

Personality and Drug Abuse as Antecedents of Eyewitness Testimony among Undergraduates of Ebonyi State University

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Abstract

This study examined personality and drug abuse as antecedents of eyewitness testimony among undergraduates of Ebonyi state University. The study sought to know if personality traits will play a role in eyewitness testimony of Nigerians; and whether drug abuse will equally play a role. Data for the study were obtained from 193 undergraduates of Ebonyi State University Abakaliki. The participants comprised 117 females and 76 males. Simple random sampling techniques were used in selecting the participants for the study. Participant's ages ranged from 18 to 34 years with mean age as 22.23 (SD = 3.26). A questionnaire with demographic variables and three scales were used for data collection. The scales are Eyewitness Metamemory Scale, Big Five Personality Inventory, and Drug Attitude Scale. Hierarchical Multiple Regression (HMR) was used to test the predictive role of the independent variable (Drug abuse) on the dependent variable (eyewitness testimony), and the personality. The study shows that the five personality traits studied - extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience were not significantly related to eyewitness testimony. But it shows that Drug Attitude has significant relationship with eyewitness testimony of participants. Therefore, the personality traits were indicated not to be potential factors that can explain eyewitness testimony while Drug Attitude has significant potential to explain eyewitness testimony. The limitations of the study which include lack of funds, limited scope and insecurity were pointed out. Suggestions for further studies and recommendations for possible solutions to the issue of personality and drug abuse on eyewitness testimony were made.

Keywords: Drug Abuse, Personality, Eyewitness Testimony, Undergraduates

Introduction

Extant discoveries have shown that over the last three decades, psychologists have made important impacts, and applied them to the legal system in myriad ways such as eyewitness testimony. Eyewitness memories are often critical sources of information for investigating what happened during a criminal offense (Wells et al., 2006). Although playing a central role in criminal investigations and decision-making, eyewitness evidence has often been found to be unreliable, and constitutes a major contributing factor behind wrongful convictions (Garrett, 2011; Innocence project, 2018). Recent research, however, suggests that incorrect memories



are more effortful to retrieve than correct memories, and confidence in a memory is based on retrieval effort (Innocence Project, 2018). Erroneous eyewitness reports are sometimes due to a witness' deliberate lies about the target event (DePaulo et al., 2003; Sporer & Schwandt, 2006; Vrij et al., 2017). Perhaps less obvious, and another major source of eyewitness error, is when a witness gives an honest report but remembers things incorrectly. While differentiating between sincere correct and incorrect memories may be critical to reaching valid judicial decisions, research has demonstrated that people have great difficulty in judging the accuracy of others' memories (Lindholm, 2005, 2008).

Eyewitnesses frequently play a vital role in uncovering the truth about a crime. The evidence they provide can be critical in identifying, charging, and ultimately convicting suspected criminals or acquitting innocent individuals. That is why it is absolutely essential that eyewitness evidence be accurate and reliable. One way of ensuring investigators, obtain the most accurate and reliable evidence from eyewitnesses as suggested by researchers is to follow sound protocols to obtain correct eyewitness information. Despite its importance to the judicial process, relatively little research in this part of the world has examined the extent to which erroneous eyewitness memories may differ from those that are accurate.

Scholars such as McLeod (2018) continue to maintain that eyewitness testimony is an important area of research in cognitive psychology and human memory. This is why juries tend to pay close attention to eyewitness testimony and generally find it a reliable source of information. However, research into this area has found that eyewitness testimony can be affected by many psychological factors such as people's individual differences in form of personality and their state of mental status. According to McLeod, it is a legal term which refers to an account given by people of an event they have witnessed. For example, individuals may be required to give a description at a trial of a murder, robbery or a road accident someone has seen. This includes identification of perpetrators, details of the crime scene etc. Extant literature portrayed Bartlett's theory of reconstructive memory as crucial to an understanding of the reliability of eyewitness testimony (McLeod, 2018). According to Bartlett, recall is subject to personal interpretation dependent on our learnt or cultural norms and values, and the way we make sense of our world (McLeod, 2018). Studies on eyewitness indicated that many people believe that memory works something like a videotape; that storing information is like recording and remembering is like playing back what was recorded; with information being retrieved in much the same form as it was encoded. Remarkably, memory does not work in this way; it is a well-known feature of human memory that individuals do not store information exactly as it is presented to them. Rather, people extract from information the gist, or underlying meaning (McLeod, 2018). In other words, people store information in the way that makes the most sense to them. People make sense of information by trying to fit it into schemas, which are a way of organizing information (McLeod, 2018).

Laney, and Loftus (2008) saw eyewitness testimony as what happens when a person witnesses a crime (or accident, or other legally important event) and later gets up on the stand and recalls for the court all the details of the witnessed event. Hence, it is believed to involve a more complicated process than might initially be presumed. This is why it is presumed to include what happens during the actual crime to facilitate or hamper witnessing, as well as everything that happens from the time the event is over to the later courtroom appearance. The eyewitness



may be interviewed by the police and numerous lawyers, describe the perpetrator to several different people, and make an identification of the perpetrator, among other things (Laney, & Loftus 2013). Eyewitnesses can provide very compelling legal testimony, but rather than recording experiences flawlessly, their memories are susceptible to a variety of errors and biases (Laney, & Loftus 2013); although an eyewitness can make errors in remembering specific details and can even remember whole events that did not actually happen. Eyewitness testimony is the account a bystander or victim gives in the courtroom, describing what that person observed, that occurred during the specific incident under investigation. Ideally this recollection of events is meant to be detailed; but it is not always the case.

Findings from previous studies observed that there is now a wealth of evidence, from research conducted over several decades, suggesting that eyewitness testimony is probably the most persuasive form of evidence presented in court, but in many cases, its accuracy is dubious (Laney, & Loftus 2013). There is also evidence that mistaken eyewitness evidence can lead to wrongful conviction—sending people to prison for years or decades, even to death row, for crimes they did not commit. Faulty eyewitness testimony has been implicated in at least 75% of DNA exoneration cases—more than any other cause (Garrett, 2011). There is also hope, though, that many of the errors may be avoidable if proper precautions are taken during the investigative and judicial processes. Psychology researchers has noted some of those precautions to involve misinformation – which can be introduced into the memory of a witness between the time of seeing an event and reporting it later. In support, hundreds of subsequent studies have demonstrated that memory can be contaminated by erroneous information that people are exposed to after they witness an event (Frenda, Nichols, & Loftus, 2011; Loftus, 2005). The misinformation in these studies has led people to incorrectly remember everything from small but crucial details of a perpetrator's appearance to objects as large as a barn that wasn't there at all. Some other studies have shown that misinformation can corrupt memory even more easily when it is encountered in social situations (Gabbert, Memon, Allan, & Wright, 2004). In addition to correctly remembering many details of the crimes they witness, eyewitnesses often need to remember the faces and other identifying features of the perpetrators of those crimes. Similarly, there is a substantial body of research demonstrating that eyewitnesses can make serious, but often understandable and even predictable, errors (Caputo & Dunning, 2007).

Ideally, eyewitness as recollection of events is usually detailed; however, this is not always the case (Wells, Memon, & Penrod, 2006). Eyewitness is mainly a recollection used as evidence to show what happened from a witness' point of view. The important thing to note is that memory recall has been considered a credible source in the past, but has recently come under attack as forensics can now support psychologists in their claim that memories and individual perceptions can be unreliable, manipulated, and biased (Memon, Mastroberardino, & Fraser, 2008). As a result of this, many countries, and psychology scholars, are now attempting to make changes in how eyewitness testimony is presented in court (Greenwood, & John 2009).

Theoretical framework

Drug Abuse and Eyewitness Testimony

Cognitive models posit that wide range of drugs (medicines) are used currently, many of which are designed to affect brain function. Others do so as a side-effect. The effects depend on how



the body deals with the drug (pharmacokinetics) and how the drug affects the body, including the brain (pharmacodynamics). An extensive range of effects on the brain and psychological functioning can ensue, including effects on intellectual functioning, dexterity, memory, learning and subjective effects. Individual factors are important and can profoundly influence both the type and extent of drug effects. Relevant drugs can be divided into: those prescribed primarily to treat psychiatric disorders. These include sleeping tablets, tranquillizers, antidepressants and antipsychotics; those used to treat neurological disorders that have psychological side-effects. Examples are anticonvulsants and anti-parkinsonian drugs; those used to treat non-nervous disorders that may have psychological side-effects. But the major concern of this paper is illicit drugs used in the non-medical context by drug addicts. Druginduced state that can influence testimony are mainly sedation, disinhibition, paradoxical reactions and alterations in memory.

A large body of research has investigated the many potential factors that may affect eyewitness memory and we should note that the importance of Information provided by eyewitnesses is instrumental in solving criminal cases. One such factor is witness intoxication during the crime. Eyewitnesses are frequently under the influence of alcohol and/or drugs while witnessing a crime. Although a reasonable number of studies have assessed the effect of the most prevalent form of intoxication, alcohol inebriation, on eyewitness memory (see, e.g., Crossland, Kneller, & Wilcock, 2016; Hagsand, Roos af Hjelmsäter, Granhag, Fahlke, & Söderpalm Gordh, 2017; Schreiber Compo et al., 2017). Drug abuse, example, Cannabis is associated not only with a decrease in correct recall but also with an increase in incorrect recall. Intoxicated participants are more likely to recall items that were never presented to them, that is, they are more likely to have false memories (Ranganathan & D'Souza, 2006). Cannabis intoxication affects memory. This is clear from a range of studies examining recall and recognition of simple stimuli such as word lists (e.g., D'Souza et al., 2004; Miller, Cornett, & Wikler, 1979; Miller, McFarland, Cornett, & Brightwell, 1977). In these studies, participants come to the laboratory and either use cannabis (experimental group) or not (control group). Participants are then presented with a set of items and asked to recall those items, either immediately or after a delay (or both). In most studies, participants also perform a recognition test after the recall phase. The findings consistently show that intoxicated participants recall fewer studied items than do sober participants, regardless of delay. It seems that the detrimental effect of cannabis intoxication operates at all stages of the memory process-encoding, consolidation, and retrieval—although findings are somewhat mixed as to at which stage cannabis causes the greatest detriments (see Ranganathan & D'Souza, 2006, for a review).

Personality and Eyewitness Testimony

The current research aims to identify which, if any, personality traits are related to recognition in an eyewitness task. Scholars have found that some individual differences in personality traits such as memory, attention to detail, intellectuality, curiosity, or self-control influence memory performance in areas such as offender identification and suggestibility (Andersen, Carlson, Carlson, & Gronlund, 2014; Pires, Silva, & Ferreira, 2013). Despite the extant findings, it is noteworthy that only a few studies have examined the effect of personality domains on memory performance. For example, researchers Areh and Umek (2004) found that personality traits of extraversion increased memory performance; but in contrast, Madsen and Holmberg (2015) rather found that extraversion decreased the quantity of information recalled, whereas Liebman



et al. (2002) found no relationship between both variables. Similarly, mixed results are also found for the personality domains of Openness and Neuroticism (Liebman et al., 2002; Madsen & Holmberg, 2015). These discrepancies in results may be due to either the participants, environment, the nature of event examined or the instruments used to measure personality.

Personality is the way a person thinks, feels, and acts and it is individualized to each specific person that tends to be relatively stable across a variety of environments and situations. Different personality traits make people act and perceive things in different ways. Some psychological researchers typically distinguish five major domains of personality traits in human behavior (Lubinski, 2000). Because personality has continuously been theoretically linked to differential performance in eyewitness identification tasks, this study believes that it is worth studying. For example, if it is known that individuals who differ along a personality dimension also differ in their identification accuracy, therefore it can be assumed that the information is potentially useful. Hence, the study aims at investigating the relationship between personality and eyewitness testimony. Personality traits such as Neuroticism (Wells & Olson, 2003), and Openness (Rasmussen & Berntsen, 2010), have a positive relationship with various aspects of memory. Additionally, Neuroticism, Extraversion and psychoticism (a trait relating to antisocial behaviour) may be related to eyewitness testimony (Areh &Umek, 2004; Eysenck, 2006). Areh and Umek (2004) found that 26% of the variance in the accuracy of eyewitness testimony was related to these personality traits. It would therefore appear that there is a relationship between personality traits and memory.

Studies on eyewitness testimony have indicated it is crucial and failure in it affects the society deeply. For example, when people fail to give accurate eyewitness testimony, tackling social vices becomes challenging. Pajon and Walsh (2017) found that personality domain was positively correlated with memory performance. Their study enables a clearer picture of how personality has effect on memory and seeds the idea that claiming linear relationships between estimator variables and memory may be over-simplistic as variables appeared to be related among them when influencing eyewitness memory. Stahly (2018) found significant relationship between conscientiousness and overall memory for the scenes. Although a study by Curley, MacLean, and Murray (2017) identified openness as the only personality trait significantly associated with correct recognition scores. But Andersen, Carlson, Carlson, and Gronlund (2014) stated that individual differences in cognitive ability influence eyewitness identification; and that those individual differences in facial recognition ability, working memory capacity, and levels of autistic traits, did result in differential performance. Therefore, it is possible to enhance the accuracy of eyewitness identifications by tailoring a lineup presentation method to the capabilities of an individual eyewitness. Because individuals are created differently, their approaches to eyewitness are equally different. This implies that some individuals have the attribute of remembering and giving good accounts of events in order to promote justice in the society.

In another similar study, McDougall, and Pfeifer (2012) showed that extroverts reported more vivid imagery than introverts, although the finding did not translate into better recall for extroverts, even for concrete stimuli; therefore, for individuals, recall was best for unambiguous concrete nouns, followed by concrete homonyms, then abstract nouns. While initial analyses suggested that there was an interaction between extraversion and the type of



word presented, later analyses revealed that neuroticism was the main driver in differences in recall between different word types. Areh, and Umek (2004) maintained that if criminal investigators do not find any firm evidence and relevant witness of a crime exists, a question about reliability of a witness is brought forward. Persons high on extroversion and low on neuroticism are more reliable witnesses. Extrovert ones are oriented toward other people and more empathetic. Accuracy of memory recall also depends on personal emotional stability. Thus, subjects with high neuroticism produce less accurate recall (higher proportion of added and false details); and similar performance by subjects with high psychoticism was found. They are less empathetic, less social and they care less about collaboration with investigators and performance in the experiment. However, they also showed a weak response or low quantity of recalled data. While differences in recall were best explained by context availability theory (Penny, Ian, Jodi, Luke, & Bradley, 2007) rather than dual coding theory (Paivio, 1991), questions remain about the power of either theory to explain the role of individual differences in personality on recall, particularly given that imagery vividness effects were related to extraversion while differences in recall were related to neuroticism.

The Context-Availability Theory

The context-availability theory suggests that concrete words are more easily recognized and remembered because more contextual information is available in memory for concrete concepts(Penny, Ian, Jodi, Luke, & Bradley, 2007). This contextual information includes the situations and settings in which concepts are encountered. For abstract concepts, associated contextual information is less readily available. Support for the context-availability theory is provided by studies showing that the usual concreteness effect is eliminated when concrete and abstract words are presented in supportive sentence contexts (Penny, Ian, Jodi, Luke, & Bradley, 2007).

The Dual Coding Theory

The dual coding theory attempts to give equal weight to verbal and non-verbal processing. Clark and Paivio (1991) states: "Human cognition is unique in that it has become specialized for dealing simultaneously with language and with nonverbal objects and events. The theory assumes that there are two cognitive subsystems, one specialized for the representation and processing of nonverbal objects/events (i.e., imagery), and the other specialized for dealing with language. Dual coding theory has been applied to many cognitive phenomena including: mnemonics, problem solving, concept learning and language.

Fuzzy Trace Theory

The fuzzy trace theory holds that false memories occur when people rely on gist rather than verbatim memory, and the activation-monitoring account holds that false memories occur when cognitive control mechanisms are not appropriately activated. Riba et al.'s neuroimaging data revealed that during the recognition test, regular cannabis users displayed less activation than did control participants both in brain regions associated with verbatim memory and in regions associated with gist memory (Brainerd & Reyna, 2002), The authors argued that control participants engaged in concurrent retrieval of verbatim- and gist-based memories, resulting in a conflict that prompted greater engagement of cognitive control mechanisms (as reflected in



increased frontal activation), which helped control participants distinguish between old and new words. Regular cannabis users, in contrast, found it more difficult to determine that the lure words had not been presented during the learning phase. Thus, regular cannabis use can have lasting effects on cognitive mechanisms, rendering cannabis users more susceptible to false memories.

Statement of Problem

Researchers have been studying eyewitness testimony for over a century because of the frailties of human memory and the important role that it plays in wrongful convictions. This is because eyewitness memories remain critical sources of information for investigating what happened during a criminal offense and other related issues. However, it is worrisome that its evidence has often been found to be unreliable, and constitutes a major contributing factor behind wrongful conviction. In the justice system, especially in Nigeria, a good eyewitness is needed to deliver credible judgment; to avoid abortion of justice. It is also very useful in providing reliable information necessary to combat crimes, and make good laws. In fact, the American Psychological Association estimates that one in three eyewitnesses make an erroneous identification. In the United States, for example, approximately 75,000 defendants are implicated by eyewitnesses annually (Department of Justice, 1999). Inaccurate eyewitness testimony accounts for more wrongful convictions than do false confessions, problems with informants, and defective or fraudulent science combined (Innocence Project, 2005). Following the kind of governance in Nigeria and her judicial system, environment may be inducing fear in the minds of individuals who are potential eyewitness. In this study, attention is given to personality and drug abuse as variables that may be responsible to why eyewitness error occurs. Some personality factors may be more prone to eyewitness memory failure while some may enhance performances in eyewitness. Understanding them becomes necessary in improving our judicial system, fight against injustice, forensic practice and criminal investigations. The study is equally beneficial in understanding personality attributes prone to crime, and ways of modifying them to safe the society. Similarly, people may be fearing and considering how society would value them if they decide to give accurate testimony; and this maybe more particular to certain personality. This becomes more challenging and pathetic in a country like Nigeria as it increases abortion of justice and trampling of people's rights because they lack freedom and freewill to give accurate eyewitness. The research aims to provide answer to the following questions. 1) Will drug abuse influence eyewitness testimony among Undergraduate of Ebonyi State University?

2) Will personality traits (extraversion, agreeableness, conscientiousness, neuroticism and openness) influence eyewitness testimony among Undergraduate of Ebonyi State University?

Hypotheses

- 1) Personality traits (extraversion, agreeableness, conscientiousness, and openness) will significantly play a role in eyewitness testimony among Ebonyi State University students.
- 2) Drug abuse will significantly play a negative role in eyewitness testimony among Ebonyi State University students.



Methods

Participants

Participants in this study were one hundred and ninety-three (193) students of Ebonyi State University, Abakaliki. They comprised seventy-six (76) males and one hundred and seventeen (117) female students of the school. The participants were drawn from four Departments in the faculty of Social Sciences and Humanities of the school. The departments are Psychology, Mass Communication, Political Science and English. Personality is the study's independent variable; while self-evaluation is the moderator. The study's dependent variable is eyewitness testimony. These variables were determined using data/responses from subjective surveys. Multistage sampling - A type of sampling that divides large populations into stages inform of cluster to make the sampling process more practical, and then simple random sampling is used to select participants (Glen, 2014) was adopted, in which cluster sampling was used in drawing the departments where the participants were selected; while simple random sampling was used in selecting the participants in the selected faculties. Participant's ages ranged from 18 to 34 years, with their mean age as 22.23, and SD 3.26. Demographic information such as gender, age, religion and ethnic group were obtained from the participants.

Instruments

A questionnaire comprising three scales was used for data collection. The scales include Eyewitness Metamemory Scale, Big Five Personality Inventory and Core Self-Evaluation Scale.

The alcohol, smoking, and substance involvement screening test (ASSIST)

Drug Abuse consists of only 12 items. Each item is rated on a 5-point Likert scale, ranging from strongly disagree (1) characteristics of me to strongly agree(5) characteristic of me. Mean score for **ASSIST** Scale was calculated only from twelve straightforwardly-worded items.

Eyewitness Metamemory Scale (Saraiva, van Boeijen, Hope, Horselenberg, Sauerland, & van Koppen, 2019)

Two qualitative approaches were adopted to develop an initial pool of items for the EMS. First, we closely examined the items of other metamemory measures and, where possible, based our item development on these items. The items consisted of 23 items, including eyewitness specific items and items concerning facial recognition adapted from various metamemory questionnaires. All items were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). We did not establish specific hypotheses concerning the factorial structure that would emerge from these items but rather used an exploratory approach to establish its factorial structure.

Big Five Inventory (BFI) (John, Donahue & Kentle, 1991)

This is a 44-item inventory developed by John, Donahue and Kentle (1991). It assesses personality from five distinct dimensions: Extraversion (8 items), Agreeableness (9 items), Consciousness (9 items), Neuroticism (8 items) and Openness to experience (10 items). According to Omoluabi (2002), BFI was adapted for the use of professionals in Nigeria after several years of research at restandardizing it, in order to enhance its suitability and relevance for Nigerians. John, Donahue and Kentle (1991) reported a Cronbach alpha internal consistency reliability of .80 and a 3-month test retest reliability of .85. Extraversion = .05,



Agreeableness = .13, Conscientiousness = .11, Neuroticism = .39 and Openness to Experience = .24. According to Umeh (2004), the low correlation coefficients obtained when the scores of the participating students on the BFI was correlated with their scores on the Maladjustment Scale shows the divergent nature of the two instruments. Thus, it is an evidence of BFI's crosscultural validity. Sample items in the BFI includes I see myself as: Someone who is full of energy (Extraversion), someone who has a forgiving nature (Agreeableness); someone who is a reliable worker (Conscientiousness); someone who gets nervous easily (Neuroticism); someone who is inventive (Openness to experience).

Procedure

The researcher approached the participants in their various classes after obtaining permission from the heads of the departments of Psychology, Mass Communication, Political Science and English of the faculty of Social Sciences and Humanities, Ebonyi State University, Abakaliki. The permission of the participants was sought through informed consent that they fill and sign indicating their willingness to participate in the study. Anonymity and confidentiality of the data was emphasized in the instructions. Participants were informed that participation is voluntary, free to withdraw at any time, and that the informed consent form they signed indicates their willingness to participate in the study. A research assistant was recruited and trained by the researcher for the purpose of the study and on the mode of administering and collecting the questionnaire, in order to avoid having too many abnormalities in form of incomplete filling or arbitrary answers. The researcher and research assistant were introduced at the introductory part of the questionnaire which provides the researchers opportunity to create rapport with the participants. The participants were educated on the proper format of responding to the items to minimize the number of questionnaires to be discarded or abnormality. Participants were requested to complete the questionnaire and return them directly to the researcher or research assistant. The questionnaires were administered to the participants physically in their classrooms. A total of two hundred (200) copies of the questionnaire were produced but one hundred and ninety-three (193)were administered to the participants with the help of the research assistant. Fifty questionnaires were administered in each Department (Psychology, Mass Communication, Political Science and English). The questionnaires were cross checked for abnormalities before they are used for data analysis. Participants were thanked for contributing to knowledge, and equally debriefed on the essence of the study. Raw scores were obtained from the participants on the demographics such as gender, age, religion and marital status. Scores on gender was coded as: 1 for males, 2 for females. Age was not coded – participants indicated their real ages. Religion was coded as; 1 = Christian, 2 = Islam, 3 = ATR, and 4 = Others, which they were told to indicate on the space provided. Under the Ethical Guidelines of The Ebonyi State University, Abakaliki, Psychology department, participants' identity was maintained at all times, and no information was disclosed to anybody other than the researcher.

Design/Statistics

The design of the study is cross-sectional design – a non-causal method of obtaining data from a population, or a representative subset, at a specific point in time (Schmidt, & Kohlmann, 2008). Data obtained from participants were analyzed using regression and moderation. Regression was used to test the first three hypotheses while moderation analysis was used to test the fourth hypothesis. Hayes Regression-Based Macro PROCESS for SPSS was employed



for the analysis. The statistics enabled the researcher to test the moderating relationships between the variables (Eze, Ifeagwazi, &Chukwuorji, 2020).

Results

The researcher presents analysis of data obtained from participants, and result interpretations. Descriptive statistics (frequencies, mean and standard deviation) and correlations among the study variables are presented in table one. In table two, results of the Hierarchical Multiple Regression conducted to test the hypotheses was presented. The dependent variable for the analyzed result is eyewitness testimony. The variables were entered into the equation in models. In the first model of the equation, demographic variables (gender, age, and religion) were entered in order to control for the likely impact they may have on eyewitness testimony of the participants. The five personality traits were entered in model 2 of the equation, while core self-evaluation was entered in model3 of the equation, all in a bid to test their predictive roles on eyewitness testimony of participants.

Table 1: Correlations of demographic variables (gender, age and religion), personality traits (extraversion, agreeableness, conscientiousness, neuroticism, & openness), ASSIST

and evewitness testimony. 3 4 7 Variables SD 5 6 8 9 \mathbf{M} 10 1 Gender 1.61 .49 2 22.23 3.26 -.30*** Age Religion -.15** 3 1.15 .53 .17** 4 -.07 Extraversion 27.86 5.13 .04 -.11 .43*** 5 Agreeableness 27.30 6.24 .05 -.13* -.09 29.47 21** Conscientious 6.45 .04 -.06 -.07 26*** 6 ness 7 .05 .07 -.02 .25*** .21** .27*** Neuroticism 28.46 6.86 .25*** Openness to 36.73 7.41 .07 .09 -.09 .25*** 8 Experience 9 **ASSIST** 44.41 -.09 .01 -.06 .10 .09 .09 .13 .09 26.29 Eyewitness 98.17 16.32 -.05 -.10 -.11 .09 .08 -.01 .01 .06 .07 -10 **Testimony**

Result of table one above showed that the demographic variables gender (r = -.05), age (r = -.10) and religion (r = -.11) were not significantly related to eyewitness testimony. The five personality traits extraversion (r = .09), agreeableness (r = .08), conscientiousness (r = -.01), neuroticism (r = .01), and openness to experience (r = .06) were not significantly related to eyewitness testimony. ASSIST has significant relationship with eyewitness testimony of participants (r = .07). Gender was negatively significantly related to age (r = -.30, p<.001), and religion (r = -.15, p<.01). Age was positively significantly related to religion (r = .17, p<.001) and negatively related to agreeableness (r = -.13, p<.05). Extraversion was significantly related to agreeableness (r = .43, p<.001), conscientiousness (r = .26, p<.001), neuroticism (r = .25,

^{***}p < .001; **p < .01, *p < .05



p<.001) and openness (r = .28, p<.001). Agreeableness was significantly related to conscientiousness (r = .21, p<.01), neuroticism (r = .21, p<.01) and openness (r = .25, p<.001). Conscientiousness was significantly related to neuroticism (r = .27, p<.001) and openness (r = .25, p<.001). Neuroticism was significantly related to openness (r = .41, p<.001).

Table 2: Hierarchical multiple regression predicting eyewitness testimony from Personality traits (extraversion, agreeableness, conscientiousness, neuroticism and openness) and ASSIST

Variables	Model 1	Model 2	Model 3
Gender	09	10	09
Age	11	11	11
Religion	10	10	09
Extraversion		.06	.08
Agreeableness		.03	.02
Conscientiousness		05	05
Neuroticism		01	02
Openness to Experience		.06	.06
ASSIST			.05
R	.16	.19	.20
\mathbb{R}^2	.03	.04	.04
R ² change	.03	.01	.003
F value	F(3,189)=.17	F(8, 184) = .53	F(9, 183)=.57

Note: *=p<.05

The results of the Hierarchical Multiple Regression in table 2 above indicated that the demographics, gender (β = -.09, p> .05), age (β = -.11, p> .05) and religion(β = -.10, p> .05) were not significant predictors of eyewitness testimony among the participants. The demographic variables accounted for none significant 16% impact as predictors of eyewitness testimony (R^2 = .16). The five personality traits extraversion(β = .06, p> .05), agreeableness(β = .03, p> .05), conscientiousness(β = -.05, p> .05), neuroticism (β = -.01, p> .05)and openness to experience (β = .06, p> .05)entered in model 2 of the equation were not significant predictors of eyewitness testimony. They accounted for non-significant less than 1% variance in predicting eyewitness testimony among the participants (ΔR^2 = .01, p> .05). ASSIST entered in model 3 did significantly predict eyewitness testimony among the participants. It accounted for non-significant less than 1% variance in predicting eyewitness testimony among the participants (ΔR^2 = .003, p> .05). Therefore, the personality traits and core self-evaluation were indicated not to be potential factors that can explain eyewitness testimony.



Discussion

This study discusses the analysis conducted on the data obtained from the participants. With data from One hundred and ninety-three respondents, the goal of the questionnaire was to look closely at the variables and evaluate whether personality traits will significantly play a role in eyewitness testimony; and especially in the presence of self- evaluation as moderator. The study showed that amongst the five personality traits studied, extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience were not significantly related to eyewitness testimony. Drug abuse has significant relationship with eyewitness testimony of participants. Therefore, the personality traits were indicated not to be potential factors that can explain eyewitness testimony while drug abuse has potential impact to explain eyewitness testimony. Similarly, developing the attributes of strong work or business ethics as well as total commitment among Nigerians promotes eyewitness testimony that can enhance judicial and forensic investigations.

Summary of Findings

- 1. Gender, age and religion were not significantly related to eyewitness testimony.
- 2. Self-efficacy was positively significantly related to academic performance among undergraduate of Ebonyi State University.
- 3. The five personality traits extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience were not significantly related to eyewitness testimony.
- 4. Drug Abuse has significant relationship with eyewitness testimony of participants.
- 5. Demographics, gender, age and religion were not significant predictors of eyewitness testimony among the participants.
- 6. The five personality traits extraversion, agreeableness, conscientiousness, neuroticism and openness to experience were not significant predictors of eyewitness testimony.
- 7. Drug Abuse did significantly predict eyewitness testimony among the participants

Implication of the Finding

The findings from this study help forensic experts to understand to what extent they can utilize personality attributes in getting accurate eyewitness. Forensic researchers can equally benefit by doing further investigations maybe experimental on personality and the moderator – Drug Abuse in order to gain more understanding of their usefulness. The judicial system of the country will through the findings of this research become more ardent investigating eyewitness testimony presented to them by any legal practitioner (Lawyers and other criminal investigators) in order to avoid irredeemable errors. It expose the previous research conducted by other scholars who assert that personality and Drug abuse play significant roles in eyewitness testimony among Nigerians. Judges, the government and the members of the public would understand the potential roles of some personality traits in forensic investigations and crime control, and how to drug abuse has negatively impacted on Nigerians from been able to give accurate eyewitness testimony that can fight crimes and criminality like corruption and other social vices taking place every day in Nigeria at different region and culture.

Limitation of the Study

The recent strike embarks on by Academic Staff Union of Universities in Nigeria possess a lot of hitch as many universities are closed. Also, the increased crime rates like kidnapping,



robbery and killings in Nigeria limited movements from one part to another. It is henceforth necessary to conduct similar studies in all regions or states of Nigeria to get a broader understanding of the population's attitude in eyewitness testimony and whether same personality traits play similar roles. Funds also constitute hitches as the researcher was limited by the scope it would have cover, if there were grant available for this study. The analysis of this research was conducted with few respondents (n = 193) from only one state and university amidst the different regions of Nigeria and numerous schools.

Suggestions for Further Studies

The researchers strongly suggest that further research on this topic should be carried out in wider scope by other researchers as the research was conducted with few respondents (N=193) from only one state and a university among the different regions of the country and numerous schools. Having assessed the correlation between drug abuse and personality on antecedents of eyewitness testimony, and subsequently through this study discovered that there were no significant relationship and that personality did not moderate the eyewitness testimony. Researchers in forensic psychology are charged to come up with more accurate measure in finding lasting solution for the inaccuracy in dispensing of judgment in the Nigeria Judicial System.

References

- Andersen, S. M., Carlson, C. A., Carlson, M. A., & Gronlund, S. D. (2014). Individual differences predict eyewitness identification performance. *Personality and Individual Differences*, 60, 36–40. https://doi.org/10.1016/j.paid.2013.12.011
- Areh, I., &Umek, P. (2004). *Personal Characteristics and Validity of Eyewitness Testimony*. From Policing in Central and Eastern Europe: Dilemmas of Contemporary Criminal Justice, 355-359.
- Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge University Press.
- Brainerd, C. J., & Reyna, V. F. (2002). Fuzzy-trace theory and false memory. Current Directions in Psychological Science, 11, 164–169. 10.1111/1467-8721.00192 [CrossRef] [Google Scholar]
- Brewer, N., & Burke, A. (2002). Effects of testimonial inconsistencies and eyewitness confidence on mock-juror judgments. Law and Human Behavior, 26, 353–364. 10.1023/a:1015380522722 [PubMed] [CrossRef] [Google
- Brühl, C., Schmidt, T., Pieper, S. *et al.*(2013). Terrestrial pesticide exposure of amphibians: An underestimated cause of global decline? *Science Representing* 3, 1135 (2013). https://doi.org/10.1038/srep01135.



- Caputo, D., & Dunning, D. (2007). Distinguishing accurate identifications from erroneous ones: Post-dictive indicators of eyewitness accuracy. In *The Handbook of Eyewitness Psychology: Volume II* (pp. 441-464). Psychology Press.
- Clark, J. M.,&Paivio, A. (1991). Dual coding theory and education. *Educational Psychology Review*, 3(3), 149-170.
- Cropley, A. J. (2019). Qualitative research methods: A practice-oriented introduction for students of psychology and education. Riga, Latvia: Zinātne. (open access doi: 10.13140/RG.2.1.3095.6888).
- Curley, L. J., MacLean, R., & Murray, J. (2017). The relationship between the big 5 personality traits and eyewitness recognition. *Journal of Articles in Support of the Null Hypothesis*, 13(2), 1539-8714
- DePaulo, B. M., Lindsay, J. L., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological Bulletin*, 129, 74–118. doi: 10.1037/0033-2909.129.1.74
- Etkin, A. (2010). Functional neuroanatomy of anxiety: A neural circuit perspective. *Current Topical Behavioural Neuroscience*, 2, 251-77. doi: 10.1007/7854_2009_5.
- Etkin, A.,&Wager, T. D (2007). Functional neuroimaging of anxiety: A meta-analysis of emotional processing in PTSD, social anxiety disorder, and specific phobia. *American Journal of Psychiatry*, 164(10), 1476-88.doi: 10.1176/appi.ajp.2007.07030504.
- Eysenck, H.J. (1967). The biological basis of personality. Thomas: Spring-field, Ill.
- Eysenck, M. W. (2006). Fundamentals of cognition. Psychology Press/Taylor & Francis (UK).
- Fas, N., Page, A., Serfaty, C., Tai, V., & Winkler, C. (2008). Speaker overestimation of communication effectiveness and fear of negative evaluation: Being realistic is unrealistic. Psychonomic Bulletin & Review, 15(6): 1160–1165. doi:10.3758/pbr.15.6.1160.
- Frenda, S. J., Nichols, R. M., & Loftus, E. F. (2011). Current issues and advances in misinformation research. *Current Directions in Psychological Science*, 20(1), 20–23. https://doi.org/10.1177/0963721410396620
- Gabbert, F., Memon, A., Allan, K., & Wright, D. B. (2004). Say it to my face: examining the effects of socially encountered misinformation. *Legal and Criminological Psychology*, 9(2), 215-227. https://doi.org/10.1348/1355325041719428
- Garrett, B. (2011). *Convicting the Innocent*. Cambridge: Harvard University Press. doi: 10.4159/harvard.9780674060982



- Głomb, K. (2022). How to improve eyewitness testimony research: theoretical and methodological concerns about experiments on the impact of emotions on memory performance. *Psychological Research*, 86, 1–11 (2022). https://doi.org/10.1007/s00426-021-01488-4
- Innocence project (2018). Innocence project. Available at: https://www.innocenceproject.org/
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The big-five inventory-version 4a and 54*. Berkeley, CA: Berkeley Institute of Personality and Social Research, University of California.
- Laney, C. & Loftus, E. F. (2013). Eyewitness testimony and memory biases. In R. Biswas-Diener & E. Diener (Eds), *Noba textbook series: Psychology*. Champaign, IL: DEF publishers. DOI: nobaproject.com.
- Laney, C., & Loftus, E. F. (2008). Emotional content of true and false memories. *Memory*, 16, 500–516.
- Liebman, J. I., Mckinley, M., Leonard, A. M., Sheesley, L. A., Gallant, C. L., Renkey, M. E., & Lehman, E. B. (2002). Cognitive and psychosocial correlates of adults' eyewitness accuracy and suggestibility. *Personality and Individual Differences* 33(1), 49-66. DOI: 10.1016/S0191-8869(01)00135-0
- Lindholm, T. (2005). Group-based biases and validity in eyewitness credibility judgments: examining effects of witness ethnicity and presentation modality. *Journal of Applied Social Psychology*, 35, 1474–1501. doi: 10.1111/j.1559-1816.2005.tb02180.x
- Loftus, E. F. (2005). Planting misinformation in the human mind: A 30-year investigation of the malleability of memory. *Learning & memory (Cold Spring Harbor, N.Y.)* 12(4):361-6. DOI: 10.1101/lm.94705
- Loftus, E. F. (2019). Eyewitness testimony. *Cognitive Psychology*, 33(4), 498-503. https://doi.org/10.1002/acp.3542
- Madsen, K., & Holmberg, U. (2015). Interviewees' psychological well-being in investigative interviews: A therapeutic jurisprudential approach. *Psychiatry, Psychology and Law,* 22(1), 60–74. https://doi.org/10.1080/13218719.2014.918083.
- Mansell, W., Clark, D. M., Ehlers, A., & Chen, Y.P. (1999). Social anxiety and attention away from emotional faces. *Cognition and Emotion*, *13*(6), 673–690. https://doi.org/10.1080/026999399379032
- Marr, C., Otgaar, H., Sauerland, M., Quaedflieg, C., & Hope, L. (2021). The effects of stress on eyewitness memory: A survey of memory experts and laypeople. *Memory & cognition*, 49(3), 401–421. https://doi.org/10.3758/s13421-020-01115-4



- McDougall, S., & Pfeifer, G. (2012). Personality differences in mental imagery and the effects on verbal memory. *British Journal of Psychology*, 103(4), 556–573. https://doi.org/10.1111/j.2044-8295.2011.02094.x
- McLeod, S. (2018). *Piaget's theory and stages of cognitive development*. Developmental Psychology, Simply Psychology.
- McLeod, S. A. (2018). *Eyewitness testimony*. Simply Psychology. www.simplypsychology.org/eyewitness-testimony.html
- Mesagno, Christopher; J. Harvey; C. Janelle (2012). Choking under pressure: The role of fear of negative evaluation. Psychology of Sport & Exercise, 13(1), 60–68. doi:10.1016/j.psychsport.2011.07.007.
- Mesárošová, B., Hajdúk, M., &Heretik, A., Jr. (2014). Rezilienciaakočrta a výsledok v proceseprijímacíchpohovorovuchádzačov o štúdium v odborepsychológia [Resilience as the trait and the result in the process of entrance exams of candidates for the study of psychology]. ČeskoslovenskáPsychologie: Časopis Pro PsychologickouTeorii a Praxi, 58(4), 340–354.
- Morrison, A. S.,&Heimberg, R. G. (2013). Social anxiety and social anxiety disorder. *Annual Review of Clinical Psychology* 9(1):249-74. DOI: 10.1146/annurev-clinpsy-050212-185631
- National Academy of Sciences (2014). Identifying the culprit: Assessing eyewitness identification. Washington, DC: The National Academies Press. [Google Scholar]
- Pajon, L., & Walsh, D. (2017). Examining the effects of violence and personality on eyewitness memory. *Psychiatry*, *Psychology and Law*, 24(6), 923–935, https://doi.org/10.1080/13218719.2017.1327313
- Penny, M. P., Ian, S. H., Jodi, D. E., Luke, C. H., & Bradley, G. G. (2007). Neural Correlates of Concreteness in Semantic Categorization. *Journal of Cognitive Neuroscience* 19(8), 1407–1419
- Rapee, R. M., & Spence, S. H. (2004). The etiology of social phobia: Empirical evidence and an initial model. *Clinical psychology review*, 24(7), 737-767.
- Rasmussen., A. S. & Berntsen, D.(2010). Personality traits and autobiographical memory: Openness is positively related to the experience and usage of recollections. *Memory*, 18(7), 774-86.doi: 10.1080/09658211.2010.514270.
- Saraiva, R. B., van Boeijen, I. M., Hope, L., Horselenberg, R., Sauerland, M., &Koppen, P. J. (2019). Development and validation of the Eyewitness Metamemory Scale. *Applied Cognitive Psychology*, *33*(5), 964–973. https://doi.org/10.1002/acp.3588



- Saunders, M.N.K., Lewis, P.,& Thornhill, A. (2019). *Research methods for business students*. 8th Edition, Pearson, New York.
- Schmidt, C. O., & Kohlmann, T.(2008). When to use the odds ratio or the relative risk? *International Journal of Public Health* 53(3), 165-7. doi: 10.1007/s00038-008-7068-3.
- Sporer, S. L. (2007). Evaluating witness evidence: The fallacies of intuition. In C. Engel, & F. Strack (Eds.), *The impact of court procedure on the psychology of judicial decision making* (pp. 111-150). Baden-Baden, Germany: Nomos Verlag.
- Sporer, S., & Schwandt, B. (2006). Paraverbal indicators of deception: A meta-analytic synthesis. *Appl. Cogn. Psychol.* 20, 421–446. doi: 10.1002/acp.1190
- Stein, M. B., Jang, K. L., &Livesley, W. J. (2002). Heritability of social anxiety-related concerns and personality characteristics: A twin study. *Journal of Nervous and Mental Disease*, 190(4), 219–224. https://doi.org/10.1097/00005053-200204000-00002
- Vrij, A., Fisher, R. P., & Blank, H. (2017). A cognitive approach to lie detection: A meta-analysis. *Legal Criminology Psychology*22, 1–21. doi: 10.1111/lcrp.12088
- Wells, G. L., Memon, A., & Penrod, S. D. (2006). Eyewitness evidence: Improving its probative value. *Psychological Science Public International*, 7, 45–75. doi: 10.1111/j.1529-1006.2006.00027.x
- Wright, D. B., Memon, Amina; Skagerberg, Elin, M., & Gabbert, F. (2009). When eyewitnesses talk (PDF). Current Directions in Psychological Science, 18(3), 174–178. doi:10.1111/j.1467-8721.2009.01631.x.
- Yilmaz, A. S. (2016). Eyewitness memory: how stress and situational factors affect eyewitness recall. A thesis Presented to the Department of Psychology and the Robert D. Clark Honors College in partial fulfillment of the requirements for the degree of Bachelor of Science