

# Religion and Happiness Among Israeli Jews: Findings from the ISSP Religion III Survey

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**Abstract** This study investigates religious predictors of happiness in a population-based sample of Israeli Jewish adults ( $N = 991$ ). Using data collected in 2009–2010 as a part of the International Social Survey Programme’s Religion III Survey, analyses were conducted on a fully recursive structural model of the effects of synagogue attendance and several religious mediators on a single-item measure of happiness. Bivariately, every religious measure (synagogue attendance, prayer frequency, certainty of God beliefs, a four-item Supernatural Beliefs Scale, and subjective religiosity) is positively and significantly associated with happiness. In the structural model, 11 of 15 hypothesized paths are significant. Of these, only subjective religiosity exhibits a significant direct effect on happiness ( $\beta = 0.15, p < .01$ ). The other four religious indicators, however, all exert indirect effects on happiness through subjective religiosity and combinations of each other. Total effects on happiness of both synagogue attendance ( $\beta = 0.10, p < .01$ ) and the Supernatural Beliefs Scale ( $\beta = 0.12, p < .05$ ) are statistically significant. Analyses adjust for effects of age and other sociodemographic covariates. Results build on a growing body of population-based findings supporting a salutary impact of Jewish religious observance on subjective well-being in Israel and the diaspora.

**Keywords** Religion · Happiness · Judaism · Israel

## 1 Introduction

### 1.1 Background

Over three decades of empirical research has accumulated linking dimensions of religiousness to overall and domain-specific measures of subjective well-being (SWB). This concept covers a lot of ground and this literature, likewise, identifies religious determinants or correlates of a diversity of well-being outcomes. These include cognitive, affective,

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attitudinal, and somatic indicators, and encompass both subjective self-assessments of life satisfaction, congruence, and affect balance, among other constructs, and psychiatric diagnoses such as depression and anxiety. Among the least investigated well-being outcomes in relation to putative religious predictors is happiness. This is surprising, as happiness is otherwise prominent in the pantheon of systematically researched well-being constructs in recent years.

Early reviews of the SWB literature identified religion, broadly defined, as a potential determinant. But this observation was highly caveated, and researchers were tentative in drawing generalized conclusions. For example, Diener (1984) noted, “Although it appears that religious belief and participation may positively influence SWB, many questions remain unanswered” (p. 556), notably the “why” question. In a subsequent review, 15 years later, he was no less tentative (Diener et al. 1999), despite accumulation of more substantial empirical evidence. He called especially for “more rigorous methodologies, broader samples, greater precision in measuring types of religiosity” (p. 289), and more emphasis on investigating possible mediating variables and exploring this subject in religions besides Christianity. These deficiencies or lacunae are of such longstanding that other important early reviews did not see cause to mention religion at all (e.g., Ryff 1989; Stull 1987).

In a recent review, George (2010) noted that while considerable research has explored the impact of religiousness on health, relatively few studies have examined its impact on SWB, mostly via studies of the effects of formal attendance at religious services. Yet while these studies have identified salutary and significant effects, conceptual and methodological limitations limit our ability to generalize these results.

In their famous review entitled, “Who is Happy?,” Myers and Diener (1995) were comfortable in acknowledging that the evidence for a salutary effect of religion on mental health is “impressive” (p. 16). Among this research, they included studies of non-psychiatric indicators such as life satisfaction and happiness. Yet they, too, noted that up to that point (and this observation holds true 18 years later) there remains to be any systematically “rigorous exploration” (p. 16) of just what it is that explains these findings. In other words, again, the “why” question.

Systematic reviews of empirical research on religion and SWB have, over the years, identified a larger number of one-off studies of well-being, in general, and happiness, in particular, than many investigators may be aware. In a review of 73 empirical studies of religion published from 1980 through the mid 1990s just in gerontological journals—the field of gerontology has been one of the hotbeds of empirical well-being research for many decades—several happiness studies were identified (e.g., Ellison 1991; Heisel and Faulkner 1982; Reed 1991; Steinitz 1980), although results were mixed (see Levin 1997). The first edition of the *Handbook of Religion and Health* (Koenig et al. 2001), reviewing all research conducted up until 2000, identified 102 studies of religion and well-being, including studies that incorporated measures of happiness. In the new second edition (Koenig et al. 2012), updating the review through 2010, 224 new religion and well-being studies appeared just in the past decade. The *Handbook's* 350-plus-page tabular summarization of individual study results did not differentiate well-being studies by which specific constructs were assessed in respective studies (e.g., happiness, life satisfaction, morale), but the narrative text noted that many of these studies included happiness measures. Further, of the most recent batch of religion and well-being studies published in the past decade, 78 % had positive and statistically significant findings, such that greater religiousness was associated with greater well-being (including more happiness). A recent summary of this work, supplemented by new analyses of 25 years of survey data,

concluded that “there is a significant religious effect on happiness and it remains strong when relevant controls are applied” (Stark and Maier 2008, p. 125).

Despite the apparent consistency of these findings, there is still much that we are not clear about when it comes to how religion influences positive affects such as happiness. Specifically, (a) observed findings are mostly not based on population-based samples; (b) respondents are predominantly North American Christians of one or another denomination, and largely White; and (c) religious assessment is not very sophisticated. Typically, respondents are asked about attending church services and not much else. To be clear, this is not a criticism of existing studies; recent work on this subject has been uniformly excellent. Nor is it an implied criticism of studies of religious service attendance; this is an important and meaningful construct, but, clearly, its measurement does not begin to tap the fullness of religious expression (see Hill and Hood 1999). The point here is that we do not know as much as it might seem that we do, and there are still substantial gaps in knowledge, especially regarding how it is, precisely, that religious participation influences happiness and whether this observation transcends religious affiliation.

The present study is an effort to extend the religion and happiness literature to Judaism, building on existing research and drawing on data from the Religion III Module of the International Social Survey Programme (ISSP), specifically from the ISSP’s Israeli sample. This is a newly available and nationally representative population-based data source from Israel and it contains multiple measures of Jewish religiousness. These data will enable a closer and more systematic look at how participation in religious services, in concert with a handful of other religious indicators, impacts a measure of happiness among Jews.

## 1.2 Judaism and Happiness

While Jewish studies of religion and SWB have appeared in the literature for more than 20 years (e.g., Anson et al. 1990; Shmotkin 1990), these tend to focus on life satisfaction (e.g., Amit 2010; Lazar and Bjorck 2008; Shkolnik et al. 2001; Van Praag et al. 2010) or psychological distress (Loewenthal et al. 1997; Lupo and Strous 2011; Wang et al. 2008). Analyses of religious predictors of happiness in Jews are fewer and less programmatic. Accordingly, results are inconsistent, based partly on limitations inherent in available samples and measures.

A British study using a recruited sample of Jewish and Protestant adults experiencing stress found positive associations between several religious measures (including frequency of religious activity, belief that God is in control, and receipt of religious or spiritual support) and a happiness-like measure of positive mood (Loewenthal et al. 2000). These salutary impacts were mostly confirmed in a path model positing a variety of direct and indirect effects, overall and separately among Jewish respondents. A study of Israeli Jewish undergraduates likewise found a small but significant association between positive attitudes toward Judaism and greater happiness (Francis et al. 2004). By contrast, drawing on data from the U.S. General Social Survey (GSS), several religiosity scales were found to be positively associated with a rating of happiness, but only among Catholics and Protestants, not among Jews (Cohen 2002). The author noted, though, that there were probably too few Jews in the sample to enable meaningful conclusions. Finally, cumulative data from the 1972–1996 GSS also revealed that Jews, in general, are a bit more likely to report being “not too happy” than are Protestants and Catholics, but 85.7 % are nonetheless “pretty” or “very” happy (Ferriss 2002).

Over the past few years, two ongoing research programs independently have conducted systematic research on religion and SWB among Jews. The work of Rosmarin and

colleagues has produced a series of psychological studies of selected mental health or well-being outcomes, especially depression and anxiety (Pirutinsky et al. 2011; Rosmarin et al. 2009a, b, c, 2010), mostly in clinical or community samples of Jewish subjects recruited from the Orthodox and Torah-observant population in the U.S. These studies reveal, for the most part, that Jewish religious observance is significantly associated with higher levels of mental health and well-being and is protective against psychological distress and mental illness. Moreover, this benefit is most salient, on average, among traditionally religious subjects and less manifest (or not manifest at all) among more liberal or secular Jews.

Concurrently, Levin has conducted a series of studies of religious correlates or predictors of a variety of mental- and physical-health-related outcomes using existing data collected as a part of various large population-based national surveys in the U.S., the Jewish diaspora, and/or Israel. To this point, analyses have been conducted on a host of outcomes, including subjective health, functional disability, life satisfaction, happiness, positive well-being, depression, and psychological distress, drawing on probability-survey data from the National Jewish Population Survey (Levin 2011a), the World Values Survey (Levin 2012c), the Gallup World Poll (Levin 2011b), the European Social Survey (Levin 2013), and the Survey of Health, Ageing and Retirement in Europe (Levin 2012a, b). The results mostly mirror those of Rosmarin and colleagues: Jewish religiousness is a statistically significant and moderate to strong predictor of positive well-being and is inversely associated with illness and psychological distress, and there is modest evidence for a “dose–response” gradient such that the greatest benefit seems to accrue to more religiously observant Jews, whether in the U.S. (Levin 2011a) or Israel (Levin 2011b).

Among both sets of studies there are a few select findings indicative of a religious effect specifically on happiness, but the relationship is nuanced. Among Israeli Jews, using data from the World Values Survey, affirming the importance of God in one’s life was found to be modestly associated with greater life satisfaction, but not with happiness, while in the diaspora, the same measure was associated with greater happiness, as was more frequent attendance at synagogue services, but neither was associated with life satisfaction (Levin 2012c). In a Jewish community sample in the U.S., a multi-item measure of trust in God was significantly associated with greater happiness, and a similarly constructed mistrust in God measure was associated with less happiness (Rosmarin 2009b). In an online survey of Jewish community-dwelling and student respondents in the U.S., indices of general gratitude and religious commitment were both associated with greater happiness, as well as with measures of life satisfaction and positive affect (Rosmarin et al. 2011).

### 1.3 Conceptual and Theoretical Issues

The construct of happiness is generally considered one of the dimensions or domains of the broader meta-construct of subjective or psychological well-being, a conceptual convention accepted by empirical researchers in various disciplines for decades (e.g., George 1981; Stull 1987), although not without debate. Qualitative studies of happiness, for example, reveal additional conceptual complexity, especially cross-culturally (Delle Fave et al. 2011; Lu 2001; Pflug 2009). A recent essay differentiated the constructs of happiness and well-being and further distinguished between episodic happiness and happiness as a personal attribute (Raibley 2012). Regardless, happiness is typically measured by summary scales that tap into the affective domain of well-being, but, when circumstances dictate, also by single-item measures of global happiness (e.g., “In general, how happy are you these days?”). Analyses of data from indices used to assess happiness and associated positive affects have a long history: a review published nearly 30 years ago identified, at

the time, over 700 studies of happiness using over two dozen measures of happiness (Stones and Kuzma 1985). This is no small or marginal corner of the well-being landscape, as the longstanding presence of this journal attests. Throughout this literature, though, happiness and related constructs such as life satisfaction are often confounded—that is, studies purported to be about one actually are about the other (e.g., Okulicz-Kozaryn 2010), and the terms happiness, life satisfaction, and SWB are sometimes used interchangeably (e.g., Veenhoven 2012). This serves to mix up affective, cognitive, and other domains of SWB that are best modeled separately, as they have distinct patterns of correlates and determinants, including religious ones (see Koenig et al. 2012).

By contrast, religiousness or religiosity, broadly defined, rather than a unitary construct (like happiness) is itself more a meta-construct or domain of life experience (like SWB). Accordingly, sociologists and psychologists of religion differentiate religious beliefs, behaviors, affects, attitudes, values, experiences, motivations, affiliations, and so forth, each with traditions of assessment encompassing validated measurement instruments. Religious assessment, as a topic for theory and research, dates to the 1960s for the field of sociology, beginning with Glock and Stark's (1965) seminal *Religion and Society in Tension*, an elaboration of the multiple dimensions of religiosity; and to the 1950s for the field of psychology, starting with Allport's (1954) classic *The Nature of Prejudice*, which contrasts what he terms institutionalized and interiorized religiosity. These two works begat respective traditions of research and writing that more or less have come to define the subsequent decades of work in the sociology and psychology of religion.

In the research literature on religious determinants of health and well-being, a limited number of these constructs have predominated in published studies. Besides an item or items asking about one's religious denomination, usually for demographic purposes, by far the most commonly used substantive religious measure is a single item assessing the frequency of attendance at religious services, ostensibly in a church or synagogue or, more recently, a mosque. For good or bad, such an item, variously worded, has come to dominate research in this field: for good in those situations where theory is constructed or hypotheses posited whereby the stated focus of a given study is on identifying and explaining the impact specifically of public religious behavior; for bad in those other situations whereby investigators with minimal or no expertise in the study of religion reflexively include such a question on the presumption that this is the only or best or most obvious way to inquire about an amorphous "religiosity" or "spirituality."

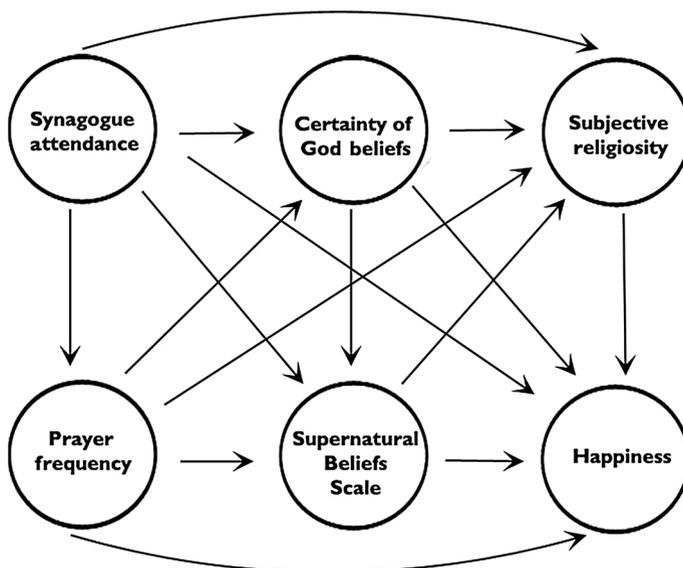
Research on religion and happiness constitutes a modest subset of the larger literature on religion and SWB. Due to the multiplicity of both religious indicators used and happiness measures modeled—single items and multi-item scales among them—representative reviews have concluded, predictably, that "the results of these studies have been mixed" (Lewis and Cruise 2006, p. 214). The different religious and national populations and samples investigated and concomitant differences in how religiousness is normatively defined and what it means across religions and cultures exacerbate this summary finding. This offers little direction as to how religion and happiness might be associated, for example, among Israeli Jews.

Still, summary findings are possible and, thus, a model of expected relationships can be posited here. A recent review noted that both in the U.S. and globally one may identify small, positive, and statistically significant associations between religiousness and happiness, findings that persist after controlling for effects of various life circumstances (Diener et al. 2011). Another recent review, using pooled GSS data from 2000 to 2006, presented interesting findings suggestive of moderately less happiness among respondents who self-identify as non-religious: they were less likely to be "very happy" (26 vs. 35 %) and more

likely to be “not too happy” (13 vs. 10 %) (Hout and Greeley 2012). These results are provocative and provide at least modest guidance for expectations in the population under investigation here.

In the present study, a measure of synagogue attendance is utilized that was included within the ISSP survey as part of a systematic effort to assess different aspects of religiousness in the Israeli population (see “Methods”). In these analyses, synagogue attendance is the most distal, or “leftward,” construct in a multifactorial path model explicitly posited to guide investigation of the putative religious determinants of the outcome under study here, namely happiness. The model that has been constructed (see Fig. 1) is fully recursive; that is, there are hypothesized paths linking each construct, sequentially, with those that antecede it and with those that follow it, all in a “rightward” direction pointing toward happiness. In other words, according to this model, frequent synagogue attendance engenders more frequent prayer which, in turn, reinforces certainty of God beliefs and thus supernatural beliefs in general, these all serving to enhance one’s subjective perception of religiosity. The end result of this process, according to this model, is greater happiness. The model thus depicts a myriad of potentially direct and indirect associations, leading from synagogue attendance through the other religious constructs to happiness.

The proposed model does not, of course, exhaust all possible religious or psychosocial constructs that might, in theory, mediate a hypothetical association between synagogue participation and happiness. But that would require scales and indices not necessarily available in this dataset. In a recent paper (Levin 2012a), the question was posed as to “just what it is about going to *shul* (synagogue) that is contributing to the salutary impact” on mental health indicators. The present analyses are a modest effort to answer this question, albeit in the more limited context of SWB and, specifically, happiness. The model is set up simply to test explicitly how it is, in religious terms, that going to *shul*, for worship and prayer services or other activities, makes for happier Jews. In other words, what are the



**Fig. 1** Hypothesized structural model of Jewish religiousness and happiness

other religious behaviors, beliefs, or attitudes, engendered by or associated with frequent synagogue participation, that themselves may enhance or lead to a positive, joyous mood?

According to the proposed model, regular attendance at *shul* is expected to lead to a variety of religious sequelae for Jews. First, attendance should be associated with a greater frequency of prayer (this would seem obvious, as many Jewish prayers require a *minyan*, or quorum, of ten males or adults). Second, it may reinforce theistic beliefs and an affirmation of traditional teachings about the afterlife and miracles. This is not to say that all practicing Jews affirm all of these things and do so with equal intensity or nuance—far from it. But, thinking epidemiologically here, one might expect, on average, all things being equal, greater orthodoxy (with or without a small “o”) among those who regularly *davven* (pray) in *shul* than among a cohort of secular Jews or non-participants in institutional religious life. Analyses of social survey data on the Jewish population in the U.S. have shown this association for decades (e.g., Lazerwitz and Harrison 1979). Third, frequent synagogue attendance is expected to be associated, again on average, with higher self-assessments of religiousness or piety, for similar reasons to the prior point, especially in a more Orthodox or Conservative direction. Again, this is supported by empirical findings (Hartman and Sheskin 2012). Finally, subjective religiosity is expected to be associated with happiness, in a salutary direction, in keeping with a substantial number of prior studies of religion and positive well-being in various religious populations (Lewis and Cruise 2006). The literature on this latter subject—salutary effects of subjective religiosity—has accumulated so much evidence and is of such longstanding, in fact, that specialized reviews noted this point as long ago as the mid 1980s (e.g., Witter et al. 1985, whose meta-analysis identified a mean effect size for this association of 0.13).

Besides these endogenous (“inside” the model) religious variables, a few exogenous (“outside” the model) sociodemographic variables are included as covariates. Each has been found in many prior studies to be correlates or determinants of religiousness and/or well-being for many populations. These include age, gender, marital status, education, and urban/rural residence. Most of this evidence comes from studies in the U.S., mainly of Protestant Christians, both African Americans and Whites. Whether these variables exhibit similar effects in a sample of Israeli Jews is not clear, but it was deemed judicious to include them here in order to insure that any observed findings would not be due solely to sociodemographic features of this population.

Age-adjustment, especially, looms large in the religion and well-being literature. This is due to the possibility that, among older cohorts, a measure of religious attendance represents a proxy for age-related declines in functional health (that would hinder ambulatory status and thus an ability to go to services) and thus may render observed associations with well-being variables at least partly artifactual. This issue has been discussed in this literature for decades, at least since the observation of Comstock and Tonascia (1977) that epidemiologic findings identifying a protective effect of religious attendance on mortality rates “may have resulted from the fact that chronically ill persons attended church infrequently” (p. 57). Subsequent research has suggested that this religious effect may be substantive (Idler and Kasl 1997), but in the absence of longitudinal data in this instance it is prudent to adjust for age.

Finally, it should be noted that while other model specifications for religious mediators of a synagogue-attendance-happiness association are hypothetically possible, rearranging the order of said mediators in Fig. 1 would not alter the net association between synagogue attendance and happiness, which is the main focus of this paper. Moreover, without longitudinal data, inferences of causal order are not possible; the best that can be done is to

specify a particular theoretically supportable model like the present one and then analyze it, adjusting for age and controlling for effects of pertinent exogenous variables.

## 2 Methods

### 2.1 Participants and Procedures

The International Social Survey Programme (ISSP) is a multinational cooperative social science research venture established in 1984 by investigators in the U.S., the U.K., Germany, and Australia. It conducts annual nationally representative randomized surveys of the adult population, including both core questions and a rotating set of topical modules. As of 2012, surveys were conducted in 49 members countries, including Israel, and over 5,200 scholarly publications had been produced by researchers in over 50 countries (Smith 2012). Its goal is to combine cross-national and cross-time perspectives to study social change throughout the world (Skjåk 2010). The first survey was conducted in 1985, and since then specialized religion modules have been implemented on three occasions, the first two in 1991 and 1998 (Svallfors 1996).

The possibility of a third religion module was proposed in 2005 on the grounds that it was one of the most utilized modules in the ISSP, with hundreds of publications up to that point (Smith 2005). Because of the nature of the topic and the diversity of nationalities, cultures, and religion, this is the most challenging subject for the ISSP as far as insuring conceptual equivalence (see Lüchau 2004). Accordingly, the “Religion III” module, implemented in 2008, includes a combination of two-thirds replicated questions from prior religion modules, one-third newly developed items, and a mix of both culture-specific and culture-neutral items (Skjåk 2010; Uher 2000). The ISSP religion modules are notable, compared to other large-scale religion surveys, in that they include numerous measures of religious beliefs, and not just behaviors, attitudes, and affiliations as typical of surveys of religion (Bréchon 2009).

The 2008 Israeli survey used a four-stage sampling design with Kish-grid randomization, and was conducted through face-to-face interviews of unpaid respondents, comprising adult citizens at least 18 years of age. Fieldwork took place over a five-month period from September, 2009, to February, 2010, under the direction of the B.I. and Lucille Cohen Institute for Public Opinion Research, at Tel Aviv University. The survey contained all core ISSP items, along with the Religion III Module items, translated into and implemented in Hebrew, Arabic, and Russian. The questionnaire was not pretested in this sample, but there were survey reliability measures, including 30 % backchecking; 15 % verified keying; filter, logic, and range checks; and data errors individually corrected. The issued sample size was 1,709, with an eligible sample of 1,625, and 1,046 completed cases (Gendall 2010; GESIS Data Archive for the Social Sciences 2012). An additional 147 interviews were conducted in small Arab communities, for a final sample size of 1,193, but these additional respondents were not included in the present study. Analyses are conducted here using data only from those Israeli Jewish respondents self-identifying as affiliating with the Jewish religion ( $N = 991$ ). Data were obtained from the GESIS Data Archive for the Social Sciences (ISSP Research Group 2012). Respondents averaged 44.78 years of age ( $SD = 17.75$ ) and 12.96 years of education ( $SD = 3.17$ ), 57 % were female and 59 % were married, and the study sample was more urban than rural (average score = 3.88 on a 5-point scale of urbanicity) (see Table 1).

While country-by-country differences in response rate and features of study design complicate cross-national comparisons (Heath et al. 2009), especially for a subject as

**Table 1** Descriptive statistics and Pearson correlations for study variables

Study variables	1	2	3	4	5	6	7	8	9	10	Mean	SD
1. Happiness											3.06	0.74
2. Subjective religiosity	0.20***										3.99	1.60
3. Supernatural Beliefs Scale	0.18***	0.65***									13.48	5.76
4. Certainty of God beliefs	0.07*	0.56***	0.64***								5.07	1.54
5. Prayer frequency	0.13***	0.68***	0.59***	0.51***							5.33	3.81
6. Synagogue attendance	0.11***	0.64***	0.53***	0.43***	0.69***						3.52	2.37
7. Age	-0.15***	-0.04	-0.23***	-0.09**	-0.07*	-0.05					44.78	17.75
8. Female	0.02	0.06*	0.08*	0.11***	-0.04	-0.16***	0.00				0.57	0.50
9. Married	0.23***	0.19***	0.07*	0.11***	0.14***	0.10**	0.23***	-0.00			0.59	0.49
10. Years of education	0.12***	-0.08*	-0.11**	-0.21***	-0.05	-0.08*	-0.18***	0.07*	0.11***		12.96	3.17
11. Urbanicity	0.02	0.08*	0.01	-0.04	0.02	0.02	0.05	0.02	-0.01	0.07*	3.88	1.06

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

seemingly culture-specific as religion, these issues are less likely to come into play within analyses of single-nation samples such as in the present paper. Accordingly, every national ISSP sample contains some degree of discrepancies in relation to information obtained by respective national census data, as would any such national survey, but the deviations are only modest for the Israeli sample (Heath et al. 2009).

## 2.2 Measures

Analyses utilize mostly single-item variables assessing happiness, Jewish religiousness, and sociodemographic characteristics. Many of these variables were reverse-coded or recoded in other ways to facilitate analyses.

### 2.2.1 Happiness

This study's dependent construct, *happiness*, is assessed by a standard single-item measure: "If you were to consider your life in general these days, how happy or unhappy would you say you are, on the whole?" (coded: 1 = not at all happy, 2 = not very happy, 3 = fairly happy, 4 = very happy). No other general well-being items, physical or psychological, were included in this dataset.

### 2.2.2 Jewish Religiousness

This study includes five religious measures, four of which are single items: *subjective religiosity* ("Would you describe yourself as...?"; coded: 1 = extremely non-religious, 2 = very non-religious, 3 = somewhat non-religious, 4 = neither religious nor non-religious or can't choose, 5 = somewhat religious, 6 = very religious, 7 = extremely religious), *certainty of God beliefs* ("Please indicate which statement below comes closest to expressing what you believe about God."; coded: 1 = I don't believe in God, 2 = I don't know whether there is a God and I don't believe there is any way to find out, 3 = I don't believe in a personal God, but I do believe in a Higher Power of some kind, 4 = I find myself believing in God some of the time, but not at others, 5 = While I have doubts, I feel that I do believe in God, 6 = I know God really exists and I have no doubts about it), *prayer frequency* ("Now thinking about the present... About how often do you pray?"; coded: 1 = never, 2 = less than once a year, 3 = about once or twice a year, 4 = several times a year, 5 = about once a month, 6 = 2–3 times a month, 7 = nearly every week, 8 = every week, 9 = several times a week, 10 = once a day, 11 = several times a day), and *synagogue attendance* ("With what regularity do you participate in religious activities of a synagogue [mosque or church] or other religious institutions [including prayer and other activities]?"<sup>1</sup>; coded: 1 = never, 2 = less frequently [than once a year], 3 = once a year, 4 = several times a year, 5 = once a month, 6 = 2 or 3 times a month, 7 = once a week, 8 = several times a week).

In addition, a *Supernatural Beliefs Scale* was constructed as a summary index of scores on four separate responses to the question, "Do you believe in?," including "life after death," "heaven," "hell," and "religious miracles," each scored on a common metric (coded: 1 = no, definitely not, 2 = no, probably not, 3 = can't choose, 4 = yes, probably, 5 = yes, definitely). This scale has a high internal-consistency reliability ( $\alpha = 0.94$ ).

<sup>1</sup> No English translation for this item was included in the ISSP Israeli codebook. The translation given here of the text of the Hebrew question is original, courtesy of Rabbi Gordon Fuller.

### 2.2.3 Covariates

Sociodemographic covariates include *age* (in years), *gender* (0 = male, 1 = female), *marital status* (0 = not married and living with legal spouse, 1 = married, living with legal spouse), *years of education* (open-ended reporting of number of years of schooling), and *urbanicity* (1 = farm or home in the country, 2 = country village, 3 = town or small city, 4 = suburbs or outskirts of a big city, 5 = urban, a big city).

## 2.3 Data Analysis

All analyses were conducted using SAS version 9.2. First, descriptive statistics (means and standard deviations) and bivariate Pearson ( $r$ ) correlations for all study variables were obtained using the UNIVARIATE and CORR procedures, respectively. Second, a traditional path analysis was run, testing the structural linkages in the theoretical model proposed earlier. The path model was analyzed using OLS regression via the REG procedure.<sup>2</sup> To generate the path model estimates, a series of successive models was tested: first, happiness was regressed onto all of the study variables, then subjective religiosity was regressed onto all the variables to the “left” of it in the model, then likewise for the Supernatural Beliefs Scale, certainty of God beliefs, prayer frequency, and synagogue attendance, in sequence. The end results are estimates of structural (regression) parameters for all posited linkages, including proposed covariate effects. Both standardized ( $\beta$ ) and unstandardized ( $b$ ) regression coefficients are reported, in order to enable comparison of associations both within and across the successive models. The path analysis results are adjusted for age and for effects of all other covariates.

## 3 Results

All five religious measures are positively and significantly correlated<sup>3</sup> with happiness, such that greater Jewish religiousness or religious observance is associated, on average, with more happiness (see Table 1). In addition, all of the religious measures are strongly and significantly intercorrelated, and each of the sociodemographic covariates is significantly

<sup>2</sup> Typically, path analyses of structural-equation models are conducted using covariance-structure-modeling (CSM) methods, such as LISREL. In the present study, OLS regression was used for mostly pragmatic reasons. The dependent construct (happiness), the independent construct (synagogue attendance), all but one of the religious mediators, and all of the covariates were single-item variables. An advantage of CSM is to be able to build in measurement-error variance. In this study, that would not have been possible. To conduct these analyses in CSM fashion would thus be unlikely to have altered the findings much, and would have served mainly to complicate the decomposition-of-effects piece of the analysis. It also would have complicated the presentation of results and may have rendered the paper highly inaccessible to much of this journal's audience (e.g., academic psychologists and clinicians). Therefore, the more old-school OLS method was used.

<sup>3</sup> Several additional religious indicators present in the ISSP data were also examined here (not reported in Table 1). Happiness correlates strongly and significantly with frequency of synagogue activities besides services ( $r = 0.11, p < .001$ ), frequency of visits to holy places ( $r = 0.16, p < .001$ ), religious objects in the home ( $r = 0.11, p < .001$ ), and self-describing as religious rather than spiritual ( $r = 0.14, p < .001$ ). These measures were excluded from the path analysis, however, for two reasons: (1) to avoid cluttering the model with too many religious constructs, and (2) very high levels of multicollinearity with conceptually similar variables already in the model (all four additional variables correlate very highly with the five religious measures in the model). These additional religious variables would thus not have added much to the analysis or to the overall understanding of this paper's substantive topic.

associated with happiness and/or one or more religious measures. On average, besides being more religious, happy people also tend to be younger, married, and more educated.

As seen in the presentation of path model results (see Table 2), 11 of 15 hypothesized paths among endogenous (non-covariate) constructs are statistically significant and in the expected direction. Of these, only subjective religiosity, however, has a statistically significant direct effect on (or, more correctly, is directly and significantly associated with) happiness ( $\beta = 0.15$ ,  $p < .01$ ). The other four religious constructs, though, including synagogue attendance, each exerts indirect effects on happiness through subjective religiosity as well as through combinations of each other. That is, greater synagogue attendance, more frequent prayer, more certainty about God, and endorsement of supernatural beliefs each instills a greater sense of overall religiousness, which in turn is associated with being happy. Finally, youth and marriage maintain significant associations with happiness, and the other three covariates exhibit modestly significant associations with one or more religious indicators. To summarize, each religious construct is connected to happiness either by a statistically significant direct effect (in the case of subjective religiosity) or by a sequence of indirect effects that ultimately run through subjective religiosity (in the case of the other four religious indicators).

For those who may be interested in additional information, the total effects observed in a path analysis, such as those presented in Table 2, may be decomposed into direct and indirect components (see Lleras 2005). This is done here according to the method described by Alwin and Hauser (1975), in which the magnitude of a respective indirect effect is the product of the standardized regression ( $\beta$ ) coefficients for the direct paths between those variables (see also Finney 1972). Where there are multiple mediating variables and thus multiple pathways between two respective variables, there will be multiple indirect effects. By adding the sum of all of these indirect effects (sometimes referred to as the total indirect effect) to the observed direct effect (i.e., the coefficient produced in the path analysis, as in Table 2), one produces the total effect of one variable on another.<sup>4</sup> In the present study, direct effects presented in Table 2 are subject to decomposition in this way (see Table 3), producing indirect effects which when added to the direct effects produce total effects.<sup>5</sup> One can see expressed here in Table 3 the magnitude of total effect sizes of the various religious indicators on happiness. This serves, in a sense, as a way to “look behind the curtain” of Table 2 to gauge the precise magnitude of effect sizes and the precise pathways by which the modeled variables impact upon each other.

This additional analysis proved fruitful. In examining Table 3, we can see that even for those religious variables that do not have a direct impact on happiness, there are nonetheless substantive indirect effects on happiness. Moreover, besides subjective religiosity, which already was found to exert a direct effect on happiness, this analysis revealed that both synagogue attendance ( $\beta = 0.10$ ,  $p < .01$ ) and the Supernatural Beliefs Scale

<sup>4</sup> Calculation of indirect effects is actually more complicated than in this description. Where a given pathway involves multiple mediating variables, the calculation of a respective indirect effect through these mediators can get unwieldy in a hurry and exceedingly difficult to calculate by hand. As an alternative, Alwin and Hauser (1975) recommend use of what they term “reduced-form equations” which enable hand-calculation of indirect effects through simple arithmetic using results taken from regression analysis printout. This is much too technical to convey even in a footnote; the interested reader is referred to Alwin and Hauser (1975).

<sup>5</sup> Significance tests for the indirect effects were produced through use of the Sobel test for mediation effects via a very useful online interactive calculation tool (Preacher and Leonardelli 2012). Identical results were obtained, from the same tool, using the Aroian and Goodman versions of the Sobel test.

**Table 2** Path analysis results for religious and sociodemographic predictors of happiness

Independent variables	Dependent variables											
	Synagogue attendance		Prayer frequency		Certainty of God beliefs		Supernatural Beliefs Scale		Subjective religiosity		Happiness	
	$\beta$	(b)	$\beta$	(b)	$\beta$	(b)	$\beta$	(b)	$\beta$	(b)	$\beta$	(b)
Age	-0.11**	(-0.01)	-0.05*	(-0.01)	-0.11***	(-0.01)	-0.19***	(-0.06)	0.05*	(0.00)	-0.19***	(-0.01)
Female	-0.15***	(-0.74)	0.08**	(0.58)	0.15***	(0.49)	0.08**	(0.93)	0.08***	(0.26)	0.01	(0.02)
Married	0.14***	(0.68)	0.08**	(0.66)	0.07*	(0.49)	0.02	(0.26)	0.08***	(0.27)	0.23***	(0.36)
Years of education	-0.11**	(0.08)	-0.03	(-0.04)	-0.21***	(-0.10)	-0.04	(-0.07)	0.01	(0.01)	0.06	(0.01)
Urbanicity	0.04	(0.10)	0.00	(0.00)	-0.03	(-0.04)	0.02	(-0.09)	0.06**	(0.01)	-0.00	(-0.00)
Synagogue attendance			0.69***	(1.12)	0.15***	(0.10)	0.20***	(0.49)	0.25***	(0.17)	-0.02	(-0.00)
Prayer frequency					0.40***	(0.16)	0.24***	(0.36)	0.27***	(0.11)	0.01	(0.00)
Certainty of God beliefs							0.39***	(1.45)	0.15***	(0.16)	-0.08	(-0.04)
Supernatural Beliefs Scale									0.27***	(0.07)	0.08	(0.01)
Subjective religiosity											0.15**	(0.07)
F	9.44		132.47		66.50		127.90		154.38		12.32	
p	<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001	
R <sup>2</sup>	0.05		0.49		0.36		0.55		0.63		0.13	

N = 838

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 3** Decomposition of effects for religious predictors of happiness

Dependent variable	Independent variable	Total effect	Indirect effects via				Direct effect
			PF	CGB	SBS	SR	
Prayer frequency	SA	0.69***	–	–	–	–	0.69***
Certainty of God beliefs	SA	0.43***	0.28***	–	–	–	0.15***
	PF	0.40***	–	–	–	–	0.40***
Supernatural Beliefs Scale	SA	0.53***	0.27***	0.06***	–	–	0.20***
	PF	0.39***	–	0.15***	–	–	0.24***
	CGB	0.39***	–	–	–	–	0.39***
Subjective religiosity	SA	0.64***	0.30***	0.04***	0.05***	–	0.25***
	PF	0.43***	–	0.10***	0.06***	–	0.27***
	CGB	0.26***	–	–	0.11***	–	0.15***
	SBS	0.27***	–	–	–	–	0.27***
Happiness	SA	0.10**	0.05	0.00	0.03***	0.04***	–0.02
	PF	0.07	–	–0.01	0.03*	0.04***	0.01
	CGB	–0.01	–	–	0.05***	0.02***	–0.08
	SBS	0.12*	–	–	–	0.04***	0.08
	SR	0.15**	–	–	–	–	0.15***

SA synagogue attendance, PF prayer frequency, CGB certainty of God beliefs, SBS Supernatural Beliefs Scale, SR subjective religiosity

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

( $\beta = 0.12$ ,  $p < .05$ ) do have statistically significant total effects on happiness. The effect of synagogue attendance is mediated by small but significant indirect effects through both the Supernatural Beliefs Scale ( $\beta = 0.03$ ,  $p < .001$ ) and subjective religiosity ( $\beta = 0.04$ ,  $p < .001$ ). On the whole, then, the hypothesized model is supported, as synagogue attendance and every mediating religious construct impacts on every other construct “ahead” of it in the model including happiness, whether directly (in the case of subjective religiosity) or indirectly, and synagogue attendance exerts a significant total effect on happiness.

#### 4 Discussion

To summarize, several measures of Jewish religious observance are significantly related to happiness, such that greater religiousness is associated with more happiness. This is found bivariate, and is confirmed by path analysis. Subjective religiosity exhibits a direct effect on happiness, and the other religious measures exert indirect effects on happiness through subjective religiosity and through each other. In reference to the hypothesized structural model, expectations are generally confirmed: the putative impact of synagogue attendance on happiness is mediated by measures of prayer frequency, certainty of God beliefs, a Supernatural Beliefs Scale, and subjective religiosity. In other words, frequent attendance at *shul* is associated with more frequent prayer which, in turn, reinforces religious beliefs

and, accordingly, enhances self-assessment of overall religiousness. All of this, taken together, makes for happier Jewish adults.

One must be careful not to read too much into these findings, consistent though they are. First, there are the usual caveats regarding inferences of epidemiologic causation from prevalence-study (or, in the parlance of social research, cross-sectional survey) data. On the other hand, the wording of certain study variables at least partially mitigates this issue, as some ability exists to make modest inferences of temporality: e.g., happiness is assessed currently (“these days”) and the most distal religious variables in the path model (synagogue attendance and prayer frequency) reference behavior over at least the past year. Still, this advantage should not be overstated: in epidemiologic terms, the present data do not qualify as longitudinal, no matter the wording of variables, and any inference of true risk or protection from these findings cannot be supported.

Second, there are certainly more sophisticated ways to assess happiness than the measure used in this study. It was thus not possible to specify the religious associations identified here to particular domains or aspects of happiness—just to a global and unspecified self-attribution of being “happy or unhappy” assessed “in general” and “these days.” This is not ideal, but is an inherent pitfall of reliance on secondary analysis of existing data. Such single-item indicators, however, are used throughout the well-being literature, especially in relation to putative religious determinants, and the happiness variable used in the present study is standard-issue. It was thus felt that any potential limitations in outcome assessment here were outweighed by the opportunity to investigate this subject in a large national probability survey accompanied by a variety of interesting religious indicators. While the results are not definitive, they nicely contribute to the literature on religion and happiness by extending the pool of positive findings to the Israeli Jewish population. These findings can and should be confirmed in other datasets that contain more sophisticated well-being measures (and more substantive covariates, such as putative psychosocial and behavioral mediators of religion-well-being associations). Original data collection efforts focused on exploring population-wide determinants of happiness would be advised to include more sophisticated multi-item indices, a familiar call for readers of this journal.

These findings offer a modest step forward in identifying what it is about going to *shul* that is or should be promotive of happiness. These data do not allow us to draw conclusions as to whether salutary effects of participating in synagogue services exert their influence through motivating healthy behavior, engendering social support, or eliciting positive emotions, all of which have been posited and/or identified as possible mediators of a religion-well-being relationship in the general population (see Levin 2010). We can, however, begin to identify those other religious behaviors, beliefs, or attitudes engendered by synagogue attendance that serve as conduits for a putative effect on happiness. The hypothesized model is one of various such configurations that could reasonably be proposed; with the causal limitations of the present design its veracity cannot be proven. But the empirical results presented here are at least suggestive of the religious processes through which going to services might ultimately impact on one particular measure of well-being in this population. Besides, these findings nicely reinforce the inherited Jewish folk wisdom that going to *shul* is “good for you.”

How might these analyses be followed up? While the present study is not the only recent investigation to have broached the subject of religious determinants of SWB among Israeli Jews, few studies have focused explicitly on religion in relation to true diagnostic indicators of mental health or illness in this population. Extending this current line of research to, say, the Israel National Health Survey (INHS) would be an ideal next step. The

INHS has a full battery of mental health items and scales, coded according to both DSM and ICD standards and definitions. There are also a small number of religious indicators present, including a standard measure of Israeli Jewish religious identity (i.e., using the familiar categories of ultra-Orthodox, religious, traditional, and secular) and a single-item measure of subjective religiosity, the latter of which is the only religious construct in the present study found to exert a direct effect on the study's well-being outcome.

Another next step might be to find ways to exploit existing surveys in order to revisit a religion-happiness relationship within the Jewish diaspora. Analysis of a combined diaspora sample, drawing on Jewish respondents throughout various national surveys, was already conducted using data from the World Values Survey (Levin 2012c). The same approach could be taken, ostensibly, with the ISSP or other of the large multinational survey programs, provided a sufficient number of Jewish respondents were available. Additionally, there have been numerous Jewish community surveys conducted within the largest U.S. cities over the past decade. Religious indicators are present throughout these datasets, but subjective well-being measures, including happiness and mental health indicators, are more sketchy: some exist in some studies, none in others. But these data sources, as well, provide an opportunity to utilize secondary analysis to explore this issue inexpensively before considering mounting something like a national or global Jewish health survey, an idea which has begun to be discussed. In the meantime, there remain fruitful ways to identify whether and how Jewish religious observance impacts on happiness, in particular, and on SWB, in general, using existing and underexploited data resources. This work is worthwhile and should continue.

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