

# Susceptibility to Conspiracy Theories: The Relationship between Conspiracy Mentality and Need for Cognition

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## ABSTRACT

Interest in conspiracy theories is growing in both scholarly and popular discourse. Much research has been undertaken to discover the personality traits of those who are prone to believing conspiracy theories. This study attempted to investigate another possible factor that could influence this. 117 adults volunteered to take part in this study. The Need for Cognition Scale (NCS-6), which measures an individual's desire to engage in challenging cognitive activity, was administered on the respondents as well as the Conspiracy Mentality Questionnaire (CMQ) intended to measure a person's susceptibility to explanations offered by conspiracy theories about societal phenomena. The respondents' NCS-6 total weighted mean indicated that a need for challenging cognitive activity was *neither characteristic nor uncharacteristic* of them. However, their CMQ total weighted mean showed that they believe conspiracy theories *very likely* explain societal phenomena. The results also indicated a statistically significant low positive relationship between the respondents' NCS-6 scores and CMQ scores. This implies that as the respondents' need for challenging cognitive activity rises, their susceptibility to explanations offered by conspiracy theories about societal phenomena slightly increase as well. In addition, a significant difference was also established between the respondents' Need for Cognition Scale scores when grouped according to presence or absence of romantic involvement.

**Keywords:** *Need for Cognition Scale, Conspiracy Theory, Conspiracy Mentality Questionnaire*

## INTRODUCTION

To help put an end to the COVID-19 pandemic, vaccines were invented and distributed quickly. However, one of the many obstacles that the global vaccination drive encountered were people's belief in conspiracy theories that caused hesitation in being vaccinated or even outright rejection of the vaccine<sup>1</sup>.

Numerous research on conspiracy theories have been published since 2008, many of which were in response to the COVID-19 outbreak. Concerns about the effects of exposure to conspiracy theories on beliefs and the effects of conspiracy theory beliefs on behaviors frequently serve as the driving force for these studies. Several studies find correlating relationships that support the idea that exposure leads to belief, and that belief, in turn, leads to behavior<sup>2</sup>.

In scholarly and public discourse, conspiracy theories are getting more and more traction<sup>3</sup>. Conspiracy beliefs are extensive and can have damaging consequences<sup>4</sup>. A wide range of multidisciplinary literature has been produced as a result of academic endeavors to comprehend the attraction and effects of conspiracy theories. Conspiracy theories are much more than silly ideas, and they should be treated seriously for a number of reasons. First off, there are many different factors, from personality qualities to intricate social requirements, that can lead someone to believe in conspiracies. Conspiracy theories are spread by a variety of techniques,

-serving a variety of political, psychological, and societal goals. Last but not least, conspiracy theories have an impact on both specific people and significant societal organizations<sup>5</sup>.

Historical evidence suggests that political extremes strongly supported theories of conspiracies about other-minded organizations. In one study, it was discovered that adherence to conspiracy theories were mediated by participants' belief in straightforward political solutions to societal issues. Furthermore, the study demonstrated that political extremism and conspiracy theories are closely related since they both involve highly structured ways of thinking that are intended to explain societal occurrences<sup>6</sup>.

Possessing higher education decreases the likelihood of conspiracy theory belief. However, the connection between education and conspiracy theories cannot be explained by a single process alone; rather, it is the outcome of the complex interaction of numerous psychological elements linked to education<sup>7</sup>.

One study compared COVID-19 conspiracy theory beliefs between men and women. The prevalence of women endorsing COVID-19 conspiracy theories was found to be much lower than that of men. The study goes on to say that two dispositional factors - learned helplessness and conspiratorial thinking - may contribute to this gender gap's explanation<sup>8</sup>.

According to another study, the need to understand and feel safe in one's surroundings, as well as the desire to believe that the community one identifies with is superior to others, are what drive people to believe in conspiracies. The study further asserts that supporting conspiracies was not primarily driven by a desire for answers or a sense of control. The study also revealed some evidence that those who were motivated by social interactions were more inclined to believe particular conspiracy theories. In addition, the study found that conspiracy theories were more likely to be believed by persons who had particular

personality features, such as a strong sense of hostility toward other people and high degrees of paranoia. The likelihood of being insecure, paranoid, emotionally unstable, impulsive, suspicious, withdrawn, manipulative, egotistical, and eccentric was also higher among people who firmly believed in conspiracies<sup>9</sup>.

In an aforementioned study, highly structured ways of thinking<sup>6</sup> is stated as a characteristic of believing in conspiracy theories. The need for cognition is said to be the propensity to take pleasure in effortful thought<sup>10</sup>. In one study, it was found that college students with higher need for cognition possessed higher levels of life satisfaction than those with lower needs for cognition<sup>11</sup>.

With the objective of identifying another factor that contributes to the belief in conspiracy theories, this study focused on the need for cognition as a potential variable. Volunteers were invited to answer an instrument that measures one's need for cognition and another instrument measuring their belief in conspiracy theories. Specifically, this study addressed the following research questions:

1. What is the Need for Cognition Scale scores of the respondents?
2. What are the Conspiracy Mentality Questionnaire scores of the respondents?
3. Is there a significant relationship between the respondents' Need for Cognition Scale scores and their Conspiracy Mentality Questionnaire scores?

## **METHODOLOGY**

The respondents who volunteered for this study were 117 adults who reside in the municipalities of Angono, San Mateo and Rodriguez in Rizal Province and in Quezon City, Marikina City and Antipolo City. There were 27 males and 90 females. Their ages ranged from 19 to 46 with a mean of 21.82 years. The Need for Cognition Scale (NCS-6), a 6-item, 5-point Likert scale instrument, which measures an individual's desire to engage in challenging cognitive

activity, was administered on the respondents<sup>12</sup>. They were also asked to answer the Conspiracy Mentality Questionnaire (CMQ), which is a 5-item, 11-point Likert scale instrument intended to measure a person's susceptibility to explanations offered by conspiracy theories about societal phenomena<sup>13</sup>. 60 respondents have no romantic involvement while 57

have romantic involvements. For purposes of this study, romantic involvement means having a spouse or a steady romantic partner.

## RESULTS

The following are the data gathered and statistical computations presented in tabular form.

**Table 1. Scale of Interpretation for Item Weighted Means of the Responses to the Need for Cognition Scale**

Weighted mean range	Verbal Interpretation
1.000 – 1.800	Extremely uncharacteristic of me
1.801 – 2.600	Moderately uncharacteristic of me
2.601 – 3.400	Neither characteristic nor uncharacteristic of me
3.401 – 4.200	Moderately characteristic of me
4.201 – 5.000	Extremely characteristic of me

**Table 2. Need for Cognition Scale Item Weighted Means**

Item	Weighted Mean <i>N=117</i>	Verbal Interpretation
1. I would prefer complex to simple problems.	3.009	Neither characteristic nor uncharacteristic of me
2. I like to have the responsibility of handling a situation that requires a lot of thinking.	3.504	Moderately characteristic of me
3. Thinking is not my idea of fun. (reverse)	3.453	Moderately characteristic of me
4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. (reverse)	2.974	Neither characteristic nor uncharacteristic of me
5. I really enjoy a task that involves coming up with new solutions to problems.	4.009	Moderately characteristic of me
6. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	3.436	Moderately characteristic of me
Total Weighted Mean	3.397	Neither characteristic nor uncharacteristic of me

**Table 3. Scale of Interpretation for Item Weighted Means of the Responses to the Conspiracy Mentality Questionnaire**

Weighted mean range	Verbal Interpretation
1.000 – 1.916	Certainly not
1.917 – 2.833	Extremely unlikely
2.834 – 3.749	Very unlikely
3.750 – 4.666	Unlikely
4.667 – 5.582	Somewhat unlikely
5.583 – 6.498	Undecided
6.499 – 7.414	Somewhat likely
7.415 – 8.330	Likely
8.331 – 9.246	Very likely
9.247 – 10.162	Extremely likely
10.162 – 11.000	Certain

**Table 4. Conspiracy Mentality Questionnaire Item Weighted Means**

Item	Weighted Mean <i>N=117</i>	Verbal Interpretation
1. I think that many very important things happen in the world, which the public is never informed about.	9.436	Extremely likely
2. I think that politicians usually do not tell us the true motives for their decisions.	9.504	Extremely likely
3. I think that government agencies closely monitor all citizens.	7.231	Somewhat likely
4. I think that events which superficially seem to lack a connection are often the result of secret activities.	8.598	Very likely
5. I think that there are secret organizations that greatly influence political decisions.	9.077	Very likely
Total weighted mean	8.769	Very likely

**Table 5. The Relationship between the Respondents' Need for Cognition Scale scores and Conspiracy Mentality Questionnaire scores**

Pearson r computation	
X Values $\Sigma = 397.5$ Mean = 3.397 $\Sigma(X - Mx)^2 = SSx = 50.491$	X and Y Combined N = 117 $\Sigma(X - Mx)(Y - My) = 23.564$ R Calculation $r = \Sigma((X - My)(Y - Mx)) / \sqrt{(SSx)(SSy)}$ $r = 23.564 / \sqrt{(50.491)(158.129)} = 0.2637$ Meta Numerics (cross-check) $r = 0.2637$
Y Values $\Sigma = 1026$ Mean = 8.769 $\Sigma(Y - My)^2 = SSy = 158.129$	
The P-Value is .004069. The result is significant at $p < .05$ .	

**Table 6. The Difference between the respondents' Need for Cognition Scale Scores when grouped according to Romantic Involvement**

Welch's T-test computation		
Group	Without Romantic Involvement	With Romantic Involvement
Mean	3.2250000000	3.57894736840
SD	0.58208098016	0.69229408088
SEM	0.07514633141	0.09169659107
N	60	57
Intermediate values used in calculations: t = 2.9855 df = 109 standard error of difference = 0.119 Confidence interval: The mean of Without Romantic Involvement Minus with Romantic Involvement equals -0.35394736840 95% confidence interval of this difference: From -0.58891919214 to -0.11897554466		
P value and statistical significance: The two-tailed P value equals 0.0035 By conventional criteria, this difference is considered to be very statistically significant.		

**Table 7. The Difference between the respondents' Conspiracy Mentality Questionnaire Scores when grouped according to Romantic Involvement**

Welch's T-test computation		
Group	Without Romantic Involvement	With Romantic Involvement
Mean	8.760	8.779
SD	1.075	1.268
SEM	0.139	0.168
N	60	57
Intermediate values used in calculations: t = 0.0870 df = 109 standard error of difference = 0.218 Confidence interval: The mean of Without Romantic Involvement Minus with Romantic Involvement equals -0.019 95% confidence interval of this difference: From -0.451 to 0.413		
P value and statistical significance: The two-tailed P value equals 0.9308 By conventional criteria, this difference is considered to be not statistically significant.		

## DISCUSSION

Table 2 presents the item weighted means for each of the 6 items of the NCS-6 scores of the respondents. Based on the total weighted mean of 3.397, it would appear that it is *neither characteristic nor uncharacteristic* of the respondents to need challenging cognitive activity.

The item weighted means for each of the 5 items of the Conspiracy Mentality Questionnaire scores of the respondents are shown in Table 4. A total weighted mean of 8.769 indicates that for the respondents,

societal phenomena can be *very likely* explained by conspiracy theories.

The Pearson r computation of the respondents' Need for Cognition Scale scores and Conspiracy Mentality Questionnaire scores are shown in Table 5. Based on the resulting r value of 0.2637 and a p value of .004069, it can be inferred that there is a significant low positive relationship between the respondents' Need for Cognition Scale scores and Conspiracy Mentality Questionnaire scores.

A Welch's t-test computation between the Need for Cognition Scale scores of the

respondents when grouped according to the presence or absence of a romantic involvement can be seen in Table 6. The resulting t value of 2.9855 and p value of 0.0035 shows a very statistically significant difference. And because the mean for those with romantic involvement is higher than those without, it can be inferred that for the respondents of this study, those with romantic involvement have a higher need for challenging cognitive activity.

Table 7 presents the Welch's t-test computation between the Conspiracy Mentality Questionnaire scores of the respondents when grouped according to the presence or absence of a romantic involvement. The resulting t value of 0.087 and p value of 0.9308 indicates no statistically significant difference between those two groups.

## CONCLUSIONS

Overall, the need for challenging cognitive activity is neither characteristic nor uncharacteristic of the respondents. The respondents also very likely believe that societal phenomena can be explained by conspiracy theories. Because a significant low positive correlation was established between the respondents' NCS-6 and CMQ scores, it can be concluded that as the respondents' need for challenging cognitive activity rises, their susceptibility to explanations offered by conspiracy theories about societal phenomena slightly increase and vice versa. Lastly, those respondents with romantic involvement have a higher need for challenging cognitive activity.

## ETHICAL DECLARATION

The researcher declares that this study strictly adhered to the ethics of research. Informed consent was obtained, freedom to withdraw at any time from the study was made known to the participants, their identities were anonymized, the participants were not exposed to any physical, psychological or social harm and the results were used for research purposes only. The researcher further ensured steps to prevent

bias in the interpretation of the data. Lastly, there was no conflict of interest in the conduct of the study.

## Declaration by Authors

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**Conflict of Interest:** The authors declare no conflict of interest.

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