Effect of Age and Gender on Ethical Decision Making

Yi-Fang Chiu and Brandy Spindel

San Jose State University
Abstract

The effects of gender and age on ethical decision making were investigated. Ethical decision making was determined by a two dilemma questionnaire written by Lind (2009). The results indicated gender or age alone had no effect on ethical decision making but when gender and age were combined on the mean score of the two dilemmas combined, the results were nearly significant. Further investigation of those results showed that gender and age combined on dilemma one alone was not significant but on dilemma two, were significant. The findings showed that gender and age combined can in fact have an effect on ethical decision making.
Effects of Age and Gender on Ethical Decision Making

Decision making is inevitable in daily life, and ethical decision making is especially important to the harmony of the American society. An estimated 1,382,012 violent crimes (including murder, non-negligent manslaughter, forcible rape, robbery, and aggravated assault) occurred nationwide in 2008 (Uniform Crime Reports, 2009). Robbery losses were estimated at $581 million in 2008. The average dollar loss per robbery offense was $1,315, and the highest average dollar loss (for banks) was $4,854 per offense (Violent Crime, 2009). The Internet Crime Complaint Center received 275,284 complaints in the year 2008. The total dollar loss from all referred cases of fraud non-fraudulent complaints (including auction fraud, non-delivery, credit/debit card fraud, computer intrusions, spam/unsolicited e-mail, and child pornography) was $264.6 million with a median dollar loss of $931.00 per complaint (2008 IC3 Annual Report, 2009). This study is designed to test two factors that might be linked closely to ethical decision making with a hope that the findings will provide practical implications for future researchers and law enforcement institutions.

Decision Making and Ethical reasoning

The decision making processes consists of strategies, probabilities, choice and judgment (Gagne, 1959). For a decision to be made, it requires a type of rise in emotions that will reflect the outcome of a decision which then readies the subject for new information when making an uncertain decision (Davis, Lovea, & Maddoxa, 2009). Decision times depend on the evidential difference between the degree of conflict and the options or objects, predicting that choices largely depend on the amount of evidence speaking for each of the objects (Hilbig & Polh, 2009). Decision making can be disadvantageous even when explicit and stable information about outcome contingencies is provided when there is stress involved (Starcke, Wolf, Markowitsch, &
Brand, 2008). Decision making involves two interrelated yet functionally distinct cycles (Reynolds, 2006). One higher order conscious reasoning cycle and a reflexive pattern matching cycle that describes not only reasoned analysis, but also the intuitive and retrospective aspects of decision making (Reynolds, 2006). A primitive neural network model of the basal ganglia-dopamine (BG-DA) system shows that it slowly learns to make decisions on the basis of the relative probability of rewards but is not as sensitive to the value of specific rewards or recency (Frank & Claus, 2006). An updated model, however, that explores BG-orbitofrontal cortex (OFC) interactions more successfully estimates the true expected value of decision making and shows that the BG-OFC interaction is faster at switching behavior when reinforcement contingencies change (Frank & Claus, 2006). One sub-process of decision making is ethical reasoning.

Ethical reasoning which leads to ethical decision-making is a complex and multidimensional process (Beu, Buckley, & Harvey, n.d.). Different people will view the same ethical dilemma and decide in different ways. Some people have a predisposition toward unethical behaviors and there are times when basic moral norms are not sufficient, like when moral rules conflict (Beu, Buckley, & Harvey, n.d.). Ethical reasoning is impacted by a person’s place of employment, work experience, demographic characteristics of age, gender, and ethnicity (Ducut, 2007). Ethical reasoning increases in combination with every 10 years of accumulated work experience and with age. Individuals who work in nonprofit organizations tend to be more ethical in their reasoning than other groups (Ducut, 2007).

A model used to explain how ethical reasoning occurs integrates the learning process described by Kolb (1976) and a developmental scheme of ethical reasoning by Van Hoose (1980). This model states that as the individual advances through five ethical stages (Van Hoose,
1980), the four dimensions of growth (Kolb, 1976) combine together even more (Pelsma & Borgers, 1986). Kolb’s (1976) learning process incorporates four methods of relating to the world (feeling, watching, thinking, doing) into a circular representation of the learning process. Van Hoose’s (1980) developmental scheme of ethical reasoning and decision making are conceptualized along a developmental continuum consisting of five increasingly complex orientations: punishment, institutional, societal, individual, and principle or conscience. When people lack empathy and moral identity, they are said to be morally disengaged; and moral disengagement is positively related to unethical decision making (Detert & Trevino, 2008).

*Effects of Age*

Ethical decision-making takes two forms when age is a factor (Prezlaff, 2005). The first form takes into account age as a factor at the societal, or policy level. The second form takes into account the capacity of the individual to make decisions regarding their own care. Ethical decision-making may be reached at any age when those decisions involve the life or well being of others or may impact the individual’s life or well being. While awareness of self is necessary, the capacity of a child is not sufficient enough and does not improve the child’s ability to make an informed and “ethically sound” decision regarding self care (Prezlaff, 2005).

The most unethical decisions have a tendency to be found in younger age groups (Jennings, Hunt, & Munn, 1996) because younger children are less capable than older children to embrace their parents' views in reasoning through ethical dilemmas (Leibig & Green, 1999). Age is a determining factor in making ethical decisions starting with the most ethical decisions being made by the older participants and decreasing ethical decisions being made as their age decreased (Ruegger & King, 1992). Another study which examined whether age cohort was the key to determining ethical values that influenced healthcare executive’s values showed that age
cohort groups had practically identical value preferences when making ethical decisions (Jurkiewicz & Bradley, 2002).

Effects of Gender

Both males and females believe that their own sex is more ethical than the opposite sex (Kidwell, Stevens, & Bethke, 1987). Females tend to report fewer delinquent activities than males, even though they do not differ significantly in delinquent action (Jensen & Eve, 1976). Females are less likely to use double standards when it comes to their own (un)ethical behavior compared to corporate (un)ethical actions (Vermeir & Van Kenhove, 2008). One study shows that there are no significant differences found in ethical reasoning based on gender although women tend to use more ethics than men when making an ethical decision (Wilson, 1995).

There are significant gender differences in ethical perceptions of business practices, but the differences decline as work experience increases (Franke, Crown, & Spake, 1997). Men and women may differ in moral orientation, but do not differ in moral reasoning (Pratt, 2002). Ethical decision-making is more likely to differ by social, political, and cultural experiences more than by gender alone (D’Cruz et al, 2002). Whether or not men will have a lower level of response to an ethical dilemma than women really depends on the situation of the dilemma (Hoffman, 1998). There has long been a debate between male and female reasoning about ethical conflict. Several studies supported the hypothesis that females are more care-oriented while males are more justice-oriented (Ford & Lowery, 1986).

Interactions

One study found no difference in the moral maturity level and ethical decision making of Small Business Professionals based on age and gender (Jones, 2008). Another study finds that flexibility of ethical reasoning is greater for later than early adolescents, especially for males.
(Hanson & Mullis, 1985). Female social workers of any age as well as younger male social workers are more likely to believe allegations of sexual abuse therefore making an ethical decision to help their clients more than others (Jackson & Nuttall, 1994).

With the growing delinquent activities in current American society, issues about how and when people make decisions on ethical dilemmas becomes more salient. Previous research has integrated the roles gender and age play in making ethical decisions. However, very few have studied the combined effects of these two factors. This study examines not only the effect of gender and age, but also their combined interaction on ethical decision making.

Method

Participants

Sixty-four Junior College students participated in this experiment. There were twenty-two 18 to 22-year-old females, twenty 18 to 22-year-old males, fourteen 26 and above females and eight 26 and above males. They were of different ethnicity, religion, socioeconomic status, and marital status. The participants were enrolled in one of three classes. They were either in Introduction to Psychology, Research Methods in Psychology, or Elementary Statistics.

Materials

Materials included one background questionnaire and two ethical dilemma questionnaires. The background questionnaire (see Appendix A) was used to identify those participants who met the criteria set for this experiment which was that they needed to either be between the ages of 18 to 22 or 26 years old and above. This included questions about their gender, ethnicity, and age, country of birth, first language spoken, primary language spoken, religion, and marital status. The ethical dilemma questionnaires (see Appendix B) were adapted from Lind’s Moral Judgment Test (MJT) (Lind, 2009). There were ethical dilemmas in two short
stories that were followed by 13 questions each. Dilemma one was called Workers’ Dilemma and was about workers who were fired from their jobs without a reason and while they suspected it was because their managers were using an intercom system to listen to their conversations, their union was not going to do anything unless they had proof. Two workers then decided to break into the main office and steal the tapes as proof. Dilemma two was called Doctor’s Dilemma and was about a woman who had cancer and had no hope of survival and was in a lot of pain and convinced her doctor to give her an overdose of morphine since she figured she would be dead in a few weeks anyway and she just could not take the pain anymore.

Procedure

The experimenters, with prior approval from the professors teaching the classes, went into the classrooms and asked the students if they were willing to participate in a study. After the participants signed the consent forms, the experimenters handed out the background questionnaire and the ethical dilemma questionnaire to all the participants and gave them ten minutes to fill out both forms. After this, the forms were collected and the participants had the opportunity to ask questions.

Design and Analyses

The two factors in this research design were Gender and Age. This was a between factors research and analyses. The levels for Gender factor were male and female and the levels for Age factor were 18-22-years old vs. 26 years and above. Based on these criteria, the experimenters obtained a total of 64 participants. For each dilemma, the answer for the first question was the sign score ranging from -3 to 3 and then the average absolute value of questions two to thirteen was the C-score. This was a modified version of Lind’s (2009) C-score. Each participant had one sign score and one C-score for each dilemma.
Results

This study evaluated the effects of Age and Gender on ethical decision making.

Effects of Gender

There was no significant difference between the male participants (M = .58, SD = .18) and female participants (M = .55, SD = .22), $F(1, 60) < 1$, on the mean C-score on the two dilemmas.

Separate analyses with Gender and Marital Status, $F(1, 60) = 1.011, p < .319$, Gender and Religion, $F(4, 53) < 1$, and Gender and Ethnicity, $F(1, 60) < 1$, were not significant.

A separate analysis with Gender and Class showed that the interactions of Gender and Class was significant, $F(2, 58) = 3.399, p < .04$. This result was not the expected outcome.

Figure 1 shows that the highest average was for males in the Introduction to Psychology class (M = .64, SD = .17). The lowest average was for females in the Introduction to Psychology class (M = .47, SD = .14).

Effects of Age

There was no significant difference between the 18 to 22-year-old group (M = .56, SD = .18) and the 26-year old and above group (M = .58, SD = .25), $F(1, 60) < 1$.

Separate analyses with Age and Marital Status, $F(1, 60) < 1$, Age and Religion, $F(4, 53) < 1$, Age and Ethnicity, $F(1, 60) < 1$, and Age and Class, $F(2, 58) < 1$, were not significant.

Interactions of Gender and Age
The interaction of Gender and Age on the mean c-score of the two dilemmas on the questionnaire was nearly significant, $F(1, 60) = 3.300, p < .074$. The highest average was for females ages 26 and above ($M = .62, SD = .28$). The lowest average was for females ages 18 to 22 ($M = .51, SD = .17$).

The interaction of Gender and Age on the Workers’ Dilemma alone was not significant, $F(1, 60) < 1$.

The interaction of Gender and Age on the C-score of the Doctor’s Dilemma alone was significant, $F(1, 60) = 5.036, p < .029$. The Doctor’s Dilemma outcome was not expected. Figure 2 shows that the highest average was for females ages 26 and above ($M = .67, SD = .31$) and the lowest average was for males ages 26 and above ($M = .49, SD = .19$).

The interactions of Gender, Age, and Class on ethical decision making was not significant, $F(2, 52) < 1$.

Other Factors

The joint effects of Class and Religion on ethical decision making, $F(8, 48) < 1$, Class and Ethnicity on ethical decision making, $F(2, 58) < 1$, and Marital Status and Ethnicity on ethical decision making, $F(1, 60) < 1$, were not significant.

The joint effects of Class and Marital Status on ethical decision making, $F(2, 58) = 2.562, p < .086$, and Ethnicity and Religion on ethical decision making, $F(3, 54) = 2.670, p < .057$, were nearly significant.

Discussion
This study investigated the effects of gender and age on ethical decision making. While decision making is a part of everyday life, ethical decision making is important to the harmony of American society. The most unethical decisions have a tendency to be found in the younger age groups (Jennings, Hunt, & Munn, 1996). Research on the interactions between age and gender on ethical decision making has yielded different results. The goal of this study was to measure the effects of age and gender on ethical decision making using two ethical dilemma questionnaires adopted by Lind (2009). The participants answered the questions on the questionnaire and were assigned a sign score and a C-score for each dilemma.

Although the effects of Gender on ethical decision making were not statistically significant in this study, the interactions of Gender and Class were. This supports the idea that ethical decision-making is more likely to differ by social, political, and cultural experience than by gender alone (D’Cruz et al, 2002). Males in the Introduction to Psychology class seemed to be more ethical than females in this class. While the class the participants were in was not thought to be a factor in ethical decision making, it was the only statistically significant result found. One possible reason for this result is the subject matter that was taught in the classes. It is possible that in the Introduction to Psychology class, the participants had already discussed the importance of ethical decision making while the participants in the Elementary Statistics class had no prior knowledge of the importance of ethical decision making. As well as the Research Methods in Psychology class, they may have taken Introduction to Psychology such a long time ago or they were more concentrated on what they were doing in class that day that ethical decision making on a hypothetical dilemma was not of great importance at that moment.

The effects of Age on ethical decision making were not statistically significant when combined with other factors. Since the participants for this study were all 18 years of age or
older, this may support the idea that unethical decisions have a tendency to be found in younger age groups (Jennings, Hunt, & Munn, 1996). This also may support the findings that the most ethical decisions being made are by the older participants and decreasing ethical decisions being made as their age decreases (Ruegger & King, 1992). This study did not study the younger adolescent age groups or the older generations. A study of age on ethical decision making with a bigger age gap such as elementary school aged children compared to senior citizens may yield a different result.

The interaction of Gender and Age on the mean C-score of the two dilemmas was nearly significant, the highest average being for females. The same conclusion is found in a study that shows that women tend to use more ethics then men when making ethical decisions (Wilson, 1995). The second highest average was for the younger males ages 18 to 22 which also supports a study that shows that female social workers and younger male social workers are more likely to believe allegations of sexual abuse therefore making more ethical decisions on how to help their clients (Jackson & Nuttall, 1994).

The interaction of Gender and Age on the Doctor’s Dilemma alone was significant. The highest average C-score was for females ages 26 and above and the lowest C-score average was for males 26 and above. The Doctor’s Dilemma was about a woman who had cancer and had no hope of being saved and during a temporary period of improvement, convinced her doctor to give her a lethal dose of morphine. An analysis of the sign scores, the higher for this dilemma the more for the doctors decision to aid in the euthanasia, showed that the women 26 years and above were less in favor of it (-.500) and males 26 and above were more in favor of it (1.250). In one study of 379 patients, 239 patients wanted assisted suicide and one major desire for the hastened death was due to major depression (p< .001) (Wilson, et al., 2007). Assisted suicide is
not legalized in this country and since a man is more likely to commit fatal suicide than women when depressed, this could be one reason why men are more in favor of assisted suicide (Lester, 1995).

While Age and Gender in this study as well as others resulted in nothing really statistically significant, there was not much research to compare the results to. Why the results turned out to be what they are is also a question that is unanswered at this time. Age and Gender are important factors in ethical decision making because decisions are made every day and knowing which gender at which age is the most capable of making an ethical decision is important in maintaining an even balance in society and also when delegating an important decision. Knowledge of the two factors combined can increase the likelihood that the most ethical decision in any situation will be made.

Further studies of the effects of Age and Gender on ethical decision making may include larger age gaps, larger number of participants, and a more random sample of participants. Also, including a question at the end of the dilemmas asking who the participant was thinking of in the dilemma might shed some light as to why the decisions were made. A longitudinal study over the course of a participants life with them filling out the same dilemma questionnaires every 20 years may also increase understandings of how ethical decision making progresses. Other studies may combine factors such as Race, Marital Status, Ethnicity, Age, and Gender in order to produce more precise results that may provide an even clearer understanding of why some people are more ethical in decision making then others regardless of any factors that may produce a statistically significant result or not. This is important because it could help put the right people in the right decision making positions which could inevitably make life progress in a more manageable fashion.
References


Ducut, J. D. (2007). Nurturing the ethical reasoning of leaders: The illumination of ethics education, demographics, and teaching methods. Dissertation Abstracts International Section A: Humanities and Social Sciences, 67 (7-A), 2462. (UMI No. 3224165)


Appendix A: Background Questionnaire

*Please fill out this form as accurately and honestly as possible.*

1. What is your gender (Please circle one)
   - Male
   - Female
2. What is your age? __________
3. What is your ethnicity? (Please circle one)
   - Asian
   - Black
   - Hispanic/Latino
   - Middle eastern
   - Pacific Islander
   - White (Caucasian)
   - Other __________
4. What is your country of birth? ________________________________
5. What is your first spoken language? _____________________________
6. What is the language you use the most? __________________________
7. What is your religion? _____________________________________
8. What is your marital status? __________________________________
Appendix B: Ethical Dilemma Questionnaire

Instruction: Please read the story and rate each item based on how strongly you agree or disagree with the statement. You don’t have to spend too much time on each statement. Please be as honest as possible. Thank you.

Example Dilemma

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $400 for the radium and charged $4,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money and tried every legal means, but he could only get together about $2,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So, having tried every legal means, Heinz gets desperate and consider breaking into the man's store to steal the drug for his wife.

I strongly disagree I strongly agree

1. Would you disagree or agree with Heinz’s thinking? -3 -2 -1 0 +1 +2 +3

How acceptable do you find the following arguments in favor of Heinz’s thinking? Suppose someone argued Heinz was right…

I strongly reject I strongly accept

2. because the druggist was too greedy, Heinz was justified in breaking into the store……………………………….. -4 -3 -2 -1 0 +1 +2 +3 +4

How acceptable do you find the following arguments against Heinz’s thinking? Suppose someone argued Heinz was wrong…

I strongly reject I strongly accept

4. because we would endanger law and order in society if everyone acted as Heinz did. …………………………… -4 -3 -2 -1 0 +1 +2 +3 +4

<Now, please respond to the following two dilemmas (Worker's Dilemma and Doctor’s Dilemma). You have about 10 minutes to complete the tasks. Thank you!>
## 1. Workers' Dilemma

Recently a company fired some people for unknown reasons. Some workers think the managers are listening in on employees through an intercom system and using the information against them. The managers deny this charge. The union says it will only do something about it when there is proof. Two workers then break into the main office and take the tapes that prove the managers were listening in.

<table>
<thead>
<tr>
<th>I strongly disagree</th>
<th>I strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>-1</td>
<td>2</td>
</tr>
<tr>
<td>-2</td>
<td>3</td>
</tr>
</tbody>
</table>

### How acceptable do you find the following arguments in favor of the two workers' behavior? Suppose someone argued they were right...

<table>
<thead>
<tr>
<th>I strongly reject</th>
<th>I strongly accept</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>-1</td>
<td>2</td>
</tr>
<tr>
<td>-2</td>
<td>3</td>
</tr>
<tr>
<td>-3</td>
<td>4</td>
</tr>
</tbody>
</table>

2. because they didn't cause much damage to the company.
3. because due to the company's disregard for the law, the means used by the two workers were permissible to restore law and order.
4. because most of the workers would approve of their deed and many of them would be happy about it.
5. because trust between people and individual dignity count more than the firm's internal regulations.
6. because the company had committed an injustice first, the two workers were justified in breaking into the offices.
7. because the two workers saw no legal means of revealing the company's misuse of confidence, and therefore chose what they considered the lesser evil.

### How acceptable do you find the following arguments against the two workers' behavior? Suppose someone argued they were wrong...

<table>
<thead>
<tr>
<th>I strongly reject</th>
<th>I strongly accept</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>-1</td>
<td>2</td>
</tr>
<tr>
<td>-2</td>
<td>3</td>
</tr>
<tr>
<td>-3</td>
<td>4</td>
</tr>
</tbody>
</table>

8. because we would endanger law and order in society if everyone acted as the two workers did.
9. because one must not violate such a basic right as the right of property ownership and take the law into one's own hands, unless some universal moral principle justifies doing so.
10. because risking dismissal from the company on behalf of other people is unwise.
11. because the two should have run through the legal channels at their disposal and not committed a serious violation of the law.
12. because one doesn't steal and commit burglary if one wants to be considered a decent and honest person.
13. because the dismissals of the other employees did not affect them and thus they had no reason to steal the transcripts.
2. Doctor's Dilemma

A woman had cancer and she had no hope of being saved. She was in terrible pain and so weak that a large dose of a pain killer such as morphine would have caused her death. During a temporary period of improvement, she begged the doctor to give her enough morphine to kill her. She said she could no longer stand the pain and would be dead in a few weeks anyway. The doctor decided to give her an overdose of morphine.

14. Do you disagree or agree with the doctor's behavior?

<table>
<thead>
<tr>
<th>I strongly disagree</th>
<th>I strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>-3</td>
<td>+3</td>
</tr>
<tr>
<td>-2</td>
<td>+2</td>
</tr>
<tr>
<td>-1</td>
<td>+1</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

How acceptable do you find the following arguments in favor of the doctor? Suppose someone said he acted rightly...

15. because the doctor had to act according to his conscience. The woman's condition justified an exception to the moral obligation to preserve life.

16. because the doctor was the only one who could fulfill the woman's wish; respect for her wish made him act as he did.

17. because the doctor only did what the woman talked him into doing. He need not worry about unpleasant consequences.

18. because the woman would have died anyway and it didn't take much effort for him to give her an overdose of a painkiller.

19. because the doctor didn't really break a law. Nobody could have saved the woman and he only wanted to shorten her suffering.

20. because most of his fellow doctors would presumably have done the same in a similar situation.

How acceptable do you find the following arguments against the doctor? Suppose someone said that he acted wrongly...

21. because he acted contrary to his colleagues' convictions. If they are against mercy-killing the doctor shouldn't do it.

22. because one should be able to have complete faith in a doctor's devotion to preserving life even if someone with great pain would rather die.

23. because the protection of life is everyone's highest moral obligation. We have no clear moral criteria for distinguishing between mercy-killing and murder.

24. because the doctor could get himself into much trouble. They have already punished others for doing the same thing.

25. because he could have had it much easier if he had waited and not interfered with the woman's dying.

26. because the doctor broke the law. If one thinks that mercy-killing is illegal, then one should refuse such requests.

Thank you!
Figure 1. Interactions of Gender and Class on the mean C-score
Figure 2. Interactions of Gender and Age on Doctor’s Dilemma