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# Gender Differences in Identity-Based Social Influence: An Experimental Examination of Software Piracy Behavior

Noura Eisa Jaber Al Khyeli

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United Arab Emirates University

College of Information Technology

Department of Information Systems and Security

GENDER DIFFERENCES IN IDENTITY-BASED SOCIAL  
INFLUENCE: AN EXPERIMENTAL EXAMINATION OF  
SOFTWARE PIRACY BEHAVIOR

Noura Eisa Jaber Rashed Al Khyeli

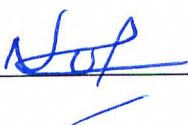
This thesis is submitted in partial fulfilment of the requirements for the degree of  
Master of Science in IT Management

Under the Supervision of Dr. Marton Gergely

November 2018

### Declaration of Original Work

I, Noura Eisa Jaber Rashed Al Khyeli, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this thesis entitled "*Gender Differences in Identity-Based Social Influence: An Experimental Examination of Software Piracy Behavior*", hereby, solemnly declare that this thesis is my own original research work that has been done and prepared by me under the supervision of Dr. Marton Gergely, in the College of Information Technology at UAEU. This work has not previously been presented or published, or formed the basis for the award of any academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my thesis have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this thesis.

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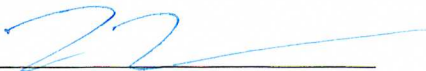
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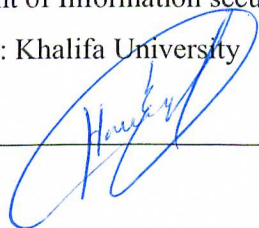
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## Abstract

Software piracy is the unauthorized copying, sharing, or using of software. It can be a profitable endeavor for individuals, and a tremendous loss for the industry. According to Gulf News, Software piracy losses in the Arabian Gulf states in 2015 was 897\$ million (AED 3.29 billion). Therefore, it is critical to understand as much as possible about the phenomenon and investigate the factors that influence subjects' piracy behavior. Driven by gaps in previously published literature, the study presented here is an experimental investigation into the gender differences in identity-based social influence. In essence, the study examined if males or females are more likely to influence a group of their peers to either pirate or abstain from pirating a piece of software. While this topic is previously unstudied in the field of software piracy, it could be potentially useful in such areas as anti-piracy advertising. Further, as most of the published studies in software piracy are inclined to social desirability bias (as these studies traditionally rely on surveys and responses to paper-based scenarios), the study presented herein has been designed with the specific objective of avoiding social desirability bias by having real money at stake in an experimental setting.

**Keywords:** Software piracy, gender differences, identification based social Influence.



## Title and Abstract (in Arabic)

### الفروق بين الجنسين في التأثير الاجتماعي القائم على الهوية: اختبار تجريبي للسلوك التجريبي للبرمجيات

#### الملخص

قرصنة البرامج هي النسخ أو المشاركة أو الاستخدام غير المصرح به للبرامج. يمكن أن يكون مسعى مربح للأفراد، وخسارة هائلة لهذه الصناعة. ووفقاً لشركة جلف نيوز، فإن خسائر قرصنة البرامج في دول الخليج العربي في عام 2015 بلغت 897 مليون دولار (3.29 مليار درهم إماراتي). لذلك، من الأهمية أن نفهم بأكثر قدر ممكن حول هذه الظاهرة والتحقيق في العوامل التي تؤثر على سلوك القرصنة لدى الأفراد. الدراسة المعروضة هنا هي التحقيق التجريبي في الاختلافات بين الجنسين في التأثير الاجتماعي القائم على الهوية. في جوهرها، فحصت الدراسة ما إذا كان الذكور أو الإناث أكثر عرضة للتأثير على مجموعة من أقرانهم إما للقرصنة أو الامتناع عن قرصنة قطعة من البرمجيات. في حين أن هذا الموضوع غير مدروس سابقاً في مجال قرصنة البرامج، فقد يكون مفيداً في مجالات مثل الإعلانات المناهضة للقرصنة. علاوة على ذلك، بما أن معظم الدراسات المنشورة في قرصنة البرامج تميل إلى التحيز الاجتماعي المرغوب (حيث أن هذه الدراسات تعتمد تقليدياً على المسوحات والاستجابات للسيناريوهات المستندة إلى الورق)، فقد تم تصميم الدراسة المقدمة هنا بهدف محدد هو تجنب التحيز الاجتماعي المرغوب فيه من خلال وجود أموال حقيقية على المحك في بيئة تجريبية.

**مفاهيم البحث الرئيسية:** قرصنة البرمجيات، اختلاف الأجناس، التأثير الاجتماعي القائم على تحديد الهوية.

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## **Dedication**

*To my beloved parents and family*

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## Chapter 1: Introduction

### 1.1 Overview

Information security's primary concern is to protect digital assets from unauthorized access, in other words, the software industry's fight against software piracy. Software piracy has been a problematical subject for several decades (Gopal and Sanders, 1997; Konstantakis et al., 2010; Mishra et al., 2007). While there is some research striving to identify motives of why people pirate software, not all of the independent factors behind why individuals pirate is fully understood. However, due to the scope of the software piracy phenomenon (the Business Software Alliance reported that there is an annual revenue loss of over \$63 billion in the industry), it is becoming vitally more important to address these uncertainties (Chan and Lai, 2011; Moores and Esichaikul, 2011).

Software piracy is traditionally viewed as an ethical issue in research (e.g.: Mason, 1986). Most previous studies of software piracy are surveys of the past behavior of users, or responses to controlled scenarios. The issue with such studies is susceptibility to social desirability bias, where social desirability bias is answering or responding to questions or items in a manner as to seem more favorable to others. It can either be over- or underreporting. Having such bias in responses is a major problem when the field of the study involves socially delicate matters such as software piracy. It is much better to avoid social desirability bias if possible. However, for matters where the topic cannot be avoided, as with software piracy, there are numerous ways to attempt to avoid social desirability bias to some extent. One way is to collect data in a way that avoids direct face-to-face questioning. Another mean of tackling this issue is through running experiments which have real money at stake for the subjects.



The study presented here has been designed with the specific objective of avoiding social desirability bias by having real money at stake for the subjects. The aim of the study at hand is to investigate subjects' piracy behavior. Specifically, we are interested in how gender differences in identity-based social influence can manipulate subjects' software piracy behavior.

## **1.2 Background**

In most research concerning intellectual property, attention has often focused on property rights and what causes its abuses. As such, software piracy is also the abuse of intellectual property rights. Software Piracy has been identified as a serious problem facing the software industry (Gopal and Sanders, 1997).

Software piracy is the illegal access, use or/and copying of software products. The global counterfeiting and piracy are estimated to cost the US economy around \$200 to \$250 billion a year, as reported by the US Immigration and Customs Enforcement Agency, in addition to the loss of 750,000 jobs (Moore and Esichaikul, 2011). According to Gulf News, software piracy losses in the Arabian Gulf states in 2015 is \$897 million, which is around AED 3.29 billion (Gulf News, 2016). Establishing an understanding of the issues that foster software piracy is necessary, because there is not only a yearly revenue loss of over \$63 billion worldwide but also \$208 million in the UAE alone. It is calculated that 84% of the UAE population pirate software. As such, it is important to understand why individuals participate in software piracy, and how they can potentially be deterred. One variable that is understudied in the software piracy area and can potentially address both of these issues is the variable of social influence. Therefore, the main focus of the experiment will be on the variable of social influence, and how social influence can affect software piracy behavior.

Social influence is accountable for a lot of human behavior. Social influence can be of different types, but the most important to software piracy study, are compliance and identification. In compliance, an individual diverges their behavior due to the social approval of another individual or a group of individuals (Kelman, 1958). Compliance-based social influence, also known as social norms, is an eventual rather than immediate form of social influence. On the other hand, in identification-based social influence, an individual performs in a certain way since they want to keep or establish a relationship with another individual or a group of individuals (Kelman, 1958). Most research done on software piracy which emphasizes social influence focuses on social norms rather than identification-based social influence. Up until now, identification-based social influence is relatively unstudied in the field of software piracy. The experimental investigation herein is directed to investigate this type of social influence. Further, the research aims to investigate if any gender differences exist in identity-based social influence within the field of software piracy. According to Raven (1965), males commonly have less difficulty exerting influence than females do, as men convey support and authority. Such conclusions indicate that gender differences in identity-based social influence could exist, and therefore should also be studied in a software piracy context. It is also important to note that past research on software piracy generally uses either survey-based questionnaires of past piracy behavior or hypothetical scenarios for participants to imagine themselves in when answering questions regarding the storyline. These both can lead to misreporting or having bias in the research, as subjects are being asked ethically sensitive questions, or even questions regarding illegal behavior. This issue is known as social desirability bias, and for some reason, it has only received sparse attention from software piracy research (Chung and Monroe, 2003). Software desirability bias is a form of reply bias

that is the inclination of survey respondents to answer questions in a manner that will be observed favorably by others. It can either be over-reporting good behaviors, or under-reporting bad behaviors. As much of the earlier research done on software piracy depended on such self-reporting data, they were most likely subject to this social desirability bias, which raises issues regarding the validity of their findings.

In this study, social desirability bias was avoided by using real money in a real experimental situation where subjects must make a choice, whether to pirate or purchase a piece of software from a website. During the course of the experiment, anonymous subjects acted sincerely as they have actual money at stake rather than just ticking yes or no on a survey.

### **1.3 Research Questions**

As previously mentioned, there are some concerns that have not received sufficient attention from researchers in the software piracy arena, despite the notable importance of striving to classify the motives of why individuals pirate software. In this research, we investigated software piracy behavior in relation to identity-based social influence, and the role of gender power differences in identity-based social influence. As such, the research question for this study is:

Q: To what extent do gender differences in identity-based social influence exist? In other words, do males or females exert more social influence?

### **1.4 Overview of Research Methodology**

Most of the published studies in software piracy are inclined to social desirability bias since they rely on surveys and responses to paper-based scenarios. The aim of this research is to investigate piracy behaviors in an experimental

environment to avoid social desirability bias. In the experiment, subjects were recruited from Information Technology college and the Business college in UAE University. The students were recruited from both junior and senior level courses, and their participation was completely voluntary and anonymous. They were told that they are required to purchase a computer program for a class they are registered in. Each subject was given AED 100 to purchase this software, in the form of a Visa pre-paid debit card that can be used physically and online (real money). They were told that the money is to pay for the cost of the software which is around AED 25. The subjects can then keep any money left in their cards at the end of the study as payment for their participation in the study. Students were required to anonymously log in to a website where they can purchase the required software. As they reach the main web page, an advertisement for the same software appeared with a link to download the software for free (an illegal download).

The study had three treatment cells: Control (the experiment proceeded without any interruption), Unethical Social Influence (a confederate actor attempts to draw subjects to the illegal download by reciting specifically written lines), and Ethical Social Influence (the confederate actor attempts to draw subjects towards the legal download by reciting specifically written lines). There were at least 30 students in each. These three treatments were repeated twice, once with a male confederate actor, and another time with a female confederate actor. Through this, it will be possible to see the effect of gender in each treatment.

The remainder of the thesis will be formatted as follows. Next, literature on the topic of software piracy and social desirability bias in software piracy will be discussed. Second, the hypotheses will be discussed along with their respective

theoretical underpinnings. After, the research methodology along with the statistical analyses will be detailed. Lastly, the results will be discussed and some insights into the findings offered.

## Chapter 2: Literature Review

To evaluate the research on software piracy, major scholarly databases were searched (e.g: EBSCO, ProQuest, Google Scholar).

In the late twentieth century, The World Wide Web became the primary source of media goods acquisition and sharing (Bender and Wang, 2009). However, as with every new technology, comes new challenges. For digital media goods, one of the problems that arose was piracy. Although analog piracy was present before the evolution of digital media files, it was present only in extremely isolated cases, further, it was costly and time-consuming for end users (Bender and Wang, 2009; Keintz, 2005). Initially, piracy was executed on a commercial scale for profit (Bender and Wang, 2009). However, digital media piracy is now centered around end-user piracy, where consumers can obtain goods without a physical transaction.

The study at hand focuses exclusively on software piracy. The motivation for this is that software, as opposed to other forms of digital media, is fundamentally different for several reasons. Although both have high production costs yet low reproduction costs, music and video are ‘experience’ goods and viewed in an entirely different light by consumers. They are purchased for entertainment purposes exclusively (Bhattacharjee et al., 2006).

### 2.1 Software Piracy

For many decades, software piracy has been an obstacle in the industry, where it is the illegal use/copying of software goods that are protected by legal intellectual property rights (Gopal and Sanders, 1997; Konstantakis et al., 2010; Mishra et al., 2007). The damages from software piracy have increased severely over the last

decades, from an expected AED 3.6 billion annually in the 1980's to over AED 231 billion annually in 2011 (Business Software Alliance, 2012; Chan and Lai, 2011; Moores and Esichaikul, 2011). An estimation of the average worldwide piracy rate is 42% (Business Software Alliance, 2012). With such facts showing that software piracy is current and still dangerous to the industry, an understanding of the antecedents related to software piracy remains of relevance.

As software piracy is the objective of this research, it is vital to understand software piracy types and to distinguish the type of software piracy studied in this thesis. Software piracy has been classified into two separate categories in prior research.

The two types of software piracy:

- a. Commercial Pirating: cases in which software is being pirated to be sold for profit.
- b. Personal Use Software Piracy: individuals who make illegitimate copies of others' software or media goods for personal use.

In past research, the definition of the term software piracy changes, as can be seen in Table 1, extracted from Gergely (2015), which lists the past research definitions of software piracy. Nevertheless, in this thesis software piracy is defined as the unauthorized copying of software goods preserved by intellectual property rights by an individual solely for personal use.

Table 1: Definitions of Software Piracy

	Definition	Source
1	Illegal copying/downloading of copyrighted software and media files.	Al-Rafee and Cronan (2006) Cronan and Al-Rafee (2008)
2	Unauthorized use, duplication, distribution, or sale of commercially available software.	Aleassa et al. (2010)
3	Unauthorized copying of computer software which constitutes copyright infringement for either commercial or personal use.	Asongu (2012)
4	Illegal copying of computer software.	Bhal and Leekha (2007) Christensen and Eining (1991) Higgins et al. (2006)
5	Production of unauthorized copies of software by individuals or businesses for resale or for use in the workplace, at school, or at home.	Chan and Lai (2011)
6	Unauthorized duplication of computer software.	Depret and Fiske (1993)
7	Copying computer programs.	Forester (1990)
8	The practice of unauthorized copying of a computer program.	Gino et al. (2009)
9	Unauthorized reproduction.	Gopal and Sanders (2000)
10	Unauthorized copying, distributing, or downloading of copyrighted material.	Higgins et al. (2006) Fang and Lee (2016)
11	Unlicensed software.	Martinez-Sanchez and Romeu (2018)
12	Unauthorized distribution and duplications of intellectual properties.	Chang et al. (2017)

As with the two types of software piracy, past research identifies four overarching schools of thought in software piracy (Gergely and Rao, 2013):

- a. Behavioral (ethical)
- b. Protection
- c. Economics
- d. Global culture



The behavioral school consists of studies that investigate individual characteristics and external factors that affect piracy behavior. Individual characteristics entail variables such as age and gender, while external factors include the likes of software cost, software affordability and ethical judgment (e.g.: social norms). The protection school discusses studies that describe methods to control and decrease piracy. While the economics school fosters a rational method, which balances the losses attributed to piracy by the software publishers against the benefits concluded from the network externalities associated with piracy. Lastly, the global aspect measures the impacts of cross-national differences in piracy behavior.

The main concentration of this study is within the behavioral school. The heart of the research in the behavioral school is to study external factors that influence software piracy. In the behavioral school, the factors studied can be divided into four subgroups: demographics, cost, ethical beliefs, and deterrence (Gergely and Rao, 2013). The main concern of this thesis is within ethical beliefs. Table 2 (extracted from Gergely, 2015) lists the key findings from behavioral school in the ethics category.

Table 2: Key Findings from Behavioral School in Ethics and Demographic

Sub-Category	Findings	Source
Ethics	Ethical judgment influences piracy behavior.	Moore and Esichaikul (2011)
Ethics	Ethical variables have no effect on an individual's likeliness to pirate software.	Pearson et al. (1997)
Ethics	Social norms are correlated to the level of software piracy.	Aleassa et al. (2010) Kartas and Goode (2010) Nill et al. (2010) Seale et al. (1998) Tang and Farn (2005)
Ethics	Social norms are not correlated to the level of software piracy.	Chang et al. (2017) Cronan and Al-Rafee (2008) Kartas and Goode (2010) Liao et al. (2010) Phau and Ng (2009)
Ethics	Informational influence found not to be a determinant of software piracy behavior.	Tang and Farn (2005)
Demographic	Younger individuals pirate more.	Gopal and Sanders (1997) Mishra et al. (2007) Moore and Esichaikul (2011) Solomon and O'Brien (1990)
Demographic	Males pirate more than females.	Fang and Lee (2016) Ferraresso (2016) Higgins (2006) Hinduja (2003)
Demographic	Cognitive capital reduces piracy rates.	Odilova (2017)

One thing that is noticed here is the lack of study in the area of social influence. While social norms have been studied extensively, its counterpart of social influence is left entirely unstudied. As such, social influence's effects on software piracy behavior will be the target of this thesis.

## **2.2 Social Desirability Bias**

As software piracy is being viewed from an ethical perspective in this study, and as studies of an ethical nature are often subject to biases, it is important to discuss the aspect of social desirability bias in software piracy research. Social desirability bias is when someone answers a survey untruthfully to be accepted by other members of the society, in other words, it is either the under- or over-reporting of behaviors by a respondent to earn the approval of others (Arnold and Feldman, 1981).

The likelihood of social desirability bias in software piracy investigation has been recognized by several researchers (e.g.: Christensen and Eining, 1991). Table 3 (extracted from Gergely, 2015), shows social desirability bias in software piracy literature.

Table 3: Social Desirability Bias in Software Piracy Literature

Source	Sample Size	Data Collection Method	Reduction Methods	Detection Methods	Correction Methods	Piracy Rate
Solomon & O'Brien (1990)	266	Quantitative: Survey Questionnaire	Anonymous			53%
Christensen & Eining (1991)	269	Quantitative: Survey Questionnaire	Anonymous			52%
Gopal & Sanders (1997)	123	Quantitative: Survey Questionnaire	Anonymous			
Seale et al. (1998)	523	Quantitative: Survey Questionnaire	Anonymous			44%
Thong & Yap (1998)	243	Quantitative: Survey Questionnaire	Voluntary & Anonymous			
Moores & Esichaikul (2011)	243	Quantitative: Survey Questionnaire	Voluntary & Anonymous			93%
Peace et al. (2003)	201	Quantitative: Survey Questionnaire	Anonymous; Used 'intention to pirate' as proxy for behavior			59%
Moores & Esichaikul (2011)	462	Quantitative: Survey Questionnaire				76%
Cronan et al. (2006)	519	Quantitative: Survey Questionnaire				34%
Moores & Esichaikul (2011)	243	Quantitative: Survey Questionnaire	Anonymous			93%
Warner (2008)	481	Quantitative: Survey Questionnaire	Randomized response technique	Compared randomized response results to direct response sample		54%
Mishra et al. (2007)	162	Quantitative: Survey Questionnaire				23%
Siponen & Vartiainen (2007)	249	Quantitative: Survey Questionnaire	Anonymous			

Table 3: Social Desirability Bias in Software Piracy Literature (Continued)

Source	Sample Size	Data Collection Method	Reduction Methods	Detection Methods	Correction Methods	Piracy Rate
Moore & Esichaikul (2011)	103	Quantitative: Survey Questionnaire				35%
Konstantakis et al. (2010)	56	Qualitative: Semi-Structured Face-to-Face Interview	Voluntary			100%
Chan & Lai (2011)	266	Quantitative: Survey Questionnaire	Anonymous	Marlowe-Crowne Social Desirability Scale	One-sample test revealed that the social desirability score was significantly lower than the mid-scale value, thus eliminating any serious threat	

Only a few tries have been made to implement formal techniques to subdue or detect, and correct bias, as can be seen in the table above. In 30 studies regarding behavioral studies that contained empirical data on software piracy behavior (and could be prone to social desirability bias), 11 did not even make a (or made an indirect) reference to issues related to social desirability bias (Gergely and Rao, 2014). The remaining 19 studies were investigated further to identify possible evidence of the presence or absence of response bias. The review of the studies implies that most researchers, deliberately, or unconsciously, guided the studies to reduce bias. In most cases, the responses were written anonymously which assured confidentiality where confidentiality of responses is known to reduce bias. However, while there is no conclusive evidence that the bias exists, research has been conducted that suggests that it does (Gergely, 2015; Gergely and Rao, 2014). As such, one of the goals herein was to conduct our study with a full understanding of social desirability bias and make every effort to minimize it in order to assure the validity of the study.

### Chapter 3: Theory and Hypotheses

The main objective of this thesis is to investigate the influence of gender differences in identity-based social influence on software piracy behavior. The experimental study covered three treatments groups (Control, Unethical Social Influence, Ethical Social Influence). The experiment was repeated with two actors, once a male and one female, to determine any gender differences in identity-based social influence. The Table 4 below lists the treatments that was done for this thesis along with the corresponding gender of the actor.

Table 4: The Three Treatment Groups

Treatment groups				
Control Treatment	Unethical Social Influence Treatment		Ethical Social Influence Treatment	
Both actors in the room with no interaction with subjects	Male actor	Female actor	Male actor	Female actor

In control Treatment, no influence was exerted onto the subjects. In the Unethical Social Influence Treatment, a negative social influence was exerted, and lastly in the Ethical Social Influence Treatment, positive social influence was exerted by the actors.

#### 3.1 Social Influence

Human behavior can be stirred by social influence, causing a change in an individuals' views and choices. (e.g.: Bandura, 1965; Hicks, 1968; Gergely 2015). For people, the primary motive behind any act is to act in a way that fulfills a set of objects

in the most productive way. However, this decision-making process can be augmented depending on three types of social influence:

- a. Conformity-Based Social Influence
- b. Compliance-Based Social Influence
- c. Identification-Based Social Influence

The compliance-based social influence is the extent to which a person identifies with the others in their more-immediate surroundings (Gino et al., 2009). Conformity-based social influence can be explained by defining social norms. Norms are definite customs and practices shared by a group of individuals, it can be a behavior or anything that guide their interactions with others. While conformity is the action of harmonizing opinions, attitudes, beliefs, and performances to group norms. Of most importance to this study is identification-based social influence, which can hugely affect the behavior of individuals (Wenzel, 2004). For example, when an outsider or a stranger to a certain group behave in unethical behavior, members of the group tend to distance themselves, while when a member of the same group engages in the same unethical behavior, the behavior is more accepted (Gino et al., 2009). While there is significant evidence on the impact of identification-based social influence on ethical decision making in the field of psychology and ethics (e.g.: Gino et al., 2009; Wenzel, 2004), the topic remains unstudied in the area of software piracy.

Based on this, it is hypothesized that:

*H1: The proportion of individuals engaging in software piracy in the Unethical Social Influence condition will be higher than the proportion of individuals*

*engaging in software piracy in the Control Condition for both male and female actors.*

*H2: The proportion of individuals engaging in software piracy in the Ethical Social Influence Condition will be lower than the proportion of individuals engaging in software piracy in the Control Condition for both male and female actors.*

### **3.1.1 Gender and Social Influence**

Another area in software piracy that remains unstudied is the effect of gender difference within identity based social influence. Earlier research has shown that a gender gap in software piracy exists (Higgins, 2006; Hinduja, 2003). As to this day, researchers have proved that females are less prone to pirate software from the web than males (Fang and Lee, 2016; Ferrarresso, 2016). This can be explained by looking through how males are raised more differently than females. For example; parents are expected to apply the parental management tasks differently for females and males, as predicted by Gottfredson and Hirschi's theory. Parents are more prone to monitor their female child's action because of fear for their children's future. Which leads to providing more behavioral information to a female child than for a male child. Therefore, it is rational that females have different levels of self-control than males. However, this does not explain if there is a difference in terms of behavior based on the gender of the individual exerting social influence.

Gender differences in social influence can be explained by the study of power of Raven (1965). The authors found utilizing experiments in social psychology that there exist six categories of power in social influence.



- a. Coercive Power: Uses a social, physical or emotional threat to earn agreement from others while the target is unaware.
- b. Reward Power: Based on the right to grant or reject physical, cultural, sentimental, or religious rewards to someone for doing what is required of them.
- c. Legitimate Power: Arises from a chosen or elected state of authority.
- d. Referent Power: Based on the association's individuals make and the crowds and associations they relate to.
- e. Expert Power: Based on what a person knows, practice, and distinctive skills or expertise.
- f. Informational Power: The capacity of an agent of authority to be able to change matters and influence through the use of the resource of information

Males generally possessed greater levels of expert and legitimate power than females, while females hold higher levels of referent power than males do. Usually, males have less difficulty exerting influence than females do, as men tend to convey support and authority. Such conclusions indicate that gender differences in influence do exist due to these inequalities in power.

Despite the research on gender differences in social influence not being extremely popular, it does show that males and females are different in their capacity to influence others due to the difference in gender power. Several researchers have published results concluding that males have higher access to social power than females (e.g., Carli and Eagly, 2001; Depret & Fiske, 1993; Johnson, 1976; Kanter, 1977; Lips, 1991; Lorber, 1998). In addition, people tend to agree more often with

males' verbal contributions in a social setting, as opposed to females', and eventually individuals will submit more often to the views of a male than those of a female (Berger et al, 1980).

As such, it is hypothesized that:

*H3: The proportion of individuals engaging in software piracy under the male confederate actor's influence will be higher than the proportion of individuals engaging in software piracy under the female confederate actor's influence for the Unethical Social Influence Condition.*

*H4: The proportion of individuals engaging in software piracy under the female confederate actor's influence will be higher than the proportion of individuals engaging in software piracy under the male confederate actor's influence for The Ethical Social Influence Condition.*

### **3.1.2 Social Desirability Bias**

Social desirability bias can be dangerous and drive to critical validity obstacles in both survey and experimental data (Nederhof, 1985). A self-administered survey is the commonly used method of data acquisition in software piracy research, social desirability bias can most likely affect previously published research findings. As the experiment in this thesis will have no questionnaires asking subjects about past or hypothetical behavior in order to gather data, theoretically there should be no social desirability bias. Further, by having subjects make a real decision, with real money, the behaviors measured should be also unbiased. This can be measured using previously published scales for social desirability bias.

To this end, it is hypothesized that:

*H5: The social desirability scores of individuals who pirate will not be different than the social desirability scores of individuals who do not pirate.*

## **Chapter 4: Research Methodology**

In the current section, the experimental design of the study is explained. The study was conducted to investigate the research questions of interest. The aim of the study is to explore the impact of gender differences in identity-based social influence on subjects' software piracy behavior. This section includes information on the subjects, an overview of the sessions, the website, the tasks of each actor, the treatment groups, the experimental procedure, and the assignment to be completed by subjects.

### **4.1 Recruitment of Subjects**

University students are a leading demographic that involved in software piracy for non-commercial reasons (Christensen and Eining, 1991; Ramakrishna et al., 2001; Solomon and O'Brien, 1990; Gergely, 2015). Therefore, about 201 students were recruited to volunteer in the study. The student's participation in the study was completely voluntary, and they were guaranteed of the anonymity of their behaviors and responses. The subjects were also randomly assigned to the treatment groups.

Subject participation in the study were requested in a classroom. Subjects were summoned to register for a study of the factors that influence the software acquisition practices of students. Potential subjects were informed that their participation is voluntary. Non-participation would have no effect on their grade in the course that they are recruited from. They were told that the study would take approximately one hour. Volunteers who signed up for the experiment received 100 AED in consideration for their time but would be required to acquire a software program during the study, which may cost some money. Subjects were invited to sign up for an experimental session at a time convenient to their schedule. The prospective participants provided their email addresses and received an email reminder 24 hours prior to their session.

The experiment was held approximately one week after the recruitment session. The experiment was held in a computer laboratory, which can be viewed in the picture below (Figure 1).



Figure 1: The Computer Laboratory

## 4.2 Incentive

At the time of recruitment, the subjects were promised a certificate of participation, as well as 100 AED for participation in the study, minus the cost of acquiring software during the session. During the recruitment, subjects were told that the software cost would be about 25 AED.

In terms of administering incentive payments to the subjects, at the start of the experimental session each subject was given a 100 AED gift card (Figure 2). The preloaded visa gift card needed to be used as the mode of compensation for the subjects for two reasons. First, it is necessary to have a bank or credit card to complete an online download transaction. It is possible that not all subjects have one, or if they do, they may not be willing to utilize it in the study. Second, it is visibly impossible to see the balance on the gift card. Therefore, those subjects who are inclined to pirate will be able to do so without any concern that their actions could be detected by the research assistant conducting the session. This card had real cash value and it can be used at

any commercial establishment for purchases of any kind, or for online transactions. The subjects were told that any money that will be left on the gift card after acquiring the software will be theirs to keep.



Figure 2: The Gift Card

### 4.3 Confidentiality

The following steps are taken to ensure the anonymity of responses:

- a. The subject ID will correspond to the last four digits of the gift card number.
  - The gift cards are picked at random by the subjects.
  - There is no record matching the name of the subject to the ID.
- b. Subjects pick their seat location randomly.

### 4.4 Language of the Study

The experiment was carried at the UAE University, where most students speak both Arabic and English. However, the majority of students' mother tongue is Arabic, therefore the experiment was conducted in Arabic.

While recruiting subjects, it was made clear that the language of the study would be Arabic, and students were asked to join only if they spoke and were able to read Arabic. The Arabic version of the website and the questionnaire can be found in Appendix A.

However, due to this thesis being in English, all questionnaires, websites, and dialogues have been translated to English for the ease of the reader.

## **4.5 Variables of Interest**

The variables that will be measured are as follows:

### **4.5.1 Dependent Variable**

The dependent variable is a binary response that measures the respondents' software acquisition choice. It's either purchased from the legal site or pirated from the illegal site. The students final download decision will be recorded in the database as either 'Pay' or 'No Pay', utilizing the last four digits of each subject's gift card (which will be used to login to the website and will also be written at the top of each questionnaire which will be provided to the students at the sections).

### **4.5.2 Independent Variables**

The independent variables will be manipulated across the three treatment groups:

- a. Social Influence Conditions (None, Unethical Influence, Ethical Influence).
- b. Gender of the confederate actor (male, female).

### 4.5.3 Correlates

Several correlates will also be measured:

- a. Demographic variables
- b. Age
- c. Gender
- d. Ethnicity
- e. Status in College (Freshman, Sophomore, etc.)
- f. Major

Social Desirability Bias Scale:

- 40 items from the Balanced Inventory of Desirable Responding (all items from Paulhus's BIDR scale), 7-point scale.

Data was gathered from two locations. The website that was linked to a database. Two of the students' actions was registered by the program and saved to the database.

- a. The students' download decision will be recorded as 'Pay' or 'No Pay'.
- b. Every page visited, along with the order of the pages visited and duration of time spent on each page was noted.

Data was also gathered from a post-experiment questionnaire (for the correlates)



## 4.6 Treatments

At the start of each session, subjects access a website to acquire the required software. In addition to information from the legitimate website, they see a large advertisement from another website, evidently a pirate site, which offered the same software for free. Almost immediately after the commencement of the study, a confederate actor makes the statement that he or she has been told to make for that treatment. This statement was the treatment manipulation for that specific treatment condition. Following this ‘disruption’, the subjects then proceed to acquire the software from a source of their choice: purchase from the legal site or get it for free from the pirate site. Data is gathered to subsequently determine if the subject purchased or pirated the software. Following the acquisition, the subjects complete a questionnaire presented to them.

There are three treatment groups, each repeated twice, once with a male confederate actor, and once with a female actor. The three differing treatment conditions are outlined below.

### **Treatment 1:**

The first treatment condition is the control condition. In the first treatment condition, there is no manipulation; the confederate actor (in one case a male, in the other case a female) is present, but did not say anything. The dialogue (or lack of) can be seen below.

- Confederate: (makes no statement)
  
- Research Assistant: (stays silent)

The subjects follow the instructions and complete the task. The subjects had a choice to acquire the software from a legal site for 25 AED or from a pirate site for no charge. Since the confederate actor did not try to influence the subjects, there is no social influence.

In this treatment, there is no social influence, since the confederate said nothing.

### **Treatment 2:**

In the second treatment condition, the unethical social influence condition, the unethical social influence of the confederate is addressed by the following intervention:

Confederate: "Hey, did you all see this link to the site where you can pirate the software for free? If we click it, we can keep all of our 100-dirham gift cards!"

Research Assistant: "Please do not disturb the others. You should complete the task in silence."

Confederate: "I am going to get it from that site for free!"

Research Assistant: "Please do not disturb the others."

The subjects follow the instructions and complete the task. The subjects had a choice to acquire the software from a legal site for 25 AED or from a pirate site for no charge. As the confederate actors try to influence the subjects by claiming they will acquire the software from the pirate site, there is a negative social influence. The confederate actor loudly states that he/she intends to acquire software from the pirate site, so unethical social influence is high.

**Treatment 3:**

In the third treatment condition, the Ethical Social Influence Condition, the ethical social influence of the confederate is addressed by the following intervention:

Confederate: “Hey, did you all see this link to the site where you can pirate the software for free? If we click it, we can keep all of our 100-dirham gift cards!”

Research Assistant: “Please do not disturb the others. You should complete the task in silence.”

Confederate: “No, that would be wrong. I will not get it from there!” Research Assistant: “Please do not disturb the others.”

The subjects follow the instructions and complete the task. The subjects would have a choice to acquire the software from a legal site for 25 AED or from a pirate site for no charge. As the confederate actors try to influence the subjects by claiming they will not acquire the software from the pirate site (as that would be unethical), there is a positive social influence. The confederate actor loudly states that he/she does not intend to acquire software from the pirate site, so the ethical social influence is high.

**4.7 Analysis**

As no predictions are being made, and only the strength of the relation between two variables is being assessed, seven independent chi-squared tests with phi correlations will be used to test the planned comparisons for the following differences (Warner, 2008):

- Between piracy behavior of individuals in the Control Condition (Control group) and piracy behavior of individuals in the negative social influence

condition (Unethical Social Influence Condition group) for subjects under the male confederate actors' influence.

- Between piracy behavior of individuals in the Control Condition (Control group) and piracy behavior of individuals in the positive social influence conditions (Unethical Social Influence Condition group) for subjects under the male confederate actors' influence.
- Between piracy behavior of individuals in the Control Condition (Control group) and piracy behavior of individuals in the negative social influence condition (Unethical Social Influence Condition group) for subjects under the female confederate actors' influence.
- Between piracy behavior of individuals in the Control Condition (Control group) and piracy behavior of individuals in the positive social influence conditions (Unethical Social Influence Condition group) for subjects under the female confederate actors' influence.
- Between piracy behavior of individuals in the male actor's negative social influence condition (Unethical Social Influence Condition group - Male actor) and piracy behavior of individuals in female actor's negative social influence condition (Unethical Social Influence Condition group - Female actor).
- Between piracy behavior of individuals in the male actor's positive social influence condition (Ethical Social Influence Condition group - Male actor) and piracy behavior of individuals in female actor's positive social influence condition (Ethical Social Influence Condition group - Female actor).

- Between social desirability scores of individuals that pirated (Dependent Variable = No Pay) and the social desirability scores of the individuals who purchased (Dependent Variable = Pay) the software.

The variable coding can be seen in Table 5.

Table 5: Variable Coding for the Planned Comparisons

Antecedent for Planned Comparison	Hypothesis	Dependent Variable	Independent Variable
Unethical Social Influence	H1: The proportion of individuals engaging in software piracy in the Unethical Social Influence Condition will be higher than the proportion of individuals engaging in software piracy in the Control Condition for both male and female actors.	Piracy decision (i.e.: Pay, or Pirate) is a binary categorical variable coded as 0 (Pirate) or 1 (Pay).	Social Influence is a categorical variable, coded as -1 (No Social Influence), or 1 (Unethical Social Influence).
Ethical Social Influence	H2: The proportion of individuals engaging in software piracy in the Ethical Social Influence Condition will be lower than the proportion of individuals engaging in software piracy in the Control Condition for both male and female actors.	Piracy decision (i.e.: Pay, or Pirate) is a binary categorical variable coded as 0 (Pirate) or 1 (Pay).	Social Influence is a categorical variable, coded as -1 (No Social Influence), or 1 (Ethical Social Influence).
Gender Difference in Unethical Social Influence	H3: The proportion of individuals engaging in software piracy under the male confederate actor's influence will be higher than the proportion of individuals engaging in software piracy under the female confederate actor's influence for the Unethical Social Influence Condition.	Piracy decision (i.e.: Pay, or Pirate) is a binary categorical variable coded as 0 (Pirate) or 1 (Pay).	Gender of confederate actor is a categorical variable, coded as 0 (Male), or 1 (Female).
Gender Difference in Ethical Social Influence	H4: The proportion of individuals engaging in software piracy under the female confederate actor's influence will be higher than the proportion of individuals engaging in software piracy under the male confederate actor's influence for the Ethical Social Influence Condition.	Piracy decision (i.e.: Pay, or Pirate) is a binary categorical variable coded as 0 (Pirate) or 1 (Pay).	Gender of confederate actor is a categorical variable, coded as 0 (Male), or 1 (Female).
All	H5: The social desirability scores of individuals who pirate will not be different than the social desirability scores of individuals who do not pirate.	Piracy decision (i.e.: Pay, or Pirate) is a binary categorical variable coded as 0 (Pirate) or 1 (Pay).	BIDR (Social Desirability Bias Score) is a continuous variable, coded from 0 (No Bias), to 40 (High Bias).

The chi-squared test examined whether the group means are different, while the phi correlation measured how the two variables are related. These analyses can be utilized when both the dependent and independent variables are dichotomous. For these hypotheses, the dependent variable is whether the subject pirates the software or not [1 (not pirate), or 0 (pirate)]. As the only difference between the two comparison treatment groups is the level of variable of study (e.g.: unethical social influence vs. no social influence), any statistically significant differences can be attributed to that variable. Using the phi coefficient, strength of the association and a corresponding effect size can be calculated as well.

In order for a chi-squared test with a phi correlation to be conducted, all of the requirements for a chi-squared test need to be met [i.e.: ordinal or nominal quantitative data, one or more categories, independent observations, adequate sample size (at least 10), simple random sample, data in frequency form, all observations used]. In addition, two further assumptions must be met for the phi correlations. First, the marginal distributions need to be examined, to see whether the sample sizes in each row and column are sufficiently large (e.g.: in each treatment group). These sample sizes should be about 20 - 30 per group. Second, for the dichotomous outcome variables, a contingency table needs to be created in order to ensure that no cell should have a frequency of less than 5 (i.e.: the proportion of belonging to any one group cannot be less than 5%). For small group sizes, or expected frequencies less than 5 in a group, the Fisher exact test should be used as opposed to chi-squared.

#### **4.8 The Websites**

A website has been created for the purpose of the study, as previously mentioned, it enables research subjects to either purchase or pirate a specified

software. It is important to note however, that the experimental website is not linked to any real banking systems, so the value of the gift card remains unchanged. The subject is not aware of this. Hence, from the subject's perspective, they are engaging in a legitimate transaction.

The pages of the website:

**Page 1:**

The first page the subjects see was the log in page (Figure 3), where they used the last four digits of the Visa gift cards to enter the system. This ensures the anonymity of the subjects, as they are not using any university login credentials.



The screenshot shows a login page titled "SOFTWARE ACQUISITION PRACTICES: PILOT STUDY" and "LOG-IN PAGE". Below the title, there is an instruction: "Instructions: The last 4 digits of your gift card are your USER\_ID for this study. Please make a note of it." Below the instruction, there is a text input field labeled "ENTER USER\_ID:" and a "Submit" button.

Figure 3: The Login Page

**Page 2:**

The next page simulated that of a legitimate software product description page (Figure 4) and contained an advertisement of the same software for free (the piracy option / illegal download page). Subjects may purchase the software legally by clicking the 'Buy Now' button. Alternately, the subject may click on the 'Free Download' button and acquire the software without paying for it.


<b>Finance EZ Excel Calculator</b> <i>Software to manage your money.</i>	
<p><b>Editor's Rating:</b> 5.0 out of 5</p> <p><b>Avg User Rating:</b> 4.5 out of 5 (4253 votes)</p> <p><b>QUICK SPECS</b></p> <p><b>Version:</b> 1.6B</p> <p><b>File Size:</b> 947 Kb</p> <p><b>Date Uploaded:</b> 12 Nov 2013</p> <p><b>Total Downloads:</b> 214,328</p> <p><b>Downloads this week:</b> 323</p> <p><b>System:</b> Windows</p> <p><b>Price:</b> \$9.99</p>	<p><b>Editor's Review:</b> By CNET Staff, Posted Nov 2, 2013</p> <p>The Finance EZ Excel Calculator for Microsoft Excel is a great low-cost alternative to a financial calculator.</p> <p>Use the Finance EZ Excel Calculator to get those important answers you need quickly and easily. This software program is simple to use with an intuitive layout and easily works through any version of Microsoft Excel. The Finance EZ Excel Calculator is a smart choice, whether you are a practicing professional or a student who is trying to get your homework finished. The software helps you solve your business, statistical and mathematical equations quickly and accurately. The design of the Finance EZ Excel Calculator is packed with great features, like chain algebraic and algebraic entry-system logic keys. It also features dedicated keys for common statistical and financial functions. You can view your answers with upto 12 digits of accuracy and get immediate results.</p> <p style="text-align: center;"><a href="#">BUY NOW \$9.99</a></p> <p style="text-align: center;">  </p>
	<p><b>MegaUpload</b> <b>FREE SOFTWARE!!</b></p> <p><b>Why pay for Finance EZ Excel Calculator when you can get it free?</b></p> <p style="background-color: green; color: white; padding: 5px;"><b>FREE DOWNLOAD</b></p> <p><b>MegaUpload</b></p>

Figure 4: The Legitimate Website Page with a Pirate Advertisement next to it

If subjects click the 'Buy Now' button, they were transferred to a payment screen (Figure 5). It included the means for the subject to enter the customary gift card information, such as the gift card number, the card verification value (CVV), expiration date, and so on. A 'download' button is provided. When the subject clicked on the download button, the system verified card details of the gift card first. The programming was done for the website of this study made sure that the card number corresponds to one that is part of the set that is being used in the experiment. It also checked to see if the card number is being used a second time. If the gift card number is not on the list for the study, or if it has been used before, an error message was displayed. If there was no error, the download process would begin. The web page recorded the last four digits of the gift card number in a database to indicate that the subject made a legitimate purchase. It should be noted that the advertisement for the pirate site continued to display on this screen also, in case the subject should change



his/her mind and choose to get the software from the illegal (pirate) site. After the subjects have made their choice, they are redirected to a subsequent page with specific download instructions (Figure 5). Upon completion of the download, the website displayed a 'thank you' message.

Figure 5: The Payment Page

### Page 3:

If the subject clicked on the advertisement, they were transferred to the illegal pirate website (Figure 6). This site displayed a mission statement explaining how it is the goal of the website organizers is to make the unauthorized software easily available to the public free-of-charge to all users. Below this mission statement, there was a download link for subjects to click on to acquire the software. No link is provided back to the legal site because it is not customary for legal sites to advertise their software on pirate sites. However, the subjects were able to use the back-buttons of the browser to return to the legal website if they wish. Upon completion of the download, the website displayed a 'thank you' message similar to (Figure 7).

## MegaUpload

*Why pay for software when you can get it free?*

### Finance EZ Excel Calculator

**Description:**

The Finance EZ Excel Calculator for Microsoft Excel is a great low-cost alternative to a financial calculator.

**Disclosure:**

We are not an authorized site for the software publisher. We are solely here to offer free copies of software.

**Uploaded:** 2013-12-01 04:01:20 GMT

**By:** [smith20287](#)

**Seeders:** 88

**Leechers:** 3

**Comments:** 1

**Info Hash:**

21ABN8720PERYUOZ290001

**FREE DOWNLOAD**

**Comments:**

[DannyDeuceman](#): 2013-12-03 at 10:32 CET

Works great! Thank you. :)

Figure 6: The Illegal Description Page

**Page 4:**

The last page consisted of a ‘thank you’ message and download link. Whether they log out from the pirate page or the legal page, each login page had a similar ‘thank you’ message. An example of the web page can be seen below (Figure 7).

## Finance EZ Excel Calculator

Thank you for buying Finance EZ Excel Calculator.

**Instructions:**

1. You will have to click "DOWNLOAD" button below to download the software.
2. When you click DOWNLOAD, you will see a bar at the bottom of the screen asking you whether you want to save or open the program. Please select "SAVE".

You may click CONTINUE to download the software.

DOWNLOAD

After downloading the software, please click: EXIT

Figure 7: The Thank You Page after purchase

### 4.9 Databases

The website pages were linked to a database. The database contained a list of all the gift card numbers being used in the study. If the subject logs into the program, they must enter the last four digits of their gift card number. This number will be checked against the information in the database. If the entered number did not match or had already been used, an error message appeared.

Two of the subjects' actions was recorded by the program and saved to the database.

- a. The subjects' download decision recorded as 'Pay' or 'No Pay'.
- b. Every page the subject visits, along with the order of the pages visited and duration of time spent on each page.

## **Chapter 5: Statistical Analysis and Results**

This experiment examined gender differences in identity based social influence on software piracy behavior. It covered three treatment groups (Control, Unethical Social Influence, Ethical Social Influence). Unethical Social Influence and Ethical Social Influence were repeated with two different actors, a male and a female. Each treatment was ran in three different sessions to assure the success of each session. As such, if any issues arose, only around 10 gift cards would go to waste, and only around 10 new subjects would be needed (as opposed to 30, if all subjects were in one group). Further, it is far easier to control an experimental session with only 10 subjects, as opposed to one with 30.

In this section, the results of the experiment are reported.

### **5.1 Data Cleansing**

As data was recorded and obtained from the experimental setup, some data were either not recorded or recorded incorrectly. The procedure of correcting or removing inaccurate data is called data cleansing, and here is how this problem was solved in the experiment at hand:

#### **Missing Data in the Questionnaire:**

During the experiment, subjects were handed a questionnaire to fill in, after they finished the experiment. For some subjects, some questions in the questionnaire were not answered. In such cases, the average response of the same item from the same manipulation session was taken for each missing item.

**No Matching ID's:**

If the questionnaire did not have the corresponding 4-digit number on it, matching it to the log in number on the website, the data were dropped.

**Several Attempts of Downloading by Subjects:**

During the experiment, the subjects were able to use the back button on the keyboard to go back and change their decision multiple times. In such cases, the first decision made by the subject was recorded.

**Sabotaged Sessions:**

If in any treatment session, the treatment had any sort of 'damage' (e.g.: a subject spoke, or an actor failed to deliver their lines correctly), the data from that session was dropped, and the session was re-run.

**5.2 Variable Definitions and Measures**

The dependent and independent variables are discussed in this section:

**5.2.1 Dependent Variable**

Piracy Decision - in the experiment, the software monitors subjects' actions and records it in a database. Subjects can make two decisions, pirate the software from the illegal site (no pay), or purchase software from the legal site (pay). The piracy decision is coded as 0 [No Pay (i.e.: Pirate)] or 1 [Pay (i.e.: Not pirate)].

**5.2.2 Independent Variable**

Social Influence - is the state where an individual's views or choices (in this case the confederate actor) get carried on by others' (in this case the subjects)

statements or behaviors. This is deployed by the confederate actor in the unethical social influence and ethical social influence manipulations in the experiment. Unethical influence and ethical influence are manipulated in different treatment sessions. Social influence is a categorical variable, coded as 0 (No Social Influence), -1 (Unethical Social Influence), or 1 (Ethical Social Influence).

### 5.3 Descriptive Statistics

Subjects were recruited from the UAE University. Subjects were recruited from different classes, targeting students of both genders from different backgrounds and majors. The students were told that participation in the experiment is voluntary.

Two hundred and one subjects were recruited. It is important to note that the UAE University's population is mainly female, therefore, we had a difficult time recruiting males. Nevertheless, the all treatment groups included a subjects from both genders. The general characteristics of the subject sample is displayed in Tables 6 through 10

Table 6: Gender Characteristics of Sample

Gender	Count
Male	28
Female	173

Table 7: Ethnicity Characteristics of Sample

Ethnicity	Count
African American	0
Caucasian	0
Hispanic	0
Middle Eastern	185
Native American	0
Oriental	4
Pacific Islander	0
South Asian	2
Other	10

Table 8: Age Characteristics of Sample

Age	Count
<18	0
18-29	201
30-39	0
40-49	0
>50	0

Table 9: Student Status Characteristics of Sample

Ethnicity	Count
Freshman	6
Sophomore	44
Junior	75
Senior	33
Graduate	43

Table 10: Student Major of sample

Major	Count
Accounting	3
Economics	12
Finance	13
Info Sys	91
Management	23
Marketing	4
Other	55

## 5.4 Piracy Rate

During the experiment, the decision of each subject was recorded and saved in a database. The piracy rate by treatment group can be seen in Table 11. The planned comparisons for Software Piracy Rate can be seen in Tables 11 through Table 14. These will be discussed in detail below.

Table 11: Piracy Percentage by Treatment Group

Treatment groups	Control Treatment	Unethical Social Influence Treatment		Ethical Social Influence Treatment	
		Male actor	Female actor	Male actor	Female actor
Total Subjects	43	36	43	36	43
Pay (Not Pirate)	9	8	9	15	11
No Pay (Pirate)	34	28	34	21	32
% Piracy	79.06%	77.77%	79.06%	58.33%	74.41%

Table 12: Planned Comparisons for Software Piracy Rate

		Male Unethical Social Influence	Male Ethical Social Influence	Female Unethical Social Influence	Female Ethical Social Influence
Control	<i>Expected Directionality</i>	$PiracyRate_{Control} < PiracyRate_{Unethical-Male}$	$PiracyRate_{Control} > PiracyRate_{ethical-Male}$	$PiracyRate_{Control} < PiracyRate_{Unethical-Female}$	$PiracyRate_{Control} > PiracyRate_{Ethical-Female}$
	<i>Meets Expected Directionality?</i>	NO $PiracyRate_{Control} > PiracyRate_{Unethical-Male}$	YES	NO $PiracyRate_{Control} = PiracyRate_{Unethical-Female}$	YES
	<i>Significance</i>	Not Significant (p=0.552)	Significant (p=0.040)	Not Significant (p=0.604)	Not Significant (p=0.400)

Mathematical probabilities, such as p-values, starts from 0 (significant) to 1 (not significant), where p-value is the measure of the evidence strength against a null hypothesis (Warner, 2008). Mathematically speaking, outcomes yielding a p-value of



0.10, or less, are considered statistically significant (Warner, 2008). The smaller the p-value, the greater the evidence for (or in some cases against) the null hypothesis.

Based on piracy percentage measure, the piracy rate in the Control Treatment was not significantly higher than the piracy rate in Male Unethical Social Influence Treatment (79.06% versus 77.77%,  $p=0.552$ ) as shown in Tables 11 and 12. Thus, the Male Unethical Social Influence Treatment null hypothesis 1 was not supported. In Figure 8, a bar chart comparison between Control Condition and Male Unethical Social Influence decisions is displayed. The piracy rate in the Control Treatment was equal to the piracy rate in Female Unethical Social Influence Treatment (79.06% versus 79.06%,  $p=0.604$ ). Therefore, the Female Unethical Social Influence Treatment null hypothesis 1 was not supported. In Figure 9, a bar chart comparison between Control Condition and Male Unethical Social Influence decisions is displayed.

The piracy rate in the Control Treatment was significantly higher than the piracy rate in Male Ethical Social Influence Treatment (79.06% versus 58.33%  $p=0.040$ ). Thus, the Male Ethical Social Influence Treatment null hypothesis 2 was supported. The piracy rate in the Control Treatment was not significantly higher than the piracy rate in the Female Ethical Social Influence Treatment, albeit the directionality of this comparison was met (79.06% versus 74.41%  $p=0.400$ ). Thus, the Female Ethical Social Influence Treatment hypothesis 2 was not supported. In Figures 10 and 11, the bar charts comparison between Control Condition and Male Ethical Social Influence decisions and between Control Condition and Female Ethical Social Influence decisions are displayed.

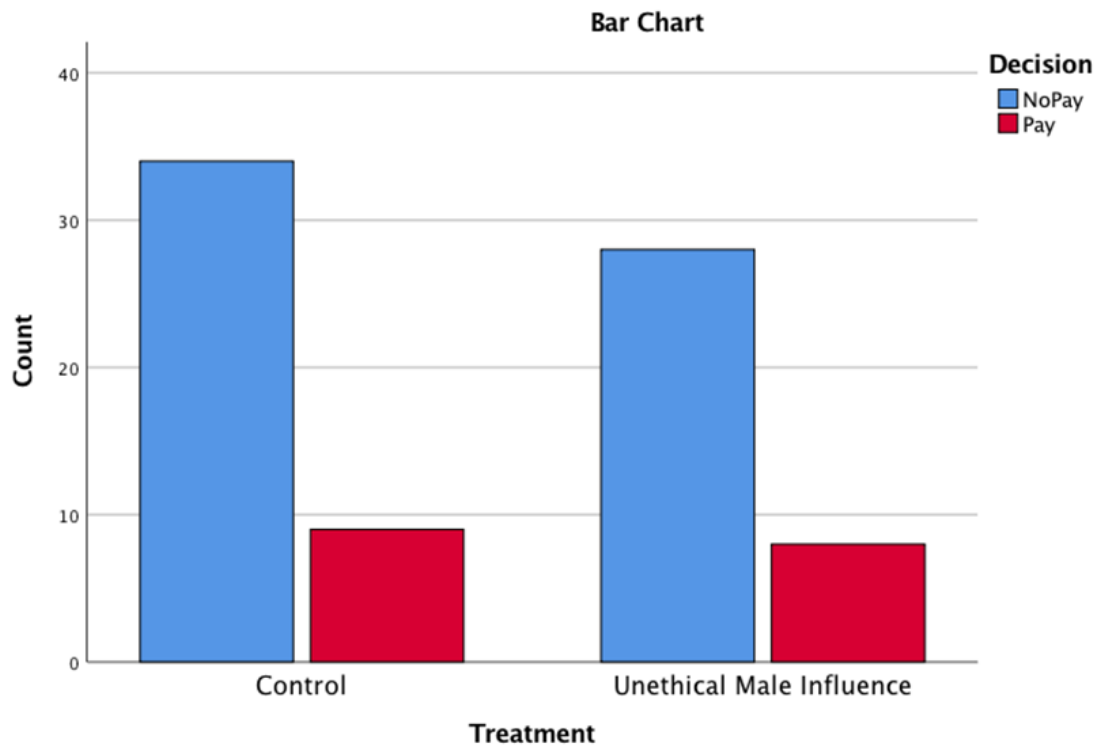


Figure 8: A Bar Chart Comparison between Control Condition and Male Unethical Social Influence

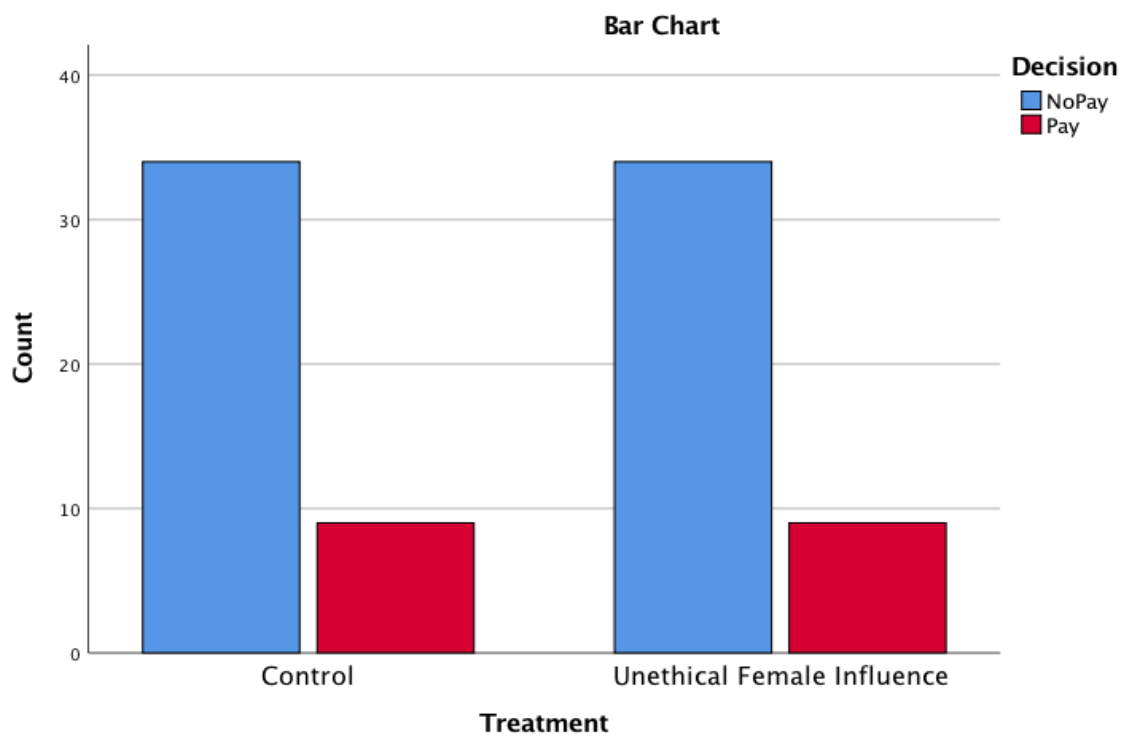


Figure 9: A Bar Chart Comparison between Control Condition and Female Unethical Social Influence

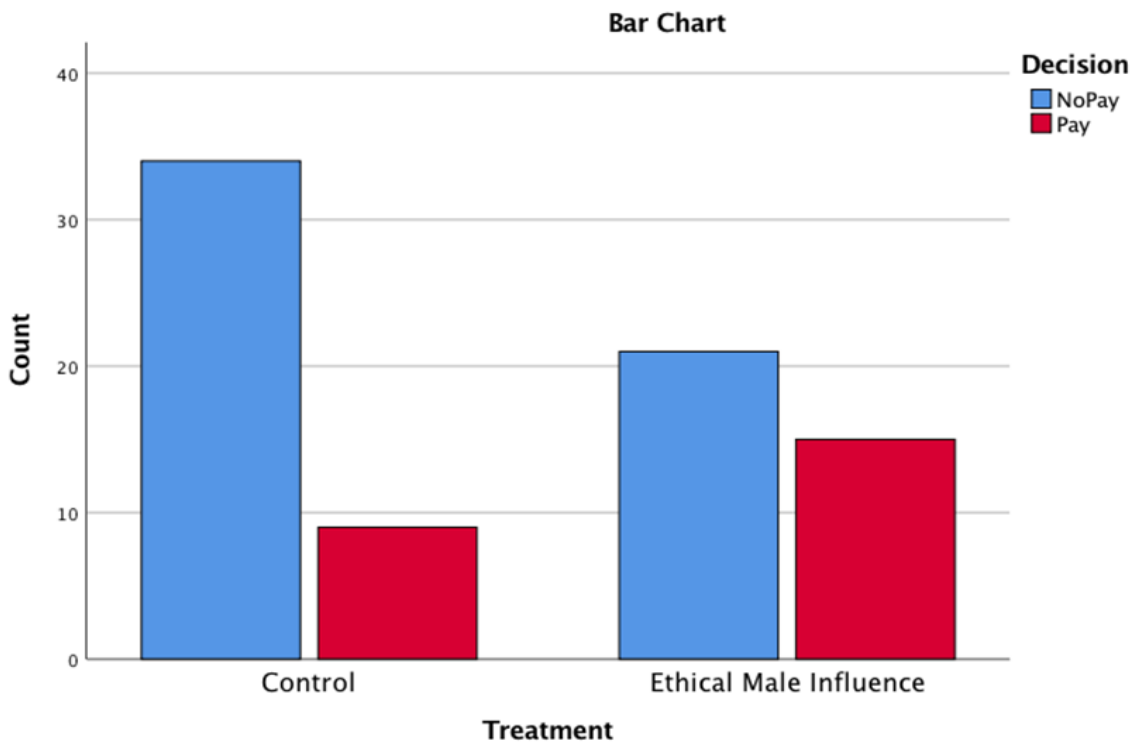


Figure 10: A Bar Chart Comparison between Control Condition and Male Ethial Social Influence

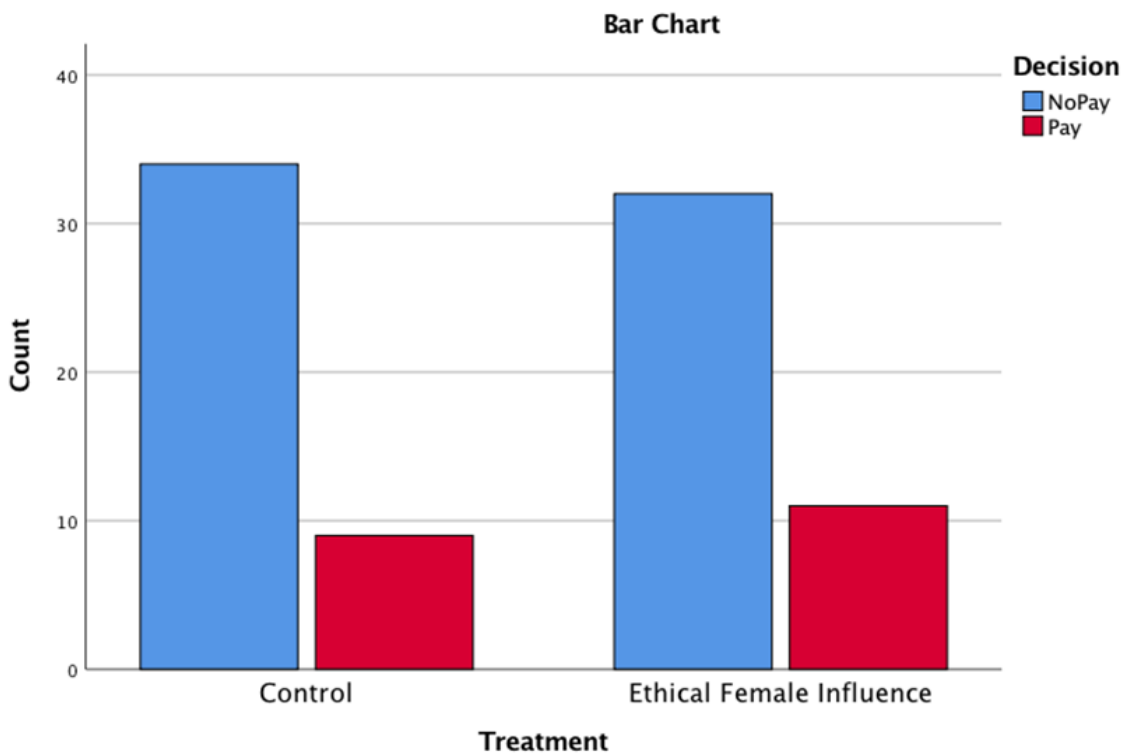


Figure 11: A Bar Chart Comparison between Control Condition and Female Ethical Social Influence

Table 13: Planned Comparisons for Male Unethical Social Influence

		Male Ethical Social Influence	Female Unethical Social Influence
Male Unethical Social Influence	<i>Expected Directionality</i>	$\text{PiracyRate}^{\text{Unethical-Male}} > \text{PiracyRate}^{\text{Ethical-Male}}$	$\text{PiracyRate}^{\text{Unethical-Male}} > \text{PiracyRate}^{\text{Unethical-Female}}$
	<i>Meets Expected Directionality?</i>	YES	YES
	<i>Significance</i>	Significant (p=0.064)	Not Significant (p=0.552)

Upon further analysis, it can be seen that the Male Ethical Social Influence Condition was significantly lower in piracy rate than the Male Unethical Social Influence Condition. (58.33% versus 77.77%, p=0.064) as shown in Tables 11 and 13. This further supports that the Male Ethical Social Influence Treatment was effective.

However, the piracy rate in the Male Unethical Social Influence Condition was not significantly lower than the piracy rate in the Female Unethical Social Influence, although the directionality of this comparison was accurately predicted. (77.77% versus 79.06%, p=0.552). Hence, the Female Unethical Social Influence Treatment was not as anticipated, and hypothesis 3 was not supported.

Table 14: Planned Comparisons for Male Ethical Social Influence

		Female Ethical Social Influence
Male Ethical Social Influence	<i>Expected Directionality</i>	$\text{PiracyRate}^{\text{Ethical-Male}} < \text{PiracyRate}^{\text{Ethical-Female}}$
	<i>Meets Expected Directionality?</i>	YES
	<i>Significance</i>	Significant (p=0.101)

Lastly, in comparing the piracy rate in the Male Ethical Social Influence Condition and the Female Ethical Social Influence, it can be seen that the Male Ethical Social Influence Condition was significantly lower than the piracy rate in the Female

Ethical Social Influence, as originally hypothesized in H4 (58.33% versus 74.41%,  $p=0.101$ ) as shown in Tables 11 and 14. Hence, this hypothesis was supported.

### 5.5 Social Influence Manipulation Check

After the software acquisition, each subject answered a post-experiment questionnaire for the purpose of checking whether the manipulations worked as expected, as well as to gather background information about the subjects. The questionnaire can be found in Appendix A. For the aforementioned manipulation checks, on page 6, Items 10, 11, 12, and 13 are shown in Table 15. These were the manipulation checks related to the Social Influence Treatment Conditions. After reverse coding items 12 and 13, the answer choice “Yes” corresponded to a subject perceiving Unethical Social Influence (coded as ‘-1’), “No” corresponded to a perceived Ethical Social Influence (coded as ‘1’), and “Don’t Know” corresponded to no perceived Social Influence (coded as ‘0’).

Table 15: Social Influence Manipulation Check Items

The student in the last row was going to download the software from the free site.	Yes	No	Don't Know
The student in the last row was going to behave unethically.	Yes	No	Don't Know
The student in the last row was going to buy the software from the legal site.	Yes	No	Don't Know
The student in the last row was going to behave honestly.	Yes	No	Don't Know

The average of the items was taken for all subjects to assure that the perceived social influence the subjects experienced met the real experimental manipulations, as originally planned. Table 16 shows the average social influence manipulation check scores of each item separately, while ‘Influence 4’ is the merging of all items, ‘Influence 3’ is the merging of items 10,12 and 13, and ‘Influence 2’ is the merging of only item 12 and 13. The rationale for these combinations is explained in Table 16.

Table 16: Average Social Influence Manipulation Check Scores

Average Influence Manipulation Check Score (-1 = Unethical; 1 = Ethical)	Control	Male Unethical Social Influence	Male Ethical Social Influence	Female Unethical Social Influence	Female Ethical Social Influence
Item 10	0.42	-0.06	-0.19	-0.23	-0.30
Item 11	0.07	-0.14	0.17	0.09	0.05
Item 12	-0.14	-0.06	-0.19	0.07	0.12
Item 13	-0.12	0.03	0.08	-0.02	0.07
Influence 4	-0.15	-0.06	-0.03	-0.03	-0.02
Influence 3	-0.22	-0.03	-0.10	-0.07	-0.04
Influence 2	-0.13	-0.01	-0.06	0.01	0.09

The Cronbach’s Alpha test statistic was used in this study to determine which item should be dropped, to reach a more reliable scale for the manipulation checks. After testing, it was determined that Influence 2 was the most reliable scale with a Cronbach’s Alpha of 0.70, which is the minimum cutoff for an internally valid scale in the social sciences (using SPSS reliability check feature, steps can be seen in

Appendix B). The planned comparisons for the social influence manipulation check scores can be seen in Table 17.

Table 17: Planned Comparisons for Social Influence Manipulation Check Scores

		Male Unethical Social Influence	Male Ethical Social Influence	Female Unethical Social Influence	Female Ethical Social Influence
Control	<i>Expected Directionality</i>	$\text{Influence}_{\text{Control Male}} > \text{Influence}_{\text{Unethical-Male}}$	$\text{Influence}_{\text{Control Male}} < \text{Influence}_{\text{Ethical-Male}}$	$\text{Influence}_{\text{Control Female}} > \text{Influence}_{\text{Unethical-Female}}$	$\text{Influence}_{\text{Control Female}} < \text{Influence}_{\text{Ethical-Female}}$
	<i>Meets Expected Directionality?</i>	NO $\text{Influence}_{\text{Control Male}} < \text{Influence}_{\text{Unethical-Male}}$	YES	NO $\text{Influence}_{\text{Control Female}} > \text{Influence}_{\text{Unethical-Female}}$	YES
	<i>Significance</i>	Not Significant P=0.334	Not Significant P=0.600	Not Significant P=0.255	Significant P=0.093

By evaluating the comparisons, we are able to tell whether the manipulations in the experiments were accepted by the subjects as originally anticipated. The expected directionality in social influence is a measure of the average value of the subjects' perceived social influence in any given treatment group [-1 = unethical influence; 1 = ethical influence]. As such, " $\text{Influence}_{\text{Control Male}} > \text{Influence}_{\text{Unethical-Male}}$ " means that there would be less unethical social influence in the Control Treatment versus the Male Unethical Social Influence Treatment.

The effect of unethical influence was to be determined by the comparing subjects' average manipulation check responses in the Control Condition (treatment 1, no social influence) to the Negative Social Influence Condition (treatment 2 and treatment 4: Male Unethical Social Influence Condition and Female Unethical Social

Influence Condition). As can be seen, the Unethical Social Influence manipulation has failed. Social influence in the Male Unethical Social Influence Condition was less unethical than the social influence in the Control Condition ( -0.13 versus -0.01 [-1 = unethical influence; 1 = ethical influence] with  $p=0.334$ ). While the Female Unethical Social Influence was also less unethical than social influence in the Control Conduction ( -0.13 versus 0.011 [-1 = unethical influence; 1 = ethical influence] with  $p=0.600$ ). Thus, the Unethical Social Influence Treatment did not deliver the effect it was intended throughout both the Male Unethical Social Influence and Female Unethical Social Influence Treatment groups. So, once again, a simple comparison of piracy rates between the Control Treatment, the Male Unethical Social Influence Treatment and Female Unethical Social Influence Treatment is not sufficient to test the effect of social influence. This will be discussed further in the next chapter.

The effect of ethical influence was to be determined by comparing subject behavior in the Control Condition (treatment 1, no social influence) to the positive social influence condition (treatment 3 and treatment 5: Male Ethical Social Influence Condition and Female Ethical Social Influence Condition). As can be seen, the Ethical Social Influence manipulation was in the expected directionality in both cases. Social influence in the Male Ethical Social Influence Condition was less unethical than the social influence in the Control Condition ( -0.13 versus -0.06 [-1 = unethical influence; 1 = ethical influence] with  $p=0.255$ ), and the Female Ethical Social Influence was also less unethical than the social influence in the Control Conduction ( -0.13 versus 0.09 [-1 = unethical influence; 1 = ethical influence] with  $p=0.4093$ ). Thus, while not significant in both cases, the Ethical Social Influence Treatment was marginally successful in the Male Ethical Social Influence Treatment group and successful in the



Female Ethical Social Influence Treatment group. This will be further discussed in the next chapter.

### **5.6 Social Desirability Bias**

Social Desirability Bias (SDB) is the tendency to answer a survey item in a favorable manner in order to seem more favorable to others. To address if the current experiment had any sort of SDB-related confounding issues, the questionnaire given to subjects after the completion of the experiment contained forty questions related to SDB, known as The Balanced Inventory of Desirable Responding (BIDR). Each question was answered on a scale of 1 (Strongly Agree) to 7 (Strongly Disagree). If subjects chose 'extreme answers', such as 1's or 2's, it indicates a high probability of dishonesty. As such, score of 1 and 2 are converted to 1, and summed, while scores above 2 are converted to 0. The converted 40 BIDR item scores of each subject are added up, and after conversion and summation, all subjects have BIDR scores of between 0 (not biased) and 40 (highly biased). By using a Binary Logistic Regression in SPSS (more details can be found in Appendix B), it can be seen how closely associated the BIDR scores are to the subjects' original piracy decision. If the two are significantly correlated, this implies a strong bias in the results. If the two are not significantly related, this implies there is no SDB present in the experimental responses. After running the analysis, it can be seen that the two variables (BIDR and Piracy Decision) are not significantly related ( $p=0.928$ ), which designates that SDB is not factor in the investigation. To further confirm this result, another method of evaluation was conducted, wherein an ANOVA test for mean variance was ran to see if there was any significant difference in BIDR scores between individuals that had pirated, and those that did not. Once again, the same result was obtained using

ANOVA ( $p=0.929$ ), and we can be assured that SDB did not confound the results of the experimental analysis, thus supporting Hypothesis 5.

The overall results of the analyses in relation to the hypotheses can be seen below in Table 18.

Table 18: Results of the Hypotheses

H1: The proportion of individuals engaging in software piracy in the Unethical Social Influence Condition will be higher than the proportion of individuals engaging in software piracy in the Control Condition for both male and female actors.	Not supported
H2: The proportion of individuals engaging in software piracy in the Ethical Social Influence Condition will be lower than the proportion of individuals engaging in software piracy in the Control Condition for both male and female actors.	Partially supported
H3: The proportion of individuals engaging in software piracy under the male confederate actor's influence will be higher than the proportion of individuals engaging in software piracy under the female confederate actor's influence for the Unethical Social Influence Condition.	Not supported
H4: The proportion of individuals engaging in software piracy under the female confederate actor's influence will be higher than the proportion of individuals engaging in software piracy under the male confederate actor's influence for the Ethical Social Influence Condition.	Supported
H5: The social desirability scores of individuals who pirate will not be different than the social desirability scores of individuals who do not pirate.	Supported

## **Chapter 6: Conclusion**

The aim of this thesis was to study software piracy behavior under specified conditions. In the research at hand, an experiment was conducted. The goal of the experiment was to study was to examine if males or females are more likely to influence a group of their peers to either pirate or abstain from pirating a piece of software.

In this section, the key findings of the experiment will be summarized and discussed. Later, the contributions of the study will be discussed, and lastly the limitations of the study and the future research possibilities are mentioned.

### **6.1 Discussion of Key Findings**

As the study was conducted, this discussion of the key findings will be presented below.

#### **6.1.1 Discussion of Results for Study**

The research objective of the study is to examine the effect of social influence on software piracy behavior in an experimental setting. This study tests Hypothesis 1 through Hypothesis 4. While Hypothesis 5 is to examine the success of eliminating social desirability bias.

The results of each of the hypothesis tests are discussed below:

#### **Hypothesis 1: Control Versus Unethical Social Influence**

In the first hypothesis, it was assumed that the proportion of individuals engaging in software piracy in the Unethical Social Influence Condition will be higher than the proportion of individuals engaging in software piracy in the Control Condition

for both male and female actors. However, the piracy rate in the Control treatment was not significantly higher than the piracy rate in both Male Unethical Social Influence treatment and Female Unethical Social Influence Treatment. Therefore, the hypothesis was not supported. In addition, the Unethical Social Influence manipulation has failed. The perceived level of Social influence in the Male Unethical Social Influence Condition was less unethical than the social influence in the Control Condition. Moreover, the Female Unethical Social Influence was also less unethical than social influence in the Control Conduction. This explains why the comparison between the piracy rates was the opposite of what hypothesized. The subjects seem to not have felt negative social influence by the actors. Subjects needed to understand the actor and the Research Assistant's lines fully, and if they were not paying attention or listening, they may have missed the treatment cues, thus causing the issues mentioned. This is further mentioned as one of the limitations of the study.

### **Hypothesis 2: Control Versus Ethical Social Influence**

In the second hypothesis, it was assumed that the proportion of individuals engaging in software piracy in the Ethical Social Influence Condition will be lower than the proportion of individuals engaging in software piracy in the Control Condition for both male and female actors. The piracy rate in the Control treatment was significantly higher than the piracy rate in Male Ethical Social Influence treatment. On the other hand, the piracy rate in the Control treatment was not significantly higher than the piracy rate in the Female Ethical Social Influence treatment. Thus, the Male Ethical Social Influence treatment null hypothesis was supported, but the Female Ethical Social Influence portion of Hypothesis 2 was not supported. Moreover, the Male Ethical Social Influence Condition was significantly lower in piracy rate than the

Male Unethical Social Influence Condition, thus further supporting that the Ethical Social Influence for the Male actor was effective.

When the effect of the ethical influence was determined by comparing the manipulation checks in the Control Condition (treatment 1, no social influence) to the Positive Social Influence Condition (treatment 3 and treatment 5: Male Ethical Social Influence Condition and Female Ethical Social Influence Condition, respectively), it was found that the Ethical Social Influence manipulation was in the expected directionality in both cases. This meant that social influence in the Male Ethical Social Influence Condition was less unethical than the social influence in the Control Condition and the Female Ethical Social Influence was also less unethical than the social influence in the Control Conduction. Thus, while the manipulation check was not significant in both cases, the Ethical Social Influence Treatment was somewhat successful in the Male Ethical Social Influence treatment group and fully successful in the Female Ethical Social Influence treatment group.

### **Hypothesis 3: Male Unethical Social Influence Versus Female Unethical Social Influence**

The third hypothesis, assumed that the proportion of individuals engaging in software piracy under the male confederate actor's influence would be higher than the proportion of individuals engaging in software piracy under the female confederate actor's influence for the Unethical Social Influence Condition. The statistical findings here indicate that the piracy rate in the Male Unethical Social Influence Condition was not significantly lower than the piracy rate in the Female Unethical Social Influence, although the directionality of this comparison was accurately predicted. In addition, according to the comparisons of the manipulation checks, the Male Unethical Social

Influence Treatment and Female Unethical Social Influence Treatment was not sufficient to test the effect of unethical social influence. As mentioned prior, the subjects seem to not have felt the negative social influence by the actors, and this would need to be examined further.

#### **Hypothesis 4: Male Ethical Social Influence Versus Female Ethical Social Influence**

In the fourth hypothesis, it was assumed that the proportion of individuals engaging in software piracy under the female confederate actor's influence will be higher than the proportion of individuals engaging in software piracy under the male confederate actor's influence for the Ethical Social Influence Condition. In the statistical results, comparing the piracy rate in the Male Ethical Social Influence Condition and the Female Ethical Social Influence, it can be seen that the Male Ethical Social Influence Condition was significantly lower than the piracy rate in the Female Ethical Social Influence, thus the hypothesis was supported.

As mentioned in previous chapters, this can be explained by the fact that males tend to have higher levels of social power than females in cases such as the one at hand (e.g.: Carli and Eagly, 2001; Depret and Fiske, 1993; Johnson, 1976; Kanter, 1977; Lips, 1991; Lorber, 1998). Due to this, people tend to agree more often with males' verbal contributions in a social setting, as opposed to females', and eventually individuals will submit more often to the views of a male than those of a female (Berger et al, 1980). Thus, it is not surprising that the Male Ethical Influence was successful in lowering piracy rates, while the Female Ethical Influence was not. Such findings indicate that gender differences in influence do exist and require further evaluation.

### Hypothesis 5: Social Desirability Bias

In the fifth hypothesis, it was assumed that the social desirability scores of individuals who pirate will not be different than the social desirability scores of individuals who do not pirate. In essence, this implies that Social Desirability Bias would be absent from the experiment (measured through an established scale known as the Balanced Inventory of Desirable Responding, or BIDR). By using a Binary Logistic Regression in SPSS, it can be seen how closely associated the BIDR scores are to the subjects' piracy decisions. After running the analysis, it can be seen that the two variables (BIDR and Piracy Decision) are not significantly related ( $p=0.928$ ), which confirms that SDB is not factor in the investigation. To further validate this result, an ANOVA test was ran comparing the Social Desirability scores of individuals that pirated the software, with those that did not, and this yielded the same results. As such, fifth hypothesis was fully supported.

The summary of the findings can be seen in Table 19.

Table 19: Key Findings

Hypothesis	Finding
H1	Neither the male nor female actor was successfully able to exert unethical social influence and increase the piracy rates.
H2	The male actor was able to successfully exert ethical social influence and decrease the piracy rates. However, the female actor was not able to exert ethical social influence and lower the piracy rates.
H3	The male actor was not able to exert unethical social influence and raise piracy rates more than the female actor.
H4	The male actor was able to successfully exert ethical social influence and lower the piracy rates more than the female actor.
H5	Social desirability bias was successfully eliminated in all sessions.

Next, the contributions of this study will be discussed.

## **6.2 Methodological Contribution**

Commonly, software piracy research relies on studies and questionnaires, which are a self-report of previous piracy behavior, or on self-report responses of subjects' intention to pirate based on a theoretical plot. As such, these tend to contain a level of social desirability bias, which in turn jeopardizes the validity of the results of these studies. Therefore, our experimental study, measuring the effect of gender differences in identity-based social influence on software piracy behavior, is truly novel. We have demonstrated that by utilizing an experiment with real money at stake, social desirability bias can be eliminated, even in studies with ethically sensitive topics.

## **6.3 Empirical Contribution**

Empirically, our study offers a few contributions. First, some gender differences in identification-based social influence on software piracy behavior were detected, albeit not in across each treatment group as originally hypothesized. In our experiment, we have demonstrated that males exerted more ethical influence than females in convincing a group of their peers to abstain from pirating a piece of software. Further, we have demonstrated that it is possible for software piracy rates to be lowered, simply through the application of ethical social influence. Such empirical information is helpful in learning more about software piracy behavior in general, as well as about identity-based social influence as well as gender differences therein, within the software piracy area.



Further, we have added to the empirical evidence that experiments utilizing real money can be used to assess piracy behavior without jeopardizing the study to the common validity pitfalls of social desirability bias.

#### **6.4 Theoretical Contribution**

Theoretically, we provided a new view of the software piracy phenomenon, as previous research has not mentioned social influence in the same light as herein, in particular, the effects of gender differences in identity-based social influence on software piracy behavior. Once again, we have expanded the theory of software piracy to include the variables of gender in identity-based social influence, and as mentioned above in the empirical contributions, have begun to attempt to identify the possible differences that may exist between the social influence a male and female exert related to the software piracy framework.

#### **6.5 Practical Contribution**

The effect of gender differences in identity-based social influence on software piracy behavior was detected and discussed, and these results could be incorporated into the fights against software piracy. However, the manner and the efficacy of this undertaking would have to be further studied and evaluated in a practical context.

#### **6.6 Limitations**

The conducting of experiments calls on the need for compromises in the choice of research conditions. No experiment is perfect, and as such there are always limitations to the study. First, the research assistant was in the experimental room to conduct the study, and interacted with the confederate actors in the presence of the subjects during the sessions. The research assistant was extremely aware of the

possibility of subconsciously making demands. While this is not believed to be the case, it is stated as a point of information. Second, the study was conducted in an existing computer classroom. There is no flexibility to position the computer monitor display, such that subjects cannot see the actions of other subjects. There is no evidence that such inter-subject influence exists, but it needs to be acknowledged that the possibility exists. Third, the budget for the experiment was limited, the visa gift cards number were limited. Each session had about 10 subjects, and each treatment was ran three times. If more visa gift cards were at hand, more sessions would be done for the sake of accuracy. Finally, even though the positions of the actors were selected carefully, there is still a chance that the subjects were not able to notice the actor or hear them clearly. While it seems this was not the case, subjects still needed to understand the actor and the Research Assistant's lines fully, and if they were not paying attention or listening, they may have missed the treatment cues, thus causing the subjects to not behave as originally expected. Although this was painstakingly planned for, and monitored through manipulation checks, it seems that some further refinement in the experimental procedures is still needed, especially for the Unethical Influence treatment groups. As such, there are some limitations in this study.

## **6.7 Conclusion**

Driven by gaps in previously published literature, the study presented here is an experimental investigation into the gender differences in identity-based social influence. In essence, the study examined if males or females are more likely to influence a group of their peers to either pirate or abstain from pirating a piece of software. While this topic is previously unstudied in the field of software piracy, it could be potentially useful in such areas as anti-piracy advertising. Further, as most of

the published studies in software piracy are inclined to social desirability bias (as these studies traditionally rely on surveys and responses to paper-based scenarios), the study presented herein has been designed with the specific objective of avoiding social desirability bias by having real money at stake in an experimental setting. In sum, the examination demonstrated that a male was able to exert ethical social influence on their peers (to not pirate) more so than their female counterpart, while the unethical social influence (to pirate) was unfortunately not successfully measured due to confounding issues. In addition, social desirability bias was successfully avoided in the study by having real money at stake.

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## Appendices

### Appendix A: Questionnaire Items and Website for The Experiment

#### A.1: Questionnaire Items (English Version)

Last four digits of your gift card number: \_\_\_\_\_

## Software Acquisition Practices

## Questionnaire

**PLEASE READ CAREFULLY.**

### INSTRUCTIONS

1. Write the last four digits of your gift card on the top right-hand corner of this page.
2. In responding to the questionnaire, there is no right or wrong answer. Please provide the most appropriate response.
3. Please respond to all items.

Instructions: Please state the extent to which you agree or disagree with the following statements based on the conditions in the experiment. (Circle one for each statement).

I fully understood the conditions of the experiment.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
Overall, the website was easy to use and understand.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I had problems finding the 'BUY NOW' button on the website.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I noticed that there was an advertisement for a free download of the software on the website.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
It was clear that the free download option was from an illegal pirate site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I believe that the university environment promotes piracy.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
A student disrupted the experimental session.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
The disrupting student claimed he had found a free download link to get the software program.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)

The disrupting student asked whether it was okay to get the software from the free download link.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I did not understand what the disrupting student's question was regarding.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
The research assistant said that it was not okay to get the software from the free download link.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I interpreted the research assistant's statement to mean there would be little or no risk of punishment for getting the software through the free link.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I was not able to relate to the student who disrupted the experimental session.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I could not identify with the student who disrupted the experimental session.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)

I felt a rapport with the students who disrupted the experimental session	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
The student who disrupted the experimental session could easily be my friend.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
The student who disrupted the experimental session would not have fit in with my group of friends.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
The student who disrupted the experimental session is likable.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I noticed the advertisement for the free download link only after the disrupting student mentioned it.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)

Instructions: Please respond to the following items based on the conditions in the experiment. (Circle one for each statement).

I turned around and saw the student in the last row who asked a question during the session.	Yes			No				No one asked a question	
The student who asked the question could easily have been a friend.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)	No one asked a question	
The downloading of the software from the free site would have been unethical.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)		
It would be unethical to download the software from the free site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)		
It would not be wrong to download the software from the free site	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)		
It would be dishonest to download the software from the free site	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)		
It would be fraudulent to download the software from the free site	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)		
It would be moral to download the software from the free site	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)		
I would not have been reprimanded if the research assistant had reported that I downloaded the software from the free site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)	Don't Know	

I would have been criticized if the research assistant had reported that I downloaded the software from the free site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)	Don't Know
I would not have been given a warning if the research assistant had reported that I downloaded the software from the free site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)	Don't Know
I would have been disapproved of if the research assistant had reported that I downloaded the software from the free site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)	Don't Know
I would have been punished if the research assistant had reported that I downloaded the software from the free site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)	Don't Know
I would have been chastised if the research assistant had reported that I downloaded the software from the free site.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)	Don't Know
The student in the last row was going to download the software from the free site.	Yes			No			Don't Know	
The student in the last row was going to behave unethically.	Yes			No			Don't Know	

The student in the last row was going to buy the software from the legal site.	Yes		No		Don't Know		
The student in the last row was going to behave honestly.	Yes		No		Don't Know		
How much money were you given to acquire the software?	\$10	\$20	\$30	\$40			
The software that you are getting is:	A physical package			A digital download			
The software costs (approximately):	\$5	\$10	\$15	\$20			
The cost of the software is:	Affordable			Not affordable			
The cost of the software is:	Unfair			Fair			
In the study, it was clear that I could keep any money that I did not spend on the software.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)



Background Information

Instructions: Please circle one for each.

Gender		Male				Female				
Age		<18	18-29		30-39		40-49		>49	
Student Status		Freshman		Sophomore		Junior	Senior	Graduate		Other
Academic Major		Accounting	Economics	Finance	Info Sys		Management	Marketing	Other	
Ethnicity		African-American	Caucasian	Hispanic	Native American	Pacific Islander	Oriental	South Asian	Middle Eastern	Other
Work		Full-time			Part-time			Not Applicable		

Instructions: Based on your personal assessment, please indicate the extent to which you agree with the following statements. (Please circle one for each statement).

My first impressions of people usually turn out to be right.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
It would be hard for me to break any of my bad habits.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I don't care to know what other people really think of me.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have not always been honest with myself.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I always know why I like things.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
When my emotions are aroused, it biases my thinking.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
Once I've made up my mind, other people can seldom change my opinion.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I am not a safe driver when I exceed the speed limit.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I am fully in control of my own fate.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
It's hard for me to shut off a disturbing thought.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I never regret my decisions.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)

I sometimes lose out on things because I can't make up my mind soon enough.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
The reason I vote is because my vote can make a difference.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
My parents were not always fair when they punished me.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I am a completely rational person.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I rarely appreciate criticism.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I am very confident of my judgments.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have sometimes doubted my ability as a lover.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
It's all right with me if some people happen to dislike me.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I don't always know the reasons why I do the things I do.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I sometimes tell lies if I have to.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I never cover up my mistakes.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
There have been occasions when I have taken advantage of someone.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I never swear.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)

I sometimes try to get even rather than forgive and forget.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I always obey laws, even if I'm unlikely to get caught.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have said something bad about a friend behind his/her back.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
When I hear people talking privately, I avoid listening.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have received too much change from a salesperson without telling him or her.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I always declare everything at customs.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
When I was young I sometimes stole things.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have never dropped litter on the street.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I sometimes drive faster than the speed limit.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I never read sexy books or magazines.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have done things that I don't tell other people about.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I never take things that don't belong to me.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)

I have taken sick-leave from work or school even though I wasn't really sick.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have never damaged a library book or store merchandise without reporting it.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I have some pretty awful habits.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)
I don't gossip about other people's business.	1 (Strongly Agree)	2	3	4	5	6	7 (Strongly Disagree)

Instructions: Please separate this last sheet from the rest of your questionnaire and hand it in separately.

#### Debriefing and Results of the Study

If you have questions about the study, or would be interested in knowing the results, please provide us with your email below, or send an email to Prof Marton Gergely (mgergely@uaeu.ac.ae). Results will be available only after Jan 1, 2019.

Email: \_\_\_\_\_

#### CONFIDENTIALITY OF THE STUDY

Data gathering for the current study will continue through August 30, 2018. Please do not discuss the scenario or the questions that you answered with anyone. The success of the study depends on your cooperation.

I agree not to discuss any aspect of the study – what I did, what happened, what questions I completed – with anyone, including other subjects and others who are not participating in the study until Jan 1, 2019.

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

Please separate the last page from the rest of the questionnaire before handing it in.

## A.2: Questionnaire Items (Arabic Version)

آخر أربع أرقام من رقم بطاقة الهدية: \_\_\_\_\_

### ممارسات شراء البرمجيات

#### استبيان

#### الرجاء قراءة بعناية

#### التعليمات

1. أكتب الأرقام الأربعة الأخيرة من بطاقة الهدية في الركن الأيمن العلوي من هذه الصفحة.
2. لا توجد إجابة صحيحة أو خاطئة في الإجابة على الاستبيان. الرجاء الإجابة على حسب ملاءمة.
3. الرجاء الرد على كافة العناصر.

التعليقات: يرجى بيان المدى الذي تتفق أو تختلف مع البيانات التالية استناداً على الشروط في التجربة. (دائرة واحدة لكل بيان).

7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	فهمت تماماً تعليمات وشروط التجربة
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	بشكل عام، كان الموقع الإلكتروني سهل الاستخدام والفهم
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	واجهت مشاكل في العثور على زر "اشتر الآن" على الموقع
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لقد لاحظت أن هناك إعلان للتحميل مجاناً من البرنامج على الموقع
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	كان من الواضح أن خيار التحميل المجاني لموقع القرصنة غير قانوني
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	سيكون من غير الأخلاقي تحميل البرنامج من الموقع المجاني.
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لن يكون من الخطأ تحميل البرنامج من الموقع المجاني.
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	سيكون عملاً غير نزيهاً تحميل البرنامج من الموقع المجاني.
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	سيكون نوعاً من الاحتيال تحميل البرنامج من الموقع المجاني.



7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	سيكون تحميل البرنامج من الموقع المجاني سلوك أخلاقي.
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	أعتقد أن بيئة الجامعة تعزز أعمال القرصنة
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	يوجد طالب عطل الدورة التجريبية
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	الطالب الذي عطل التجربة ادعى أنه وجد رابط تحميل مجاني للحصول على البرنامج
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	الطالب الذي عطل التجربة تسأل عما إذا كان مسموح الحصول على البرنامج من رابط التحميل مجاناً
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	أنا لم أفهم سؤال الطالب الذي عطل التجربة
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	لم أتقبل الطالب الذي عطل الجلسة التجريبية.
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	شعرت بالترابط مع الطلاب الذين عطلوا الجلسة التجريبية
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	الطالب الذي عطل الجلسة التجريبية كان بالإمكان أن يكون صديقاً لي
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	الطالب الذي عطل الجلسة التجريبية سيكون شاذاً عن طبيعة صفات أصدقائي
7 أعارض (بشدة)	6	5	4	3	2	1 أوافق (بشدة)	الطالب الذي عطل الجلسة التجريبية شخص محبوب

7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	قال مساعد البحث أنه غير مسموح الحصول على البرنامج من رابط التحميل مجاناً
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	قاطعت حديث مساعد البحث لكي أوضح أنه سيكون هناك عائق بسيط أو غير معروف في حاله الحصول على البرنامج من وصلة تنزيل البرامج المجانية
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لم أستطيع تقبل ما كان يقوله الطالب الذي قاطع جلسة التجربة
7 أعارض (بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لاحظت الإعلان عن الرابط المجاني للتحميل إلا بعد ذكر الطالب الذي عطل التجربة

تعليمات: يرجى الرد على البنود التالية استناداً على الشروط في التجربة. (دائرة واحدة لكل بيان).

لم يسأل أحد سؤالاً	لا	نعم					التفت إلى الوراء لأرى الطالب في الصف الأخير الذي طرح سؤالاً خلال الدورة	
		6	5	4	3	2	1 (أوافق بشدة)	
لم يسأل أحد سؤالاً	7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	يمكن بسهولة أن يكون الطالب الذي طرح السؤال صديقاً لي
7 (أعارض بشدة)	6	5	4	3	2		1 (أوافق بشدة)	تحميل البرنامج من الموقع مجاناً كان عمل غير أخلاقي
لا أعلم	7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لن أتعرض لتوبيخ إذا مساعد البحث شكى أنني حملت البرنامج من الموقع مجاناً
لا أعلم	7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	كنت سأنتقد إذا أبلغ عني مساعد البحوث بأنني حملت البرنامج من الموقع المجاني
لا أعلم	7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لم أكن لأعطي تحذيراً لو أن مساعد البحوث لم يبلغ عني بأنني حملت البرنامج من الموقع المجاني.
لا أعلم	7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	كنت سوف أرفض إذا أبلغ عني مساعد البحوث بأنني حملت البرنامج من الموقع المجاني
لا أعلم	7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	كنت سأعاقب لو أن مساعد الأبحاث أبلغ باني قد قمت بتحميل البرنامج من الموقع المجاني

لا أعلم	7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	كنت ساعقب لو أن مساعد البحوث قد أبلغ باتي حملت البرنامج من الموقع المجاني.
لا أعلم	لا	نعم		الطالب في الصف الأخير كان سيحمل البرنامج من الموقع مجاناً				
لا أعلم	لا	نعم		الطالب في الصف الأخير كان سيتصرف بتصرف غير أخلاقي				
لا أعلم	لا	نعم		الطالب في الصف الأخير كان سيشتري البرنامج من الموقع القانوني.				
لا أعلم	لا	نعم		الطالب في الصف الأخير كان سيتصرف بتصرف نزيه.				
200 درهم	150 درهم	100 درهم	50 درهم	كم من الأموال تم منحك للحصول على البرنامج؟				
برنامج رقمي للتحميل	برنامج ذو أقرص مملوسة للتحميل		البرنامج الذي تحصل عليه هو:					
100 درهم	75 درهم	50 درهم	25 درهم	تكاليف البرمجيات (تقريباً):				
غير مكلف	مكلف		تكلفة البرنامج:					
غير عادل	عادل		تكلفة البرنامج:					
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	في الدراسة، كان واضحاً أنه بإمكانني الاحتفاظ بأي مبلغ لم أصرفه على البرنامج	

معلومات أساسية

تعليمات: رجاءً ضع دائرة على حدة.

أنثى		ذكر				الجنس			
>49		49-40		39-30		29-18		العمر	
أخرى	خريج	أقدم		سنة ثالثة		سنة ثانية	مستجد	الحالة الدراسية	
أخرى	التسويق	إدارة		نظم المعلومات	الشؤون المالية	الاقتصاد	المحاسبة	التخصص الأكاديمي	
أخرى	أمريكي من أصل أفريقي	القوقاز	من أصل إسباني	الأمريكيين الأصليين	جزر المحيط الهادئ	الشرقية	جنوب آسيا	الشرق الأوسط	الأصل العرقي
لا ينطبق		دوام جزئي		دوام كامل		العمل			

تعليمات: استناداً على التقييم الشخصي الخاص بك، يرجى بيان المدى الذي تتفق مع العبارات التالية.  
(الرجاء دائرة واحدة لكل بيان).

7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	انطباعي الأول عن الأشخاص في الأغلب يكون صحيح
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	يصعب علي التخلص من عاداتي السيئة
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لا يهمني رأي الناس عني
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لم أكن دائماً صادقاً مع نفسي
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا دائماً أعرف لماذا أحب الأشياء
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	حينما تثار مشاعري، فإنها ستؤثر على تفكيري
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	عندما أتخذ قرارى، فإنه من الصعوبة على الآخرين تغيير رأى
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا سائق غير أمين عندما أتعدى السرعة المحددة
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا المتحكم في مصيري
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	من الصعب علي تجنب التفكير المثير للقلق
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لا أتم أبداً على أي قرار أأخذه
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا في بعض الأحيان أخسر بعض الأمور بسبب عدم استطاعتي اتخاذ القرار في الوقت المفترض
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا أصوت والسبب لأن تصويتي يمكن أن يحدث فرقا
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	والداي لم يكونا دائماً على عدالة عندما يعاقبوني
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا شخص عقلائي تماماً

7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	نادراً ما أتقبل الانتقاد
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا واثق جداً من أحكامي
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا أحياناً أشك في مقدرتي كمحب
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لا مانع لدي إذا كان بعض الناس لا يرقونني
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لا أعرف دائماً الأسباب لماذا أقوم بفعل الأشياء التي أقوم بها
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا بعض الأحيان أكذب إذا اضطررت
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لا أخفي أخطائي أبداً
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لقد استغلّيت بعض الأشخاص في بعض المواقف
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لا أقسم أبداً
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا في بعض الأحيان أحاول الحصول على القصص بدلاً من المسامحة والنسيان
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا دائماً أتبع القانون، حتى ولو من غير المرجح أن أحاسب
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	قد تحدثت عن صديق لي بشكل سيئ بغيابة
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أتجنب الاستماع عندما يتحدث الأشخاص بخصوصية
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لقد تلقيت مبلغاً متبقياً (فكه) أكثر مما استحق من مندوب المبيعات دون أن أخبره
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا دائماً أعلن كل شيء عند الجمارك
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	عندما كنت صغيراً في بعض الأحيان سرقت الأشياء
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لم أرمي القمامة في الشارع أبداً

7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا أسوق أسرع من السرعة المحددة في بعض الأحيان
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لم أقرأ كتب أو مجلات مثيرة أبداً
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	قد فعلت أشياء لا أخبر الآخرين بها
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لم أأخذ الأشياء التي لا تنتمي لي أبداً
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لقد أخذت إجازة مرضية من العمل أو المدرسة حتى ولو لم أكن مريضة حقاً
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لم أضرب كتاب في مكتبة أو البضائع المخزنة دون الإبلاغ عن ذلك
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	لدي بعض العادات السيئة
7 (أعارض بشدة)	6	5	4	3	2	1 (أوافق بشدة)	أنا لا أتحدث عن أحوال الناس الأخرى



**التعليمات:** الرجاء فصل هذه الورقة الأخيرة عن بقية الاستبيان الخاص بك ,سلم كل على حدة.

استخلاص المعلومات ونتائج الدراسة

إذا كان لديك أسئلة حول الدراسة، أو كنت مهتم بمعرفة النتائج، يرجى تزويدنا بالبريد الإلكتروني الخاص بك أدناه، أو إرسال بريد إلكتروني إلي الدكتور مارتون غيرغلي.

[mgergely@uaeu.ac.ae](mailto:mgergely@uaeu.ac.ae)

وسوف نتاح النتائج بعد 1 يناير 2019

البريد الإلكتروني: \_\_\_\_\_

### سرية الدراسة

تجميع البيانات لدراسة الحالية ستستمر حتى 31 أغسطس 2018. الرجاء عدم مناقشة المشهد أو الأسئلة التي أجببت عليها مع أي شخص. يتوقف نجاح الدراسة على حسن تعاونكم. أنا أتفق على عدم مناقشة أي جانب من جوانب هذه الدراسة -ما فعلت، وماذا حصل مع أي شخص، بما في ذلك المواضيع الأخرى، وغيرهم ممن لم يشاركوا في الدراسة حتى 31 أغسطس 2018.

الاسم: \_\_\_\_\_

التوقيع: \_\_\_\_\_

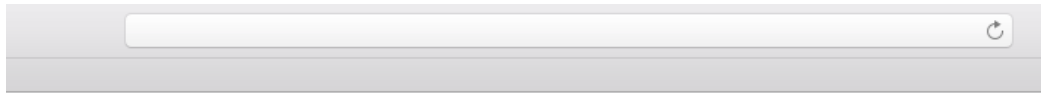
الرجاء فصل الصفحة الأخيرة من بقية الاستبيان قبل تسليمه.

## A.3: The Legal Website (Arabic Version)

حاسبة التمويل EZ Excel برنامج لإدارة أموالك	
<p><b>MegaUpload</b> البرمجيات المجانية!!</p> <p>لماذا ندفع للحصول على حاسبة التمويل EZ excel بينما يمكننا الحصول عليه مجاناً؟</p> <p><b>تحميل مجاني</b> <b>MegaUpload</b></p>	<p><b>تقرير المحررين:</b> نشرت 2 نوفمبر، CNET موظفون 2013</p> <p>تقييم المحرر: 5. من أصل 5 متوسط تصنيف المستخدم: 4.5 من أصل 5 (4353 صوتاً)</p> <p>المواصفات سريعة الإصدار: 1.6B حجم الملف: 947 ك. بايت تاريخ الرفع: 12 نوفمبر 2013 عدد مرات التحميل: 214,328 هذا الأسبوع: 323 النظام: ويندوز السعر: AED 25</p>
	<p>هذه EZ Excel حاسبة التمويل ل Microsoft Excel بديل بكلفه ارخص تكلفة الآلة الحاسبة المالية استخدام التمويل حاسبة EZ Excel للحصول على تلك الإجابات الهامة التي تحتاج إليها بسرعة وسهولة هذا البرنامج بسيط للاستخدام مع تخطيط بديهي وسهل يعمل من خلال أي إصدار من Microsoft excel حاسبة التمويل EZ Excel اختيار ذكي ذا كنت محترف أو طالب يسعى للحصول على لدرجات عالية البرنامج يساعدك على حل الأعمال التجارية الخاصة بك وحل المعادلات الرياضية والإحصائية بسرعة ودقة تصميم حاسبة EZ Excel تحتوي على ميزات كثير مثل سلسلة مفاتيح منطق النظام دخول جبرية ويتميز أيضا بمفاتيح مخصصة لوظائف إحصائية ومالية وعرض الإجابات الخاصة بك مع أرقام تصل إلى 12 من الدقة والحصول على نتائج فورية.</p> <p><b>شراء الآن AED 25</b></p> <p></p>

حاسبة التمويل EZ Excel برنامج لإدارة أموالك.	
<p><b>MegaUpload</b> البرمجيات المجانية!!!</p> <p>لماذا ندفع للحصول على حاسبة التمويل EZ excel بينما يمكننا الحصول عليه مجاناً؟</p> <p><b>تحميل مجاني</b> <b>MegaUpload</b></p>	<p>تقييم المحرر: 5.0 من أصل 5 متوسط تصنيف المستخدم: 4.5 من أصل 5 (4253 صوتاً)</p> <p>المواصفات سريعة الإصدار: 1.6 حجم الملف : 947 ك. بايت تاريخ الرفع: 12 نوفمبر 2013 عدد مرات التحميل: 214,328 هذا الأسبوع: 323 النظام: ويندوز السعر : AED 25</p>
	<p><b>معلومات الدفع</b></p> <p>رقم البطاقة: <input type="text"/></p> <p>تاريخ الانتهاء: <input type="text" value="2014"/> <input type="text" value="Jan"/></p> <p>رمز cvv: <input type="text"/></p> <p><b>اشترى الآن AED 25</b></p> <p></p>

### A.3: The Illegal website (Arabic Version)



**MegaUpload**  
 لماذا ندفع للحصول على EZ excel حاسبة التمويل بينما يمكننا الحصول عليه  
 مجاناً؟

#### حاسبة التمويل EZ Excel

شرح:

هذه EZ Excel حاسبة التمويل ل Microsoft Excel بديل "رخصة" تكلفة للإله حاسبة مالية

تصريح:

نحن لسنا بموقع مصرح به من قبل منشئي البرنامج. نحن هنا فقط لعرض نسخ مجانية للبرنامج

تم تحميل: 04:01:20 01-12-2013 بتوقيت جرينتش

smith20287 من قبل :

بذور: 88

صفحة: 3

التعليقات: 1

معلومات القطع:

21ABN8720PERYUOZ290001

تحميل مجاني

التعليقات:

[Masoud234](#): : 2013-12-03 10:32 الساعة CET

يشغل جيد. شكرا ( ) :

## Appendix B: Spss Output for Statistical Analysis

### B.1: Logistic Regression for Social Desirability Bias (BIDR)

#### Notes

Output Created	25-SEP-2018 12:09:19	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	201
Missing Value Handling	Definition of Missing	User-defined missing values for factor, subject and within-subject variables are treated as missing.
	Cases Used	Statistics are based on cases with valid data for all variables in the model.
Weight Handling	not applicable	
Syntax	<pre> GENLIN                                Decision (REFERENCE=LAST) WITH                 BIDR /MODEL                                BIDR INTERCEPT=YES DISTRIBUTION=BINOMIAL LINK=LOGIT /CRITERIA METHOD=FISHER(1) SCALE=1    COVB=MODEL MAXITERATIONS=100 MAXSTEPHALVING=5 PCONVERGE=1E- 006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95 CITYPE=WALD LIKELIHOOD=FULL /MISSING CLASSMISSING=EXCLUDE /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION. </pre>	
Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.00

## Model Information

Dependent Variable	Decision <sup>a</sup>
Probability Distribution	Binomial
Link Function	Logit

a. The procedure models .00 as the response, treating 1.00 as the reference category.

## Case Processing Summary

	N	Percent
Included	201	100.0%
Excluded	0	0.0%
Total	201	100.0%

## Categorical Variable Information

Dependent Variable	Decision		N	Percent
	.00		149	74.1%
	1.00		52	25.9%
	Total		201	100.0%

## Continuous Variable Information

	N	Minimum	Maximum	Mean	Std. Deviation
Covariate BIDR	201	1.00	29.00	15.5821	5.86639

Goodness of Fit<sup>a</sup>

	Value	Df	Value/df
Deviance	34.392	26	1.323
Scaled Deviance	34.392	26	
Pearson Chi-Square	31.011	26	1.193
Scaled Pearson Chi-Square	31.011	26	
Log Likelihood <sup>b</sup>	-40.126		
Akaike's Information Criterion (AIC)	84.252		
Finite Sample Corrected AIC (AICC)	84.312		
Bayesian Information Criterion (BIC)	90.858		
Consistent AIC (CAIC)	92.858		

Dependent Variable: Decision

Model: (Intercept), BIDR<sup>a</sup>

a. Information criteria are in smaller-is-better form.

b. The full log likelihood function is displayed and used in computing information criteria.

Omnibus Test<sup>a</sup>

Likelihood Ratio Chi-Square	Df	Sig.
.008	1	.928

Dependent Variable: Decision

Model: (Intercept), BIDR<sup>a</sup>

a. Compares the fitted model against the intercept-only model.

## Tests of Model Effects

Source	Type III Wald Chi-Square	Df	Sig.
(Intercept)	4.917	1	.027
BIDR	.008	1	.928

Dependent Variable: Decision

Model: (Intercept), BIDR

## Parameter Estimates

Parameter B	Std. Error	95% Confidence Interval		Wald Hypothesis Test		
		Lower	Upper	Wald Chi- Square	df	Sig.
(Intercept)	1.014 .4574	.118	1.911	4.917	1	.027
BIDR	.002 .0275	-.052	.056	.008	1	.928
(Scale)	1 <sup>a</sup>					

Dependent Variable: Decision

Model: (Intercept), BIDR

a. Fixed at the displayed value.

## B.2: Planned Comparison of Control Group Versus Male Unethical Social Influence Group

Notes		
Output Created		25-SEP-2018 12:12:07
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	79
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax		CROSSTABS /TABLES=Treatment BY Decision /FORMAT=AVALUE TABLES /STATISTICS=CHISQ PHI /CELLS=COUNT /COUNT ROUND CELL /BARCHART.
Resources	Processor Time	00:00:01.75
	Elapsed Time	00:00:01.00
	Dimensions Requested	2
	Cells Available	524245

## Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Treatment Decision	* 79	100.0%	0	0.0%	79	100.0%

Treatment \* Decision Crosstabulation  
Count

		Decision		Total
		NoPay	Pay	
Treatment	Control	34	9	43
	Unethical Male Influence	28	8	36
Total		62	17	79

## Chi-Square Tests

		Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Square	Chi-	.019 <sup>a</sup>	1	.889		
Continuity Correction <sup>b</sup>		.000	1	1.000		
Likelihood Ratio		.019	1	.889		
Fisher's Exact Test					1.000	.552
N of Valid Cases		79				

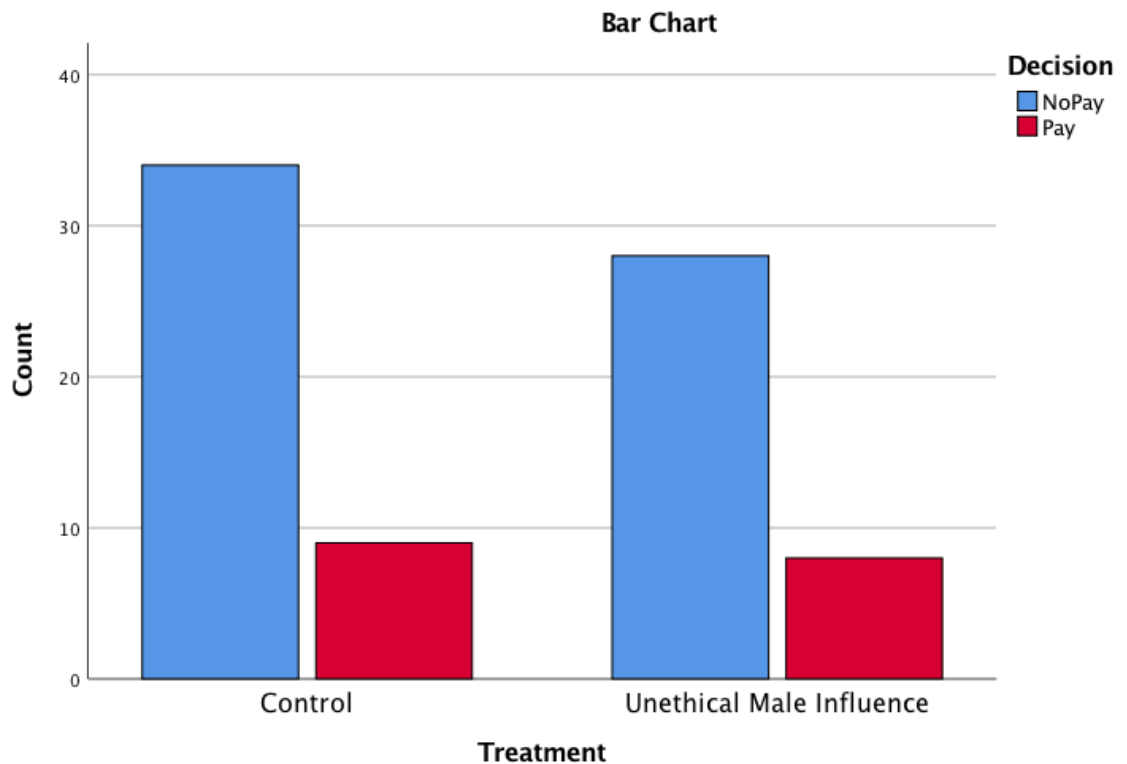
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.75.

b. Computed only for a 2x2 table

## Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.016	.889
	Cramer's V	.016	.889
N of Valid Cases		79	





### B.3: Planned Comparisons of Control Group Versus Male Ethical Social Influence Group

#### Notes

Output Created	25-SEP-2018 12:12:42	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	79
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.

Syntax		CROSSTABS /TABLES=Treatment BY Decision /FORMAT=AVALUE TABLES /STATISTICS=CHISQ PHI /CELLS=COUNT /COUNT ROUND CELL /BARCHART.
Resources	Processor Time	00:00:00.25
	Elapsed Time	00:00:00.00
	Dimensions Requested	2
	Cells Available	524245

## Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Treatment Decision	* 79	100.0%	0	0.0%	79	100.0%

Treatment \* Decision Crosstabulation  
Count

		Decision		Total
		NoPay	Pay	
Treatment	Control	34	9	43
	Ethical Male Influence	21	15	36
Total		55	24	79

## Chi-Square Tests

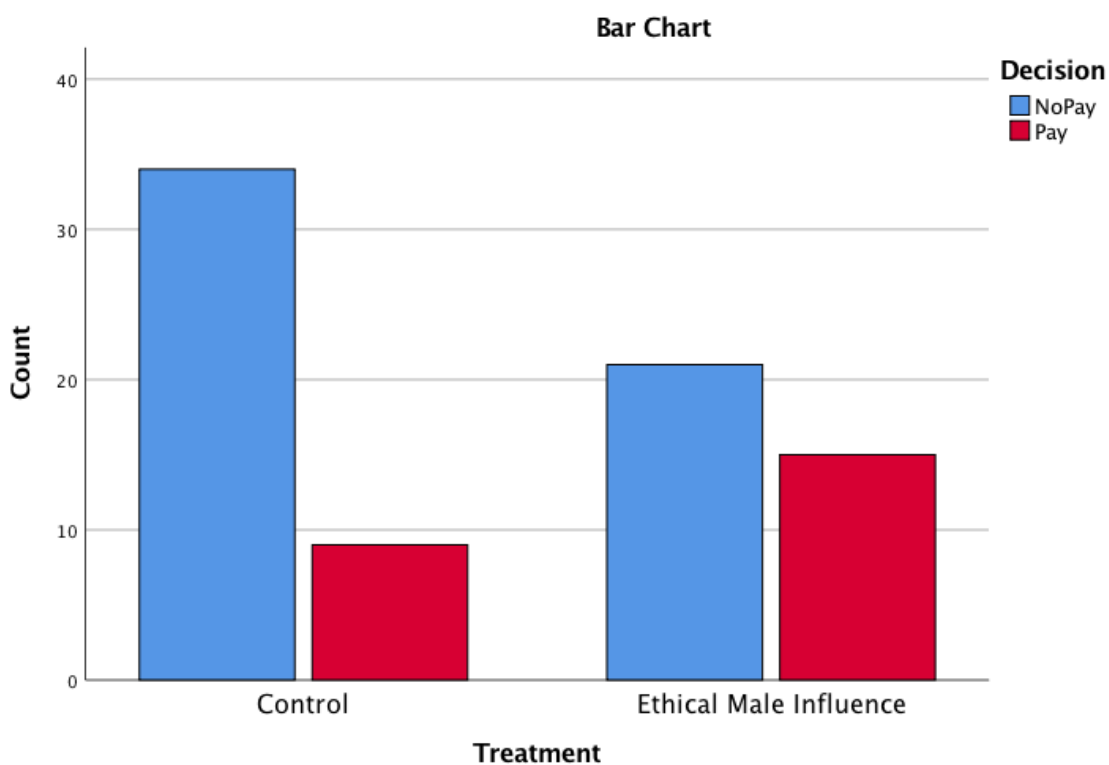
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Square	Chi- 3.984 <sup>a</sup>	1	.046		
Continuity Correction <sup>b</sup>	3.064	1	.080		
Likelihood Ratio	3.997	1	.046		
Fisher's Exact Test				.054	.040
N of Valid Cases	79				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.94.

b. Computed only for a 2x2 table

## Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.225	.046
	Cramer's V	.225	.046
N of Valid Cases		79	



#### B.4: Planned Comparison of Control Group Versus Female Unethical Social Influence Group

## Notes

Output Created	25-SEP-2018 12:13:20	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	86
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.

Cases Used		Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax		CROSSTABS /TABLES=Treatment BY Decision /FORMAT=AVALUE TABLES /STATISTICS=CHISQ PHI /CELLS=COUNT /COUNT ROUND CELL /BARChart.
Resources	Processor Time	00:00:00.23
	Elapsed Time	00:00:00.00
	Dimensions Requested	2
	Cells Available	524245

## Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Treatment Decision	* 86	100.0%	0	0.0%	86	100.0%

Treatment \* Decision Crosstabulation  
Count

		Decision		Total
		NoPay	Pay	
Treatment	Control	34	9	43
	Unethical Female Influence	34	9	43
Total		68	18	86

## Chi-Square Tests

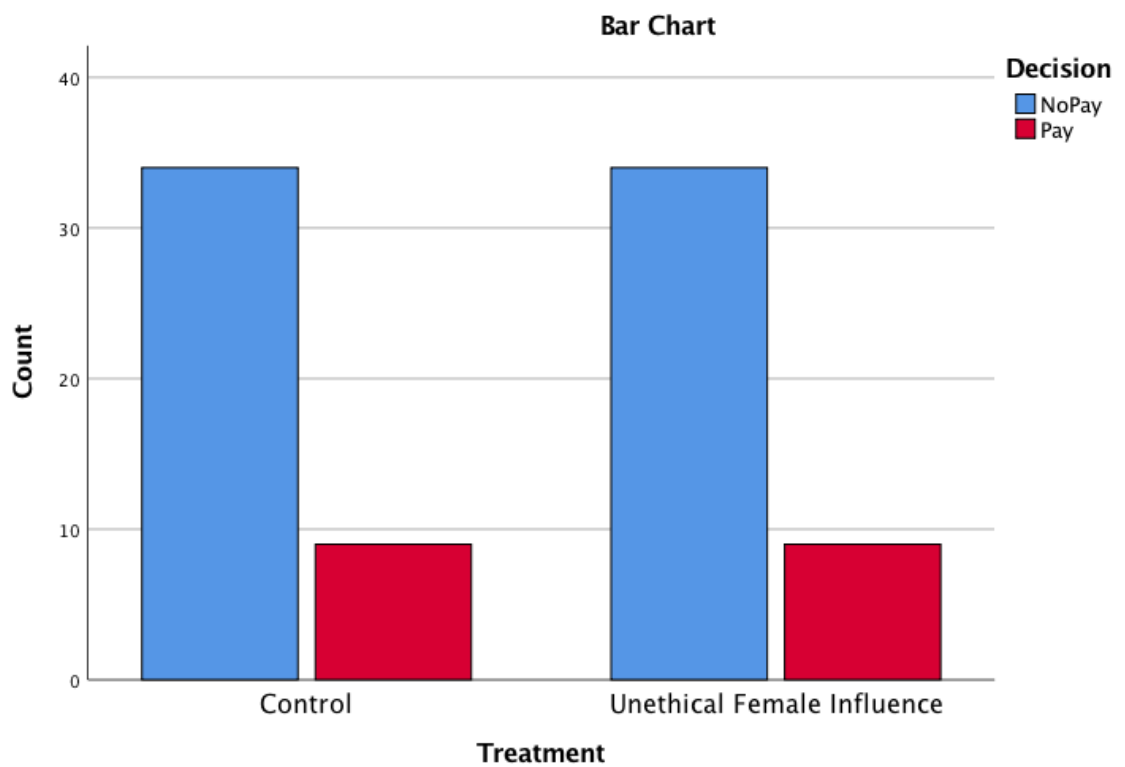
		Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Square	Chi-	.000 <sup>a</sup>	1	1.000		
Continuity Correction <sup>b</sup>		.000	1	1.000		
Likelihood Ratio		.000	1	1.000		
Fisher's Exact Test					1.000	.604
N of Valid Cases		86				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.00.

b. Computed only for a 2x2 table

### Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.000	1.000
	Cramer's V	.000	1.000
N of Valid Cases		86	



### B.5: Planned Comparison of Control Group Versus Female Ethical Social Influence Group

#### Notes

Output Created	25-SEP-2018 12:13:53	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	86
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax	CROSSTABS /TABLES=Treatment BY Decision /FORMAT=AVALUE TABLES /STATISTICS=CHISQ PHI /CELLS=COUNT /COUNT ROUND CELL /BARCHART.	
Resources	Processor Time	00:00:00.18
	Elapsed Time	00:00:00.00
	Dimensions Requested	2
	Cells Available	524245

#### Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Treatment Decision	* 86	100.0%	0	0.0%	86	100.0%

Treatment \* Decision Crosstabulation  
Count

		Decision		Total
		NoPay	Pay	
Treatment	Control	34	9	43
	Ethical Female Influence	32	11	43
Total		66	20	86

Chi-Square Tests

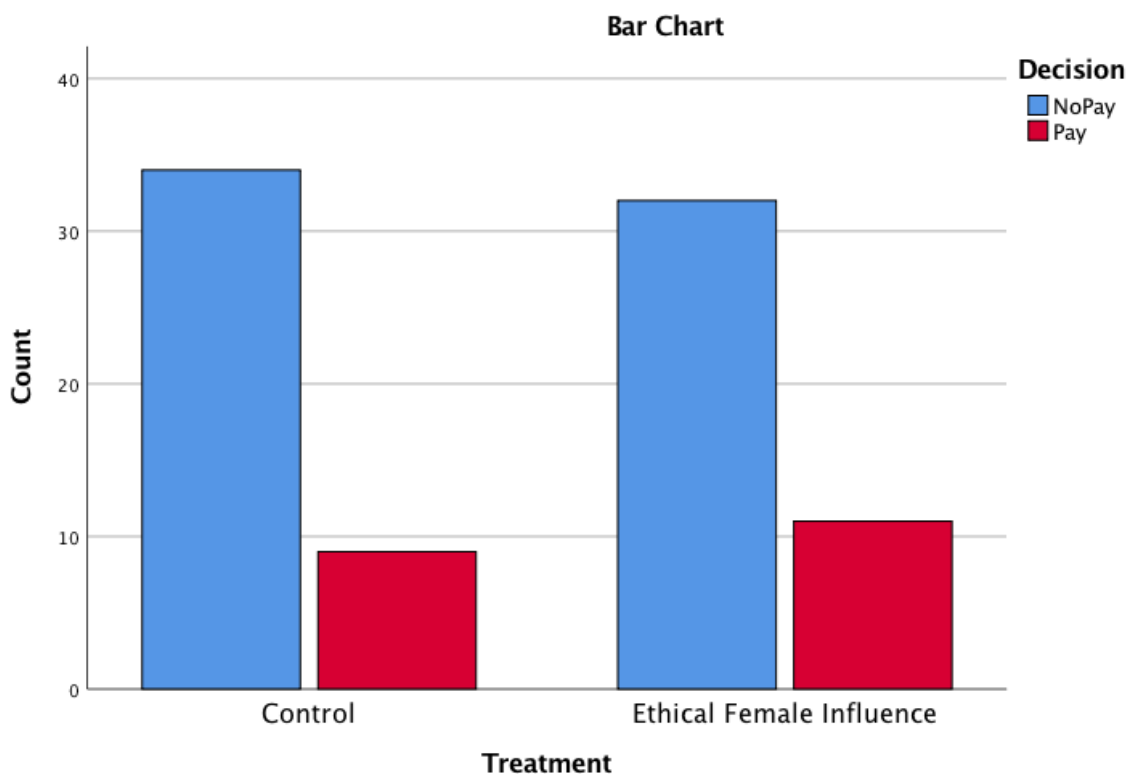
		Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Square	Chi-	.261 <sup>a</sup>	1	.610		
Continuity Correction <sup>b</sup>		.065	1	.799		
Likelihood Ratio		.261	1	.609		
Fisher's Exact Test					.799	.400
N of Valid Cases		86				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.00.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.055	.610
	Cramer's V	.055	.610
N of Valid Cases		86	



### B.6: Planned Comparison of Male Unethical Social Influence Group Versus Female Unethical Social Influence Group

#### Notes

Output Created	25-SEP-2018 12:17:31	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	79
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.



Syntax		CROSSTABS /TABLES=Treatment BY Decision /FORMAT=AVALUE TABLES /STATISTICS=CHISQ PHI /CELLS=COUNT /COUNT ROUND CELL /BARCHART.
Resources	Processor Time	00:00:00.17
	Elapsed Time	00:00:00.00
	Dimensions Requested	2
	Cells Available	524245

## Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Treatment Decision	* 79	100.0%	0	0.0%	79	100.0%

Treatment \* Decision Crosstabulation  
Count

		Decision		Total
		NoPay	Pay	
Treatment	Unethical Female Influence	34	9	43
	Unethical Male Influence	28	8	36
Total		62	17	79

## Chi-Square Tests

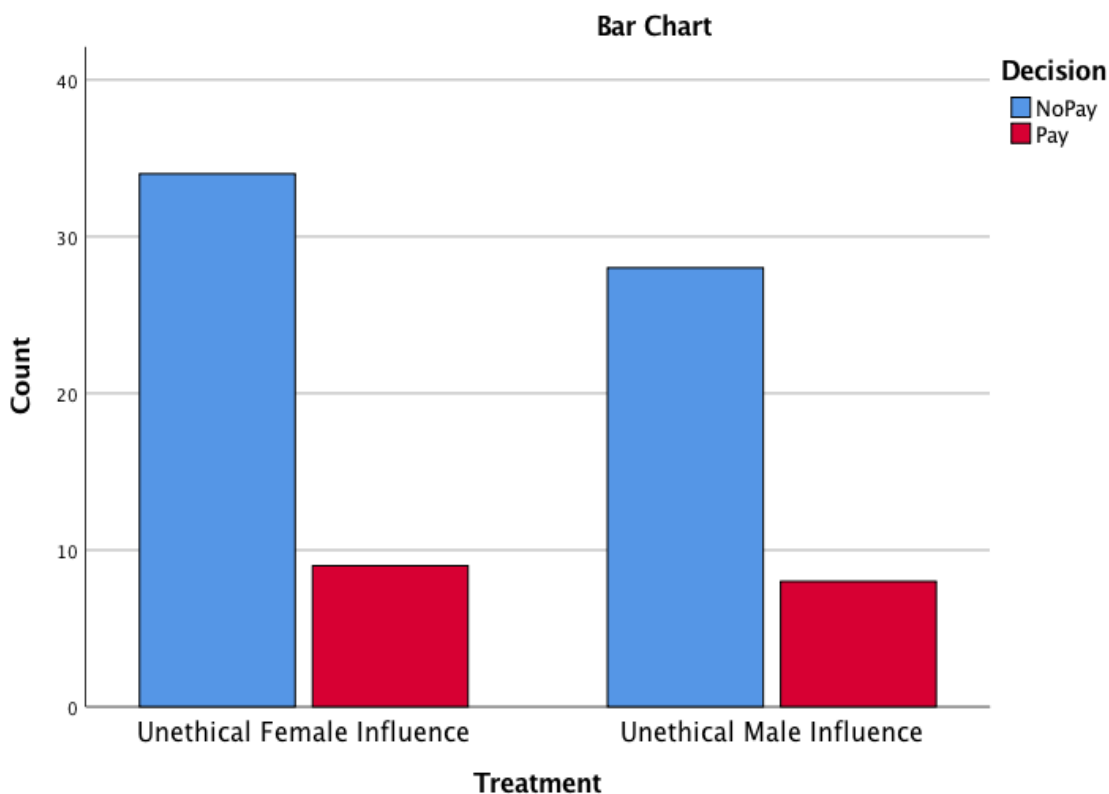
		Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson	Chi-Square	.019 <sup>a</sup>	1	.889		
Continuity	Correction <sup>b</sup>	.000	1	1.000		
Likelihood	Ratio	.019	1	.889		
Fisher's	Exact Test				1.000	.552
N of Valid Cases		79				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.75.

b. Computed only for a 2x2 table

## Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.016	.889
	Cramer's V	.016	.889
N of Valid Cases		79	



### B.7: Planned Comparison of Male Ethical Social Influence Group Versus Female Ethical Social Influence Group

## Notes

Output Created	25-SEP-2018 12:18:24	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	79
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.

Cases Used		Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax		CROSSTABS /TABLES=Treatment BY Decision /FORMAT=AVALUE TABLES /STATISTICS=CHISQ PHI /CELLS=COUNT /COUNT ROUND CELL /BARChart.
Resources	Processor Time	00:00:00.17
	Elapsed Time	00:00:00.00
	Dimensions Requested	2
	Cells Available	524245

## Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Treatment Decision	* 79	100.0%	0	0.0%	79	100.0%

Treatment \* Decision Crosstabulation  
Count

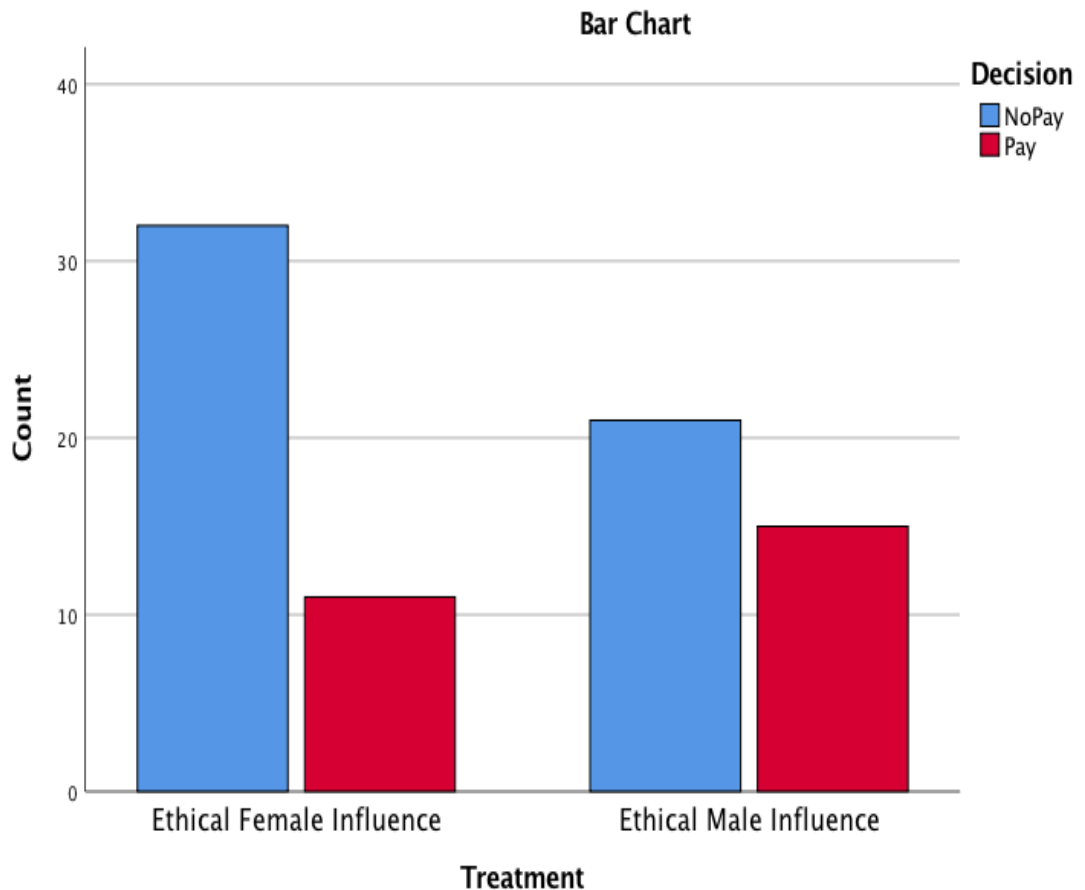
		Decision		Total
		NoPay	Pay	
Treatment	Ethical Female Influence	32	11	43
	Ethical Male Influence	21	15	36
Total		53	26	79

## Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Square	Chi- 2.296 <sup>a</sup>	1	.130		
Continuity Correction <sup>b</sup>	1.625	1	.202		
Likelihood Ratio	2.296	1	.130		
Fisher's Exact Test				.154	.101
N of Valid Cases	79				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.85.

b. Computed only for a 2x2 table



## Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.170	.130
	Cramer's V	.170	.130
N of Valid Cases		79	

**B.8: ANOVA Analysis of Decision Versus Social Desirability Bias (BIDR)**

## Notes

Output Created	25-SEP-2018 12:23:21	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	201
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax	ONEWAY BIDR BY Decision /STATISTICS DESCRIPTIVES /PLOT MEANS /MISSING ANALYSIS.	
Resources	Processor Time	00:00:00.15
	Elapsed Time	00:00:00.00

## Descriptives

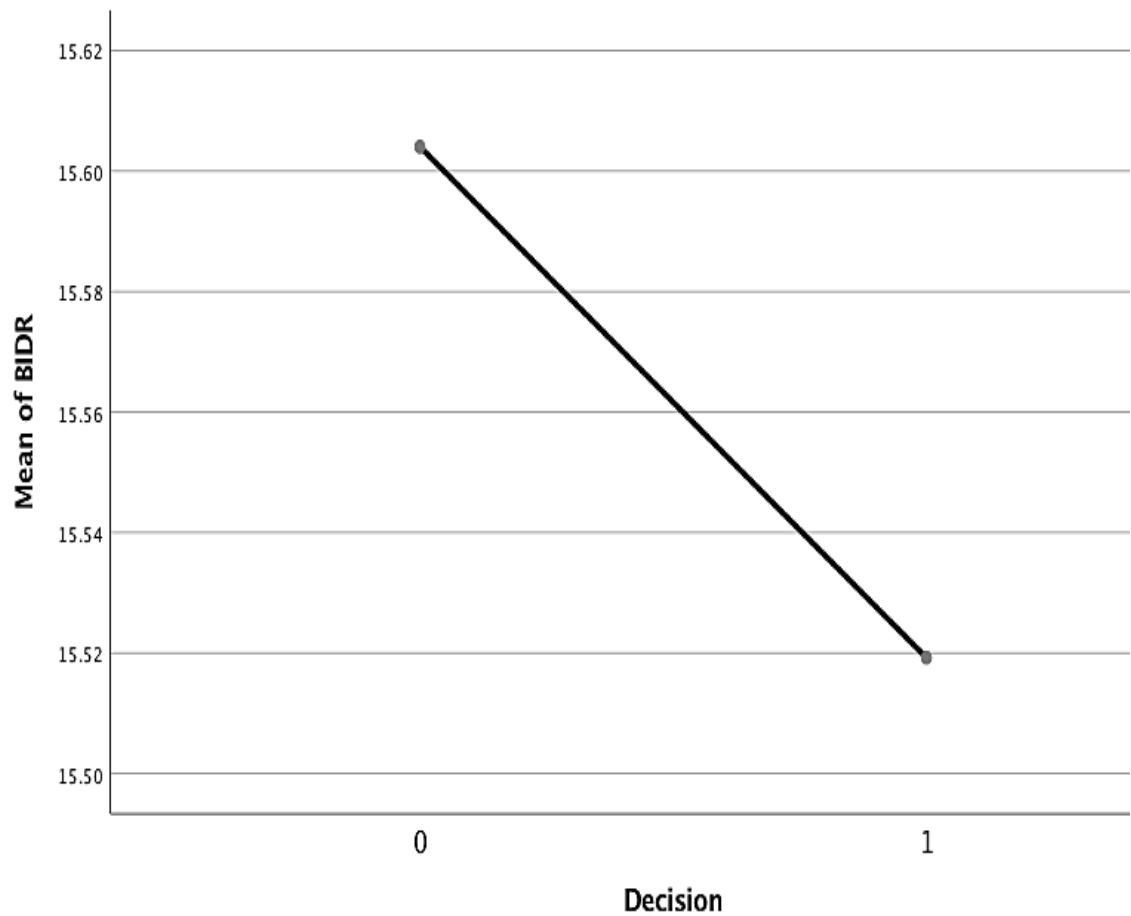
## BIDR

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	149	15.6040	5.71132	.46789	14.6794	16.5286	1.00	29.00
1	52	15.5192	6.34774	.88027	13.7520	17.2865	2.00	29.00
Total	201	15.5821	5.86639	.41378	14.7662	16.3980	1.00	29.00

ANOVA  
BIDR

	Sum Squares	of df	Mean Square	F	Sig.
Between Groups	.277	1	.277	.008	.929
Within Groups	6882.618	199	34.586		
Total	6882.896	200			

## Means Plots



**B.9: Scale Reliability Check of Influence Items (Items 10, 11, 12, and 13)**

## Notes

Output Created		25-SEP-2018 12:32:50
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	282
	Matrix Input	
Missing Handling	Value Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Item10 Item11 Item12 Item13 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA  /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

## Case Processing Summary

		N	%
Cases	Valid	281	99.6
	Excluded <sup>a</sup>	1	.4
	Total	282	100.0

a. Listwise deletion based on all variables in the procedure.

## Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.648	.654	4

## Item Statistics

	Mean	Std. Deviation	N
Item10	1.2705	.61946	281
Item11	.9679	.67271	281
Item12	1.0714	.62841	281
Item13	1.0321	.60566	281

## Inter-Item Correlation Matrix

	Item10	Item11	Item12	Item13
Item10	1.000	.261	.353	.329
Item11	.261	1.000	.115	.327
Item12	.353	.115	1.000	.538
Item13	.329	.327	.538	1.000

## Item-Total Statistics

	Scale if Deleted	Mean Item	Scale Variance if Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Item10	3.0714	1.988	.423	.184	.584	
Item11	3.3740	2.077	.300	.146	.673	
Item12	3.2705	1.934	.448	.334	.567	
Item13	3.3097	1.821	.564	.368	.486	

## Scale Statistics

Mean	Variance	Std. Deviation	N of Items
4.3418	3.111	1.76378	4

**B.10: Scale Reliability Check of Influence Items (Items 10, 12, and 13)**

## Notes

Output Created	25-SEP-2018 12:33:23	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	282
	Matrix Input	
Missing Handling	Value Definition of Missing	User-defined missing values are treated as missing.



Cases Used		Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Item10 Item12 Item13 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA  /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

Scale: ALL VARIABLES

#### Case Processing Summary

		N	%
Cases	Valid	281	99.6
	Excluded <sup>a</sup>	1	.4
	Total	282	100.0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.673	.673	3

#### Item Statistics

	Mean	Std. Deviation	N
Item10	1.2705	.61946	281
Item12	1.0714	.62841	281
Item13	1.0321	.60566	281

#### Inter-Item Correlation Matrix

	Item10	Item12	Item13
Item10	1.000	.353	.329
Item12	.353	1.000	.538
Item13	.329	.538	1.000

## Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected if Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Item10	2.1035	1.171	.389	.152	.699
Item12	2.3026	.997	.546	.325	.495
Item13	2.3418	1.054	.528	.312	.522

## Scale Statistics

Mean	Variance	Std. Deviation	N of Items
3.3740	2.077	1.44116	3

**B.11: Scale Reliability Check of Influence Items (Items 12 and 13)**

## Notes

Output Created	25-SEP-2018 12:34:25	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	282
	Matrix Input	
Missing Handling	Value Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax	RELIABILITY /VARIABLES=Item12 Item13 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA  /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL.	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

## Case Processing Summary

		N	%
Cases	Valid	281	99.6
	Excluded <sup>a</sup>	1	.4
	Total	282	100.0

a. Listwise deletion based on all variables in the procedure.

## Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.699	.700	2

## Item Statistics

	Mean	Std. Deviation	N
Item12	1.0714	.62841	281
Item13	1.0321	.60566	281

## Inter-Item Correlation Matrix

	Item12	Item13
Item12	1.000	.538
Item13	.538	1.000

## Item-Total Statistics

	Scale Mean if Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Item12	1.0321	.367	.538	.290	.
Item13	1.0714	.395	.538	.290	.

## Scale Statistics

Mean	Variance	Std. Deviation	N of Items
2.1035	1.171	1.08232	2

### B.12: One-Way T-Test of Influence 11, Influence 12, Influence 13 by Treatment Group

#### Notes

Output Created	25-SEP-2018 13:36:15	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	79
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax	ONEWAY Influence4 Influence3 Influence2 BY Treatment /STATISTICS DESCRIPTIVES /PLOT MEANS /MISSING ANALYSIS.	
Resources	Processor Time	00:00:01.89
	Elapsed Time	00:00:02.00

## Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum
Influence4 1	43	-.1512	.46014	.07017	-.2928	-.0096	-1.00
2	36	-.0556	.28101	.04684	-.1506	.0395	-1.00
Total	79	-.1076	.38953	.04383	-.1948	-.0203	-1.00
Influence3 1	43	-.2248	.52312	.07978	-.3858	-.0638	-1.00
2	36	-.0278	.33214	.05536	-.1402	.0846	-1.00
Total	79	-.1350	.45454	.05114	-.2368	-.0332	-1.00
Influence2 1	43	-.1279	.61811	.09426	-.3181	.0623	-1.00
2	36	-.0139	.36812	.06135	-.1384	.1107	-1.00
Total	79	-.0759	.51942	.05844	-.1923	.0404	-1.00

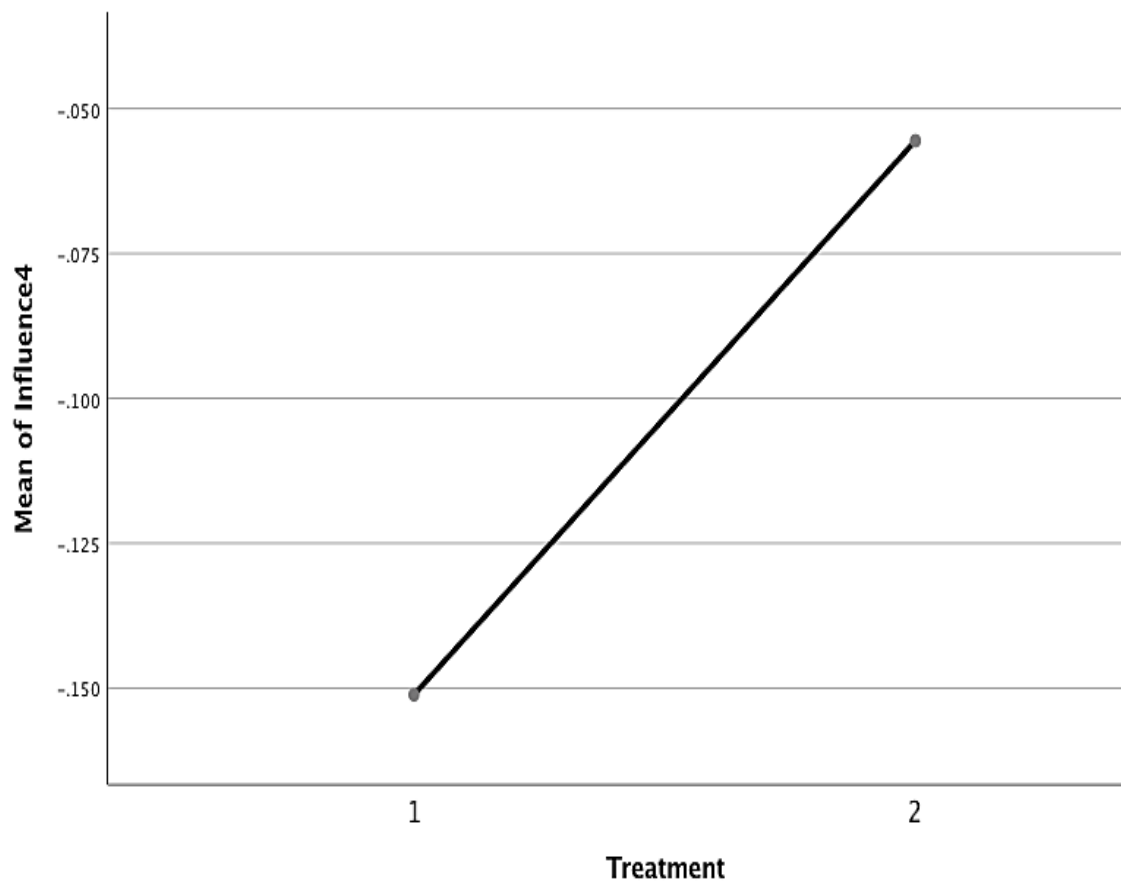
## Descriptives

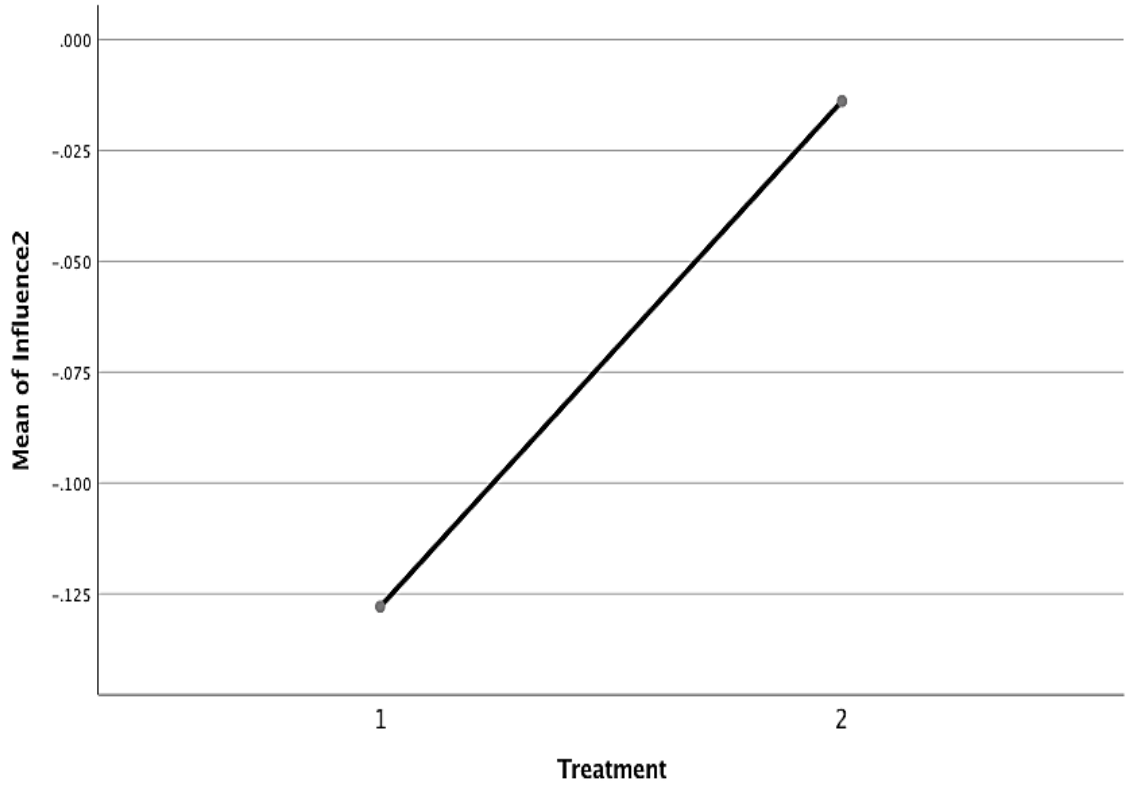
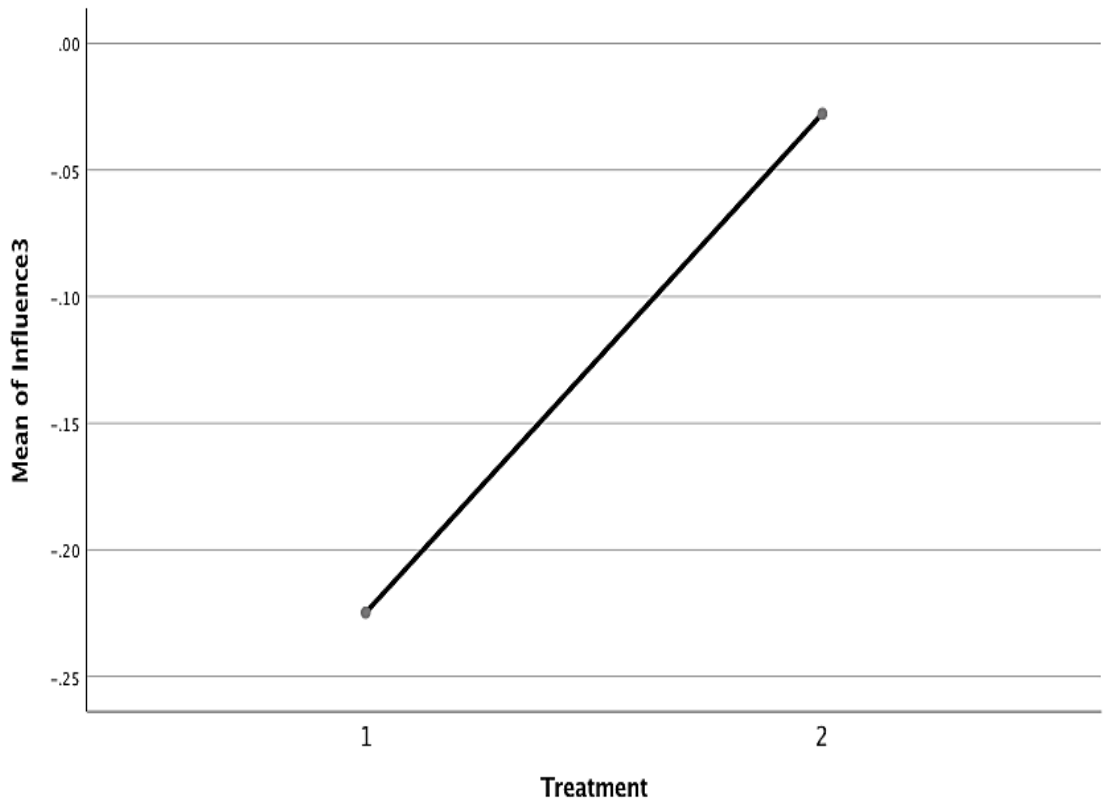
	Maximum
Influence4	1
	2
Total	1.00
Influence3	1
	2
Total	1.00
Influence2	1
	2
Total	1.00

## ANOVA

	Sum Squares	of df	Mean Square	F	Sig.
Influence4 Between Groups	.179	1	.179	1.183	.280
Within Groups	11.656	77	.151		
Total	11.835	78			
Influence3 Between Groups	.761	1	.761	3.815	.054
Within Groups	15.355	77	.199		
Total	16.115	78			
Influence2 Between Groups	.255	1	.255	.943	.334
Within Groups	20.790	77	.270		
Total	21.044	78			

## Means Plots





## Notes

Output Created	25-SEP-2018 13:37:55	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	79
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax	ONEWAY Influence4 Influence3 Influence2 BY Treatment /STATISTICS DESCRIPTIVES /PLOT MEANS /MISSING ANALYSIS.	
Resources	Processor Time	00:00:00.51
	Elapsed Time	00:00:00.00

## Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
						Lower Bound	Upper Bound	
Influence4	1	43	-.1512	.46014	.07017	-.2928	-.0096	-1.00
	3	36	-.0347	.49336	.08223	-.2017	.1322	-1.00
	Total	79	-.0981	.47606	.05356	-.2047	.0085	-1.00
Influence3	1	43	-.2248	.52312	.07978	-.3858	-.0638	-1.00
	3	36	-.1019	.51529	.08588	-.2762	.0725	-1.00
	Total	79	-.1688	.51990	.05849	-.2852	-.0523	-1.00
Influence2	1	43	-.1279	.61811	.09426	-.3181	.0623	-1.00
	3	36	-.0556	.59495	.09916	-.2569	.1457	-1.00
	Total	79	-.0949	.60487	.06805	-.2304	.0405	-1.00



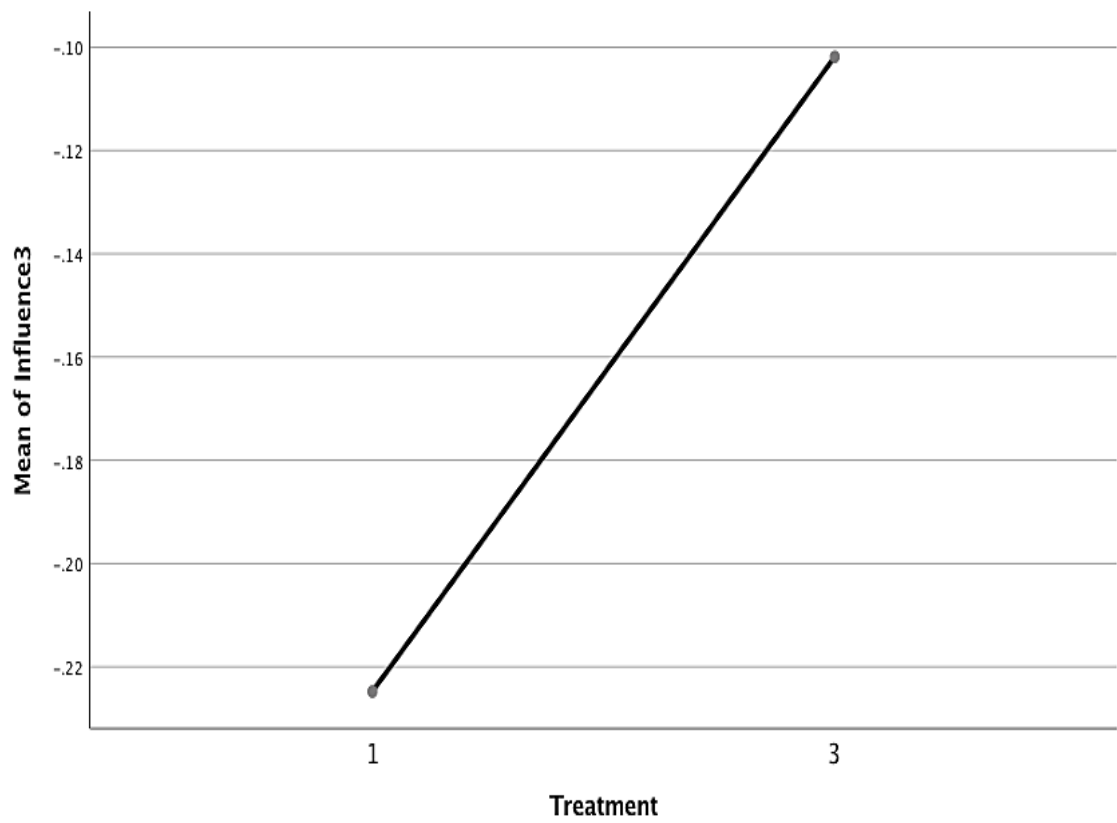
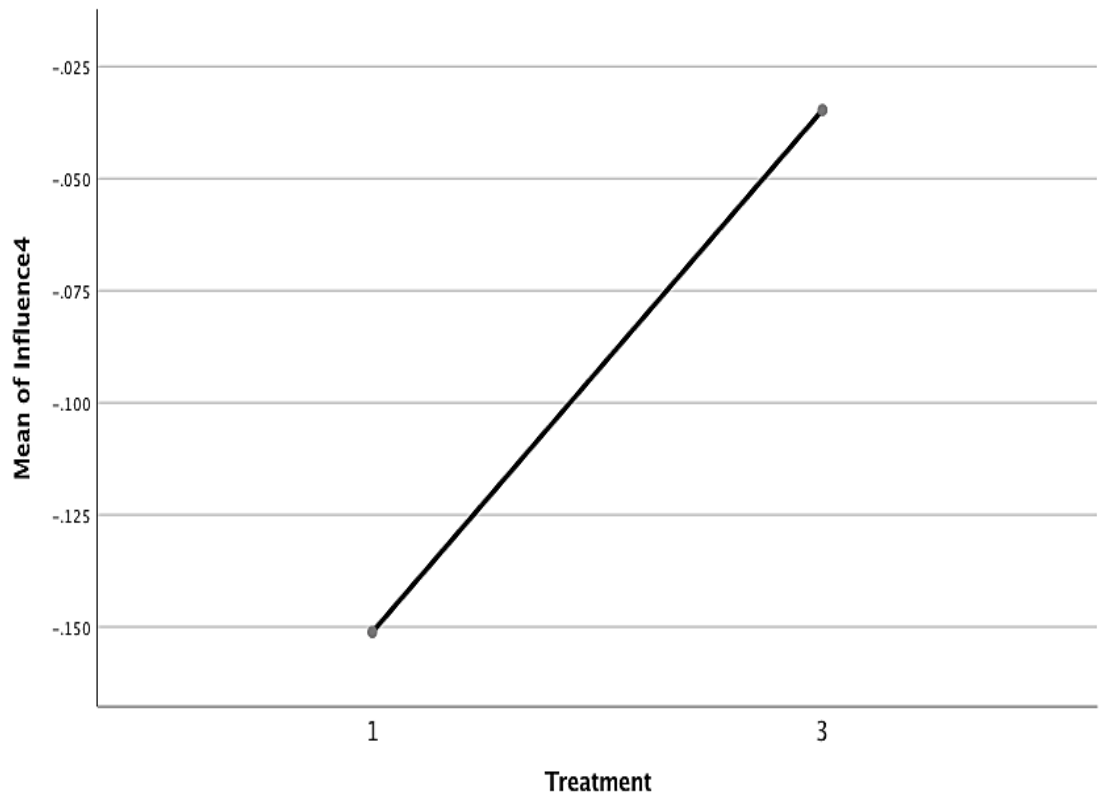
## Descriptives

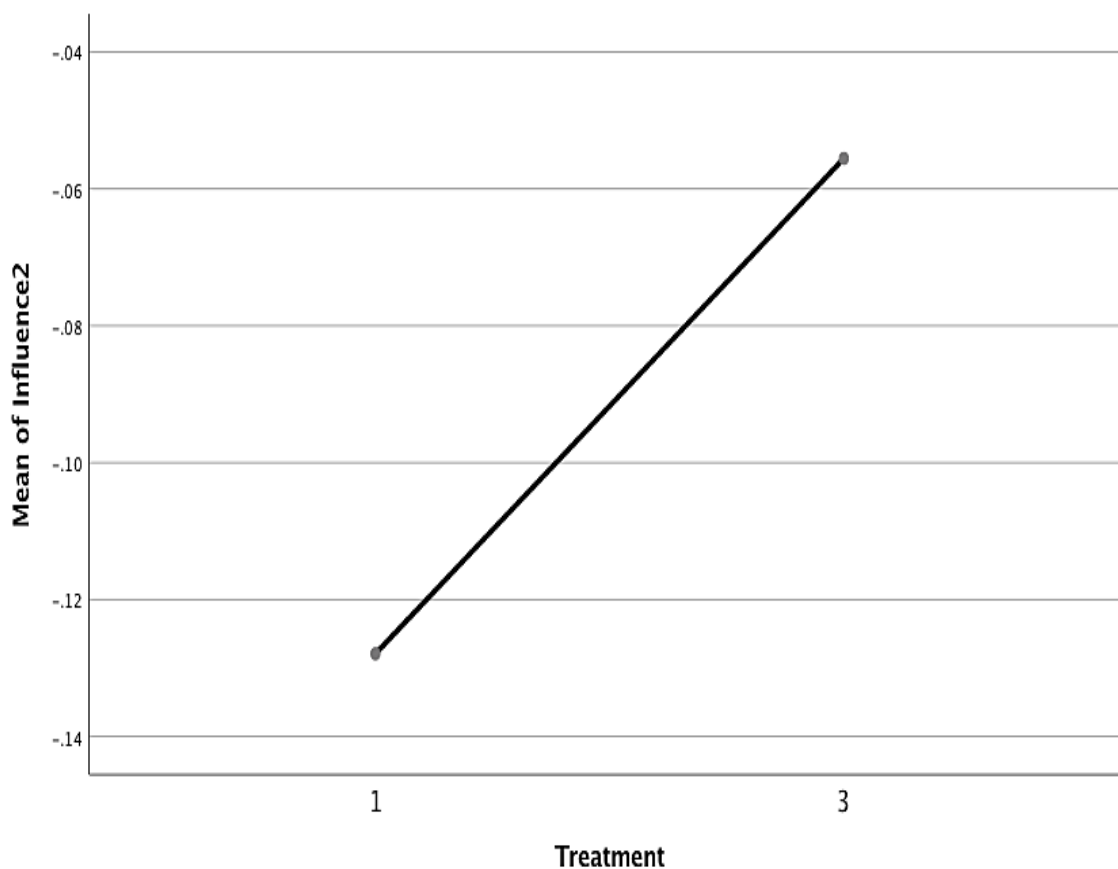
		Maximum
Influence4	1	1.00
	3	1.00
	Total	1.00
Influence3	1	1.00
	3	1.00
	Total	1.00
Influence2	1	1.00
	3	1.00
	Total	1.00

## ANOVA

	Sum	of	Mean		
	Squares	df	Square	F	Sig.
Influence4	Between Groups	1	.266	1.175	.282
	Within Groups	77	.226		
	Total	78			
Influence3	Between Groups	1	.296	1.097	.298
	Within Groups	77	.270		
	Total	78			
Influence2	Between Groups	1	.103	.278	.600
	Within Groups	77	.369		
	Total	78			

## Means Plots





## Notes

Output Created	25-SEP-2018 13:38:29	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	86
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.

Syntax		ONEWAY Influence4 Influence3 Influence2 BY Treatment /STATISTICS DESCRIPTIVES /PLOT MEANS /MISSING ANALYSIS.
Resources	Processor Time	00:00:00.46
	Elapsed Time	00:00:01.00

## Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum
Influence4 1	43	-.1512	.46014	.07017	-.2928	-.0096	-1.00
4	43	-.0291	.47936	.07310	-.1766	.1185	-1.00
Total	86	-.0901	.47110	.05080	-.1911	.0109	-1.00
Influence3 1	43	-.2248	.52312	.07978	-.3858	-.0638	-1.00
4	43	-.0698	.51207	.07809	-.2274	.0878	-1.00
Total	86	-.1473	.52044	.05612	-.2589	-.0357	-1.00
Influence2 1	43	-.1279	.61811	.09426	-.3181	.0623	-1.00
4	43	.0116	.50578	.07713	-.1440	.1673	-1.00
Total	86	.0581	.56578	.06101	-.1794	.0632	-1.00

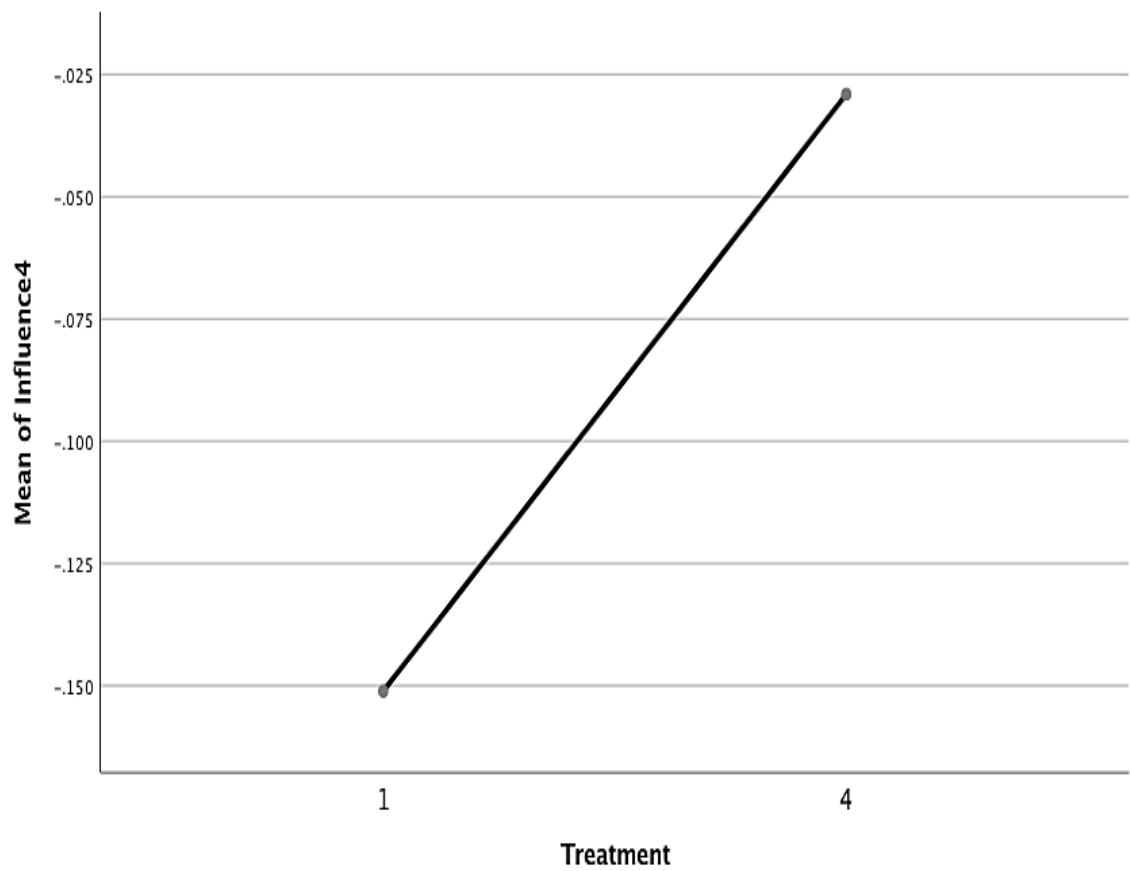
## Descriptives

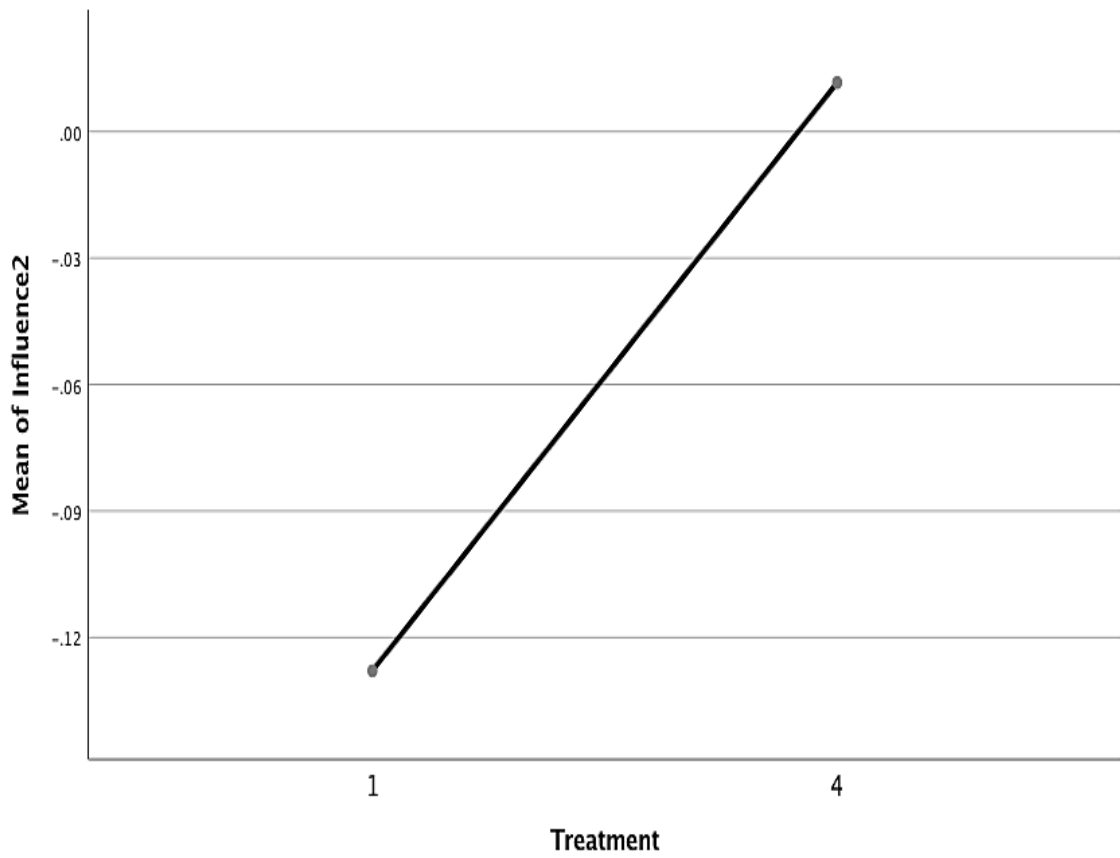
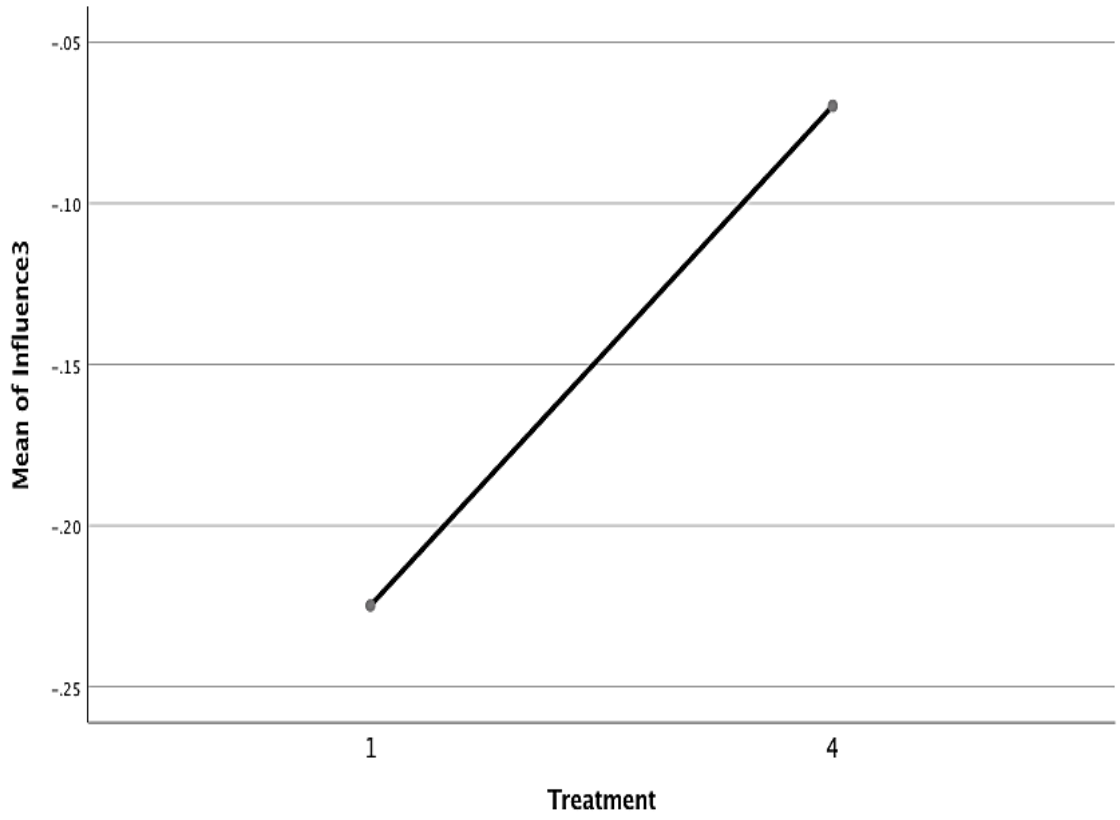
		Maximum
Influence4	1	1.00
	4	1.00
	Total	1.00
Influence3	1	1.00
	4	1.00
	Total	1.00
Influence2	1	1.00
	4	1.00
	Total	1.00

## ANOVA

	Sum Squares	df	Mean Square	F	Sig.
Influence4 Between Groups	.320	1	.320	1.452	.232
Within Groups	18.544	84	.221		
Total	18.864	85			
Influence3 Between Groups	.517	1	.517	1.929	.169
Within Groups	22.506	84	.268		
Total	23.023	85			
Influence2 Between Groups	.419	1	.419	1.313	.255
Within Groups	26.791	84	.319		
Total	27.209	85			

## Means Plots





## Notes

Output Created	25-SEP-2018 13:39:10	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	86
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax	ONEWAY Influence4 Influence3 Influence2 BY Treatment /STATISTICS DESCRIPTIVES /PLOT MEANS /MISSING ANALYSIS.	
Resources	Processor Time	00:00:00.40
	Elapsed Time	00:00:01.00

## Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum
Influence4	1	43	-.1512	.46014	.07017	-.2928	-.0096	-1.00
	5	43	-.0178	.48285	.07363	-.1664	.1308	-1.00
	Total	86	-.0845	.47363	.05107	-.1860	.0171	-1.00
Influence3	1	43	-.2248	.52312	.07978	-.3858	-.0638	-1.00
	5	43	-.0394	.49399	.07533	-.1914	.1126	-1.00
	Total	86	-.1321	.51429	.05546	-.2424	-.0218	-1.00
Influence2	1	43	-.1279	.61811	.09426	-.3181	.0623	-1.00
	5	43	.0921	.58017	.08848	-.0865	.2706	-1.00
	Total	86	-.0179	.60609	.06536	-.1479	.1120	-1.00

## Descriptives

		Maximum
Influence4	1	1.00
	5	1.00
	Total	1.00
Influence3	1	1.00
	5	1.00
	Total	1.00
Influence2	1	1.00
	5	1.00
	Total	1.00

## ANOVA

	Sum	of	Mean			
	Squares	df	Square	F	Sig.	
Influence4	Between Groups	.383	1	.383	1.720	.193
	Within Groups	18.685	84	.222		
	Total	19.067	85			
Influence3	Between Groups	.739	1	.739	2.855	.095
	Within Groups	21.743	84	.259		
	Total	22.482	85			
Influence2	Between Groups	1.040	1	1.040	2.895	.093
	Within Groups	30.184	84	.359		
	Total	31.224	85			



## Means Plots

