Resistance to Smoking Cigarettes Interacts With the Desire to Smoke to Predict Craving Uncontrollability.

Cecelia Schneider, Hannah Henderson, Jennifer C. Veilleux, Ph. D.

University of Arkansas

Abstract

Background: Craving uncontrollability, or the perception of being unable to tolerate and control cravings, is considered to be a crucial factor associated with an individual's ability to manage smoking cessation and the cessation of use of other addictive substances (Veilleux et al., 2015). The varying intensities of the contradicting desires often exhibited by nicotine users — the interaction of resistance to smoking and the desire to smoke — is theorized to be a key component prompting substance use (Breiner et al., 1999). Thus, it may be that the intensity of desire to smoke and intensity of desire to resist smoking also interact to predict craving uncontrollability. To determine if the interaction of resistance to smoking and the desire to smoke in daily life can be used to assess the level of ability an individual has to manage the quit process successfully, this study investigates whether the momentary resistance to smoking moderates the relationship between the momentary desire to smoke and craving uncontrollability.
Methods: Participants (*N=84*) were regular cigarette users at least considering quitting smoking. Participants completed one week of ecological momentary assessment via their Android or Iphone smartphones. Participants responded to random prompts 5 times per day where they answered questions about cigarette craving and resistance and perceived momentary self-regulation abilities (i.e.,willpower, distress intolerance, and craving uncontrollability). Participants were also instructed to log all smoking-events immediately following smoking. Smoking prompts also included the same self-regulation questions as the random prompts.

Results: We used multilevel modeling to account for the nested data, and separated within-person from between-person variance. Results show that when people had more craving (i.e. within-person craving) they reported that their craving was more uncontrollable (i.e. higher craving uncontrollability).
When people had more resistance to smoking (i.e. within-person resistance) they reported that their craving uncontrollability decreased. People who reported higher levels of resistance(i.e. between person craving) reported less craving uncontrollability. There was not a significant effect of average between-person resistance on craving uncontrollability. Finally, within-person craving and within-person resistance interacted to predict craving uncontrollability. The relationship between within-person craving and craving uncontrollability was stronger when within-person resistance is relatively low.

Variable	Estimate (Std. Error)	t	p
Intercept	**2.06 (.54)**	**3.78**	**< .001**
Within-Person Craving	**.009 (.0007)**	**12.28**	**< .001**
Within-Person Resistance	**-.001 (.0008)**	**-13.489**	**<.001**
Craving x Resistance	**.025(.035)**	**7.28**	**<.001**
Session Type (0 = Random; 1 = Smoking)	**.0038(.0076)**	**5.01**	**<.001**
Between person Craving	-.0012(.0085)	-1.47	.15
Between Person Resistance	**.00006(.000009)**	**-2.32**	**.02**

Conclusion: These results underscore the importance of the level of within-person resistance for understanding people's craving uncontrollability. It is important to assess craving to smoke separately from resistance to smoking (i.e., desire to refrain from smoking), because they are separable. Craving is considered easier to control when resistance is stronger, suggesting that smoking cessation treatment may need to find ways to enhance desires to resist smoking to improve quitting self-efficacy.

Demographic Information

84 participants (Mage = 40.64) included community members who were regular cigarette users considering quitting smoking.

Please indicate which gender you most identify with:

Gender	Valid Percent
Male	53.0
Female	45.8
Other/I choose not to respond	1.2
Total	100.0

Please endorse your race or ethnicity:

Race/ Ethnicity	Valid Percent
White (non-Hispanic)	90.4
African-American (non-Hispanic)	3.6
Hispanic/Latino	1.2
Asian American/ Pacific Islander	2.4
Native American/Alaskan Native	2.4
Total	100.0

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On average, how many cigarettes do you smoke each day?	83	6.00	40.00	16.3373	5.93723
Please choose the number that indicates where you are now.	83	0	10	5.87	1.924
Valid N (listwise)	83				

Statistics

	Have you ever tried to quit or cut down?	How many times have you tried to quit or cut down?	When was your last quit/reduction attempt?	Does your motivation to quit smoking change from one day to the next?
N				
Valid	83	81	81	83
Missing	1	3	3	1

Have you ever tried to quit or cut down?

	Valid Percent
Yes	97.6

No	2.4
Total	100.0

How many times have you tried to quit or cut down?

	Valid Percent
Once	10.7
Twice	21.4
Three or more times	64.3
Total	100.0

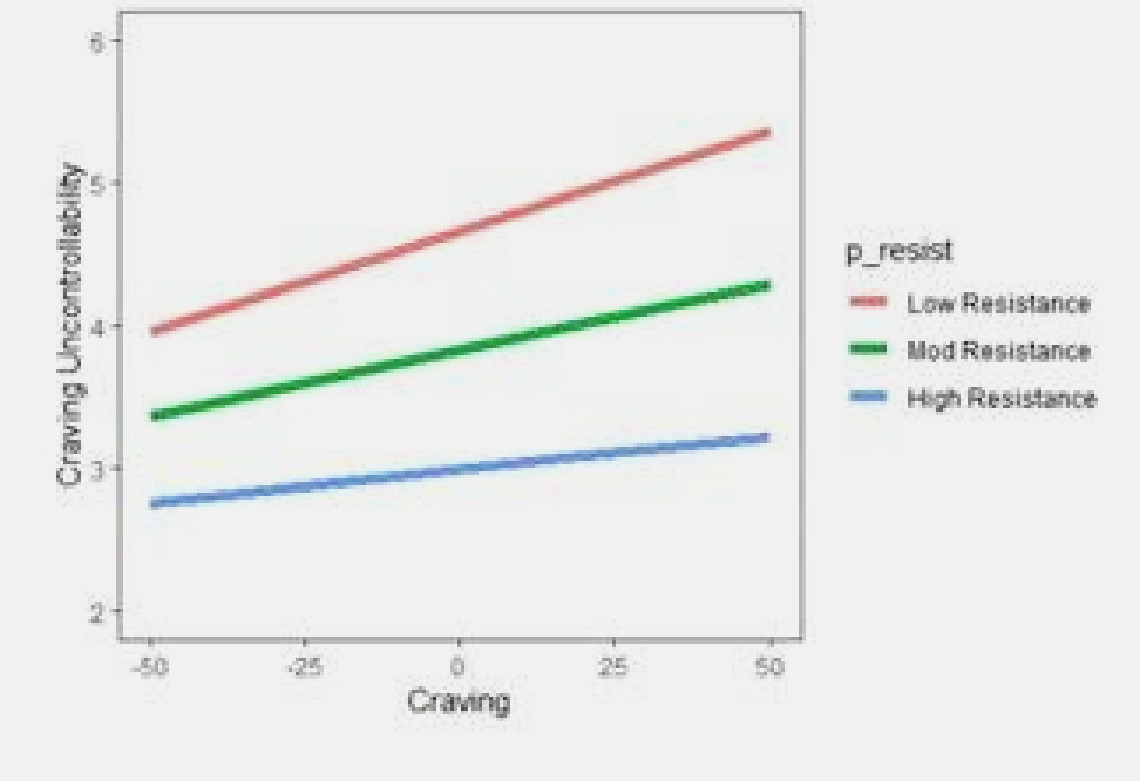
Does your motivation to quit smoking change from one day to the next?

	Valid Percent
Yes	36.1
No	63.9
Total	100.0

When was your last quit/reduction attempt?

	Valid Percent
Within the last 30 days	9.9
Within the last 6 months	18.5
More than 6 months ago	71.6
Total	100.0

Within Person Craving and Resistance Predict Craving Uncontrollability



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