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Validation of the Abrahamic Forms of the Centrality of Religiosity Scale (CRS-5, CRS-10, and CRS-15): Evidence from Selected University Students in the Philippines

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Abstract: The Centrality of Religiosity Scale (CRS) is an instrument that measures the centrality, importance, or salience of religious meanings in personality. Addressing the dearth of research on the salience of religion among Filipino Christian youths, the researchers explore in this paper the degree of religiosity of selected university students and the relevance of religious beliefs in their daily life by validating the Abrahamic forms of the Centrality of Religiosity Scale (CRS-5, CRS-10, and CRS-15). This paper specifically answers the following questions: (1) What CRS version is valid for Filipino Christian youths? (2) What is the position of the religious construct-system among selected Filipino Christian university students? and (3) How does the centrality of religiosity influences the selected Filipino Christian university students' subjective experience and behavior? Means and standard deviations were calculated for the five subscales of the centrality of religiosity for CRS-5, CRS-10, and CRS-15. The distribution of the subscale scores was also computed using measures of skewness and kurtosis. Cronbach's α values are provided for each of the subscales to establish internal consistency. Descriptive statistics were also computed with the use of the Statistical Package for Social Science (SPSS) software version 20. Bivariate correlations are reported for all CRS-15 items. This paper established that in a predominantly Christian country such as the Philippines, the CRS-15 is suitable in measuring the centrality of religiosity among Filipino Christian youths.

Keywords: Abrahamic religions; Christianity; centrality of religiosity; university students

1. Introduction

The Philippines is celebrating 500 years of Christianity. This milestone is important for a predominantly Christian country wherein 80% of the population are Roman Catholics and 11% belong to other Christian denominations (2011). The Philippines is also considered as a country of the young. Among the estimated 100 million Filipinos, 28% are youths whose ages range from 10 to 24 years (UNFPA Philippines 2020) Since many Filipino Christians consider faith as very important in their lives (Patinio 2020), the Philippines is an important locus of inquiry on the salience of religion and religiosity.

Although there are numerous religiously affiliated individuals in the Philippines, the extent of their religiosity is unclear. There are no studies on the centrality of religiosity among Filipino Christian youths to the best of our knowledge. Thus, the researchers

inquire: “Are Filipino Christian youths religious?” More importantly, “How does religion influence the Filipino Christian youth’s subjective experience and behavior?” In assessing the religiosity of Filipino Christian youths, this paper hopes to provide a better understanding of how religion affects the personal life of selected university students in a mostly Christian country.

1.1. The Dimensions of Religiosity and Centrality of Religiosity

Religiosity is a complex concept viewed from different vantage points. This paper, anchored on the sociological theory of religion, explores the multidimensionality of religiosity. Emile Durkheim defined religion as a unified system of beliefs and practices relative to sacred things that unite into one moral community (Lessa and Vogt 1972, p. 29). Informed by Durkheim’s definition of religion, Glock and Stark (1965) assert that a religious person can demonstrate religious commitment in different dimensions. They identified five dimensions of religiosity, namely experiential, ritualistic, ideological, intellectual, and consequential. There have been many studies on the multidimensionality of religious commitment. Although the number of dimensions varies, there appears to be a consensus on the importance of the belief or ideology dimension, intellectual or knowledge dimension, public dimension, private dimension, and spiritual experience dimension (Duke and Johnson 1984, p. 60). Approaching religiosity from the lived perspective, Allport and Ross (1967) identified two fundamental dimensions of religiosity: extrinsic and intrinsic. Extrinsic religiosity refers to a person’s practical outlook on religion. Individuals who demonstrate extrinsic religiosity utilize religion for status, sociability, and self-justification. In contrast, a person with intrinsic religiosity finds their master motive for life in religion. Their needs are in harmony with their religious beliefs (Holdcroft 2006, p. 90).

Stefan Huber developed a multidimensional method of measuring religiosity drawn from the measurement models of religiosity by Glock and Stark (1966) and Allport and Ross (1967). Huber’s conceptualization takes the multifaceted phenomenological model by Glock and places it on an aggregated score of the religious dedication proposed by Allport (Ackert et al. 2020b). The concept allows for assessing the centrality of religiosity and the analysis of the core dimensions of religiosity: ideology, intellect, religious experience, private and public religious practices. The intellect dimension refers to the social expectation regarding people who believe in the transcendent or ultimate truth/reality to have some knowledge of religion and explain their views on transcendence, religion, and religiosity. The ideology dimension refers to the social expectation that religious individuals believe in a transcendent reality and the relationship between the human and the divine. The public practice dimension refers to the social expectation that religious individuals are affiliated with religious communities and manifest their beliefs through religious rituals and communal activities. The private practice dimension refers to the social expectation that religious individuals devote themselves to the transcendent or ultimate truth/reality by engaging in private space activities and rituals. Lastly, the religious experience dimension refers to the social expectation that religious individuals communicate or have some kind of direct contact with ultimate reality (Huber and Huber 2012).

Huber (2007) anchors the idea of the centrality of religiosity on George Kelly’s (1955) “psychology of personal constructs.” Huber (2007) asserts that Kelly’s (1955) approach to the psychology of personality benefits empirical research in theology since it considers the psychological function of religious contents in a non-reductive way. The phenomenological and constructivist model of Kelly (1955) emphasizes the personal perspective of the individual. Hence, a person’s experiences and behaviors depend on their constructions of reality. In this framework, faith and religious beliefs are specific ways of construing reality.

Huber (2007) explains that the constructivist model of personal religiosity can also refer to “personal construct”, which is a pattern or schema for anticipating events. It can also point to a “personal construct-system”, which is a group of personal constructs with a common range of mutually interrelated meanings. In the context of religion, a person’s religious construct-system can consist of all personal constructs related to personal religiosity.

Although an individual's personal constructs and construct-systems are interrelated, they operate in a hierarchical structure. Following Kelly's (1955) constructivist model, there are construct-systems that are in central or superordinate positions whereas other construct-systems are subordinate. The superordinate construct-system determines the activation of a subordinate construct. Hence, religiosity is considered an expression of the individual's religious construct-system from the constructivist perspective. This construct-system consists of all personal constructs which are related to the realm of religion and religiosity.

The five core dimensions are channels or modes in which personal religious constructs are shaped and activated (Huber and Huber 2012, p. 710). When the religious construct system is central, religious beliefs can influence a person's subjective experience and behavior (Huber 2007).

1.2. Some Examples of the Visibility of the Ideological and Public Practice Dimensions

The Roman Catholic Church in the Philippines is active in the spiritual care of many Filipino Catholics and in shaping government policies on reproductive health, education, and corruption. This affects many Catholic youths whose concerns include premarital sex, cohabitation, divorce, and homosexuality (Castillo 2018; de Irala et al. 2009). The doctrines of the Catholic Church also serve as cognitive strategies for some Filipino Catholic youths to cope with major life stressors (del Castillo and Aliño 2020).

Aside from the Catholic Church, there are other Christian churches that actively participate in the religious and political spheres in the country such as *Iglesia ni Cristo* (Cornelio 2017), charismatic churches (Ma 2005), and the *Iglesia Filipina Independiente* (Cabillas 2002).

Numerous Filipino Catholics participate in popular forms of religiosity. Devotees of the "Black Nazarene" join the *traslación*, a barefoot procession that lasts for almost 20 hours during the feast day of *Nuestro Padre Jesus Nazareno de Quiapo* (Espiritu 2016). Another popular devotion for many Filipino Catholics is the *Santo Niño* (Child Jesus). During the *Simulog* festival, many people attend the liturgical celebrations, dance on the streets, and carry the image of the child Jesus (Ortiz et al. 2017).

1.3. Measuring the Centrality of Religiosity among Filipino Youths

The related literature survey highlights the importance of the Christian faith to many Filipinos, selected religious assemblies, and some of the contributions of Christian churches to the public space. While there are studies on Christian ideology and the public practice of religion (Espiritu 2016; Ortiz et al. 2017), there is limited information on Filipino Christian youth religiosity, that includes the intellect, private practice, and religious experiences dimensions.

In 2019, a nationwide survey showed that 83% of Filipinos (18 years old and above) consider religion very important in their lives and manifest their religious belief through weekly religious services (Social Weather Stations 2019). Addressing the dearth of research on the salience of religion among Filipino youths, the researchers explore in this paper the degree of religiosity of selected Filipino Christian university students and the relevance of religious beliefs in their daily life. Since there is no culturally adapted scale to measure the centrality of religiosity among the Filipino Christian youths, the researchers communicated with the author of the scale who permitted the use of the Centrality of Religiosity Scale or CRS. The CRS has been applied in numerous studies in the sociology of religion, the psychology of religion, and religious studies. Its single most extensive application is the global Religion Monitor with representative samples in 21 countries (Huber and Huber 2012). The CRS has been validated in many countries. However, the Abrahamic versions of the Centrality of Religiosity Scale have not been validated in the Philippine milieu and used to explain religion's salience in Filipino Christian youths' personalities. By validating the Abrahamic forms of the Centrality of Religiosity Scale (CRS-5, CRS-10, and CRS-15), the researchers can ascertain that it does not carry delimiting objectives or contexts that are very specific to its design and development. The CRS also translates the Filipino Christian youths' lived reality into material data and quantifies their life's

correlation with religiosity. This paper specifically answers the following questions: (1) What CRS version is valid for Filipino Christian youths? (2) What is the position of the religious construct-system among selected Filipino Christian university students? and (3) How does the centrality of religiosity influence the selected Filipino Christian university students' subjective experience and behavior?

1.4. *The Centrality of Religiosity Scale: Various Forms and Applications in Different Contexts*

The Centrality of Religiosity Scale (CRS) is an instrument that measures the centrality, importance, or salience of religious meanings in personality (Huber and Huber 2012, p. 711). The CRS has five subscales: intellectual, ideology, public practice, private practice, and religious experience. The CRS has three Abrahamic forms suitable for Abrahamic religions: 15 items (CRS-15), 10 items (CRS-10), and 5 items (CRS-5). Three interreligious forms reflect openness for polytheistic concepts and practices. They are composed of 20 items (CRSi-20), 14 items (CRSi-14), and 7 items (CRSi-7). Hence, there are six forms of CRS. The forms of the present validation (CRS-15, CRS-10, and CRS-5) focus on the predominantly monotheistic Filipino religious context, with an Abrahamic tradition, in which the majority is Christian.

Huber and Huber (2012) describe the Abrahamic forms of CRS as provided in three lengths with 15 (CRS-15), 10 (CRS-10), and 5 items (CRS-5). The CRS-15 has three items per dimension and is considered to have the highest dimensional discriminance. CRS-10 is a reduced and more economical version containing only two questions per dimension, while CRS-5 is the most frugal version with one item per core dimension.

1.5. *The Centrality of Religiosity Scale: Various Forms and Applications in Different Contexts*

Although the Abrahamic forms of the CRS have been validated and applied in numerous studies, it is still noteworthy to look at its current validations from different religious and sociocultural contexts. Ackert et al. (2020a) validated the short forms of CRS in Russia and concluded that the CRS-5 is suitable for the Orthodox-dominated religious landscape. Esperandio et al. (2019) validated the Brazilian version CRS-10BR and CRS-5BR and concluded that the CRS-10BR captures the CRS full construct. Researchers Lee and Kuang (2020) validated the CRS in the Hong Kong context. They found out that the single-factor solution of five items (CRS-5) had better fit indices than the seven-item interreligious version (CRSi-7). Grover and Dua (2019) translated into Hindi the CRS-15 and evaluated the scale for cross-language equivalence, test-retest reliability, internal consistency, and split-half reliability. Their validation showed that the Hindi version of CRS had good cross-language equivalence with the English version for all items and dimensions. Huza (2019) validated a Romanian version of the Centrality of Religiosity Scale (CRS-15) and reported that the CRS-15 is a valid and reliable measure in detecting religiosity's centrality. In the Philippines, Batara (2018) utilized the CRS-15 to investigate what dimension of religion is best predictive of helping behavior. Although the study does not mention the validation of CRS-15, Batara (2018) concluded that the public practice dimension mostly facilitates helping behavior. Lastly, only the interreligious forms of the Centrality of Religiosity Scale or CRSi (CRSi-7, CRSi-14, and CRSi-20) have been validated in the Philippines. Considering the presence of different religions and the freedom of people to navigate the religious space, del Castillo et al. (2020) assert that the CRSi-20 is a valid and reliable measure for the centrality of religiosity in the Philippines and support the usefulness of the CRS among Filipino interreligious youth.

2. Method

2.1. *Participants*

This study aims to validate the Abrahamic versions of the Centrality of Religiosity Scale (CRS-15, CRS, 10, and CRS-5) by using samples from Filipino Christian youths studying in selected universities in the Philippines. This paper is probably the first attempt to validate the Abrahamic versions of CRS in the Philippines' context and focus on a specific target group of youths.

Convenience sampling was adopted for the present study. A total of 490 Filipino Youths (64.69% females, 35.31% males) participated in the present study using convenience sampling. The respondents were all Christians, where the majority identified as Roman Catholics ($n = 430$ or 87.76%), and the rest were affiliated with other Christian denominations ($n = 60$ or 12.24%).

The Abrahamic version of the CRS was administered online through Google forms from September 20 until October 31, 2020. The participants were fully informed about the aims of the study. After answering the informed consent and the required demographics, the respondents answered the Centrality of Religiosity Scale (Huber and Huber 2012). The only personal data collected from the respondents were religious affiliation, age, and gender.

2.2. Instrument

The importance of the religious constructs in Filipino Christian youths' personality was measured using the full English version of the Centrality of Religiosity Scale (CRS) -5, -10, and -15 (Huber and Huber 2012) with permission from the author. The CRS assumes that (1) The measurement of the general intensity of the five core dimensions allows a representative estimation of the frequency and intensity of the activation of the personal religious construct system and (2) The probability of a central position of the religious construct-system in personality increases with the overall intensity and frequency of its activation (Huber and Huber 2012, p. 715). Thus, an individual whose religiosity is in a central position can be intensely influenced by personal religious constructs (Huber 2007).

A person can demonstrate his or her religiosity in a myriad of ways. Since the intellectual and ideological dimensions refer to thought, a person can operationalize his or her religiosity by believing in God or something divine, thinking about religious issues, learning about religious topics, and keeping abreast with religious questions. On the dimensions of the public and private practice of religiosity, which refer to an action, a religious person can participate in religious services, be a member of a religious community, and pray. Regarding the experiential dimension, which refers to experience, emotion, and perception, a religious person can feel the presence or intervention of God or something divine in certain situations.

The CRS uses a subjective 5-point frequency (very often, often, occasionally, rarely, and never) and intensity (very much so, quite a bit, moderately, not very much, and not at all) response scale and 8 or 7 items objective frequency scale for the assessment of private and public practice respectively (Huber and Huber 2012). The answer options for the private practice are "several times a day", "once a day", "more than once a week", "once a week", "one or three times a month", "a few times a year", "less often", and "never". Accordingly, the answer options for the public practice are "more than once a week", "once a week", "one or three times a month", "a few times a year", "less often", and "never". To guarantee the compatibility of the answer scales the authors propose a re-coding procedure for the 8- and 7-level answers to 5-level. The principles are described in Huber and Huber (2012, p. 720). We follow the re-coding suggestions of the authors. Thus, the final data results in a uniform range of 1 to 5, with one being the minimum and five the maximum expression on the scale. The CRS-5, -10, and -15 subscales, items, and the general scale construction principle are shown in Table 1.

The CRS index is a composite score based on the average of all items and ranges from 1 to 5. According to Huber and Huber (2012) individuals whose CRS index is higher than 4.0 are "highly religious". They have a profound religious life and faith likely plays a central role in their life. Individuals whose CRS index is lower than 2.0, are categorized as "non-religious". For these individuals, religion is of little value or influence. Individuals are categorized as "religious" if their CRS index is between 2.0 and 4.0. This means that while religion is present in their life, it does not play an essential role in their decisions.

Table 1. CRS-5, CRS-10, and CRS-15 Subscales and Sample Items.

CRS Versions and Subscales		Item	Item Number
CRS-5	Intellect	How often do you think about religious issues?	1
	Ideology	To what extent do you believe that God or something divine exists?	2
	Public Practice	How often do you take part in religious services?	3
	Private Practice	How often do you pray?	4
	Religious Experience	How often do you experience situations in which you have the feeling that God or something divine intervenes in your life?	5
CRS-10	Intellect	How interested are you in learning more about religious topics?	6
	Ideology	To what extent do you believe in an afterlife—e.g., immortality of the soul, resurrection of the dead, or reincarnation?	7
	Public Practice	How important is it to take part in religious services?	8
	Private Practice	How important is personal prayer for you?	9
	Religious Experience	How often do you experience situations in which you have the feeling that you are touched by divine power?	10
CRS-15	Intellect	How often do you keep yourself informed about religious questions through radio, television, internet, newspapers, or books?	11
	Ideology	In your opinion, how probable is it that a higher power really exists?	12
	Public Practice	How important is it for you to be connected to a religious community?	13
	Private Practice	How often do you pray spontaneously when inspired by daily situations?	14
	Religious Experience	How often do you experience situations in which you have the feeling that God or something divine is present?	15

Note. CRS—Centrality of Religiosity Scale. In the CRS-5 each core dimension has only one item. In the CRS-10 all the CRS-5 items are included and each core dimension receives one more additional item. In the CRS-15 all items of the CRS-5 and CRS-10 are included, additionally, each core dimension receives an extra item.

3. Data Analysis

Means and standard deviations were calculated for the five subscales of the centrality of religiosity for each of the versions CRS-5, CRS-10, and CRS-15. Measures of skewness and kurtosis were also computed to describe how the subscale scores were distributed. Cronbach’s α (1951) values are provided for each of the subscales to establish internal consistency. Descriptive statistics were also computed with the use of the Statistical Package for Social Science (SPSS) software version 20. Bivariate correlations are reported for all CRS-15 items. Table 2 shows that besides the participants’ age, all of the CRS subscales are highly correlated with each other.

Table 2. CRS-5, CRS-10, and CRS-15 Bivariate Correlation.

Variables	M	SD	1	2	3	4	5	6	7
1 Age	19.28	2.23	-						
2 Intellect	3.44	0.82	0.06	(0.77)					
3 Ideology	4.37	0.71	0.04	0.45 **	(0.76)				
4 Public practice	3.55	0.93	0.03	0.71 **	0.55 **	(0.78)			
5 Private practice	4.24	0.94	0.04	0.59 **	0.64 **	0.70 **	(0.70)		
6 Religious experience	3.83	0.97	−0.03	0.60 **	0.64 **	0.66 **	0.72 **	(0.85)	
7 Religiosity (Grand Mean)	3.89	0.73	0.03	0.80 **	0.76 **	0.87 **	0.88 **	0.87 **	(0.93)

Note. ** $p < 0.001$, M = mean, SD = standard deviation, Cronbach’s (1951) alpha reliabilities are shown in the diagonal, and $N = 490$.

The Abrahamic Centrality of Religiosity Scale’s factor structure was tested using confirmatory factor analysis (CFA). CFA of the Huber and Huber’s (2012) five-factor model was done using Structural Equation Modelling (SEM) with the help of the Analysis of Moment Structures (AMOS) software version 20 (Arbuckle 2011). Preliminary analysis of

the normality of the data was achieved by examining the skewness and kurtosis of the distribution (Kline 2005, p. 74). Results of the univariate normality test indicated that the values were within the accepted ranges of ± 2.0 for skewness and ± 7.0 for kurtosis (Cunningham 2008). However, studies have shown that it is not sufficient enough to just compute for the univariate normality, but should also include the assumption of multivariate normality (Byrne 2001; West et al. 1995). Mardia's (1970) coefficient was computed with values above the accepted norm, hence violating the assumption of multivariate normality (Byrne 2010). To remedy this, the bootstrapped method was used in the succeeding CFA analyses (West et al. 1995; Yung and Bentler 1996; Zhu 1997). For the CFA, the following fit indices and criteria were used to establish model fit: a non-significant chi-square, root-mean-square-error-of approximation (RMSEA; < 0.06) with a 90% confidence limit (Browne and Cudeck 1993), standardized root mean square residual (SRMR) < 0.08 , goodness of fit index (GFI), comparative fit index (CFI), and Tucker-Lewis index (TLI) > 0.90 (Hair et al. 2014).

Results

The mean, standard deviation, skewness, kurtosis, and Cronbach's α of each of the subscales and total score of CRS were determined (See Table 3). For the CRS-15, the mean scores of the core dimensions ranged from 3.44 to 4.37 with a standard deviation ranging from 0.71 to 0.97. The skewness measures varied between -1.72 to -0.33 . The skewness values were all negative, implying that the scores of subscales are concentrated on the higher values. Subscales whose skewness values were between -0.5 to 0.5 indicate that the scores of the distribution are slightly skewed, while those whose skewness measures were smaller than -1.0 or larger than 1.0 imply that the distribution is moderately skewed. The kurtosis values ranged from -0.36 to 3.66 . Positive kurtosis values indicate that the distribution is more peaked than the normal distribution and has heavier tails. While negative kurtosis values indicate that the distribution is less peaked than the normal curve and has lighter tails. The internal consistency of these subscales is acceptable (Cohen et al. 2007). The Cronbach's α s of each of the subscale had values that ranged from 0.70 to 0.93, which is considered reliable to highly reliable (Bryman and Cramer 1990, p. 71). Although 0.59 (for CRS-10 intellect and public practice) is almost 0.60, alpha values in CRS-15 are still more reliable than the CRS-10 and/or CRS-5.

Table 4 shows a summary of the fit indices for all seven models. All models have significant chi-square values which indicate a poor fit. However, such can be expected considering that the sample size is quite large (Tabachnick and Fidell 2001). Also, CRS-5 and CRS-10 models (1 to 4) do not seem to exhibit good fits. Even after examining the modification indices, there were no residuals that could be covaried. It is possible that the seeming poor structural validity of CRS-10 (especially Models 3 and 4) can be attributed to the fact that there are only two indicators assigned per factor.

As for the three models of CRS-15 (5 to 7), residuals of items 13 and 14 for the *religious experience* factor ($\delta_{x_{13}x_{14}} = 0.25$, $z = 3.73$, $p < 0.001$), and residuals of items 12 and 15 for the *intellect* factor ($\delta_{x_{12}x_{15}} = 0.39$, $z = 7.02$, $p < 0.001$) were uniformly covaried. This is duly informed by modification indices in Models 5, 6, and 7. Of all the models, Model 6 indicated a good fit ($\chi^2/df = 2.78$, RMSEA = 0.06, SRMR = 0.04, GFI = 0.94, CFI = 0.97, TLI = 0.96).

Table 5 shows the standardized estimates for the test items for each of the five subscales of the five-factor model of the CRS-15. In CRS-15 all the items loaded significantly on their hypothesized factor ($p < 0.01$). It indicates that these items seem to be related to the underlying dimension they are supposed to measure. In addition, within CFA, it is important that inter-correlation among the subscales (variables) is within the threshold of 0.85, so as not to violate the issues of multicollinearity (Awang 2012).

Table 3. Descriptive Statistics of the CRS-15, CRS-10, and CRS-5.

Centrality of Religiosity Scale Versions		M	SD	Skewness	Kurtosis	Cronbach’s α
CRS-15	Total score	3.89	0.73	−1.11	1.18	0.93
	Intellect	3.44	0.82	−0.33	−0.21	0.77
	Ideology	4.37	0.71	−1.72	3.66	0.76
	Public Practice	3.55	0.93	−0.47	−0.36	0.78
	Private Practice	4.24	0.94	−1.65	2.23	0.70
	Religious Experience	3.83	0.97	−0.81	0.20	0.85
CRS-10	Total score	3.92	0.72	−1.16	1.41	0.89
	Intellect	3.61	0.82	−0.48	−0.01	0.59
	Ideology	4.33	0.77	−1.52	2.50	0.66
	Public Practice	3.40	0.90	−0.18	−0.44	0.59
	Private Practice	4.45	0.94	−1.95	3.05	0.82
	Religious Experience	3.80	1.00	−0.70	−0.07	0.86
CRS-5	Total score	3.81	0.69	−0.95	1.16	0.75
	Intellect	3.27	0.90	−0.09	−0.28	n.a.
	Ideology	4.55	0.84	−1.94	3.33	n.a.
	Public Practice	2.88	1.04	0.41	−0.30	n.a.
	Private Practice	4.43	1.05	−1.76	1.89	n.a.
	Religious Experience	3.89	1.05	−0.73	−0.15	n.a.

Note. N = 490. M—mean, SD—standard deviation, CRS—Centrality of Religiosity Scale. n.a.—not available because this subscale has only one item.

Table 4. Measures of Goodness of Fit Indices for Confirmatory Analysis Models of the CRS.

Centrality of Religiosity Scale		χ ²	χ ² /df	RMSEA (90% CI)	SRMR	GFI	CFI	TLI
CRS-5	Model 1	60.53	12.11	0.15 (0.12–0.19)	0.06	0.96	0.91	0.82
	Model 2	346.56	9.90	0.14 (0.12–0.15)	0.06	0.87	0.87	0.84
CRS-10	Model 3	81.39	3.26	0.07 (0.05–0.09)	0.04	0.97	0.98	0.96
	Model 4	157.01	5.23	0.09 (0.08–0.11)	0.05	0.94	0.95	0.92
CRS-15	Model 5	641.64	7.29	0.11 (0.11–0.12)	0.06	0.83	0.88	0.86
	Model 6	216.50	2.78	0.06 (0.05–0.07)	0.04	0.94	0.97	0.96
	Model 7	287.52	3.46	0.07 (0.06–0.08)	0.05	0.92	0.96	0.95

Note: CRS—Centrality of Religiosity Scale. Model 1—single-factor CRS-5; Model 2—single-factor CRS-10; Model 3—correlated five-factors CRS-10; Model 4—five-factor CRS-10 with one higher-order factor; Model 5—single-factor CRS-15, Model 6—correlated five-factors CRS-15, and Model 7—five-factor CRS-15 with one higher-order factor. χ²—Chi-square; RMSEA—root-mean-square-error-of approximation; SRMR—standardized root mean square residual; GFI—goodness of fit index; CFI—comparative fit index; and TLI—Tucker–Lewis index.

Table 6 indicates that the subscales of CRS-15 are strongly correlated, with coefficients in the range of 0.44 to 0.72. *Intellect* is positively correlated to *ideology* ($r = 0.44, p < 0.01$), *public practice* ($r = 0.71, p < 0.01$), *private practice* ($r = 0.59, p < 0.01$), and *religious experience* ($r = 0.60, p < 0.01$). *Ideology* is positively related to *public practice* ($r = 0.55, p < 0.01$), *private practice* ($r = 0.64, p < 0.01$), and *religious experiences* ($r = 0.64, p < 0.01$). While *public practice* is positively correlated to *private practice* ($r = 0.70, p < 0.01$) and *religious experiences* ($r = 0.66, p < 0.01$). Lastly, *private practice* is positively related to *religious experiences* ($r = 0.72, p < 0.01$).

Table 7 indicates the gender difference analysis for the CRS-15 subscales. Independent sampled *t*-test was accomplished to ascertain the gender differences among the various CRS-15 subscales. Results show that significant gender differences ($ps < 0.01$) were found within all of the subscales with male participants exhibiting slightly higher values (see Table 6 MD; mean differences between male and female participants) with moderately large effect sizes ranging from 0.25 to 0.51 (Cohen 1988). Some studies have shown that females are more likely to be more religious than males (Penny et al. 2015), however, some have attributed these gender differences to be culture specific (Loewenthal et al. 2002) and biological in nature (Schnabel 2015). For the current study, it is noted that male participants were significantly more religious than their female counterparts. Further

investigation is recommended to determine whether this difference is cultural, biological, or psychological in nature, however, it is currently beyond the scope of the present study.

Table 5. Factor Loadings in Model 6, Five-Factor CRS-15.

Factor	Item	λ	SE	z	p
Intellect	1. How often do you think about religious issues?	0.49	n.a.	n.a.	<0.001
	6. How interested are you in learning more about religious topics?	0.84	0.19	10.44	<0.001
	11. How often do you keep yourself informed about religious questions through radio, television, internet, newspapers, or books?	0.69	0.14	12.04	<0.001
Ideology	2. To what extent do you believe that God or something divine exists?	0.92	n.a.	n.a.	<0.001
	7. To what extent do you believe in an afterlife—e.g., immortality of the soul, resurrection of the dead, or reincarnation?	0.56	0.05	12.72	<0.001
	12. In your opinion, how probable is it that a higher power really exists?	0.67	0.04	15.79	<0.001
Public Practice	3. How often do you take part in religious services?	0.50	n.a.	n.a.	<0.001
	8. How important is it to take part in religious services?	0.87	0.16	11.50	<0.001
	13. How important is it for you to be connected to a religious community?	0.88	0.17	11.54	<0.001
Private Practice	4. How often do you pray?	0.76	n.a.	n.a.	<0.001
	9. How important is your personal prayer for you?	0.89	0.05	20.62	<0.001
	14. How important is personal prayer for you?	0.80	0.06	18.45	<0.001
Experience	5. How often do you experience situations in which you have the feeling that God or something divine intervenes in your life?	0.80	n.a.	n.a.	<0.001
	10. How often do you experience situations in which you have the feeling that God or something divine wants to show or reveal something to you?	0.84	0.05	23.77	<0.001
	15. How often do you experience situations in which you have the feeling that God or something divine is present?	0.91	0.05	21.85	<0.001

Note. SE—standard error; z—obtained z value; p—probability value = < 0.001.

Table 6. Correlation Matrix of the CRS-15 Subscales.

CRS Subscales	1	2	3	4
1. Intellect				
2. Ideology	0.44 **			
3. Public Practice	0.71 **	0.55 **		
4. Private Practice	0.59 **	0.64 **	0.70 **	
5. Religious Experiences	0.60 **	0.64 **	0.66 **	0.72 **

Note: ** $p < 0.01$.

Table 7. Gender Differences among the CRS-15 Subscales.

CRS Subscales	Gender	Mean	SD	SE	F	t	p	MD	Cohen's d
Intellect	Female	3.33	0.86	0.05	7.75	−4.23	0.000	−0.31	0.38
	Male	3.63	0.71	0.05					
Ideology	Female	4.31	0.74	0.04	6.43	−2.68	0.008	−0.17	0.25
	Male	4.48	0.64	0.05					
Public Practice	Female	3.39	0.93	0.05	3.56	−5.23	0.000	−0.45	0.51
	Male	3.84	0.84	0.06					
Private Practice	Female	4.11	1.00	0.06	19.65	−4.44	0.000	−0.36	0.41
	Male	4.47	0.75	0.06					
Religious Experience	Female	3.71	1.01	0.06	8.79	−4.09	0.000	−0.35	0.38
	Male	4.06	0.84	0.06					
Religiosity (Grand Mean)	Female	3.77	0.77	0.04	10.39	−5.12	0.000	−0.33	0.47
	Male	4.10	0.62	0.05					

Note. Female $n = 317$, Male $n = 173$.

4. Discussion

There were 490 participants in the present study. Based on the CRS index, 259 or 52.86% of the respondents were categorized as *highly religious*, 220 or 44.90% were categorized *religious*, while only 11 or 2.24% were *not religious*.

In this study, wherein the CRS-5, -10, -15 were validated using samples from selected Christian university students from the Philippines, the results showed that CRS-5 and CRS-10 Models 2 (single-factor), 3 (correlated five-factors), and 4 (five-factor CRS-10 with one higher-order factor) did not exhibit good fit. The poor structural validity of CRS-10 (especially Models 3 and 4) can be attributed to the fact that there were only two indicators assigned per factor. However, CRS-15 Model 5 (single-factor), 6 (correlated five-factors), and 7 (five-factor CRS-15 with one higher-order factor) show good fit. However, the researchers defer to the CRS-15 Model 6 since it yielded the most acceptable goodness of fit measures. Although the chi-squared value is significant because of the large sample size, the values of the other goodness of fit indices are within the acceptable thresholds. The CFA results for the correlated five-factor CRS-15 showed that all items were significant at 0.01 when tested on their hypothesized factors. It showed that the items were related to the factors that they were supposed to measure. There are also significant positive correlations across the factors of the CRS-15 which establishes the convergent validity across subscales.

The CRS revealed that the selected Filipino Christian university students are not “nominal Christians” but religious. Hence, the selected Filipino Christian university students have a profound religious life and the Christian faith plays a central role in their life.

Among the subscales of CRS-15, the group of Filipino Christian university students scored highest on ideology ($M = 4.37$). Hence, they strongly believe in the existence and power of a transcendent reality. This aligns with the findings of [Patinio \(2020\)](#) that many Filipinos believe that faith in God is very important.

The selected Filipino Christian university students also show considerable importance in the private practice dimension ($M = 4.24$). This aligns with the findings of [del Castillo and Aliño \(2020\)](#) that many Filipino Christian youths pray in private. Compared to the other dimensions, the selected Filipino Christian youths scored relatively low on public practice ($M = 3.55$). The religious experience dimension ($M = 3.83$) of the selected Filipino Christian youths complements the assertion of [Agoncillo \(2015\)](#) that the Filipino Catholic youth strongly feel the presence of God in their lives and they have had religious experiences that indicate this presence. It also supports the findings of [Baring et al. \(2018\)](#) that Filipino youths have an emotional disposition towards God and appropriated religion as a sacred affiliated construct (p. 11). The group of Filipino Christian university students scored the least on the intellect dimension ($M = 3.44$). This has an implication on the Catholic Church in the Philippines since most of the youths in the sample are Catholics (87.76%) and that

Filipino Catholic youths are considered by the Catholic Church as its greatest resource for evangelization (Catholic Church Bishop's Conference of the Philippines 1992). This also brings to mind the observation of Agoncillo (2015) that the Filipino Catholic youth have moderate knowledge of Catholic doctrine. The low score on the intellectual dimension can also mean that the limited understanding of Catholic doctrine among Filipino Catholic youths hinders them from critically responding to religious issues in the public sphere (Castillo 2018; de Irala et al. 2009).

5. Conclusions and Outlook

This paper established that the CRS-15 is suitable in measuring the centrality of religiosity among Filipino Christian youths.

The Centrality of Religiosity Scale also revealed that selected Filipino Christian university students' religious construct-system is in a central position. They express religiosity mostly on the ideology and private practice dimensions. The high CRS index score of the selected Filipino Christian university students also shows that religion is significant in their construct system. Since their religious beliefs are powerful enough to influence subjective experience and behavior, religion is relevant in all the domains of their life.

This study has also shown that the multidimensional model of religiosity operationalized by the Centrality of Religiosity Scale (CRS-15) works well in a predominantly Christian country. Similar to the findings of various scholars who validated the basic forms of the CRS in milieus dominated by an Abrahamic religion (Ackert et al. 2020a; Esperandio et al. 2019; Huza 2019), the scale can encompass various expressions of the Christian religion in the Philippines.

The CRS-15 is suitable for future studies on religiosity, especially in exploring the underlying dimensions that characterize people's notions of religion and the centrality of religiosity among Filipino Christians. Another CRS-15 research on a larger sample can illuminate the interstices between religious commitment and some Filipino youth issues such as reproductive health and homosexuality. In further studies, researchers may also utilize the CRS to investigate religiosity's centrality among Filipino Christian youths who are out-of-school. The CRS can also shed light on how religion facilitated some Filipino Christian youth's mental and physical well-being during a significant life stressor.

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References

- Ackert, Michael, Elena Prutskova, and Ivan Zabaev. 2020a. Validation of the Short Forms of Centrality of Religiosity Scale in Russia. *Religions* 11: 577. [CrossRef]
- Ackert, Michael, Maglakelidze Badurashvili, and Huber Stefan. 2020b. Validation of the Short Forms of the Centrality of Religiosity Scale in Georgia. *Religions* 11: 57. [CrossRef]

- Agoncillo, Roland. 2015. Understanding Catholic Youth Religiosity in a Developing Country. Available online: <https://icsai.org/procarch/1iclehi/1iclehi-47.pdf> (accessed on 10 November 2020).
- Allport, Gordon W., and J. Michael Ross. 1967. Personal religious orientation and prejudice. *Journal of Personality and Social Psychology* 5: 432. [CrossRef] [PubMed]
- Arbuckle, James L. 2011. *IBM SPSS Amos 20 User's Guide*. Chicago: Amos Development Corporation.
- Awang, Zainudin. 2012. *A Handbook on Structural Equation Modeling Using AMOS*. Malaysia: Universiti Teknologi MARA Press.
- Baring, Rito, Philip Joseph Sarmiento, Nestor Sibug, Paolo Lumanlan, Benito Bonus, Cristina Samia, and Stephen Reysen. 2018. Filipino College Students' Attitudes towards Religion: An Analysis of the Underlying Factors. *Religions* 9: 85. [CrossRef]
- Batara, Jame Bryan. 2018. Public practice of religion as predictor of prosocial behavior. *Prism* 23: 73–81.
- Browne, Michael W., and Robert Cudeck. 1993. Alternative ways of assessing model fit. In *Testing Structural Equation Models*. Edited by Kenneth A. Bollen and John Scott Long. Newbury Park: Sage Publications.
- Bryman, Alan, and Duncan Cramer. 1990. *Quantitative Data Analysis for Social Scientists*. London: Routledge.
- Byrne, Barbara M. 2001. *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*. Mahwah: Lawrence Erlbaum Associates.
- Byrne, Barbara M. 2010. *Structural Equation Modeling with AMOS. Basic Concepts, Applications, and Programming*. New York: Taylor and Francis.
- Cabillas, D. M. 2002. Iglesia Filipina Independiente (Philippine Independent Church) (IFI). (Comments from Churches Involved in Union Negotiations). *The Ecumenical Review* 54: 414–20. Available online: <https://link.gale.com/apps/doc/A92136492/AONE?u=dlsuandsid=AONE&xid=57b674c9> (accessed on 10 November 2020).
- Castillo, Rosa Cordillera. 2018. Unpacking “Youth” and “Religiosity” in Being Catholic. (2016). *Journal of World Christianity* 8: 165–76. Available online: <https://www.jstor.org/stable/10.5325/jworlchri.8.2.0165> (accessed on 10 November 2020). [CrossRef]
- Catholic Church Bishop's Conference of the Philippines. 1992. *Acts and Decrees of the Second Plenary Council of the Philippines*. Manila: The Philippines.
- Cohen, Jacob. 1988. *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed. Hillsdale: Lawrence Erlbaum Associates.
- Cohen, Louis, Lawrence Manion, and Keith Morrison. 2007. *Research Methods in Education*, 6th ed. Abingdon: Routledge.
- Cornelio, Jayeel. 2017. Religion and civic engagement: The case of Iglesia ni Cristo in the Philippines. *Religion, State and Society* 45: 23–38. [CrossRef]
- Cronbach, Lee J. 1951. Coefficient alpha and the internal structure of tests. *Psychometrika* 16: 197–334. [CrossRef]
- Cunningham, Everarda G. 2008. *A Practical Guide to Structural Equation Modelling Using AMOS*. Melbourne: Statsline.
- de Irala, Jokin, Alfonso Osorio, Cristina Lopez del Burgo, Vina Belen, Filipinas de Guzman, Maria del Carmen Calatrava, and Antonio Torralba. 2009. Relationships, love and sexuality: What the Filipino teens think and feel. *BMC Public Health* 9: 282. Available online: <https://link.gale.com/apps/doc/A207293358/AONE?u=dlsuandsid=AONE&xid=d9b028f0> (accessed on 10 November 2020). [CrossRef]
- del Castillo, Fides, and Marie Aliño. 2020. Religious Coping of Selected Filipino Catholic Youth. *Religions* 11: 462. [CrossRef]
- del Castillo, Fides, Clarence Darro del Castillo, Marie Antoinette Aliño, Rene Nob, Michael Ackert, and Gregory Ching. 2020. Validation of the Interreligious Forms of the Centrality of Religiosity Scale (CRSi-7, CRSi-14, and CRSi-20): Salience of Religion among Selected Youth in the Philippines. *Religions* 11: 641. [CrossRef]
- Duke, James, and Barry Johnson. 1984. Spiritual Well-Being and the Consequential Dimension of Religiosity. *Review of Religious Research* 26: 59–72. [CrossRef]
- Esperandio, Mary Rute Gomes, Hartmut August, Juan José Camou Viacava, Stefan Huber, and Márcio Luiz Fernandes. 2019. Brazilian Validation of Centrality of Religiosity Scale (CRS-10BR and CRS-5BR). *Religions* 10: 508. [CrossRef]
- Espiritu, Wilson. 2016. People's Mysticism and Political Engagement: The Prophetic Character of The Nazareno Image. Available online: https://www.academia.edu/32493183/Peoples_Mysticism_and_Political_Engagement_The_Prophetic_Character_of_the_Nazareno_Image (accessed on 26 November 2020).
- Glock, Charles Y., and Rodney Stark. 1965. *Religion and Society in Tension*. Chicago: Rand McNally.
- Glock, Charles Y., and Rodney Stark. 1966. *Christian Beliefs and Anti-Semitism*, 1st ed. New York: Harper and Row.
- Grover, Sandeep, and Devakshi Dua. 2019. Translation and Adaptation into Hindi of Central Religiosity Scale, Brief Religious Coping Scale (Brief RCOPE), and Duke University Religion Index (DUREL). *Indian Journal of Psychological Medicine* 41: 556–61. [CrossRef]
- Hair, Joseph F., Thomas M. Hult, Christian M. Ringle, and Marko Sarstedt. 2014. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Newbury Park: SAGE.
- Holdcroft, Barbara. 2006. What is Religiosity. *Journal of Catholic Education* 10. [CrossRef]
- Huber, Stefan, and Odilo Huber. 2012. The Centrality of Religiosity Scale (CRS). *Religions* 3: 710–24. [CrossRef]
- Huber, Stefan. 2007. Are Religious Beliefs Relevant in Daily Life? In *Religion Inside and Outside Traditional Institutions*. Edited by Streib Heinz. Empirical Studies in Theology. Leiden/Boston: Brill, vol. 15, pp. 211–30.
- Huza, Gheorghe. 2019. The psychometric properties of a Romanian Version of the Centrality of Religiosity Scale (CRS-15). *Religions* 10: 11.
- Kelly, George. 1955. *The Psychology of Personal Constructs*. New York: Norton.
- Kline, Rex B. 2005. *Principles and Practice of Structural Equation Modeling*. New York: Gilford Press.

- Lee, John Chi-Kin, and Xiaoxue Kuang. 2020. Validation of the Chinese Version of the Centrality of Religiosity Scale (CRS): Teacher Perspectives. *Religions* 11: 266. [CrossRef]
- Lessa, William A., and Evon Vogt. 1972. *Reader in Comparative Religion: An Anthropological Approach*. New York: Harper and Row.
- Loewenthal, Kate Miriam, Andrew K. MacLeod, and Marco Cinnirella. 2002. Are women more religious than men? Gender differences in religious activity among different religious groups in the UK. *Personality and Individual Differences* 32: 133–39. [CrossRef]
- Ma, Wonsuk. 2005. Doing Theology in the Philippines: A Case of Pentecostal Christianity. *Asian Journal of Pentecostal Studies*. Available online: <https://www.aptspress.org/wp-content/uploads/2018/06/05-2-WMa.pdf> (accessed on 9 November 2020).
- Mardia, Kanti V. 1970. Measures of multivariate skewness and kurtosis with applications. *Biometrika* 57: 519–30. [CrossRef]
- Penny, Gemma, Leslie J. Francis, and Mandy Robbins. 2015. Why are women more religious than men? Testing the explanatory power of personality theory among undergraduate students in Wales. *Mental Health, Religion & Culture* 18: 492–502.
- Ortiz, Ersal, Faith Joan P. Relampagos, Jyn Ruehn S. Pejana, Shene Michelle B. Siarot, Nino Aaron S. Tolo, Ruby S. Melchor, and Reynaldo B. Inocian. 2017. The Transition of Sinulog Dance Festival in the Face of Modernization. *International Journal of Research Granthaalayah* 5: 293–309. [CrossRef]
- Patinio, Ferdinand. 2020. More Pinoys Believe Faith 'Very Important' in Fighting Covid-19. Available online: <https://www.pna.gov.ph/articles/1108913> (accessed on 13 November 2020).
- Philippines: Society and Culture*, 2nd ed. 2011. Manila: World Trade Press.
- Schnabel, Landon. 2015. How religious are American women and men? Gender differences and similarities. *Journal for the Scientific Study of Religion* 54: 616–22. [CrossRef]
- Social Weather Stations. 2019. Fourth Quarter 2019 Social Weather Survey: Record-High 83% of Adult Filipinos Say Religion is "Very Important". Available online: <https://www.sws.org.ph/swsmain/artcldisppage/?artcsyscode=ART-20200412155426> (accessed on 6 November 2020).
- Tabachnick, Barbara G., and Linda S. Fidell. 2001. *Using Multivariate Statistics*. Needham Heights: Allyn and Bacon.
- UNFPA Philippines. 2020. Young People. Available online: <https://philippines.unfpa.org/en/node/15309> (accessed on 24 January 2021).
- West, Stephen G., John F. Finch, and Patrick J. Curran. 1995. Structural equation models with nonnormal variables: Problems and remedies. In *Structural Equation Modeling: Concepts, Issues, and Applications*. Edited by Rick H. Hoyle. Thousand Oaks: Sage Publications, pp. 56–75.
- Yung, Yiu-Fai, and Peter M. Bentler. 1996. Bootstrapping techniques in analysis of mean and covariance structures. In *Advanced Structural Equation Modeling: Issues and Techniques*. Edited by George A. Marcoulides and Randall E. Schumacker. Mahwah: Lawrence Erlbaum Associates, pp. 195–226.
- Zhu, Weimo. 1997. Making bootstrap statistical inferences: A tutorial. *Research Quarterly for Exercise and Sport* 68: 44–55. [CrossRef]