

# An Investigation of the Relationship between the Need for Cognitive Closure and Religious Fundamentalism

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**Abstract**—There are positive significant relationships between the Need for Cognitive Closure (NFC) and Religious Fundamentalism (RF) among students. The preliminary assumption of the current study was: There would be a stronger pattern of association between these constructs, if the participants of the study are more exposed to the study's main concept which is religiosity. In other words, close-mindedness would be more related to homogeneous samples of practicing devotees of monotheistic religions compared to student samples. The main hypothesis was that concerning the Muslim sample, there will be a significant and positive correlation between the need for closure (and all facets of it, except decisiveness) and RF. Both the student sample (n=88), and the Muslim practicing mosque attending sample (n=40), were administered three scales of Need for Closure (NFC), Religious Fundamentalism (RFS), and Four Basic Dimensions of Religiousness (FBDRS). The results of the study moderately confirmed the hypothesis and showed a positive correlation between NFC and RFS with the Muslim sample. Specifically, preference for order, preference for predictability and discomfort with ambiguity facets of the NFC positively correlated with RFS. However, with regards to the student sample such relationships between the constructs were not found.

**Keywords**—Religiosity, close-mindedness, religious fundamentalism, need for closure, monotheistic religions.

## I. INTRODUCTION

NOWADAYS, RF might be considered as one of the most burning issues in the world. Especially because of flourishing fundamental religious propensities in the Middle East, such as appearance of Wahhabism in Saudi Arabia, Shia fundamentalism in Iran after the revolution of 1978-79, ISIS in Iraq (as the main country in which Daesh originated), Orthodox Militancy in Israel and etc. [9], [18]. Hence, we decided to inquire into RF from the psychological point of view. The topic of RF then will be investigated in relation to a concept akin to close-mindedness, which is the NFC.

The term close-mindedness relevant constructs were mentioned by Saroglou [1], who refers to concepts such as dogmatism, need for closure, authoritarianism, stereotypical thinking, in-group favoritism, and etc. Before the main concern of the current paper is presented, a few such constructs of dogmatism, and NFC, as well as some types

of religious affiliation will be discussed in this article. Moreover, there will be a focus on RF, which in other studies (such as Altemeyer's study [5]) has already been found to correlate with constructs related to close-mindedness.

In the preliminary discussion of concepts as well as in the current research, we want to find answers of two questions: What is the relationship between NFC and RF? And what is the relationship between religiosity per se and RF?

With regards to religion—in the current study—the term would basically refer to monotheistic religions such as Islam, Christianity, and Judaism. The reason is that there are many different religions in the world which might be dramatically different from each other by nature. For example, many scholars have discussed that East Asian religions could be found to be less associated with prejudice, dogmatism, intolerance, need for closure, and out-group derogation in comparison with monotheistic religions [12], [15], [17], [19]. Furthermore, Harrington [23] argued that compared to monotheistic religions, East Asian religions are more associated with compassion, harmony, and peace. This emphasis on such paragons would impose positive behavioral consequences on the believers in different levels such as inter-group as well as intra-group relations. Salient concern and emphasis on peace, tolerance, and harmony would be a reason that there is much less in-group out-group differentiation among East Asian devotees, while as Galen [11] argued this would not be the case with monotheistic religions, in which different patterns of behavior are accentuated between the in-group and out-groups at a higher extent. Nevertheless, as it is well-known from the cultural psychology (e.g. [24]) difference between behavioral patterns shown towards the in-group and out-groups is larger among people from collectivistic cultures (such as East Asian cultures), and therefore, what Galen [11] discussed about the lesser in-group out-group differentiation among East Asian believers has to be taken more critically. However, it may be, lesser association of East-Asian religions with prejudice and other close-mindedness relevant constructs seems to be a trustable argumentation.

Importance of God is another distinction between the two types of religiosity, for instance, as Stark [19] discussed God would be considered as a strong determinant of morality in monotheistic religions while it is not the case with East Asian kinds of religiosity. Moreover, regarding the need for closure as one of the discussed concepts in the current study, religiosity in case of East Asian religions such as Buddhism might not be associated with high need for closure, as this

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construct is related to monotheistic religions such as Christianity [8], [10]. Hence, in the current paper the term religion will refer to monotheistic types of religion, so called Abrahamic religions such as Islam, Christianity, and Judaism.

It is worth to mention, the current paper is mainly based on the study conducted by Saroglou et al. [2] in which the results showed positive correlation between the NFC and RF in general, also between RF and preference of order and preference of predictability dimensions of the need for closure in particular. Additionally, the present study will replicate and extend the aforementioned research with consideration of a few empirical revisions.

## II. HYPOTHESES

While we accepted Saroglou et al.'s study [3] as a starting point for the present research in many respects, what may be considered as a limitation is that the participants of the research were students. Since the study is about RF, it may have been more optimal to find participants who are more exposed to the study's constructs. For instance, it might be better finding participants not from educational environments, but from institutions in which religion is explicitly practiced such as churches, synagogues, mosques and etc. In line with Saroglou [4], decisiveness facet of the NFCS will not be taken into consideration in hypothesis section of the present paper; as he discussed, the reason would be due to lack of tentative evidence concerning any association between decisiveness and religiosity.

The current paper plans to involve subjects at mosques. The assumption is that there will be high significant correlation between the need for closure and RF. More specifically, except decisiveness, more facets of the NFCS will correlate with the RF scale while in the study conducted by Saroglou [1] RF scale was positively correlated with NFCS in general and only with the need for order and predictability facets of it and not with the other two facets (decisiveness facet of the NFC scale was omitted) which are close-mindedness and discomfort with ambiguity. Therefore, the hypotheses of this study will be as following:

1. With the student sample the results will be consistent with those found in Saroglou's study [3] in which the RFS significantly correlated with NFCS in general and specifically with order and predictability facets of it.
2. Concerning the practicing and mosque attending Muslim sample, there will be a strong correlation between the need for closure and RF in general. More specifically stronger pattern of correlation between the scales will be found; in other words, all (except decisiveness) the facets of the NFCS will be involved in correlations with RFS.
3. Concerning both samples, there will be significant positive correlation between need for closure and FBDRS.

## III. METHODOLOGY

### A. Participants

40 practicing and mosque attending Muslims (all males) were considered as one of the samples in the current study.

Their age ranged from 19 to 45 ( $M=28.25$ ). All the participants reported as being Muslims and practicing. Also, in the Muslim sample participants were from Sudan ( $n=2$ ), Yemen ( $n=1$ ), Nigeria ( $n=9$ ), Turkey ( $n=3$ ), Palestine ( $n=7$ ), Azarbaijan ( $n=1$ ), Syria ( $n=4$ ), Egypt ( $n=1$ ), Algeria ( $n=8$ ), and Libya ( $n=4$ ). Moreover, 21 participants answered as having university degree to the questions of education, 17 participants reported university student, and two participants replied that they had high school degree.

The online version of the questionnaires was sent to 300 students, to which eighty-eight people answered. Therefore, the student sample contained 88 Master students of English Studies who are majoring in English language and literature (33 males, 55 females) at the University of Eötvös Loránd in Budapest, Hungary. Participants ranged in age from 19 to 37 ( $M=24.86$ ). They identified themselves as Christians (43.2%), Jewish (12.5%), atheist (31.8%), Buddhist (2.3 %) and other (10.2%). They also reported as being non-religious (42%), non-practicing religious (21.6%), and practicing religious (36.4%). In addition, all of the participants in the student sample were from Hungry.

### B. Procedure

There were two different samples of participants, one of them was the student sample consistent with the study run by Saroglou [2], and another sample was practicing-mosque-attending Muslim sample. This would be based on the study conducted by Altemeyer [6] in which he stated church attendance is positively associated with right wing authoritarianism as well as RF. The assumption was that mosque attendance will be associated with RF concerning Muslim participants as well.

For the Muslim sample, the author of the present paper used a paper and pencil method of data collection; he personally went to two mosques in Budapest, Hungary and asked the participants to fill out the questionnaires. It was not possible to enter the part of the mosque allocated for women; therefore, many email addresses were collected from mosque attending women at the same place. However, none of the women answered the online version of the questionnaires which were sent to their email addresses. This is the reason all participants were males.

Regarding the student sample, an online method of data collection (the same questionnaires) was administrated.

### C. Research Ethics

The ethical consideration form of Eötvös Loránd University was filled out, also all the scales as well as the methods of data collection were submitted to research ethics board of the university. After evaluation and approval of the study by the ethical committee, the ethical permission was received in 19th of February in 2015, and the data collection was immediately started until 20th of March in the same year.

The participants received informed consent before they commenced with answering the questionnaires. They were informed that the data will be used anonymously in a larger statistical scale, and there will be no personal evaluation on

their results. Before starting filling out the scales they confirmed that the informed consent was read and they wish to proceed.

#### D. Scales

As discussed earlier, the study administrated three questionnaires; NFCS, RFS, and FBDRS. All the three scales were translated into Arabic for the Muslim sample. Also, back translation method was used in order to assure the reliability of the translation.

NFCS; a 47-item version of the NFCS with six-point Likert type format created by Kruglanski and his colleagues [14] was utilized. The five facets of the NFCS as well as an example for each are as following:

- Preference for order; "I think that having clear rules and order at work is essential for success"
- Preference for predictability; "I like to have friends who are unpredictable"
- Decisiveness; "I would describe myself as indecisive"
- Discomfort with ambiguity; "I don't like situations that are uncertain"
- Close-mindedness; "Even after I've made up my mind about something, I am always eager to consider a different opinion (reverse-scored)" [21].

RFS; a 12-item 7-point Likert type RFS [11] was applied in order to measure the RF construct mentioned above. The 12-item RFS is a revised version of the original 20-item RFS [7] which was later in 2004, shortened by 40%, with higher empirical validity. A few examples of the items are mentioned below:

- "God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed"
- "No single book of religious teachings contains all the intrinsic, fundamental truths about life" (reversed scoring key).
- "The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against God" [7].

FBDRS; a religiosity scale was utilized in order to measure how the participants are religious in general. It is a 12-item 7-point Likert type FBDRS by Saroglou [2] which contains four interrelated dimensions; community, morality, emotions and meaning:

- Community; "In religion I enjoy belonging to a group/community"
- Morality; "I am attached to the religion for the values and ethics it endorses"
- Emotions; "I like religious ceremonies"
- Meaning; "I feel attached to religion because it helps me to have a purpose in my life" [2].

## IV. RESULTS

### A. Student Sample

As depicted in Table I, close-mindedness and discomfort with ambiguity facets of the NFCS have poor internal consistencies; however, there was no possibility to improve their Cronbach's Alphas by deleting any item from each facet.

Furthermore, none of the analyses regarding the student sample showed any significant gender difference.

TABLE I  
DESCRIPTIVE STATISTICS OF THE STUDENT SAMPLE

	M	SD	Alpha
Total NFCS	3.38	0.44	0.81
Order (NFCS)	3.70	0.77	0.76
Predictability (NFCS)	3.48	0.83	0.76
Decisiveness (NFCS)	3.75	1.00	0.81
Discomfort with Ambiguity (NFCS)	3.91	0.68	0.63
Close-mindedness (NFCS)	2.71	0.63	0.57
RFS	2.30	1.16	0.90
Total FBDRS	3.16	1.58	0.93
Community (FBDRS)	3.04	1.82	0.85
Morality (FBDRS)	2.84	1.90	0.91
Emotions (FBDRS)	3.70	1.85	0.87
Meaning (FBDRS)	3.04	1.67	0.79

Note. n=88

### Correlation between NFCS and RFS

TABLE II  
CORRELATION BETWEEN THE NFCS FACETS AND RFS

	r	P
Order (NFCS)	0.009	0.93
Predictability (NFCS)	0.9	0.38
Decisiveness (NFCS)	0.10	0.31
Discomfort with Ambiguity (NFCS)	-0.3	0.75
Close-mindedness (NFCS)	0.14	0.18

A non-parametric test was applied to check out whether or not there is normal distribution, and RFS was found not to be normally distributed. Therefore, a Spearman test was conducted to examine if there is a correlation between NFCS and RFS in general. The results showed no significant correlation between NFCS and RF scales ( $r=0.11$ ,  $p=0.29$ ). Moreover, either of the NFCS facets significantly correlated with the RF scale. In addition, results of the Christian and Jewish participants ( $N=49$ ) exclusively from other participants in the sample did not show any significant correlation between the scales, neither did they with none of the facets of NFCS and RFS. This was the case with the rest of the sample (those who identified themselves as Buddhist, Krishna, Atheist, and other) as well ( $N=39$ ). It is noteworthy to mention, such differentiation between monotheistic participants and the rest was based on the notion of dramatic differences between monotheistic and non-monotheistic religions which was discussed in the introduction part. As discussed earlier in the current study, the term religion basically refers to monotheistic religions, thus apart from involvement of all participants in the analyses, for each analysis Christian-Jewish group of participants was also separated in order to obtain more interpretable results. Further, based on Jackson's study [13] which was argued earlier, mere religiosity might lead the individuals to be prejudiced, that is why Christian-Jewish participants were separated from rest of the sample. Additionally, for each section analyses were also applied for Christian-Jewish-practicing participants ( $N=24$ ). Moreover, at this section Pearson tests were computed for Christian-Jewish-

practicing participants (N=24), that showed no significant correlation between the scales as well as the NFCS facets and RFS.

#### Correlation between Need for Closure and FBDRS

Further, the non-parametric test showed that the distributions of both NFCS and FBDRS were normal. Thus a Pearson test was computed to check out the correlation between each two facets of the scales. The results showed no correlation between NFCS and FBDRS ( $r=0.10$ ,  $p=0.32$ ). Additionally, as Table III, displays, none of the facets (five facets of the NFCS and four facets of the FBDRS) significantly correlated with each other. Here again there was

no significant difference between Christian-Jewish participants and others. In this part too results of Christian-Jewish-practicing participants (N=24) did not show any significant correlation between the scales, and between the facets of both either. However, a few correlations were close to be significant such as the correlation between discomfort with ambiguity (NFCS) and meaning (FBDRS) ( $r=0.36$ ,  $p=0.08$ ), between discomfort with ambiguity (NFCS) and morality (FBDRS) ( $r=0.37$ ,  $p=0.07$ ), and between predictability (NFCS) and morality (FBDRS) ( $r=0.39$ ,  $p=0.056$ ).

TABLE III  
CORRELATIONS BETWEEN NFCS AND FBDRS FACETS (STUDENTS SAMPLE)

	Community	Morality	Emotions	Meaning
Order (NFCS)	$r=0.04$ , $p=0.69$	$r=0.20$ , $p=0.055$	$r=0.06$ , $p=0.52$	$r=0.14$ , $p=0.16$
Predictability (NFCS)	$r=-0.05$ , $p=0.63$	$r=0.16$ , $p=0.12$	$r=-0.11$ , $p=0.28$	$r=0.02$ , $p=0.78$
Decisiveness (NFCS)	$r=0.04$ , $p=0.68$	$r=0.06$ , $p=0.52$	$r=0.07$ , $p=0.51$	$r=0.11$ , $p=0.29$
Discomfort with Ambiguity (NFCS)	$r=0.02$ , $p=0.78$	$r=0.09$ , $p=0.36$	$r=-0.06$ , $p=0.55$	$r=0.07$ , $p=0.51$
Close-mindedness (NFCS)	$r=0.06$ , $p=0.53$	$r=0.03$ , $p=0.76$	$r=-0.11$ , $p=0.30$	$r=0.03$ , $p=0.71$

Note. \* $p < 0.05$  level (2-tailed). \*\*  $p < 0.01$  (2-tailed).

#### Correlation between RF and FBDRS

The results showed a moderate correlation between RFS and FBDRS ( $r = 0.53$ ,  $P < 0.001$ ). Additionally, the results of the Christian and Jewish participants separated from the rest of the sample (N=49), showed a significant correlation between the scales ( $r=0.55$ ,  $p<0.001$ ). However, regarding the rest of the sample (N=39) the results showed no significant correlation ( $r=0.26$ ,  $p=0.104$ ).

Finally, regarding Christian-Jewish-practicing participants (N=24), Pearson tests were computed and the results showed significant positive correlation between the scales ( $r=0.57$ ,  $p=0.004$ ). Table IV lists the summary of the results that except community, there are significant positive correlations between FBDRS dimensions and RFS.

TABLE IV  
CORRELATIONS BETWEEN RFS AND FBDRS DIMENSIONS (CHRISTIAN-JEWISH-PRACTICING SAMPLE)

	$r$	$P$
Community (FBDRS)	0.30	0.15
Morality (FBDRS)	0.64**	<b>0.001</b>
Emotions (FBDRS)	0.45*	<b>0.02</b>
Meaning (FBDRS)	0.48*	<b>0.01</b>

Note. \* $p < 0.05$  (2-tailed). \*\*  $p < 0.01$  (2-tailed).

#### Regression Analysis (Student Sample)

A multiple regression analysis was applied in order to examine if FBDRS dimensions predict RF. Because community, morality dimensions of the FBDRS as well as the total FBDRS did not meet normal distribution, only meaning and emotions dimensions of the FBDRS were entered as independent variables. Also, homoscedasticity, linearity, collinearity, and non-zero variances assumptions were all met by the scales. The results were statistically significant ( $F(2, 84) = 15.59$ ,  $p < 0.001$ ), the model explained nearly 27% of the variance of RFS. Meaning dimension of the scale

significantly predicted RF (Beta=0.45,  $t=3.77$   $p<0.001$ ), while, emotion facet of the FBDRS didn't significantly predict RFS.

#### B. Muslim Sample

Table V, shows the internal consistencies of order, predictability, and decisiveness facets of NFCS were found not to be satisfactory. Therefore, their reliability was increased by omitting three items of order (11, 20, and 47), one item of predictability (8), and three items of decisiveness (14, 17, and 23). Their Cronbach's Alphas then improved from 0.52 to 0.67 for order, from 0.67 to 0.75 for predictability, and from 0.49 to 0.67 for decisiveness.

TABLE V  
DESCRIPTIVE STATISTICS OF THE MUSLIM SAMPLE

	M	SD	Alpha
Total NFCS	4.03	0.39	0.70
Order (NFCS)	4.80	0.52	0.67
Predictability (NFCS)	4.22	0.79	0.75
Decisiveness (NFCS)	3.91	0.80	0.67
Discomfort with Ambiguity (NFCS)	4.07	0.89	0.73
Close-mindedness (NFCS)	3.55	1.02	0.77
RFS	5.99	0.79	0.77
Total FBDRS	6.06	1.10	0.93
Community (FBDRS)	5.67	1.63	0.87
Morality (FBDRS)	6.30	1.01	0.85
Emotions (FBDRS)	6.01	1.27	0.81
Meaning (FBDRS)	6.27	1.12	0.78

Note. n=40

#### Correlation between NFCS and RFS

A Pearson test was computed in order to figure out if there is any correlation between NFCS and RFS in general. The results revealed a significant positive correlation ( $r=0.45$ ,  $p=0.003$ ). Table VI, presents the significant correlations between order, predictability, and discomfort with ambiguity



facets of the NFCS and RFS, while no significant relationships were found between close-mindedness as well as decisiveness facets of NFCS and RFS.

TABLE VI  
CORRELATION BETWEEN THE NFCS FACETS AND RFS

	r	P
Order (NFCS)	0.50**	<b>0.001</b>
Predictability (NFCS)	0.46**	<b>0.003</b>
Decisiveness (NFCS)	-0.19	0.23
Discomfort with Ambiguity (NFCS)	0.37*	<b>0.02</b>
Close-mindedness (NFCS)	0.05	0.75

Note. \* $p < 0.05$  (2-tailed). \*\*  $p < 0.01$  (2-tailed).

TABLE VII  
CORRELATIONS BETWEEN NFCS AND FBDRS FACETS (MUSLIM SAMPLE)

	Community	Morality	Emotions	Meaning
Order (NFCS)	$r=0.07, p=0.68$	$r=0.01, p=0.54$	$r=-0.08, p=0.60$	$r=0.06, p=0.69$
Predictability (NFCS)	$r=0.07, p=0.67$	$r=0.01, p=0.95$	$r=-0.19, p=0.23$	$r=-0.07, p=0.64$
Decisiveness (NFCS)	$r=-0.28, p=0.07$	$r=-0.45^{**}, p=0.004$	$r=-0.27, p=0.09$	$r=-0.26, p=0.09$
Discomfort with Ambiguity (NFCS)	$r=0.08, p=0.62$	$r=-0.03, p=0.86$	$r=-0.01, p=0.93$	$r=-0.15, p=0.34$
Close-mindedness (NFCS)	$r=-0.007, p=0.96$	$r=-0.08, p=0.61$	$r=-0.19, p=0.23$	$r=-0.06, p=0.70$

Note. \* $p < 0.05$  (2-tailed). \*\*  $p < 0.01$  (2-tailed).

#### Correlation between FBDRS and RFS

The results also showed a positive significant relationship between FBDRS and RFS ( $r=0.38, p=0.017$ ). Table VIII, summarizes the results of the correlation between RFS and FBDRS dimensions. Except community, all other dimensions of the FBDRS significantly correlated with RFS.

TABLE VIII  
CORRELATIONS BETWEEN RFS AND FBDRS DIMENSIONS (MUSLIM SAMPLE)

	r	P
Community (FBDRS)	0.26	0.09
Morality (FBDRS)	0.43**	<b>0.005</b>
Emotions (FBDRS)	0.35*	<b>0.02</b>
Meaning (FBDRS)	0.31*	<b>0.04</b>

Note. \* $p < 0.05$  (2-tailed). \*\*  $p < 0.01$  (2-tailed).

#### Regression Analysis (Muslim Sample)

A multiple regression test was conducted to check out if total FBDRS as well as each facet of NFCS along with community dimension of FBDRS predict RFS. Morality, emotions, and meaning (FBDRS) were not entered because they were not normally distributed. Also, total NFCS was excluded because it violated the assumption of collinearity. Moreover, for the entered independent variables assumptions of homoscedasticity, linearity, and non-zero variances were not violated. The prediction model was significant ( $F(7, 32) = 5.367, p < .001$ ) and explained approximately 54% of the variance of RFS. The results showed that total FBDRS and discomfort with ambiguity (NFCS) significantly predicted RFS, while other independent variables were not found to significantly predict RFS.

Linear regression tests were also run to examine whether or not RFS uniquely predicts each dimension of NFCS. As shown in Table X, RFS significantly predicted total NFCS ( $F(1, 38) = 9.87, R^2 = 0.20$ ). Moreover, order ( $F(1, 38) = 12.88, R^2 = 0.25$ ), predictability ( $F(1, 38) = 10.16, R^2 = 0.21$ ), and

#### Correlation between Need for Closure and FBDRS

A correlation between NFCS and FBDRS was computed by a Pearson test. The results showed no significant association ( $r=-0.09, p=0.56$ ). Correlations between facets of the two scales were also administered (Table VII). The only significant correlation was found between decisiveness (NFCS) and morality (FBDRS) ( $r=-0.40, p=0.01$ ). Pearson tests were computed between the scales' facets, while for those correlations in which morality, emotions, and meaning facets of the FBDRS were involved, Spearman tests were applied because they were found not to be normally distributed.

discomfort with ambiguity ( $F(1, 38) = 5.98, R^2 = 0.13$ ) facets of the NFCS, also were found to be significantly predicted by RFS.

TABLE IX  
MULTIPLE REGRESSIONS OF NFCS FACETS AND COMMUNITY DIMENSION OF FBDRS ON RFS

Predicted Variable	Predictors	Beta	t	P
RFS	Order (NFCS)	0.22	1.29	0.20
RFS	Predictability (NFCS)	0.27	1.43	0.16
RFS	Decisiveness (NFCS)	0.06	0.44	0.66
RFS	Discomfort with Ambiguity (NFCS)	0.40	2.54	<b>0.01</b>
RFS	Close-mindedness (NFCS)	0.16	0.91	0.36
RFS	Total FBDRS	0.64	2.84	<b>0.008</b>
RFS	Community (FBDRS)	-0.31	-1.44	0.15

Note. Dependent variable: RFS

TABLE X  
LINEAR REGRESSIONS OF RFS ON NFCS FACETS

Predicted Variables	Predictor	Beta	t	P
Total NFCS	RFS	0.45	3.14	<b>0.003</b>
Order (NFCS)	RFS	0.50	3.59	<b>0.001</b>
Predictability (NFCS)	RFS	0.46	3.18	<b>0.003</b>
Decisiveness (NFCS)	RFS	-0.19	-1.21	0.23
Discomfort with Ambiguity (NFCS)	RFS	0.37	2.45	<b>0.02</b>
Close-mindedness (NFCS)	RFS	0.05	0.32	0.75

Note. Dependent variables: Total NFCS, order, predictability, decisiveness, ambiguity, and close-mindedness facets of NFCS.

#### V. DISCUSSIONS

As reported at the results section, the first hypothesis of the present study was not supported. It was assumed consistent with Saroglou's study [2], the results of the student sample would show positive association between NFCS and RFS, as well as positive correlation between order and predictability facets of NFCS and RFS. However, this was not the case even

after non-monotheistic and non-monotheistic-practicing participants were analyzed separately. Neither the whole sample nor none of the sub-samples showed any significant correlation between the scales. There might be different explanations for such inconsistency between the present study's results and those of Saroglou's [2]. For instance, in the latter neither the number of monotheistic participants nor the extent of participants' exposure to their religions was reported, so the nature of the sample with respect to religiosity is not precisely known. While in the current study 44.3% of the participants were non-Christian-Jewish, also 42% of them were non-religious which is a big amount ( $N=39$ ) in small sample of only 88 participants. Thus, a more homogeneous religious sample of students in which majority of the participants affiliate with different types of religion, could lead the results of the current study to be more consistent with those of found in the study conducted by Saroglou [2] (if the sample of his study was also a homogenous religious group of participants). For example, Brandt et al. [8] reported positive relationship between RF and NFC in a study in which 112 out of 183 participants identified themselves as Christians. Hence, the nature of the sample would be a crucial element which determines the association between the scales. Thus, it should be the case that the more a sample is religious the more it is likely to show significant correlations between the scales. Furthermore, as discussed earlier reliability of a student sample might not be satisfactory enough with regards to constructs such as fundamentalism. This was the main reason the author of the current paper decided to distribute questionnaires among practicing mosque-attending Muslims in order to have a more suiting sample.

The results showed that the second assumption of the study was moderately supported. It was hypothesized that there would be a stronger correlation between NFCS and RFS, as well as all facets of NFCS (except decisiveness) with RFS, if the sample of the study contained participants more exposed to the main construct of the study that is religiousness. As depicted at the previous section, a significant and positive moderate correlation was found between the scales. Also order, predictability and discomfort with ambiguity correlated with RF. Consistently; linear regression analyses showed that order, predictability, and discomfort with ambiguity facets of NFCS significantly predicted RF. As the results of Saroglou's study [2] showed the correlation between the scales was low ( $r=0.17$ ,  $p<0.01$ ), while this was improved to be a moderate correlation in the current study with the Muslim participants. Also, order and predictability were found to correlate more strongly with RFS in comparison with those found in the mentioned study's results. Additionally, one more facet of NFCS that is discomfort with ambiguity correlated with RF, which was not so in Saroglou's study [2]. This supported the assumption that the more the nature of the sample is congruent with the construct of RF, the more it would be associated with high NFC.

The third hypothesis was that there will be a general positive relationship between NFCS and FBDRS. This was based on the fact that there are common characteristics

between NFC and religiosity in general. For instance, as argued before NFC is related to constructs such as right wing authoritarianism [16], [20] and out-group derogation [22]. On the other hand, religiosity in general might lead the individual to derogate out-groups [13] or associate with authoritarianism. As the results showed the third hypothesis was not supported either. The relationship between NFCS and FBDRS was analyzed and in both samples of participants, no correlation was found. This was neither between the scales nor between facets of each in both samples, except the only significant result which was a negative significant moderate correlation between morality dimension of religiosity and decisiveness facet of NFCS in the Muslim sample.

In Christian-Jewish-practicing sub-sample of the student sample, a few of the results tended to be close to the significance level, for example between discomfort with ambiguity facet of the NFCS and meaning dimension of the FBDRS, between discomfort with ambiguity (NFCS) and morality (FBDRS), and between predictability (NFCS) and morality (FBDRS). This was also the case as the whole sample was analyzed which was between morality (FBDRS) and order (NFCS). Although the decisiveness facet of the NFCS was not about to be taken into consideration in the analyses, however it might be worth to report that the analyses showed the correlations were marginally significant between this facet of the NFCS and community, emotions, and meaning dimensions of religiosity. One explanation could be due to the presence of such tendency levels in both samples. So, there might have been significant correlations between the scales in both samples if there had been larger samples of participants. The other explanation would be concerning the positive relationship between RFS and FBDRS in both samples. As reported at the results section, in the student sample moderate correlation was found between the scales, and the model of multiple regression explained (emotions and meaning layers of the FBDRS as independent variables) approximately 27% of the variance of RF. Moreover, in the Muslim sample, a positive low correlation was found between the scales. Also in the Muslim sample, total FBDRS positively predicted RF in a multiple regression in which the model explained 54% of the variance of RF, while only total FBDRS and discomfort with ambiguity facet of the NFCS significantly predicted RF. Therefore, while there is correlation between NFC and RF in the Muslim sample which is not the case in the student sample, in both samples there are positive associations between RFS and FBDRS. The positive association between RF and religiosity in general seems rational due to the very common concept in both constructs which is religion. However, as the results showed, religiousness in itself might not be necessarily related to high need for closure, while fundamentalist approach of religiosity and high need for closure would potentiate each other. Although there are common characteristics between NFC and religiosity per se, lack of association between them might be due to the matter of extent. In other words, high need for closure may associate with high RF, as both correlate with high extent of common constructs such as prejudice and authoritarianism, while mere

religiosity might be related to the same construct in lower extent, which subsequently does not correlate with the need for closure.

## VI. CONCLUSION

Although the causal relationship between the main constructs of the study might not be possible to be known, given the correlational design, RF and high NFC seem to positively associate with each other. Also, those who are more involved with religiosity by practicing and temple attending are more likely to show higher extent of fundamentalism. In addition, education seems not to be a relevant factor with regards to the endorsement of fundamental approach of religiosity. As reported earlier, the Muslim sample contained only two participants with high school degrees while the rest were either university students or graduated from university. The Muslim sample in our study does not have a lower level of schooling than the student sample. In addition, fundamentalism per se may not necessarily lead the person to engage with behavioral aftermaths. However, there might be religious fundamentals who perceive that their social identity as well as values and/or resources are threatened. Although there are no concrete data at our disposal regarding the likely outcomes of perception of such threat associated with RF, the individuals might be motivated to get involved in behavioral consequences of fundamentalism such as terrorism and aggressive out-group derogations. On the other hand, as the need for closure is related to RF, behavioral outcomes of both constructs would probably strengthen and potentiate each other especially in conflictual situations. Nevertheless, it should be added that more research would be needed to reveal the connection between the endorsement of fundamentalist beliefs and the likeability of getting involved in aggressive acts.

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