Cognitive Reasoning Behind Smoking Relapse: The Relation Between Dissonance and External Driving Factors

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Despite the health risks associated with smoking, many continue to smoke. In relation to cognitive dissonance theory (CDT), this paper assesses smoking continuants who have tried to quit, but have relapsed.

Cognitive dissonance, in relation to smoking, refers to the conflicting attitudes, beliefs, and behaviors created when people smoke (behavior), while they know smoking can cause cancer (cognition). Festinger's (1957) CDT suggests that, "We have an inner drive to hold all our attitudes and beliefs in harmony and avoid disharmony (or dissonance)" (McLeod, 2014). Therefore, the dissonance produced in a smoker who recognizes the health risks associated with his/her behavior leads to the need to restore balance and reduce the discomfort (McLeod, 2014).

When smokers quit, they *reduce* their dissonance by changing behavior. They stop smoking all together and are back in *harmony*. However, when they have trouble fighting their addiction, their dependence overrides their newfound harmony. The smokers then relapse, *restoring* the dissonance they worked hard to reduce. When smokers relapse, as opposed to changing their behaviors for dissonance reduction (i.e. quitting), they change their belief system.

Many people who want to quit never fully succeed. In my research, not only have I come across studies examining smoking continuants' change in beliefs as a result of dissonance reduction methods, but I have also found studies examining potential external driving factors that could make it difficult to quit.

It seems as though these external factors create a sort of vicious cycle. First, they motivate smokers to continue the unhealthy behavior. Then, after making the decision to continue smoking, people will find themselves in disharmony, soon to recognize the need to restore balance and reduce dissonance.

H1: Smokers who have relapsed seek resolution of dissonance by adjusting their belief system in a pattern consistent with CDT.
H2: When smokers relapse, what was once *reduced* dissonance becomes *renewed* due to the motivation of external factors to continue smoking.
H3: These strong external factors serve as driving forces to continue smoking, thus also serving as driving forces for dissonance reduction. These external factors causes smokers to then make up reasons not to quit and to change their belief systems in a pattern consistent with CDT.

Through this literature review, I will examine trends in smoking relapse. I aim to find what specific external driving factors, if any, serve as motivation to continue smoking, thereby leading to smokers relapsing, and how researchers have assessed the relevance of the extra external driving factors to the failure to quit smoking.

Method

Originally, I searched for studies relating solely to smoking continuants who seek resolution of dissonance, adjusting their belief system in a pattern consistent with CDT. I chose articles that I believed to be the most relevant to this topic, and I examined those first. However, in my search, I came across a few studies that examined the difficulties smokers experience with quitting. I used those as well, thinking they could be useful in comprehending the decision to continue smoking. Those few articles gave me the idea to examine external factors as motivation to continue smoking, which would then lead to the desire to reduce dissonance.

As I analyzed the literature I selected for review, I realized "smoking continuants" could refer to either smokers who have never tried to quit, smokers who have intentions to quit, or smokers who have relapsed. In efforts to narrow my focus, I decided pay attention to the results regarding relapsers and use any additional information to compare and contrast. Therefore, for the purpose of my study, "smoking continuants" is used to refer to smokers who have relapsed.

Literature Review

Modernized Main Beliefs

Dijkstra (2008) explains how many people who value their health still behave in unhealthy ways. Knowing there is risk associated with their behavior is nerve-wracking and

therefore, causes discomfort. This idea is related back to Festinger's (1957) CDT and how dissonance motivates cognitive or behavioral changes. Although many studies have examined CDT, Dijkstra investigated the role of "new cognitive elements" which are used to "lower the aversive state" and are what Dijkstra refers to as *disengagement beliefs*. These beliefs, in regard to smokers, are excuses or weak arguments that reduce dissonance. Smokers who adhere to these beliefs tolerate the dissonance by lowering their perception of the health risk and then they continue to smoke. When smokers reduce dissonance by using these weak arguments, they no longer need to quit smoking. They put themselves back in harmony by making up excuses in place of the truth. The stronger the disengagement belief, the lower a smoker's intention of quitting will be.

In Dijkstra's study, he examined the effects for both smokers who strongly comply with these beliefs and smokers who don't. He also examined to what extent these beliefs will protect a smoker from being persuaded and whether or not these beliefs are enough to counter persuasive information. In his results, as predicted, he found, "Smokers who strongly adhere to disengagement beliefs will display low spontaneous quitting activity, but that persuasive information will increase their quitting activity" (p. 800).

"Disengagement belief" is just a new term for Festinger's original idea of attitude or belief change in regard to the "principle of cognitive consistency" (McLeod, 2014). We seek consistency in our attitudes and beliefs, and when it is not there, something must change in order to reduce the dissonance (McLeod, 2014). Dijkstra's believes that to reduce dissonance, we adhere to disengagement beliefs.

Cognitive Differences between Smokers, Ex-Smokers, & Non-Smokers

Several studies have examined differences in cognitions as well as the difference in the amount of dissonance between smokers, ex-smokers, and non-smokers. They consistently found that smokers exhibit greater cognitive dissonance than ex-smokers and non-smokers. Additionally, these studies found that smokers change their beliefs with "dissonance-reducing

statements" (Johnson, 1968), as long as they continue to smoke (Halpern, 1994; Johnson, 1968; McMaster & Lee, 1991).

Halpern found, in agreement with previous studies, that current smokers exhibited greater cognitive dissonance regarding smoking risks than do former smokers. Additionally, an exception was found with heavier smokers, both current and former (had to have smoked for at least 17 years), who demonstrated reduced dissonance for higher risk subsets. Similarly, in McMaster and Lee's study examining "differences between smokers, non-smokers, and ex-smokers in their factual knowledge of the effects of smoking, in their beliefs about smoking, and in their perceptions of the risks of smoking"(p. 350), they found data that also indicates these differences. Compared to non-smokers and ex-smokers who believed "the average Australian smoker" (p. 352) would have a higher risk of contracting lung cancer, smokers rated their own risk of contracting lung cancer *less* as than the risk of the average Australian smoker. These findings further support Johnson's study that smokers engage in dissonance-reducing ideas as they continue to smoke.

Intervention & Anti-Smoking Campaigns

Researchers have examined the potential for intervention methods and anti-smoking campaigns to increase smoking cessation. Despite the different approaches, Kneer and Glock (2012), Simmons, Heckman, Fink, Small, and Brandon (2013), and Voisin, Stone, and Becker (2013) all found that interventions and anti-smoking campaigns increase risk perception and dissonance, strengthening motivation to reduce discomfort and to quit.

In their study testing the impact of warning labels on cigarette packaging on smokers' cognitive dissonance, Kneer and Glock compiled data supporting their hypothesis that "Smokers' ratings of different types of diseases should differ before presentation of the warning labels. After exposure to the labels, smokers should rate their chance of contracting a smoking-related disease higher than their chance of contracting a non-smoking-related disease" (p. 361). Additionally, as they predicted, warning labels increase "perceived smoking-related health

risks among smokers because they could not avoid this information in the experimental situation" (p. 361). With this data in mind, Voisin, Stone, and Becker (2013) found that with a stronger perception of smoking-related health risks, anti-smoking campaigns establish an inconsistency between "the injunctive norm against smoking and their own pro-smoking behavior." Because of this discrepancy, dissonance is created, which motives smokers to reduce. Similarly, Simmons, Heckman, Fink, Small, and Brandon (2013) conducted a study testing the efficiency of dissonance-enhancing, web-based experiential intervention programs, specific for college-aged smokers. In their research, they used "Web-Smoke," an intervention strategy "rooted in the principles of the social psychological theory of cognitive dissonance" (p. 811). As hypothesized, "the Web-Smoke intervention was more effective than control groups in increasing motivation to quit" (p. 810). Just as Voisin et al. found, smokers would be motivated to reduce the enhanced dissonance created in the intervention.

While interventions and anti-smoking campaigns have the potential to drive a smoker to cessation, external factors may counteract these persuasive initiatives, playing a role in the decision to continue smoking.

External Factors

Several studies examined external factors, such as depression and social anxiety, and their association with smoking. Buckner, Zvolensky, Jeffries, and Schmidt (2014) and John, Meyer, Rumpf, and Hapke (2004) were all in agreement, as they identified these as a specific factors contributing to the failure to quit smoking. Though Gibbons, Eggleston, and Benthin (1996) took a different approach, they were able to identify self-esteem as another external factor contributing to the large relapse rate in smoking.

John et al. studied the relationship between smoking and nicotine dependence with mental disorders. They found increased rates of mental disorders, such as depression and anxiety, to be associated with adult-aged smokers. Similarly, Buckner et al. examined the relationship between social anxiety and smoking. This study, however, went more in depth,

specifically examining "Whether social anxiety was associated with cognitive vulnerability factors related to smoking: perceived barriers for quitting, cessation-related problems, negative-affect-reduction-outcome expectancies, and negative-affect-reduction motives" (p. 341). The data collected support their hypothesis that there is a relationship between social anxiety and smoking. Additionally, Gibbons, Eggleston, and Benthin (1996) examined the large relapse rate, as smokers are unable to maintain abstinence. In relation to CDT, their study observed the impact of relapse on smokers' cognitions with focuses on risk perception and self-esteem. Their results suggest that relapsers' perceptions of risk decreased after resuming smoking. However, the decline was significant only for those exhibiting high self-esteem.

Results

After examining a total of ten studies, I have found many of them supported of my three hypotheses. Though he did not discuss relapse, Dijkstra's (2008) findings support part of H1, in that smokers seek resolution to dissonance, and to do so, they adhere to what Dijkstra refers to as "disengagement beliefs." Adhering to disengagement beliefs, in terms of my study and H1, would be adjusting their belief systems to reduce dissonance.

Johnson (1968), Halpern (1994), and McMaster and Lee's (1991) findings also support H1, but only to an extent, as these studies also do not discuss relapse. The main theme of Johnson's article, in addition to their findings, illustrate this hypothesis, in that as long as someone chooses to smoke, that person will endorse dissonance-reducing ideas. Similarly, Halpern and McMaster and Lee's findings support the need to reduce dissonance by adjusting beliefs. This theme is evident in Halpern's studies when the heavier smokers demonstrated reduced dissonance for higher subsets. It is clear that as heavier smokers, they are at an even higher risk, making the dissonance extremely discomforting. Therefore, there is a greater need to reduce dissonance. McMaster and Lee's findings portray smokers in a state of denial, choosing to believe they, personally, are not at as great a risk as someone else. By believing something different from the truth, they are displaying dissonance-reducing ideas.

Also supporting H1 was Gibbons, Eggleston, and Benthin's (1996) study, and they *did* examine relapse. According to their study, smokers who have relapsed maintain high self-esteem in order to reduce dissonance and protect their ego. Their findings also support H2, in that having high self-esteem allows smokers to relapse easily and often, allowing them to confidently lower their risk perception, thus reduce their dissonance. This implies that what was once reduced dissonance from quitting came back and has been renewed. There is a new need to reduce it again, which can be easily accomplished by maintaining high self-esteem. Additionally, the findings of Buckner, Zvolensky, Jeffries, and Schmidt (2014) and John, Meyer, Rumpf, and Hapke (2004) also support H2, although only half of it. While these studies may not discuss relapse, they illustrate a degree of dissonance created due to motiving external factors, such as depression and anxiety.

Kneer and Glock (2012), Simmons, Heckman, Fink, Small, and Brandon (2013), and Voisin, Stone, and Becker (2013) all concluded that interventions and anti-smoking campaigns increase risk perception and dissonance, strengthening the motivation to reduce the discomfort and to quit. Their findings did not directly relate to any of my hypotheses. Kneer and Glock, Simmons et al, and Voisin et al. all concluded that interventions and anti-smoking campaigns increase risk perception and dissonance, strengthening the motivation to reduce the discomfort and to quit. While this part of my research does not directly pertain to one of my hypotheses, these studies were useful to examine for contrasting purposes. From what I have found, interventions and anti-smoking campaigns serve as the opposite of external factors: whereas interventions and anti-smoking campaigns have been found to persuade smokers to quit, external factors have the potential to counteract those initiatives and motivate a smoker to continue the unhealthy behavior.

What I know now that I did not know before was that self-esteem was a factor associated with smoking. Gibbons, Eggleston, and Benthin (1996) found that smokers with higher self-esteem experience a greater decrease in risk perception, which, therefore, significantly reduces dissonance. In other words, standing by your beliefs, whether they are

wrong or right, and maintaining a confident attitude, puts you in the most comfortable position you can be in. This also makes it easier to relapse. This study also relates to H1, and does so quite aptly. In this study, they discuss the findings of Steele (1988), in which, "He asserted that smokers may cope with ego threat posed by awareness of smoking danger by affirming or reaffirming their self-worth on some other dimension, such as personality" (Gibbons, Eggleston, & Benthin, 1997, p. 185). With this idea, dissonance "poses a treat to self-esteem, which prompts some kind of response" (p. 185). In response, to protect the ego or self-esteem, the smoker would reduce the dissonance and continue to smoke.

Discussion & Conclusion

Though none of the studies directly illustrated what I was looking to find, by piecing together multiple studies, I can form an educated answer. By doing this, I can conclude that my research question has been answered and my hypotheses have been supported.

Initially, I asked *what external driving factors, if any, serve as motivation to relapse and to continue smoking? How have researchers assessed their relevance to the failure to quit smoking?* I have found through this review of literature that there are several psychiatric diseases, such as social anxiety and depression, which can make a person to want to smoke as a way of self-medicating to cope with these diseases. Additionally, people exhibiting higher self-esteem have lower intentions of quitting. Being confident, they protect their ego, standing by their beliefs, and continue to smoke.

As for my hypotheses, my results assure me that I have support for both H1 and H2, however, H3 was not supported in the literature I reviewed, whereas, it brings the other two hypotheses together, making it very complex. However, John, Meyer, Rumpf, and Hapke's (2004) findings support part of H3, for the act of self-medicating suggests that psychiatric diseases (external factors) serve as driving forces to continue smoking. Then, if combined with Johnson's (1968) findings, that smokers engage in dissonance-reducing ideas as they continue to smoke, it can be inferred that external factors not only serve as driving forces to continue

smoking, but also as driving forces for dissonance reduction. Finally, if all is pieced together with the findings of Dijkstra (2008), Johnson (1968), Halpern (1994), and McMaster and Lee (1991), whether it is disengagement beliefs or general dissonance-reducing ideas, that smokers adjust their belief system to reduce dissonance, together, these results support all of H3.

In conclusion, implications from my study suggest that there are strong external factors, such as social anxiety, depression, and self-esteem that not only serve as driving forces to continue smoking, but also as driving forces for dissonance reduction. This causes smokers to then make up reasons not to quit and to changes their belief systems in a pattern consistent with CDT.

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