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Implicit Bias: The Decision to Shoot or Not Shoot

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Implicit Bias: The Decision to Shoot or Not Shoot

By

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Abstract

This study used a videogame to simulate encounters that law enforcement officers may have with potentially hostile targets. Implicit bias is something that every person carries with him or her. It is unconsciously learned from the societies within which we live, from the overt to the subliminal messages that bombard us daily. This research attempted to determine whether implicit bias real and present, and to what extent can this notion be empirically observed. The literature review covered (1) What does the existing literature say about the nature and extent of implicit bias? (2) What are some examples of implicit bias? (3) Where do we learn, and how do we acquire, implicit bias? This explanatory study sought to determine whether implicit bias may contribute to fatal shooting events. Although not statistically significant, an analysis of the raw numbers of incorrect shots may suggest that participants were more likely to make a mistake (whether Type I or II Error) when the person in the scene was White rather than Black. Popular media would suggest that the unarmed black male would be shot the most, but this study's sample population has suggested other results.

Keywords: implicit bias, shoot-don't shoot, fatal shootings, critical incident

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Dedication

I dedicate this work to the working men and women in law enforcement who risk their lives daily. In addition, I dedicate this work to my loving parents; they have supported me in my pursuit of higher education and career endeavors.

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Chapter I: Introduction

The Problem: Fatal Shootings by Police

In recent years, there has been a rising concern in the U.S. regarding the shooting of unarmed black males. Headlines have outdone police efforts to force a focus in law enforcement. All too often, the negative headlines outweigh the positive headlines about law enforcement. Many headlines center around the idea of a white cop shooting a young black male. According to a Washington Post article (Kindy, 2015a), as of June 1, 2015, black Americans were more than twice as likely to be unarmed as white Americans when killed by police. At that time, 32 percent of the 135 black people killed by police had been unarmed, compared with 15 percent of the 234 white people. This disparity has since shrunk, with 26 percent of the 248 black people and 18 percent of 490 white people being recorded as unarmed (Kindy, 2015a). Pundits and protestors have voiced accusations that police officers in the United States are racist, that the criminal justice system is racist. There is expressed concern that police officers are more aggressive in their response to black males than white males.

Recent research has tested the idea that conscious racist action may not be at the root of these shootings. Rather, *Implicit Bias* learned by all of us via society's messages may be a primary contributor. "Implicit bias is the bias in judgment and/or behavior that results from subtle cognitive processes that often operate at a level below conscious awareness and without intentional control," (NCSC, 2012, p. 1). Implicit bias is therefore something that every person carries with him or her. It is unconsciously learned from the societies within which we live, from the overt to the subliminal messages that bombard us daily.

Research Statement & Questions

This study was conceptualized as part of a larger research project. The starting premise was that implicit bias contributes to fatal shooting outcomes, especially for young Black men. The overall hypothesis was that professional instruction in the use of firearms, combined with classes that increase cultural and racial awareness, can be used to "train out" or to mitigate the affect of implicit biases acquired from one's social environment. To test this hypothesis, a two-part research design was established.

Part 1 entailed the study presented herein; that is, to determine whether or not differences could be identified among people's decisions and behaviors relative to shoot-don't shoot scenarios. These differences were examined using participants' demographics to identify patterns that may indicate the presence of implicit bias. Part 2 of this project will be conducted in the future and involve a quasi-experimental research design. Two groups will be used: control and treatment. Participants with no firearms experience or cultural/racial awareness training will comprise the two sample populations. Both groups will receive a pre-test (100 shoot-don't shoot scenarios). The treatment group will then receive focused instruction, while the control group gets nothing. Once the treatment group's training is complete, both groups will receive a post-test (100 shoot-don't shoot scenarios).

Part 1 of this research project sought answers to two majors questions. The first query: 1) What do we know about implicit bias? This was operationalized using 3 supporting questions: What does the existing literature say about the nature and extent of implicit bias in the United States today? What are some examples of implicit bias? How is implicit bias learned and acquired? The author then went on to find the answers to a second research question: 2) Can

shoot-don't shoot testing be used to identify the presence of implicit bias and to measure its influence, and if so, then how?

Purpose & Objectives

The overall objective for the two-part research project is to test whether implicit bias can be reduced by appropriate training. The author intends to test whether law enforcement training has a positive affect reducing the number of shootings of unarmed men, both Black and White. The purpose for doing the study at hand is to determine how and to what extent people's decisions and behaviors in shoot don't-shoot scenarios can be empirically measured, whether or not the presence of implicit bias can be quantitatively identified.

Implicit bias is therefore something that every person carries with him or her. It is unconsciously learned from the social environments within which we live, from the overt to the subliminal messages that bombard us daily. The question then is whether implicit bias can be overcome or at least mitigated. To what extent can this hypothesis be empirically observed when comparing trained and untrained persons?

In other words, in the end, will this research project find that the specialized training received by law enforcement officers makes a difference? Dos it increase the accuracy and effectiveness of their decision making on the job? Does it reduce the likelihood that an encounter will become fatal? If Part 1 of this research project is successful in determining how well shoot-don't shoot testing works to identify and measure implicit bias, then the author may proceed with Part 2 and seek to identify and measure the affect of specialized law enforcement training on reducing implicit bias.

Chapter II: Literature Review

What is Implicit Bias, and Who has It?

Implicit bias is present in all of us, implicit bias contributes to fatal shootings, and its affect can be mitigated by training. This chapter will explore the social problem of implicit bias and law enforcements decision to shoot and describe the extent to which it exists in the U.S. today. We will explore how implicit bias is formed in every individual and where we learn it. It will then review criminological theories that help to explain and understand the problem, and the scientific research that has been conducted to address it. The chapter closes by examining both society's and the criminal justice system's responses to the problem.

According to The Kirwan Institute at Ohio State University, Implicit bias has a few key characteristics that help us shape our understanding. Implicit biases are pervasive. Everyone possesses them, even people with acknowledged commitments to impartiality such as judges. Implicit and explicit biases are related but separate mental constructs. They are not mutually exclusive and may even reinforce each other. The implicit associations we hold do not necessarily align with our declared beliefs or even reflect stances we would explicitly endorse. We generally tend to hold implicit biases that favor our own in-group, though research has shown that we can still hold implicit biases against our in-group. Implicit biases are malleable. Our brains are incredibly complex, and the implicit associations that we have formed can be gradually unlearned through a variety of debiasing techniques (Staats, 2015).

To comprehend implicit bias further, it is important to understand two stems of distinctions when individuals process information. Cognitive psychologists Shiffrin and Schneider (1977) have labelled the distinctions between "controlled" and "automatic" information processing. Controlled processing was thought to be voluntary, attention demanding,

and of limited capacity; Automatic processing was thought to unfold without attention, to have nearly unlimited capacity, and hard to suppress voluntarily (Payne & Gawronski 2010; Bargh, 1994). Early studies have shown attitudes can be understood as activated by either controlled or automatic processes. Implicit bias is thought to be a very automatic process. The notion embedded behind this concept is that automatic responses were thought to be "uncontaminated" by controlled or strategic responses (Amodio & Devine, 2009). This is to say that the relatively unconscious and automatic features of judgement and social behavior exist.

In an earlier study, "sequential priming" task, subjects were asked to react to social group labels ("black," "women," etc.) and subject's reaction times were recorded to stereotypic words ("lazy" or "nurturing"). People respond more quickly to concepts closely linked together in memory. In this task, subjects responded quicker to words like "lazy" following exposure to "black" than "white". Researchers standardly take this pattern to indicate a prejudiced automatic association between semantic concepts. Several studies have brought forth the awareness of stereotypes affecting social judgement and behavior in relative freedom from how subjects respond on measures of their explicit attitudes (Banaji et al., 1993; Devine, 1989; Devine & Monteith, 1999; Dovidio & Gaertner, 2004; Greenwald & Banaji, 1995;). What a person says is not necessarily a good representation of the whole of what he/she believes, nor how he/she will behave. Research measures people's attitudes without having to ask them directly.

Implicit bias is similar to expectations or preferences. We expect a certain outcome from an individual given their attributes in appearance. Implicit bias may also be understood in terms of dating; you prefer a certain type of person over another to date. This cognitive process also thrives in law enforcement; usually based on modified experiences, an individual may expect to have a certain outcome with another given prior experiences with a person of similar attributes.

"[An] officer may interpret the behavior of the suspect through the lens of his or her stereotypic expectations, which could lead the officer to interpret the behavior of black suspects as more aggressive and dangerous than the same behavior performed by white suspects," (Peruche & Plant, 2006).

Children studies have shown ambiguous aggressive behaviors to be more mean and threatening (and less playful and friendly) when these behaviors were attributed to black rather than white peer (Sagar & Schofield, 1980). Individuals might overestimate the physical aggressiveness of blacks as a group. Black males in this study have been once again thought of as more threatening; leaving the idea of blacks being threatening to be all too generalizable to a number of situations. It's not to say we are born bigots, but through exposure of our demographics and media perception, we learn these types of behaviors.

How is Implicit Bias Formed?

The tough reality for society is prejudice may be hardwired in our brains but we can learn to override our prejudice and embrace difference (Fiske, 2008). People may believe they lack prejudice but the issue is far more than good intentions. According to Fiske, "it requires broad social efforts to challenge stereotypes and get people to work together across group lines" (Fiske, 2008). On a law enforcement level, we re-evaluate how departments are implementing community policing. Exposing yourself to the cultures of other ethnicities helps reduce implicit bias against other groups. For example, in a police department if the department is equally diverse, and everyone shows to work within different diversities, it will increase relations with that culture in the work place and outside patrolling on the streets. It takes finding common ground with those you are surrounded by. Interactions with law enforcement help shape this

issue as a whole. Positive interactions with law enforcement is said to create a better outlook about the police.

Some people have no contact with officers and still view them in a negative sense. Personal experience appears to influence attitudes for some people, but perceptions are also shaped by other forces. Media affect[s] public perceptions of social perceptions of social problems, although the degree of influence depends in part on a particular audience's receptivity to media messages (Weitzer & Tuch, 2004). Studies on mass media reporting have shown immediate news coverage of brutality incidents or corruption scandals (Weitzer & Tuch, 2004). "Black Lives Matter" is a demonstration group that was produced from several news reports of police brutality. This media coverage allows the wrong perception of both parties involved. This also created an image for both groups to have a preconceived notion by individuals inside and outside both parties perceiving each other's views and goals. Most crime described on television have been young black males with baggy clothes, possible threat, and so forth. Now, citizens and law enforcement has all been exposed to this; creating an implicit bias of a group due to increased exposure. Same goes for the demonstration group; news stories have spawned from the media and have been the most popular story. A story is then several times updated on during the course of the investigation and officer trial which the topic is never fading from citizen's view. This reinforcement keeps the story alive before it becomes all too familiar.

Neighborhoods that harbor the majority of negative relations with law enforcement is those communities with high crime rates and tend to have problematic police-community relations. "In their efforts to fight crime in these communities, police tend to typify residents as troublemakers and act aggressively toward them. The result is that verbal and physical abuse, unjustified stops of people on the street, and corrupt activities are much more likely to occur in

high-crime than in low-crime areas," (Weitzer & Tuch, 2004). Officers and citizens attitudes do not mesh in most of these situations; a suspects clothing and demeanor play a part in these exchanges. The importance to study demeanor and attitudes in unarmed shootings would also shed light on negative altercations. Neighborhoods and departments all over the U.S. will have differing opinions of their communities and often race is a good indicator. Police misconduct is viewed through the media and personal interactions and studies have shown minorities having the most negative interactions.

Attitudes from law enforcement and citizens tend to have an "us vs. them" attitude; this changes within better training, better understanding of policies, and more diverse work group supporting better community policing. By the high exposure of police misconduct, and the high exposure to who the criminal is perceived to be, giving different reinforcement of more positive views between the two can reinforce a new bias about each group. Just slightly change the context in which people view photos of other races, and you'll see changes in the ways their brains react (Fiske, 2008).

When and Where can it be Seen in Society?

Extensive research has documented the effects of implicit racial biases in a variety of realms ranging from classrooms to courtrooms to hospitals. There have been several examples of where to view implicit bias in society.

A 2012 study examined how pediatricians' implicit racial attitudes affect treatment recommendations for four common pediatric conditions. Results indicated that as pediatricians' pro-white implicit biases increased, they were more likely to prescribe painkillers for patients who were white as opposed to black. Other research explored the connection between criminal sentencing and black features bias, which refers to the generally negative judgments and beliefs

that many people hold regarding individuals who possess features such as dark skin, a wide nose, and full lips. Researchers found that when controlling for several factors like seriousness of the primary offense, number of prior offenses, etc., individuals with the most prominent African American features received longer sentences than their less featured counterparts. This phenomenon was observed interracially in both black and white male samples (Staats, 2015).

Chapter III: Research Design

The Original Study

The original study by Josh Correll (2007) included three separate experiments. The original study had 92 non-black undergraduate participants who were randomly assigned to a condition. The design involved a single between-subjects factor with a covariation condition with three levels; stereotype congruent, control, and stereotype incongruent. Stereotype congruent reinforced the stereotype by adding more armed black and more unarmed white scenarios. Stereotype incongruent did the opposite; it had more unarmed black and more armed white scenarios. The control left the condition showing an even amount of every scenario. Participants would play two rounds of the "videogame" that consisted of a 2 x 2 design; *Target Race* (Black vs. White) and *Object Type* (gun vs. non-gun) as repeated factors. The game eliminated eight randomly selected targets from the original pool of 20 for each of the two underrepresented target types. They found *Target Race* and *Object Type* were correlated (r=.25).

A Replication Model

The research design for my study involved "shoot or don't shoot" scenarios; this was based on the original study done by Josh Correll (2007) and its use of still images. In the original study, the participants were presented with a life-sized projection of the scenarios about 20 feet in front of them. They used real pistols and live ammunition, along with protective eyewear and hearing protection. I attempted to quasi-replicate that experimental method by using a plastic pistol that fired a laser at projections on the wall. Computer software and a camera were used to record the shots (Laser Activated Shot Reporter, LASR). I was challenged by several issues while trying to accomplish this, and was required to modify the research design even further

(more on this is discussed in Chapter V, Complications). In the end, I used Correll's online videogame (http://psych.colorado.edu/~jclab/FPST/demo/canvas/testPrograms/st_v.1.html).

I used a convenience sampling technique to identify research subjects (n=33). The experiment involved untrained individuals as the sample population. They were Saint Cloud State University students from various academic disciplines. However, most of the participants were from criminal justice. I completed all Institutional Review Board (IRB) requirements and received its approval to proceed (see Appendix G).

In a demonstration of one of Josh Correll's studies, he informed the participants of their result after every shot (i.e., *Good Shot*, or *You Killed an Innocent Person*). I opined that by immediately reporting the outcome of the encounter, the researcher was providing rewards and punishments. Skinner's *Operant Conditioning* (1938, 1950, 1953, 1971) proposed that behavior is shaped and maintained by the consequences that follow it. The greatest affect on an individual's subsequent behavior is obtained by using consequences that have a high probability of happening, and that immediately follow said behavior (he refers to this as the *Schedule of Consequences*). He conceptualizes these consequences in two categories of contingencies: reinforcement (i.e., rewards) and punishment (i.e., aversive stimuli). Skinner also discusses discriminative stimuli. These are present only before or during the conduct of the behavior in judgment. They function as a cue of what is to follow--reward or punishment.

Skinner (1938) proposes that reinforcement increases and punishment decreases the likelihood that a behavior will be repeated. Following a demonstrated behavior, a positive reinforcement occurs when something desirable is provided and is perceived by the actor as a reward; and a negative reinforcement occurs when something undesirable is removed and perceived as a reward. Following an actor's demonstrated behavior, a positive punishment occurs

when something undesirable is provided and is perceived by the actor as an aversive stimulus; and lastly, a negative punishment occurs when something desirable is removed and perceived as an aversive stimulus. Thus, one may infer that immediately reporting the outcome of each encounter may have reinforced or influenced subsequent behavior.

The online videogame version of Correll's study does not provide a report until after all encounters are complete. Participants were told, by completing the survey and participating in the videogame, that they were implying consent to participate in this study. They were informed this study examined human decision-making during simulated life and death situations that are often called "shoot/don't shoot scenarios." Each individual's participation involving the videogame takes about 10-15 minutes to complete. Still pictures of various scenes were displayed on the computer. Participants may see a series of 1 to 4 different scenes, before seeing an individual in which we will require a *Choice*. At some time during each Choice, a still picture will suddenly appear of a person holding either a handgun or some harmless object like a cellphone or other portable electronic device. Participants must then decide to shoot (pressing L) or do not shoot (pressing A). Each participant will be given 2 attempts: Round 1 is a familiarization or practice, and Round 2 is the study portion. I am concerned about how much time it takes to make a decision—right or wrong. Once a participant begins the videogame, they may quit at any time but, they will not be allowed to restart. Results are then collected and sorted into an SPSS raw data file for analyzing.

The following variables were collected from the survey and aggregated in SPSS: *Gender,* the sexual orientation of the participant. *Age,* the age of the participant. *Race,* the biological trait they defined themselves. *Firearm Experience,* how much experience they have in training others or being trained with a firearm. *Military Experience,* the amount of years, if they have been

deployment, and the amount of exposure to combat. *Law Enforcement Experience*, the amount of years, and if they have ever fired in the line of duty. *Diversity Exposure*, a participant's interpretation to growing up in a diverse society as a child. *Hometown Population*, the population of a participant's hometown.

The following variables were collected from the task results page and aggregated in SPSS: *Armed White Correct*, the number of correctly shot armed white scenarios. *Armed Black Correct*, the number of correctly shot armed black scenarios. *Armed White Incorrect*, the number of unshot armed white scenarios. *Armed Black Incorrect*, the number of unshot armed black scenarios. *Unarmed White Correct*, the number of correctly "not shot" unarmed white scenarios. *Unarmed Black Correct*, the number of correctly "not shot" unarmed black scenarios. *Unarmed White Incorrect*, the number of incorrectly shot unarmed white scenarios. *Unarmed Black Incorrect*, the number of incorrectly shot unarmed black scenarios. *Split Time (Unarmed/Armed, White/Black)*, (or the reaction time) the amount of time (less than a second given) to make a choice on a scenario. *Game Points*, the amount of points a participant received from playing the videogame task.

The data were organized and stored in an MS Excel spreadsheet after collection and were analyzed using SPSS.

Chapter IV: Findings & Conclusions

Study Summary

The following demographics were collected by a survey tool (Appendix A). If an answer was left blank, it was attributed as unknown or no. A greater proportion of the sample population were *Male* (60%). Most of the participants were under *Age 18-25* (79%). About 1/4 of the participants self-identified as Non-White (27%); of which, 15 percent were *Black* and 12 percent *Other*. Of those who self-identified as *Other*, 9 percent listed *Asian* and 3 percent *Multiracial*. In Minnesota, people of Color (those who identify as a race other than White alone, and/or those who are Hispanic) make up 19% of the total population. Non-Hispanic White Minnesotans represent the remaining 81% of the statewide population (U.S. Census Bureau, 2015). The *Degree Field* of a majority of the participants (49%) was identified as Criminal Justice, with 33 percent as Non-Criminal Justice and 18 percent as Unknown. Relative to *Firearm Experience*, the participants were weighted heavily toward having previously fired a real firearm (76%). About 1/4 of the sample (24%) had never owned or fired a firearm. Firearm ownership was weighted toward not having a personal weapon (64%). Relative to *Description of Training*, participants reported those that are typical of the Midwest, wherein, hunting and military service are common. About 24 percent reported firearms training related to personal carry or hunting, with 12 percent reporting military service. Of those who served in the military (n=4, or 12% of the sample), only 1 reported yes for *Combat Zone Deployed*. None (0%) of those with military experience reported having *Fired Firearm in the Line of Duty*. Although 3 participants (9% of the sample) reported *Law Enforcement Experience*, a closer look revealed that none of that experience was as a sworn officer. Participants' experiences were in positions that do not require a weapon to be carried: university public safety, police reserves, and Skills training. About 82

percent of participants reported *Diversity Exposure in Childhood*. This is quite interesting considering the extent of demographic diversity in Minnesota. Only 48 percent of the participants reported having grown up in towns/cities with populations greater than or equal to 25,000. In fact, only 4 (12%) reported having come from a city of 180,000 or larger.

Engagement - Correct

During the computer game used in this study, participants were presented with four ideal-types of scenarios: Armed White, Armed Black, Unarmed White, or Unarmed Black. The game only recorded a "score" when a participant struck either "A" (don't shoot) or "L" (shoot) on the keyboard. If no key was struck, then no score was entered. When a participant hesitates and does not fire at all or before the game continues, then no score was recorded by the game for that scene. Only when the wrong key was pressed was an "incorrect" score recorded as either Armed White Incorrect, Armed Black Incorrect, Unarmed White Incorrect, or Unarmed Black Incorrect.

1. PERCENT CORRECT AW/AB/UW/UB

	MIN	MAX	MEAN	MODE	STDEV
BLACK	85.0	100.0	96.0	100.0	1.28
WHITE	76.0	100.0	93.8	100.0	1.83
ASIAN	90.9	100.0	96.1	100.0	0.10
MULTI	95.7	96.0	95.9	96.0	0.15
NONWHITE	85.0	100.0	96.0	100.0	1.49

2. PERCENT CORRECT ARMED

	MIN	MAX	MEAN	MODE	STDEV
BLACK	91.7	100.0	96.7	96.0	2.60
WHITE	76.0	100.0	93.9	100.0	5.89
ASIAN	90.9	100.0	93.8	82.0	3.54
MULTI	96.0	96.0	96.0	96.0	0.00
NONWHITE	90.9	100.0	94.3	96.0	3.16

3. PERCENT CORRECT ARMED BLACK

	MIN	MAX	MEAN	MODE	STDEV
BLACK	95.8	100.0	96.7	95.8	1.84
WHITE	80.0	100.0	94.4	100.0	5.61
ASIAN	92.0	96.0	93.3	92.0	2.31
MULTI	96.0	96.0	96.0	96.0	0.00
NONWHITE	92.0	96.0	94.0	96.0	2.31

4. PERCENT CORRECT ARMED WHITE

	MIN	MAX	MEAN	MODE	STDEV
BLACK	91.7	100.0	96.7	100.0	3.46
WHITE	76.0	100.0	93.5	96.0	6.25
ASIAN	90.9	100.0	94.2	NA	5.04
MULTI	96.0	96.0	96.0	96.0	0.00
NONWHITE	90.9	100.0	94.7	NA	4.21

On average, non-whites were slightly more likely than whites to correctly engage all scenarios (mean = 96% compared to 93.8%)(table 1). When engaging armed scenarios (AW/AB), this difference was even smaller; nonwhites (94.3%) and whites (93.9%)(table 2). However, upon closer examination of how accurately participants engaged scenarios with armed blacks, whites (94.4%) were slightly more accurate than nonwhites (94.0%). Black participants were the most accurate in engaging armed black scenarios (96.7%)(table 3). Comparing table 3 and 4, white participants were slightly more likely to correctly engage armed black targets than armed white targets(mean = 94.4% compared to 93.5%) and there were no differences for black participants between armed black and armed white scenarios (96.7%). However, nonwhite participants as a group were slightly more likely to correctly engage armed white scenarios compared to armed black (mean= 94.7% compared to 94.0%).

Engagement Relationships

Although not statistically significant, an analysis of the raw numbers of incorrect shots may suggest that participants were more likely to make a mistake (whether Type I or II Error) when the person in the scene was White rather than Black. Were they engaging in more intense decision making when the person in the scene was Black? Or, was the number of incorrect shots dependent on the color of the object in the person's hand and the background colors? A more detailed analysis of the scenes and an attempt to standardize the presentation of colors and textures is needed in future research.

No statistically significant relationships could be identified between the variables *Sex* and any of percentages of correct or incorrect shots.

- The is no relationship between the sex of participants (Male and Female) and the percent of armed Whites correctly shot (AW % Correct) ($x^2 = 10.394$, $df = 11$, $p = 0.495$).

- The is no relationship between the sex of participants (Male and Female) and the percent of armed Blacks correctly shot (AB % Correct) ($x^2 = 9.385$, $df = 8$, $p = 0.311$).
- The is no relationship between the sex of participants (Male and Female) and the percent of unarmed Whites correctly shot (UW % Correct) ($x^2 = 12.616$, $df = 10$, $p = 0.246$).
- The is no relationship between the sex of participants (Male and Female) and the percent of unarmed Blacks correctly shot (UB % Correct) ($x^2 = 13.221$, $df = 13$, $p = 0.431$).
- The is no relationship between the sex of participants (Male and Female) and the percent of armed Whites incorrectly shot (AW % Incorrect) ($x^2 = 10.394$, $df = 11$, $p = 0.495$).
- The is no relationship between the sex of participants (Male and Female) and the percent of armed Blacks incorrectly shot (AB % Incorrect) ($x^2 = 9.385$, $df = 8$, $p = 0.311$).
- The is no relationship between the sex of participants (Male and Female) and the percent of unarmed Whites incorrectly shot (UW % Incorrect) ($x^2 = 12.616$, $df = 10$, $p = 0.246$).
- The is no relationship between the sex of participants (Male and Female) and the percent of unarmed Blacks incorrectly shot (UB % Incorrect) ($x^2 = 13.221$, $df = 13$, $p = 0.431$).

Engagement Split Times

Perhaps, a different way to examine the issue of decision making is by looking a *Split Time* for how long it took a participant to engage a scene. Again, no statistically significant relationships could be identified when examining *Split Time* relative to the type of person in the scene or the percent of Type I and II errors. However, small differences were visibly present.

Split Time – Male Only

Statistics

		Split Time AW	Split Time AB	Split Time UW	Split Time UB
N	Valid	20	20	20	20
	Missing	0	0	0	0
Mean		.61755	.60950	.65020	.66380
Median		.60700	.60100	.63650	.65600
Mode		.534[a]	.533[a]	.630	.573[a]
Std. Deviation		.050611	.046208	.050504	.049782
Skewness		.334	.194	1.390	.610
Std. Error of Skewness		.512	.512	.512	.512
Kurtosis		-.701	-.968	2.718	.307
Std. Error of Kurtosis		.992	.992	.992	.992
Range		.180	.162	.217	.205
Minimum		.534	.533	.581	.573
Maximum		.714	.695	.798	.778

a. Multiple modes exist. The smallest value is shown

Split Time – Female Only

Statistics

		Split Time AW	Split Time AB	Split Time UW	Split Time UB
N	Valid	13	13	13	13
	Missing	0	0	0	0
Mean		.60408	.58808	.64715	.66238
Median		.59100	.59900	.64300	.67000
Mode		.620	.498[a]	.569[a]	.670
Std. Deviation		.047073	.049276	.037751	.032043
Skewness		.346	-.518	-.136	.397
Std. Error of Skewness		.616	.616	.616	.616
Kurtosis		-.287	-.205	.574	.621
Std. Error of Kurtosis		1.191	1.191	1.191	1.191
Range		.169	.168	.147	.118
Minimum		.525	.498	.569	.613
Maximum		.694	.666	.716	.731

a. Multiple modes exist. The smallest value is shown

Regardless of the scenario (AW, AB, UW, and UB), the Mean split time for males was slightly longer than that for females. The Mean split times for males ranged from 0.60950 to 0.66380 seconds (a range of 0.0543 with an average of 0.63526 seconds). The Mean split times for females ranged from 0.58808 to 0.66238 seconds (a range of 0.0743 with an average of 0.62542 seconds). The maximum time required to make a decision for males was up to 0.798 seconds, and for females up to 0.731 seconds. The minimum time required to make a decision for males was 0.695 seconds, whereas females made a decision as quickly as 0.666 seconds. The range for male decision making was 0.103 seconds (Mean = 0.74675 seconds). For females, the range was 0.065 seconds (Mean = 0.70175 seconds). This suggests that, regardless of the scenario, males spent more time than females in making a decision to shoot or to not shoot.

Below is a table for D' Prime Analysis. Participants' responses on each trial are going to be consequences of both their perceptual sensitivity to the stimuli presented and their decision strategy or bias toward saying something is there or not when they are in doubt. Signal Detection (sensory decision) Theory is a mathematical, theoretical system that recognizes that individuals are not merely passive receivers of stimuli. They are also engaged in the process of deciding whether they are confident enough to say "Yes, I detect that stimuli" when engaged in psychophysics experiments. With two possible experimental trials (signal present or absent) and two possible participant responses ("yes" it is present or "no" it isn't there) there are four possible outcomes to each of many trials.

D'Prime Analysis		
Signal	**Response**	
	Yes (Shoot)	***No (Don't Shoot)***
Present (Armed)	Hit	Miss
Absent (Unarmed)	False Alarm	Correct Negative

Engagement – Incorrect

There are two types of possible errors. A Type I Error is shooting an unarmed person (i.e., a false positive). A Type II Error is not shooting an armed person (i.e., a false negative). Since the outcome rests on the life or death of a person, and in accordance with United States criminal justice practices, a Type II Error is preferred (a false negative). However, this type of error allows danger to a police officer in where he or she could be fatally shot by the person whom he or she chose not to engage.

	Type I, Type II Errors	
	Unarmed	***Armed***
Shoot	Type I (False Positive) Shooting an Unarmed individual.	Correct
Don't Shoot	Correct	Type II (False Negative) Not shooting and armed individual (Resulting in harm).

In this study, a total of 47 *Armed White* and 43 *Armed Black* images were not fired upon. This represented a Type II Error; a decision was made to not shoot and an armed person was allowed to escape or allow for potential harm to the officer. A total of a total of 45 *Unarmed White* and 41 *Unarmed Black* images were fired upon. This represented a Type I Error; a decision was made to shoot and an unarmed person was killed. A Chi-square Goodness of Fit test on the number of incorrect shots by race (White with Black) suggested that there was no statistically significant difference ($x^2 = 0.762$, $df = 1$, $p > 0.3$). Likewise, a Chi-square Goodness of Fit test on the number of incorrect shots by scenario (Armed with Unarmed) suggested that there was no statistically significant difference ($x^2 = 0.186$, $df = 1$, $p > 0.5$).

	PERCENT INCORRECT ARMED WHITE (AW)				
	MIN	MAX	MEAN	MODE	STDEV
BLACK	0.0	8.3	3.3	0.0	3.46
WHITE	0.0	24.0	6.5	4.0	6.25
ASIAN	0.0	9.1	5.8	NA	5.04
MULTI	4.0	4.0	4.0	4.0	0.00
NONWHITE	0.0	9.1	4.2	0.0	3.72

	PERCENT INCORRECT ARMED BLACK (AB)				
	MIN	MAX	MEAN	MODE	STDEV
BLACK	0.0	4.2	3.3	4.2	1.84
WHITE	0.0	20.0	5.6	0.0	5.61
ASIAN	4.0	8.0	6.7	8.0	2.31
MULTI	4.0	4.0	4.0	4.0	0.00
NONWHITE	0.0	8.0	4.5	4.0	2.40

	PERCENT INCORRECT UNARMED WHITE (UW)				
	MIN	MAX	MEAN	MODE	STDEV
BLACK	0.0	8.3	3.3	0.0	4.47
WHITE	0.0	19.0	6.8	0.0	5.25
ASIAN	0.0	4.2	1.4	0.0	2.42
MULTI	4.0	4.0	4.0	4.0	0.00
NONWHITE	0.0	8.3	2.7	0.0	3.53

	PERCENT INCORRECT UNARMED BLACK (UB)				
	MIN	MAX	MEAN	MODE	STDEV
BLACK	0.0	15.0	6.3	0.0	6.40
WHITE	0.0	14.3	5.7	0.0	4.30
ASIAN	0.0	5.6	1.9	0.0	3.23
MULTI	4.3	4.3	4.3	4.3	0.00
NONWHITE	0.0	15.0	4.6	0.0	5.27

*The top two tables are type II errors, and the bottom two are type I errors.

In the top left table, whites are twice as likely than blacks to fail to engage armed whites (3.3% to 6.5%, type II errors). In the top right table, whites were twice as likely than blacks to fail to engage armed blacks (3.3% to 5.6%, type II errors). In the bottom left table, whites were twice as likely to shoot the unarmed whites than the black participants. Lastly, in the bottom right table, black participants were slightly more likely to wrongly engage armed blacks.

	PERCENT INCORRECT ARMED (AW/AB)				
	MIN	MAX	MEAN	MODE	STDEV
BLACK	0.0	8.3	3.3	4.0	2.61
WHITE	0.0	24.0	6.1	0.0	5.89
ASIAN	0.0	9.1	6.2	8.0	3.54
MULTI	4.0	4.0	4.0	4.0	0.00
NONWHITE	0.0	9.1	4.3	4.0	3.04

	PERCENT INCORRECT UNARMED (UW/UB)				
	MIN	MAX	MEAN	MODE	STDEV
BLACK	0.0	15.0	4.8	0.0	5.45
WHITE	0.0	19.0	6.2	0.0	4.78
ASIAN	0.0	5.6	1.6	0.0	2.57
MULTI	4.0	4.3	4.2	4.0	0.21
NONWHITE	0.0	15.0	3.7	0.0	4.46

	PERCENT INCORRECT AW/AB/UW/UB				
	MIN	MAX	MEAN	MODE	STDEV
BLACK	0.0	15.0	4.0	0.0	4.23
WHITE	0.0	24.0	6.2	0.0	5.34
ASIAN	0.0	9.1	3.9	0.0	3.80
MULTI	4.0	4.3	4.1	4.0	0.15
NONWHITE	0.0	15.0	4.0	0.0	3.78

In the bottom center table, regardless of the race involved in a scenario (i.e., all scenarios), Whites (6.2%) were more likely to make a Type I or II Error than Black participants. Relative to Type I Errors, White participants (6.2%) were more likely to shoot an unarmed person regardless of his race than Blacks (4.8%) or all Nonwhites (3.7%). White participants were twice as likely to make a Type II error than blacks (6.1% to 3.3%). Blacks were more likely to shoot ab unarmed black person (Type I Error) than they were to not shoot an armed person (Type II Error)[4.8% to 3.3%]. Whites were relatively consistent in their likelihood to do either a Type I or II Error [6.2% to 6.1%].

To state these findings in another way, a review of some hypothetical encounters is in order. The context of these encounters is not known at this point in time. All that is known is that an individual finds himself standing face-to-face with another individual who is armed (that person may be a police officer or an armed citizen).

1) If I were an **unarmed Black**, then I would not want to encounter an armed Black. The armed Black is more likely to make a mistake (6.3% of the time) and to fatally shoot me than the White person (5.7%).

2) If I were an **unarmed White**, then I would not want to encounter an armed White. The armed White is much more likely to make a mistake (6.8% of the time) and to fatally shoot me than the Black person (3.3%).

3) If I were an **armed Black**, then I would want to encounter an armed White. The armed White is a lot more likely to make a mistake (5.6% of the time) and fail to engage me than the Black person (3.3%).

4) If I were an **armed White**, then I too would want to encounter an armed White. The armed White is more than twice as likely to make a mistake (6.5% of the time) and fail to engage me than the Black person (3.3%).

Chapter V: Recommendations & Implications

Proposed Recommendations

In this sample population, military and civilian training may have an affect on participants' ability to fire a weapon, but will likely have no discernible relationship with their decisions to shoot or don't shoot. A larger sample with more depth in experience (i.e., a greater number of years of service as military of law enforcement) is required in future research. Furthermore, we would continue with a more advanced research design.

In the current study, still images were used in order to display a potential threat with a definite firearm or harmless object. In future experiments, incorporating controlling for interactive content and attitudes of an encountered individual may present other factors in a scenario that may change the decisions individuals make. The studies at hand including Correll's initial study, asked individuals to make the decision at "face value" with no context. Interactive Use-of-Force simulators would provide the next level of experimentation on this issue to provide a more in depth look at this social issue.

One participant commented that he did not focus on the race of the person in the photo; rather he was concerned with discerning the item within the individual's hand. This may be known more commonly as the Stroop Effect; a demonstration of interference in the reaction time of a task. Considering the effect exposes the nature of automatic processing versus conscious visual control, this effect may easily be a factor in the results. To include a more accurate measurement of implicit bias, I recommend using interactive simulations to add more context. I believe context would provide a significant change in participant results. A few things could be considered more heavily and that is clothing, hairstyle, demeanor, and race would become more prevalent. In an interactive simulation, participants would engage with a target identifying their

race, demeanor, clothing, and situation all before making the decision to shoot or not shoot. The still images did capture an instant reaction to item and race but I believe using the interactive simulations would yield a better study between armed white, unarmed white, armed black, and unarmed black targets.

There are several reasons why present-day police agencies should strive for realistic firearm training. Given a bigger population and controlling for more factors could help improve the likelihood of finding significant differences between law enforcement personnel and untrained civilians. Testing both untrained and trained individuals may help determine whether law enforcement training can mitigate implicit bias. Ideally, I would like to conduct a pre-test, training, post-test model where people going into the field can be tested, trained, and post-tested to support implicit bias training in law enforcement. Conducting an additional study would allow us to observe the affect of training on outcomes.

Social & Policy Recommendations

Goals moving forward are in the categories as follows: recruitment and hiring, community policing, training, and supervision. Recruitment and hiring is known to best be effective in a diverse workforce. Officers have an increased likelihood to come to understand and respect various racial and cultural perspectives through their daily interactions with one another (Gove, 2015). When officers spend time in a diverse group of peers within their agency, their implicit biases are weakened through positive interactions. Having a police force with diverse personnel conveys a sense of equality to the public they serve and promote respect to other races. A topic to revisit is community policing. The goal of community policing is to promote fair and impartial policing. Knowing your citizen’s names and faces and citizens knowing their police force by name and face can improve differentiating situations by race. Police can overcome

stereotypes based on characteristics such as race. This also helps reduce biases held against the police. Arguably, one of the practices departments lack is this style of policing. In larger cities, it is much harder to know everyone and generally there tends to be more crime in bigger cities. The challenge of getting time to relate to the community is a component in the problem.

Training has shown to play a significant role on reducing implicit bias in behavior. Research has found that individuals who are made aware of their implicit biases are motivated and able to implement "controlled" (unbiased) behavior (Gove, 2015). The studies have also proven that there is benefit in additional training; this training officers nationwide need to participate in require a Virtra or FATS (Firearms Training Simulator) shooting simulator. In one study, after extensive exposure to the program, the officers were able to eliminate this bias (Plant & Peruche, 2005). The simulations provide scenarios where the decision to shoot is dependent on the officer's situation. Being in those situations and being allowed to get more experience may help guide officers in all ranks and years of service. The simulators have the capability to display 300 degrees of action. Officers may experience simulations of traffic stops, reasonable suspicion to frisk, consent searches, and other procedures. These scenarios need to focus on more than just "use of force" scenarios; they need to show some ethnic groups may not be threatening and rather scared of the situation. A "cognitive correction" may help officers reduce implicit bias and would be helpful to implement at the most basic levels of law enforcement.

Lastly, law enforcement departments should evaluate their supervision. Police supervisors are agencies first line of defense against all manners of problems. Supervisors should receive specific training on implicit bias; it may help affect them and their agency if there is an existing problem. Supervisors enforce policy on biased policing; if an officer shows a tendency to have discriminatory behavior, it should be addressed quickly by supervisors. Also, supervisors

help shape new recruits. By the role of a field training officer (FTO), they will most likely teach new officers some of these tendencies and things to look for which will expose them to possibly bias attitudes. It's imperative for FTO's to give helpful insight without promoting prejudice practices. There will always be polarizing groups but through the goals moving forward, law enforcement has some areas of focus to improve that will help mend the trust of communities with their corresponding agencies.

The Kirwan Institute suggests biases can be unlearned or in their terms "malleable." Researchers have studied various debiasing techniques in an effort to use this malleability property to counter-existing biases. Debiasing is a challenging task that relies on the creation of new mental associations, requiring "intention, attention, and time" (Devine, 1989, p. 16). Banaji and Greenwald use an analogy of a stretched rubber band. Debiasing interventions must be consistently reinforced. They suggest, "Like stretched rubber bands, the associations modified... likely soon return to their earlier configuration. Such elastic changes can be consequential, but they will require reapplication prior to each occasion on which one wishes them to be in effect" (Banaji & Greenwald, 2013, p. 152). Stressing the need for repeated practice and training, others assert these new implicit associations may stabilize over time (Glock & Kovacs, 2013). Debiasing is not simply a matter of suppressing biased thoughts. Research indicates that suppressing automatic stereotypes can actually increase these stereotypes by making them hyper-accessible rather than reducing them (Galinsky & Moskowitz, 2000, 2007; Macrae, Bodenhausen, Milne, & Jetten, 1994). Several approaches to debiasing have emerged, producing diverse results. Among those for which research evidence suggests the possibility of successful debiasing outcomes include:

- Counter-stereotypic training in which efforts focus on training individuals to develop new associations that contrast with the associations they already hold through visual or verbal cues (see, e.g., Blair et al., 2001; J. Kang et al., 2012; Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000; Wittenbrink, Judd, & Park, 2001)
- Another way to build new associations is to expose people to counter-stereotypic individuals. Much like debiasing agents, these counter-stereotypic examples possess traits that contrast with the stereotypes typically associated with particular categories, such as male nurses, elderly athletes, or female scientists. (see, e.g., Dasgupta & Asgari, 2004; Dasgupta & Greenwald, 2001; J. Kang & Banaji, 2006)
- Intergroup contact generally reduces intergroup prejudice (Peruche & Plant, 2006; Pettigrew, 1997; Pettigrew & Tropp, 2006). Allport stipulates that several key conditions are necessary for positive effects to emerge from intergroup contact, including individuals sharing equal status and common goals, a cooperative rather than competitive environment, and the presence of support from authority figures, laws, or customs (Allport, 1954).
- Education efforts aimed at raising awareness about implicit bias can help debias individuals. The criminal justice context has provided several examples of this technique, including the education of judges (Kang et al., 2012; Saujani, 2003) and prospective jurors (Bennett, 2010; Roberts, 2012). These education efforts have also been embraced by the health care realm (Hannah & CarpenterSong, 2013; R. A. Hernandez et al., 2013; Teal et al., 2012).
- Having a sense of accountability, that is, "the implicit or explicit expectation that one may be called on to justify one's beliefs, feelings, and actions to others," can decrease the influence of bias (T. K. Green & Kalev, 2008; J. Kang et al., 2012; Lerner & Tetlock, 1999, p. 255; Reskin, 2000, 2005).

- Taking the perspective of others has shown promise as a debiasing strategy, because considering contrasting viewpoints and recognizing multiple perspectives can reduce automatic biases (Benforado & Hanson, 2008; Galinsky & Moskowitz, 2000; Todd, Bodenhausen, Richeson, & Galinsky, 2011).
- Engaging in deliberative processing can help counter implicit biases, particularly during situations in which decision-makers may face time constraints or a weighty cognitive load (Beattie et al., 2013; D. J. Burgess, 2010; J. Kang et al., 2012; Richards-Yellen, 2013). Medical professionals, in particular, are encouraged to constantly self-monitor in an effort to offset implicit biases and stereotypes (Betancourt, 2004; Stone & Moskowitz, 2011).

Complications

This study was modified from its original design due to impacts on the study. The two impacts on this study were technology and time. The effects necessitated a change in methods and a change in the research purpose. Technology plagued the study due to incompatibility with the original testing equipment. The issue centered on the purchased software, Laser Activated Shot Reporter (L.A.S.R.). It was the lack of the software being able to identify the difference between the scenario changes. The software required a “refresh” or “reset” in order to function for the next scenario/scene.

The other complication the study incurred was time. The first method was going to involve a police department, interactive scenarios, a larger sample size, and more advanced technology that would have been compatible for the study. The “Use of Force simulation training system” at KEEPRs was the ideal site to work with. Unfortunately, I couldn’t work out details in time with the storeowner to use the equipment. I then modified the design to include the use of L.A.S.R., which was incompatible; I then opted for a present videogame study done by Josh

Correll using a computer. Given the remaining time to collect data and finish the thesis, it was a default option. Using a simulated laser firearm would have been ideal over a keyboard but the complications changed how the experiment method would be conducted. Additionally, personal complications due to the affect of several job offers. Some required me to travel to interview and test in Washington, D.C., Madison, WI, Twin Cities area in Minnesota, specifically Brooklyn Center, MN and some locally here in St. Cloud, MN. This changed the purpose of the study and how the plan to look at how training can mitigate implicit bias was devised into future study goals.

Closing Remarks

The broad underlying objective of this thesis was to attempt to integrate knowledge gained from surveys and compare to videogame testing results. Popular media would suggest that the unarmed black male would be shot more often by an officer than an unarmed white male. Though this study's sample population was small, the data suggest there is no significant difference. In other studies, officers with higher education tend to use less verbal & physical force than less educated officers. Officers with any college education result in significantly less verbal force compared to those with a high school education. However, only those encounters involving officers with a 4-year degree result in significantly less physical force. Finally, encounters involving officers with greater experience result in less verbal & physical force (Paoline & Terrill, 2007). With this type of significance, education and training can mitigate an officer's encounter with violent outcomes. It is also suggested, perhaps the primary reason police departments are reluctant to implement an educational requirement is the lack of evidence demonstrating that a college education leads to tangible desirable outcomes (Skogan & Frydl, 2004; Rydberg & Terrill, 2010). Using a larger sample population and getting a mixture of law

enforcement individuals and untrained individuals in two separate groups and compare between the two groups would hopefully produce something significant.

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Appendix A: Cover Letter & Consent Form

This information was provided to the participant before the survey and the videogame task.

PARTICIPATION & SURVEY CONSENT FORM

You have been asked to participate in an important research project. The survey includes questions about your demographics and experience in Law Enforcement and handguns.
Your participation in this experiment & survey is voluntary and anonymous. What does that mean?

VOLUNTARY. You do not have to answer any question that you are uncomfortable with; in fact, you do not have to answer any of them. You will not receive any prize or award for your participation. If you decide that you do not want to participate, then no punishment, harmful or adverse action will be given to you or taken against you by your Chief if you are law enforcement, or anyone. Even if you have already started answering questions, you may change your mind at any time and stop filling out the survey or participate in the experiment.

ANONYMOUS. Anonymous means that no one knows who filled it out. To keep this survey and experiment anonymous, please do not make any marks on it that can identify you such as your name or nicknames, or any comments about yourself. That way, no one will be able to tell which survey is yours or someone else's. All survey answers will be recorded in a database. That way, your answers will be mixed in with everyone else's.

By completing the survey and participating in the videogame, you are implying consent to participate in this study. This study examines human decision-making during simulated life and death situations that are often called "shoot/don't shoot scenarios." Therefore, your participation involves the videogame takes about 10-15 minutes to complete. Still pictures of various scenes will be on the computer screen. You may see a series of 1 to 4 different scenes, before seeing an individual in which we will require a *Choice*. At some time during each Choice, a still picture will suddenly appear of a person holding either a handgun or some harmless object like a cellphone or other portable electronic device. You must then decide to shoot (pressing L) or don't shoot (pressing A). You will be given 2 attempts: Round 1 is a familiarization or practice, and Round 2 is the study portion.

We are concerned about how much time it takes to make a decision—right or wrong. Whether or not you participate is entirely up to you. Once you begin the videogame, you may quit at any time (but, you will not be allowed to restart). You will not be scored using a point system or a pass/fail criteria. No prizes are awarded for participation or achievement. Likewise, nothing happens should you decided to not participate.

If you have any questions about this study, then you can contact Mr. Ashton Adank (adas0801@stcloudstate.edu) or Dr. Gilbertson (dlgilbertson@stcloudstate.edu) at (320) 308-5771. A copy of the final report will be given to Dr. Lee Gilbertson in May 2017. If you want to know what was learned from the experiment & survey, then you can call either Mr. Adank or Dr. Gilbertson on whether they can bring a copy of the report.

Thanks for participating!

Appendix B: Data Collection Instrument

The survey form was used in the collection of information from participants.

Survey Questionnaire

Instructions

Check the box that most applicable to you or fill in the blanks. Major:_____

1. Your Gender ***(Select only one.)***

- ☐ Male
- ☐ Female

2. Your Age ***(Select only one.)***

- ☐ 18-25
- ☐ 26-35
- ☐ 36-45
- ☐ 46-55
- ☐ 56-64

3. Your Race ***(Select only one.)***

- ☐ Black
- ☐ White
- ☐ Other _____ (Please specify.)

4. Firearms Experience ***(Select only one.)***

- ☐ I train individuals on the use of firearms.
- ☐ I own a firearm and shoot it at the range, and have received formal firearms training. **Training Type:**_____
- ☐ I own a firearm and shoot it at the range but have no formal firearms training.
- ☐ I do not own a firearm, but I have shot at the range.
- ☐ I have never shot a firearm (owned or unowned).

5. Military Experience

- ☐ No Military training
- ☐ Military training → How many years of service? _____

Have you been deployed to a combat zone?

- ☐ Yes
- ☐ No

Have you fired a firearm in the line of duty?

- ☐ Yes
- ☐ No

6. Law Enforcement Experience

- ☐ No Law Enforcement Training
- ☐ Law Enforcement Training → How many years of service? _____

Have you fired your firearm in the line of duty?

- ☐ Yes
- ☐ No

7. Diversity Exposure / Hometown Population

During your childhood through high school years, were you exposed to different races, religions, and ethnicities in your hometown?

- ☐ Yes
- ☐ No

What is your estimated population of your hometown? _____

Appendix C: Example Results Table

This is the results screen. Below is a control output. This was not a participant's result.
To conduct this, two scenarios were purposefully done correctly, and two were purposefully done incorrectly.

TASK RESULTS

You earned -2445 points in this task.

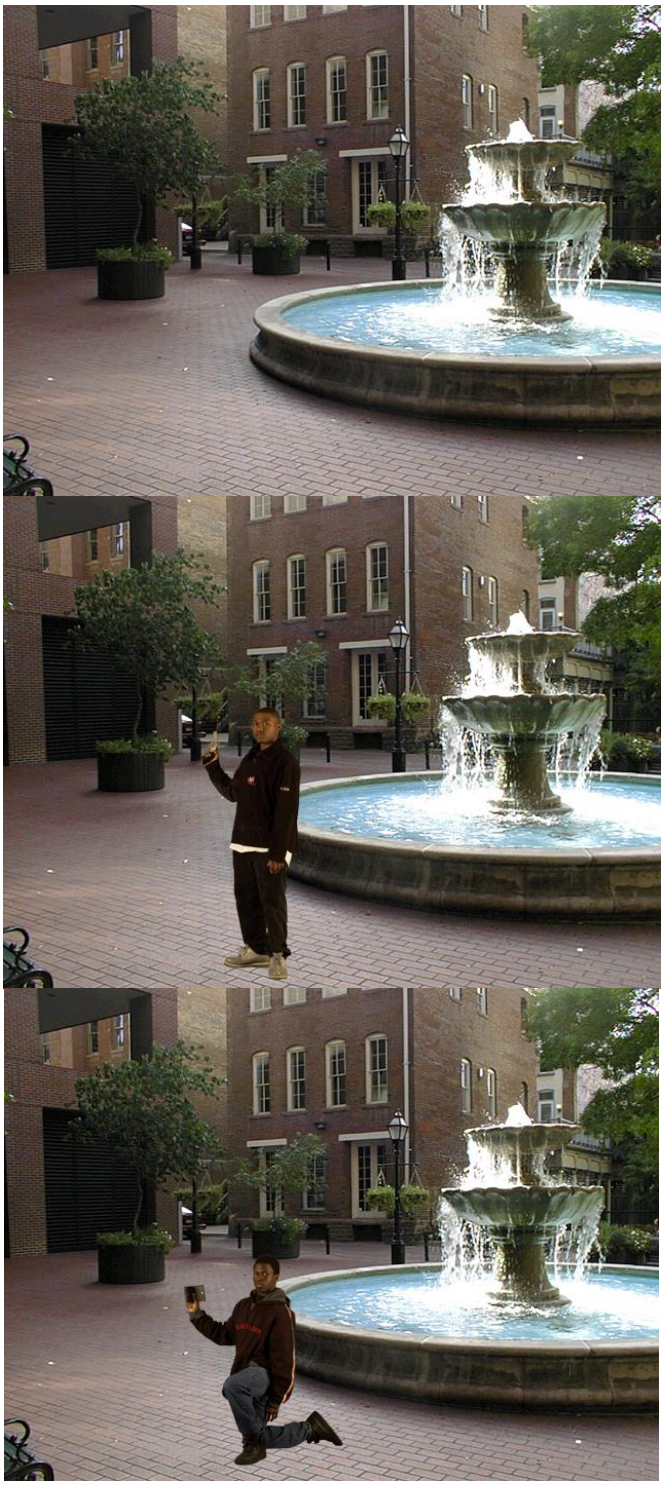
	# CORRECT	# INCORRECT	AVG. TIME (ms)
ARMED			
White	1	0	786
Black	0	1	N/A
UNARMED			
White	0	1	N/A
Black	1	0	677

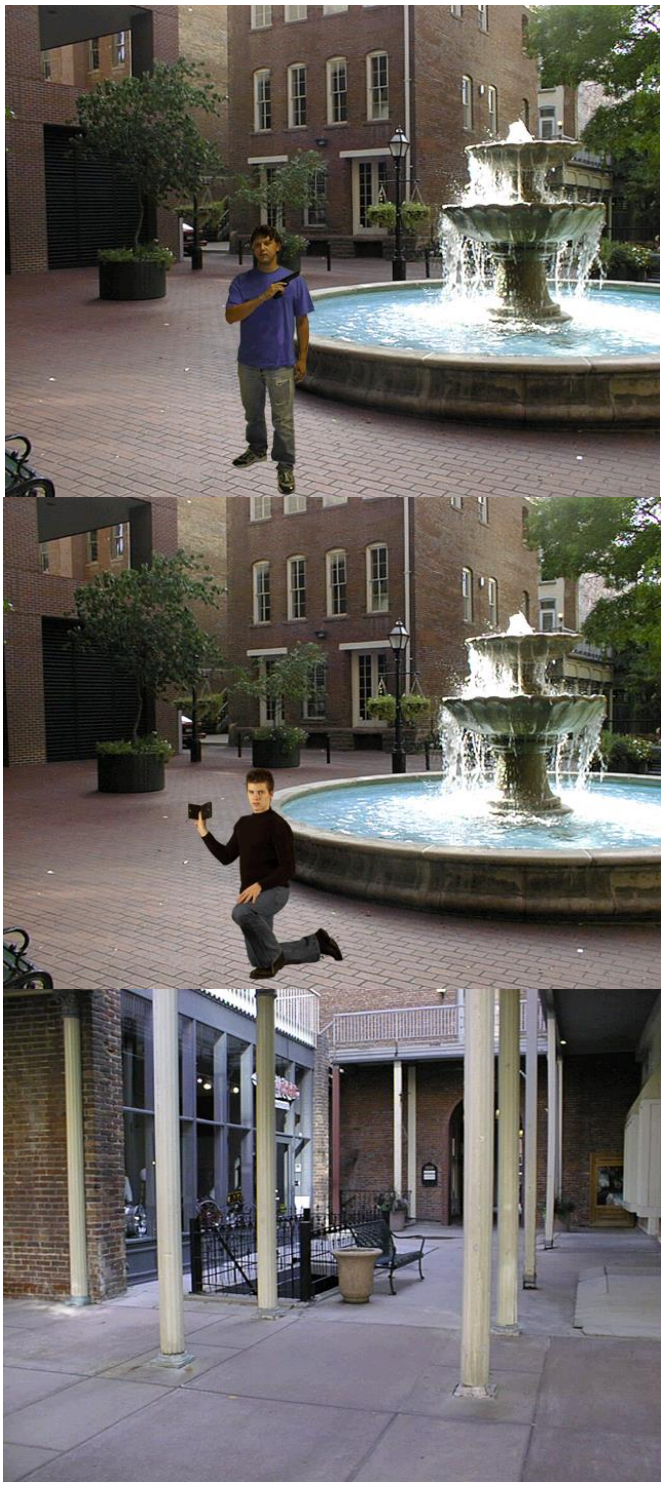
Above is a summary of your performance on the shooter task. The # CORRECT/# INCORRECT columns give the number of correct and incorrect responses, respectively. The AVG TIME(ms) column gives the average time to make a correct response, in milliseconds.The rows give information about the type of trial. Armed/Unarmed refers to whether the target person had a gun or not. White/Black refers to the race of the target person.

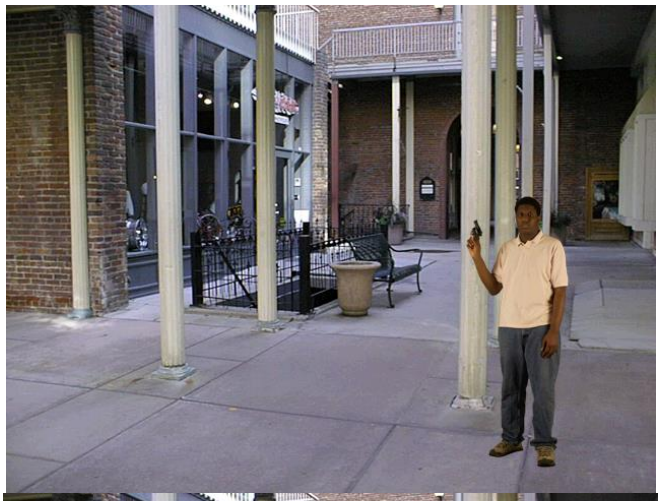
Thank you! You may close this window when you are finished reviewing your results.

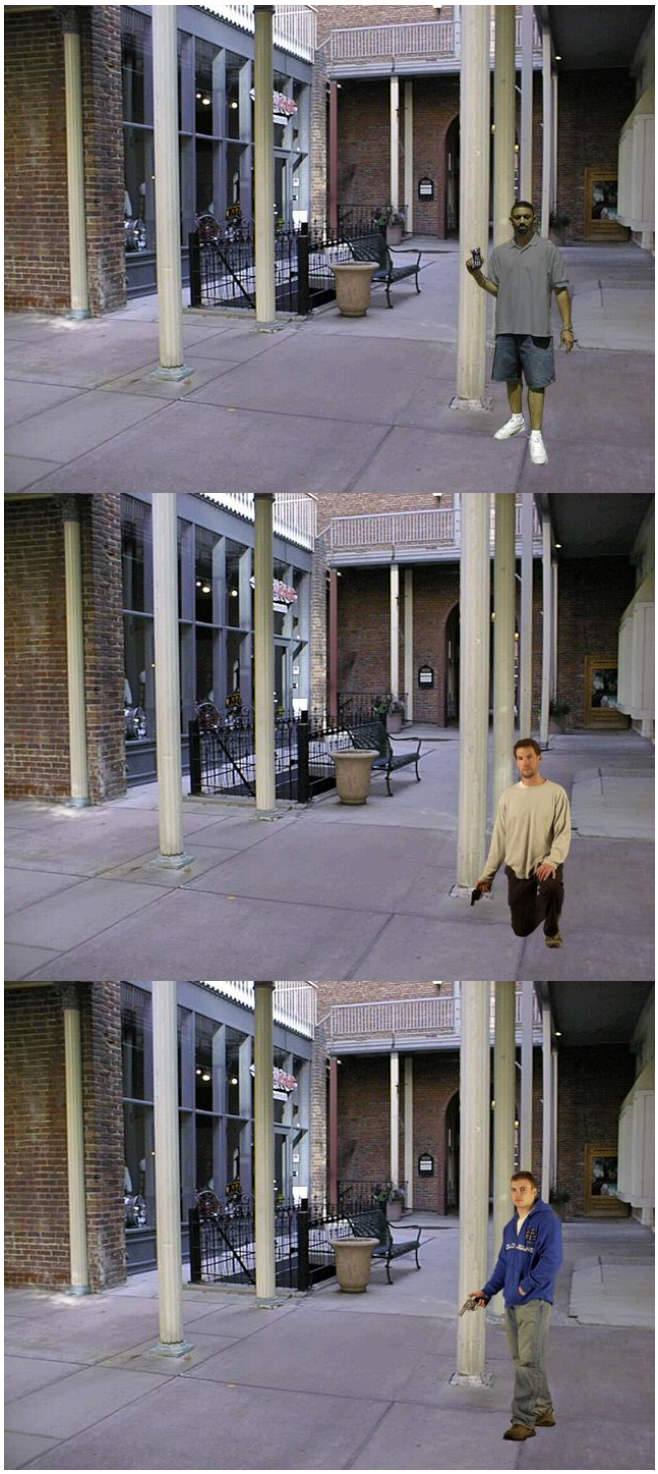
Appendix D: Study Scenes & Scenarios

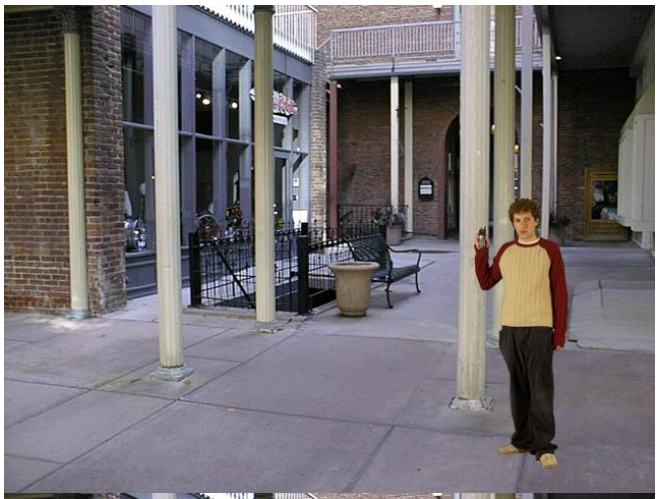
Below are all of the scenes and scenarios possible to encounter.

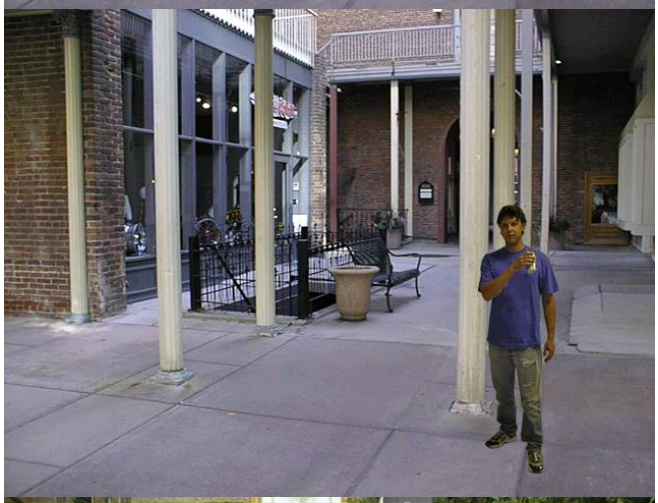


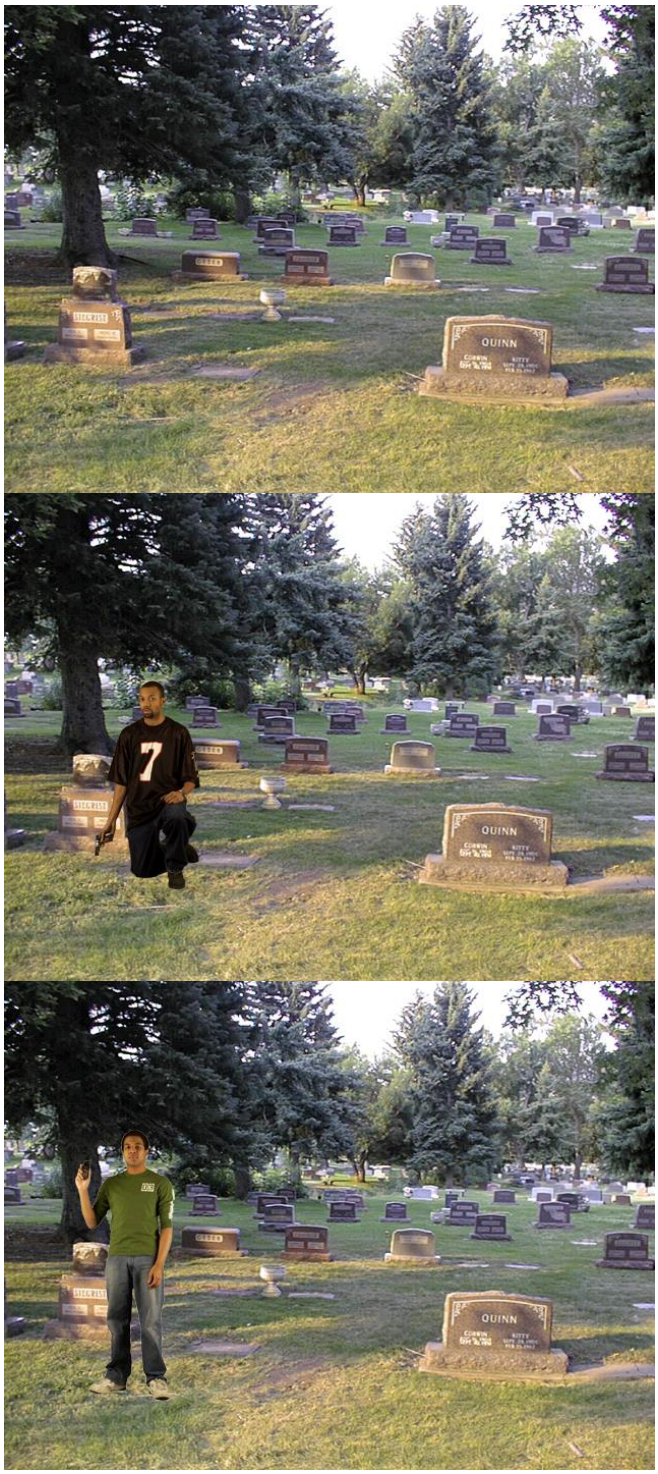











QUINN
7
QUINN
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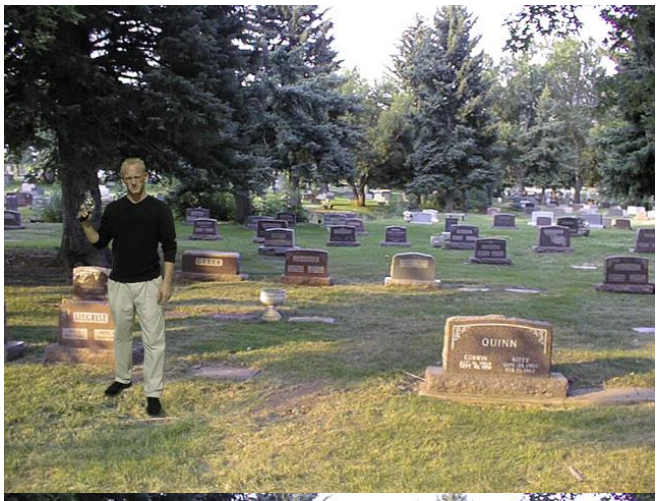
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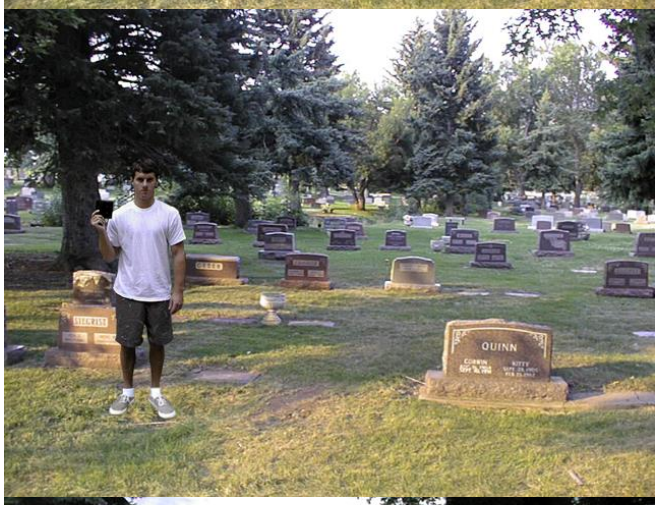
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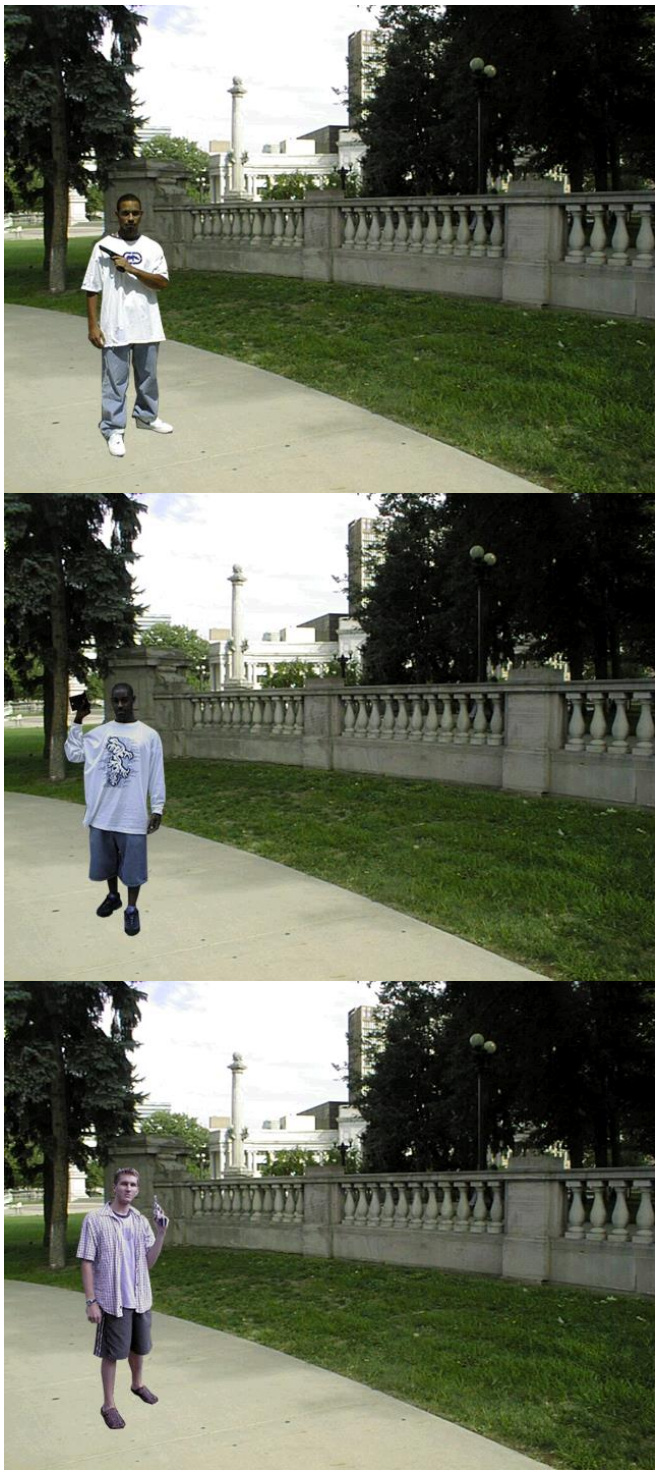
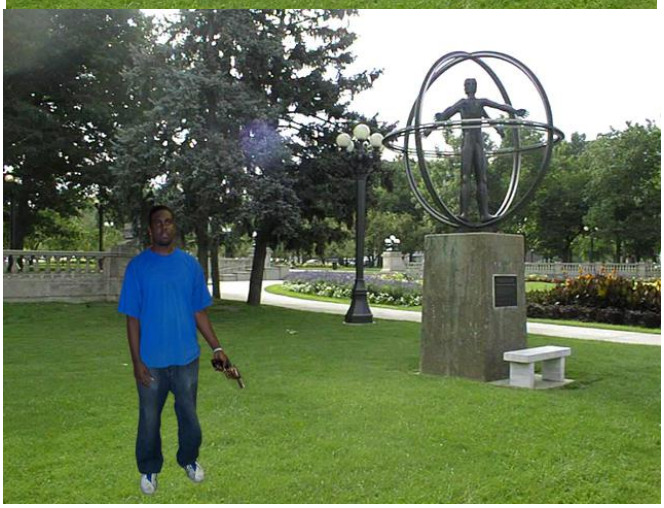
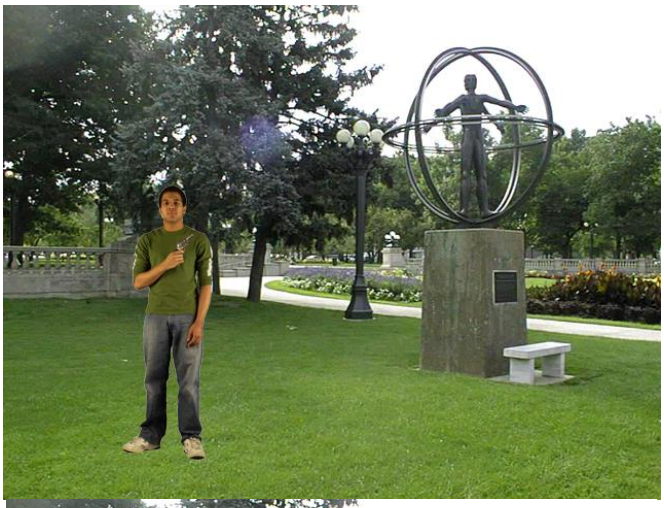
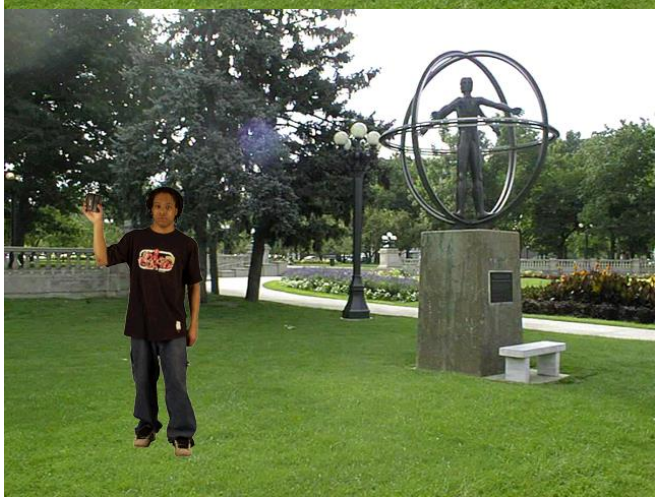
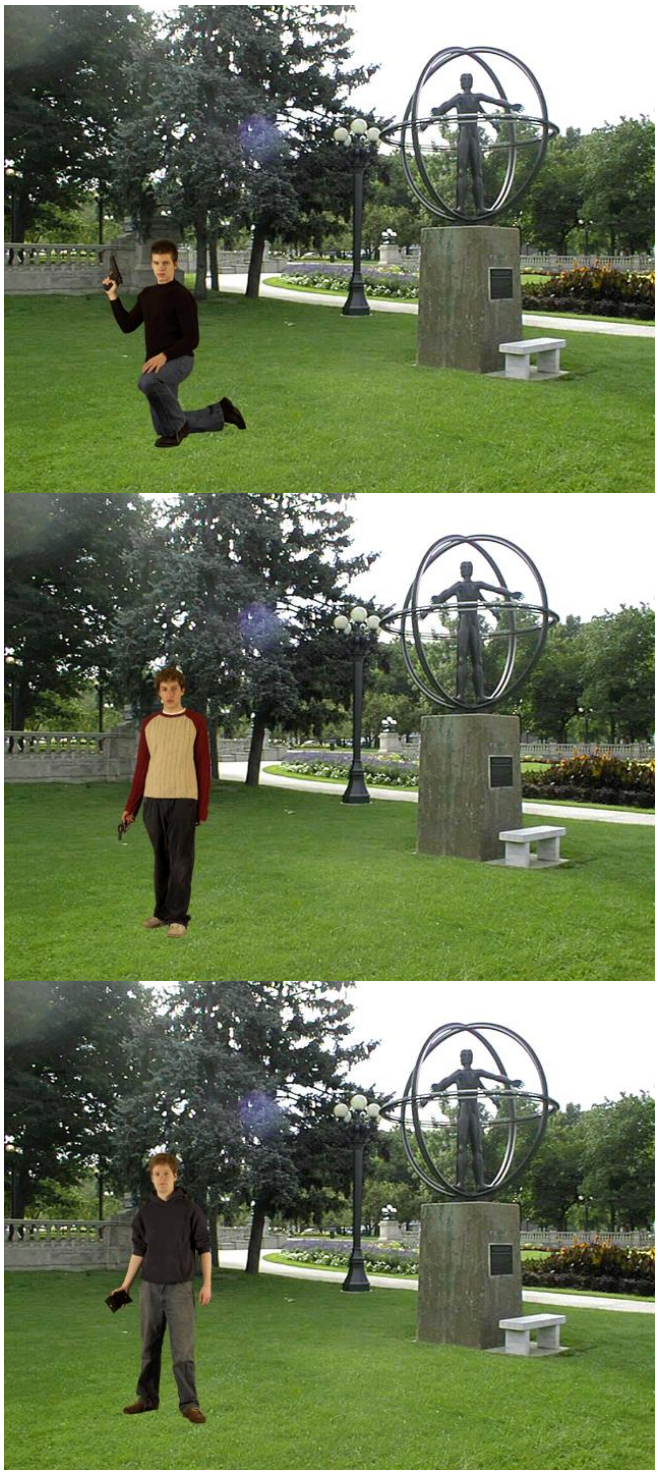
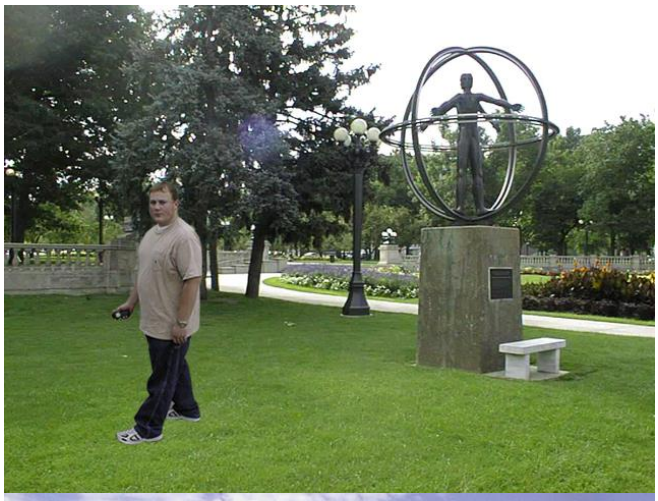


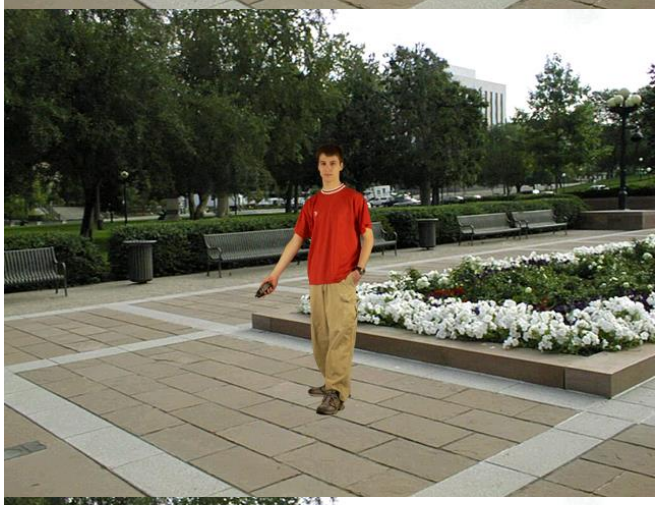








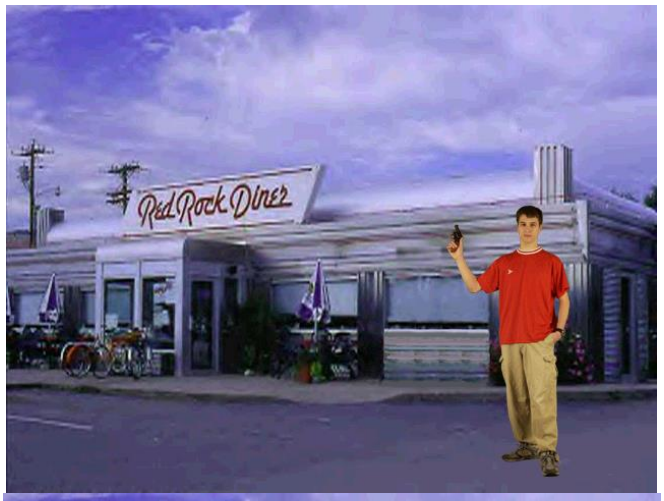




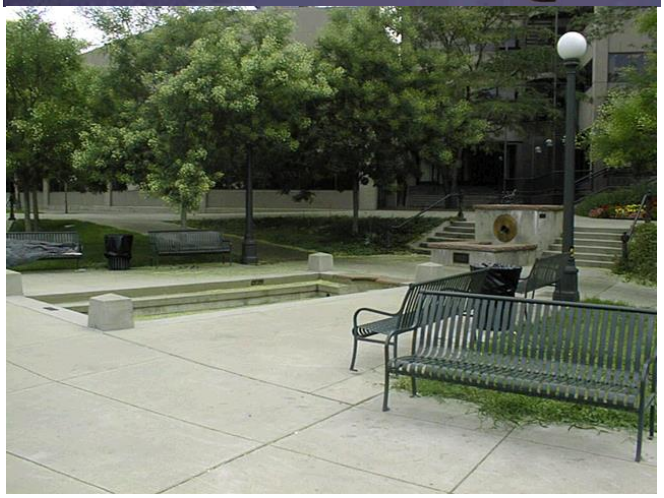

Red Rock Diner

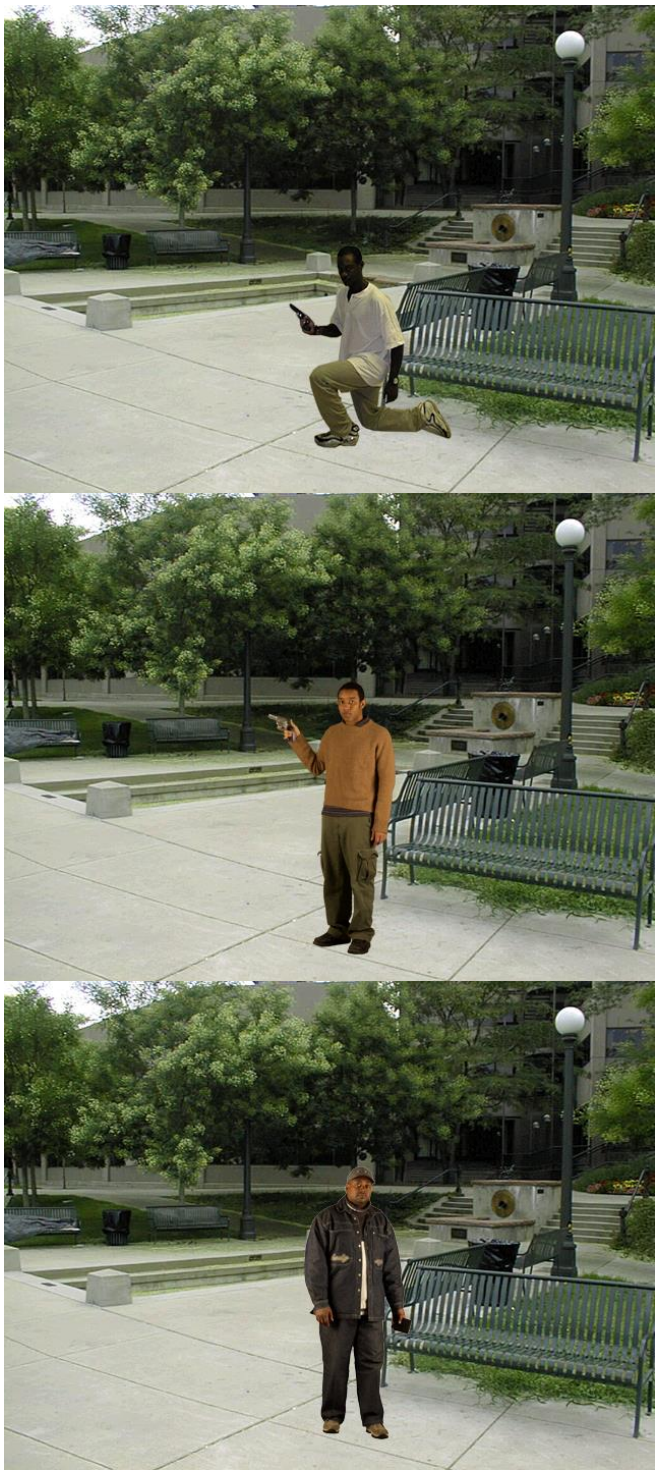

Red Rock Diner

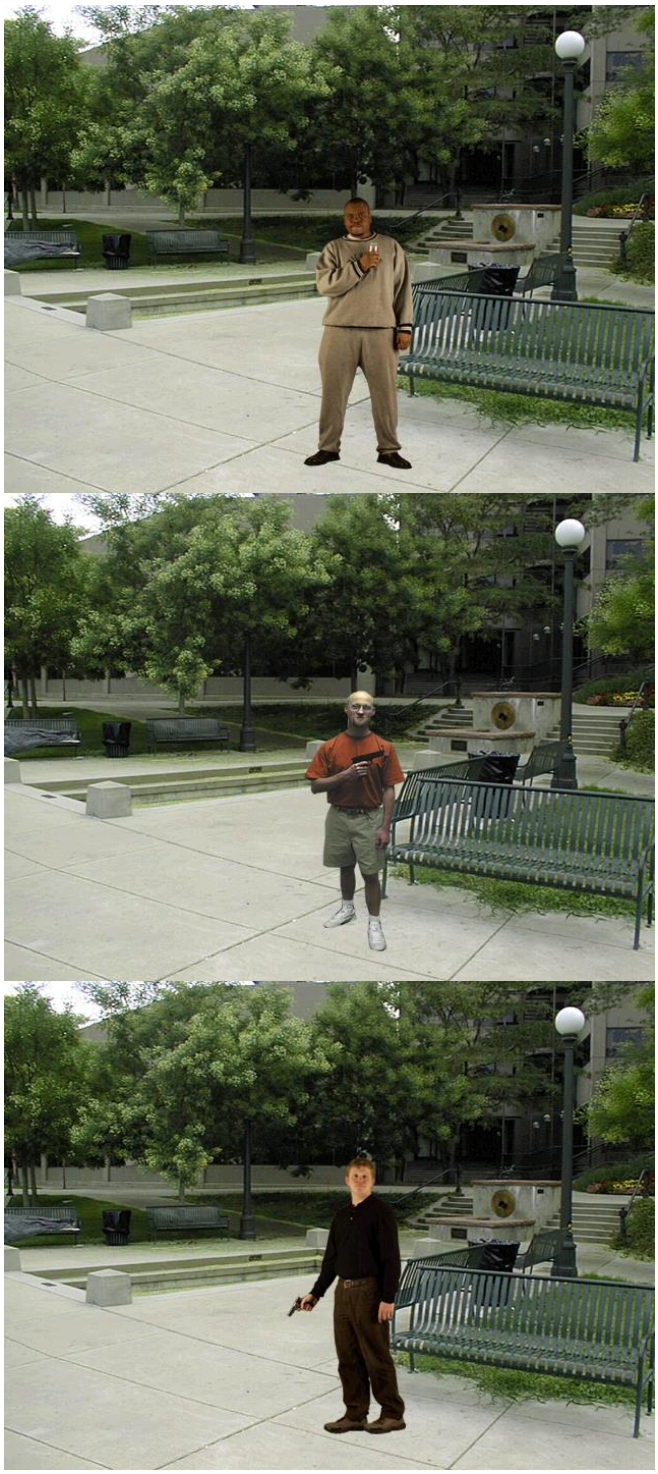

Red Rock Diner

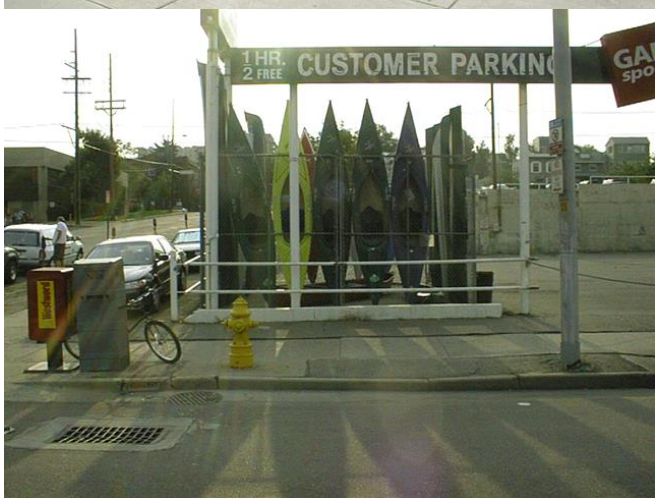

Red Rock Diner


Red Rock Diner

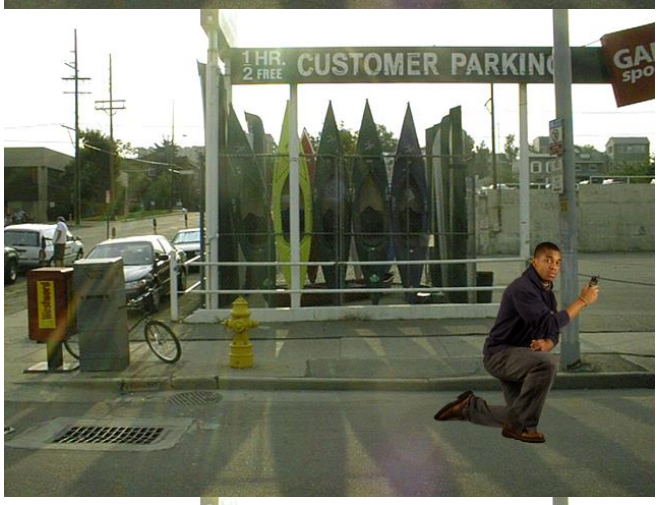


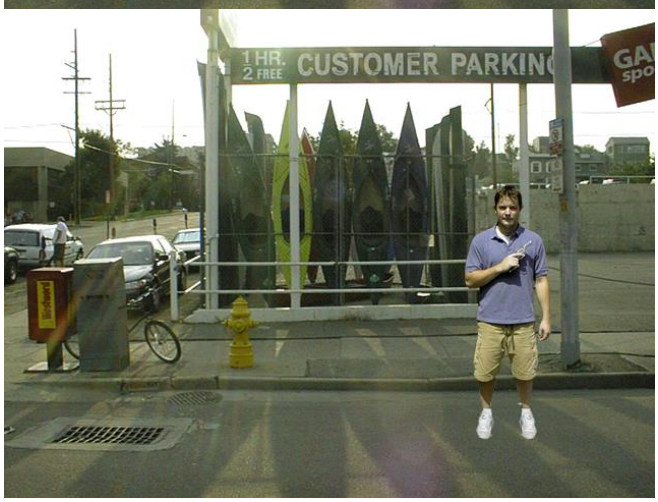





1 HR.
2 FREE
CUSTOMER PARKIN


1 HR.
2 FREE
CUSTOMER PARKIN


1 HR.
2 FREE
CUSTOMER PARKIN


1 HR.
2 FREE
CUSTOMER PARKIN


1 HR.
2 FREE
CUSTOMER PARKIN


PANORAMA
RESTAURANT


PANORAMA
RESTAURANT


PANORAMA
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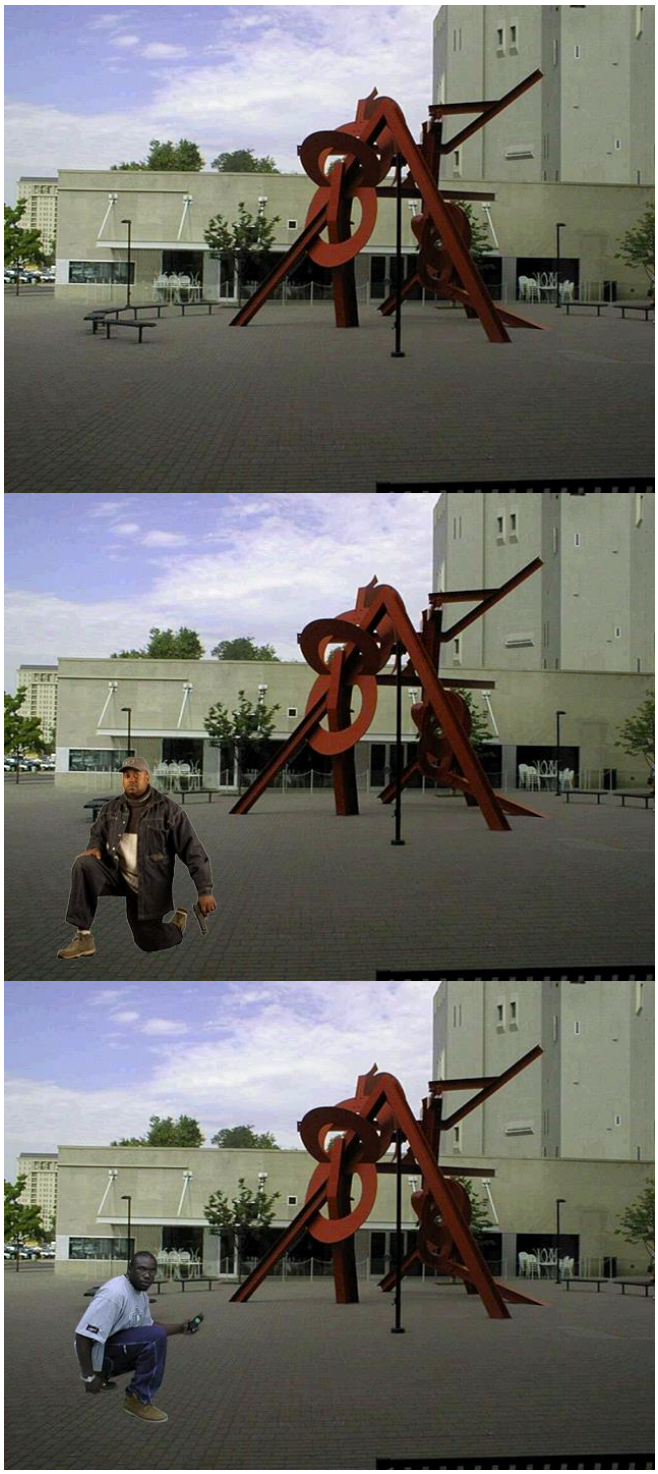
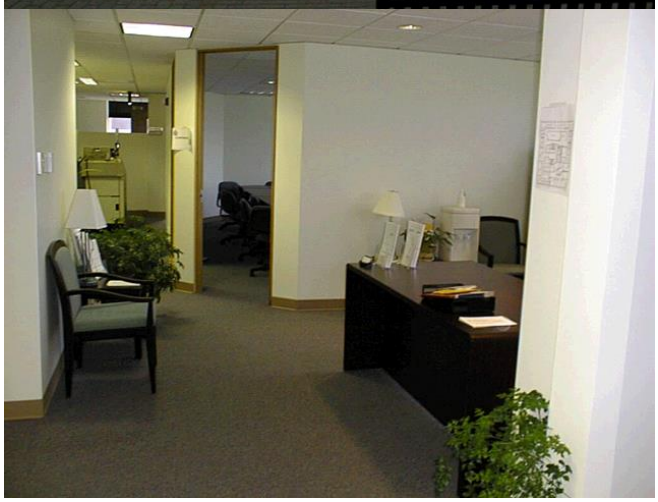
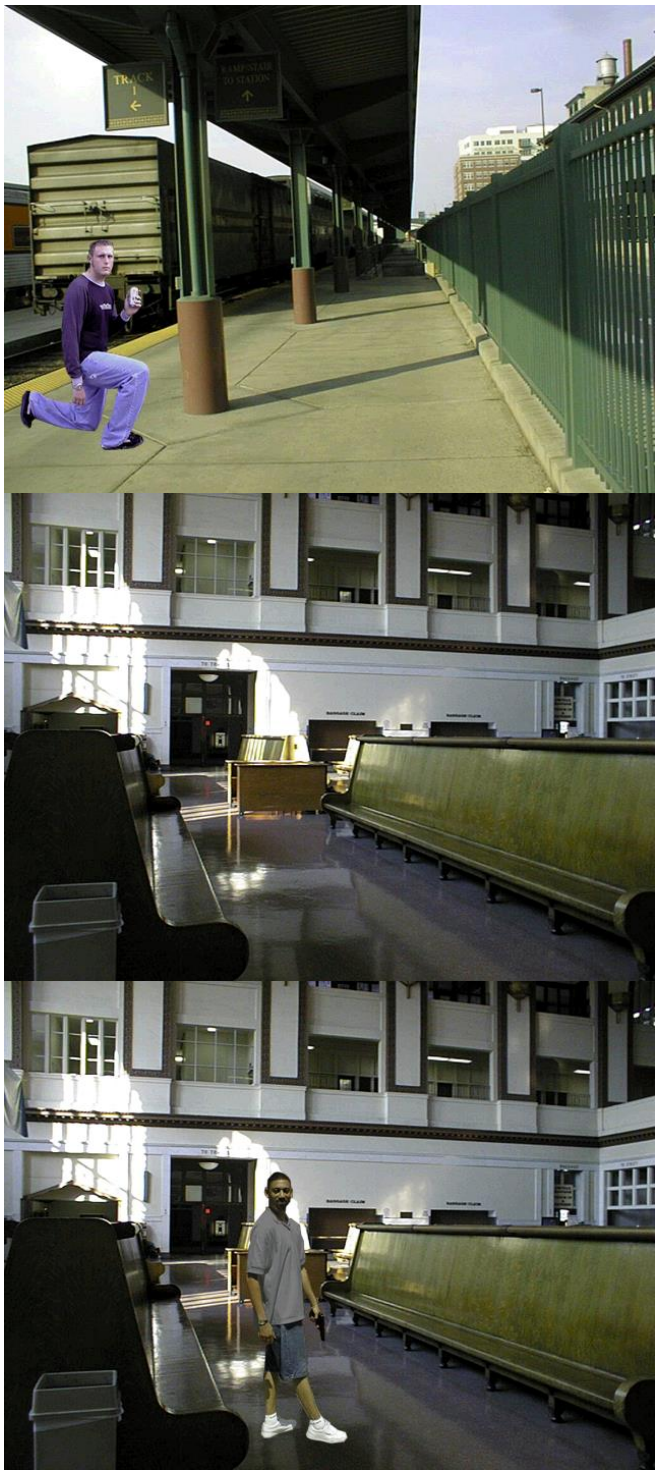
PANORAMA
RESTAURANT






TRACK 1
RAMPSTAIR TO STATION


TRACK
1
RAMP/STAIR
TO STATION

Appendix E: Data Outputs & Calculations

SPLIT TIMES BY SCENARIO RACE & PARTICIPANT RACE

		SCENARIO	
	PARTICIPANT	WHITE	BLACK
QUICKEST	ASIAN	0.579	0.582
MINIMUM	BLACK	0.565	0.544
	MULTI	**0.665**	**0.620**
	WHITE	**0.525**	**0.498**
SLOWEST	ASIAN	0.716	0.731
MAXIMUM	BLACK	**0.678**	**0.679**
	MULTI	0.689	0.697
	WHITE	**0.798**	**0.778**
RANGE	ASIAN	0.137	0.149
	BLACK	0.113	0.135
	MULTI	**0.024**	**0.077**
	WHITE	**0.273**	**0.280**

		SCENARIO	
	PARTICIPANT	WHITE	BLACK
AVERAGE	ASIAN	0.640	0.618
MINIMUM	BLACK	**0.583**	**0.569**
	MULTI	0.665	0.620
	WHITE	0.611	0.604
AVERAGE	ASIAN	0.678	0.678
MAXIMUM	BLACK	0.634	0.653
	MULTI	**0.689**	**0.697**
	WHITE	0.648	0.663
AVERAGE	ASIAN	0.659	0.648
MEAN	BLACK	**0.608**	**0.611**
	MULTI	**0.677**	**0.659**
	WHITE	0.630	0.634

MEAN
0.654
0.610
0.668
0.632

EXTREMES

White participants produced the overall, quickest decision time in both categories of scenarios: 0.525 seconds for White and 0.498 seconds for Black.
White participants also produced the overall, slowest decision time in both categories of scenarios: 0.798 seconds for White and 0.778 seconds for Black.
Multiracial participants demonstrated the shortest range in time for decision making in both categories: 0.024 seconds for White and 0.077 seconds for Black.
White participants demonstrated the longest range in time for decision making in both categories: 0.273 seconds for White and 0.280 seconds for Black.

AVERAGES

Relative to average minimums, Black participants were the quickest at making decisions about both White (0.583 sec) and Black (0.569 sec) scenarios.
Relative to average maximums, Multiracial participants were the slowest at making decisions about both White (0.689 sec) and Black (0.697 sec) scenarios.
Relative to average means, Black participants were the quickest at making decisions about both White (0.608 sec) and Black (0.611 sec) scenarios.
Relative to average means, Multiracial participants were the slowest at making decisions about both White (0.677 sec) and Black (0.659 sec) scenarios.
Overall, Black participants made quicker decisions on average regardless of the race of the scenario (0.610 sec).
Overall, Multiracial participants made slower decisions on average regardless of the race of the scenario (0.668 sec).

				SPLIT TIME				SPLIT TIME STATS - ALL SCENARIOS					SPLIT TIME STATS - BOTH WHITE SCENARIOS					SPLIT TIME STATS - BOTH BLACK SCENARIOS				
REC	SEX	AGE	RACE	AW	AB	UW	UB	MIN	MAX	MEAN	MODE	STDEV	MIN	MAX	MEAN	MODE	STDEV	MIN	MAX	MEAN	MODE	STDEV
24	FEMALE	1	ASIAN	0.694	0.666	0.716	0.731	0.666	0.731	0.702	NA	0.028	0.694	0.716	0.705	NA	0.016	0.666	0.731	0.699	NA	0.046
1	MALE	2	ASIAN	0.579	0.582	0.621	0.618	0.579	0.621	0.600	NA	0.023	0.579	0.621	0.600	NA	0.030	0.582	0.618	0.600	NA	0.025
11	MALE	1	ASIAN	0.648	0.605	0.697	0.684	0.605	0.697	0.659	NA	0.041	0.648	0.697	0.673	NA	0.035	0.605	0.684	0.645	NA	0.056
			MINIMUM	0.579	0.582	0.621	0.618	0.579	0.621	0.600	NA	0.023	0.579	0.621	0.600	NA	0.016	0.582	0.618	0.600	NA	0.025
			MAXIMUM	0.694	0.666	0.716	0.731	0.666	0.731	0.702	NA	0.041	0.694	0.716	0.705	NA	0.035	0.666	0.731	0.699	NA	0.056
			MEAN	0.640	0.618	0.678	0.678	0.617	0.683	0.653	NA	0.031	0.640	0.678	0.659	NA	0.027	0.618	0.678	0.648	NA	0.042
			MODE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
			STANDARD DEVIATION	0.058	0.043	0.050	0.057	0.045	0.056	0.051	NA	0.010	0.058	0.050	0.054	NA	0.010	0.043	0.057	0.049	NA	0.016
10	FEMALE	1	BLACK	0.565	0.544	0.616	0.678	0.544	0.678	0.601	NA	0.060	0.565	0.616	0.591	NA	0.036	0.544	0.678	0.611	NA	0.095
25	FEMALE	1	BLACK	0.59	0.567	0.678	0.679	0.567	0.679	0.629	NA	0.058	0.590	0.678	0.634	NA	0.062	0.567	0.679	0.623	NA	0.079
5	MALE	1	BLACK	0.583	0.574	0.643	0.636	0.574	0.643	0.609	NA	0.036	0.583	0.643	0.613	NA	0.042	0.574	0.636	0.605	NA	0.044
26	MALE	1	BLACK	0.574	0.578	0.584	0.615	0.574	0.615	0.588	NA	0.019	0.574	0.584	0.579	NA	0.007	0.578	0.615	0.597	NA	0.026
32	MALE	1	BLACK	0.601	0.581	0.647	0.658	0.581	0.658	0.622	NA	0.037	0.601	0.647	0.624	NA	0.033	0.581	0.658	0.620	NA	0.054
			MINIMUM	0.565	0.544	0.584	0.615	0.544	0.615	0.588	NA	0.019	0.565	0.584	0.579	NA	0.007	0.544	0.615	0.597	NA	0.026
			MAXIMUM	0.601	0.581	0.678	0.679	0.581	0.679	0.629	NA	0.060	0.601	0.678	0.634	NA	0.062	0.581	0.679	0.623	NA	0.095
			MEAN	0.583	0.569	0.634	0.653	0.568	0.655	0.610	NA	0.042	0.583	0.634	0.608	NA	0.036	0.569	0.653	0.611	NA	0.060
			MODE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
			STANDARD DEVIATION	0.014	0.015	0.035	0.028	0.014	0.027	0.016	NA	0.017	0.014	0.035	0.023	NA	0.020	0.015	0.028	0.011	NA	0.027
21	FEMALE	1	MULTI	0.665	0.62	0.689	0.697	0.620	0.697	0.668	NA	0.035	0.665	0.689	0.677	NA	0.017	0.620	0.697	0.659	NA	0.054
3	FEMALE	1	WHITE	0.62	0.643	0.643	0.638	0.620	0.643	0.636	NA	0.011	0.620	0.643	0.632	NA	0.016	0.638	0.643	0.641	NA	0.004
13	FEMALE	2	WHITE	0.573	0.619	0.679	0.67	0.573	0.679	0.635	NA	0.049	0.573	0.679	0.626	NA	0.075	0.619	0.670	0.645	NA	0.036
17	FEMALE	1	WHITE	0.563	0.508	0.623	0.616	0.508	0.623	0.578	NA	0.054	0.563	0.623	0.593	NA	0.042	0.508	0.616	0.562	NA	0.076
19	FEMALE	1	WHITE	0.525	0.498	0.569	0.613	0.498	0.613	0.551	NA	0.051	0.525	0.569	0.547	NA	0.031	0.498	0.613	0.556	NA	0.081
20	FEMALE	1	WHITE	0.627	0.608	0.653	0.671	0.608	0.671	0.640	NA	0.028	0.627	0.653	0.640	NA	0.018	0.608	0.671	0.640	NA	0.045
23	FEMALE	1	WHITE	0.648	0.598	0.656	0.647	0.598	0.656	0.637	NA	0.026	0.648	0.656	0.652	NA	0.006	0.598	0.647	0.623	NA	0.035
27	FEMALE	1	WHITE	0.62	0.599	0.632	0.65	0.599	0.650	0.625	NA	0.021	0.620	0.632	0.626	NA	0.008	0.599	0.650	0.625	NA	0.036
28	FEMALE	1	WHITE	0.572	0.571	0.63	0.651	0.571	0.651	0.606	NA	0.041	0.572	0.630	0.601	NA	0.041	0.571	0.651	0.611	NA	0.057
29	FEMALE	1	WHITE	0.591	0.604	0.629	0.67	0.591	0.670	0.624	NA	0.035	0.591	0.629	0.610	NA	0.027	0.604	0.670	0.637	NA	0.047
2	MALE	1	WHITE	0.563	0.592	0.622	0.623	0.563	0.623	0.600	NA	0.029	0.563	0.622	0.593	NA	0.042	0.592	0.623	0.608	NA	0.022
4	MALE	1	WHITE	0.571	0.549	0.628	0.673	0.549	0.673	0.605	NA	0.056	0.571	0.628	0.600	NA	0.040	0.549	0.673	0.611	NA	0.088
6	MALE	1	WHITE	0.604	0.586	0.645	0.654	0.586	0.654	0.622	NA	0.033	0.604	0.645	0.625	NA	0.029	0.586	0.654	0.620	NA	0.048
7	MALE	1	WHITE	0.634	0.65	0.666	0.694	0.634	0.694	0.661	NA	0.026	0.634	0.666	0.650	NA	0.023	0.650	0.694	0.672	NA	0.031
8	MALE	1	WHITE	0.656	0.661	0.658	0.674	0.656	0.674	0.662	NA	0.008	0.656	0.658	0.657	NA	0.001	0.661	0.674	0.668	NA	0.009
9	MALE	2	WHITE	0.61	0.616	0.619	0.631	0.610	0.631	0.619	NA	0.009	0.610	0.619	0.615	NA	0.006	0.616	0.631	0.624	NA	0.011
12	MALE	1	WHITE	0.654	0.666	0.676	0.716	0.654	0.716	0.678	NA	0.027	0.654	0.676	0.665	NA	0.016	0.666	0.716	0.691	NA	0.035
14	MALE	1	WHITE	0.534	0.546	0.581	0.573	0.534	0.581	0.559	NA	0.022	0.534	0.581	0.558	NA	0.033	0.546	0.573	0.560	NA	0.019
15	MALE	2	WHITE	0.7	0.695	0.798	0.778	0.695	0.798	0.743	NA	0.053	0.700	0.798	0.749	NA	0.069	0.695	0.778	0.737	NA	0.059
16	MALE	2	WHITE	0.643	0.655	0.63	0.648	0.630	0.655	0.644	NA	0.011	0.630	0.643	0.637	NA	0.009	0.648	0.655	0.652	NA	0.005
18	MALE	1	WHITE	0.553	0.533	0.615	0.643	0.533	0.643	0.586	NA	0.052	0.553	0.615	0.584	NA	0.044	0.533	0.643	0.588	NA	0.078
22	MALE	1	WHITE	0.598	0.599	0.618	0.619	0.598	0.619	0.609	NA	0.012	0.598	0.618	0.608	NA	0.014	0.599	0.619	0.609	NA	0.014
30	MALE	2	WHITE	0.714	0.671	0.706	0.746	0.671	0.746	0.709	NA	0.031	0.706	0.714	0.710	NA	0.006	0.671	0.746	0.709	NA	0.053
31	MALE	2	WHITE	0.693	0.648	0.72	0.727	0.648	0.727	0.697	NA	0.036	0.693	0.720	0.707	NA	0.019	0.648	0.727	0.688	NA	0.056
33	MALE	1	WHITE	0.639	0.603	0.63	0.666	0.603	0.666	0.635	NA	0.026	0.630	0.639	0.635	NA	0.006	0.603	0.666	0.635	NA	0.045
			MINIMUM	0.525	0.498	0.569	0.573	0.498	0.581	0.551	NA	0.008	0.525	0.569	0.547	NA	0.001	0.498	0.573	0.556	NA	0.004
			MAXIMUM	0.714	0.695	0.798	0.778	0.695	0.798	0.743	NA	0.056	0.706	0.798	0.749	NA	0.075	0.695	0.778	0.737	NA	0.088
			MEAN	0.613	0.605	0.647	0.662	0.597	0.665	0.632	NA	0.031	0.611	0.648	0.630	NA	0.026	0.604	0.663	0.634	NA	0.041
			MODE	0.620	0.599	0.630	0.670	0.598	0.643	NA	NA	NA	0.620	0.643	0.626	NA	0.006	0.599	0.643	0.611	NA	0.036
			STANDARD DEVIATION	0.051	0.052	0.047	0.046	0.050	0.047	0.045	NA	0.015	0.050	0.047	0.046	NA	0.020	0.051	0.045	0.045	NA	0.025

MILITARY				LAW ENFORCEMENT			BACKGROUND		NUMBER OF SCENES ACCURATELY ENGAGED				TOTAL ENGAGEMENTS BY SCENARIO				PERCENT OF SCENES ACCURATELY ENGAGED					
MIL_EXP	MIL_YRS	CBT_DEPL	MIL_LOD	LE_EXP	LE_DEGR	LE_YRS	LE_LOD	DIVERS	HT_POP	AWC	ABC	AWI	ABI	UWC	UBC	UWI	UBI	AWTot	ABTot	UWTot	UBTot	ShotsTot	AWCP	ABCP	AWIP	ABIP	UWCP	UBCP	UWIP	UBIP
0	0	0	0	0		0	0	1	2,000	22	24	2	1	25	24	0	0	24	25	25	24	98	91.7	96	8.3	4	100	100	0	0
0	0	0	0	0		0	0	1	14,000	22	24	2	1	22	24	3	2	24	25	25	24	98	91.7	96	8.3	4	88	91.7	12	8.3
0	0	0	0	0		0	0	1	10,000	25	25	0	0	24	24	2	1	25	25	24	25	99	100	100	0	0	91.7	96	8.3	4
0	0	0	0	0		0	0	0	5,000	24	22	1	3	22	25	2	0	25	25	24	25	99	96	88	4	12	91.7	100	8.3	0
0	0	0	0	0		0	0	1	61,000	25	24	0	0	22	21	2	2	25	24	24	23	96	100	100	0	0	91.7	91.3	8.3	8.7
0	0	0	0	0		0	0	0	5,000	23	25	1	0	25	25	0	0	24	25	25	25	99	95.8	100	4.2	0	100	100	0	0
0	0	0	0	0		0	0	1	70,000	22	25	2	0	21	23	2	0	24	25	23	24	95	91.7	100	8.3	0	91.3	100	8.7	0
0	0	0	0	1	Reserves	2	0	1	70,000	24	24	0	1	24	24	1	0	24	25	25	24	99	100	96	4	0	96	100	4	0
0	0	0	0	1	Skills	0	0	1	300,000	24	25	1	1	24	25	1	0	25	25	25	25	100	96	100	4	0	96	92	4	8
0	0	0	0	0		0	0	1	800	24	23	1	1	24	25	0	0	25	24	24	25	98	96	95.8	4	4.2	100	100	0	0
0	0	0	0	0		0	0	1	0	23	23	0	2	23	24	1	0	23	25	24	24	96	100	92	0	8	96.8	100	4.2	0
0	0	0	0	0		0	0	0	0	22	25	1	0	21	21	4	1	23	24	20	21	89	95.8	100	4.2	0	95	85.7	5	14.3
0	0	0	0	0		0	0	0	67,000	22	25	1	0	21	21	4	1	23	25	25	22	95	95.7	100	4.3	0	84	95.5	16	4.5
1	2	2	0	0		0	0	0	25,000	24	25	1	0	23	24	1	1	25	25	24	25	99	96	100	4	0	95.8	96	4.2	4
1	1.5	2	2	0		0	0	1	180,000	21	23	3	1	23	17	1	1	24	24	24	18	90	87.5	95.8	12.5	4	95.8	94.4	4.2	5.6
1	3	2	1	0		0	0	1	60,000	22	23	2	2	25	23	1	1	24	25	25	24	98	91.7	92	8.3	8	100	95.8	12	4.2
0	0	0	0	0		0	0	1	2,500	24	23	1	2	22	25	3	1	25	25	25	24	99	96	92	4	8	88	95.8	12	4.2
0	0	0	0	1	Public Safety	0	0	1	70,000	20	20	5	3	21	23	2	3	25	23	23	24	95	80	87	20	13	91.3	87.5	8.7	12.5
0	0	0	0	0		0	0	1	11,000	23	23	2	2	24	23	1	2	25	25	25	25	100	92	92	8	8	96	92	4	8
0	0	0	0	0		0	0	0	3,000	24	21	1	3	22	23	1	2	25	24	23	25	97	96	87.5	4	12.5	95.7	92	4.3	8
0	0	0	0	0		0	0	0	2,000	24	24	1	1	24	22	1	1	25	25	25	23	98	96	96	4	4	96	95.7	4	4.3
0	0	0	0	0		0	0	1	15,000	25	22	0	3	21	22	2	3	25	25	25	23	98	100	88	0	12	91.3	88	8.7	12
0	0	0	0	0		0	0	1	40,000	25	25	0	0	24	23	1	3	25	25	25	24	99	100	100	0	0	96	95.8	4	4.2
0	0	0	0	0		0	0	1	250,000	20	23	2	2	24	17	0	1	22	25	25	24	89	90.9	92	9.1	8	100	94.4	0	5.6
1	4	2	2	0		0	0	1	17,000	22	23	2	1	23	17	2	3	24	24	25	20	93	91.7	95.8	8.3	4.2	92	85	8	15
0	0	0	0	0		0	0	1	300,000	25	24	0	1	25	25	2	1	25	25	25	25	100	100	96	4	4	96	100	4	0
0	0	0	0	0		0	0	1	30,000	24	23	1	2	24	24	2	1	25	25	25	25	100	96	92	4	8	92	96	8	8
0	0	0	0	0		0	0	1	10,000	19	20	6	5	21	22	4	1	25	25	25	23	99	76	80	24	20	84	95.7	16	4.3
0	0	0	0	0		0	0	1	50,000	25	23	0	0	24	24	0	0	25	23	24	24	96	100	100	0	0	100	100	0	0
0	0	0	0	0		0	0	0	5,000	19	24	3	1	22	21	1	3	22	25	23	24	94	86.4	96	13.6	4	95.7	87.5	4.3	12.5
0	0	0	0	0		0	0	1	7,000	22	23	1	2	24	24	0	1	23	25	24	25	97	95.7	92	4.3	8	100	96	0	4
0	0	0	0	0		0	0	1	75,000	24	24	1	1	23	24	0	2	25	23	25	25	98	96	96	4	4	100	92	0	8
0	0	0	0	0		0	0	1	75,000	24	24	1	1	23	23	4	2	25	23	25	25	98	96	96	4	4	100	92	0	8
0	0	0	0	0		0	0	1	75,000	20	20	3	2	17	20	4	2	23	22	21	22	88	87	90.9	13	9.1	81	90.9	19	9.1

MINIMUM	0
MAXIMUM	300,000
MEAN	55,524
MODE	5,000
STANDARD DEVIATION	82,486

	19	20	25	25	0	0	17	17	0	0	22	22	20	20	18	88	76	80	0	0	81	85	0	0
	25	25	25	23	6	5	25	25	4	3	25	25	25	25	25	100	100	100	24	20	100	100	19	15
	23	23	1	1	1	1	23	22	1	1	24	25	24	24	24	97	94	95	6	5	94	95	6	5
	24	23	1	1	1	1	24	24	1	1	25	25	25	25	25	98	96	100	4	5	100	100	0	0
	2	1	3	1	1	1	2	2	1	1	1	1	1	1	2	3	6	5	6	5	5	5	5	5
	2	1	3	1	1	1	2	2	1	1	1	1	1	1	2	3	6	5	6	5	5	5	5	5

				SPLIT TIME				SPLIT TIME STATS - ALL SCENARIOS					SPLIT TIME STATS - BOTH WHITE SCENARIOS					SPLIT TIME STATS - BOTH BLACK SCENARIOS					GAME
REC	SEX	AGE	RACE	AW	AB	UW	UB	MIN	MAX	MEAN	MODE	STDEV	MIN	MAX	MEAN	MODE	STDEV	MIN	MAX	MEAN	MODE	STDEV	POINTS
24	FEMALE	1	ASIAN	0.694	0.666	0.716	0.731	0.666	0.731	0.702	NA	0.028	0.694	0.716	0.705	NA	0.016	0.666	0.731	0.699	NA	0.046	180.000
10	FEMALE	1	BLACK	0.565	0.544	0.616	0.678	0.544	0.678	0.601	NA	0.060	0.565	0.616	0.591	NA	0.036	0.544	0.678	0.611	NA	0.095	585.000
25	FEMALE	1	BLACK	0.590	0.567	0.678	0.679	0.567	0.679	0.629	NA	0.058	0.590	0.678	0.634	NA	0.062	0.567	0.679	0.623	NA	0.079	255.000
21	FEMALE	1	MULTI	0.665	0.620	0.689	0.697	0.620	0.697	0.668	NA	0.035	0.665	0.689	0.677	NA	0.017	0.620	0.697	0.659	NA	0.054	540.000
3	FEMALE	1	WHITE	0.620	0.643	0.643	0.638	0.620	0.643	0.636	NA	0.011	0.620	0.643	0.632	NA	0.016	0.638	0.643	0.641	NA	0.004	645.000
13	FEMALE	2	WHITE	0.573	0.619	0.679	0.670	0.573	0.679	0.635	NA	0.049	0.573	0.679	0.626	NA	0.075	0.619	0.670	0.645	NA	0.036	415.000
17	FEMALE	1	WHITE	0.563	0.508	0.623	0.616	0.508	0.623	0.578	NA	0.054	0.563	0.623	0.593	NA	0.042	0.508	0.616	0.562	NA	0.076	470.000
19	FEMALE	1	WHITE	0.525	0.498	0.569	0.613	0.498	0.613	0.551	NA	0.051	0.525	0.569	0.547	NA	0.031	0.498	0.613	0.556	NA	0.081	475.000
20	FEMALE	1	WHITE	0.627	0.608	0.653	0.671	0.608	0.671	0.640	NA	0.028	0.627	0.653	0.640	NA	0.018	0.608	0.671	0.640	NA	0.045	380.000
23	FEMALE	1	WHITE	0.648	0.598	0.656	0.647	0.598	0.656	0.637	NA	0.026	0.648	0.656	0.652	NA	0.006	0.598	0.647	0.623	NA	0.035	670.000
27	FEMALE	1	WHITE	0.620	0.599	0.632	0.650	0.599	0.650	0.625	NA	0.021	0.620	0.632	0.626	NA	0.008	0.599	0.650	0.625	NA	0.036	525.000
28	FEMALE	1	WHITE	0.572	0.571	0.630	0.651	0.571	0.651	0.606	NA	0.041	0.572	0.630	0.601	NA	0.041	0.571	0.651	0.611	NA	0.057	15.000
29	FEMALE	1	WHITE	0.591	0.604	0.629	0.670	0.591	0.670	0.624	NA	0.035	0.591	0.629	0.610	NA	0.027	0.604	0.670	0.637	NA	0.047	620.000
			MINIMUM	0.525	0.498	0.569	0.613	0.498	0.613	0.551	0.000	0.011	0.525	0.569	0.547	0.000	0.006	0.498	0.613	0.556	0.000	0.004	15.000
			MAXIMUM	0.694	0.666	0.716	0.731	0.666	0.731	0.702	0.000	0.060	0.694	0.716	0.705	0.000	0.075	0.666	0.731	0.699	0.000	0.095	670.000
			MEAN	0.604	0.588	0.647	0.662	0.582	0.665	0.625	#DIV/0!	0.038	0.604	0.647	0.626	#DIV/0!	0.030	0.588	0.663	0.625	#DIV/0!	0.053	444.231
			MODE	0.620	#N/A	#N/A	0.670	0.620	0.679	#N/A	#N/A	#N/A	0.620	#N/A	0.626	#N/A	#N/A	#N/A	0.670	0.611	#N/A	0.036	#N/A
			STANDARD DEVIATION	0.047	0.049	0.038	0.032	0.046	0.031	0.038	#DIV/0!	0.015	0.047	0.038	0.040	#DIV/0!	0.021	0.049	0.032	0.037	#DIV/0!	0.025	194.538
1	MALE	2	ASIAN	0.579	0.582	0.621	0.618	0.579	0.621	0.600	NA	0.023	0.579	0.621	0.600	NA	0.030	0.582	0.618	0.600	NA	0.025	535.000
11	MALE	1	ASIAN	0.648	0.605	0.697	0.684	0.605	0.697	0.659	NA	0.041	0.648	0.697	0.673	NA	0.035	0.605	0.684	0.645	NA	0.056	495.000
5	MALE	1	BLACK	0.583	0.574	0.643	0.636	0.574	0.643	0.609	NA	0.036	0.583	0.643	0.613	NA	0.042	0.574	0.636	0.605	NA	0.044	525.000
26	MALE	1	BLACK	0.574	0.578	0.584	0.615	0.574	0.615	0.588	NA	0.019	0.574	0.584	0.579	NA	0.007	0.578	0.615	0.597	NA	0.026	700.000
32	MALE	1	BLACK	0.601	0.581	0.647	0.658	0.581	0.658	0.622	NA	0.037	0.601	0.647	0.624	NA	0.033	0.581	0.658	0.620	NA	0.054	565.000
2	MALE	1	WHITE	0.563	0.592	0.622	0.623	0.563	0.623	0.600	NA	0.029	0.563	0.622	0.593	NA	0.042	0.592	0.623	0.608	NA	0.022	410.000
4	MALE	1	WHITE	0.571	0.549	0.628	0.673	0.549	0.673	0.605	NA	0.056	0.571	0.628	0.600	NA	0.040	0.549	0.673	0.611	NA	0.088	470.000
6	MALE	1	WHITE	0.604	0.586	0.645	0.654	0.586	0.654	0.622	NA	0.033	0.604	0.645	0.625	NA	0.029	0.586	0.654	0.620	NA	0.048	665.000
7	MALE	1	WHITE	0.634	0.650	0.666	0.694	0.634	0.694	0.661	NA	0.026	0.634	0.666	0.650	NA	0.023	0.650	0.694	0.672	NA	0.031	445.000
8	MALE	1	WHITE	0.656	0.661	0.658	0.674	0.656	0.674	0.662	NA	0.008	0.656	0.658	0.657	NA	0.001	0.661	0.674	0.668	NA	0.009	510.000
9	MALE	2	WHITE	0.610	0.616	0.619	0.631	0.610	0.631	0.619	NA	0.009	0.610	0.619	0.615	NA	0.006	0.616	0.631	0.624	NA	0.011	625.000
12	MALE	1	WHITE	0.654	0.666	0.676	0.716	0.654	0.716	0.678	NA	0.027	0.654	0.676	0.665	NA	0.016	0.666	0.716	0.691	NA	0.035	260.000
14	MALE	1	WHITE	0.534	0.546	0.581	0.573	0.534	0.581	0.559	NA	0.022	0.534	0.581	0.558	NA	0.033	0.546	0.573	0.560	NA	0.019	620.000
15	MALE	2	WHITE	0.700	0.695	0.798	0.778	0.695	0.798	0.743	NA	0.053	0.700	0.798	0.749	NA	0.069	0.695	0.778	0.737	NA	0.059	190.000
16	MALE	2	WHITE	0.643	0.655	0.630	0.648	0.630	0.655	0.644	NA	0.011	0.630	0.643	0.637	NA	0.009	0.648	0.655	0.652	NA	0.005	460.000
18	MALE	1	WHITE	0.553	0.533	0.615	0.643	0.533	0.643	0.586	NA	0.052	0.553	0.615	0.584	NA	0.044	0.533	0.643	0.588	NA	0.078	65.000
22	MALE	1	WHITE	0.598	0.599	0.618	0.619	0.598	0.619	0.609	NA	0.012	0.598	0.618	0.608	NA	0.014	0.599	0.619	0.609	NA	0.014	415.000
30	MALE	2	WHITE	0.714	0.671	0.706	0.746	0.671	0.746	0.709	NA	0.031	0.706	0.714	0.710	NA	0.006	0.671	0.746	0.709	NA	0.053	255.000
31	MALE	2	WHITE	0.693	0.648	0.720	0.727	0.648	0.727	0.697	NA	0.036	0.693	0.720	0.707	NA	0.019	0.648	0.727	0.688	NA	0.056	475.000
33	MALE	1	WHITE	0.639	0.603	0.630	0.666	0.603	0.666	0.635	NA	0.026	0.630	0.639	0.635	NA	0.006	0.603	0.666	0.635	NA	0.045	-35.000
			MINIMUM	0.534	0.533	0.581	0.573	0.533	0.581	0.559	0.000	0.008	0.534	0.581	0.558	0.000	0.001	0.533	0.573	0.560	0.000	0.005	-35.000
			MAXIMUM	0.714	0.695	0.798	0.778	0.695	0.798	0.743	0.000	0.056	0.706	0.798	0.749	0.000	0.069	0.695	0.778	0.737	0.000	0.088	700.000
			MEAN	0.618	0.610	0.650	0.664	0.604	0.667	0.635	#DIV/0!	0.029	0.616	0.652	0.634	#DIV/0!	0.025	0.609	0.664	0.637	#DIV/0!	0.039	432.500
			MODE	#N/A	#N/A	0.630	#N/A	0.574	0.643	#N/A	#N/A	#N/A	0.630	0.643	#N/A	#N/A	0.006	0.648	#N/A	#N/A	#N/A	#N/A	#N/A
			STANDARD DEVIATION	0.051	0.046	0.051	0.050	0.046	0.052	0.046	#DIV/0!	0.014	0.049	0.051	0.048	#DIV/0!	0.018	0.046	0.050	0.045	#DIV/0!	0.023	195.067

ENGAGEMENT SUMMARY				ENGAGEMENT STATS - ACCURATE				ENGAGEMENT STATS - INACCURATE				SPLIT TIME			SPLIT TIME STATS - ALL SCENARIOS				SPLIT TIME STATS - BOTH WHITE SCENARIOS			
RightTot	WrongTot	RightPerc	WrongPerc	MIN	MAX	MEAN	MODE	STDEV	MIN	MAX	MEAN	MODE	STDEV	AW	AB	UW	UB	MIN	MAX	MEAN	MODE	STDEV	MIN	MAX	MEAN	MODE	STDEV
95	3	96.9	3.1	91.7	100.0	96.9	100.0	3.96	0.0	8.3	3.1	0.0	3.96	0.579	0.582	0.621	0.618	0.579	0.621	0.600	NA	0.023	0.579	0.621	0.600	NA	0.030
90	8	91.8	8.2	88.0	96.0	91.9	91.7	3.27	4.0	12.0	8.2	8.3	3.27	0.563	0.592	0.622	0.623	0.563	0.623	0.600	NA	0.029	0.563	0.622	0.593	NA	0.042
96	3	97	3	91.7	100.0	96.9	100.0	3.96	0.0	8.3	3.1	0.0	3.96	0.620	0.643	0.643	0.638	0.620	0.643	0.636	NA	0.011	0.620	0.643	0.632	NA	0.016
93	6	93.9	6.1	88.0	100.0	93.9	NA	5.20	0.0	12.0	6.1	NA	5.20	0.571	0.549	0.628	0.673	0.549	0.673	0.605	NA	0.056	0.571	0.628	0.600	NA	0.040
92	4	95.8	4.2	91.3	100.0	95.8	100.0	4.91	0.0	8.7	4.3	0.0	4.91	0.583	0.574	0.643	0.636	0.574	0.643	0.609	NA	0.036	0.583	0.643	0.613	NA	0.042
98	1	99	1	95.8	100.0	99.0	100.0	2.10	0.0	4.2	1.1	0.0	2.10	0.604	0.586	0.645	0.654	0.586	0.654	0.622	NA	0.033	0.604	0.645	0.625	NA	0.029
91	4	95.8	4.2	91.3	100.0	95.8	100.0	4.91	0.0	8.7	4.3	0.0	4.91	0.634	0.651	0.666	0.694	0.634	0.694	0.661	NA	0.026	0.634	0.666	0.650	NA	0.023
96	2	98	2	96.0	100.0	98.0	100.0	2.31	0.0	4.0	2.0	0.0	2.31	0.656	0.661	0.658	0.674	0.656	0.674	0.662	NA	0.008	0.656	0.658	0.657	NA	0.001
96	4	96	4	92.0	100.0	96.0	96.0	3.27	0.0	8.0	4.0	4.0	3.27	0.61	0.616	0.619	0.631	0.610	0.631	0.619	NA	0.009	0.610	0.619	0.615	NA	0.006
96	2	98	2	95.8	100.0	98.0	100.0	2.37	0.0	4.2	2.1	0.0	2.37	0.565	0.544	0.616	0.678	0.544	0.678	0.601	NA	0.060	0.565	0.616	0.591	NA	0.036
93	3	96.9	3.1	92.0	100.0	97.0	100.0	3.85	0.0	8.0	3.1	0.0	3.85	0.648	0.605	0.697	0.684	0.605	0.697	0.659	NA	0.041	0.648	0.697	0.673	NA	0.035
84	5	94.4	5.6	85.7	100.0	94.1	NA	6.03	0.0	14.3	5.9	NA	6.03	0.654	0.666	0.676	0.716	0.654	0.716	0.678	NA	0.027	0.654	0.676	0.665	NA	0.016
89	6	93.7	6.3	84.0	100.0	93.8	NA	6.86	0.0	16.0	6.2	NA	6.86	0.573	0.619	0.679	0.67	0.573	0.679	0.635	NA	0.049	0.573	0.679	0.626	NA	0.075
96	3	97	3	95.8	100.0	97.0	96.0	2.04	0.0	4.2	3.1	4.0	2.04	0.534	0.546	0.581	0.573	0.534	0.581	0.559	NA	0.022	0.534	0.581	0.558	NA	0.033
84	6	93.3	6.7	87.5	95.8	93.4	95.8	3.97	4.2	12.5	6.6	4.2	3.97	0.7	0.695	0.798	0.778	0.695	0.798	0.743	NA	0.053	0.700	0.798	0.749	NA	0.069
93	5	94.9	5.1	91.7	100.0	94.9	NA	3.89	0.0	8.3	5.1	NA	3.89	0.643	0.655	0.63	0.648	0.630	0.655	0.644	NA	0.011	0.630	0.643	0.637	NA	0.009
92	7	92.9	7.1	88.0	96.0	93.0	NA	3.78	4.0	12.0	7.1	NA	3.78	0.563	0.508	0.623	0.616	0.508	0.623	0.578	NA	0.054	0.563	0.623	0.593	NA	0.042
82	13	86.3	13.7	80.0	91.3	86.5	NA	4.71	8.7	20.0	13.6	NA	4.71	0.553	0.533	0.615	0.643	0.533	0.643	0.586	NA	0.052	0.553	0.615	0.584	NA	0.044
93	7	93	7	92.0	96.0	93.0	92.0	2.00	4.0	8.0	7.0	8.0	2.00	0.525	0.498	0.569	0.613	0.498	0.613	0.551	NA	0.051	0.525	0.569	0.547	NA	0.031
90	7	92.8	7.2	87.5	96.0	92.8	NA	3.97	4.0	12.5	7.2	NA	3.97	0.627	0.608	0.653	0.671	0.608	0.671	0.640	NA	0.028	0.627	0.653	0.640	NA	0.018
94	4	95.9	4.1	95.7	96.0	95.9	96.0	0.15	4.0	4.3	4.1	4.0	0.15	0.665	0.62	0.689	0.697	0.620	0.697	0.668	NA	0.035	0.665	0.689	0.677	NA	0.017
90	8	91.8	8.2	88.0	100.0	91.8	88.0	5.67	0.0	12.0	8.2	12.0	5.67	0.598	0.599	0.618	0.619	0.598	0.619	0.609	NA	0.012	0.598	0.618	0.608	NA	0.014
97	2	98	2	95.8	100.0	98.0	100.0	2.37	0.0	4.2	2.1	0.0	2.37	0.648	0.598	0.656	0.647	0.598	0.656	0.637	NA	0.026	0.648	0.656	0.652	NA	0.006
84	5	94.4	5.6	90.9	100.0	94.3	NA	4.06	0.0	9.1	5.7	NA	4.06	0.694	0.666	0.716	0.731	0.666	0.731	0.702	NA	0.028	0.694	0.716	0.705	NA	0.016
85	8	91.4	8.6	85.0	95.8	91.1	NA	4.49	4.2	15.0	8.9	NA	4.49	0.59	0.567	0.678	0.679	0.567	0.679	0.629	NA	0.058	0.590	0.678	0.634	NA	0.062
99	1	99	1	96.0	100.0	99.0	100.0	2.00	0.0	4.0	1.0	0.0	2.00	0.574	0.578	0.584	0.615	0.574	0.615	0.588	NA	0.019	0.574	0.584	0.579	NA	0.007
94	6	94	6	92.0	96.0	94.0	96.0	2.31	4.0	8.0	6.0	4.0	2.31	0.62	0.599	0.632	0.65	0.599	0.650	0.625	NA	0.021	0.620	0.632	0.626	NA	0.008
82	16	83.7	16.3	76.0	95.7	83.9	NA	8.50	4.3	24.0	16.1	NA	8.50	0.572	0.571	0.63	0.651	0.571	0.651	0.606	NA	0.041	0.572	0.630	0.601	NA	0.041
96	0	100	0	100.0	100.0	100.0	100.0	0.00	0.0	0.0	0.0	0.0	0.00	0.591	0.604	0.629	0.67	0.591	0.670	0.624	NA	0.035	0.591	0.629	0.610	NA	0.027
86	8	91.5	8.5	86.4	96.0	91.4	NA	5.16	4.0	13.6	8.6	NA	5.16	0.714	0.671	0.706	0.746	0.671	0.746	0.709	NA	0.031	0.706	0.714	0.710	NA	0.006
93	4	95.9	4.1	92.0	100.0	95.9	NA	3.27	0.0	8.0	4.1	NA	3.27	0.693	0.648	0.72	0.727	0.648	0.727	0.697	NA	0.036	0.693	0.720	0.707	NA	0.019
94	4	95.9	4.1	92.0	100.0	96.0	96.0	3.27	0.0	8.0	4.0	4.0	3.27	0.601	0.581	0.647	0.658	0.581	0.658	0.622	NA	0.037	0.601	0.647	0.624	NA	0.033
77	11	87.5	12.5	81.0	90.9	87.5	90.9	4.68	9.1	19.0	12.6	9.1	4.68	0.639	0.603	0.63	0.666	0.603	0.666	0.635	NA	0.026	0.630	0.639	0.635	NA	0.006
77	0	84	0	76	91	84	88	0.00	0	0	0	0	0.00	0.525	0.498	0.569	0.573	0.498	0.581	0.551	NA	0.008	0.525	0.569	0.547	NA	0.001
99	16	100	16	100	100	100	100	8.50	9	24	16	12	8.50	0.714	0.695	0.798	0.778	0.695	0.798	0.743	NA	0.060	0.706	0.798	0.749	NA	0.075
91	5	94	6	90	98	94	97	3.74	2	10	6	3	3.74	0.612	0.601	0.649	0.663	0.595	0.666	0.631	NA	0.033	0.611	0.650	0.631	NA	0.027
96	4	98	2	92	100	97	100	3.96	0	8	3	0	3.96	0.563	0.666	0.630	0.670	0.620	0.643	0.631	NA	0.015	0.563	0.643	0.626	NA	0.042
5	3	4	4	5	3	4	4	1.75	3	5	4	4	1.75	0.049	0.048	0.045	0.043	0.046	0.044	0.043	NA	0.015	0.048	0.045	0.045	NA	0.019

SPLIT TIME STATS - BOTH BLACK SCENARIOS					GAME
MIN	MAX	MEAN	MODE	STDEV	POINTS
0.582	0.618	0.600	NA	0.025	535
0.592	0.623	0.608	NA	0.022	410
0.638	0.643	0.641	NA	0.004	645
0.549	0.673	0.611	NA	0.088	470
0.574	0.636	0.605	NA	0.044	525
0.586	0.654	0.620	NA	0.048	665
0.650	0.694	0.672	NA	0.031	445
0.661	0.674	0.668	NA	0.009	510
0.616	0.631	0.624	NA	0.011	625
0.544	0.678	0.611	NA	0.095	585
0.605	0.684	0.645	NA	0.056	495
0.666	0.716	0.691	NA	0.035	260
0.619	0.670	0.645	NA	0.036	415
0.546	0.573	0.560	NA	0.019	620
0.695	0.778	0.737	NA	0.059	190
0.648	0.655	0.652	NA	0.005	460
0.508	0.616	0.562	NA	0.076	470
0.533	0.643	0.588	NA	0.078	65
0.498	0.613	0.556	NA	0.081	475
0.608	0.671	0.640	NA	0.045	380
0.620	0.697	0.659	NA	0.054	540
0.599	0.619	0.609	NA	0.014	415
0.598	0.647	0.623	NA	0.035	670
0.666	0.731	0.699	NA	0.046	180
0.567	0.679	0.623	NA	0.079	255
0.578	0.615	0.597	NA	0.026	700
0.599	0.650	0.625	NA	0.036	525
0.571	0.651	0.611	NA	0.057	15
0.604	0.670	0.637	NA	0.047	620
0.671	0.746	0.709	NA	0.053	255
0.648	0.727	0.688	NA	0.056	475
0.581	0.658	0.620	NA	0.054	565
0.603	0.666	0.635	NA	0.045	-35
0.498	0.573	0.556	NA	0.004	-35
0.695	0.778	0.737	NA	0.095	700
0.601	0.664	0.632	NA	0.044	437
0.666	0.643	0.611	NA	0.036	470
0.048	0.043	0.042	NA	0.024	192

Appendix F: SPSS Outputs

Frequency Tables

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	20	60.6	60.6	60.6
	Female	13	39.4	39.4	100.0
	Total	33	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	26	78.8	78.8	78.8
	26-35	7	21.2	21.2	100.0
	Total	33	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black	5	15.2	15.2	15.2
	White	24	72.7	72.7	87.9
	Other	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

Specified Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		29	87.9	87.9	87.9
	Asian	3	9.1	9.1	97.0
	Multiracial	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Degree Field

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Don't Know/ Unrecorded	6	18.2	18.2	18.2
	Criminal Justice	16	48.5	48.5	66.7
	Non Criminal Justice	11	33.3	33.3	100.0
	Total	33	100.0	100.0	

Firearm Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I own a firearm and shoot it at the range and recieved formal firearms training.	11	33.3	33.3	33.3
	I own a firearm and shoot it at the range but have no formal firearms training.	1	3.0	3.0	36.4
	I do not own a firearm, but I have shot at the range.	13	39.4	39.4	75.8
	I have never shot a firearm (owned or unowned).	8	24.2	24.2	100.0
	Total	33	100.0	100.0	

Description of Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		22	66.7	66.7	66.7
	Conceal & Carry	3	9.1	9.1	75.8
	Conceal & Carry/Firearm Safety	1	3.0	3.0	78.8
	Firearm Certificate	1	3.0	3.0	81.8
	Gun Safety/PermitCarry	1	3.0	3.0	84.8
	Hunters Safety/LE reserve	1	3.0	3.0	87.9
	Military	1	3.0	3.0	90.9
	Military (Dad is Instructor)	1	3.0	3.0	93.9
	Military/CCW	1	3.0	3.0	97.0
	SKILLS/Hunters Safety	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Military Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	29	87.9	87.9	87.9
	Yes	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

Years of Military Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	29	87.9	87.9	87.9
	1.5	1	3.0	3.0	90.9
	3.0	1	3.0	3.0	93.9
	4.0	1	3.0	3.0	97.0
	5.0	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Combat Zone Deployed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N/A	29	87.9	87.9	87.9
	Yes	1	3.0	3.0	90.9
	No	3	9.1	9.1	100.0
	Total	33	100.0	100.0	

Fired firearm in the line of duty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N/A	29	87.9	87.9	87.9
	No	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

Law Enforcement Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	30	90.9	90.9	90.9
	Yes	3	9.1	9.1	100.0
	Total	33	100.0	100.0	

Description of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		30	90.9	90.9	90.9
	Public Safety	1	3.0	3.0	93.9
	Reserves	1	3.0	3.0	97.0
	Skills	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Years of Law Enforcement Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	31	93.9	93.9	93.9
	1	1	3.0	3.0	97.0
	2	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Fired firearm in the line of duty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N/A	32	97.0	97.0	97.0
	No	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Diversity Exposure in Childhood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	6	18.2	18.2	18.2
	Yes	27	81.8	81.8	100.0
	Total	33	100.0	100.0	

Hometown Population

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	6.1	6.1	6.1
	800	1	3.0	3.0	9.1
	2000	2	6.1	6.1	15.2
	2500	1	3.0	3.0	18.2
	3000	1	3.0	3.0	21.2
	5000	3	9.1	9.1	30.3
	7000	1	3.0	3.0	33.3
	10000	2	6.1	6.1	39.4
	11000	1	3.0	3.0	42.4
	14000	1	3.0	3.0	45.5
	15000	1	3.0	3.0	48.5
	17000	1	3.0	3.0	51.5
	25000	1	3.0	3.0	54.5
	30000	1	3.0	3.0	57.6
	40000	1	3.0	3.0	60.6
	50000	1	3.0	3.0	63.6
	60000	1	3.0	3.0	66.7
	61000	1	3.0	3.0	69.7
	67000	1	3.0	3.0	72.7
	70000	3	9.1	9.1	81.8
	75000	2	6.1	6.1	87.9
	180000	1	3.0	3.0	90.9
	250000	1	3.0	3.0	93.9
	300000	2	6.1	6.1	100.0
	Total	33	100.0	100.0	

Armed White Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19	2	6.1	6.1	6.1
	20	3	9.1	9.1	15.2
	21	1	3.0	3.0	18.2
	22	7	21.2	21.2	39.4
	23	4	12.1	12.1	51.5
	24	10	30.3	30.3	81.8
	25	6	18.2	18.2	100.0
	Total	33	100.0	100.0	

Armed Black Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	3	9.1	9.1	9.1
	21	1	3.0	3.0	12.1
	22	2	6.1	6.1	18.2
	23	11	33.3	33.3	51.5
	24	9	27.3	27.3	78.8
	25	7	21.2	21.2	100.0
	Total	33	100.0	100.0	

Armed White Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	24.2	24.2	24.2
	1	13	39.4	39.4	63.6
	2	7	21.2	21.2	84.8
	3	3	9.1	9.1	93.9
	5	1	3.0	3.0	97.0
	6	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Armed Black Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	10	30.3	30.3	30.3
	1	10	30.3	30.3	60.6
	2	8	24.2	24.2	84.8
	3	4	12.1	12.1	97.0
	5	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Unarmed White Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17	1	3.0	3.0	3.0
	19	1	3.0	3.0	6.1
	21	5	15.2	15.2	21.2
	22	7	21.2	21.2	42.4
	23	6	18.2	18.2	60.6
	24	9	27.3	27.3	87.9
	25	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

Unarmed Black Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17	3	9.1	9.1	9.1
	18	1	3.0	3.0	12.1
	20	1	3.0	3.0	15.2
	21	4	12.1	12.1	27.3
	22	4	12.1	12.1	39.4
	23	8	24.2	24.2	63.6
	24	8	24.2	24.2	87.9
	25	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

Unarmed White Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	27.3	27.3	27.3
	1	11	33.3	33.3	60.6
	2	8	24.2	24.2	84.8
	3	2	6.1	6.1	90.9
	4	3	9.1	9.1	100.0
	Total	33	100.0	100.0	

Unarmed Black Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	27.3	27.3	27.3
	1	12	36.4	36.4	63.6
	2	7	21.2	21.2	84.8
	3	5	15.2	15.2	100.0
	Total	33	100.0	100.0	

AW Total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22	2	6.1	6.1	6.1
	23	4	12.1	12.1	18.2
	24	9	27.3	27.3	45.5
	25	18	54.5	54.5	100.0
	Total	33	100.0	100.0	

AB Total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22	1	3.0	3.0	3.0
	23	2	6.1	6.1	9.1
	24	6	18.2	18.2	27.3
	25	24	72.7	72.7	100.0
	Total	33	100.0	100.0	

UW Total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	1	3.0	3.0	3.0
	21	1	3.0	3.0	6.1
	23	6	18.2	18.2	24.2
	24	10	30.3	30.3	54.5
	25	15	45.5	45.5	100.0
	Total	33	100.0	100.0	

UB Total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	2	6.1	6.1	6.1
	20	1	3.0	3.0	9.1
	21	1	3.0	3.0	12.1
	22	2	6.1	6.1	18.2
	23	4	12.1	12.1	30.3
	24	10	30.3	30.3	60.6
	25	13	39.4	39.4	100.0
	Total	33	100.0	100.0	

Total Shots Fired

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	88	1	3.0	3.0	3.0
	89	2	6.1	6.1	9.1
	90	1	3.0	3.0	12.1
	93	1	3.0	3.0	15.2
	94	1	3.0	3.0	18.2
	95	3	9.1	9.1	27.3
	96	3	9.1	9.1	36.4
	97	2	6.1	6.1	42.4
	98	9	27.3	27.3	69.7
	99	6	18.2	18.2	87.9
	100	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

AW % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	76.0	1	3.0	3.0	3.0
	80.0	1	3.0	3.0	6.1
	86.4	1	3.0	3.0	9.1
	87.0	1	3.0	3.0	12.1
	87.5	1	3.0	3.0	15.2
	90.9	1	3.0	3.0	18.2
	91.7	5	15.2	15.2	33.3
	92.0	1	3.0	3.0	36.4
	95.7	2	6.1	6.1	42.4
	95.8	2	6.1	6.1	48.5
	96.0	9	27.3	27.3	75.8
	100.0	8	24.2	24.2	100.0
	Total	33	100.0	100.0	

AB % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	80.0	1	3.0	3.0	3.0
	87.0	1	3.0	3.0	6.1
	87.5	1	3.0	3.0	9.1
	88.0	2	6.1	6.1	15.2
	90.9	1	3.0	3.0	18.2
	92.0	7	21.2	21.2	39.4
	95.8	3	9.1	9.1	48.5
	96.0	7	21.2	21.2	69.7
	100.0	10	30.3	30.3	100.0
	Total	33	100.0	100.0	

AW % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	8	24.2	24.2	24.2
	4.0	9	27.3	27.3	51.5
	4.2	2	6.1	6.1	57.6
	4.3	2	6.1	6.1	63.6
	8.0	1	3.0	3.0	66.7
	8.3	5	15.2	15.2	81.8
	9.1	1	3.0	3.0	84.8
	12.5	1	3.0	3.0	87.9
	13.0	1	3.0	3.0	90.9
	13.6	1	3.0	3.0	93.9
	20.0	1	3.0	3.0	97.0
	24.0	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

AB % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	10	30.3	30.3	30.3
	4.0	7	21.2	21.2	51.5
	4.2	3	9.1	9.1	60.6
	8.0	7	21.2	21.2	81.8
	9.1	1	3.0	3.0	84.8
	12.0	2	6.1	6.1	90.9
	12.5	1	3.0	3.0	93.9
	13.0	1	3.0	3.0	97.0
	20.0	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

UW % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	81.0	1	3.0	3.0	3.0
	84.0	2	6.1	6.1	9.1
	88.0	2	6.1	6.1	15.2
	91.3	3	9.1	9.1	24.2
	91.7	3	9.1	9.1	33.3
	92.0	2	6.1	6.1	39.4
	95.0	1	3.0	3.0	42.4
	95.7	2	6.1	6.1	48.5
	95.8	3	9.1	9.1	57.6
	96.0	5	15.2	15.2	72.7
	100.0	9	27.3	27.3	100.0
	Total	33	100.0	100.0	

UB % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	85.0	1	3.0	3.0	3.0
	85.7	1	3.0	3.0	6.1
	87.5	2	6.1	6.1	12.1
	88.0	1	3.0	3.0	15.2
	90.9	1	3.0	3.0	18.2
	91.3	1	3.0	3.0	21.2
	91.7	1	3.0	3.0	24.2
	92.0	4	12.1	12.1	36.4
	94.4	2	6.1	6.1	42.4
	95.5	1	3.0	3.0	45.5
	95.7	2	6.1	6.1	51.5
	95.8	3	9.1	9.1	60.6
	96.0	4	12.1	12.1	72.7
	100.0	9	27.3	27.3	100.0
	Total	33	100.0	100.0	

UW % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	9	27.3	27.3	27.3
	4.0	5	15.2	15.2	42.4
	4.2	3	9.1	9.1	51.5
	4.3	2	6.1	6.1	57.6
	5.0	1	3.0	3.0	60.6
	8.0	2	6.1	6.1	66.7
	8.3	3	9.1	9.1	75.8
	8.7	3	9.1	9.1	84.8
	12.0	2	6.1	6.1	90.9
	16.0	2	6.1	6.1	97.0
	19.0	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

UB % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	9	27.3	27.3	27.3
	4.0	4	12.1	12.1	39.4
	4.2	3	9.1	9.1	48.5
	4.3	2	6.1	6.1	54.5
	4.5	1	3.0	3.0	57.6
	5.6	2	6.1	6.1	63.6
	8.0	4	12.1	12.1	75.8
	8.3	1	3.0	3.0	78.8
	8.7	1	3.0	3.0	81.8
	9.1	1	3.0	3.0	84.8
	12.0	1	3.0	3.0	87.9
	12.5	2	6.1	6.1	93.9
	14.3	1	3.0	3.0	97.0
	15.0	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Total Number Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	77	1	3.0	3.0	3.0
	82	2	6.1	6.1	9.1
	84	3	9.1	9.1	18.2
	85	1	3.0	3.0	21.2
	86	1	3.0	3.0	24.2
	89	1	3.0	3.0	27.3
	90	3	9.1	9.1	36.4
	91	1	3.0	3.0	39.4
	92	2	6.1	6.1	45.5
	93	5	15.2	15.2	60.6
	94	3	9.1	9.1	69.7
	95	1	3.0	3.0	72.7
	96	6	18.2	18.2	90.9
	97	1	3.0	3.0	93.9
	98	1	3.0	3.0	97.0
	99	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Total Number Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	3.0	3.0	3.0
	1	2	6.1	6.1	9.1
	2	3	9.1	9.1	18.2
	3	4	12.1	12.1	30.3
	4	6	18.2	18.2	48.5
	5	3	9.1	9.1	57.6
	6	4	12.1	12.1	69.7
	7	3	9.1	9.1	78.8
	8	4	12.1	12.1	90.9
	11	1	3.0	3.0	93.9
	13	1	3.0	3.0	97.0
	16	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Total Percent Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	83.7	1	3.0	3.0	3.0
	86.3	1	3.0	3.0	6.1
	87.5	1	3.0	3.0	9.1
	91.4	1	3.0	3.0	12.1
	91.5	1	3.0	3.0	15.2
	91.8	2	6.1	6.1	21.2
	92.8	1	3.0	3.0	24.2
	92.9	1	3.0	3.0	27.3
	93.0	1	3.0	3.0	30.3
	93.3	1	3.0	3.0	33.3
	93.7	1	3.0	3.0	36.4
	93.9	1	3.0	3.0	39.4
	94.0	1	3.0	3.0	42.4
	94.4	2	6.1	6.1	48.5
	94.9	1	3.0	3.0	51.5
	95.8	2	6.1	6.1	57.6
	95.9	3	9.1	9.1	66.7
	96.0	1	3.0	3.0	69.7
	96.9	2	6.1	6.1	75.8
	97.0	2	6.1	6.1	81.8
	98.0	3	9.1	9.1	90.9
	99.0	2	6.1	6.1	97.0
	100.0	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Total Percent Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	1	3.0	3.0	3.0
	1.0	2	6.1	6.1	9.1
	2.0	3	9.1	9.1	18.2
	3.0	2	6.1	6.1	24.2
	3.1	2	6.1	6.1	30.3
	4.0	1	3.0	3.0	33.3
	4.1	3	9.1	9.1	42.4
	4.2	2	6.1	6.1	48.5
	5.1	1	3.0	3.0	51.5
	5.6	2	6.1	6.1	57.6
	6.0	1	3.0	3.0	60.6
	6.1	1	3.0	3.0	63.6
	6.3	1	3.0	3.0	66.7
	6.7	1	3.0	3.0	69.7
	7.0	1	3.0	3.0	72.7
	7.1	1	3.0	3.0	75.8
	7.2	1	3.0	3.0	78.8
	8.2	2	6.1	6.1	84.8
	8.5	1	3.0	3.0	87.9
	8.6	1	3.0	3.0	90.9
	12.5	1	3.0	3.0	93.9
	13.7	1	3.0	3.0	97.0
	16.3	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Split Time AW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.525	1	3.0	3.0	3.0
	.534	1	3.0	3.0	6.1
	.553	1	3.0	3.0	9.1
	.563	2	6.1	6.1	15.2
	.565	1	3.0	3.0	18.2
	.571	1	3.0	3.0	21.2
	.572	1	3.0	3.0	24.2
	.573	1	3.0	3.0	27.3
	.574	1	3.0	3.0	30.3
	.579	1	3.0	3.0	33.3
	.583	1	3.0	3.0	36.4
	.590	1	3.0	3.0	39.4
	.591	1	3.0	3.0	42.4
	.598	1	3.0	3.0	45.5
	.601	1	3.0	3.0	48.5
	.604	1	3.0	3.0	51.5
	.610	1	3.0	3.0	54.5
	.620	2	6.1	6.1	60.6
	.627	1	3.0	3.0	63.6
	.634	1	3.0	3.0	66.7
	.639	1	3.0	3.0	69.7
	.643	1	3.0	3.0	72.7
	.648	2	6.1	6.1	78.8
	.654	1	3.0	3.0	81.8
	.656	1	3.0	3.0	84.8
	.665	1	3.0	3.0	87.9
	.693	1	3.0	3.0	90.9
	.694	1	3.0	3.0	93.9
	.700	1	3.0	3.0	97.0
	.714	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Split Time AB

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.498	1	3.0	3.0	3.0
	.508	1	3.0	3.0	6.1
	.533	1	3.0	3.0	9.1
	.544	1	3.0	3.0	12.1
	.546	1	3.0	3.0	15.2
	.549	1	3.0	3.0	18.2
	.567	1	3.0	3.0	21.2
	.571	1	3.0	3.0	24.2
	.574	1	3.0	3.0	27.3
	.578	1	3.0	3.0	30.3
	.581	1	3.0	3.0	33.3
	.582	1	3.0	3.0	36.4
	.586	1	3.0	3.0	39.4
	.592	1	3.0	3.0	42.4
	.598	1	3.0	3.0	45.5
	.599	2	6.1	6.1	51.5
	.603	1	3.0	3.0	54.5
	.604	1	3.0	3.0	57.6
	.605	1	3.0	3.0	60.6
	.608	1	3.0	3.0	63.6
	.616	1	3.0	3.0	66.7
	.619	1	3.0	3.0	69.7
	.620	1	3.0	3.0	72.7
	.643	1	3.0	3.0	75.8
	.648	1	3.0	3.0	78.8
	.650	1	3.0	3.0	81.8
	.655	1	3.0	3.0	84.8
	.661	1	3.0	3.0	87.9
	.666	2	6.1	6.1	93.9
	.671	1	3.0	3.0	97.0
	.695	1	3.0	3.0	100.0
	Total	33	00.0	100.0	

Split Time UW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.569	1	3.0	3.0	3.0
	.581	1	3.0	3.0	6.1
	.584	1	3.0	3.0	9.1
	.615	1	3.0	3.0	12.1
	.616	1	3.0	3.0	15.2
	.618	1	3.0	3.0	18.2
	.619	1	3.0	3.0	21.2
	.621	1	3.0	3.0	24.2
	.622	1	3.0	3.0	27.3
	.623	1	3.0	3.0	30.3
	.628	1	3.0	3.0	33.3
	.629	1	3.0	3.0	36.4
	.630	3	9.1	9.1	45.5
	.632	1	3.0	3.0	48.5
	.643	2	6.1	6.1	54.5
	.645	1	3.0	3.0	57.6
	.647	1	3.0	3.0	60.6
	.653	1	3.0	3.0	63.6
	.656	1	3.0	3.0	66.7
	.658	1	3.0	3.0	69.7
	.666	1	3.0	3.0	72.7
	.676	1	3.0	3.0	75.8
	.678	1	3.0	3.0	78.8
	.679	1	3.0	3.0	81.8
	.689	1	3.0	3.0	84.8
	.697	1	3.0	3.0	87.9
	.706	1	3.0	3.0	90.9
	.716	1	3.0	3.0	93.9
	.720	1	3.0	3.0	97.0
	.798	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Split Time UB

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.573	1	3.0	3.0	3.0
	.613	1	3.0	3.0	6.1
	.615	1	3.0	3.0	9.1
	.616	1	3.0	3.0	12.1
	.618	1	3.0	3.0	15.2
	.619	1	3.0	3.0	18.2
	.623	1	3.0	3.0	21.2
	.631	1	3.0	3.0	24.2
	.636	1	3.0	3.0	27.3
	.638	1	3.0	3.0	30.3
	.643	1	3.0	3.0	33.3
	.647	1	3.0	3.0	36.4
	.648	1	3.0	3.0	39.4
	.650	1	3.0	3.0	42.4
	.651	1	3.0	3.0	45.5
	.654	1	3.0	3.0	48.5
	.658	1	3.0	3.0	51.5
	.666	1	3.0	3.0	54.5
	.670	2	6.1	6.1	60.6
	.671	1	3.0	3.0	63.6
	.673	1	3.0	3.0	66.7
	.674	1	3.0	3.0	69.7
	.678	1	3.0	3.0	72.7
	.679	1	3.0	3.0	75.8
	.684	1	3.0	3.0	78.8
	.694	1	3.0	3.0	81.8
	.697	1	3.0	3.0	84.8
	.716	1	3.0	3.0	87.9
	.727	1	3.0	3.0	90.9
	.731	1	3.0	3.0	93.9
	.746	1	3.0	3.0	97.0
	.778	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

Game Points

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-35	1	3.0	3.0	3.0
	15	1	3.0	3.0	6.1
	65	1	3.0	3.0	9.1
	180	1	3.0	3.0	12.1
	190	1	3.0	3.0	15.2
	255	2	6.1	6.1	21.2
	260	1	3.0	3.0	24.2
	380	1	3.0	3.0	27.3
	410	1	3.0	3.0	30.3
	415	2	6.1	6.1	36.4
	445	1	3.0	3.0	39.4
	460	1	3.0	3.0	42.4
	470	2	6.1	6.1	48.5
	475	2	6.1	6.1	54.5
	495	1	3.0	3.0	57.6
	510	1	3.0	3.0	60.6
	525	2	6.1	6.1	66.7
	535	1	3.0	3.0	69.7
	540	1	3.0	3.0	72.7
	565	1	3.0	3.0	75.8
	585	1	3.0	3.0	78.8
	620	2	6.1	6.1	84.8
	625	1	3.0	3.0	87.9
	645	1	3.0	3.0	90.9
	665	1	3.0	3.0	93.9
	670	1	3.0	3.0	97.0
	700	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

AW % Correct * Sex

Crosstab

			Sex		
			Male	Female	Total
AW % Correct	76.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	80.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	86.4	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	87.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	87.5	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	90.9	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	91.7	Count	4	1	5
		% of Total	12.1%	3.0%	15.2%
	92.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	95.7	Count	1	1	2
		% of Total	3.0%	3.0%	6.1%
	95.8	Count	2	0	2
		% of Total	6.1%	0.0%	6.1%
	96.0	Count	4	5	9
		% of Total	12.1%	15.2%	27.3%
	100.0	Count	5	3	8
		% of Total	15.2%	9.1%	24.2%
Total		Count	20	13	33
		% of Total	60.6%	39.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	a. 23 cells (95.8%) have expected count less than 5. The minimum expected count is .39.
Pearson Chi-Square	10.394[a]	11	.495	
Likelihood Ratio	13.525	11	.260	
N of Valid Cases	33			

AB % Correct * Sex

Crosstab

			Sex		
			Male	Female	Total
AB % Correct	80.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	87.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	87.5	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	88.0	Count	2	0	2
		% of Total	6.1%	0.0%	6.1%
	90.9	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	92.0	Count	3	4	7
		% of Total	9.1%	12.1%	21.2%
	95.8	Count	1	2	3
		% of Total	3.0%	6.1%	9.1%
	96.0	Count	6	1	7
		% of Total	18.2%	3.0%	21.2%
	100.0	Count	6	4	10
		% of Total	18.2%	12.1%	30.3%
Total		Count	20	13	33
		% of Total	60.6%	39.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	a. 17 cells (94.4%) have expected count less than 5. The minimum expected count is .39.
Pearson Chi-Square	9.385[a]	8	.311	
Likelihood Ratio	11.670	8	.167	
N of Valid Cases	33			

UW % Correct * Sex

Crosstab

			Sex			
			Male	Female		Total
UW % Correct	81.0	Count	1	0		1
		% of Total	3.0%	0.0%		3.0%
	84.0	Count	0	2		2
		% of Total	0.0%	6.1%		6.1%
	88.0	Count	1	1		2
		% of Total	3.0%	3.0%		6.1%
	91.3	Count	3	0		3
		% of Total	9.1%	0.0%		9.1%
	91.7	Count	2	1		3
		% of Total	6.1%	3.0%		9.1%
	92.0	Count	0	2		2
		% of Total	0.0%	6.1%		6.1%
	95.0	Count	1	0		1
		% of Total	3.0%	0.0%		3.0%
	95.7	Count	1	1		2
		% of Total	3.0%	3.0%		6.1%
	95.8	Count	3	0		3
		% of Total	9.1%	0.0%		9.1%
	96.0	Count	2	3		5
		% of Total	6.1%	9.1%		15.2%
	100.0	Count	6	3		9
		% of Total	18.2%	9.1%		27.3%
Total		Count	20	13		33
		% of Total	60.6%	39.4%		100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	a. 21 cells (95.5%) have expected count less than 5. The minimum expected count is .39.
Pearson Chi-Square	12.616[a]	10	.246	
Likelihood Ratio	16.700	10	.081	
N of Valid Cases	33			

UB % Correct * Sex

Crosstab

			Sex		
			Male	Female	Total
UB % Correct	85.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	85.7	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	87.5	Count	2	0	2
		% of Total	6.1%	0.0%	6.1%
	88.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	90.9	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	91.3	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	91.7	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	92.0	Count	2	2	4
		% of Total	6.1%	6.1%	12.1%
	94.4	Count	1	1	2
		% of Total	3.0%	3.0%	6.1%
	95.5	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	95.7	Count	0	2	2
		% of Total	0.0%	6.1%	6.1%
	95.8	Count	1	2	3
		% of Total	3.0%	6.1%	9.1%
	96.0	Count	2	2	4
		% of Total	6.1%	6.1%	12.1%
	100.0	Count	7	2	9
		% of Total	21.2%	6.1%	27.3%
Total		Count	20	13	33
		% of Total	60.6%	39.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.221[a]	13	.431
Likelihood Ratio	17.035	13	.198
N of Valid Cases	33		

a. 27 cells (96.4%) have expected count less than 5. The minimum expected count is .39.

AW % Incorrect * Sex

Crosstab

			Sex		
			Male	Female	Total
AW % Incorrect	.0	Count	5	3	8
		% of Total	15.2%	9.1%	24.2%
	4.0	Count	4	5	9
		% of Total	12.1%	15.2%	27.3%
	4.2	Count	2	0	2
		% of Total	6.1%	0.0%	6.1%
	4.3	Count	1	1	2
		% of Total	3.0%	3.0%	6.1%
	8.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	8.3	Count	4	1	5
		% of Total	12.1%	3.0%	15.2%
	9.1	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	12.5	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	13.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	13.6	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	20.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	24.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
Total		Count	20	13	33
		% of Total	60.6%	39.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	a. 23 cells (95.8%) have expected count less than 5. The minimum expected count is .39.
Pearson Chi-Square	10.394[a]	11	.495	
Likelihood Ratio	13.525	11	.260	
N of Valid Cases	33			

AB % Incorrect * Sex

Crosstab

			Sex		
			Male	Female	Total
AB % Incorrect	.0	Count	6	4	10
		% of Total	18.2%	12.1%	30.3%
	4.0	Count	6	1	7
		% of Total	18.2%	3.0%	21.2%
	4.2	Count	1	2	3
		% of Total	3.0%	6.1%	9.1%
	8.0	Count	3	4	7
		% of Total	9.1%	12.1%	21.2%
	9.1	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	12.0	Count	2	0	2
		% of Total	6.1%	0.0%	6.1%
	12.5	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	13.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	20.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
Total		Count	20	13	33
		% of Total	60.6%	39.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	a. 17 cells (94.4%) have expected count less than 5. The minimum expected count is .39.
Pearson Chi-Square	9.385[a]	8	.311	
Likelihood Ratio	11.670	8	.167	
N of Valid Cases	33			

UW % Incorrect * Sex

Crosstab

			Sex		Total
			Male	Female	
UW % Incorrect	.0	Count	6	3	9
		% of Total	18.2%	9.1%	27.3%
	4.0	Count	2	3	5
		% of Total	6.1%	9.1%	15.2%
	4.2	Count	3	0	3
		% of Total	9.1%	0.0%	9.1%
	4.3	Count	1	1	2
		% of Total	3.0%	3.0%	6.1%
	5.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	8.0	Count	0	2	2
		% of Total	0.0%	6.1%	6.1%
	8.3	Count	2	1	3
		% of Total	6.1%	3.0%	9.1%
	8.7	Count	3	0	3
		% of Total	9.1%	0.0%	9.1%
	12.0	Count	1	1	2
		% of Total	3.0%	3.0%	6.1%
	16.0	Count	0	2	2
		% of Total	0.0%	6.1%	6.1%
	19.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
Total		Count	20	13	33
		% of Total	60.6%	39.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.616[a]	10	.246
Likelihood Ratio	16.700	10	.081
N of Valid Cases	33		

a. 21 cells (95.5%) have expected count less than 5. The minimum expected count is .39.

UB % Incorrect * Sex

Crosstab

			Sex		
			Male	Female	Total
UB % Incorrect	.0	Count	7	2	9
		% of Total	21.2%	6.1%	27.3%
	4.0	Count	2	2	4
		% of Total	6.1%	6.1%	12.1%
	4.2	Count	1	2	3
		% of Total	3.0%	6.1%	9.1%
	4.3	Count	0	2	2
		% of Total	0.0%	6.1%	6.1%
	4.5	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
	5.6	Count	1	1	2
		% of Total	3.0%	3.0%	6.1%
	8.0	Count	2	2	4
		% of Total	6.1%	6.1%	12.1%
	8.3	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	8.7	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	9.1	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	12.0	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	12.5	Count	2	0	2
		% of Total	6.1%	0.0%	6.1%
	14.3	Count	1	0	1
		% of Total	3.0%	0.0%	3.0%
	15.0	Count	0	1	1
		% of Total	0.0%	3.0%	3.0%
Total		Count	20	13	33
		% of Total	60.6%	39.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.221[a]	13	.431
Likelihood Ratio	17.035	13	.198
N of Valid Cases	33		

a. 27 cells (96.4%) have expected count less than 5. The minimum expected count is .39.

Crosstabs

AW % Incorrect * Split Time AW

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	353.971[a]	319	.086
Likelihood Ratio	130.764	319	1.000
Linear-by-Linear Association	.000	1	.997
N of Valid Cases	33		

a. 360 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

AW % Correct * Split Time AW

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	353.971[a]	319	.086
Likelihood Ratio	130.764	319	1.000
Linear-by-Linear Association	.000	1	.997
N of Valid Cases	33		

a. 360 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Crosstabs

AB % Incorrect * Split Time AB

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	249.386[a]	240	.325
Likelihood Ratio	115.323	240	1.000
Linear-by-Linear Association	2.101	1	.147
N of Valid Cases	33		

a. 279 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

AB % Correct * Split Time AB

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	249.386[a]	240	.325
Likelihood Ratio	115.323	240	1.000
Linear-by-Linear Association	2.101	1	.147
N of Valid Cases	33		

a. 279 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

SPLIT TIMES - ALL

Statistics

Split Time AW

N	Valid	33
	Missing	0
Mean		.61224
Median		.60400
Mode		.563[a]
Std. Deviation		.048955
Skewness		.348
Std. Error of Skewness		.409
Kurtosis		-.611
Std. Error of Kurtosis		.798
Range		.189
Minimum		.525
Maximum		.714

a. Multiple modes exist. The smallest value is shown

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.812[a]	30	.528
Likelihood Ratio	38.706	30	.132
N of Valid Cases	33		

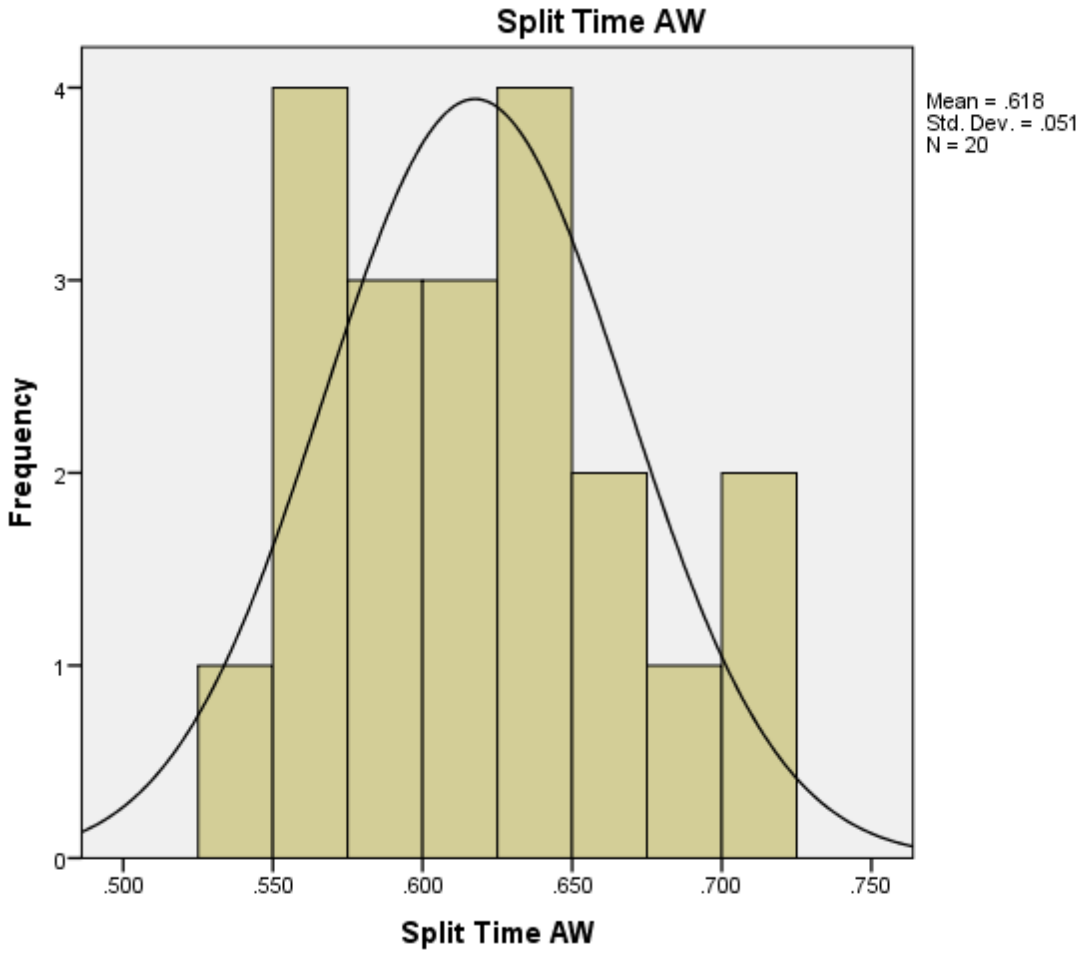
a. 62 cells (100.0%) have expected count less than 5. The minimum expected count is .39.

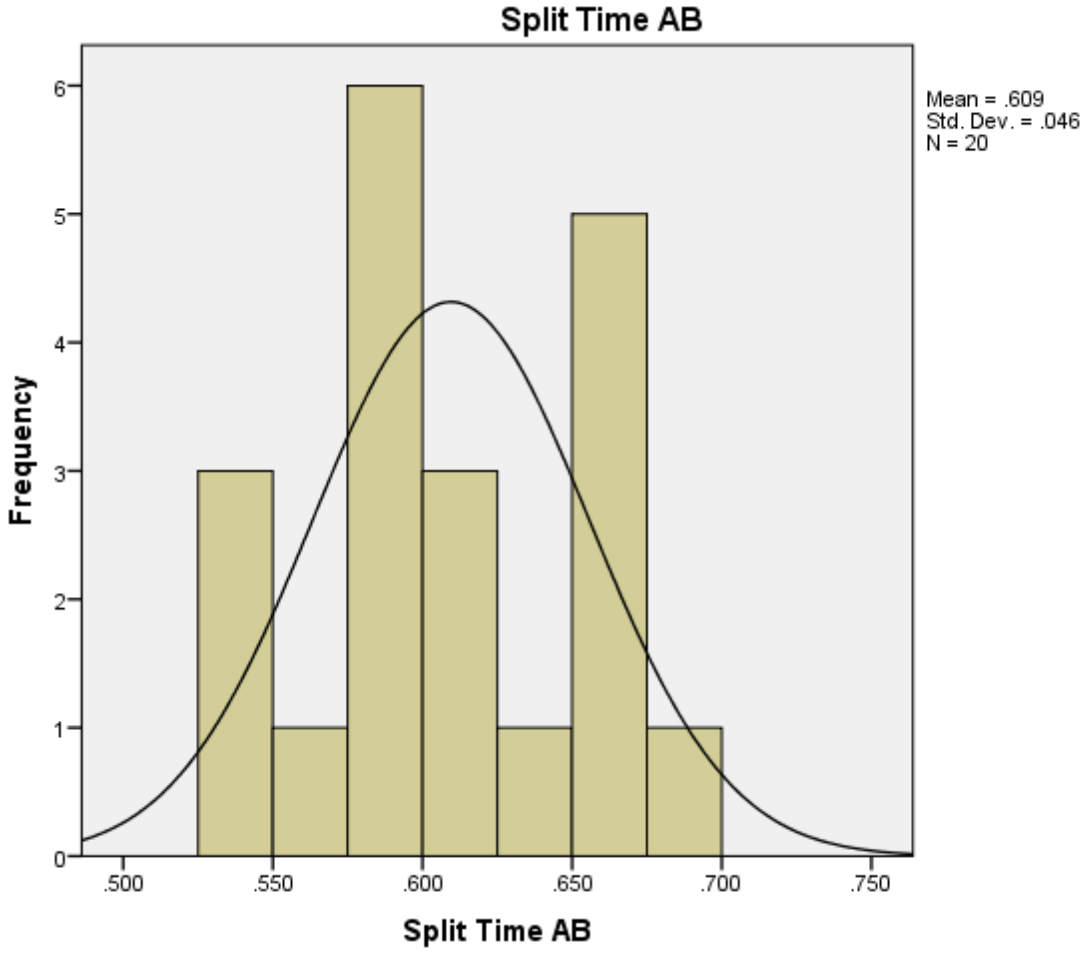
SPLIT TIME - MALE ONLY

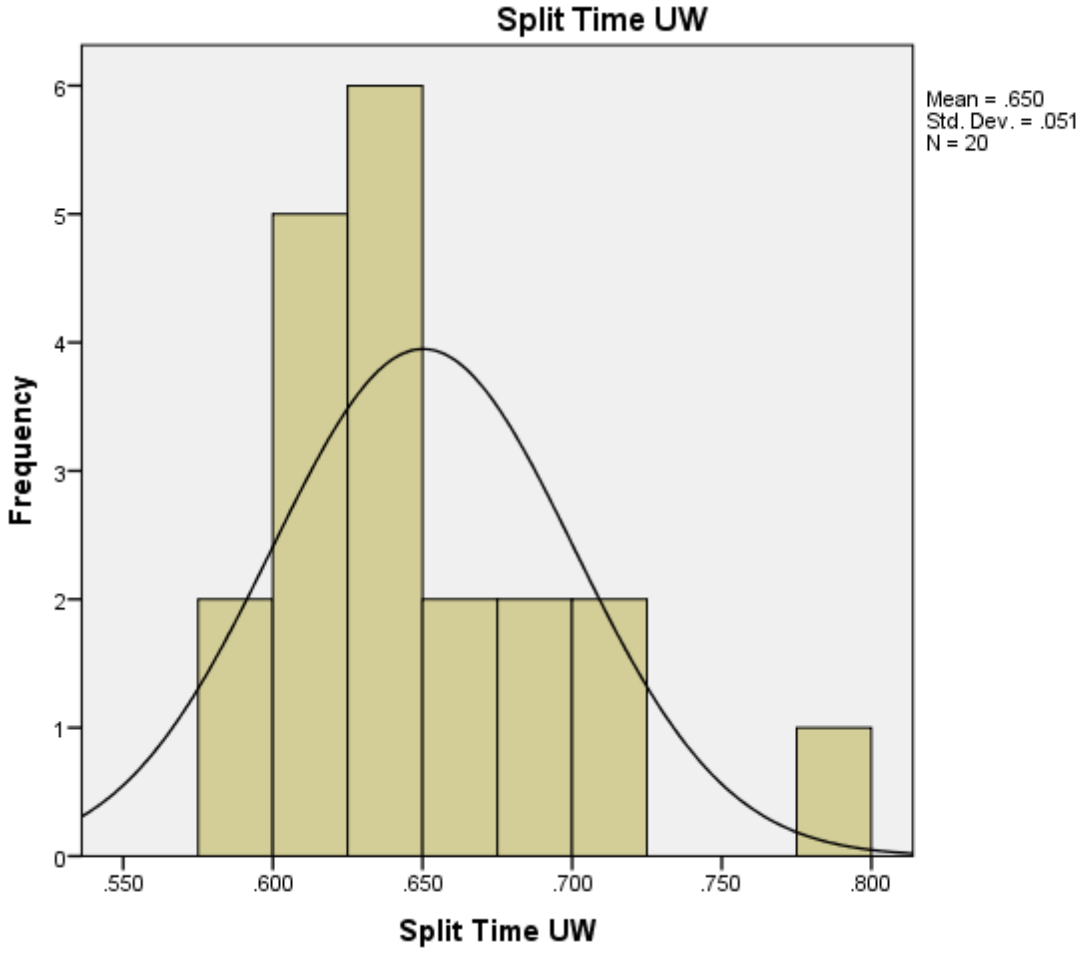
Statistics

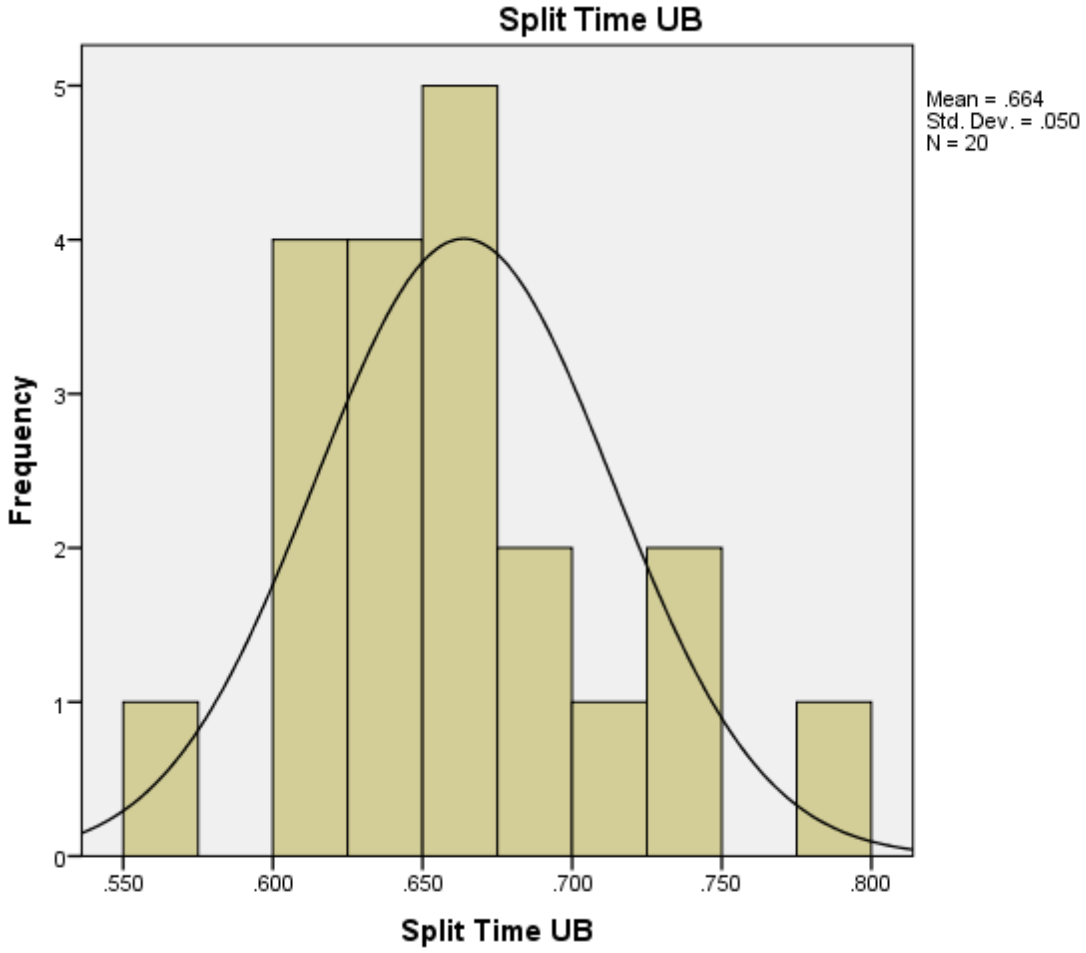
		Split Time AW	Split Time AB	Split Time UW	Split Time UB
N	Valid	20	20	20	20
	Missing	0	0	0	0
Mean		.61755	.60950	.65020	.66380
Median		.60700	.60100	.63650	.65600
Mode		.534[a]	.533[a]	.630	.573[a]
Std. Deviation		.050611	.046208	.050504	.049782
Skewness		.334	.194	1.390	.610
Std. Error of Skewness		.512	.512	.512	.512
Kurtosis		-.701	-.968	2.718	.307
Std. Error of Kurtosis		.992	.992	.992	.992
Range		.180	.162	.217	.205
Minimum		.534	.533	.581	.573
Maximum		.714	.695	.798	.778

a. Multiple modes exist. The smallest value is shown


Split Time AW
Mean = .618
Std. Dev. = .051
N = 20
Frequency
0
1
2
3
4
.500
.550
.600
.650
.700
.750
Split Time AW


Split Time AB
Mean = .609
Std. Dev. = .046
N = 20
Frequency
0
1
2
3
4
5
6
.500
.550
.600
.650
.700
.750
Split Time AB


Split Time UW
Mean = .650
Std. Dev. = .051
N = 20
Frequency
0
1
2
3
4
5
6
.550
.600
.650
.700
.750
.800
Split Time UW

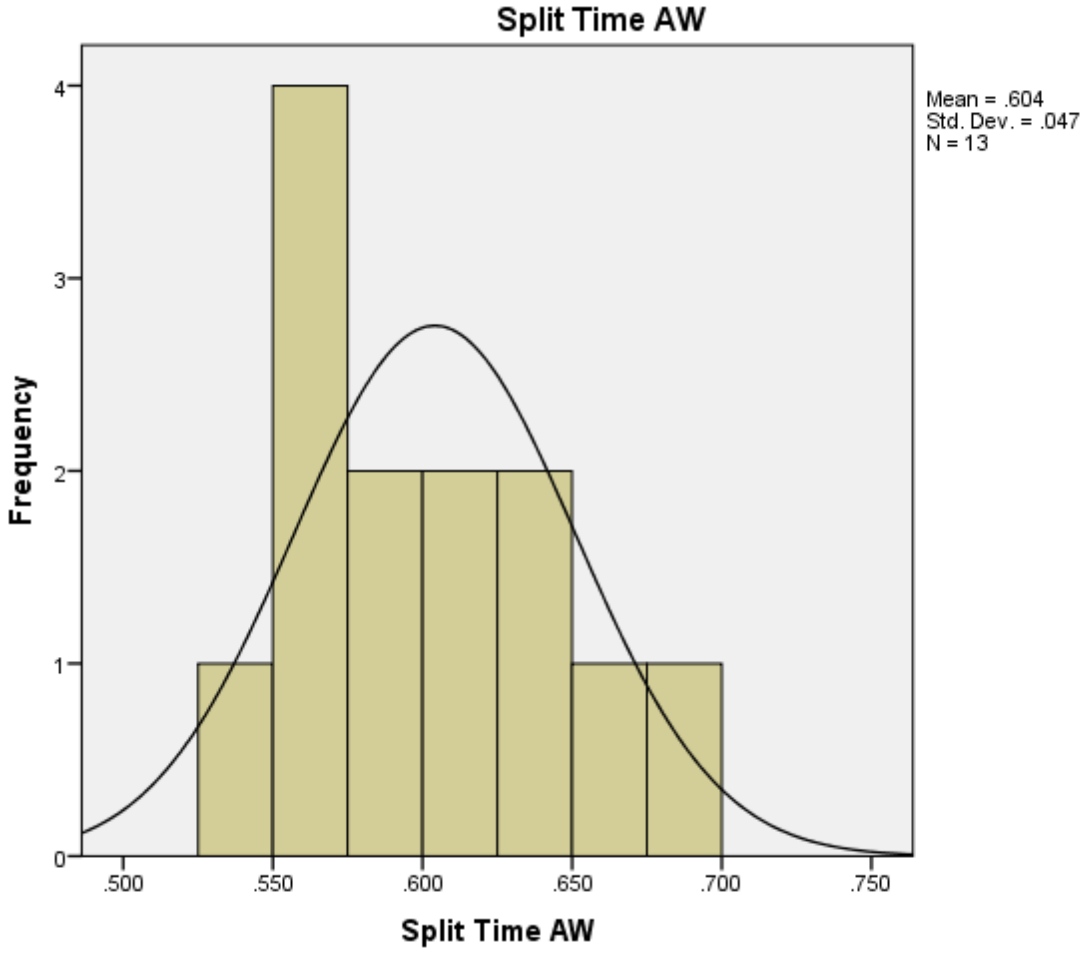

Split Time UB
Mean = .664
Std. Dev. = .050
N = 20
Frequency
0
1
2
3
4
5
.550
.600
.650
.700
.750
.800
Split Time UB

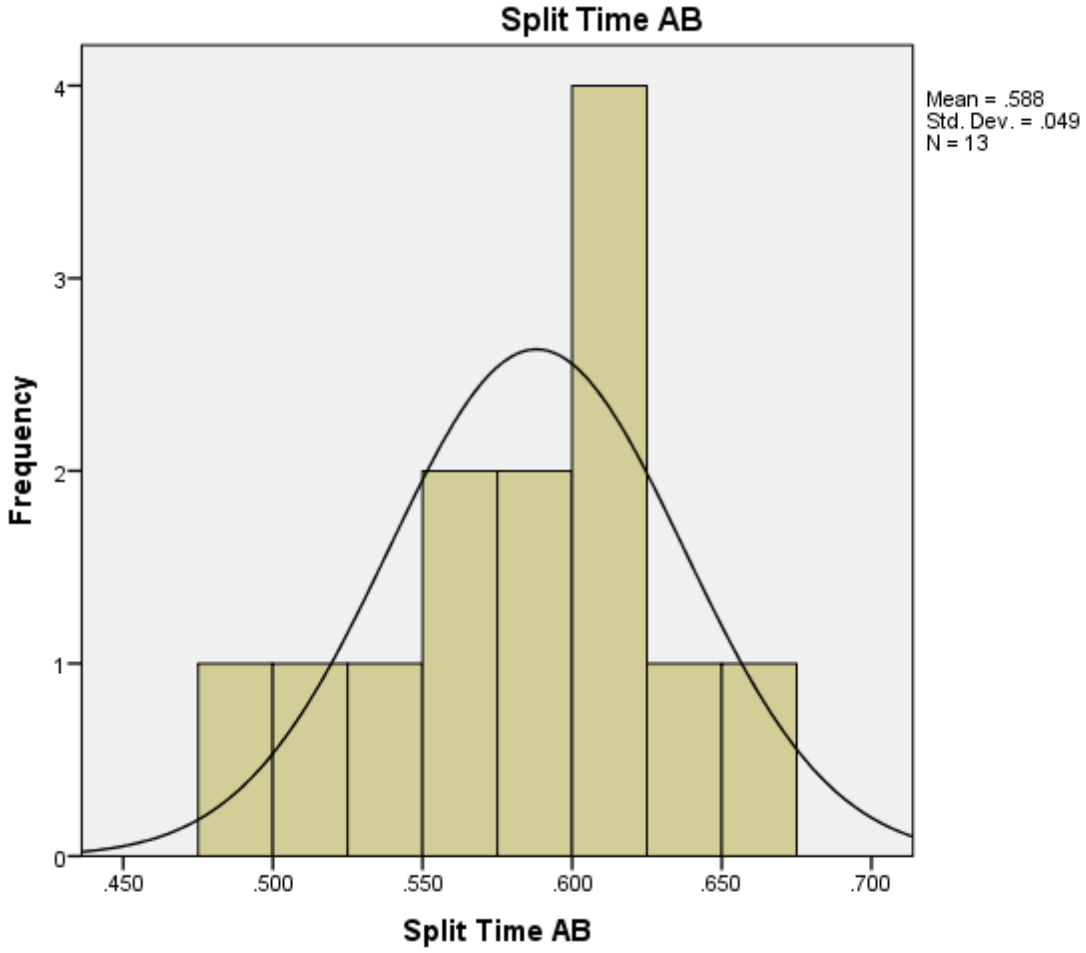
SPLIT TIME - FEMALE ONLY

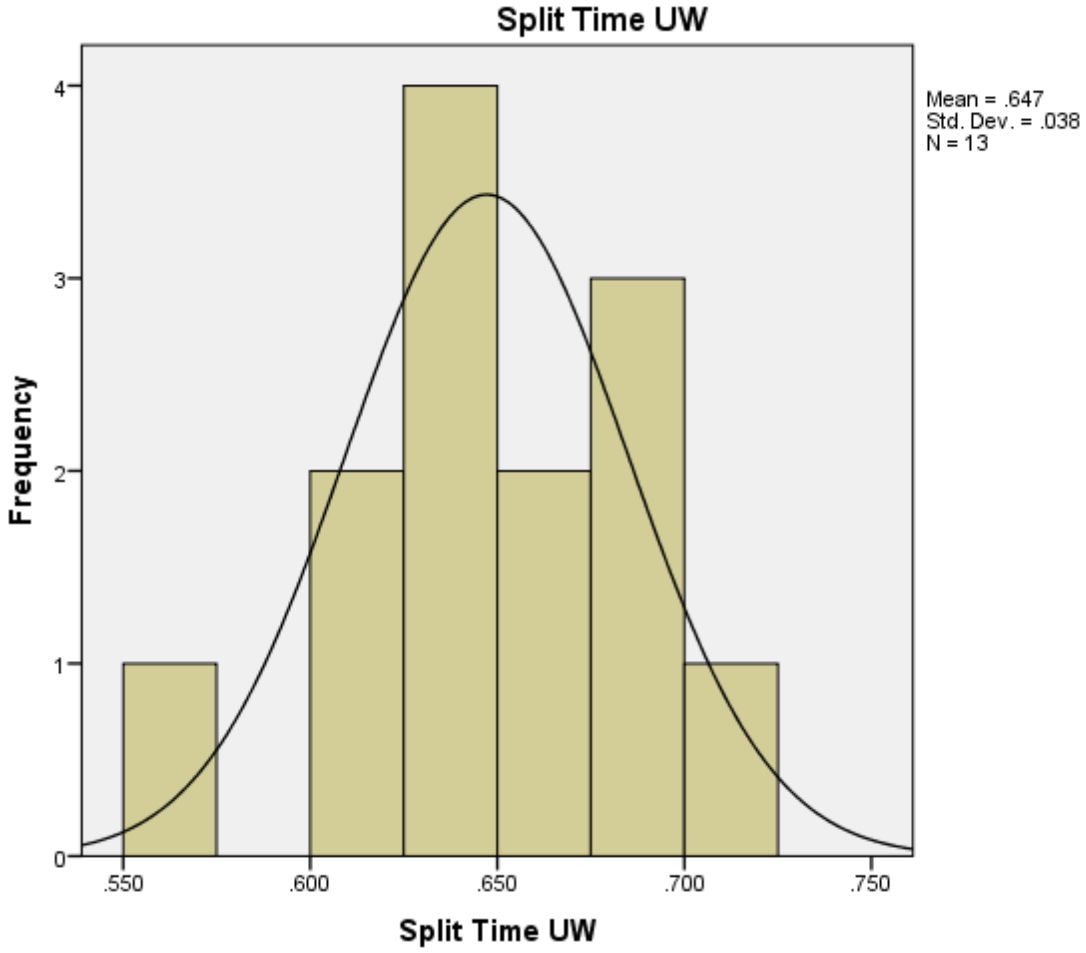
Statistics

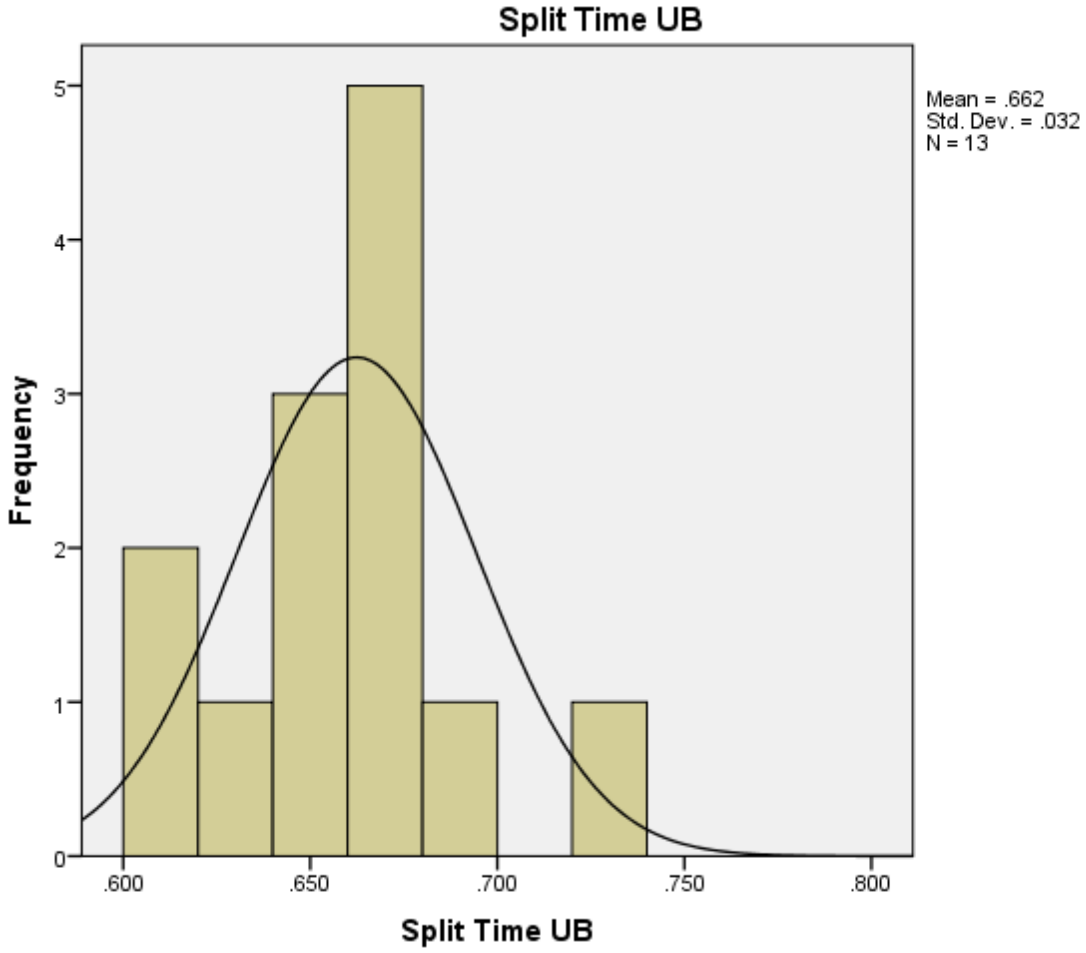
		Split Time AW	Split Time AB	Split Time UW	Split Time UB
N	Valid	13	13	13	13
	Missing	0	0	0	0
Mean		.60408	.58808	.64715	.66238
Median		.59100	.59900	.64300	.67000
Mode		.620	.498[a]	.569[a]	.670
Std. Deviation		.047073	.049276	.037751	.032043
Skewness		.346	-.518	-.136	.397
Std. Error of Skewness		.616	.616	.616	.616
Kurtosis		-.287	-.205	.574	.621
Std. Error of Kurtosis		1.191	1.191	1.191	1.191
Range		.169	.168	.147	.118
Minimum		.525	.498	.569	.613
Maximum		.694	.666	.716	.731

a. Multiple modes exist. The smallest value is shown


Split Time AW
Mean = .604
Std. Dev. = .047
N = 13
Frequency
0
1
2
3
4
.500
.550
.600
.650
.700
.750
Split Time AW


Split Time AB
Mean = .588
Std. Dev. = .049
N = 13
Frequency
0
1
2
3
4
.450
.500
.550
.600
.650
.700
Split Time AB


Split Time UW
Mean = .647
Std. Dev. = .038
N = 13
Frequency
0
1
2
3
4
.550
.600
.650
.700
.750
Split Time UW


Split Time UB
Mean = .662
Std. Dev. = .032
N = 13
Frequency
0
1
2
3
4
5
.600
.650
.700
.750
.800
Split Time UB

Crosstabs - ALL (Male and Female)

Split Time AW * Firearm Experience

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	92.899[a]	87	.313
Likelihood Ratio	72.511	87	.868
Linear-by-Linear Association	.181	1	.671
N of Valid Cases	33		

a. 120 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Split Time AB * Firearm Experience

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	95.668[a]	90	.322
Likelihood Ratio	75.283	90	.867
Linear-by-Linear Association	.664	1	.415
N of Valid Cases	33		

a. 124 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Split Time UW * Firearm Experience

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	89.226[a]	87	.414
Likelihood Ratio	68.692	87	.926
Linear-by-Linear Association	.049	1	.825
N of Valid Cases	33		

a. 120 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Split Time UB * Firearm Experience

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	95.668[a]	93	.404
Likelihood Ratio	75.283	93	.910
Linear-by-Linear Association	.059	1	.807
N of Valid Cases	33		

a. 128 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Crosstabs

Total Percent Correct * Sex

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.227[a]	22	.389
Likelihood Ratio	31.068	22	.095
Linear-by-Linear Association	.080	1	.777
N of Valid Cases	33		

a. 46 cells (100.0%) have expected count less than 5. The minimum expected count is .39.

Total Percent Incorrect * Sex

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.227[a]	22	.389
Likelihood Ratio	31.068	22	.095
Linear-by-Linear Association	.080	1	.777
N of Valid Cases	33		

a. 46 cells (100.0%) have expected count less than 5. The minimum expected count is .39.

Crosstabs

Total Percent Correct * Race

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.079[a]	44	.761
Likelihood Ratio	32.310	44	.904
N of Valid Cases	33		

a. 69 cells (100.0%) have expected count less than 5. The minimum expected count is .12.

Total Percent Incorrect * Race

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.079[a]	44	.761
Likelihood Ratio	32.310	44	.904
N of Valid Cases	33		

a. 69 cells (100.0%) have expected count less than 5. The minimum expected count is .12.

RACE = 1 BLACK ONLY

Statistics

		AW % Correct	AB % Correct	AW % Incorrect	AB % Incorrect	UW % Correct	UB % Correct	UW % Incorrect	UB % Incorrect
N	Valid	5	5	5	5	5	5	5	5
	Missing	0	0	0	0	0	0	0	0
Mean		96.740	96.720	3.260	3.280	96.740	93.660	3.260	6.340
Median		96.000	96.000	4.000	4.000	100.000	92.000	.000	8.000
Mode		96.0[a]	95.8[a]	.0[a]	4.0[a]	100.0	100.0	.0	.0
Std. Deviation		3.4551	1.8363	3.4551	1.8363	4.4652	6.3975	4.4652	6.3975
Skewness		-.601	2.220	.601	-2.220	-.611	-.251	.611	.251
Std. Error of Skewness		.913	.913	.913	.913	.913	.913	.913	.913
Kurtosis		-.354	4.941	-.354	4.941	-3.318	-1.363	-3.318	-1.363
Std. Error of Kurtosis		2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range		8.3	4.2	8.3	4.2	8.3	15.0	8.3	15.0
Minimum		91.7	95.8	.0	.0	91.7	85.0	.0	.0
Maximum		100.0	100.0	8.3	4.2	100.0	100.0	8.3	15.0

a. Multiple modes exist. The smallest value is shown

Frequency Table

AW % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	91.7	1	20.0	20.0	20.0
	96.0	2	40.0	40.0	60.0
	100.0	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

AB % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	95.8	2	40.0	40.0	40.0
	96.0	2	40.0	40.0	80.0
	100.0	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

AW % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	2	40.0	40.0	40.0
	4.0	2	40.0	40.0	80.0
	8.3	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

AB % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	1	20.0	20.0	20.0
	4.0	2	40.0	40.0	60.0
	4.2	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

UW % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	91.7	1	20.0	20.0	20.0
	92.0	1	20.0	20.0	40.0
	100.0	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

UB % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	85.0	1	20.0	20.0	20.0
	91.3	1	20.0	20.0	40.0
	92.0	1	20.0	20.0	60.0
	100.0	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

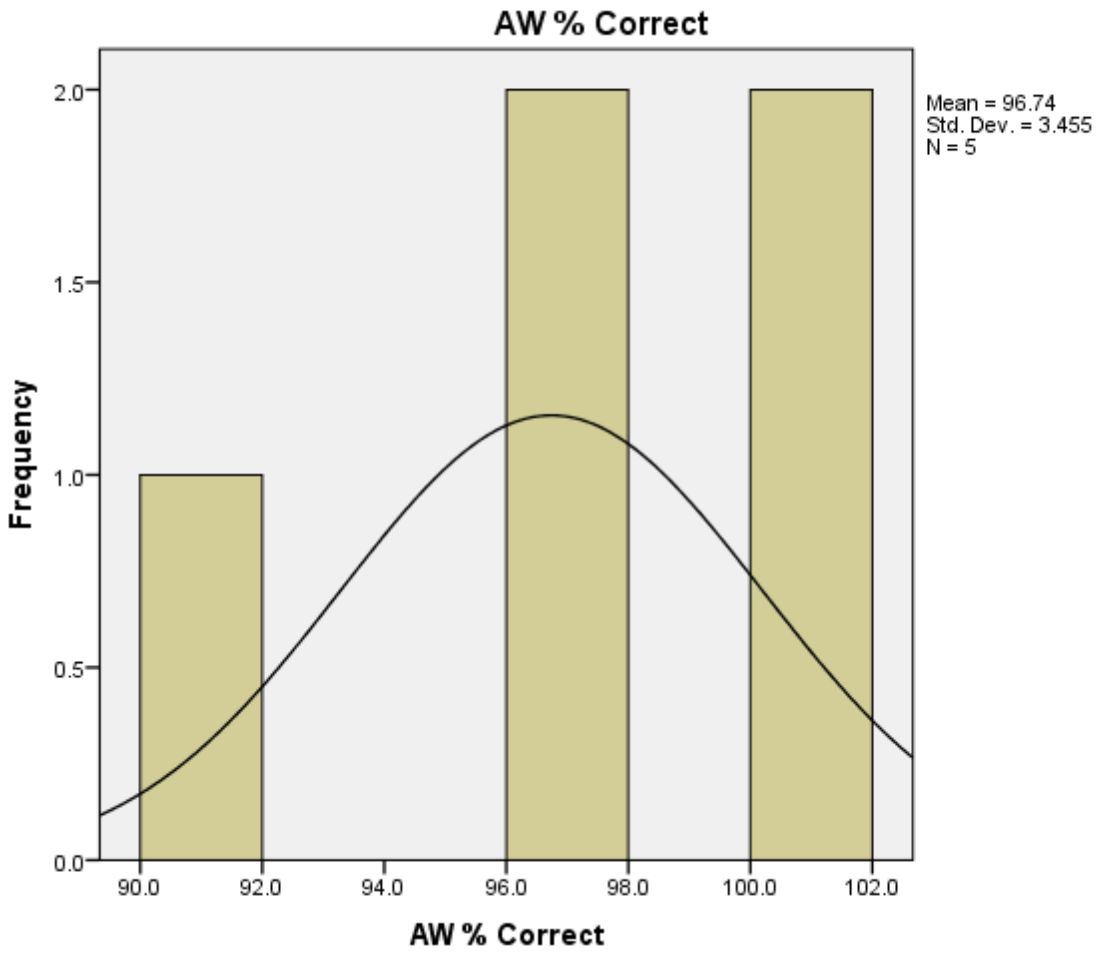
UW % Incorrect

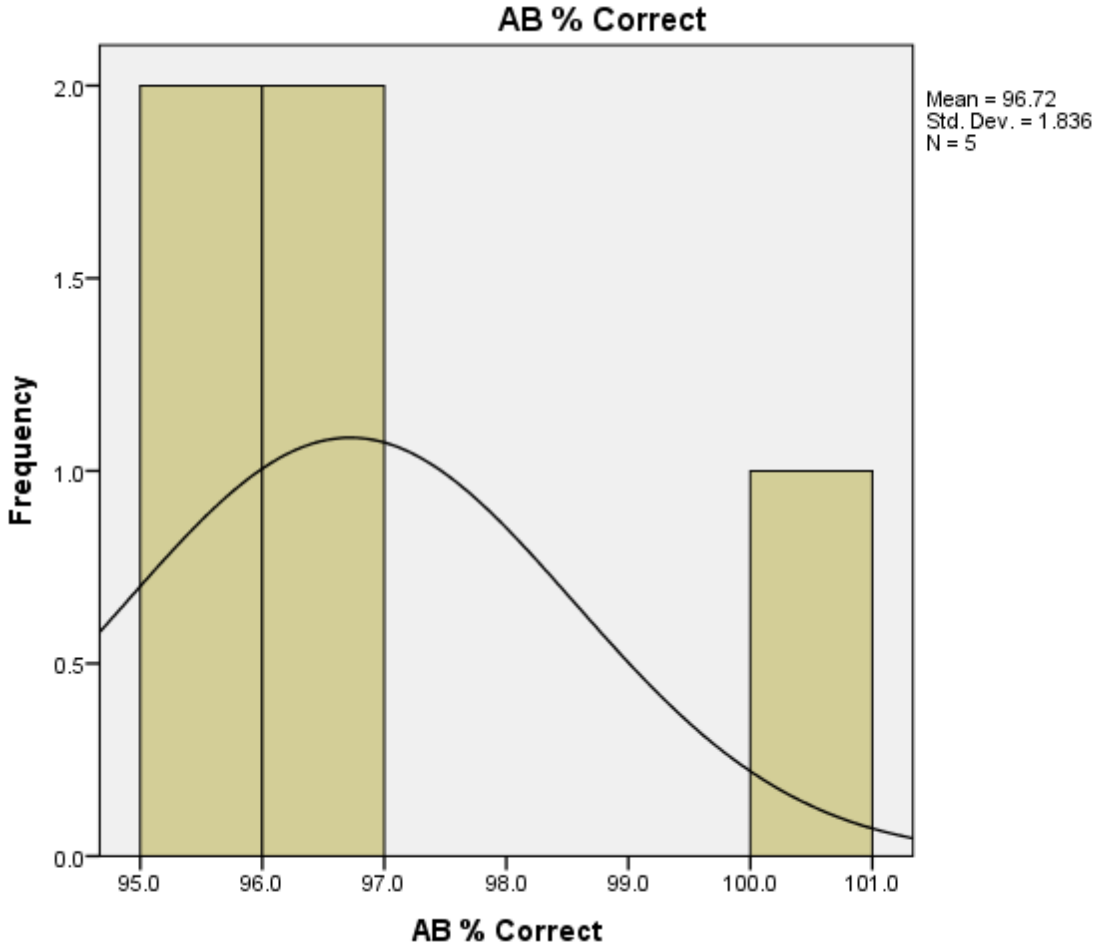
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	3	60.0	60.0	60.0
	8.0	1	20.0	20.0	80.0
	8.3	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

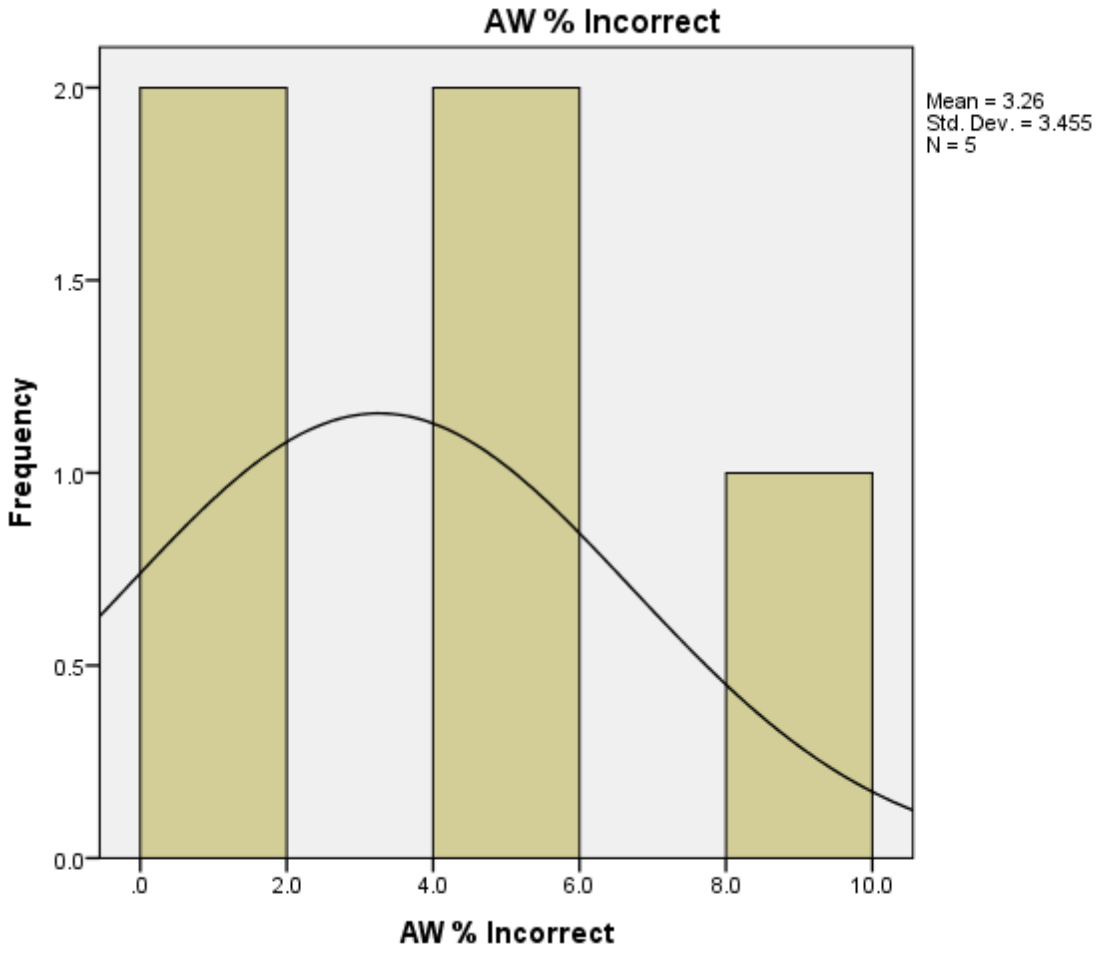
UB % Incorrect

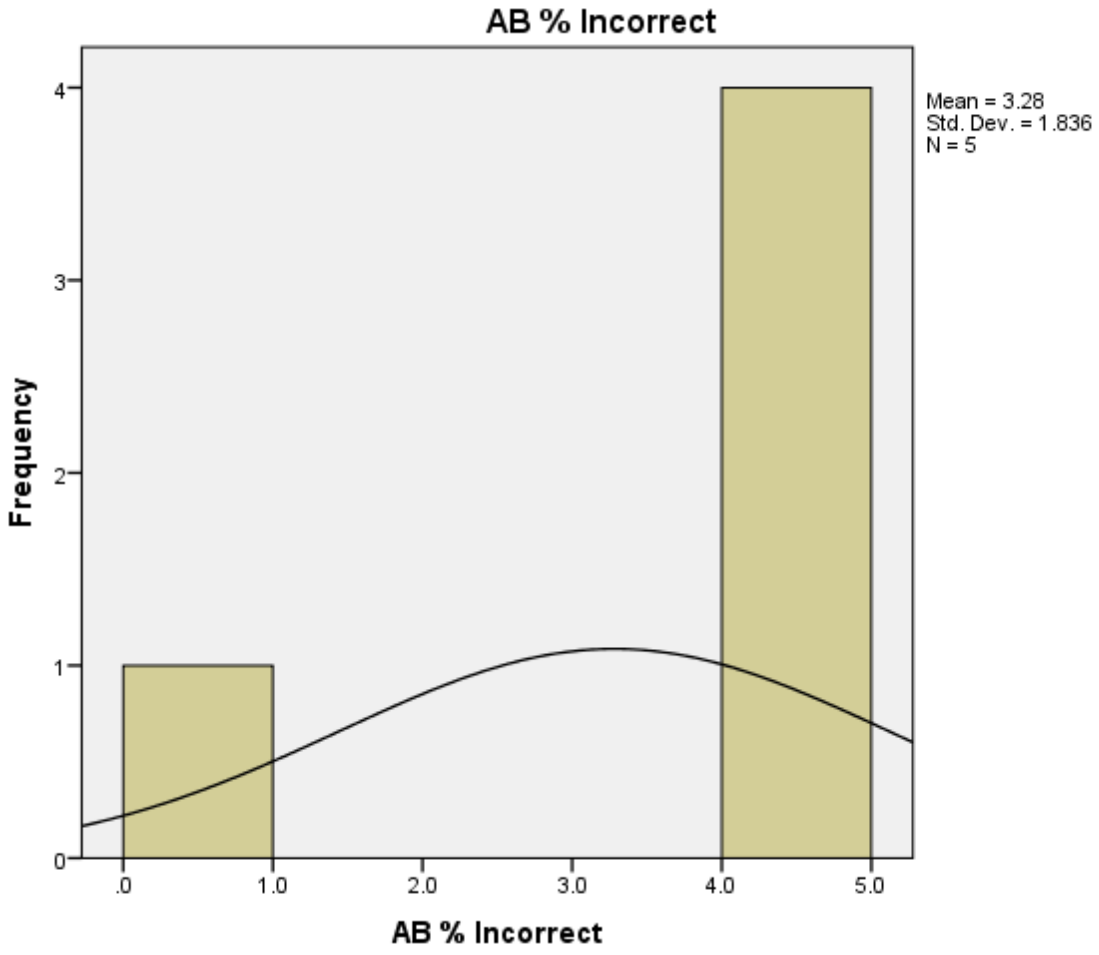
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	2	40.0	40.0	40.0
	8.0	1	20.0	20.0	60.0
	8.7	1	20.0	20.0	80.0
	15.0	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

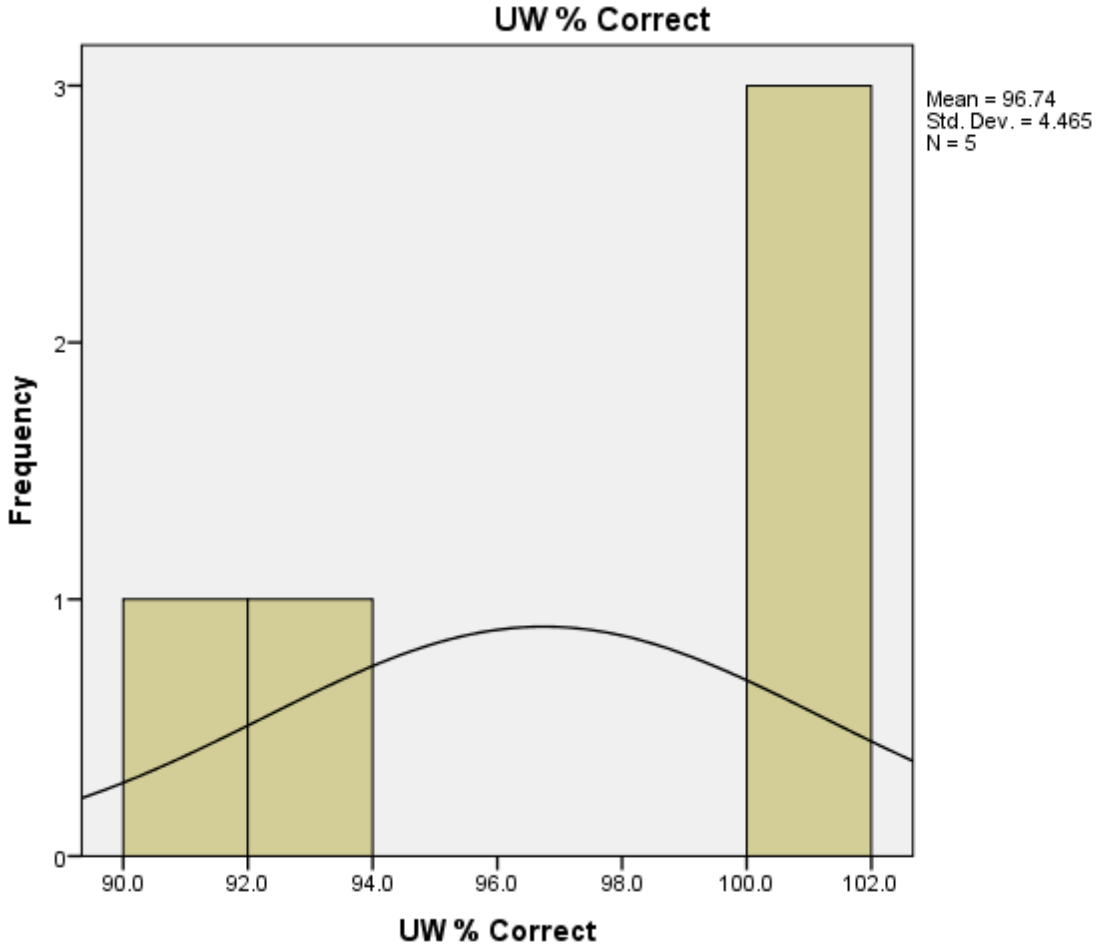
Histogram

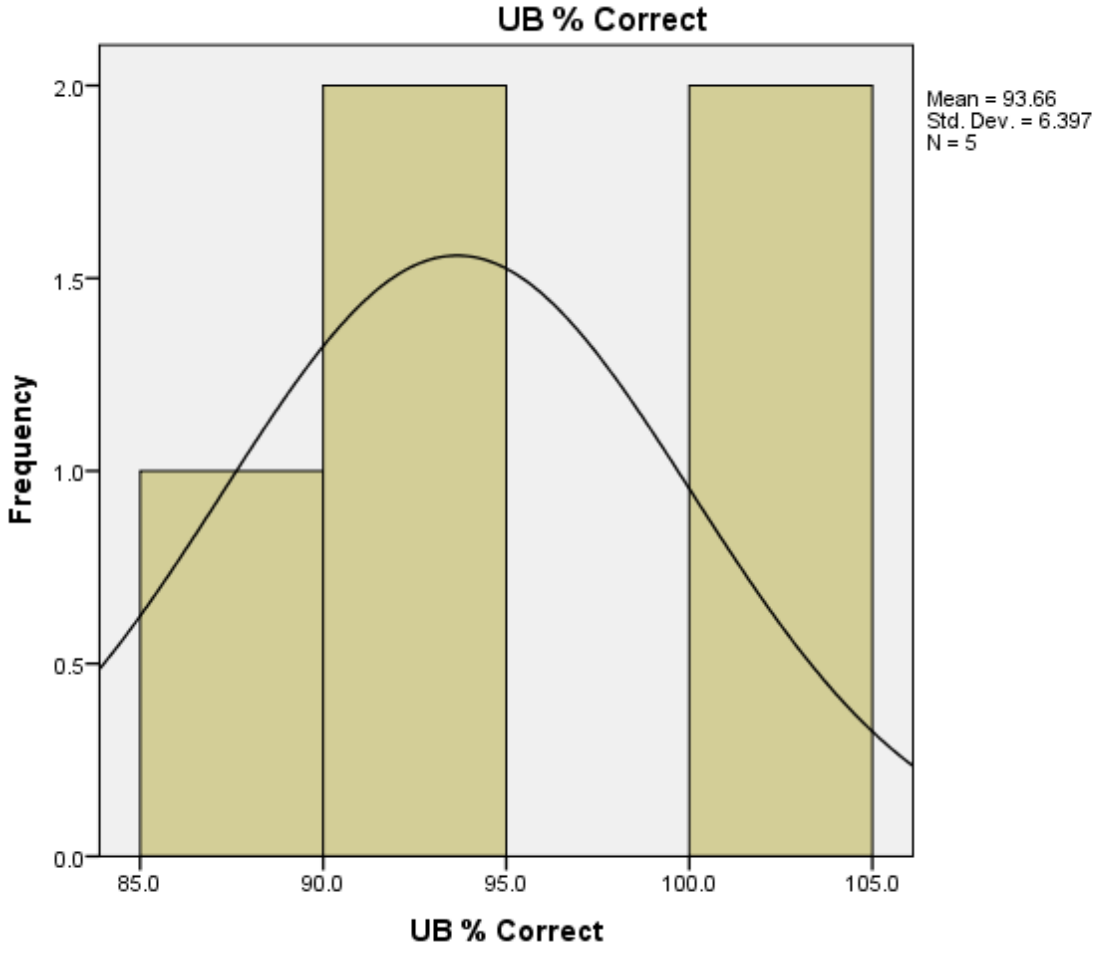

AW % Correct
Mean = 96.74
Std. Dev. = 3.455
N = 5
Frequency
2.0
1.5
1.0
0.5
0.0
90.0
92.0
94.0
96.0
98.0
100.0
102.0
AW % Correct

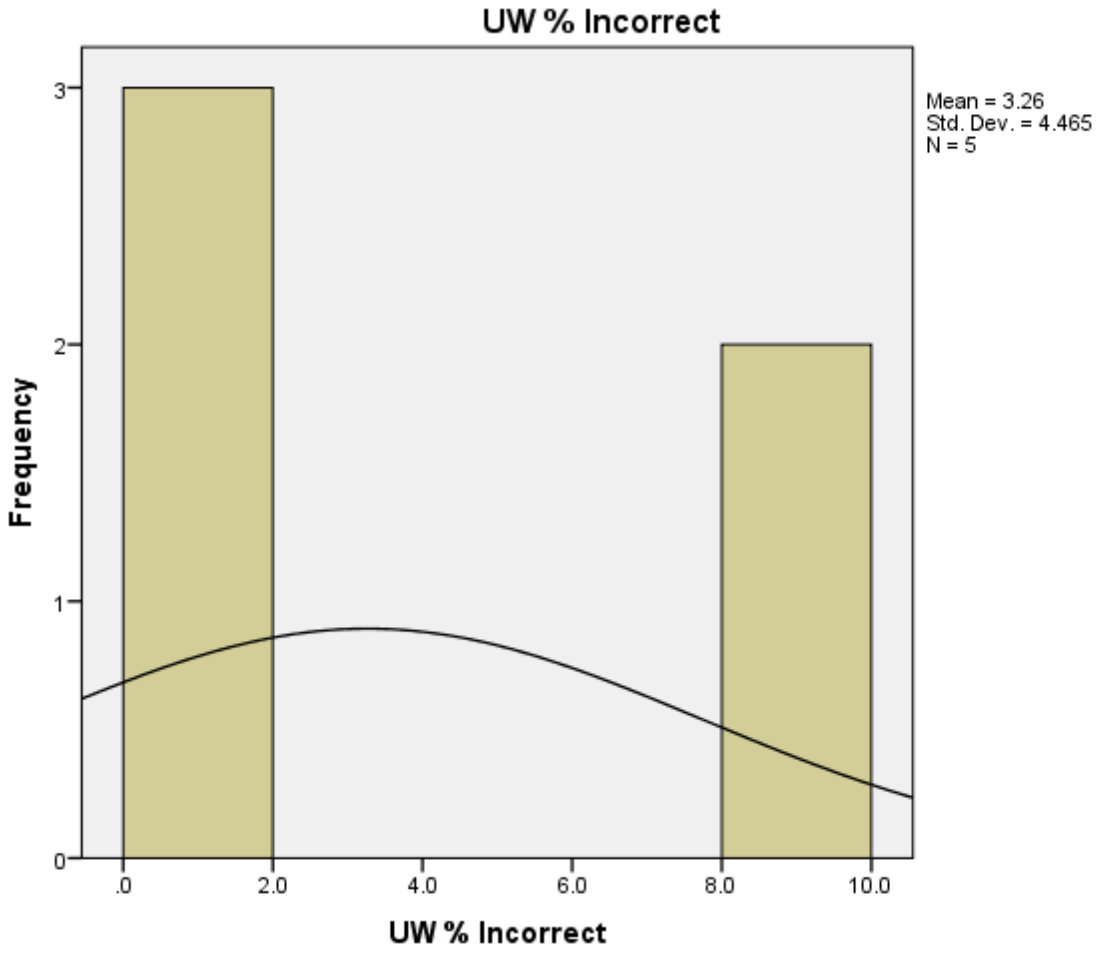

AB % Correct
Mean = 96.72
Std. Dev. = 1.836
N = 5
Frequency
2.0
1.5
1.0
0.5
0.0
95.0
96.0
97.0
98.0
99.0
100.0
101.0
AB % Correct

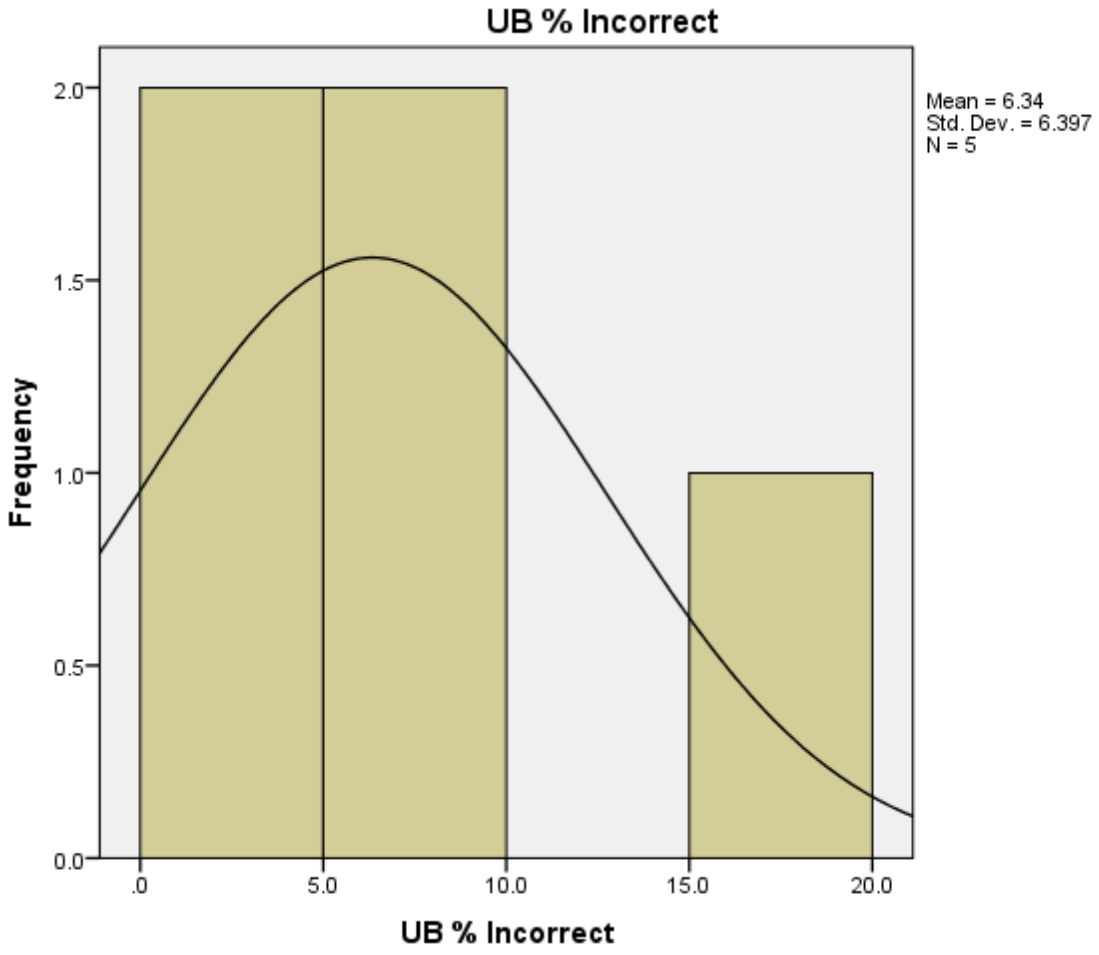

AW % Incorrect
Mean = 3.26
Std. Dev. = 3.455
N = 5
Frequency
2.0
1.5
1.0
0.5
0.0
.0
2.0
4.0
6.0
8.0
10.0
AW % Incorrect


AB % Incorrect
Mean = 3.28
Std. Dev. = 1.836
N = 5
Frequency
0
1
2
3
4
.0
1.0
2.0
3.0
4.0
5.0
AB % Incorrect


UW % Correct
Mean = 96.74
Std. Dev. = 4.465
N = 5
Frequency
0
1
2
3
90.0
92.0
94.0
96.0
98.0
100.0
102.0
UW % Correct


UB % Correct
Mean = 93.66
Std. Dev. = 6.397
N = 5
Frequency
2.0
1.5
1.0
0.5
0.0
85.0
90.0
95.0
100.0
105.0
UB % Correct


UW % Incorrect
Mean = 3.26
Std. Dev. = 4.465
N = 5
Frequency
3
2
1
0
.0
2.0
4.0
6.0
8.0
10.0
UW % Incorrect


UB % Incorrect
Mean = 6.34
Std. Dev. = 6.397
N = 5
Frequency
2.0
1.5
1.0
0.5
0.0
.0
5.0
10.0
15.0
20.0
UB % Incorrect

RACE = 2 WHITE ONLY

Statistics

		AW % Correct	AB % Correct	AW % Incorrect	AB % Incorrect	UW % Correct	UB % Correct	UW % Incorrect	UB % Incorrect
N	Valid	24	24	24	24	24	24	24	24
	Missing	0	0	0	0	0	0	0	0
Mean		93.458	94.383	6.542	5.617	93.179	94.346	6.821	5.654
Median		95.800	95.900	4.200	4.100	95.350	95.750	4.650	4.250
Mode		96.0	100.0	4.0	.0	96.0[a]	100.0	.0[a]	.0
Std. Deviation		6.2488	5.6128	6.2488	5.6128	5.2525	4.2958	5.2525	4.2958
Skewness		-1.373	-.731	1.373	.731	-.729	-.423	.729	.423
Std. Error of Skewness		.472	.472	.472	.472	.472	.472	.472	.472
Kurtosis		1.777	.014	1.777	.014	.036	-.609	.036	-.609
Std. Error of Kurtosis		.918	.918	.918	.918	.918	.918	.918	.918
Range		24.0	20.0	24.0	20.0	19.0	14.3	19.0	14.3
Minimum		76.0	80.0	.0	.0	81.0	85.7	.0	.0
Maximum		100.0	100.0	24.0	20.0	100.0	100.0	19.0	14.3

a. Multiple modes exist. The smallest value is shown

Frequency Tables

AW % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	76.0	1	4.2	4.2	4.2
	80.0	1	4.2	4.2	8.3
	86.4	1	4.2	4.2	12.5
	87.0	1	4.2	4.2	16.7
	87.5	1	4.2	4.2	20.8
	91.7	3	12.5	12.5	33.3
	92.0	1	4.2	4.2	37.5
	95.7	2	8.3	8.3	45.8
	95.8	2	8.3	8.3	54.2
	96.0	6	25.0	25.0	79.2
	100.0	5	20.8	20.8	100.0
	Total	24	100.0	100.0	

AB % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	80.0	1	4.2	4.2	4.2
	87.0	1	4.2	4.2	8.3
	87.5	1	4.2	4.2	12.5
	88.0	2	8.3	8.3	20.8
	90.9	1	4.2	4.2	25.0
	92.0	5	20.8	20.8	45.8
	95.8	1	4.2	4.2	50.0
	96.0	3	12.5	12.5	62.5
	100.0	9	37.5	37.5	100.0
	Total	24	100.0	100.0	

AW % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	5	20.8	20.8	20.8
	4.0	6	25.0	25.0	45.8
	4.2	2	8.3	8.3	54.2
	4.3	2	8.3	8.3	62.5
	8.0	1	4.2	4.2	66.7
	8.3	3	12.5	12.5	79.2
	12.5	1	4.2	4.2	83.3
	13.0	1	4.2	4.2	87.5
	13.6	1	4.2	4.2	91.7
	20.0	1	4.2	4.2	95.8
	24.0	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

AB % Incorrect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	9	37.5	37.5	37.5
	4.0	3	12.5	12.5	50.0
	4.2	1	4.2	4.2	54.2
	8.0	5	20.8	20.8	75.0
	9.1	1	4.2	4.2	79.2
	12.0	2	8.3	8.3	87.5
	12.5	1	4.2	4.2	91.7
	13.0	1	4.2	4.2	95.8
	20.0	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

UW % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	81.0	1	4.2	4.2	4.2
	84.0	2	8.3	8.3	12.5
	88.0	2	8.3	8.3	20.8
	91.3	3	12.5	12.5	33.3
	91.7	2	8.3	8.3	41.7
	92.0	1	4.2	4.2	45.8
	95.0	1	4.2	4.2	50.0
	95.7	2	8.3	8.3	58.3
	95.8	2	8.3	8.3	66.7
	96.0	4	16.7	16.7	83.3
	100.0	4	16.7	16.7	100.0
	Total	24	100.0	100.0	

UB % Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	85.7	1	4.2	4.2	4.2
	87.5	2	8.3	8.3	12.5
	88.0	1	4.2	4.2	16.7
	90.9	1	4.2	4.2	20.8
	91.7	1	4.2	4.2	25.0
	92.0	3	12.5	12.5	37.5
	94.4	1	4.2	4.2	41.7
	95.5	1	4.2	4.2	45.8
	95.7	1	4.2	4.2	50.0
	95.8	3	12.5	12.5	62.5
	96.0	4	16.7	16.7	79.2
	100.0	5	20.8	20.8	100.0
	Total	24	100.0	100.0	

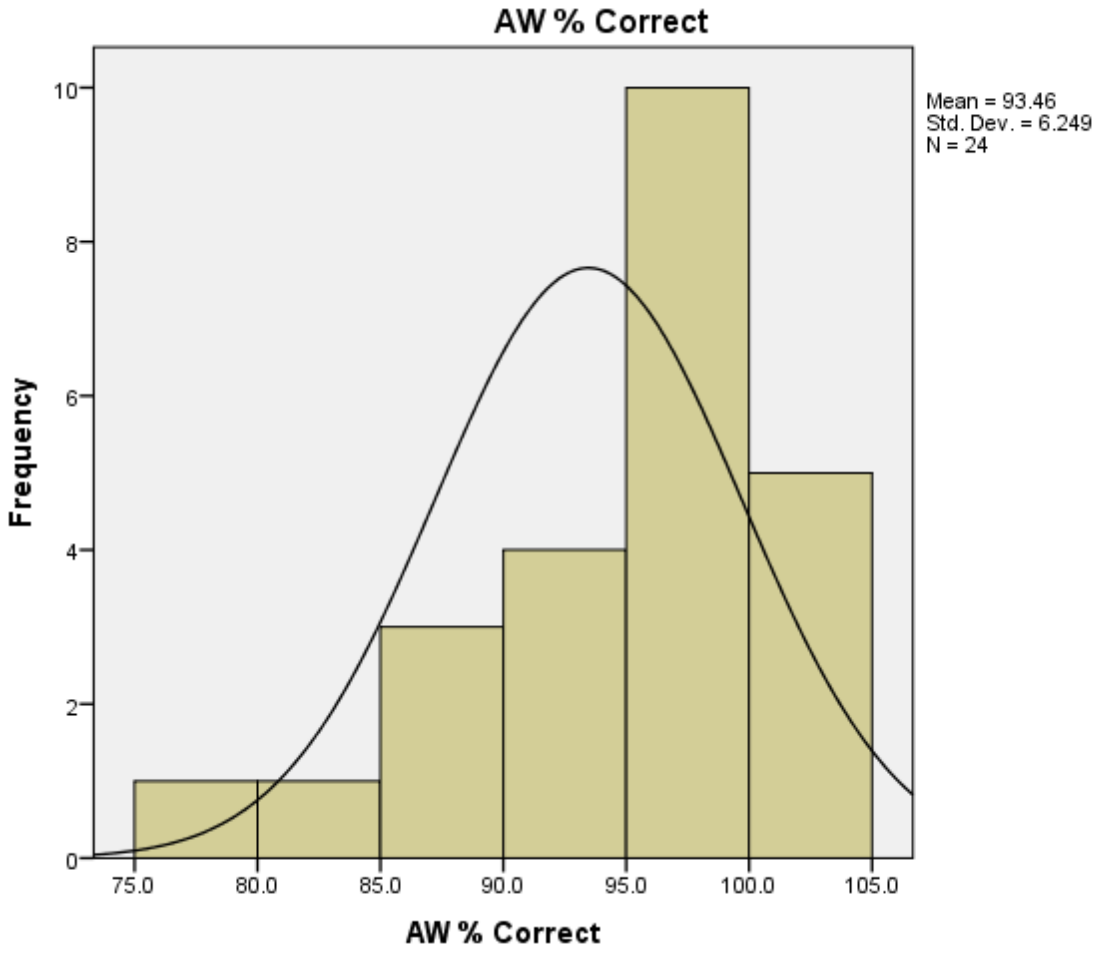
UW % Incorrect

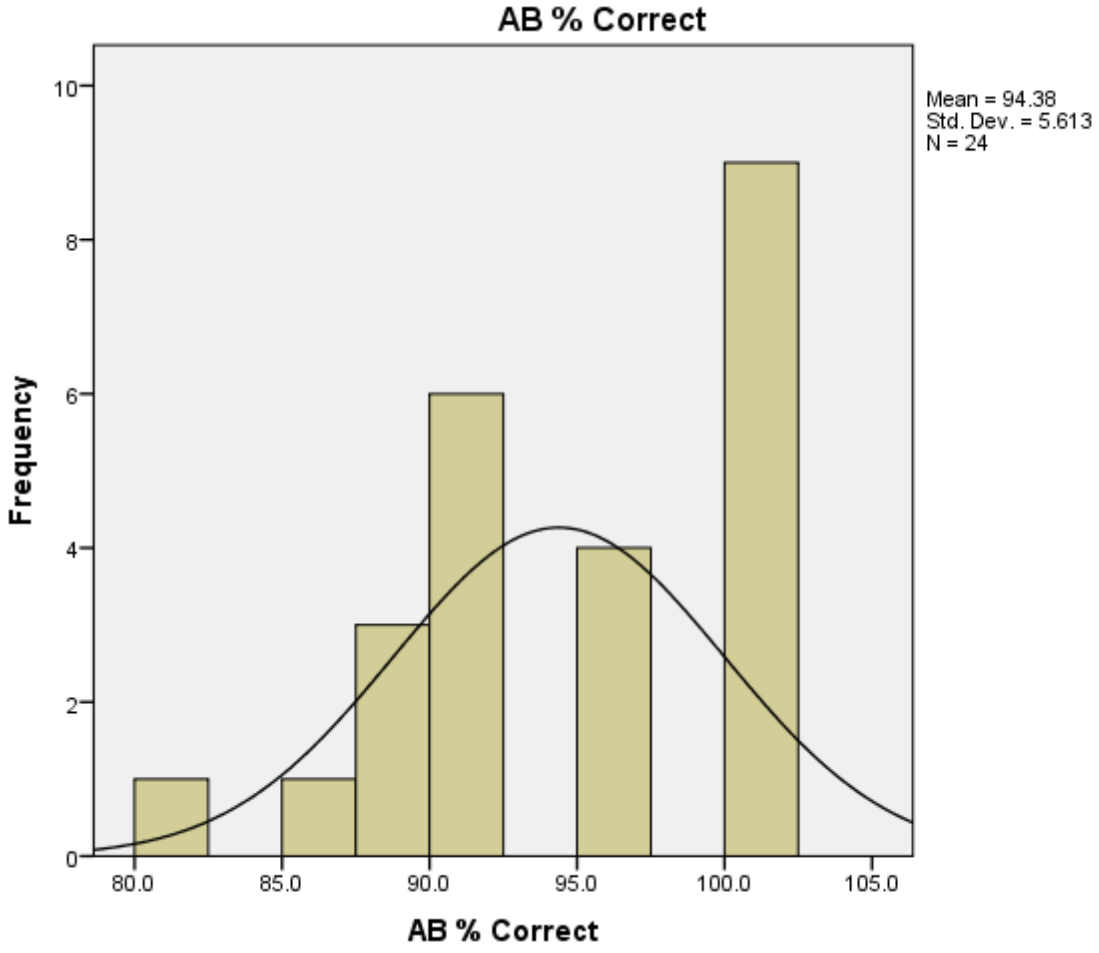
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	4	16.7	16.7	16.7
	4.0	4	16.7	16.7	33.3
	4.2	2	8.3	8.3	41.7
	4.3	2	8.3	8.3	50.0
	5.0	1	4.2	4.2	54.2
	8.0	1	4.2	4.2	58.3
	8.3	2	8.3	8.3	66.7
	8.7	3	12.5	12.5	79.2
	12.0	2	8.3	8.3	87.5
	16.0	2	8.3	8.3	95.8
	19.0	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

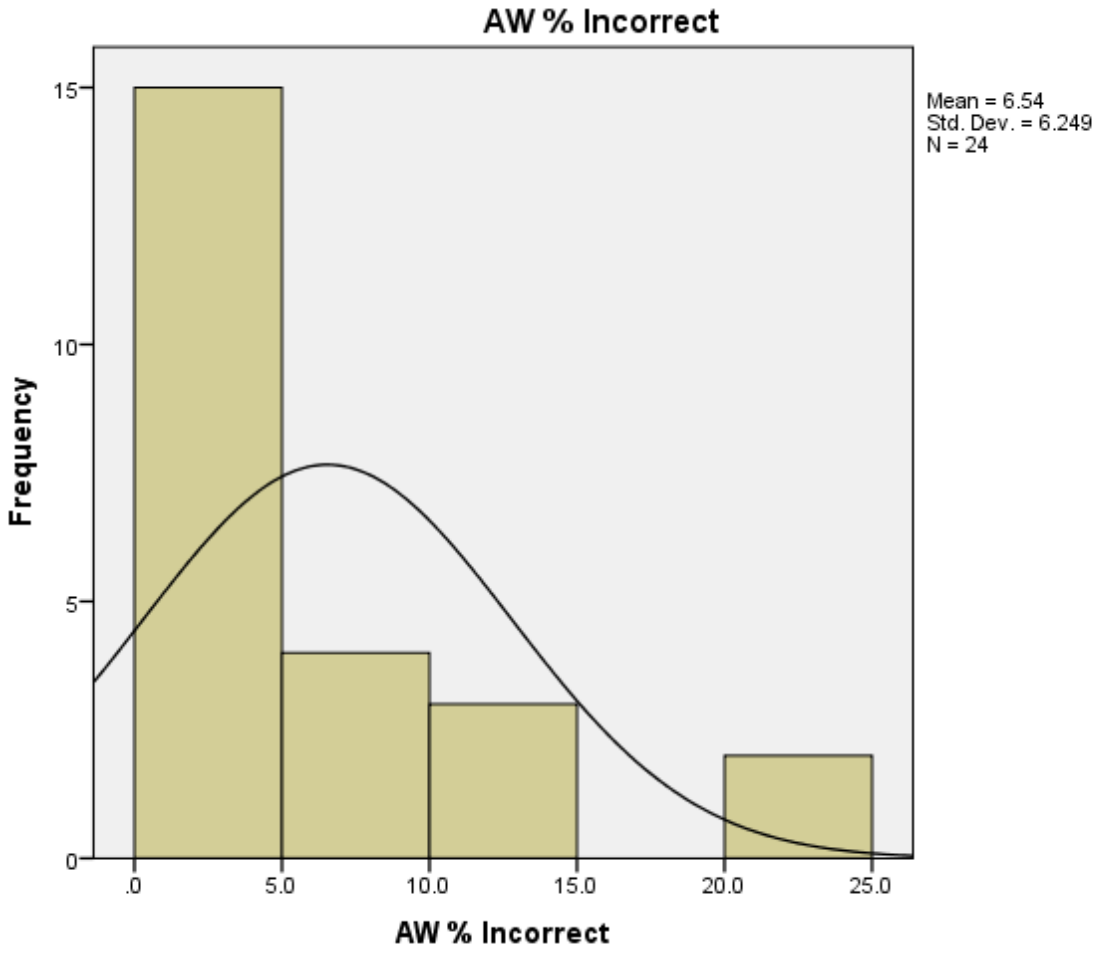
UB % Incorrect

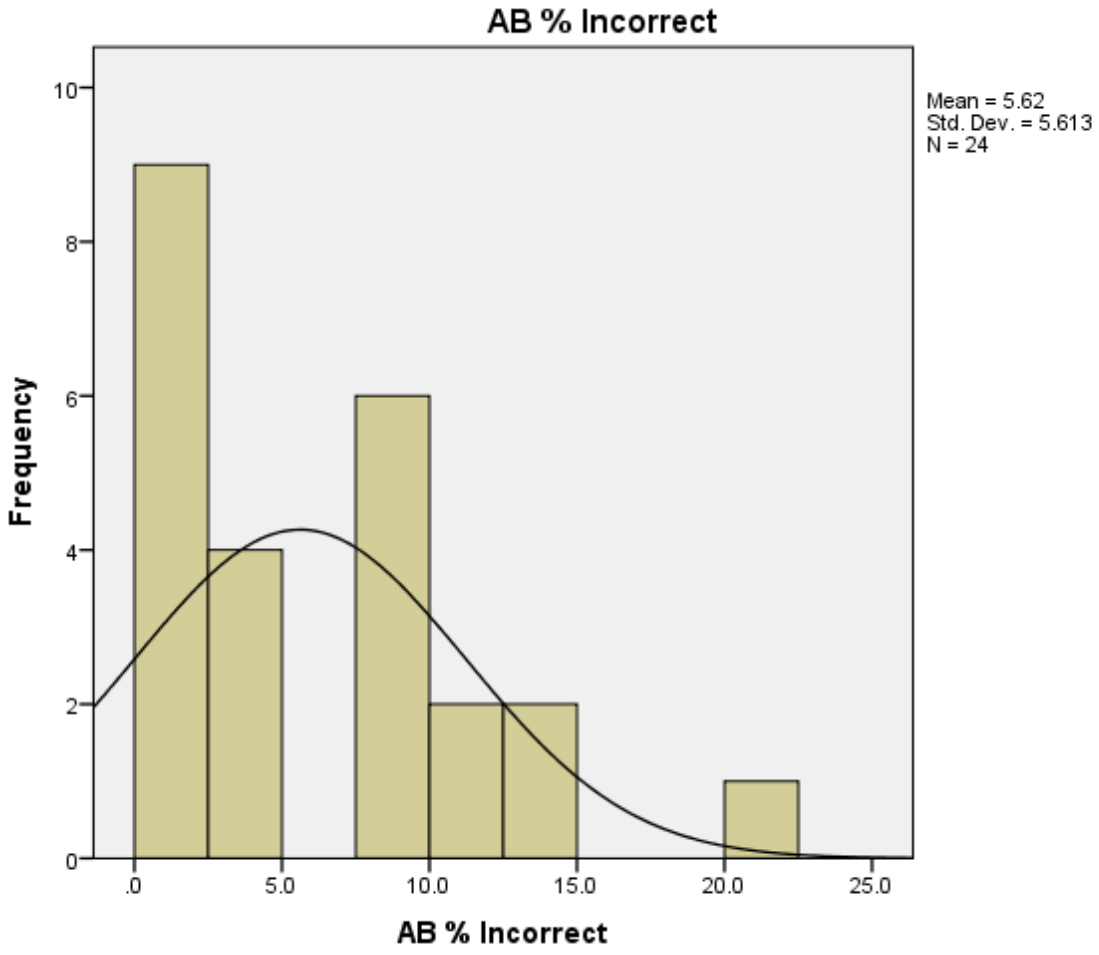
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	5	20.8	20.8	20.8
	4.0	4	16.7	16.7	37.5
	4.2	3	12.5	12.5	50.0
	4.3	1	4.2	4.2	54.2
	4.5	1	4.2	4.2	58.3
	5.6	1	4.2	4.2	62.5
	8.0	3	12.5	12.5	75.0
	8.3	1	4.2	4.2	79.2
	9.1	1	4.2	4.2	83.3
	12.0	1	4.2	4.2	87.5
	12.5	2	8.3	8.3	95.8
	14.3	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

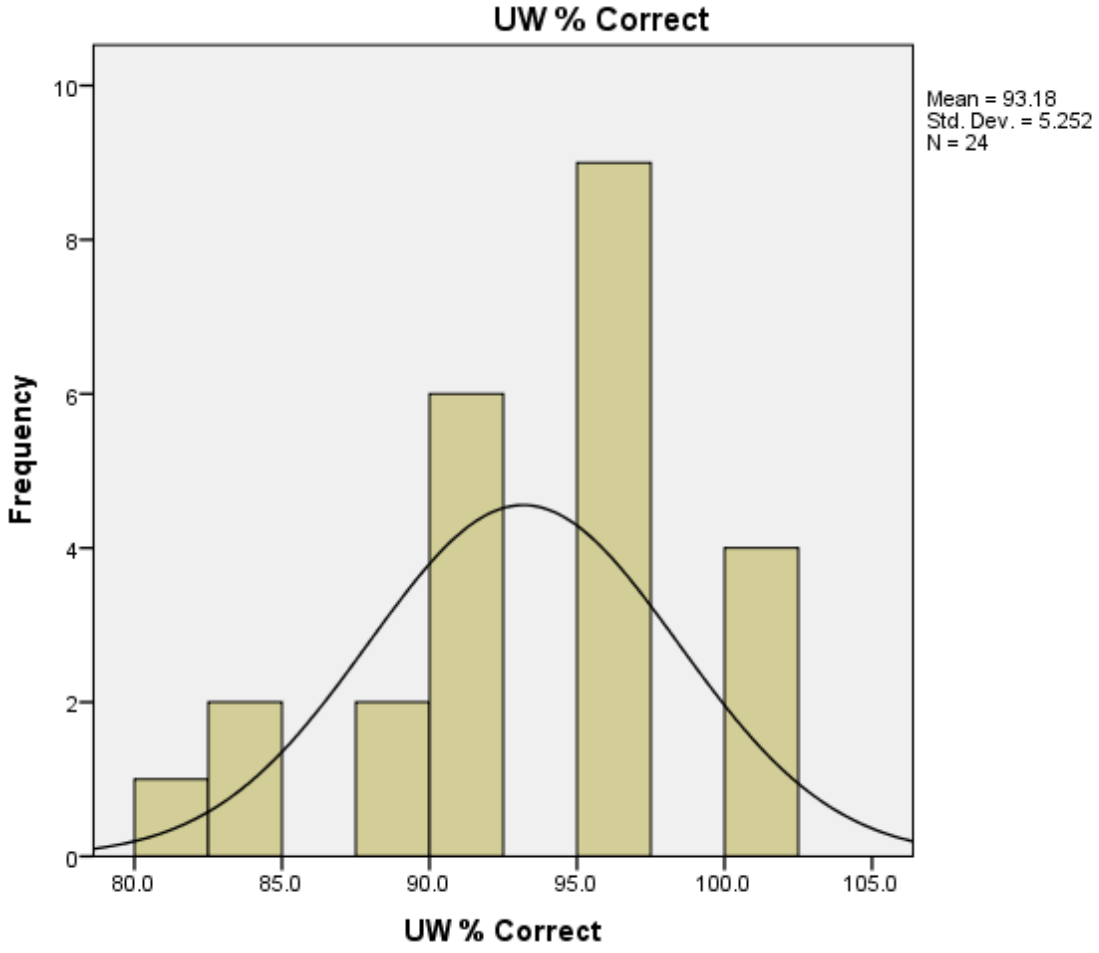
Histogram

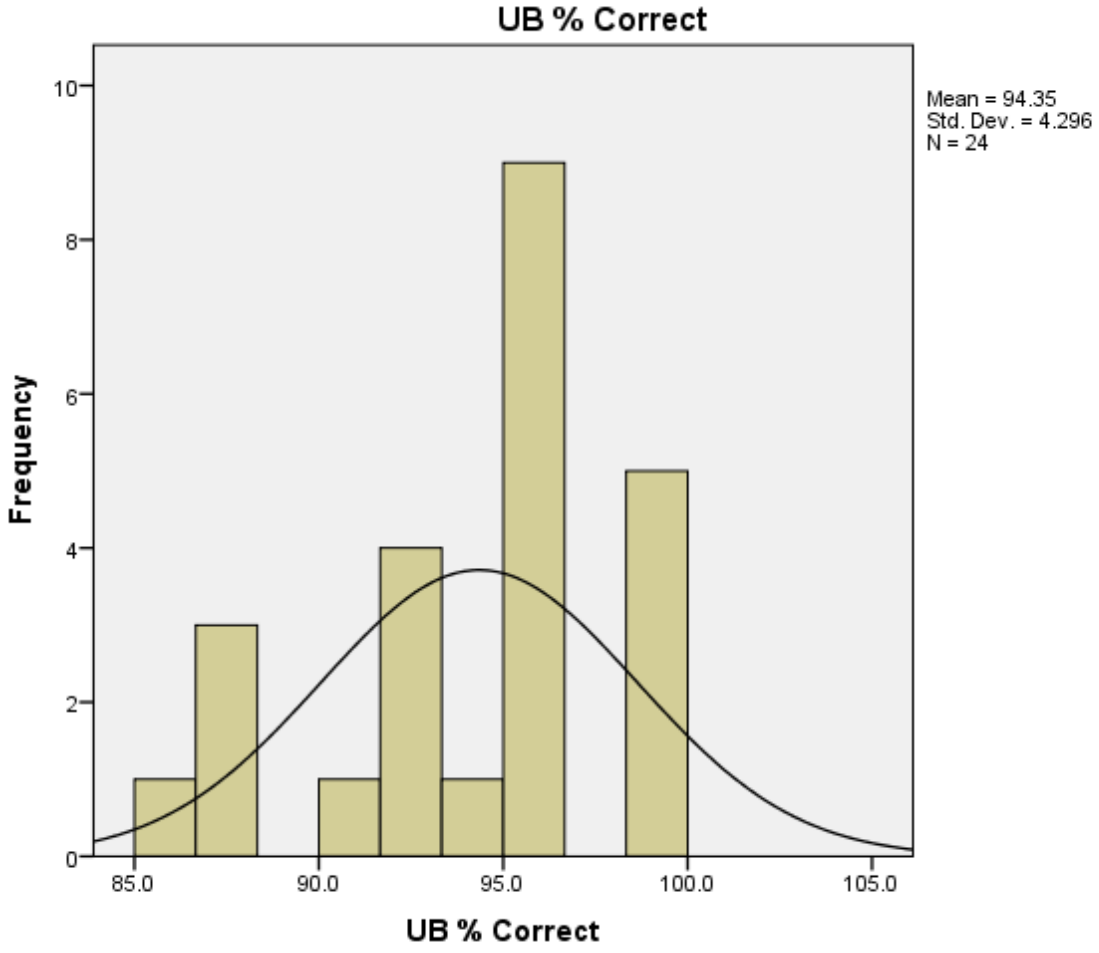

AW % Correct
Mean = 93.46
Std. Dev. = 6.249
N = 24
Frequency
0
2
4
6
8
10
75.0
80.0
85.0
90.0
95.0
100.0
105.0
AW % Correct

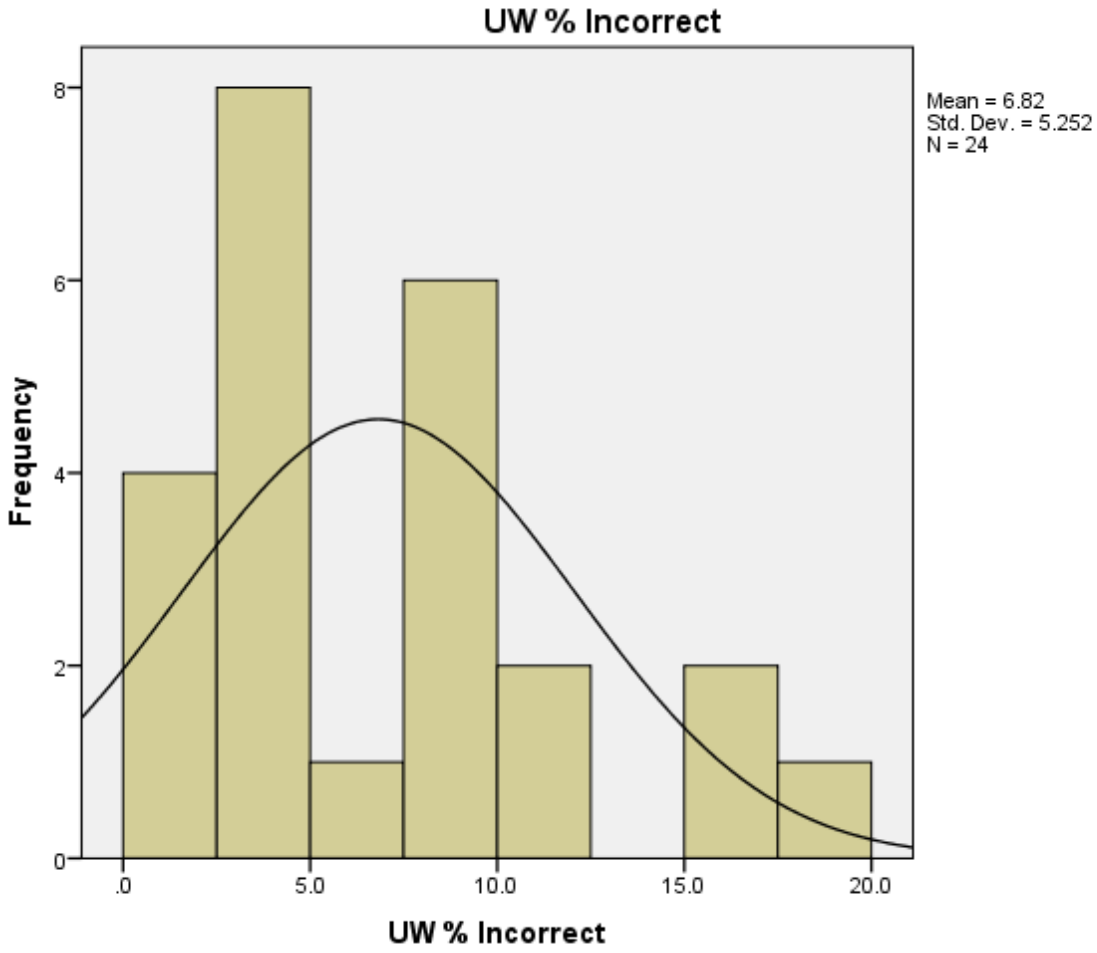

AB % Correct
Mean = 94.38
Std. Dev. = 5.613
N = 24
Frequency
0
2
4
6
8
10
80.0
85.0
90.0
95.0
100.0
105.0
AB % Correct

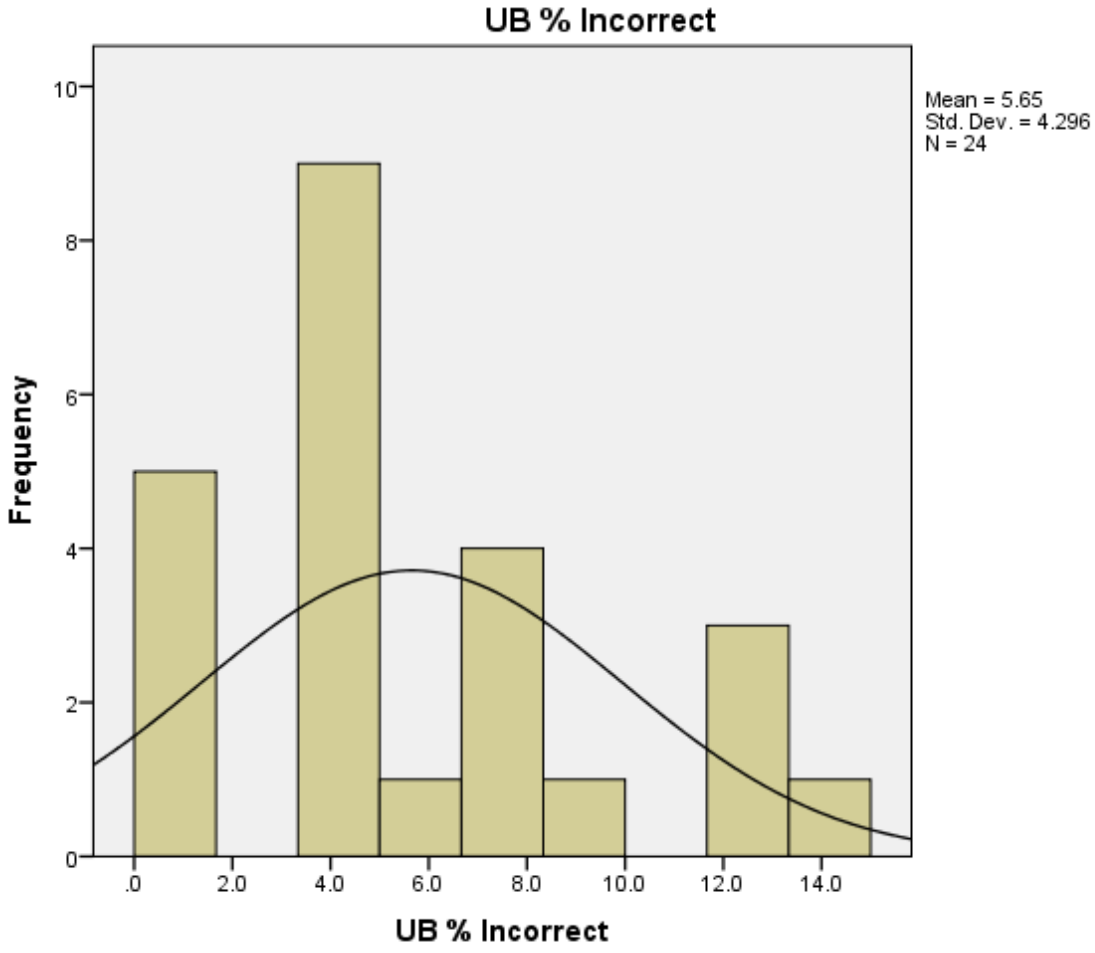

AW % Incorrect
Mean = 6.54
Std. Dev. = 6.249
N = 24
Frequency
15
10
5
0
.0
5.0
10.0
15.0
20.0
25.0
AW % Incorrect


AB % Incorrect
Mean = 5.62
Std. Dev. = 5.613
N = 24
Frequency
10
8
6
4
2
0
.0
5.0
10.0
15.0
20.0
25.0
AB % Incorrect


UW % Correct
Mean = 93.18
Std. Dev. = 5.252
N = 24
Frequency
0
2
4
6
8
10
80.0
85.0
90.0
95.0
100.0
105.0
UW % Correct


UB % Correct
Mean = 94.35
Std. Dev. = 4.296
N = 24
Frequency
0
2
4
6
8
10
85.0
90.0
95.0
100.0
105.0
UB % Correct


UW % Incorrect
Mean = 6.82
Std. Dev. = 5.252
N = 24
Frequency
0
2
4
6
8
.0
5.0
10.0
15.0
20.0
UW % Incorrect


UB % Incorrect
Mean = 5.65
Std. Dev. = 4.296
N = 24
Frequency
10
8
6
4
2
0
.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
UB % Incorrect

Statistics

Diversity Exposure in Childhood	Hometown Population	Armed White Correct	Armed Black Correct	Armed White Incorrect	Armed Black Incorrect	Unarmed White Correct	Unarmed Black Correct	Unarmed White Incorrect	Unarmed Black Incorrect	AW Total	AB Total	UW Total	UB Total	Total Shots Fired	AW % Correct	AB % Correct
33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
.8182	55524.24	22.88	23.30	1.42	1.30	22.70	22.33	1.36	1.24	24.30	24.61	24.06	23.58	96.55	94.100	94.691
1.0000	17000.00	23.00	23.00	1.00	1.00	23.00	23.00	1.00	1.00	25.00	25.00	24.00	24.00	98.00	96.000	95.000
1.00	5000[a]	24	23	1	0[a]	24	23[a]	1	1	25	25	25	25	98	96.0	100.0
.39167	82486.139	1.799	1.447	1.393	1.212	1.775	2.314	1.220	1.032	.918	.747	1.197	1.904	3.355	5.7146	4.9334
1.00	300000	6	5	6	5	8	8	4	3	3	3	5	7	12	24.0	20.0
.00	0	19	20	0	0	17	17	0	0	22	22	20	18	88	76.0	80.0
1.00	300000	25	25	6	5	25	25	4	3	25	25	25	25	100	100.0	100.0

AW % Incorrect	AB % Incorrect	UW % Correct	UB % Correct	UW % Incorrect	UB % Incorrect	Total Number Correct	Total Number Incorrect	Total Percent Correct	Total Percent Incorrect	Split Time AW	Split Time AB	Split Time UW	Split Time UB	Game Points
33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.900	5.309	94.297	94.627	5.703	5.373	91.21	5.33	94.436	5.564	.61224	.60106	.64900	.66324	437.12
4.000	4.000	95.800	95.700	4.200	4.300	93.00	5.00	94.900	5.100	.60400	.59900	.64300	.65800	475.00
4.0	.0	100.0	100.0	.0	.0	96	4	95.9[a]	2.0[a]	.563[a]	.599[a]	.630	.670	255[a]
5.7146	4.9334	5.1367	4.5196	5.1367	4.5196	5.407	3.425	3.6208	3.6208	.048955	.047868	.045290	.043093	191.882
24.0	20.0	19.0	15.0	19.0	15.0	22	16	16.3	16.3	.189	.197	.229	.205	735
.0	.0	81.0	85.0	.0	.0	77	0	83.7	.0	.525	.498	.569	.573	-35
24.0	20.0	100.0	100.0	19.0	15.0	99	16	100.0	16.3	.714	.695	.798	.778	700

		Sex	Age	Race	Specified Race	Degree Field	Firearm Experience	Description of Training	Military Experience	Years of Military Experience	Combat Zone Deployed	Fired firearm in the line of duty	Law Enforcement Experience	Description of Experience	Years of Law Enforcement Service	Fired firearm in the line of duty
N	Valid	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean			1.2121				3.5455		.1212	.409	.2121	.2424	.0909		.09	.0606
Median			1.0000				4.0000		.0000	.000	.0000	.0000	.0000		.00	.0000
Mode			1.00				4.00		.00	.0	.00	.00	.00		0	.00
Std. Deviation			.41515				1.20133		.33143	1.2084	.59987	.66287	.29194		.384	.34816
Range			1.00				3.00		1.00	5.0	2.00	2.00	1.00		2	2.00
Minimum			1.00				2.00		.00	.0	.00	.00	.00		0	.00
Maximum			2.00				5.00		1.00	5.0	2.00	2.00	1.00		2	2.00

a. Multiple modes exist. The smallest value is shown

Crosstab

			Split Time AW													
			.525	.534	.553	.563	.565	.571	.572	.573	.574	.579	.583	.590	.591	.598
AW % Incorrect	.0	Count	0	0	0	0	0	0	0	0	1	0	1	0	1	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	3.0%	3.0%
	4.0	Count	0	1	0	1	1	1	0	0	0	0	0	0	0	0
		% of Total	0.0%	3.0%	0.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	4.2	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	4.3	Count	0	0	0	0	0	0	0	1	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	8.0	Count	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	8.3	Count	0	0	0	1	0	0	0	0	0	1	0	1	0	0
		% of Total	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%
	9.1	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	12.5	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	13.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	13.6	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	20.0	Count	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	24.0	Count	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total		Count	1	1	1	2	1	1	1	1	1	1	1	1	1	1
		% of Total	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

			Split Time AW																
			.601	.604	.610	.620	.627	.634	.639	.643	.648	.654	.656	.665	.693	.694	.700	.714	Total
AW % Incorrect	.0	Count	0	0	0	1	0	0	0	0	2	0	1	0	0	0	0	0	8
		% of Total	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	6.1%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.2%
	4.0	Count	1	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	9
		% of Total	3.0%	0.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	27.3%
	4.2	Count	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
		% of Total	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%
	4.3	Count	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	6.1%
	8.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	8.3	Count	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	5
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.2%
	9.1	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%
	12.5	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%
	13.0	Count	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	13.6	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%
	20.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	24.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
Total		Count	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	33
		% of Total	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	100.0%

Crosstab

			Split Time AW												
			.525	.534	.553	.563	.565	.571	.572	.573	.574	.579	.583	.590	.591
AW % Correct	76.0	Count	0	0	0	0	0	0	1	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	80.0	Count	0	0	1	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	86.4	Count	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	87.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	87.5	Count	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	90.9	Count	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	91.7	Count	0	0	0	1	0	0	0	0	0	1	0	1	0
		% of Total	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%
	92.0	Count	1	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	95.7	Count	0	0	0	0	0	0	0	1	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	95.8	Count	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	96.0	Count	0	1	0	1	1	1	0	0	0	0	0	0	0
		% of Total	0.0%	3.0%	0.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0	Count	0	0	0	0	0	0	0	0	1	0	1	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	3.0%
Total		Count	1	1	1	2	1	1	1	1	1	1	1	1	1
		% of Total	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

			Split Time AW																	
			.598	.601	.604	.610	.620	.627	.634	.639	.643	.648	.654	.656	.665	.693	.694	.700	.714	Total
AW % Correct	76.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	80.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	86.4	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%
	87.0	Count	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	87.5	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%
	90.9	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%
	91.7	Count	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	5
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.2%
	92.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	95.7	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	6.1%
	95.8	Count	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
		% of Total	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%
	96.0	Count	0	1	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	9
		% of Total	0.0%	3.0%	0.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	27.3%
	100.0	Count	1	0	0	0	1	0	0	0	0	2	0	1	0	0	0	0	0	8
		% of Total	3.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	6.1%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.2%
Total		Count	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	33
		% of Total	3.0%	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	100.0%

Crosstab

AB % Incorrect		Split Time AB																														
		488	508	533	544	546	549	567	571	574	578	581	582	586	592	598	599	603	604	605	608	616	619	620	643	648	650	655	661	666	671	695	Total
0	Count	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1	1	0	1	0	1	0	0	1	0	0	10
	% of Total	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%	3.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	30.3%
4.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2
	% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	6.1%
4.2	Count	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	7
	% of Total	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	21.2%
8.0	Count	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	5
	% of Total	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	15.2%
9.1	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
12.0	Count	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
12.5	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
	% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%
13.0	Count	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	% of Total	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
20.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
Total	Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0	33
	% of Total	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	6.1%	3.0%	0.0%	100.0%

Crosstab

			Split Time AB														
			.498	.508	.533	.544	.546	.549	.567	.571	.574	.578	.581	.582	.586	.592	.598
AB % Correct	80.0	Count	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	87.0	Count	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	87.5	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	88.0	Count	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	90.9	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	92.0	Count	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		% of Total	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	95.8	Count	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
		% of Total	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	96.0	Count	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	0.0%	3.0%	0.0%
	100.0	Count	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%
Total		Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		% of Total	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

			Split Time AB																
			.599	.603	.604	.605	.608	.616	.619	.620	.643	.648	.650	.655	.661	.666	.671	.695	Total
AB % Correct	80.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	87.0	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	87.5	Count	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	88.0	Count	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
		% of Total	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%
	90.9	Count	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		% of Total	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
	92.0	Count	1	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0	7
		% of Total	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	21.2%
	95.8	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	9.1%
	96.0	Count	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	7
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	3.0%	0.0%	21.2%
	100.0	Count	0	0	1	0	0	1	1	0	1	0	1	0	0	1	0	0	10
		% of Total	0.0%	0.0%	3.0%	0.0%	0.0%	3.0%	3.0%	0.0%	3.0%	0.0%	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	30.3%
Total		Count	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	33
		% of Total	6.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	6.1%	3.0%	3.0%	100.0%

Appendix G: IRB Approval

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Institutional Review Board (IRB)
720 4th Avenue South AS 210, St. Cloud, MN 56301-4498

Name: Ashton Adank
Address
USA
Email: adas0801@stcloudstate.edu

IRB PROTOCOL DETERMINATION:
Expedited Review-1

Project Title: Implicit Bias Research
Advisor Dr. Douglas Lee Gilbertson

The Institutional Review Board has reviewed your protocol to conduct research involving human subjects. Your project has been: **APPROVED**

#7

Please note the following important information concerning IRB projects:

- The principal investigator assumes the responsibilities for the protection of participants in this project. Any adverse events must be reported to the IRB as soon as possible (ex. research related injuries, harmful outcomes, significant withdrawal of subject population, etc.).

- For expedited or full board review, the principal investigator must submit a Continuing Review/Final Report form in advance of the expiration date indicated on this letter to report conclusion of the research or request an extension.

-Exempt review only requires the submission of a Continuing Review/Final Report form in advance of the expiration date indicated in this letter if an extension of time is needed.

- Approved consent forms display the official IRB stamp which documents approval and expiration dates. If a renewal is requested and approved, new consent forms will be officially stamped and reflect the new approval and expiration dates.

- The principal investigator must seek approval for any changes to the study (ex. research design, consent process, survey/interview instruments, funding source, etc.). The IRB reserves the right to review the research at any time.

If we can be of further assistance, feel free to contact the IRB at 320-308-3290 or email ri@stcloudstate.edu and please reference the SCSU IRB number when corresponding.

IRB Institutional Official:

Latha Ramakrishnan

Dr. Latha Ramakrishnan
Interim Associate Provost for Research
Dean of Graduate Studies

OFFICE USE ONLY

SCSU IRB# 1700 - 2125	**Type:** Expedited Review-1	**Today's Date:** 3/16/2017
1st Year Approval Date: 3/16/2017	**2nd Year Approval Date:**	**3rd Year Approval Date:**
1st Year Expiration Date: 3/15/2018	**2nd Year Expiration Date:**	**3rd Year Expiration Date:**

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Institutional Review Board (IRB)
720 4th Avenue South MC 204K, St. Cloud, MN 56301-4498

Continuing Review / Final Report

Principal Investigator: **Ashton Adank**

Co-Investigator:

Project Title: **Implicit Bias Research**

If the project has been completed (no longer collecting data on human subjects) please indicate your projects status under Final Report and complete questions 1 through 5. If you have completed collecting data on human subjects but continue to analyze the data, as long as no new data is being obtained, your project would be considered completed.

If the project has not been completed (you are collecting data on human subjects) please indicate the status of your project under Continuing Review/Project Continuation and answer questions 1 through 5.

Final Report

____ The Project has been completed.
____ Project has not and will not be conducted. Explain:

Continuing Review/Project Continuation

____ Data collection continues with enrolled participants.
____ Participant recruitment continues following approved IRB protocol.

Have any changes been made to your research project (changes in subject recruitment, informed consent documents, design, methodology, procedures, etc.) since it was approved by the IRB?
____ No
____ Yes, explain:

Final Report and Continuing Review/Project Continuation, please answer the following:

1. How many participants have participated in your study _____

2. Have any adverse events (complaints, unexpected reactions, discomfort, or problems) occurred during this research project
____ No
____ Yes, explain:

3. Have any participants withdrawn from the research, either voluntarily or at the researcher's request?
____ No
____ Yes, explain:

4. Has any new information been identified that may affect the willingness of subjects to participate in this research project?
____ No
____ Yes, explain:

5. Have any changes been made to your research project (changes in subject recruitment, informed consent documents, design, methodology, and procedures, etc.) since it was approved by the IRB?
____ No
____ Yes, explain:

_____ _____
Principal Investigator's Signature Date

SCSU IRB#: 1700 - 2125

ST. CLOUD STATE UNIVERSITY – IRB PROTOCOL REVIEW CHECKLIST

Investigator (PI): **Ashton Adank** Training Date: **01/09/15** Training Type: **Graduate** Project Start: **03/01/2017**
Other Investigator(s): Training Date: Training Type:
Project Title: **Implicit Bias Research**

Is the activity research?
A) The activity is a systematic investigation, including research development and testing. ✓ Yes ___ No
B) The activity is designed to develop or contribute to generalizable knowledge. ✓ Yes ___ No
If you answered YES to both questions, continue with checklist.

Does the activity involve human subjects? If yes, continue.
A) The activity obtains data through intervention or interaction with the participant ✓ Yes ___ No
B) The activity obtains identifiable private information (participant identity is or may be readily determined by PI) ✓ Yes ___ No
*****If you answered yes to one of the above questions, continue with checklist.***

		Reviewer 1 N/A	Reviewer 1 YES	Reviewer 1 NO	Reviewer 2 Disagree	Comments
1.	**Were the procedures adequately described?**	☐	☒	☐	☐	Video Game/Survey
2.	**Potential conflict of interests identified?**					
	A) Funding source provides no conflict	☒	☐	☐	☐	
	B) Alternative class activity specified	☒	☐	☐	☐	
3.	**Was permission to participate obtained from appropriate persons?**					
	A) Parents/guardians if under age 18	☒	☐	☐	☐	
	B) Permission given freely	☐	☒	☐	☐	
4.	**Was written agreement to collaborate with outside agency obtained?**	☒	☐	☐	☐	[illegible]
5.	**Were procedures to identify/recruit participants adequately described?**					
	A) Without duress/coercion?	☐	☒	☐	☐	
6.	**Confidentiality or anonymity?**					
	A) Participant confidentiality assured	☐	☒	☐	☐	
	B) Data reported and/or stored in a confidential manner	☐	☒	☐	☐	
	C) Raw data destroyed within appropriate timeline	☐	☒	☐	☐	
7.	**Description of risk adequate?**					
	A) Were potential risks identified as minimal risk	☐	☒	☐	☐	
	B) Adequate precautions outlined	☐	☒	☐	☐	
	C) Given risks, are benefits sufficient to outweigh risk	☐	☒	☐	☐	
8.	**Informed consent/consent form (or intro/cover page for questionnaires or surveys)**					
	A) Clear	☐	☒	☐	☐	
	B) Provide enough information	☐	☒	☐	☐	
	C) Answer participant questions	☐	☒	☐	☐	
	D) Permission to withdraw at any time	☐	☒	☐	☐	
	E) Name and contact info of researcher and/or advisor	☐	☒	☐	☐	
9.	**Sharing results and debriefing**					
	A) Information provided on how to obtain study results or summary	☐	☒	☐	☐	
	B) Debriefing (if deception involved)	☒	☐	☐	☐	

Reviewer Initials

Project is Minimal Risk* ✓ **Yes** ___ **No**

Comments: recruitment process?

APPROVAL INFORMATION

Reviewers: [signature]
SCSU IRB#: ________
Category Approved: ________ **Exempt** ✓ **Expedited 1** ________ **Expedited 2** ________ **Full** **Approval Date:** 3/16/17
Expiration Date: ________ 3/15/18

Rev. 9/14/15

ST. CLOUD STATE UNIVERSITY – IRB PROTOCOL REVIEW CHECKLIST

IRB Protocol Review Checklist
Page Two

	Reviewer 1		Reviewer 2	
	N/A	YES	NO	Disagree	Comments
10. Research which is *Externally Funded* by federal department or agency					
A) Review grant narrative for alignment of research activity	☐	☐	☐	☐	
B) Comment to PI related to federal funding source	☐	☐	☐	☐	
11. Possible Expedited Review – 1 Process (only requires one reviewer)					
A) Vulnerable population – elderly persons (over age 65)	☐	☐	☐	☐	
B) Vulnerable population – non-English speaking	☐	☐	☐	☐	
C) Minimal risk – undesired or unexpected psychological changes	☐	☐	☐	☐	
D) Minimal risk – sensitive information category (anonymous)	☐	☒	☐	☐	
E) Minimal risk – deceptive techniques (minor)	☐	☐	☐	☐	
F) Collection of data from audio recordings	☐	☐	☐	☐	
12. Possible Expedited Review - 2 Process (at least two reviewers)					
A) Federally funded research	☐	☐	☐	☐	
B) Vulnerable population - children under 18	☐	☐	☐	☐	
C) Vulnerable population - prisoners	☐	☐	☐	☐	
D) Vulnerable population - pregnant women	☐	☐	☐	☐	
E) Vulnerable population – economically/educationally disadvantaged	☐	☐	☐	☐	
F) Vulnerable population – persons with cognitive impairments	☐	☐	☐	☐	
G) Minimal risk – physical pain/discomfort/injury from procedures/drugs	☐	☐	☐	☐	
H) Minimal risk – invasion of privacy/absence of informed consent	☐	☐	☐	☐	
I) Minimal risk – sensitive information (significant incentive to participate)	☐	☐	☐	☐	
J) Minimal risk – deception (full blown)	☐	☐	☐	☐	
K) Collection of data from video or image recordings	☐	☐	☐	☐	
13. Full Board Review Process					
A) Research will presents more than minimal risk to participants	☐	☐	☐	☐	
B) Risk where ID of participants/responses place at risk for criminal or civil liability or damaging to financial standing, etc.	☐	☐	☐	☐	
C) Classified research involving human subjects	☐	☐	☐	☐	
D) Umbrella protocol outlining standard dept/center processes	☐	☐	☐	☐	
14. Student Class Project	☐	☐	☐	☐	

ST. CLOUD STATE UNIVERSITY

EDUCATION FOR LIFE.

Institutional Review Board Protocol For Conduct of Research Involving Human Subjects

PROJECT MANAGEMENT

Project Title: **Implicit Bias Research**

Project Summary (3-5 sentences, include method of data gathering): **This explanatory study seeks to determine whether implicit bias may contribute to fatal shooting events and the extent to which a person can trim out the implicit bias. The estimated size will be 30-60 individuals. Students will stand before a powerpoint presented with both armed and unarmed individuals in various scenery. We will record if they shoot appropriate and not how well they shoot.**

Data Collection (note: must be a future date and allows sufficient time for IRB review)

Start Date: : **March 1, 2017** (ASAP) Ending Date: **May 1, 2017**

Location of the Research: **St. Cloud State University**

Office of Research and Sponsored Programs MAR 15

☒ Yes, I have reviewed the **IRB Tutorial of Common Questions and Errors** posted on the IRB webpage: http://www.stcloudstate.edu/irb/application/default.asp.

RESEARCHERS

Principal Investigator and Primary Contact (PI): **Ashton Adank**

Type of Research: ☐ faculty/staff ☐ undergraduate ☒ graduate masters ☐ graduate doctoral

Mailing Address: [redacted]

Telephone: [redacted] Email: **adas0801@stcloudstate.edu**

Advisor or Course Instructor (if PI is a student): **Dr. Douglas Lee Gilbertson**

Co-PIs or Other Investigators:

If you collaborate with an individual from another institution, we may be able to use an Authorization Agreement to rely on our or their review. Contact the IRB Administrator for more information.

SPONSORS

Is there potential or confirmed external funding source(s) for this research project? ☒No

☐Yes and ATTACH COPY OF THE GRANT NARRATIVE, TIMELINE, ETC.
Funding Agency Account #

CERTIFICATION STATEMENT

The undersigned acknowledge: 1) protocol represents a complete and accurate description of the proposed research, 2) research will be conducted in compliance with IRB recommendations and requirements, 3) research will not begin until IRB approval received, 4) modifications will not be made prior to obtaining IRB approval, 5) PI responsible for reporting to the IRB any adverse or unexpected events, 6) PI to report to IRB any significant new findings which develop during the course of the study or increase the risk to participants and 7) expedited or full IRB approval in effect for up to one year and PI is responsible to request continuing review or file final report (exempt review approval is exempt from the continuing review/final report process).

Principal Investigator Signature [signature] Date 3/15/17

I have read the protocol, advised the student and support the research/study as appropriate for the student's academic development.
Advisor/Instructor Signature [signature] Date 3/15/17

REVIEW WORKSHEET

Check **ALL** categories—if any—that apply to your research.

Common Categories for Exempt Review Process

☐ i. **Research conducted in an educational setting involving normal education practices**, such as research that examines or compares regular and special education:
- instructional strategies/techniques, curricula, **or** classroom management methods

☐ ii. Research involving the use of **educational tests (cognitive, diagnostic, aptitude, achievement) , survey procedures, interview procedures, or observation** of public behavior **if confidentiality or anonymity is maintained.**

☐ iii. Research involving activities in category 2 with subjects who are **elected or appointed public officials or candidates for public office**—regardless of whether the subjects may be identified or the information is sensitive.

☐ iv. Research involving the collection or study of **existing data, documents, records, pathological specimens,** or **diagnostic specimens**, if one of the following is true:
- the sources are publicly available **or** information is recorded by the investigator in a way that subjects **cannot be** directly or indirectly identified.

☐ v. Research **subject to the approval of Federal Department or Agency heads** and designed to study or evaluate public benefit or service programs.

☐ vi. **Taste and food quality** evaluation and consumer acceptance studies, if one of the following is consumed:
- wholesome foods without additives, **or** a food that contains a food ingredient, agricultural chemical, or environmental contaminant at or below the level found to be safe by the Food and Drug Administration, Environmental Protection Agency, or U.S. Department of Agriculture Food Safety and Inspection Service

Common Categories for Expedited Review Process

☐ i. **Clinical studies of drugs or medical devices** only when research on drugs for which an investigational new drug application is not required. (Note: Research on marketed drugs that significantly increases the risks or decreases the acceptability of the risks associated with the use of the product is not eligible for expedited review.) **or** research on medical devices for which (i) an investigational device exemption application is not required; or (ii) the medical device is cleared/approved for marketing and the medical device is being used in accordance with its cleared/approved labeling.

☐ ii. **Collection of blood samples** by finger stick, heel stick, ear stick, or venipuncture as follows:
- from healthy, nonpregnant adults who weigh at least 110 pounds (collection may not occur more than 2 times per week and exceed 550 ml in an 8 week period), **or** from other adults and children, considering the age, weight, and health of the subjects and the collection amount, frequency, and procedure (collection may not occur more than 2 times per week and exceed the lesser of 50 ml or 3 ml per kg in an 8 week period)

☐ iii. **Collection of biological specimens** by noninvasive means for research purposes.
Examples include:
- hair and nail clippings in a nondisfiguring manner;
- teeth at time of exfoliation or if routine patient care indicates a need for extraction;
- excreta and external secretions (including sweat);
- uncannulated saliva;
- placenta removed at delivery;
- amniotic fluid obtained at the time of rupture of the membrane prior to or during labor;
- supra- and subgingival dental plaque and calculus, provided the collection procedure is not more invasive than routine prophylactic scaling of the teeth and the process is accomplished in accordance with accepted prophylactic techniques;
- mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings;
- sputum collected after saline mist nebulization.

☐ iv. **Collection of data through noninvasive procedures** routinely employed in clinical practice, excluding procedures involving general anesthesia, sedation, x-rays, or microwaves. Any medical devices used must be approved for marketing.
Examples include:
- physical sensors that do not involve input of significant amounts of energy into the subject;
- weighing or testing of sensory acuity;
- magnetic resonance imaging;
- electrocardiography, electroencephalography, thermography, detection of naturally occurring radioactivity, electroretinography, ultrasound, diagnostic infrared imaging, doppler blood flow, and echocardiography;
- moderate exercise, muscular strength testing, body composition assessment, and flexibility testing where appropriate given the age, weight, and health of the individual.

☐ v. **Collection of data from voice, video, digital, or image recordings** made for research purposes.

☒ vi. **Research on individual/group characteristics** or behavior or research employing oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies on areas such as perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, social behavior, etc. **if confidentiality or anonymity is maintained.**

Other

☐ **Other,** please explain

PROJECT DESCRIPTION

Briefly summarize the proposed research and its significance. Include explanations of the following; 1) research question/hypothesis, 2) research design, including independent/dependent variables, if appropriate, and 3) relevant theory

The problem statement is best addressed by answering the following research questions. (1) What does the existing literature say about the nature and extent of the problem? (2) What are some examples of implicit bias? (3) Where do we learn, and how do we acquire, implicit bias?
The author's goal for this research is to confirm implicit bias can be reduced by law enforcement training. I intend to prove law enforcement training no matter the color of the individual, will have a positive effect, and will reduce the number of unarmed shootings and implicit bias will affect any individual not just white officers and individuals shooting young unarmed black males.

RESEARCH DESIGN

The original study by Josh Correll has conducted three studies. I will intend to replicate study 2. The original study had 92 non-black undergraduate participants who were randomly assigned to a condition. The design involved a single between-subjects factor with a covariation condition with three levels; stereotype congruent, control, and stereotype incongruent. Participants would play two rounds of the "videogame" which consisted of a 2 x 2 design; target race (Black vs. White) and Object Type (gun vs. non-gun) as repeated factors. The game eliminated eight randomly selected targets from the original pool of 20 for each of the two underrepresented target types. They found Target Race and Object Type were correlated (r=.25).

We will collect quantitative data from the experiment and apply it to the existing literature. The researcher will use a random sampling technique to collect the research data. The experiment will involve untrained individuals as the sample population; they require IRB approval. The estimated size of the sample population will be n = 30 - 60. This will be anyone who was not in law enforcement or any similar training like military. The data will be organized and stored in an excel document upon being collected. The data will be analyzed in SPSS looking for a significance.

PARTICIPANTS

1. How many people will participate in the research? Who will the participants be?
   30-60 students
2. What are the ages of potential participants? *(Check all that apply.)*
   ☐ 0-7 ☐ 8-17 ☒ 18-64 ☐ 65+
3. Some populations are considered "vulnerable" to coercion or undue influence. Will any of these populations

be invited to participate in the research? *(Check all that apply.)*

- ☐ children (under age 18)
- ☐ prisoners
- ☐ pregnant women
- ☐ economically/educationally disadvantaged individuals
- ☐ elderly individuals (over age 65)
- ☐ non-English speaking
- ☐ cognitively impaired individuals

If any of the above vulnerable categories have been checked, provide rationale for using these vulnerable populations and detail the safeguards that will be included in the research to protect their rights and welfare.

☒ no vulnerable populations

PARTICIPANT IDENTIFICATION AND RECRUITMENT

4. How will potential participants be identified and recruited? *(e.g. college classes, phone books, membership directories, etc.)* How are you obtaining access to the participants?
University classes for students

5. Copies of advertisements, bulletin board notices, telephone scripts, letters, and other recruitment materials are attached. ☐Yes ☒N/A

6. Written documentation of cooperation/permission is REQUIRED from any individual or organization that assists you in identifying and recruiting participants. Agency/Institution:

The following are attached and **MUST** be submitted with this protocol:

Yes	N/A	
☐	☒	Letter/email from professor(s) allowing you to distribute materials in their classes.
☐	☒	Letter/email from independent school(s) that will provide access to students.
☐	☒	Letter/email from medical organization(s) that will provide access to clients/patients.
☐	☒	Other, please explain

7. Will persons be compensated for participating in the research? ☐Yes ☒No

If so, what kind of reward will be given (monetary, extra credit, or other) and when will subjects receive it *(e.g. the beginning of the study, the end of the study, or at each visit)*?

NOTE: classroom research offering extra credit to participants must have other extra credit opportunities available to students.

METHODS AND PROCEDURES

8. Describe the research procedures and list tasks/activities participants will be asked to complete.
A survey of demographics and experience, then participate in the motion video scenarios.

The following are attached and **MUST** be submitted with this protocol:

Yes	N/A	
☒	☐	Attached is a copy of surveys or data collection instrument.
☐	☒	Attached is a copy of interview questions.
☐	☒	Attached is a copy of handouts.
☐	☒	Other materials attached, please explain

9. How will data be collected and recorded? How and where will data be securely stored? (password protected computer, locked file cabinet and include its location, encrypted file space, etc.) NOTE: unprotected devices not allowed.
Password protected computer

10. Will the data include names or other identifiers? ☐Yes ☒No

If yes, will the data be coded and identifiable information removed? ☐Yes ☐No

If yes, explain IN DETAIL the coding process, what additional measures will be taken to keep your data secure and who will have access to it?

11. The raw data and/or coding key from this research will be destroyed *(Check ONLY one)*:

☒ when the study is complete ☐ within three years
☐ when my degree is awarded ☐ other:

RISKS AND BENEFITS

12. Will the research present MORE THAN minimal risk* to participants? ☐Yes ☒No

**Minimal risk means that the harm or discomfort anticipated in the research is no greater than that encountered in daily life or during routine physical/psychological examinations or tests.*

13. Does the research involve:

Yes	No	
☐	☒	Physical pain, discomfort, or injury from procedures or drugs
☐	☒	Undesired and/or unexpected psychological changes *(e.g. depression, anxiety, emotional discomfort, confusion, hallucination, stress, guilt, embarrassment, loss of self-esteem, etc.)*
☐	☒	Invasion of privacy/absence of informed consent *(e.g. covert observation, review of private medical or educational records, etc.)*
☐	☒	Sensitive information *(e.g. alcohol/drug use, sexual orientation, illegal activities, suicidal thoughts, physical/mental illness, violence, depression, psychological/physical abuse, gang related activities, pro-life/pro-choice, relationship issues, etc.)* that could result in social and economic harm *(e.g. civil/criminal liability or damage to financial standing, employability, insurability, reputation, etc.)* if a breach in confidentiality occurred.
☐	☒	Deceptive techniques *(e.g. giving false feedback about performance, staging an event or situation, concealing the purpose of the research, etc.)* <u>*A debriefing statement is required.*</u>

If yes, how will subjects be misled *(i.e. what information will be withheld or what false information will be provided)*? Describe when and how this deception will be revealed to subjects and provide a copy of the oral or written debriefing statement. **See the IRB's handout on deception and the debriefing process** for information, examples, and a template.

14. What precautions will be taken to minimize or prevent potential risks, inconveniences, and discomforts *(e.g. anonymous data collection, presence of trained personnel who can respond to emergencies, etc.)*?
Anonymous data collection

INFORMED CONSENT PROCESS

The informed consent process begins when you first approach potential subjects and continues throughout your research. Typically, it involves:

- presenting information that enables an individual to <u>knowledgeably</u> and <u>voluntarily</u> decide whether or not to participate in the research.
- documenting consent with a written form signed by the participant. An implied consent form may be used for anonymous surveys.
- responding to the participant's questions/concerns during the research and communicating any new findings that may affect the participant's willingness to continue in the study.

When your research involves individuals under the age of 18, you must obtain and document the consent of parents or guardians. If your research involves subjects who are between the ages of 8 and 18, child/minor assent must be documented as well. A single project could require an adult consent form, a parental consent form and a child/minor assent form.

PARTICIPATION & SURVEY CONSENT FORM

You have been asked to participate in an important research project. The survey includes questions about your demographics and experience in Law Enforcement and handguns.
Your participation in this experiment & survey is voluntary and anonymous. What does that mean?

VOLUNTARY. You do not have to answer any question that you are uncomfortable with; in fact, you do not have to answer any of them. You will not receive any prize or award for your participation. If you decide that you do not want to participate, then no punishment, harmful or adverse action will be given to you or taken against you by your Chief if you are law enforcement, or anyone. Even if you have already started answering questions, you may change your mind at any time and stop filling out the survey or participate in the experiment.

ANONYMOUS. Anonymous means that no one knows who filled it out. To keep this survey and experiment anonymous, please do not make any marks on it that can identify you such as your name or nicknames, or any comments about yourself. That way, no one will be able to tell which survey is yours or someone else's. All survey answers will be recorded in a database. That way, your answers will be mixed in with everyone else's.

By completing the survey and participating in the videogame, you are implying consent to participate in this study. This study examines human decision-making during simulated life and death situations that are often called "shoot/don't shoot scenarios." Therefore, your participation involves the use of a plastic handgun that cannot fire real ammunition–only a laser flash comes out of it. The videogame takes about 20 minutes to complete. Still pictures of various indoor and outdoor scenes will be projected onto the wall in front of you. You may see a series of 1 to 4 different scenes, which we call a *Choice*. At some time during each Choice, a still picture will suddenly appear of a person holding either a handgun or some harmless object like a cellphone or other portable electronic device. You must then decide to shoot (by squeezing the trigger) or don't shoot. You will be given 2 attempts: Round 1 is a familiarization or practice, and Round 2 is the study portion.

We are concerned about how much time it takes to make a decision—right or wrong. Whether or not you participate is entirely up to you. Once you begin the videogame, you may quit at any time (but, you will not be allowed to restart). You will not be scored using a point system or a pass/fail criteria. No prizes are awarded for participation or achievement. Likewise, nothing happens should you decided to not participate.

If you have any questions about this study, then you can contact Mr. Ashton Adank (adas0801@stcloudstate.edu) or Dr. Gilbertson (dlgilbertson@stcloudstate.edu) at (320) 308-5771. A copy of the final report will be given to Dr. Lee Gilbertson in May 2017. If you want to know what was learned from the experiment & survey, then you can call either Mr. Adank or Dr. Gilbertson on whether they can bring a copy of the report.

Thanks for participating!

St. Cloud State University
Institutional Review Board
Approval date: 03/16/17
Expiration date: 03/15/18

Kuznia, Jodi L.

From: Adank, Ashton O.
Sent: Thursday, March 16, 2017 10:32 AM
To: Kuznia, Jodi L.
Subject: Re: Consent form

I believe Dr. Gilbertson said he planned on mentioning it to his classes. Is there a certain way we would have to document that?

Ashton Adank
St. Cloud State University
Undergraduate Academic Advisor
Criminal Justice Studies
222 Stewart Hall
720 4th Ave. South
St.Cloud, MN 56301-4498
(320) 308-3016 (office)

On Mar 16, 2017, at 8:47 AM, Kuznia, Jodi L. <jlkuznia@stcloudstate.edu> wrote:

> Thanks Ashton, just one additional questions --- what process will you be using to recruit potential participants? If you will be using any marketing flyers, please email me a copy.
>
> Thanks,
> Jodi
>
> **From:** Adank, Ashton O.
> **Sent:** Wednesday, March 15, 2017 5:04 PM
> **To:** Kuznia, Jodi L. <jlkuznia@stcloudstate.edu>
> **Subject:** Consent form
>
> Hello Jodi,
>
> Attached is my updated consent form! This one should check out! Let me know if it needs further changes.
>
> Thank you,
>
> **Ashton Adank**
> St. Cloud State University

Appendix H: Program Of Study

FOR STUDENT USE ONLY
DO NOT SUBMIT TO GRADUATE STUDIES.

Name Ashton Adank

PROPOSED PROGRAM OF STUDY

Plan A, Thesis (36 credits minimum) ✓

Plan C, Portfolio (42 credits minimum) ____

Specialization: Criminal Justice Administration ____
Criminal Justice: Counseling ____
Criminal Justice: Elective ____

Career Graduate GPA: 3.96

Dept	Number	Course Title	Instructor	Sem./Yr.	Credit	Grade
I. Research:						
Required Plans A and C						
CJS	677	Framing and Analyzing Research Problems	Francis Schreiber	Fall 2015	3	A
CEEP	678	Introduction to Graduate Statistics	Susan Dowds	Spring 2015	3	A-
CJS	679	Research in Criminal Justice	Mario Hesse	Spring 2016	3	A
Required Plan A only						
CJS	699	Thesis, 6 Cr.	D. Lee Gilbertson	Fall 2016 Spring 2017	6	PASS
		Total Credits in Research: ____				
II. Core: Min., Plan A and C, 3 Cr.						
Required: Plan A and C						
CJS	660	Theories of Criminal Behavior & Justice	Mary Clifford	Fall 2015	3	A
		Total Credits in Core: ____				
III. Seminar: Min., Plan A or C, 3 Cr.						
Required: Plan A or C						
CJS	689	Advanced Graduate Seminar	Roger Klaphake	Spring 2016	3	A
		Total Credits in Seminar: ____				
IV. Applications: Plan C Only, 12 Cr.						
Practicum in the criminal justice setting.						
Director of graduate program approval required.						
CJS	644	Practicum	X	X	X	X
		Total Credits in Applications: ____				
V. Specialization: Min., Plan A, 15 Cr.; Plan C, 15 Cr.						
CJS	525	Sex Crimes & Sex Offenders	Mary Clifford	Spring 2015	3	A
CJS	589	Patrol Operations	Stewart Wirth	Spring 2015	3	A
CJS	589	Crime Scene Investigation	Brent Baloun	Summer 2015	3	A
CJS	681	Corrections Field Research	Lindsey Vigesaa	Fall 2015	3	A
CJS	681	Implicit Bias Research	D. Lee Gilbertson	Spring 2016	3	A+
CJS	521	POST Pt. 1, 4, 6, 7	Dave Bentrud	Fall 2016	1	A
CJS	522	POST Pt. 2, 3, 5	Roger Klaphake	Fall 2016	1	A
CJS	600	Firearms Training	D. Lee Gilbertson	Spring 2017	3	A
CJS	650	Intelligence-led Policing & Analysis	D. Lee Gilbertson	Spring 2017	3	A
		Total Credits in Specialization ____				

Total Credits in Program ____

PROGRAM REQUIREMENTS:
1. Credit limitation on transfer and extension credit (combined)–10 credits.
2. Credit limitation on Workshop–Plan A, 4 Cr.; Plan C, 10 Cr.
3. Required: one-half of the minimum requirements for the entire program must be completed in 600-level courses.
4. A final oral defense of the thesis or portfolio is required.

01/15 CJS Dept.

Appendix I: Report of Final Evaluation

ST. CLOUD STATE
UNIVERSITY — SCHOOL OF GRADUATE STUDIES

This form is used to report to the School of Graduate Studies the completion of a final committee meeting for a culminating project (final oral examination or final defense).

Prior to holding the final meeting, the student and advisor must confirm the following:

- ☒ **Student has an accurate program of study on file.**
- ☒ **Student has a GPA of 3.00 or higher**
- ☒ **Student has met the requirements of the graduate program to hold a final committee meeting.**
- ☒ **Student completed a preliminary conference in a prior term.**
- ☒ **The School of Graduate Studies has approved any changes to committee composition.**

The School of Graduate Studies will not approve any final evaluation completed prior to meeting the above conditions.

REPORT OF FINAL EVALUATION COMMITTEE

The committee appointed to conduct the Final Oral Examination of

Ashton Adank (Student Name) [redacted] (Student ID Number) for the

MA ☐ MS ☑ MEM ☐ MM ☐ MSW ☐ Specialist ☐ Ed.D ☐

reports that the Final Examination was held on May 4, 2017 (Date) and that the Examination was conducted in conformity with the regulations established by the School of Graduate Studies and by the graduate program.

Based on the examination, the Committee makes the following recommendation:

☐ Pass ☒ Pass with corrections/edits as listed ☐ Fail

-more clearly specify Correll's study and method.
- present some analysis of response time.
- explore "d" prime analysis of armed/unarmed and shoot/don't shoot.
- respond to other textual suggestions for editing.

Committee: (Type or Print Name)		**Signature:**
Dr. D Gilbertson	,Chair	D. Lee Gilbertson
Dr. D. Andzenge		
Dr. J. Melcher		

Please return completed form to the School of Graduate Studies, Administrative Services Building 121 for inclusion in the student's file.

School of Graduate Studies Review **Student Notified** _____

Approved ___ Denied ___ Reason _____