International Journal of Human and Society (IJHS)

P-ISSN: 2710-4966	E-ISSN: 2710-4958
Vol. 4. No. 01 (Jan-Mar) 2024	Page 579-587

Catfishng: Examining Relationship between Machvallian Beliefs and Sexual Compulsivity in online Dating: Moderated by Gender



lqra Rasheed	M.Phil	Scholar,	The	Islamia	University	of	Bahawalpur
	iqra.sial110@gmail.com						
Aurang Zaib	M.Phil	Scholar,	The	Islamia	University	of	Bahawalpur.
	aurangzaibhsp7990@gmail.com						
Ahmed Waleed Nawaz	M.Phil	Scholar,	The	Islamia	University	of	Bahawalpur
Malik	ahmedwaleed8450@gmail.com						

Abstract: The current study is to check the "Catfishing; examining relationship between Machiavellian Belief and Sexual Compulsivity in online dating: Moderated by gender". A quantitative research design used in the survey method by using a questionnaire. The data taken from individuals on different catfishing adult websites. The sample consisted of 200 individuals through the purposive sampling. A priori power analysis calculated by using G*power analysis 3.1.9 for correlation (Faul, et. al., 2007). These instruments would use to collect the data Machiavellianism scale (Christie & Geis, 1970), sexual compulsivity scale (Kalichman & David Rompa, 2001) and gender taken from demographic variable. The result indicates that there is negative correlation between sexual compulsivity and Machiavellianism. The result of linear regression indicates that there is a significant impact of impact of Machiavellianism on sexual compulsivity. The result revealed the impact of Machiavellianism and gender on sexual compulsivity. The findings reveled that Machiavellianism positively predicted sexual compulsivity. The findings reveled that Machiavellian and gender negatively predicted sexual compulsivity. The results show that there is no difference in married and unmarried on Machiavellianism and sexual compulsivity. In future it will be important to include face-to-face interviews and establish rapport to motivate participants who are catfish to discuss why they changed specific characteristics of their online profile or why they created a completely fake one and why they deceived another person in online relationship.

Keywords: Catfishing, Machiavellian Belief, Sexual Compulsivity, Online Dating Gender

Introduction

Catfishing

As a social phenomenon, catfishing involves instances of online fraud committed by persons who claim to be interested in others but have ulterior motives. It's unclear who they are because they don't reveal themselves. Most persons who engage in catfishing are thieves or liars. Catfishers could have a wide variety of reasons for their behaviour. Some people are just pranksters; others lack self-assurance; still others seek personal revenge; and yet more hope to extort the property of those they have fooled. Catfishing is a term used to describe severe cases of online dating fraud, in which one party willfully misrepresents themselves to another in order to gain romantic interest but has no intention of ever really meeting in person. Being a victim of catfishing can have devastating effects on a person's sense of well-being. Victims of "catfishing" are sometimes too humiliated or ashamed to report the crime out of fear of retaliation. Those who have been catfished may have difficulty trusting others after being victimized, which can have repercussions in their personal and professional lives.

Machiavellian belief

Niccolo Machiavelli, who lived from 1469 to 1527, is the inspiration for the term "Machiavellian." Machiavelli advocated that people should assume the worst about one another and that a ruler should resort to violence, exploitation, and lying in order to stay in power (Walter, Anderson, & Martin, 2005). Christie (1970) suggested that there were three main ideas at play in a Machiavellian worldview. The first concept is that of manipulating other people by means of deception and flattery. The second important idea is a pessimistic view of human nature. The third concept is a departure from the norms of morality (Fehretal., 1992). Many individuals see Machiavellianism as a form of competitive interpersonal social interaction that is focused on achieving one's own personal advantage (Barber, 1994). In one sense, high Machiavellians can be philosophically agnostic, emotionally distant from those around them, and willing to change allegiances when it serves their interests (Mudrack&Mason, 1995).

Machiavellianism

Rulers, according to Machiavelli, should be cunning, ruthless, and exploitative. He added that the leader must assume everyone else is unreliable and unloyal (Hunter, Gerbing, &Boster, 1982). Machiavellianism can be regarded of as a character trait shared by those who engage in immoral behaviour in order to achieve their goals. Just to be clear, they think ahead, exhibit little impulsivity, and are coldly analytical. As far as other people are concerned, they are heartless, exploitative, and antisocial.

Sexual Compulsivity

An individual with sexual compulsivity is one who is preoccupied with their sexual desires and actions to the point where it causes them anguish or gets in the way of their ability to function socially or professionally (Barth & Kinder, 1987, Gold & Heffner, 1998). Loss of control, persisting in the conduct despite negative consequences, and preoccupation with the behaviour are other characteristics of sexually compulsive behaviour (Carnes, 1990; Schneider, 1994).

Online Dating

The term "online dating" refers to the process of meeting a potential love or sexual partner online, most often through a specific website. The scope of this concept can be widened to encompass various types of online communication venues, such as social networking sites, discussion forums, and online chat rooms, all of which facilitate the introduction of previously unaffiliated individuals. Issues of privacy, security, and identity theft, as well as the potential for misrepresentation, have been brought up in discussions concerning this type of connection creation. The term "online community" (sometimes "virtual community") is used to describe a group of people who primarily communicate with one another via the World Wide Web. Users can present an online persona that may or may not reflect their actual identity. Dating is getting to know another person with the aim of maybe developing a romantic connection with that person. Lawson and Leck (2006) point out that courtship customs develop through time and differ from culture to culture.

Rationale of the Study

Even though presently there is no accurate study from the past researches on catfishing; Machiavellian beliefs and sexual compulsivity in online daters in Pakistan. Now in present research researcher wants to conduct a research on "examining relationship between Machiavellian beliefs and sexual compulsivity in online dating moderated by gender in pakistan". Through survey researcher want to measure the relationship of Machiavellian beliefs and sexual compulsivity in online dating moderated by gender. For the measurement of Machiavellian beliefs and sexual compulsive behavior researcher will use questionnaires in which ask some question from selected population about of Machiavellian beliefs and sexual compulsivity.

Literature review

Anyone who speaks to someone or meets someone online runs the risk of being a victim of catfishing. Catfishing is a sort of deception that hurts people's feelings since it involves lying about your identity on a dating website profile and can have negative consequences. Because other users from around the world will be able to access it, users must ensure that the information they supply is confidential (Ceraolo, 2016). Since online dating is different from traditional methods, it's intriguing to learn how individuals interact online. The impact on interpersonal connections, particularly in terms of expectations for a romantic partner, might be favourable or bad depending on the quantity of time spent. Because miscommunication can cause problems and self-presentation can boost interest or alter other people's impressions, the perception of users can have an impact on relationships (Artemio, 2015).

Online contact takes place on dating platforms through online dating websites. Online dating is viewed as risky by the internet community. The risk of meeting new people in this way and cyber security issues with the sharing of general information are always present. Concerns about liars and dishonest people arise because some people may be lying about their marital status or their intentions when it comes to dating (Danielle, 2012).

The majority of those who actively engage in technology-facilitated dating tell at least some lies. For instance, a whopping 80% of daters exaggerate certain parts of their personas-men about their height and money, and women about their age and weight. Pictures from a long time ago are shared by both sexes (Dosh, 2012; Rosenbloom, 2011; Rudder, 2010). Catfishing, of course, goes much beyond simple distortion and inventive editing. Like Ahmed, other people may use a false identity to mask their insecurities regarding their appearance, sexuality, or race. Some people adopt an outside persona they believe better represents their inner selves. Others are seeking retribution from someone who has rejected them. Some people intentionally degrade and manipulate others by lying. To steal money, some people impersonate others (Olson, 2015). Others "try on" various identities in an effort to escape the confines of their physical selves, effectively impersonating God by giving a virtual Adam or Eve life. An avatar has no bodily fluids, scents, stains, or embarrassment associated with corporal behaviour. It only takes a word and an image, frequently a photo that has been "stolen," to conjure up a world devoid of the annoying realities of the physical world.

Hypothesis

- 1. There will be relationship between Machiavellian beliefs and sexual compulsivity or sexual seeking behaviours in online daters.
- 2. There will be impact of Machiavellian beliefs on sexual compulsivity or sexual seeking behaviours in online daters.
- There will be impact of Machiavellian beliefs on sexual compulsivity or sexual seeking behaviours through moderating effect of gender in online dater

Method

Research design

A quantitative research design would be used in the survey method by using a questionnaire to obtain data through purposive sampling.

Participants

The sample would be consisted of 200 individuals through the purposive sampling. A priori power analysis calculated by using G*power analysis 3.1.9 for correlation (Faul, et. al., 2007) to ensure that the study has sufficiently powerd for analysis or sufficient sample size was determined 138 with effect size 0.3, power .95 and alpha error .05. The Sample size for current study would be (200) participants taken additionally to overcome attrition rate and biasness.

Data Collection Medium

The data taken from individuals on different catfishing adult websites like Freechanow.com, Chattusa online chat room, Tupperware porn, Wingle: Adult online App, Boo-boo Dating and Friends.chat.

Demographic Sheet

This sheet comprises on the respondent name (optional), age, education, residence, socioeconomic status and the duration of online relationship. The researcher designed this sheet according to the understanding of the needs of the required information.

Instruments

The following instruments would use to collect the data.

- 1. Machiavellianism scale
- 2. Sexual Compulsivity Scale

Machiavellianism scale

The Mach-IV was created by Christie and Geis (1970) to differentiate between those who are likely to agree with Machiavellian viewpoints and those who are unlikely to do so. Machiavellianism, or а manipulative, exploitative, dishonest, and untrustworthy attitude, can thus be measured along three dimensions with the 20-item self-report measure known as the Mach-IV. Machiavellianism is measured on a scale from 0 (not very Machiavellian) to 100 (very Machiavellian). High Machs are defined as those with a score of 60 or higher. Those who have a low Mach number (below 60) are considered "low Machs." Harley Therapy Ltd. owns the rights to this website and its contents from 2006-2022. https://www.harleytherapy.co.uk/. Legally, that is. Whether Mach-IV is implemented as a onedimensional or tridimensional measure, the resulting internal reliability indices for the scales are often just barely adequate (s around.70). It has 20 questions, each of which can be answered

Results Table 4.1

Correlation Analysis

with 1 representing a strong disagreement, 2 representing a moderate disagreement, 3 representing slight disagreement, 4 а representing neutrality, 5 representing a slight 6 representing а moderate agreement, agreement, and 7 representing a strong agreement.

Sexual Compulsivity Scale

The Sexual Sensation Seeking and Sexual Compulsivity Scale is a psychometric assessment of sexual arousal, sexual drive, and sexual compulsivity. Seth Kalichman created it (Seth C. Kalichman; David Rompa) (2001). The participant is asked to score how much they agree with a series of assertions. Many health outcomes can be predicted by SCS scores. The Sexual Compulsivity Scale is a short psychometric instrument created to aid in the evaluation of compulsive sexual thoughts and actions. Both sexual addiction and sexual compulsivity share comparable theoretical and clinical underpinnings. A sexual addiction support group's booklet served as the original source material for the Sexual Compulsivity Scale (CompCare, 1987). The Sexual Compulsivity Scale has shown excellent internal consistency across a variety of populations, including male (=.77) and female (=.81)college students (Dodge, Reece, 2004), community samples of HIV-positive men and women (=.89; Kalichman&Rompa, 1995), gay and bisexual men ('s are in range.86-.90; Dodge et al., 2008; Kalichman et al There are 10 options, each of which can be scored on a scale from 1 (totally not like me) to 4 (very like me) on a 4-point scale.

Correlation Analysis			
Variables	Sexual Compulsivity	Machiavellianism	
Sexual Compulsivity	1	252**	
Machiavellianism		1	

Table 4.1 the result indicates that there is negative correlation between Sexual Compulsivity and Machiavellianism and the strength of correlation is .252.

Table 4.2 Linear Regression to Show the Impact of Machiavellianism on Sexual Compulsivity

Predictor		Coefficient				95% CI		
	В	В	S EB	Т	Р	LL	UL	
(Constant)	26.53	1.33		19.90	.000	28.1	55.9	
Machiavellianism F	.079 13.412	.022	252	-3.66	.000			
R2	.063							

In table 4.2 the result of linear regression indicates that there is a significant impact of Impact of Machiavellianism on Sexual Compulsivity.

Table 4.3

Hierarchical Regression Analysis Predicting Sexual Compulsivity (N=200)

Variable	В	95% CI		SEB	В	R^2	ΔR^2
				_			
		LLCI	ULCI				
Step 1						.063	.063***
Constant	26.537	23.909	29.166	1.333			
Machiavellianism	079	122	037	.022	.252***		
Step 2						.05	.05
Constant	25.825	22.697	28.953	1.586			
Machiavellianism	.389	535	1.313	.468	.057		
Gender	078	121	035	.022	248***		

The table 4.3 revealed the impact of Machiavellianism and gender on Sexual Compulsivity. In step 1 R2 value of .063 reveled that Machiavellianism explained 6.3% variance in Sexual Compulsivity with F(2, 197)=7.04, p<.001. The findings reveled that Machiavellianism positively predicted Sexual Compulsivity (β =.252, p<.001). In step 2 R2 value of .05 reveled that Machiavellianism and gender explained 5% variance in Sexual Compulsivity with F (2, 197)=7.04, p<.001. The findings reveled that Machiavellian and gender negatively predicted Sexual Compulsivity (β =.248, p<.001). The ΔR^2 value of .05 reveled 5% chance in variance of model 1 and model 2 with ΔF (1,197) =.001, p<.001

Discussion

The current study is to find the "Catfishing; examining relationship between Machvallian Belief and Sexual Compulsivity in online dating: Moderated by gender". One definition of catfishing is "profile plagiarism," in which one person assumes the identity of another on social networking sites (Schulman, Joost, Jarecki, Ratner, & Smerling, 2010). It is possible to use a fake profile to start a dishonest relationship (Silverish Gold Nova, 2017), and profiles do not always need to include photos. In 2010, the film Catfish popularised the concept of assuming a false online persona to gain attention (Schulman et al., 2010). Previous studies have demonstrated that persons on online dating platforms lie about their weight, height, and age (Toma, 2008) in order to make themselves more attractive to potential sexual partners. There has been a rise in the number of research that examine the repercussions of and motivations for using online dating services in recent years. There are a variety of reasons why people use these sites, but social ones like making new acquaintances, finding a romantic partner, or satisfying a spontaneous horny urge are by far the most prevalent. As the world becomes increasingly digitised, people are increasingly turning to the internet to find a life companion. Kiss.com and Match.com, the first two modern dating websites, were both founded in 1994 and 1995, with a primary focus on international dating and "mail-order bride" services at the time (Ali & Wibowo, 2011). At first, people looked down upon those who used online dating sites, believing that doing so was a sign of depression or a lack of social skills (Finkel, 2012).

H1. There will be relationship between Machiavellian beliefs and sexual compulsivity or sexual seeking behaviours in online daters.

The result indicates that there is negative correlation between Machiavellian beliefs and Sexual Compulsivity. Individuals who exhibit Machiavellianism tend to be cynical, distrustful, and eager to take advantage of others (Christie &Geis, 1970; Vecchio&Sussman, 1991). Machiavelli explained a ruler should be deceitful, exploitative, and relentless. He also noted the ruler should view others as lackadaisical and disloyal (Hunter, 1982). Individuals who engage in immoral activities in a goal-oriented manner can be thought of as possessing Machiavellianism traits. To clarify, they are strategical, have low-impulsivity, and are calculating. Others perceive them as callous, exploitative, and antisocial. The trait of being antisocial can encompass glib, charm, and other prosocial characteristics (e.g., empathy, cooperation, happiness, etc.). However, Machiavellians (i.e., Machs) use those prosocial traits to achieve personal gain. They do not care if they are benefitting at the expense of others, as it is easier for them to violate social norms and contracts (i.e., breaking promises) (McIlwain, 2011; Monaghan, 2019).

H .2 There will be impact of Machiavellian beliefs on sexual compulsivity or sexual seeking behaviours in online daters.

The result of linear regression indicates that there is a significant impact of Impact of Machiavellianism on Sexual Compulsivity. Machiavellianism's ability to predict sex behaviour was tested via a battery of regression analyses. Sexuality was studied for its role as a predictor of sexual conduct and as a moderator of the association between Machiavellianism and sexual behaviour. Initially mean-centered, then multiplied together, these variables depict Machiavellianism's effect on sex (Aiken & West, 1991).

H. 3 There will be impact of Machiavellian beliefs on sexual compulsivity or sexual seeking behaviours through moderating effect of gender in online daters

The results revealed the impact of Machiavellianism and gender on Sexual Compulsivity. In step 1 R2 value of .063 reveled that Machiavellianism explained 6.3% variance in Sexual Compulsivity with F (2, 197)=7.04, The findings reveled that p<.001. Machiavellianism positively predicted Sexual Compulsivity (β =.252, p<.001). In step 2 R2 value of .05 reveled that Machiavellianism and gender explained 5% variance in Sexual Compulsivity with F (2, 197)=7.04, p<.001. The findings reveled that Machiavellian and gender negatively predicted Sexual Compulsivity (β =.248, p<.001). The Δ R2 value of .05 reveled 5% chance in variance of model 1 and model 2 with $\Delta F(1,197) = .001$, p<.001

Limitations

This study had numerous limitations. The greatest limitation was the sample size of only 200 participants. Thus, the participants did not represent well the entire population in terms of demographic characteristics, such as education, socioeconomic status, residence, marital status, age and duration of online relationship. All of the evaluations in this study relied on self-report, which poses potentially intrusive questions to participants. Because of this, there may have been bias in the study because some participants may not have been completely honest in their responses to the questionnaires. This is especially true when it comes to discussing sexually compulsive behaviors. Not only that, but there's the matter of trying to fit in with the Some participants may have majority. intentionally framed their responses to look positive.

Suggestions for future studies

Several questions were highlighted by the

study's limitations that could be investigated in subsequent studies. This study has to be replicated at other colleges in different areas to get a more representative sample of the population and a more accurate overall conclusion. Preparing the minds of the participants for the research and clarifying the issue of secrecy necessitates further study.

Most importantly, more research should be conducted on the different behavioral patterns of catfishing by gender, as some gender differences emerged in this current study. Research should clarify why men may be more likely to catfish others. In future it will be important to include face-to-face interviews and establish rapport to motivate participants who are catfish to discuss why they changed specific characteristics of their online profile or why they created a completely fake one and why they deceived another person in online relationship.

References

- Walter, H. L., Anderson, C. M., & Martin, M.
 M. (2005). How subordinates' Machiavellianism and motives relate to satisfaction with superiors. *Communication Quarterly*, 53(1), 57-70.
- Christie, R., & Geis, F. L. (1970). Chapter I-Why Machiavelli. Studies in machiavellianism, 1-9.
- Kareshki, H. (2011). Relation among machiavellianism belief and goal orientations in academic situations. *Procedia-social and Behavioral Sciences*, 12, 414-418.
- Mudrack, P. E., & Mason, E. S. (1995). Extending the Machiavellianism construct: A brief measure and some unexplored relationships. *Journal of Social Behavior and personality*, 10(1), 187-200.
- Gerbing, D. W., Ahadi, S. A., & Patton, J. H. (1987). Toward a conceptualization of impulsivity: Components across the behavioral and self-report domains. *Multivariate behavioral research*, 22(3), 357-379.

- Barth, R. J., & Kinder, B. N. (1987). The mislabeling of sexual impulsivity. *Journal of Sex & Marital Therapy*, 13(1), 15-23.
- Gold, S. N., & Heffner, C. L. (1998). Sexual addiction: Many conceptions, minimal data. *Clinical Psychology Review*, 18, 367-381.
- Carnes, M. C., & Griffen, C. (Eds.). (1990). *Meanings for manhood*. University of Chicago Press.
- Schneider, F. (1994). Measuring the size and development of the shadow economy. Can the causes be found and the obstacles be overcome? (pp. 193-212). Springer Berlin Heidelberg.
- Lawson, H. M., & Leck, K. (2006). Dynamics of internet dating. *Social Science Computer Review*, 24(2), 189-208.
- Pasini, G., Lutzemberger, G., Frigo, S., Marelli, S., Ceraolo, M., Gentili, R., & Capobianco, M. (2016). Evaluation of an electric turbo compound system for SI engines: A numerical approach. *Applied Energy*, 162, 527-540.
- Artemio, C. P., Maginot, N. H., Serafín, C. U., Rahim, F. P., Guadalupe, R. Q. J., & Fermín, C. M. (2018). Physical, mechanical and energy characterization of wood pellets obtained from three common tropical species. *PeerJ*, 6, e5504.
- Danielle, P. K., & Wingen, J. (2012). Motor control outcomes following Nintendo Wii use by a child with Down syndrome. *Pediatric Physical Therapy*, 24(1), 78-84.
- Dosh, K. (2012). The 10 most common lies in online dating profiles. *Woman's Day*.
- Fu, F., Rosenbloom, D. I., Wang, L., & Nowak, M. A. (2011). Imitation dynamics of vaccination behaviour on social networks. *Proceedings of the Royal Society B: Biological Sciences*, 278(1702), 42-49.

- De Rudder, H. (2010). Mission Accomplished? Which Mission? The" Bologna Process"--A View from Germany. *Higher Education Review*, 43(1), 3-20.
- Olson, M. H. (2015). *Introduction to theories of learning*. Psychology Press.
- Christie, R., & Geis, F. L. (1970). Chapter I-Why Machiavelli. *Studies in machiavellianism*, 1-9.
- Kalichman, S. C., & Rompa, D. (2001). The Sexual Compulsivity Scale: Further development and use with HIV-positive persons. *Journal of personality* assessment, 76(3), 379-395.
- Kalichman, S. C. (2010). Sexual compulsivity scale. *Handbook of Sexuality-Related Measures*, 146-147.
- Dodge, B., Reece, M., Cole, S. L., & Sandfort, T. G. (2004). Sexual compulsivity among heterosexual college students. *Journal of Sex Research*, 41(4), 343-350.
- Kalichman, S. C., & Rompa, D. (1995). Sexual sensation seeking and sexual compulsivity scales: Validity, and predicting HIV risk behavior. *Journal of personality assessment*, 65(3), 586-601.
- Dodge, K. A., Greenberg, M. T., Malone, P. S., & Conduct Problems Prevention Research Group. (2008). Testing an idealized dynamic cascade model of the development of serious violence in adolescence. *Child development*, 79(6), 1907-1927.
- Jarecki, A., Smerling, M., Joost, H., Schulman, A., Ratner, B., Joost, H., & Schulman, A. (2010). Catfish.[Motion Picture]. United States: Rogue Pictures.
- Mahr, C., Kundu, P., Lackmann, A., Zanaga, D., Thiel, K., Schowalter, M., ... & Rosenauer, A. (2017). Quantitative determination of residual silver distribution in nanoporous gold and its influence on structure and catalytic performance. *Journal of catalysis*, 352, 52-58.

Schulman, S., Angerås, U., Bergqvist, D.,

Eriksson, B., Lassen, M. R., Fisher, W., & Subcommittee on Control of Anticoagulation of the Scientific and Standardization Committee of the International Society on Thrombosis and Haemostasis. (2010). Definition of major bleeding in clinical investigations of antihemostatic medicinal products in surgical patients. *Journal of Thrombosis* and Haemostasis, 8(1), 202-204.

- Toma, C. L., Hancock, J. T., & Ellison, N. B. (2008). Separating fact from fiction: An examination of deceptive selfpresentation in online dating profiles. *Personality and social psychology bulletin*, 34(8), 1023-1036.
- Ali, A. I., & Wibowo, K. (2011, July). Online dating services-chronology and key features comparison with traditional dating. In *Competition Forum* (Vol. 9, No. 2, p. 481). American Society for Competitiveness.
- Finkel, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online dating: A critical analysis from the perspective of psychological science. *Psychological Science in the Public interest*, 13(1), 3-66.
- Christie, R., & Geis, F. L. (1970). Chapter I-Why Machiavelli. *Studies in machiavellianism*, 1-9.
- Buttner, E. H., & McEnally, M. (1996). The interactive effect of influence tactic, applicant gender, and type of job on hiring recommendations. *Sex Roles*, *34*, 581-591.
- Hunter, M. C. (1982). *Mastery teaching* (pp. 63-72). El Segundo, CA: Tip Publications.
- McIlwain, D., Christensen, W., & Geeves, A. (2011). Applying intelligence to the reflexes: Embodied skills and habits between Dreyfus and Descartes. Journal of the British society for Phenomenology, 42(1), 78-103.
- Monahan, K. H., Bahnson, T. D., Poole, J. E., ... & CABANA Investigators. (2019). Effect

of catheter ablation vs antiarrhythmic drug therapy on mortality, stroke, bleeding, and cardiac arrest among patients with atrial fibrillation: the CABANA randomized clinical trial. *Jama*, *321*(13), 1261-1274.

Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. sage.