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Holly D. Ait Taouit, M.A.

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Approved:

Karl W. Stukenberg
Karl W. Stukenberg, Ph.D., ABPP
Chair, School of Psychology

John J. Barrett

John J. Barrett, Ph.D.
Dissertation Chair

The Psychometrics of a Systematic Inventory of Motives for Converting to Islam

Dissertation Committee

Chair	John J. Barrett, Ph.D. Associate Professor of Psychology
Member	Dalia Diab, Ph.D. Assistant Professor of Psychology
Member	Jennifer Gibson, Ph.D. Assistant Professor of Psychology

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Abstract

As the Muslim convert population continues to grow in the U.S., it is important for psychologists to have ways of assessing their spirituality and religiosity. While there are measures of conversion to Islam, none have been empirically validated with a U.S. convert population. The purpose of the current study was to validate an assessment measure (Lakhdar et al., 2007) previously developed with French converts, with a U.S. convert sample. The present study did not find strong evidence for the eight-factor solution that was found in the original study (Lakhdar et al., 2007). However, support for two of the original factors was established (*telic* and *autic sympathy*). Additionally, the measure demonstrated good temporal stability and three subscales (*telic, conformist,* and *autic sympathy*) were significantly correlated with validated measures of Islamic beliefs and behavioral practices. While some psychometric validity for the measure was established, the scale will likely require further revisions before being considered a valid measure of conversion to Islam for the U.S. convert population.

The Psychometrics of a Systematic Inventory of Motives for Converting to Islam

Given the increasing number of Muslim converts in the U.S., and that they or their family members may seek out psychological services during the adjustment involved in converting, psychologists should understand and appreciate reasons for conversion. The estimated population of 7 million American Muslims is expected to grow, especially given the influx each year of approximately 30,000 converts in the U.S. (Bagby, 2012). Because religion and spirituality can play such an important role in people's lives, it is imperative for psychologists not only to ask clients about their religious orientation, but to assess multiple aspects of clients' religion, including how they came to be a part of that religion (Pargament & Krumrei, 2009). Mahmood (2013) noted that Islamic converts in the U.S. may have problems adjusting to the behavioral practices prescribed by the religion (e.g., changing social habits and dress), coping with strained family relations because of the conversion, and finding social support within the Islamic community. Ahmed (2012) emphasized that appropriate assessment of individuals' reasons for joining Islam is important for successful therapy.

However, very few measures specific to Islamic conversion exist (Köse & Loewenthal, 2000; Lakhdar, Vinsonneau, Apter, & Mullet, 2007; Maslim & Bjorck, 2009). Using Lofland and Skonovd's (1981) "conversion motifs," or reasons for conversion, Additionally, Maslim and Bjorck (2009) developed an inventory of nine reasons for converting to Islam in the U.S. after reviewing various qualitative sources from the sociological literature, and then added four reasons provided by individuals in their study for a total of 13 reasons. However, they did not adequately assess validity or reliability. Lakhdar et al. (2007) developed and validated a 63-item questionnaire of potential reasons for converting to Islam based upon a sample of 191 French adolescents and adults, and found an eight-factor structure to the measure. Their factors included

the following reasons for conversion: *telic*, *paratelic*, *negativist*, *conformist*, *autic sympathy*, *autic mastery*, *alloic sympathy*, and *alloic mastery* as shown in Table 1. While this seems to be the most empirically valid measure of Islamic conversion reasons, further research is needed to assure that this measure is appropriate for use with an American convert population by validating it and examining its reliability within the U.S.

In addition to the 8 factors identified, Lakhdar and her colleagues (2007) found two higher-order factors which they labeled as active and passive reasons for converting (see Table 1). They based these findings on other research which has categorized conversion process into active and passive subtypes (for review see Spilka, Hood, Hunsberger, & Gorsuch, 2003). Passive conversion occurs when an individual does not convert after careful thought, but may be converting for reasons not related to the faith, and perhaps based on social and emotional reasons that do not require much thought (Dawson, 1990; Richardson, 1985). Active conversions occur when an individual converts to a religion because he or she is seeking self-improvement, and meaning and satisfaction in life (Paloutzian, Richardson, & Rambo, 1999; Richardson, 1985).

Certain types of conversion experiences may make it more likely that a convert will internalize and maintain the general practices and beliefs of a religion. In Lakhdar and her colleagues' study, they found that one passive motive for converting, *autic sympathy*, (i.e., converting to get closer to another person) was negatively related to the practice of Islam's mandatory prayer. This finding was replicated in Maslim and Bjorck's study (2008). A possible explanation for this finding may be that converting for passive (particularly social) reasons is less intrinsically motivating and thus individuals may be less likely to practice consistently. This understanding coincides with Gorsuch's (1997) explanation of religious motivation: "conversion as a means to an end presumably provides less motivation for adhering to religious practices than

converting for personal, intrinsic reasons" (p. 106). While Lakhdar et al. did assess one Islamic practice, prayer frequency; they did not assess Islamic beliefs. Additionally, their single-item measure (prayer adherence) is not recommended, as it may be too simplistic (Abu-Raiya & Pargament, 2011). The relationship between conversion motives, and Islamic beliefs and practices warrants a more comprehensive investigation.

The present study investigated the psychometric properties of the instrument developed by Lakhdar and her colleagues (2007) using the English translation of their instrument, here named *Lakhdar et al.'s Systematic Inventory of Motives* (L-SIM). Psychometrics were assessed by examining the L-SIM's relationship with behavioral practice and religious beliefs, the test-retest reliability, and the factor structure of the L-SIM. The first hypothesis (Hypothesis 1) was that there would be eight factors underlying the L-SIM, which was found by Lakadar et al. Additionally, the second hypothesis (Hypothesis 2) was that the measure would have moderate to high test-retest reliability. It was also hypothesized (Hypothesis 3) that higher scores on the *autic sympathy* subscale would be related to lower scores on the Muslim Practice Scale (MPS; AlMarri, Oei, & Al-Adawi, 2009). The current study also assessed two null hypotheses in relation to Islamic beliefs and practice. Hypothesis 5 was that scores on the additional seven L-SIM subscales (excluding *autic sympathy*) would not be significantly related to scores on the MPS and Hypothesis 6 was that scores on all eight of the L-SIM subscales would not be significantly related to scores on the IBS (Islamic Beliefs Scale; Abu Raiya, 2008).

Method

Participants

Two hundred and forty-four participants attempted to answer the online survey. Of these, 79 were discarded because of exclusion criteria (i.e., under age 18, non-converts, non-U.S. citizens), or failure to respond to at least half of the survey questions. Consequently, the total number of participants was 165 converts to Islam. The majority of participants (74.5%) were female and between the ages of 25-34 (see Table 2 for full demographic report).

In terms of religious demographics, participants had been Muslim for an average of 7.75 years (*SD* = 8.41), were predominantly from the Sunni sect, and were primarily Christian prior to conversion (see Table 3 for religious demographics).

For the test-retest trial 2-4 weeks after the initial assessment, 47 participants attempted the survey, but 10 did not complete any questions and 2 surveys could not be matched to the original trial. Because of this, only 35 participants were retained and included in the re-test trial analyses.

Measures

Lakhdar et al.'s Systematic Inventory of Motives. The English version of the questionnaire developed by Lakhdar and her colleagues (2007) was used to catalogue individuals' self-reported reasons for converting to Islam. The questionnaire consisted of 63 items, each listing a motive for converting to Islam and asking individuals to indicate their level of agreement with each item on a 7-point scale (1 = *Strongly Agree*, 7 = *Strongly Disagree*). The original scale was altered in a few minor ways. Firstly, the wording of the Likert scale was changed from "Completely Agree" to "Strongly Agree". Secondly, the direction of the original scale was reversed (in the original study 1 = *Completely Disagree*, 7 = *Completely*

Agree).Because of this reversal, for scale compatibility, the scale was reverse-scored when correlating with the MPS and IBS measures. Additionally, the original L-SIM consisted of a 15-point rating scale, however researchers have found that 5-point scales tend to have the best results, and scales greater than five points do not necessarily have additional benefits (Lissitz & Green, 1975). A 7-point scale was used in the current study to maximize reliability, while attempting to closely replicate the original study (Lakhdar et al., 2007). One item was deemed not culturally relevant to Americans ("I converted to Islam to express solidarity with the Maghrebi workers living in my country") and was changed to a similar statement of "I converted to Islam to express solidarity with the Muslims living in my country." after correspondence with one of the authors (E. Mullet, personal correspondence, May 22, 2014). Lakhdar et al. reported an eight-factor solution for the original scale. Additional evidence of construct validity was found insofar as those who endorsed the *autic sympathy* subscale (converting because of social reasons) prayed less frequently than those who converted for other reasons. This was expected because converting for a passive reason is less likely to result in intrinsic motivation to enact religious behavior (Dawson, 1990). No statistics regarding test-retest reliability were reported for the original scale.

Islamic Beliefs Scale. The Islamic Beliefs Scale (IBS) is a 5-item subscale of The Psychological Measure of Islamic Religiousness (PMIR), a 70-item measure that was created to measure Islamic beliefs, as well as other religious factors theorized to be associated with mental health (Abu Raiya, 2008). The IBS is a measure of the basic theological beliefs of Islam (e.g., "I believe in the existence of paradise and hell.") which are rated on a 3-point rating scale ranging from 0 to 2 (0 = *no*, 1 = *uncertain*, 2 = *yes*), where higher scores indicate stronger beliefs. In an exploratory factor analysis, the IBS demonstrated construct validity as each of the items on this

subscale clustered together, with strong factor loadings ranging from .79-.92. The IBS also demonstrated convergent validity because it was significantly correlated with four of the additional five factors on the larger questionnaire of Islamic religiosity. This included measures of ethics, religious conversion, religious struggle, and belief that hardship is Allah's punishment. This subscale was also correlated with several measures of general well-being such as a measure of Islamic well-being, positive relations with others, and purpose in life, among others. The IBS subscale also had excellent internal consistency ($\alpha = .97$) in the original study.

Muslim Practice Scale. The Muslim Practice Subscale (MPS) of the Short Muslim Belief and Practice Scale (Short-MBPS) is a 4-item subscale of a larger 9-item instrument and was created to measure Islamic behavioral practices (AlMarri, et al., 2009). The MPS assesses participants' practice of the main behavioral prescriptions of Islam (e.g., "I pray five times a day.") which are rated on a 5-point rating scale 1 to 5 (1 = *I never do this*, 5 = *I always do this*). Scores can range from 4-20, with higher scores indicating more frequent adherence to the specified religious practices. The scale has good face validity and was theoretically derived using Islamic theology. This scale was originally assessed on a large international sample ($N = 914$) from countries in the Arabian Peninsula and Malaysia. Via exploratory factor analysis, the items on the scale loaded together with factor loadings ranging from .61-.75 for the retained items. This scale was also validated by a confirmatory factor analysis demonstrating good construct validity. Additionally, it has good internal consistency ($\alpha = .83$). The MPS also demonstrated some construct validity as it was related to another religious behavior, abstinence from alcohol. A *t*-test showed that life-long abstainers from alcohol scored significantly higher on the MPS when compared to alcohol drinkers (AlMarri, et al., 2009).

Procedure

The current study was approved by the Xavier University Institutional Review Board (IRB; see Appendix A). The measures for this study were uploaded to Qualtrics, an online survey website, and disseminated to Islamically-affiliated organizations located in North America and the researcher's Muslim convert acquaintances. Participants were given an option to enter a contest for an opportunity to win a $50 Amazon.com gift card at the end of the survey. Upon accessing the web link, individuals were informed of the incentive, and the purpose and rationale of the study. From this, they were asked to check a box to give their informed consent to participate and to confirm that they were at least 18 years of age, a convert, and a U.S. citizen. Then individuals were asked to create a non-identifying code if they intended to participate in the re-test trial of the survey. Next, they completed the questionnaires in the following order: the L-SIM (Lakhdar et al., 2007), the IBS (Abu Raiya, 2008), the MPS (AlMarri, et al., 2009), and the demographic questions. At the end of the survey, they were directed to a separate link to enter their email address in a drawing for the Amazon.com gift card and indicate if they could be contacted for the re-test trial. After approximately two to four weeks (timing consistent with much of the religious assessment literature; Hood, Hill, & Spilka, 2009), an email was sent to individuals asking them to complete the survey for a second time and provided them with a link to a survey process which mirrored the initial administration (i.e., informed consent, screening, questionnaires, and option to enter into a drawing).

Results

Prior to analyses, the L-SIM was examined for normality. Total scores fit George and Mallery's (2003) limits of normal distribution, with skewness and kurtosis well below the ±2 cutoff.

Factor Analysis

The following criteria were used to conduct exploratory factor analyses in order to compare the factor structure of the L-SIM found in the current study to the original factor structure reported by Lakhdar and her colleagues (2007). In order to assess the construct validity of the measure, principal axis factor analyses were utilized, as recommended by Tabachnick and Fidell (2007). Because the eight factors specified by Lakhdar and her colleagues were likely to be intercorrelated, a direct oblimin rotation was used to allow the items to correlate naturally (Conway & Huffcutt, 2003). The following criteria were used to examine the factors that emerged: 1) eigenvalues greater than or equal to 1, and 2) factors above the inflection point on the scree plot (Costello & Osborne, 2005). The item loadings from the initial study (Lakhdar et al., 2007) were compared to the current study, and they were retained using the following criteria for retention: 1) loadings greater than .40, and 2) crossloadings less than .32 (Costello & Osborne, 2005). The sample size of the current study was 165, which Comrey and Lee (1992) regard to be "poor." An examination of the Kaiser-Meyer-Olkin measure of sampling adequacy indicated that the sample met the criterion needed for a good factor analysis (KMO = .852; Tabachnick & Fidell, 2007). Additionally, Bartlett's Test of Sphericity was significant, suggesting that items were correlated enough to conduct a factor analysis.

Two exploratory factor analyses were conducted to examine the factor structure of all items on the L-SIM. The initial exploratory factor analysis yielded 14 factors with initial

eigenvalues greater than 1. Examination of the scree plot indicated a point of inflection at approximately 3 or 4 factors. Because the factor structure differed substantially from the original scale, a subsequent factor analysis was conducted with a designated eight-factor solution as found in the original report of the scale (Lakhdar et al., 2007). Examination of initial eigenvalues of the eight-factor solution were as follows: 16.51 for Factor 1, 7.02 for Factor 2, 3.04 for Factor 3, 2.26 for Factor 4, 1.99 for Factor 5, 1.78 for Factor 6, 1.65 for Factor 7, and 1.56 for Factor 8. After rotation, Factor 1 accounted for 25.46% of the variance, Factor 2 accounted for 10.43%, Factor 3 accounted for 4.11%, Factor 4 accounted for 2.79%, Factor 5 accounted for 2.43%, Factor 6 accounted for 2.07%, Factor 7 accounted for 1.83%, and Factor 8 accounted for 1.57%. Cumulatively, the factors accounted for 50.69% of the total variance.

Lakhdar and her colleagues (2007) indicated that there were three representative items for each factor in their study. Because they chose the three most representative items from each scale, Table 4 only includes those three items for each scale. These items were used to make comparisons with the factor loadings in the current study. In the present study, Factor 1 clearly corresponded with the *telic* subscale, and Factor 2 corresponded clearly with the original *autic sympathy* subscale. For these first two factors, the items loaded as expected, and there were no crossloadings greater than .32. For the remaining six factors, the correspondence to the original subscales was not as clear. Discrepancies were noted between item loadings on the original scale by Lakhdar et al., and the current eight factors, when using item loading exclusion criteria outlined by Costello and Obsorne (2005): loadings less than .40 and crossloadings greater than .32. While Factor 3 generally corresponded to the original *conformist* subscale, one of the original three items (item 39) crossloaded on Factor 1. Factor 4 comprised items that loaded on the following corresponding original subscales: *alloic mastery*, *autic mastery*, *alloic sympathy*,

and *paratelic*. Factor 5 corresponded generally with the original *negativist* subscale, although one of items (item 37) crossloaded on Factor 2. The remaining three factors (i.e., 6, 7, and 8) had no clear correspondence to any of the original subscales. In subsequent analyses (i.e., correlations and test-retest reliability), the mean of the three items from each of the first two factors (i.e., *telic* and *autic sympathy*) was computed. An item was chosen to represent each of the remaining six factors for subsequent analyses; selection was based upon how closely the item corresponded theoretically to the original construct and/or loaded on the original subscale. These items are indicated in Table 4 with an asterisk.

Test-Retest Reliability

The L-SIM was administered to individuals (N = 35) who opted to take it on two different occasions (approximately 2-4 weeks apart), in order to determine test-retest reliability. Because the eight-factor solution did not result in similar strong factors, only means from Factors 1 and 2 were used to assess test-retest reliability. One strong retained-item that conceptually represented each factor from Lakhdar and her colleagues' study (2007) was used to represent each of the remaining six factors (i.e., 3 through 8). These aforementioned items are indicated by an asterisk in Table 4, and item numbers are noted in Table 5. Pre-test mean scores for the *telic* subscale (Factor 1) and the *autic sympathy* subscale (Factor 2) and item scores on items 28, 36, 41, 51, 53, and 59 were correlated with scores of similar items from the post-test trial (see Table 5).

Correlations resulted in a reliability coefficient of .69 for the *telic* subscale and .71 for the *autic sympathy subscale*, suggesting the scale had good temporal stability. Reliability coefficients for the additional L-SIM items ranged from .48-.76, suggesting fair to excellent temporal stability (Cicchetti, 1994).

Correlations

As noted above, because the eight-factor solution did not emerge, only means from Factors 1 and 2 were used to correlate with mean scores on the IBS and MPS for Hypotheses 4 and 5. One strong item that conceptually represented the remaining factors (Factors 3-8) from Lakhdar and her colleagues' study (2007) was used run the correlation with the IBS and MPS means (see Table 4 for chosen items). Prior to analyses, for scale compatibility, all items on the L-SIM were reverse-scored. The L-SIM factor means/items were then correlated with mean IBS and MPS scores as shown in Table 6.

Participants who converted for *telic* reasons were more likely to report stronger Islamic beliefs ($r(163) = .26$, $p < .001$). Participants who endorsed an item consistent with *conformist* reasons were likely to have strong religious beliefs ($r(163) = .32$, $p < .001$) and likely to maintain a high level of behavioral practices of Islam ($r(163) = .18$, $p = .02$). Individuals who converted for *autic sympathy* reasons, wanting to get closer to a loved one, had weaker Islamic beliefs ($r(163) = -.19$, $p = .01$) and were less likely to practice behaviors prescribed by Islam ($r(163) = -.25$, $p = .002$).

Exploratory Analyses

Sample size did not permit exploratory analyses to be conducted with the various demographic variables in the study and the IBS, MPS, L-SIM subscales.

Pearson correlations between number of years since conversion and mean MPS, IBS, and L-SIM scores was also conducted. It was found that individuals who had been Muslim longer were more likely to endorse that they converted for *negativist* reasons (i.e., "I converted to Islam as a way of provoking my family;" $r\ (159) = -.26$, $p = .001$). Additionally, individuals who had been Muslim longer tended to report more practice of Islamic behaviors ($r(159) = .18$, $p = .02$).

Discussion

Currently, there are very few empirically validated measures that assess reasons for converting to Islam in the U.S. As the U.S. Muslim population continues to grow, it is essential that the field of psychology have measures which can accurately assess important aspects of Muslim converts' lives, including understanding why they converted. The purpose of the current study was to examine the psychometric properties of a self-report measure of reasons for converting to Islam (L-SIM; Lakhdar et al., 2007) with a U.S. sample. More specifically, the present study sought to replicate the factor analysis solution found in the original study (Lakhdar et al., 2007), examine the temporal stability of the L-SIM, and explore the relationship of the L-SIM scores to measures of Islamic behavioral practice (MPS; AlMarri, et al., 2009) and beliefs (IBS; Abu Raiya, 2008).

Inconsistent with Hypothesis 1, the original factor structure was not replicated. An initial exploratory factor analysis of the L-SIM revealed a different number of factors, ranging from 3 to 14, compared to the original eight factors reported by Lakhdar et al. (2007). A subsequent factor analysis was conducted specifying an eight-factor solution. While cumulatively the eight-factor solution accounted for a substantial amount of the variance, 50.69%, this was amount was less than the 60% explained variance in the original study (Lakhdar et al., 2007). Additionally, the majority of the variance in the current study was explained by the first two factors (25.46% for Factor 1 and 10.43% for Factor 2) which is a substantial difference when compared to Lakhdar et al.'s study (16% for Factor 1 and 6% for Factor 2).

Moreover, when the eight-factor solution was specified in the analysis, discrepancies regarding item loadings on the factors were noted when compared to the originally reported item loadings. The current study examined the representative items identified by Lakhdar et al. (2007)

for each of the eight factors. Although strong support was found for the items on the *telic* and *autic sympathy* subscales, support for item loadings on the remaining factors was lacking. While the Factor 3 in the current study generally corresponded to the original *conformist* subscale, one of the representative items (item 39) crossloaded highly on Factor 1. A number of items from different subscales loaded on Factor 4, including representative items from the *alloic mastery*, *autic mastery*, *alloic sympathy*, and *paratelic* subscales. Factor 5 in the current study broadly loaded *negativist* reasons (items 35 and 36), but one of the representative items (item 37) was highly crossloaded with Factor 2. Of note, because the representative items expected to load on the *alloic mastery*, *alloic sympathy*, and *paratelic* subscales tended to load on Factor 4, no strong representative items loaded on the sixth, seventh, and eighth factors.

The aforementioned discrepancies may have occurred for a number of reasons. Firstly, although the sample in the current study (N = 165) was similar to the original study (N = 191; Lakhdar et al., 2007), the sample size for both studies falls between "poor" and "fair" categories according to Comrey and Lee (1992), who recommend at least a sample size of 200 for a factor analysis. A less than adequate sample size can yield factor loadings which are less reliable (Tabachnick and Fidell, 2007). Thus, the inability to replicate the original factor structure may be due to inadequate sample size. Secondly, the composition of the present sample differed with respect to nationality, education level, and gender representation. As noted, the current sample consisted of U.S. citizens, compared to the original study which surveyed French nationals (Lakhdar et al., 2007). The present study had more females (74%) than the original study (62%; Lakhdar et al., 2007). Additionally, the current sample seemed to be more educated than the original sample (Lakhdar et al., 2007), with 46 participants who had not completed secondary education in the original sample compared to only two participants in the current sample. While

similar numbers were found with regards to high school graduates and those with bachelor's degrees, the present sample had more individuals with master's degrees or doctorates (N = 52) when compared to the original sample (N = 31; Lakhdar et al., 2007). Because of problems in sampling, it is recommended that future research employ a larger, more diverse, and representative sample.

Finally, differences in response format may also have been a contributing factor insofar as the present study utilized a 7-point Likert scale versus the original 15-point rating scale. This decision was based on research that indicated that scales greater than 5 points did not necessarily have better results when additional options were added (Lissitz & Green, 1975). However, other researchers have found that while effects on scale reliability and factorial validity are small when scales get larger than 7, there can be differences in validity and reliability noted because the amount of naturally occurring variability is stifled (Lozano, Garcia-Cueto, & Muniz, 2008).

Consistent with Hypothesis 2, test-retest reliability for the L-SIM after 2-4 weeks was "good" according to Cicchetti's (1994) criteria. Two items (items 36 and 59) had "fair" reliability and represented the *negativist* and *paratelic* reasons, respectively. Factors 1 and 2, and all other representative items (besides item 41), had good test-retest reliability (r's ranging from .61-.74). Item 41, representing the *conformist* conversion type, met criteria for "excellent" temporal stability (r = .76). Some of the conversion reasons that appeared to be the most temporally stable, which included the *conformist* and *autic mastery* (r = .74) reasons, may be most in line with Islamic doctrine which encourages self-discipline and adherence to moral standards. For instance, *autic mastery* was represented by item 28, "I converted to Islam because Ramadan is an opportunity for gaining better self-control." These reasons may be more likely to remain stable because they are ideas that are socialized and reinforced by participants' religious

community (Snow & Machalek, 1984). Reasons that were the least temporally stable (*negativist* and *paratelic* reasons) appear to be strongly related to affective experience (Lakhdar et al., 2007), such as going against one's family and seeking excitement, and thus may be more subject to retrospective biases as participants' emotional state changes (Paloutzian, Richardson, & Rambo, 1999).

Consistent with Hypothesis 3, participants who reported that they converted for reasons of *autic sympathy* (i.e., wanting be closer to a loved one), were significantly less likely to practice Islamically prescribed behaviors as measured by the MPS, (AlMarri, et al., 2009). This replicated findings from Lakhdar and her colleagues' (2007) study where *autic sympathy* was found to be significantly negatively correlated with prayer frequency. The present study expanded the examination of religious adherence by measuring different behavioral practices in addition to prayer, including fasting during Ramadan, reading the Qur'an, and following the five pillars of Islam (AlMarri et al., 2009). Other passive motives for converting, such as *paratelic*, *negativist*, and *alloic mastery* reasons as shown in Table 1, with a listing of active v. passive conversion reasons, *theoretically* might have been related to lower rates of practice (Gorsuch, 1997). However, consistent with Hypothesis 4, no significant differences were found for these reasons. The original study (Lakhdar et al., 2007) also found no differences in practice for the other passive reasons. They reasoned that the high level of commitment needed for one to convert to Islam often results in one making considerable efforts to practice the religion (Lakhdar et al., 2007). Additionally, *autic sympathy* is different from the other passive reasons in that an individual is converting because of another person, rather than the other reasons passive reasons which may have some intrinsic value. For instance *alloic mastery*, where one seeks to join an

esteemed group, may provide individuals with motivation to practice the behaviors of that group in order to be like those he or she admires.

Mixed findings were found for Hypothesis 4 because, in addition to the null findings, some conversion reasons were correlated with the participants' reported religious practice as measured by the MPS. Individuals who converted for *conformist* reasons (e.g., wanting to please God and gain admission to Heaven) had significantly higher rates of religious practice. No other reasons were significantly associated with higher rates of Islamic practice. Köse (1999) noted that the converts they surveyed often reported that they became interested in Islam in part because of the behavioral prescriptions of the faith. This fits well with the *conformist* conversion type, where individuals are converting to the religion because they are looking for a more structured lifestyle that will lead to salvation (Lakhdar, et al., 2007).

Results were also mixed for Hypothesis 5 as some significant findings were found when correlating conversion reasons and strength of Islamic beliefs (IBS; Abu Raiya, 2008). Individuals who converted for *conformist* reasons were significantly more likely to espouse stronger religious beliefs. This finding is consistent with other researchers who note that individuals who convert for this reason do so in part for their desire to follow religious-based tenets; Maslim and Bjorck (2008) even suggested that the *conformist* conversion type be renamed "tenet-based" conversion. Additionally, individuals who converted for *telic* reasons (i.e., seeking personal growth) were also more likely to express stronger religious beliefs. This conversion reason is most similar to Richardson's (1985) idea of an active conversion reason. Theoretically, active reasons for conversion (including both the *telic* and *conformist* reasons) require a person to actively seek personal development and/or seek commitment to a higher moral order (Dawson, 1990; Paloutzian, Richardson, & Rambo, 1999). Thus, it is not surprising

that individuals would also have higher levels of religious belief and behavioral commitment (Gorsuch, 1997).

However, behavioral change is not guaranteed following conversion (Paloutzian, Richardson, & Rambo, 1999), as was seen in the current study where *telic* reasons were related to higher levels of belief, but not higher levels of Islamic practice. Additionally, converting for other active reasons, such as *autic mastery* and *alloic sympathy*, was not associated with stronger endorsement of Islamic beliefs or practice. It is unclear why these reasons were not related to higher levels of religious practice and belief, and this finding may warrant investigation in future studies. One hypothesis is that these individuals may get their needs for *autic mastery* and *alloic sympathy* fulfilled in ways of Islamic practice and belief that were not measured. For instance, an individual who converts to gain more self-control (i.e., *autic mastery*) may be more likely to engage in abstinence from intoxicating substances or premarital relations (Muffler, Langrod, Richardson, & Ruiz, 1997), but not necessarily more likely to pray. The current study also found that those who endorsed *autic sympathy* tended to have weaker Islamic beliefs. This is consistent with theories of passive conversion; if an individual converts for reasons which did not involve careful analysis, their beliefs may be more vulnerable to change (Hill & Bassett, 1992). For instance, if an individual initially converted to Islam in order to marry the person they love, their beliefs may not have been well established, and thus more likely to change with the passing of time.

Few differences were found when comparing scores on the L-SIM, IBS, and MPS with number of years since conversion. The only difference with regards to the L-SIM was that length of time since conversion was negatively correlated with *negativist* reasons. Other studies did not find number of years since conversion to be related to the *negativist* reason (Lakhdar et al., 2007;

Maslim & Bjorck, 2008). Considering the direction of the scale on the L-SIM, where lower scores on the scale indicate stronger agreement (i.e., 1 = *Strongly Agree*). This means that those who had been converts for longer, were more likely to endorse that they converted for *negativist* reasons (e.g., wanting to provoke one's family). While reasons for this finding are unclear, future research may attempt to investigate if this finding is perhaps confounded by age, in that individuals who are older may be more willing to express this reason because they are less fearful of being stigmatized as a stereotypical "young, religious zealot." Another age-related hypothesis may be that individuals who converted at a younger age may have been seeking independence from their family at the same time and Islam may have been a way for them to "rebel" or exert independence. Additionally, individuals who had been Muslim for longer reported more frequent practice of Islamic behaviors. This may have been because of a higher level of commitment initially, which has been sustained throughout their time as Muslims (Gorsuch, 1997; Hill & Bassett, 1992).

The current study had a number of limitations, the most notable being the small sample size. While over 200 participants attempted the survey, only 165 participants met inclusion criteria. Future studies should attempt to survey a larger number of people, because with a larger sample, the potential for sampling error is reduced and factor stability is increased (MacCallum, Widaman, Zhang, & Hong, 1999). In addition to obtaining a larger sample, future studies should seek a more representative sample. The current study is limited in its generalizability because of the characteristics of the participants surveyed in the present study, who tended to be White, female, 25-34 years old, highly-educated, married, and Sunni. This does not match with the convert population in U.S., which tends to be largely African American and male (Bagby, 2012; Pew Research Center, 2007). Additionally, while the majority of converts are Sunni (Pew

Research Center, 2007), future studies may benefit from seeking participants from a broader diversity of Islamic sects. Statistics on converts' typical marital status, education, and age were not available. However, when compared to the general Muslim population, the current sample likely overrepresented individuals in the 25-34 age group, married individuals, and highly educated individuals (Pew Research Center, 2011a). Reasons for these sampling biases may have been due to the sampling methods used. In particular, a "snowball" sampling method was used by emailing the researcher's Muslim convert acquaintances to ask for participation in the current study. This may have contributed to the fact that the sample seemed to overrepresent demographic characteristics of the researcher and her acquaintances (i.e., highly educated, 20-something, White, married, Sunni females). Sampling methods including giving the survey in person (to contact populations who are not commonly online or on social media—including older individuals and less computer savvy people) and reaching out to organizations that historically represent certain ethnicities or Islamic sects may have resulted in a more representative sample.

The aforementioned recommendations for future studies may help improve the psychometrics of the L-SIM so that clinical psychologists may have a psychometrically sound measure to assess and better understand their clients who have converted to Islam, as the eight-factor solution of the L-SIM was not replicated with the U.S. convert sample surveyed in the present study. While certain factors were validated, such as the *telic* and *autic sympathy* conversion motives, other factors did not prove to have consistently strong items that met retention criteria. Because of the lack of validity related to factors structure in the current study, it is recommended that in future studies, some of the items and scales be revised for use with an American convert population. Despite the lack of factorial validity, temporal stability of the

measure was established, with items and scales each having “fair” to “excellent” temporal stability. Additionally, a finding from Lakhdar et al.’s (2007) study was replicated, as *autic sympathy* was negatively correlated with Islamic behaviors. The measure also showed additional evidence of construct validity, as some of the L-SIM scales and items correlated well with the MPS and IBS. Overall the L-SIM shows some promise as potentially useful measure of Islamic conversion, yet needs significant revisions before clinical or empirical use.

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Table 1

Explanation of Lakhdar et al.'s (2007) Conversion Motives

Factors	Description	Active or Passive
Telic	Seeking personal growth and well-being	Active
Paratelic	Emotional reasons such a seeking excitement	Passive
*Negativist**	Opposing their family or environment	Passive
*Conformist**	Wanting to please God and wanting to go to Heaven	Active
Autic sympathy	Seeking to maintain or deepen a relationship with another person	Passive
Autic mastery	Developing self-control	Active
Alloic sympathy	Communing and sharing with others	Active
Alloic mastery	Seeking to join a respected group	Passive

Note. Adapted from "Conversion to Islam among French adolescents and adults: A systematic inventory of motives," by M. Lakhdar, G. Vinsonneau, M.J. Apter, and E. Mullet, 2007, *The International Journal for the Psychology of Religion*, *17*(1), 1-15.
*The negativist and conformist reasons for converting were not statistically verified, but were rather suggested to fit into Dawson's (1990) subtypes (Lakhdar, et al, 2007)

Table 2

Demographic Characteristics of Participants

Demographic Category	Sample *N* (%)
Age	
18-24	23 (13.9)
25-34	64 (38.8)
35-44	46 (27.9)
45-54	19 (11.5)
55-64	9 (5.5)
65 or Older	4 (2.4)
Sex	
Male	41 (24.8)
Female	123 (74.5)
No Answer	1 (.6)
Education Level	
<12 grade, no diploma	2 (1.2)
High school or G.E.D.	5 (3.0)
Some college, no degree	34 (20.6)
Associate's Degree	22 (13.3)
Bachelor's Degree	49 (29.7)
Master's or Doctoral Degree	52(31.5)
No Answer	1 (.6)
Relationship Status	
Single or Dating	29(17.6)
Committed Relationship	11 (6.7)
Married	105 (63.6)
Divorced	14 (8.5)
Widowed	2 (1.2)
No Answer	4 (2.4)
Race/Ethnicity	
Asian	2 (1.2)
Black	24(14.5)
Hispanic	14 (8.5)
White	106 (64.2)
Biracial	11 (6.7)
Unknown or No Answer	8 (4.8)

Table 3

Religious Demographics of Participants

Religious Demographic Category	Sample *N* (%)
Religion before Conversion	
Christianity	118 (71.5)
Judaism	2 (1.2)
Hinduism	1 (.6)
Other	1 (.6)
No Religion	36 (21.8)
Prefer not to answer	7 (4.2)
Sect	
Sunni	101 (61.2)
Shiite	3 (1.8)
Sufi	3 (1.8)
No Sect	42 (25.5)
Multiple Sects	7 (4.2)
No Answer	9 (5.5)
	M (SD)
Number of Year Since Conversion	7.75 (8.41)

Table 4

Factor Loadings of the L-SIM Items

Category / Item #	Item Description	Factor Loadings F1	F2	F3	F4	F5	F6	F7	F8
Telic									
1	To achieve better self knowledge	**.58**	-.05	-.04	-.05	.03	.23	.08	-.04
2	As a way of personal growth	**.69**	-.03	.08	-.02	-.11	.16	.12	.05
3	To be in harmony with myself	**.96**	-.07	.08	.02	-.04	-.21	-.10	.02
Autic Sympathy									
21	To be allowed to live with the persons I loved	.05	**.91**	.03	.03	.07	-.12	-.03	-.06
23	To be allowed to marry the person I loved	-.09	**.79**	.01	.05	-.07	-.04	.03	.01
24	To be totally accepted by the persons I was living with	-.12	**.80**	.02	-.00	.07	-.04	-.02	-.07
Autic Mastery									
27	To become responsible for my own actions	.33	.05	-.18	-.06	.00	-.15	.11	**-.36**
28*	Because Ramadan is an opportunity for gaining better self-control	.04	.01	.09	**-.58**	-.04	.20	-.02	-.13
29	To be part of a true community of thought and action	.03	.01	-.09	**-.45**	.05	.31	-.14	.16
Negativist									
35	To anger certain persons that opposed me	.00	.05	-.06	-.12	**-.47**	-.04	-.16	.12
36*	As a way of provoking my family	-.03	.06	.06	.06	**-.72**	.06	-.07	.07
37	Because my relatives disliked Muslims	.02	.37	-.04	-.06	**-.59**	-.08	.20	-.22
Conformist									
39	To willingly submit myself to God's will	.40	-.15	**-.51**	.07	.04	-.03	-.06	-.07
40	Because it leads the believer to redemption (God's forgiveness)	-.01	.04	**-.58**	-.13	-.02	.03	.24	-.10
41*	To be admitted to Paradise at the end of my life	-.06	-.05	**-.58**	-.08	-.08	.05	.10	-.06
Alloic Mastery									
46	Because Islam is spreading everywhere in the World	.01	.05	-.17	**-.62**	-.11	-.00	-.20	-.14
47	To be on the poor's side	.12	.08	.06	**-.36**	-.18	-.22	.19	-.20
51*	To express solidarity with the Muslims living in my country	.01	.08	-.03	**-.73**	-.06	.01	-.09	-.00
Alloic Sympathy									
53*	Ramadan was a way of communing with Muslims	.03	.09	.06	**-.55**	-.08	.15	-.03	-.20
54	Because I wanted to fight for a cause bigger than myself	-.03	.01	-.11	**-.39**	-.24	.03	.37	-.13
55	Because I wanted to share my possessions with others	.15	.11	-.16	**-.47**	.16	-.19	.06	-.15
Paratelic									
59*	Because it seemed a very exciting experience	-.01	-.01	.13	**-.38**	-.23	.37	-.03	-.03
60	For humanitarian reasons	.10	.01	-.04	**-.51**	-.04	-.11	.28	.15
61	As a way of forever getting rid of my pride and my vanity	.26	.22	-.28	-.22	-.01	-.05	.14	-.27

Note. N = 165. Representative items for each subscale were replicated from Lakhdar et al.'s study (2007). Items with an asterisk were selected for analyses because they were strong items and conceptually represented subscales. Boldfaced numbers represent highest factor loadings for items. Underlined numbers represent cross-loadings.

Table 5

Correlations between Pre-Test and Post-Test on the L-SIM

Conversion Reason	Pre-Test							
	Telic	*Autic Sympathy*	*Autic Mastery*	*Negativist*	*Conformist*	*Alloic Mastery*	*Alloic Sympathy*	*Paratelic*
Post-Test	Factor 1	Factor 2	Item 28	Item 36	Item 41	Item 51	Item 53	Item 59
Telic	.693**							
Autic Sympathy	.059	.714**						
Autic Mastery	.170	.362*	.735**					
Negativist	.006	.128	-.079	.562**				
Conformist	.233	.070	.133	.087	.758**			
Alloic Mastery	.115	.370*	.578**	.069	.131	.610**		
Alloic Sympathy	-.111	.279	.629**	.166	-.143	.364*	.628**	
Paratelic	.093	.254	.487**	.316	-.129	.379*	.397*	.481**

Note. *$p < .05$, two-tailed, ** $p < .01$, two-tailed

Table 6

Correlation Coefficients of L-SIM Conversion Reasons with IBS and MPS Scores

Conversion Reason	IBS	MPS
Telic	.26**	.05
Autic Sympathy	-.19*	-.25**
Autic Mastery	.05	.04
Negativist	.06	.02
Conformist	.32**	.18*
Alloic Mastery	.08	-.03
Alloic Sympathy	-.01	-.10
Paratelic	-.09	-.04

Note. *p<.05, two-tailed, ** p<.01, two-tailed

Appendix A

Approval Letters from the Xavier University IRB

April 1, 2015

Holly Ait Taouit
[redacted]

Re: Protocol #14-068, *The Psychometrics of a Systematic Inventory of Mothves for Converting to Islam*

Dear Ms. Ait Taouit:

The IRB has reviewed the materials regarding your study, referenced above, and has determined that it meets the criteria for the Exempt from Review category under Federal Regulation 45CFR46. However, it was noted in our final review of your materials that the wording and presentation may not make sense to participants during the retest, and that you will likely need to update your informed consent at time two (to remove mention of further retesting), as well as your survey materials (which mention the retest as well). We apologize for the oversight in not recognizing the need to request updated materials for the retest as part of our initial review.

In order to prevent delaying your study, the present approval applies only to the first collection of data and not to the retest.

You are conditionally approved to conduct the retest as well, with the conditional approval being dependent on your submitting updated copies of your materials as they will be presented at the retest administration. You may simply submit those elements of the research materials that need to be updated (as noted above, the informed consent and any survey materials that mention the retest, along with any other element you identify), along with a letter to our office indicating what changes needed to be made to ensure that participants in the retest might not inadvertently believe that yet another retest is planned.

Once those materials are received, you will receive an unrestricted approval from our office. For now, you are free to proceed with the first stage of your data collection.

If you wish to modify your study, including the addition of data collection sites, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

Please contact our office if you have any questions. We wish you success with your project!

Sincerely,

[redacted]

Morell E. Mullins, Jr., Ph.D.
Chair, Institutional Review Board
Xavier University

MEM/sb

May 19, 2015

Holly Ait Taouit
[redacted]

Re: Protocol #14-068, *The Psychometrics of a Systematic Inventory of Motives for Converting to Islam*

Dear Ms. Ait Taouit:

The IRB has reviewed the additional materials regarding your study, referenced above, and has determined that it meets the criteria for the Exempt from Review category under Federal Regulation 45CFR46. Your protocol is approved as exempt research, and therefore requires no further oversight by the IRB. We appreciate your thorough treatment of the issues raised and your timely response.

If you wish to modify your study, including the addition of data collection sites, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

Please contact our office if you have any questions. We wish you success with your project!

Sincerely,
[redacted]
Morell E. Mullins, Jr., Ph.D.
Chair, Institutional Review Board
Xavier University

MEM/sb

Appendix B

Systematic Inventory of Motives for Converting to Islam (L-SIM)

The L-SIM (Lakhdar et al., 2008) was not reproduced due to copyright.

The measure is available through APA's PsychNet at psycnet.apa.org

Appendix C

Islamic Beliefs Scale (IBS)

The Islamic Beliefs Scale is adapted from the Psychological Measure of Islamic Religiousness (Abu Raiya, 2008) and was not reproduced due to copyright.

The measure is available through OhioLINK's Electronic Theses and Dissertation Center (ETD) at www.etd.ohiolink.edu

Appendix D

Muslim Practice Subscale (MPS)

The Muslim Practice Subscale is adapted from the Short Muslim Practice and Belief Scale (AlMarri, Oei, & Al-Adawi, 2009) and was not reproduced due to copyright.

The measure is available through Taylor Francis Online at www.tandfonline.com

Summary

Title: The Psychometrics of a Systematic Inventory of Motives for Converting to Islam

Problem. There are currently few validated measures of conversion to Islam, and none have been sufficiently validated with the American Muslim convert population. In order to better serve the needs of this growing population, it is important that the field of psychology develop empirically validated measures to assess important aspects of converts' lives, including their motives for choosing Islam. The current study examined the psychometric properties of a measure of conversion motives that was originally developed with a French population (Lakhdar et al., 2007). More specifically, the present study examined the factor structure, temporal stability, and measure's relationship to established measures of Islamic beliefs (IBS; Abu Raiya, 2008) and behavioral practices (MPS; AlMarri, et al., 2009).

Method. One hundred sixty-five (N = 165) U.S. converts to Islam were surveyed online using the L-SIM, IBS, and MPS. The majority of participants were females (74.5%) between the ages of 25-34. Participants converted an average of 7.75 years (SD = 8.41) prior to the study, were predominantly Sunni (61.2%), and were primarily from Christian backgrounds before conversion (71.5%). Participants were recruited via social media and emails that were sent to the researcher's acquaintances and various Islamic organizations. Individuals were then directed via hyperlink to the study's survey using Qualtrics' online survey website, given informed consent information, asked exclusionary questions, and asked to create a non-identifying code (for re-test). Then participants were directed to the L-SIM, IBS, MPS, and various demographic questions. At the end of the survey participants were given the opportunity to enter their email address into a drawing for a $50 Amazon.com gift card and to indicate if they would like to participate in the re-test trial. Participants who agreed to be contacted where emailed a link to a

set of surveys similar to the first trial (i.e., informed consent, code, screening, questionnaires, and option to enter into a drawing).

A factor analysis, using principal axis factoring with a direct oblimin rotation was used to examine the factor structure of the L-SIM with the current dataset. Additionally, this study used a Pearson correlation to assess test-retest reliability of the L-SIM after a two to four week period. Pearson correlations were also used to examine the relationship of the L-SIM to the IBS and MPS measures. For exploratory analyses, 6 one-way ANOVAs and a *t*-test (for gender) were used to assess the relationship between the IBS, MPS, L-SIM and various demographic measures. A Pearson correlation was utilized to examine the relationship between years since conversion and the IBS, MPS, and L-SIM measures.

Findings. Results showed that an eight-factor solution did not fit well with the current L-SIM data. However, two factors of the original scale (*telic* and *autic sympathy* reasons) were supported and cumulatively explained 35.89% of the variance. The other six subscales each had problematic items, with items loading on different scales than expected, or having low factor loadings (<.40) or high crossloadings (>.38) than deemed acceptable. The L-SIM was found, however, to have "fair" to "excellent" test-retest reliability. As expected the *autic sympathy* scale from the L-SIM was negatively correlated with the IBS and MPS measures. Additionally, two L-SIM conversion reasons (*conformist* and *telic*) correlated with the IBS. The *conformist* scale also correlated with the MPS.

Implications. The current study indicated that the L-SIM needs significant revisions if the measure is to be used with a U.S. convert population. This is primarily because the eight-factor solution found in the original study (Lakhdar et al., 2007) was not replicated at present. However, the measure was found to have good temporal stability. Additionally, some support for

construct validity was verified, as certain scales of the measure were correlated with established measures of Islamic beliefs and practice.