It appears that family stress, regardless of the cause, fosters depression when a teenager becomes an adult.

A second finding specific to the married samples was the association of marital satisfaction to depression. Married people who reported higher levels of satisfaction in their marriages

Table 4. Beta Coefficients from the Structural Models, by Sex, Marital Status, and Missionary Service

Independent Variables	Men				Women			
	All		Married		All		Married	
	Mission	No	Mission	No	Mission	No	Mission	No
Adolescent Factors								
Private religiosity	.07	*	.10	.24	*	*	*	*
Public religiosity	*	*	*	*	-.07	.11	*	.15
Religious deviance	*	*	*	.24	*	*	*	.25
Father's connection	-.07	*	*	*	*	*	*	*
Mother's regulation	*	*	*	-.17	*	*	*	*
Father's granting of psychological autonomy	.06	*	*	*	.13	.12	.12	*
Mother's granting of psychological autonomy	.08	*	*	*	*	*	*	*
Family emotional strain	.13	.17	.09	.16	.07	.20	.10	.23
Family financial strain	.07	*	*	*	*	.15	*	.12
Family addiction strain	-.05	*	*	*	*	*	*	*
Current Factors								
Single	.30	.21	—	—	.07	*	—	—
Divorced/separated	.08	.31	—	—	*	*	—	—
Education	*	-.10	*	*	*	-.09	*	-.12
Family income	-.09	-.16	-.12	*	-.15	*	-.12	*
Private religiosity	-.10	*	-.07	*	-.18	*	-.08	*
Public religiosity	*	-.18	*	-.23	*	*	*	*
Inactivity	.07	*	.08	*	.08	*	.09	*
Civil marriage	—	—	.09	*	—	—	-.12	*
Civil/temple marriage	—	—	*	.19	—	—	*	*
Marital satisfaction	—	—	-.24	-.12	—	—	-.31	-.32
R²	.17	.31	.17	.18	.12	.18	.20	.29

* Not statistically significant.

scored significantly lower on the depression scale. The effect appears to be stronger for women than men.

Obviously, a fulfilling marriage provides a sense of contentment that mediates against depression, even though there may be strains in other areas of a person's life. In addition, most LDS people have a rather positive attitude towards marriage and see a successful marriage as part of the Church's spiritual charge to its members. Thus, it is not surprising that high marital satisfaction is related to lower depression.

In the four models that included both married and single respondents, marital status was a significant factor predicting depression. Those men and women who had never married or who were divorced or separated scored higher on the depression scale than did those who were married. This was especially true for men (see Table 4). The comparison of divorced or separated men to married men produced similar results. Marriage provides various benefits for both men and women. However, men seem to benefit more and usually report higher marital satisfaction than women (Waite & Gallagher, 2000). These results suggest that the emotional support received from marriage somewhat protects the couple from depression.

Religiosity was significant in the structural equation models predicting depression for the men and women who served missions. Specifically, those with higher private religious behavior were less likely to experience depression. Similar results appeared for having a period of at least one year of inactivity in the Church among the returned-missionary men and women. If highly religious men and women neglect their religious responsibilities for a period of time, then depression is a little more likely. Interestingly, other than the public religiosity of the men, religiosity had no effect on depression among those who had not served missions. Perhaps men who did not serve a mission value public religiosity in much the same way that returned-missionary men and women value private religiosity.

Consistent with previous research, socioeconomic factors of education and income were significant predictors in about half of the models predicting depression. Higher education and income reduce some of life's stresses, which results in lower depression scores.

Finally, a significant contribution to predicting depression as an adult was the psychological autonomy that fathers granted LDS female teenagers. Based on Barber's (2002) review of the literature, as well as his own research, the link between fathers' psychological control and the emotional health of their children, especially their daughters, is well established. Barber's review of the research shows that a lack of psychological autonomy from fathers is related to a variety of mental health conditions and related behaviors among young women, including depression, low self-esteem, suicide ideation, eating disorders, and sexual promiscuity. The relationship we found between how the fathers treated the women when they were teens and the onset of depression in young adulthood is modest but should be noted.

CONCLUSION

The findings of this study found no evidence that members of The Church of Jesus Christ of Latter-day Saints experience depression more often than others across the nation. In fact, we discovered that on the whole, LDS men and women with higher rates of religiosity had significantly lower levels of depression than the average American. Apparently, the religious LDS lifestyle acts as a buffer against depression rather than heightening it, as some have previously assumed.

In all the different analyses, we found no evidence linking membership in the LDS Church to a greater risk of depression. This finding is consistent with previous research noting a negative relationship between religiosity and depression among members of the LDS Church (Judd, 1999; Hilton, 2002; Jensen & Jensen, 1993; Spendlove, 1984).

So how does all of this connect back to why Utah has the highest ranking in both depression symptoms and antidepressant drug use? Perhaps Utah Latter-day Saints are an anomaly in comparison to LDS members in other parts of the United States, or perhaps they are more apt to report their symptoms and prescription drug use compared to those nationally.

On the other hand, maybe the other 25% of Utah's population, the non-LDS group, have higher level of depression levels, thus boosting Utah's percentages up a few points. Unfortunately, our data are not able to test these questions.

In terms of antidepressant use and sales, perhaps the most plausible explanation is that those in other states are more likely to self-medicate with alcohol or illegal drugs. The literature provides evidence that drinking alcohol or taking illegal drugs is a very common way people cope with symptoms of depression (Weiss, Griffin, & Mirin, 1992; Schinka, Curtiss, & Mulloy, 1994; Miller, Miller, Verhegge, Linville, & Pumariega, 2002; Moore, 1998; Hendrie, Sairally, & Starkey, 1998). Although some Utahns may follow this practice, most of those who are LDS are less likely to turn to alcohol or drugs because of the LDS Church's strong stance against the consumption of alcohol and illegal drugs for any reason. Thus, instead of self-medicating with alcohol or drugs, LDS Utahns may be more likely to seek medical assistance from their doctor, who may then prescribe an antidepressant.

Another possibility is that since Utahns are generally more educated and aware of the symptoms and treatments of depression, they are more likely than residents of some other states to seek medical treatment. Prescription practices in Utah point this out, as physicians in Utah have high prescription rates not only for antidepressants, but for other medications as well (Lamb, 2002). In fact, the study that reported Utah's high use of antidepressant prescriptions also found the state to be the highest in the nation prescribing antibiotics, analgesics (painkillers), and antiinflammatory drugs (Express Scripts, 2001).

Our second objective was to identify the determinants of depression among LDS populations. Several important findings emerged. First, marital status has a strong relationship to depression among LDS men and women. Single or divorced members of the LDS Church, especially men, were significantly more depressed than their married counterparts. Waite and Gallagher (2000) recently synthesized the latest research on the effects of marriage. Although their review found some inconsistency among studies, the overall pattern discovered was that higher levels of depression are found among the single or divorced than those who are married.

Among those married, marital satisfaction was a powerful predictor of lower depression. Those reporting lower levels of marital satisfaction were much more likely to report higher levels of depressed symptoms. Although this makes sense when considering the high emotional value that Latter-day Saints put on marriage, they as a group are not unique when it comes to this outcome. A number of studies consisting of couples with varying backgrounds have found this same association (Assh & Byers, 1996).

Our results add to the literature previously cited that finds a salient link between religiosity and depression. We found that a person's private religious behavior, including scripture study or private prayer, as well as their public behavior, such as church attendance, are negatively associated with depression. These effects, however, vary according to the level of religiosity. Private religiosity influenced depression for returned-missionary men and women, and public religiosity only for non-returned-missionary men.

The significant inverse link between private religiosity and depression unique among returned missionaries may be explained by the relatively high religious standards returned missionaries set for themselves as compared to non-returned missionaries. While serving as missionaries, these men and women developed consistent habits of daily scripture study,

private prayer, and religious observance. Once home, varying from these habits may lead to strong feelings of guilt and thus a greater strain on emotional health.

Most non-missionary LDS men and women, not experiencing these elevated levels of private religious commitment in the first place, would therefore not experience the same level of guilt or self-incrimination. However, for them, at least for the men, a similar pattern occurs in public religiosity. When they see themselves falling below a previous standard in Church attendance, feelings of inadequacy and guilt may set in, eventually leading to depression.

A final significant finding in the study is the link between childhood experiences and adult depression. Those members of the LDS Church who experienced greater family emotional strains during adolescence experienced greater depression in adulthood. A father's psychological control over a teenager is related to adult depression. This finding corroborates the literature summarized by Barber and Harmon (2002) on parental psychological control and its association with depression and other mental health problems among teenagers when they become adults.

Depression is one of the fastest-growing mental health problems in the United States. It is a growing concern among Latter-day Saints. We believe the findings in this study will provide valuable information to help social scientists and mental health experts further understand its extensiveness among Latter-day Saints and its relationship to their religiosity.

This chapter was coauthored with Daniel K Judd and Sherrie Mills Johnson. Dr. Judd is a professor of ancient scripture at Brigham Young University. He has a PhD in counseling psychology from Brigham Young University and is the author of several books and articles on mental health and family issues. Dr. Johnson holds a PhD in sociology from Brigham Young University.

NOTES

1. Structural Equation Modeling (SEM) techniques were used to perform confirmatory factor analysis for each of the latent variables. The factor loadings and squared multiple correlations for the latent variables in each model were acceptable. We also calculated the bivariate correlations between the different

indicators to identify any possible multicollinearity problems. Kline (1998) suggests that any bivariate correlation that exceeds .85 indicates a possible problem. The covariance/correlation matrix used to estimate the structural model for the returned-missionary men is shown in Table 2.

An inspection of the correlations from this model, as well as the other seven models, revealed no multicollinearity concerns. However, while estimating each model, we did find a problem with the indicator that measured family structure. Because of the low variance in this indicator, as well as a possible suppression effect while interacting with the other variables in the model, we dropped this variable from our analysis.

Table 3 shows the structural model fit indicators for all eight models. The chi-squares (χ^2), degrees of freedom (df), ratio between χ^2 and df, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI) and Standardized Root Mean Square Residual (RMR) for each of the models is presented there. The χ^2 /df ratio should be less than 5.0, the GFI and AGFI should exceed .90 and the SRMR should be less than .10. Only a few of the many indicators fell below the recommended levels. The χ^2 /df ratio is 5.2 for men who served a mission and the AGFI dipped into the .80s for the four samples who had not served missions. Overall, these measures indicate that the model fits the data reasonably well for each of the eight samples.

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