

EXAMINING DRUG USE STIGMA: CONSIDERATIONS FROM RACE AND
DRUG TYPE

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BY

ALESSIA DAL MONTE

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DEDICATION

Say their names.

ABSTRACT

ALESSIA DAL MONTE

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Despite data showing 80% of crack defendants to be Black while 66% of those who use crack are White or Hispanic, a gap exists in academic understanding of drug use stigma related to racialized drug types. For this reason, this study examines the public stigma of drug use in a diverse sample to find main and interaction effects for people who use drugs' (PWUD) race, PWUD's drug type preference, and the race of the stigma endorser. Three hundred and eight predominantly women participants (95.5%) were randomly assigned to one of six target PWUD conditions: PWUD race/ethnicity (White or Black) and drug type preference (marijuana, powder cocaine, or crack cocaine). Respondents completed the demographic questionnaire, Exposure to Drug Users Index, and three separate drug use stigma measures: Social Distance Scale for Substance Users (SDS-SU), Affect Scale for Substance Users (AS-SU), and Attribution Questionnaire (AQ-9). Three (2x3x7) ANCOVAs were conducted for each of the drug use stigma measures including the vignette PWUD's race, their drug type preference, and the respondent's race as independent variables, while controlling for exposure to PWUD. There was a significant main effect for drug type and interaction effect between PWUD

and respondent's race on the SDS-SU. The AS-SU also showed a significant interaction effect between PWUD and respondent's races in addition to a significant main effect for race of the respondent. The AQ-9 showed a significant interaction effect between PWUD's race and drug type preference. The results suggest shifting views of powder and crack cocaine, underlying racial tensions due to drug use, and negative appraisals stemming from racially stereotypical drug use. These results can help build the understanding of covert racism tied to drug use and potential interactions with other PWUD and stigma endorser attributes that may reveal the explicit impact of race on public drug use stigma.

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CHAPTER I

INTRODUCTION

Despite 52.1% of adult Americans reporting any illicit substance use, drug use has been cited by the World Health Organization (WHO) as the most stigmatized of social identities (Pescosolido et al., 2010). Stigma, defined as an attribute attaching the stigmatized to unwanted stereotypes, helps inform emotional and behavioral reactions towards specific social groups, frequently resulting in prejudice or discrimination (Link & Phelan, 2001). In spite of drug use's prevalence and stigma's salience, research into the effects of drug use stigma is relatively scarce compared to the expanse of other stigma literature. Additionally, drug use stigma does not operate in isolation from other forms of prejudice or discrimination. Disparate arrest and sentencing rates between Black and White defendants point to an intersection between race and drug use stigma for people who use drugs (PWUD; Mitchell & Caudy, 2013; Tyler & Brockman, 2017). Further, academics theorize that these differences are largely supported by public policy like mandatory minimums (Geller & Fagan, 2010; Tonry, 2011). More specifically, crack cocaine, which has been depicted by the media as being related to urban areas and Black users, has received much harsher sanctions under mandatory minimums than its psychopharmacological relative, powdered cocaine (Tyler & Brockman., 2017).

Despite evidence of a relationship between drug use stigma and racial prejudice, race has rarely been studied in relation to drug use stigma. Further, to the researcher's knowledge, no study has compared stigma toward crack cocaine and powdered cocaine

directly, rather choosing to focus on one or the other. With the racialized nature of crack and powder cocaine in mind, the interaction of race and drug type may impact individual assessments of drug use stigma endorsement. To illustrate the need for intersectional drug use stigma research, especially in the context of racialized drug types, three topics are covered. First, the definition and components of stigma is provided, as well as the individual and systemic outcomes of public stigma. Next, drug use stigma is discussed more specifically, focusing on the moralized view of drug use and its consequences. Lastly, this thesis discusses the intersection between drug use and race in public policy and differences in the way it treats crack and powder cocaine.

Conceptualizing Stigma

To understand the nuanced ways in which drug use stigma may affect the individual, a broader conceptualization of stigma's mechanics is required, including the definition, components, and types of stigma. The most common definition of stigma refers to the pioneering work of Erving Goffman's book *Stigma: Notes on the Management of Spoiled Identity*, which defines stigma as an "attribute that is deeply discrediting," reducing the attribute owner "from a whole and usual person to a tainted, discounted one" (Goffman 1963, p. 3). As the understanding of stigma has evolved, researchers have identified components of stigma and different types of stigma, which better define the mechanics and outcomes of stigma.

Components

Link et al. (2004) identified six components of stigma, and like other stigmatized identities, each component is evident for drug use stigma and a PWUD. First, stigma

supports the labeling of differences: for PWUD, labels like “addict” or “crackhead” may determine the level of stigma an individual may experience (Cunningham et al., 2015). Second, stigma acts as a link tying the stigma bearer to stereotypes. Stereotypes help inform others of a person’s public social identity derived from predisposed notions of a social group to which they belong (Andersen & Kessing, 2019). For PWUD, “blameworthy” and “dangerous” have often been touted as PWUD attributes (Corrigan et al., 2009; Link et al., 1999). Thirdly, stigma promotes “othering,” a separation of “us” from “them,” evidenced in tendencies for avoidance and support of punitive measures like mandatory minimums (Albrecht et al., 1982; Link et al., 1999). Fourth, stigma causes status loss and discrimination, or the differential treatment of an individual based on social group membership, such as the denial of a job or housing opportunity (Young et al., 2005). Next is the emotional component of stigma that includes emotional reactions to stigmatizing characteristics, such as fear or anger (Sattler et al., 2017). Lastly, Link and Phelan (2001) suggest that stigma depends on access to social, economic, and political power as seen with the war on drugs largely affecting people of lower SES (Link, et al., 2004; Mitchell & Caudy, 2013).

Public Stigma

In addition to conceptualizing the components of stigma, researchers have delineated different types of stigma including public, enacted, perceived, and self-stigmas. Each encompasses a different aspect of stigma experience. The current study focuses on public stigma, or the public endorsement of stereotypes and negative attitudes toward specific social groups. Public stigma is particularly appropriate for impactful

intersectional research as it is salient to systemic issues stemming from stereotyping and discrimination. Further, stereotyping and discriminatory actions can become internalized as self-stigma, in which a person begins to believe they fit into these negative stereotypes and are deserving of discrimination (Link et al., 2004; Palamar, et al., 2011).

Stereotyping

Public stigma is informative to the general public of stereotypes related to drug use, impacting the attitudes and beliefs of individuals interacting with PWUD (Corrigan, 2004). For example, stereotypes related to PWUD's controllability, morality, willpower, consequences, and accountability have all been readily circulated (Witte et al., 2019). In a study testing the impact of stereotype confirmation on drug use stigma scores, Witte et al., (2019) found that vignettes displaying a lack of will power, a lack of accountability and continued drug use despite negative consequences, resulted in greater negative affective reactions, greater desire for social distance, and greater negative judgement. The negative attitudes resulting from stereotype confirmation highlights the function of public stigma in validating the ill-treatment of PWUD.

Discrimination

By influencing attitudes toward PWUD, public stigma provides a framework by which individuals in the public interact with PWUD. Research suggests stereotypes may influence behavioral intentions toward the stigmatized, resulting in discrimination (Cunningham et al., 2015; Kelly & Westerhoff, 2010). For example, Kelly and Westerhoff (2010) found respondents who believed a vignette PWUD to be personally culpable for their drug use were more likely to support punitive over therapeutic

responses to drug use, demonstrating the relationship between the stereotype of culpability and discrimination. Further, Barry et al.'s (2014) study that participants endorsed more negative attitudes toward drug use compared to other mental illnesses while also being more likely to endorse a willingness to accept discriminatory practices against PWUD and reject public policies aimed at helping them.

These discriminatory actions are especially detrimental when they come from employers, landlords, and health care professionals, which can result in the denial of jobs, housing, or health care, having a profound and pervasive effect on the stigmatized. In fact, Barry et al.'s (2014) research shows that a majority of respondents believed employers should be allowed to deny employment based on PWUD status (64%) and landlords should be allowed to deny housing (54%). Relatedly, negative views of PWUD result in an overall decrease in general helping behavior, such as babysitting for, or giving a ride to PWUD, further isolating them from social support networks (Corrigan et al., 2009). Further, public stigma has been shown to be related to internalized self-stigma, suggesting that the increases in negative social interactions may cause an individual to believe the stereotypes being circulated about PWUD and to accept discriminatory action as warranted. Consequently, increased discrimination experiences have been shown to increase odds of mental health issues and poor wellbeing (Couto e Cruz et al., 2018).

Drug Use Stigma

After reviewing the definition, the components, and the types of stigma, a fuller picture emerges showing the pathways to the broad negative outcomes of stigma. This understanding helps shape the framework for the current study and clarify the

implications of the findings. As stated, this study examines public perceptions of PWUD due to broad implications for stereotyping and discrimination leading to systemic disadvantages. A closer look at drug use from the general public's perspective illustrates the way moralized views of drug use may affect perceptions of PWUD. With the outcomes of stereotyping and discrimination in mind, this study considers the public stigma of drug use.

Public Perceptions of Drug Use

Despite efforts to medicalize addiction, PWUD are still subject to highly moralizing attitudes (Murphy, 2017). The moralization of drug use stems from the assumption that drug use is a choice and that this choice is a sign of weak will, lack of morals, or other character flaws (Murphy, 2017). Further, research has shown associations between moral views of drug use and increases in stigmatizing attitudes (Henderson & Dressler, 2017). This suggests that drug use PSAs in the United States, largely funded by the federal government, have perpetuated stigma by portraying PWUD as immoral, dangerous, funding terrorism, and lacking self-control (Murphy, 2017).

The public perception of drug use parallels these PSAs as seen in the nationally representative sample of the General Social Survey (GSS; Barry et al., 2014; Corrigan et al., 2009; Link et al., 1999; Pescolido et al., 2010). Respondents rated dangerousness, social distance, causes, and dangerousness of five vignettes depicting either a physical disability or one of four disorders—schizophrenia, depression, alcohol-dependence, or drug-dependence—as defined by the DSM-IV. Of the five conditions assigned to the vignette characters, cocaine dependence was viewed the most negatively, with increased

perceptions of risk for violence and an increased desire for social distance (Link et al., 1999). Further, “bad character” was commonly endorsed as the cause of cocaine dependence (Link et al., 1999). It would also appear that these trends are relatively consistent, as Pescosolido et al. (2010) compared the GSS taken in 1996 and 2006 and found them to be stable.

Other studies have repeatedly found data that matched that of the GSS. Schomerus et al. (2011) conducted a review of 33 studies comparing substance dependence to other non-substance related mental illness. In their review of public judgement of dangerousness and unpredictability, they discovered drug addiction to elicit the worst judgement, similar to or worse than Schizophrenia and worse than alcohol dependence. Additionally, Schomerus et al. (2011) consistently found that both alcohol and drug dependence were assessed to be significantly more responsible for their condition than both Schizophrenia and Depression, with drug dependence receiving the most blame (68% compared to alcohol’s 60%). Schomerus et al. (2011) also analyzed desire for social distance from substance dependent persons. Of the six studies concerned with social distance, Schomerus et al. (2011) found comparable results to the rank ordering of blame, with drug dependence receiving the most rejection, followed by alcohol dependence, and then schizophrenia and depression. Differences in desire for social distance were found to be even stronger for substance dependency when compared to various medical diseases including cancer, myocardial infarction, diabetes, rheumatism, and AIDS, as well as 12 minority groups in Europe (Schomerus et al., 2011).

Intersection Between Race and Drug Use Stigma

While drug use alone is highly stigmatized, research should consider this issue in conjunction with other stigmatized identities. By considering cases from the margins, research may elucidate issues in academic and political discourse previously unknown from more general studies. Intersectionality acknowledges within-group differences that can affect marginalization or the denial of access to economic, political, cultural, and social opportunities based on membership to specific social groups (Crenshaw, 1991). For any single person who uses drugs, discrimination may be based primarily on drug use, but their experience is ultimately also shaped by their other identities such as gender, class, or race, resulting in fundamentally different experiences of drug use stigma. Without studying these differences specifically, intra-group differences may be glossed over. Young et al.'s (2005) research shows that with every additional stigmatizing category an individual belongs to they are subject to greater odds of mental and physical health issues. Not only does this study show stigma to be detrimental to the health of the individual, but it also points to the importance of intersectional research. For this reason, this section has an intersectional focus by providing the outcomes of having multiple marginalized identities: specifically, the individual health risks and the added risk of arrest for those who are Black and who uses drugs. Next, this section provides the historical context of disparate arrest rates for Black Americans and the war on drugs. Finally, the cause of racially disparate arrest rates are placed in the context of the disparate treatments of powder and crack cocaine.

Two Marginalized Identities

When considered independently, both racial and drug use discriminations have multiple, measurable, adverse effects on an individual's physical and mental health. Discrimination based on racial or ethnic identity is related to increased levels of stress, anxiety, and depression, and increased risk for breast cancer and diabetes (Banks et al., 2006; Crouter et al., 2006; Piette et al., 2006; Steffen et al., 2003; Phelan et al., 2014). Meanwhile, discrimination based on drug use is associated with increased levels of depression and more self-reported chronic medical conditions (Minior et al., 2003; Young et al., 2005).

While exposure to just one type of stigma has a significant impact on health, the intersectionality framework encourages researchers to consider multiple stigmas together. Essentially, individual stigmas are not experienced in isolation. Consider that minority PWUD reported rejection from friends, family, medical personnel, potential employers and landlords, and differential treatment from police officers based on drug use. Meanwhile, they also report rejection from medical personnel, potential employers, landlords, and differential treatment from the police based on their race, spared only in the family and friends' domains (Minior et al., 2003). The increased rate of discrimination experience drawn from both racial and drug use stigmas can result in higher levels of internalized self-stigma. Subsequently, internalized stigma is related to decreased comfort in treatment groups, increased drug and alcohol use, increased dependence severity, and increased experience of depressive symptoms (von Hippel, et al., 2017; Kulesza, Ramsey et al., 2014). Without considering intersectionality and the

multiple identities that might individually and collectively impact the experience of stigma, these worsened outcomes might be overlooked. Further, past research has suggested that some aspects of drug use stigma may be moderated by other identities such as race or sex (Kulesza et al., 2016). This research suggests that in order to understand the lived experience of individual PWUD, these other identities must be taken into consideration.

Arrest Disparities

While the combination of racial and drug use stigma can have serious health repercussions on the individual level, consider the systemic issues subject to the combined effect of both stigmas. While attitudes toward overt racism are typically negative, systems like healthcare, media, and public policy still have vestiges of prejudicial and discriminatory components towards PWUD, resulting in systemic disadvantages for specific races (Mitchell & Caudy, 2013). Specifically, arrest and sentencing disparities for drug related charges serve as an example of the intersection between the ill feelings toward PWUD and Black lives and begs for further research. African Americans make up approximately 13% of the US population but comprise 39% of those with federal sentences for drug offenses, 3 times the expected rate (Fielding-Miller et al., 2020). Meanwhile White Americans make up approximately 77% of the US population and account for 22% of federal drug sentences. In fact, the American Civil Liberties Union (ACLU) and the Drug Policy Alliance (DPA), report that African Americans comprise only 15% of regular PWUD, but represent 37% of individuals

arrested, 59% of those convicted, and 74% of those sentenced to prison for drug offenses (Palamar et al., 2015).

Despite differences in arrest rates, research suggests there are very few drug use or trafficking differences between races. Mitchell and Caudy (2013) investigated the racial disparity in arrest rates from a national sample. Despite small differences in drug use, drug distribution, non-drug offending, or concentration of drugs related to neighborhood socioeconomic status and crime rates—any of which could potentially increase contact with police—the combination of these still could not explain the disparity in drug arrest rates (Mitchell & Caudy, 2013). Ultimately, Mitchell and Caudy (2013) discovered 85% of racial disparity in drug arrests between White and Black people is not attributable to race differences in drug and non-drug offending.

Aggravated drug arrest rates among youth in White neighborhoods serve as additional evidence of inequality. Data shows that roughly the same number of White youth report drug use, and more White youth have reported selling illicit substances (17%), compared to Black youth (12%; Hart, 2013). Despite similar usage rates to White youth, Black youth face drug-related charges at 5 times the rate as White youth. The implications of these arrest rates continue to affect these youth by marking the start of a relationship with the criminal system. After an initial arrest, incarcerated teens' potential for subsequent incarceration increases three-fold compared to non-incarcerated teens (Substance Abuse and Mental Health Services Administration, 2020). This increase in potential incarceration begins a cycle that impedes vocational outcomes, housing options, health care services, and acquisition of relevant life skills. Further, research has shown

that the disparity between Black and White people's arrest rates are exacerbated in White neighborhoods, where the likelihood of a drug arrest for Black people was exponentially related to population ratios (Fielding-Miller, et al., 2016).

Historical Context

This systemic issue did not emerge from any single point in American history, but rather has been the culmination of different aspects of American social and political developments. America has a long history of associating illegal substance use with people of color (Hart, 2013). Additionally, this association was coupled with implications of danger, stoking White fear of drug use, particularly of minority drug use. Political leaders took advantage of White fear to wage a war on drugs, which was accompanied by alterations to policy and policing. Significantly, these changes to policing philosophy and strategy have been shown to be applied unequally across races (Beckett et al., 2006). Taken in conjunction with sentencing policy changes that levied stern punishments for crimes associated with Black people, America has seen the prison disparity reach a pinnacle. This section examines each of these historic movements in greater detail to elucidate the connection between American disdain for drugs and the Black community.

America has historically associated drug use with people of color. From 1898 to 1914, numerous articles were published in respected media outlets detailing the association of crime and Black American cocaine use (Hart, 2013). The vilification of Black Americans by newspapers was adopted by politicians, who capitalized on White fear to ease the passage of the Harrison Narcotics Tax of 1914. This tax was the first of a long line of drug policy legislation in America shaped by racial associations with drug

use. The demonization of minorities also played a key role in marijuana and opium policy developments, often portraying the minority men as using these drugs to prey on White women (Hart, 2013). These portrayals largely ignore these drugs' psychopharmacology as myths continue to circulate about drug use to serve larger political goals (Hart, 2013).

President Nixon saw the potential of mobilizing the nation against drugs and coined the phrase "war on drugs" in a 1972 address. Years after his impeachment, an advisor to President Nixon confirmed the use of the war on drugs was a means of discrediting the anti-war movement and Black Americans (Drug Policy Alliance, 2016). The same tactics were continued in the 1980s, using political power to capitalize on White fear of crack cocaine and facilitate the new war on drugs (Tonry, 2012). As re-packaged and re-launched by President Ronald Reagan, the war on drugs altered American drug policy to focus on low to mid-level offenders and respond with punitive criminal justice sanctions as a means of reducing drug activity (Mitchell & Caudy, 2013). This policy was a departure from its predecessor under President Nixon, which maintained a focus on international drug trade and prioritized rehabilitation as a drug control mechanism (Mitchell & Caudy, 2013). The lasting consequences of Reagan's war is evidenced in skyrocketed incarceration rates: the number of drug arrests went from just over a half of a million in 1981 to a peak of nearly 1.9 million in 2006, nearly quadrupling (Beckett, 2016). It was during this time that America saw the largest spike in the arrest disparities. For every 1,000 persons, the Black drug arrest rate grew from 6.5 to 29.1, while the White drug arrest rate grew a modest 3.5 to 4.6 (Beckett, 2016).

Racial Differences in Perspectives of Drug Use

The unequal treatment of drug related charges largely affecting the Black community has resulted in a racial gap in punitive attitudes regarding drug laws, with race being a strong predictor of drug policy attitudes (Johnson, 2008; Murphy, 2017). White Americans have a significantly more punitive outlook on drug policy in comparison to Black Americans (Murphy, 2017). Contrastingly, Black Americans are also more likely to endorse the opinion that the government does not spend enough on drug rehabilitation (Nielsen et al., 2010). Mirroring this data, research by Capitano and Herek (1999) shows racial differences in stigma toward injecting drug use with White participants endorsing greater stigma than Black participants. These trends suggest that drug use stigma, and especially racialized drug use stigma, may be influenced by the race of the stigma endorser. Because of the intricate nature of race relations in the United States, it is possible that the attitude gap between White and Black Americans may also be found among non-Black minorities as well, but these trends have yet to be studied. The current study serves as an opportunity to examine the inter-group differences in drug use stigma endorsement as well as interaction between the stigma target and stigma endorser's races.

Policy: Powder vs. Crack

The lack of Black support for punitive justice sanctions for drug crimes is validated as academics theorize that the racial inequities resulting from the war on drugs was largely supported by public policy: specifically, the harsh sanctions placed on the racialized drug crack cocaine (Kautt & Spohn, 2002). The federal 100-to-1 crack to

powder sentencing disparity—as well as the 18-to-1 ratio that replaced it in 2010—exemplifies the way in which crimes associated with the Black population were given the harshest sanctions, resulting in Black citizens bearing the brunt of the war on drugs (Tonry, 2011). Data shows 80% of defendants of crack offenses to be Black while 66% of users are White or Hispanic (Tyler & Brockman, 2017). The combination of mandatory minimums and high arrest rates resulted in aggravated racial disparities in sentencing outcomes, with an average of 11% longer drug sentence for Black defendants before the implementation of mandatory minimums, and an average of 49% longer sentence four years after their implementation (Tyler & Brockman, 2017). Although intended to reflect greater potential for abuse and related social harms of crack cocaine, media associations with unpredictability, violence, and gang involvement of the inner-city may have played a role in the enforcement of crack cocaine mandatory minimums (Tyler & Brockman, 2017; Walker & Mezuk, 2018).

The two forms of cocaine actually have similar physiological and psychoactive effects (Hatsukami, & Fischman, 1996). The difference lies in the route of administration, with smoking and injection being the fastest routes to the brain, resulting in a short-lived but more intense and immediate effect (Samaha et al., 2011). The intense, subjective pleasure derived from smoking crack is said to increase likelihood of addiction, but the law ignores scientific research showing smoking crack cocaine and injecting powder cocaine to have the same effect (Samaha et al., 2011). In fact, according to 2019 Substance Abuse and Mental Health Services Administration (SAMHSA) estimates, out of respondents who had tried crack in their lifetimes, only 8.1% had used in the past year

and 3.9% had used in the past month. Comparatively, of all respondents who had used cocaine in their lifetimes, 13% had used in the past year, and 4.8% had used in the past month. This data suggests that drug use discontinuation is similar between the drugs if not greater for crack cocaine.

Instead of recognizing the similar physiological and psychoactive effects between crack and powder cocaine, media and public officials have chosen to vilify the drug sold at a lower cost in lower socioeconomic status communities. Crack cocaine was inextricably tied to lower socioeconomic status and Black PWUD in the 1980s by major news media outlets. Hartman and Golub (1999) found that between 1985 and 1995, media coverage of crack cocaine concentrated on urban areas. Eighty-eight percent of *New York Times* articles, 95% of *Time* articles, and 100% of *Newsweek* articles concerning crack cocaine focused on crack as an inner-city problem. Class biases and their racial undertones functioned to perpetuate the myth that crack was an urban, minority problem that would become rampant in wealthier, Whiter suburbs, despite already broader use. An analysis conducted on the National Survey on Drug Use and Health (NSDUH) from 2009-2012 shows how these associations were manifested: crack users were at a higher risk of arrest while also tending to be of lower socioeconomic status than powder cocaine users and while Black people were at increased risk for crack use, the risk disappeared when controlling for socioeconomic variables (Palamar et al., 2015).

Despite associations between race and crack cocaine, research has yet to adequately examine the effects of the relationship on drug use stigma. Public stigma may

mirror the biases of public policy, accessing attributions associated with crack to influence the public's perceptions of race, or vice versa. In a review, Kulesza Larmier, and Rao (2014) found mixed results in levels of perceived drug use stigma based on race. As for stigma related to public opinion of PWUD, Kulesza et al. (2016) found only an implicit association between race and inclination to punish rather than help. Although this study provides useful information on the relationship between race and drug use stigma, the study fails to consider the racialized nature of different drug types, particularly differences between crack and powder cocaine.

In summary, public stigma of drug use has resulted in a moralized stance and accepted discriminatory and prejudicial actions toward drug use. This can have a multitude of negative effects on the stigmatized, from systemic marginalization to individual health disparities. While the repercussions of drug use stigma are pervasive, drug use stigma does not operate in isolation from other stigmatized identities. For drug use stigma, race is particularly salient, as Black people are disproportionately affected by drug laws. This stigma is especially concerning when considering the racialized nature of certain drugs like crack cocaine and the role public policy has played in this social group's marginalization. Additionally, past research suggesting racial differences in punitive attitudes to drug use suggests that the race of a stigma endorser may also influence assessments of racialized drug use. Understanding how the moralized views of drug use may be influenced by race and drug type, and how these might interact with stigma endorser attributes, can be important in dismantling the systems producing marginalization.

As illustrated, drug use stigma has a pervasive effect on the stigmatized and drug use stigma remains understudied despite its potential impact. First, the field could use additional information concerning race of both stigma endorsers and stigma targets, and drug use stigma with a review of studies revealing mixed results (Kulesza, Larimer, & Rao, 2014). Additionally, this is the first study of knowledge to compare crack cocaine to powdered cocaine directly. Further, this study expands the understanding of racial influence on drug use stigma by considering racialized drug types in conjunction with race, including interactions with the race of the stigma endorser. This study sought to investigate the following objectives, research questions, and hypotheses.

Objectives

1. To examine the influence of various types of drugs and race on the various assessments of stigma related values
2. To examine covert racism tied to drug use
3. To examine attributes of a stigma endorser that aggravate or mitigate drug use stigma expression

Research Questions

1. Is the endorsement of drug use stigma predicted by the race of a person who uses drugs while controlling for exposure to PWUD?
2. Is the endorsement of drug use stigma predicted by the drug type preference of a person who uses drugs while controlling for exposure to PWUD?

3. Is the endorsement of drug use stigma predicted by the race of the of the stigma endorser while controlling for exposure to PWUD?
4. Is the endorsement of drug use stigma predicted by the interaction between the race of a person who uses drugs and their drug type preference while controlling for exposure to PWUD?
5. Is the endorsement of drug use stigma predicted by the interaction between the race of a stigma endorser and the race of a person who uses drugs while controlling for exposure to PWUD?
6. Does respondents' exposure to PWUD predict the level of endorsement of drug use stigma?

Hypotheses

First, race of PWUD is not expected to have a significant direct effect due to social disapproval of overt racism and social desirability. As for drug type, previous research on differential drug use stigma based on drug type suggests the endorsement of drug use stigma will be predicted by drug type; crack cocaine is expected to elicit the greatest drug use stigma followed by powder cocaine, and then marijuana receiving the least. Race of the stigma endorser is expected to be significantly related to the various stigma measures. Next, the interaction between race of PWUD and drug type is expected to be significantly related to drug use stigma endorsement due to the racialized nature of powder and crack cocaine (Tonry, 2012). The interaction between PWUD's race and stigma endorsers' race is expected to be significantly related to the various stigma measures due to the intricate nature of race relations in America (Johnson, 2008). Lastly,

exposure to PWUD is expected to be significantly related to drug use stigma endorsement and be negatively related to drug use stigma endorsement.

CHAPTER II

METHODOLOGY

Participants

This study employed convenience sampling due to resource restraints. The study materials were entered into Psychdata, a website designed for social science researchers to conduct secure, online surveys. The link to the Psychdata survey was posted to SONA, a cloud-based participant management software that gives students in lower level psychology courses at a predominantly women's university the opportunity to take part in psychological research. Students were able complete the survey in exchange for class credit. Students who chose to participate were able to do so from anywhere with internet access. Each participant read an informed consent which ended with "click continue if you accept," serving as the informed consent agreement.

An a priori power analysis was conducted using G*Power 3.1.9 to determine the minimum sample size required to find statistical significance using a 2 (PWUD Race) x 3 (Drug type) x 7 (Participant's Race) ANCOVA with one covariate, prior exposure to PWUD. With a desired level of power set at .80, an alpha (α) level at .05, and a moderate effect size of .25 (f), it was determined that a minimum of 290 participants were required to ensure adequate power (Cohen, 1988). The initial collection of data resulted in 342 responses.

The data was examined for any incomplete responses and outlier values, and these participants' survey responses were removed from the dataset by listwise deletion. After

cleaning the data for incomplete and outlier responses, the sample totaled 308 participants. The age, gender, and ethnicity of the participants were collected and analyzed for frequencies. The sample, taken from Texas Woman's University, is more diverse in age and ethnicity than the average college population, and is mostly composed of women (Bustamante, 2021; see Table 1). The ethnic composition of the sample was 12.3% Asian, 22.1% Black, 28.9% Hispanic, 30.5% White, and 5.2% two or more races or other. For age, the sample ranged from age 17 to 49 with a mean of 19.98 and median of 18. As for gender, the sample was composed of 95.5% women, 3.6% men, 1% non-binary or other, and no transwomen or transmen (see Table 1).

Table 1

Demographic Data

		Percent	<i>n</i>
Race	Asian	12.3	38
	Black or African American	22.1	68
	Hispanic	28.9	89
	Native Hawaiian/Pacific Islander	1	3
	White	30.5	94
	Two or more races	5.2	16
Gender	Man	3.6	11
	Woman	95.5	294
	Non-Binary/Other	1	3

Procedures

This study intended to examine drug use stigma through a factorial (2x3x7) ANCOVA design, examining main and interaction effects of PWUD's race, PWUD's

drug type preference, and stigma endorser's race, while controlling for previous exposure to drug use. The race of the participants was collected with the demographic questionnaire to be included as an independent variable in the analysis. Participants were randomly assigned to one of six vignette conditions portraying the other two independent variables, PWUD race and their drug type preference. The brief, written vignette depicted a PWUD of one of two races and one of three drug types. Race varied between Black and White. The types of substances included in the current study are marijuana, crack cocaine, and powder cocaine. The vignettes were written specifically for this study and were kept simple, containing only the age, gender, race, and drug preference of a PWUD. Age and gender were added to hide race of PWUD as a variable of interest. By hiding interest in race, this study intended to avoid alterations to responses due to social desirability. Additionally, age (22) and gender (male) of the vignette were kept constant. Respondent's scores for the Exposure to Drug Users Index serve as the covariate.

While focusing on racialized drug types, the salience of race in the United States suggests that there may be some main or interaction effects for the race of the respondent and therefore should also be included in the analysis. Past research has established race as a predictor of support for harsh, punitive responses to drug related charges (Murphy, 2017). White individuals tend to support more punitive responses to drug offenses while Black individuals tend to advocate for more government spending on rehabilitation (Nielsen et al., 2010). While established literature does not encompass intergroup differences for non-Black minorities, the current research intends to expand

understanding of racial interactions on drug use stigma by examining a diverse population.

White and Black PWUD and crack cocaine and powder cocaine have been selected to elucidate the nature of stigma directed toward the racially tied drugs. Marijuana was selected as a comparison in light of its shifting legal and criminal status in public policy, evidenced in various states around the nation. In addition, it would be appropriate to use marijuana as a quasi-control comparison since these same comparisons between marijuana and other ‘harder’ drugs already exist in the drug use sphere. According to Shiner and Winstock (2015), a PWUD often compares their drug habits to perceptions of other PWUD’s substance preference and quantity habits in order to rationalize their own habits. Harder drugs are associated with stronger addictive qualities and worsened outcomes while marijuana is often categorized as a safer drug in cost-benefit analyses. Researchers suggest that these attitudes may actually function to maintain drug use stigma (Shiner & Winstock, 2015). Additionally, SAMHSA (2020) reports show that 48% of their national sample reported marijuana use, making it the most prevalently used, federally illegal drug. Marijuana’s prevalence, along with the public’s perception of its addictiveness, are reflected in research showing lower levels of stigma (Sattler et al., 2017; Sorsdahl et al., 2012). For these reasons, it would be informative to use marijuana as a comparison drug to the two types of cocaine.

Exposure to PWUD was selected as a covariate due to previous research suggesting associations with drug use stigma. Established literature shows support for a relationship between exposure and decreased stigma expression (Kulesza, Larimer, &

Rao, 2014). For example, Adalf et al. (2009) found that among American adolescents, those with 50% of friends who use drugs scored significantly lower on a public stigma inventory. Additionally, Brown (2011) used a similar level of contact inventory in order to test the psychometric properties of two inventories that were utilized for the current study. Brown (2011) found significant negative Spearman rho correlations between level of contact and inventory scores.

After participants provided their informed consent, they completed the background questionnaire which includes age, sex, and race/ethnicity. Next, they were prompted with a randomized vignette. They then responded to three measures covering different aspects of drug use stigma: one measuring affective response, one measuring desire for social distance, and one measuring a range of attitudes, affective responses, and behavioral intentions. Lastly, participants completed a scale reflecting their exposure to PWUD of various drug types. Finally, the participants were provided with full disclosure of the studies purpose.

Measures

Social Distance

The stigma component requiring separation of us from them is measured with Brown's (2011) Social Distance Scale for Substance Use (SDS-SU). The SDS-SU is a 7-item inventory that measures participants' willingness to associate with substance users at varying degrees. For example, participants were asked to rate their willingness to have the vignette example "rent a room in one's home," "work on the same job," or "have person as a neighbor." Responses were measured on a 4-point scale ranging from 1

(*definitely willing*) to 4 (*definitely unwilling*). Scores range from 7 to 28 with higher scores indicating a greater preference for social distance. The SDS-SU has reported good internal consistency with a Cronbach's alpha at .85 (Brown, 2011).

Negative Affect

Negative affect toward PWUD was assessed using Brown's (2011) Affect Scale for Substance Users (AS-SU). The AS-SU asks participants to rate various emotions regarding interacting with the vignette example. These emotions are presented in 10 bipolar scales (e.g., *relaxed – tense*, *supportive – resentful*) and were rated on a seven-point Likert scale. Scores ranged from 7 to 70 with higher scores indicating greater levels of negative affect toward PWUD. The AS-SU showed high internal consistency with a Cronbach's alpha at .92 (Brown, 2011).

Attributions of PWUD

Subscriptions to stereotypes, emotional reactions, and intention to discriminate was assessed with Corrigan et al's (2003) Attribution Questionnaire (AQ-9). The AQ-9 consists of nine factors, one item per factor. The factors assessed are Blame, Anger, No Pity, No Help, Dangerousness, Fear, Avoidance, Segregation and Coercion. These factors are then categorized into groups: Attitudes, Affects, and Behavioral Intentions. The Attitudes group, which measures stereotypes of dangerousness and blame, is informative of subscriptions to stereotypes. The Affect group likewise measures emotional reactions of fear, anger, and no pity. Lastly, Behavioral Intentions, consisting of avoidance, coercion, no help, and segregation, is indicative of respondents' potential to participate in discrimination based on drug user status.

Responses were measured on a 9-point agreement scale, ranging from *not at all* to *very much*. Higher scores indicate higher endorsement of the factor in question.

Originally intended to assess attributions of severe mental illness, this questionnaire was adapted to fit the PWUD vignettes. Previous research has utilized this tool to measure aspects of drug use stigma as well (Sattler et al., 2017; Sorsdahl et al., 2012). The original AQ-27 assessing mental illness stigma has been found to have partial support for reliability and good test-retest reliability ($r > .75$) on six of the nine factors (Brown, 2008). The current study analyzed the AQ-9 based on the total score ranging from 9 to 81, rather than examining each factor. This allowed for a result that is more reflective of the cumulative experience of stigma's individual components.

Exposure to PWUD

Exposure to drug use was measured using Palamar et al.'s (2011) Exposure to Drug Users Index. These items were adapted from mental illness familiarity and level of contact scales to reflect exposure to specific drug types. The Exposure to Drug Users Index is a 7-item scale. Respondents indicated *Yes*, *No*, or *Not sure*, to each item. *Yes* responses were scored as a 1 and *no* and *not sure* responses were scored as a 0. The scale total ranges from 0 to 7. Reliability analysis revealed acceptable alphas for marijuana ($\alpha = .79$) and cocaine ($\alpha = .79$; Palamar et al., 2011). Although they were unable to test validity for crack cocaine specifically, every scale tested had acceptable reliability: ecstasy ($\alpha = .77$), opioids ($\alpha = .82$), amphetamine ($\alpha = .82$), and drug use generally ($\alpha = .75$; Palamar et al., 2011).

Analysis

Total scores for the three drug use stigma measures and the Exposure to Drug Users Index were calculated. Three separate analyses for each of the survey's total scores—SDS-SU, AS-SU, and AQ-9—were conducted to test the five research questions. The inter-item correlation matrix is provided (see Tables 2-5). First, three separate factorial ANCOVAs for the three stigma measures were conducted with the participant's race and the race and drug type preference of the vignette PWUD serving as independent variables, and Exposure to Drug Users Index scores serves as the covariate. The effect of the participant's race alone, PWUD's race alone, and drug type preference alone were noted, as well as their interactions. Post hoc tests were analyzed on participant's race, PWUD's race, and drug type to see differences between racial/ethnic groups, Black and White vignettes, and crack cocaine, powder cocaine, and marijuana. Lastly, covariate analysis was examined for significance and parameter estimates were analyzed for the direction of significant relationships.

Table 2*SDS-SU Inter-Item Correlation Matrix*

	1	2	3	4	5	6	7
1. Renting a room in your home	1.00	0.399**	0.507**	0.480**	0.573**	0.520**	0.478**
2. As a worker on the same job	0.399**	1.00	0.550**	0.368**	0.415**	0.476**	0.501**
3. Having this person as a neighbor	0.507**	0.550**	1.00	0.453**	0.530**	0.552**	0.571**
4. As the caretaker of your children	0.480**	.368**	0.453**	1.00	0.645**	0.536**	0.479**
5. Having your children marry	0.573**	0.415**	0.530**	0.645**	1.00	0.543**	0.567**
6. Introducing to a young person	0.520**	0.476**	0.552**	0.536**	0.543**	1.00	0.592**
7. Recommending for a job	0.478**	0.501**	0.571**	0.479**	0.567**	0.592**	1.00

** Significant, $p < .01$

Table 3*AS-SU Inter-item Correlation Matrix*

	1	2	3	4	5	6	7	8	9	10
1. Optimistic/ Pessimistic	1.00	0.466**	0.533**	0.495**	0.305**	0.403**	0.584**	0.411**	0.469**	0.468**
2. Tranquil/ Anxious	0.466**	1.00	0.459**	0.558**	0.270**	0.260**	0.566**	0.369**	0.602**	0.678**
3. Supportive/ Resentful	0.533**	0.459**	1.00	0.455**	0.520**	0.487**	0.464**	0.503**	0.475**	0.468**
4. Confident/ Fearful	0.495**	0.558**	0.455**	1.00	0.275**	0.353**	0.627**	0.365**	0.599**	0.664**
5. Empathic/ Angry	0.305**	0.270**	0.520**	0.275**	1.00	0.536**	0.246**	0.505**	0.309**	0.283**
6. Disgusted/ Sympathetic	0.403**	0.260**	0.487**	0.353**	0.536**	1.00	0.375**	0.532**	0.313**	0.280**
7. Comfortable/ Apprehensive	0.584**	0.566**	0.464**	0.627**	0.246**	0.375**	1.00	0.461**	0.557**	0.615**
8. Patient/ Irritable	0.411**	0.369**	0.503**	0.365**	0.505**	0.532**	0.461**	1.00	0.393**	0.385**

9. Relaxed/ Tense	0.469**	0.602**	0.475**	0.599**	0.309**	0.313**	0.557**	0.393**	1.00	0.829**
10. Calm/ Nervous	0.468**	0.678**	0.468**	0.664**	0.283**	0.280**	0.615**	0.385**	0.829**	1.00

** Significant, $p < .01$

Table 4*AQ-9 Inter-Item Correlation Matrix*

	1	2	3	4	5	6	7	8	9
No Pity	1.00	-0.288**	-0.313**	-0.001	-0.171**	-0.130*	0.157**	-0.193**	-0.264**
Danger	-0.288**	1.00	0.813**	0.294**	0.520**	0.440**	0.268**	0.607**	0.519**
Fear	-0.313**	0.813**	1.00	0.312**	0.482**	0.456**	0.300**	0.630**	0.449**
Segregation	-0.001	0.294**	0.312**	1.00	0.347**	0.234**	0.260**	0.326**	0.177**
Blame	-0.171**	0.520**	0.482**	0.347**	1.00	0.527**	0.196**	0.466**	0.544**
Anger	-0.130*	0.440**	0.456**	0.234**	0.527**	1.00	0.122*	0.364**	0.367**
No Help	0.157**	0.268**	0.300**	0.260**	0.196**	0.122*	1.00	0.483**	0.149**
Avoidance	-0.193**	0.607**	0.630**	0.326**	0.466**	0.364**	0.483**	1.00	0.457**
Coercion	-0.264**	0.519**	0.449**	0.177**	0.544**	0.367**	0.149**	0.457**	1.00

** Significant, $p < .01$ * Significant, $p < .05$

Table 5*EI Inter-Item Correlation Matrix*

	1	2	3	4	5	6
1. Observed people	1.00	0.485**	0.531**	0.444**	0.386**	0.368**
2. Worked with	0.485**	1.00	0.426**	0.324**	0.292**	0.397**
3. Friend	0.531**	0.426**	1.00	0.454**	0.350**	0.421**
4. Family member/ relative	0.444**	0.324**	0.454**	1.00	0.404**	0.380**
5. Lived with	0.393**	0.292**	0.350**	0.404**	1.00	0.287**
6. Neighborhood	0.367**	0.397**	0.421**	0.380**	0.287**	1.00

** Significant, $p < .01$

CHAPTER III

RESULTS

Results

SDS-SU

There was a significant main effect of drug type on the SDS-SU, yielding a F-ratio of $F(2, 275) = 5.134, p = .0006, \eta^2 = 0.036$, but there was no significant main effect for drug users' race or interaction effect between drug users' race and drug type preference. Crack cocaine showed the greatest desire for social distance ($M = 23.699, SD = 3.121$), followed by powder cocaine ($M = 23.030, SD = 3.333$), and lastly marijuana ($M = 18.865, SD = 4.238$) in a Bonferroni comparison. Only the comparisons between marijuana and the other two harder drugs were significant, while the differences between crack cocaine and powder cocaine remained insignificant. This did not support the hypothesis that crack cocaine would be viewed the most negatively, followed by powder cocaine, and then marijuana (see Table 6 and Figure 1).

Table 6

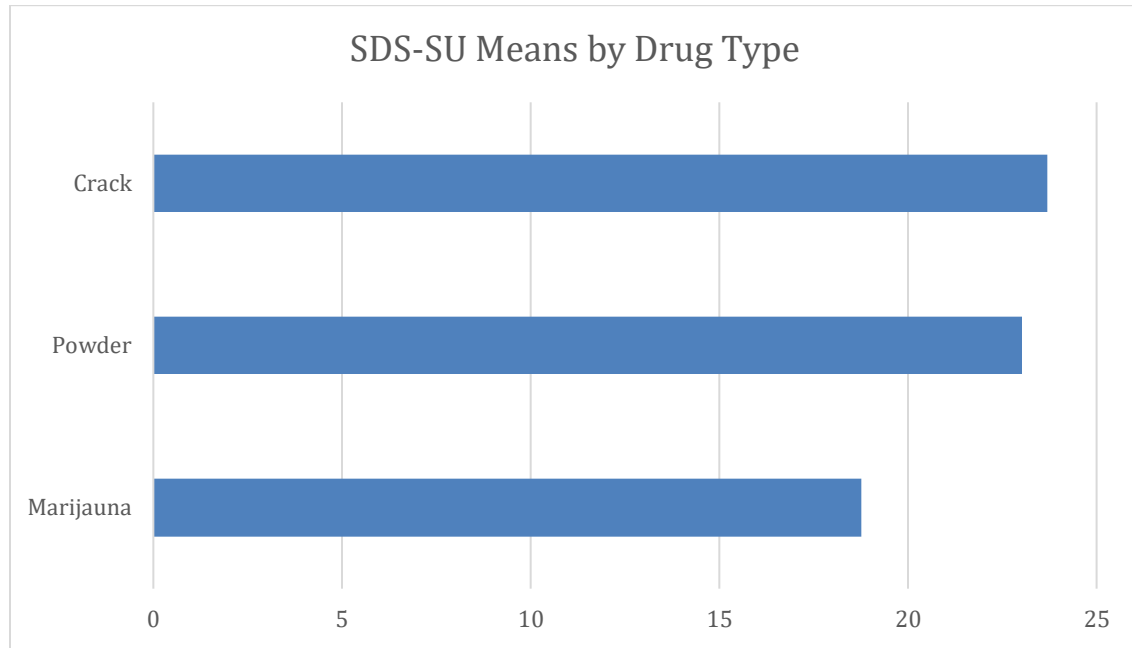
SDS-SU Drug Type Means and Standard Deviations

Drug type*	<i>M</i>	<i>SD</i>
Marijuana	18.765	4.238
Powder	23.030	3.333
Crack	23.699	3.121

* $F(2, 275) = 5.134, p = .0006, \eta^2 = 0.036$

Figure 1

Graph of SDS-SU Drug Type Averages



The SDS-SU also showed a significant interaction effect between the race of the respondent and the race of the vignette with an F-ratio of $F(4.275) = 2.567, p = .039, \eta^2 = .029 .036$. Asian and Black participants rated the Black vignettes worse than the White vignettes and Hispanic, White and two or more races rated White vignettes worse than Black vignettes. Asian participants' responses show a mean of $M = 22.708$ ($SD = 3.770$) for the White vignettes a mean of $M = 25.500$ ($SD = 1.870$) for the Black vignettes. Black participants' responses show a mean of $M = 21.733$ ($SD = 3.921$) for the White vignettes and a mean of $M = 22.158$ ($SD = 4.383$). The Hispanic participants' responses show a mean of $M = 21.263$ ($SD = 4.052$) for the Black vignettes and a mean of $M = 22.235$ ($SD = 4.701$). The White participants' responses show mean of $M = 20.434$ ($SD = 4.186$) and

a mean of $M = 21.805$ ($SD = 3.716$). Participants of 2 or more race's responses show a mean of $M = 19.800$ ($SD = 4.614$) and a mean of $M = 25.000$ ($SD = 2.830$; See Table 7 and Figure 2).

Table 7

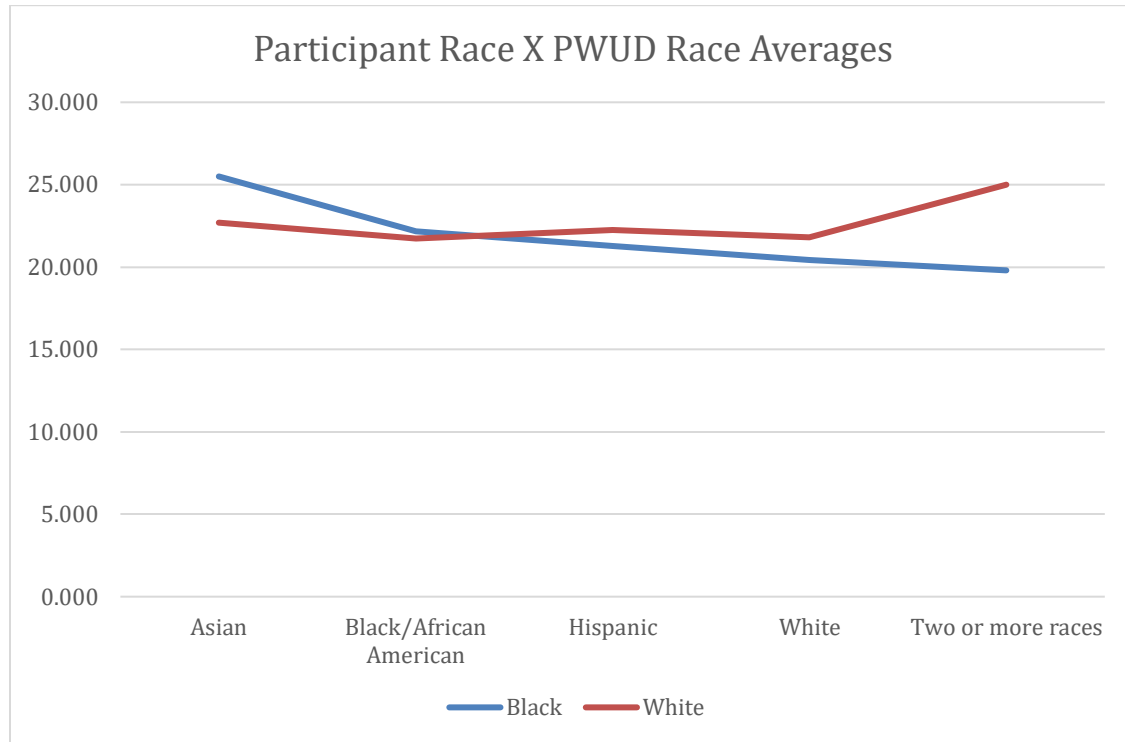
SDS-SU Participant Race X PWUD Race Means and Standard Deviations

Participant Race*	Black PWUD		White PWUD	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Asian	25.500	1.871	22.708	3.770
Black/African American	22.158	4.384	21.733	3.921
Hispanic	21.263	4.052	22.235	4.701
White	20.434	4.186	21.805	3.716
Two or more races	19.800	4.614	25.000	2.530

* $F(4.275) = 2.567$, $p = .039$, $\eta^2 = .029$.036

Figure 2

Graph of Participant Race X PWUD Race Averages



Lastly, the SDS-SU showed a significant covariate effect for the Exposure to Drug Users Index scores with an F-ratio of $F(1, 275) = 7.235, p = .008, \eta^2 = .039$. Results suggest that higher Exposure to Drug Users Index scores is associated with decreases in desire for social distance ($B = -.398$). Reliability analysis of the current study's Exposure to Drug Users Index scores show a Cronbach's Alpha of $\alpha = .850$ and the SDS-SU show a Cronbach's Alpha of $\alpha = .876$.

AS-SU

Analysis of the AS-SU scores show significant main effect for respondent's race and a significant interaction between participant's race and the vignette PWUD's race.

The main effect for respondent's race shows F-ratio of $F(5, 275) = 2.701, p = .021, \eta^2 = .047$. Asian participants endorsed the most negative affective responses to the vignette PWUD ($M = 43.395, SD = 9.078$), followed by Native Hawaiian/Pacific Islander ($M = 42.667, SD = 7.638$), the White participants ($M = 40.213, SD = 10.786$) then Hispanic participants ($M = 39.663, SD = 11.619$), then two or more race participants ($M = 36.938, SD = 9.574$), and lastly Black participants ($M = 36.897, SD = 8.452$; See Table 8 and Figure 3).

Table 8

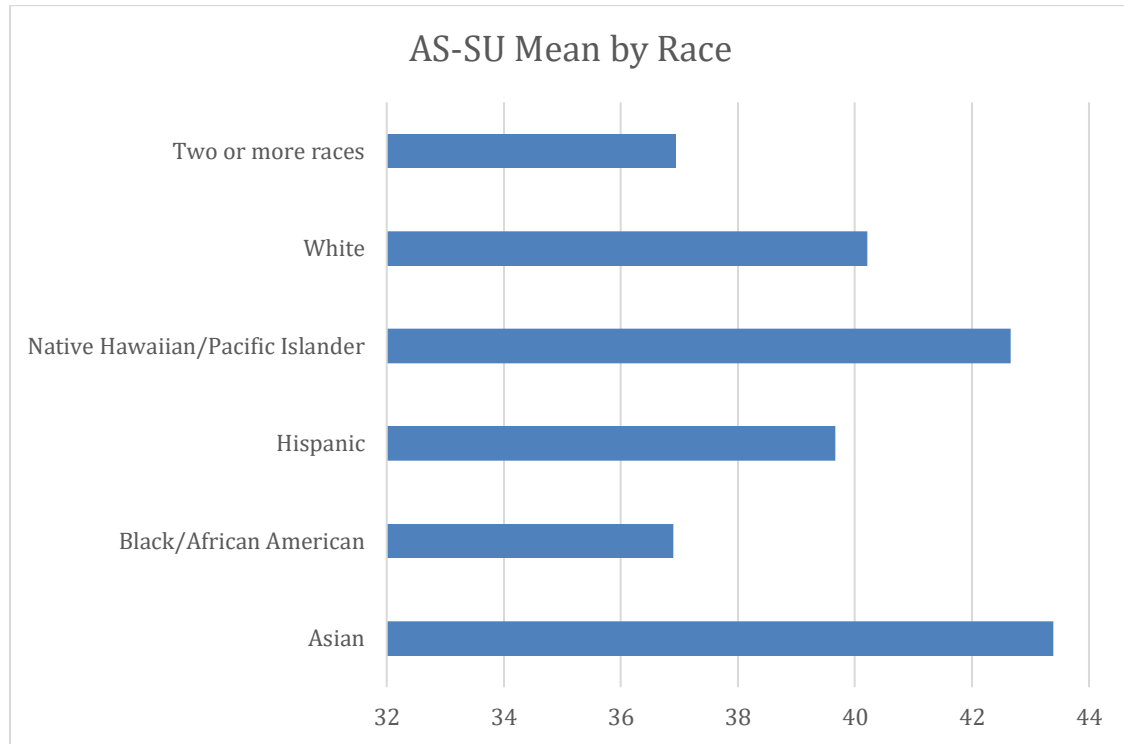
AS-SU Race Means and Standard Deviations

Race	<i>M</i>	<i>SD</i>
Asian	43.395	9.078
Black/African American	36.897	8.452
Hispanic	39.663	11.619
Native Hawaiian/Pacific Islander	42.667	7.638
White	40.213	10.786
Two or more races	36.938	9.574

* $F(5, 275) = 2.701, p = .021, \eta^2 = .047$

Figure 3

Graph of AS-SU Race Averages



The significant interaction between participant's race and vignette PWUD's race show an F-ratio of $F(4, 285) = 2.795, p = .027, \eta^2 = .039$. Like the SDS-SU, Asian and Black participants reported greater negative affective reactions to Black vignettes compared to White vignettes, while Hispanic, White, and two or more races participants reported greater negative affective reactions to White vignettes. Results for the Asian participants show a mean of $M = 40.542$ ($SD = 7.650$) for White vignettes and a mean of $M = 48.286$ ($SD = 9.49$) for the Black vignettes. Black participants' responses show a mean of $M = 34.300$ ($SD = 7.498$) for the White vignettes and a mean of $M = 38.9479$ ($SD = 8.690$) for the Black vignettes. Results for the Hispanic participants show a mean

of $M = 38.711$ ($SD = 11.752$) for Black vignettes and a mean of $M = 40.373$ ($SD = 11.584$) for the White vignettes. White participants' responses show a mean of $M = 38.925$ ($SD = 10.761$) for Black vignettes and a mean of $M = 41.878$ ($SD = 10.719$) for the White vignettes. Respondents of two or more races' responses show a mean of $M = 34.800$ ($SD = 9.589$) for the Black vignettes and a mean of $M = 40.500$ ($SD = 9.225$). Only the difference between Asian and Black respondents showed a significant difference ($p = .028$; see Table 9 and Figure 4).

Table 9

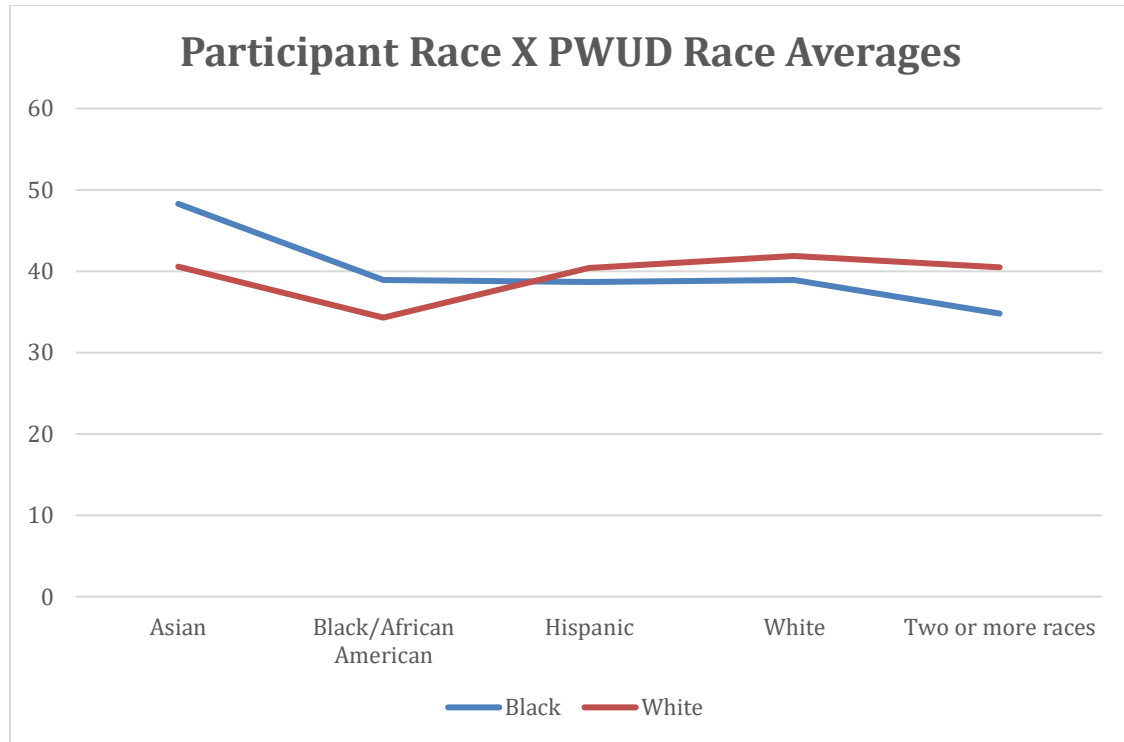
AS-SU Participant Race X PWUD Race Means and Standard Deviations

Participant Race*	Black PWUD		White PWUD	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Asian	48.286	9.498	40.542	7.650
Black/African American	38.947	8.690	34.300	7.498
Hispanic	38.711	11.752	40.373	11.584
White	38.925	10.761	41.878	10.720
Two or more races	34.800	9.589	40.500	9.225

* $F(4, 285) = 2.795$, $p = .027$, $\eta^2 = .039$

Figure 4

Graph for Participant Race X PWUD Race Averages



There was also a significant covariate effect for the Exposure to Drug Users Index scores with a F-ratio of $F(1, 275) = 12.557, p = .000, \eta^2 = .044$. Parameter estimates show decreases in negative affective reactions to the vignette PWUD when Exposure to Drug Users Index scores were higher. Reliability analysis revealed of the current study's AS-SU scores show a good internal consistency of $\alpha = .897$.

AQ-9

Analysis of the AQ-9 responses show no main effects for respondent's race, vignette PUWD's race, or drug type but does show a significant interaction effect between the vignette PWUD's race and drug type with an F-ratio of $F(2, 275) = 3.717, p = .026, \eta^2 = .026$. The results suggest that endorsement of drug use stigma varied by

the vignette PWUD's race dependent on their drug type preference and vice versa. The means suggest that White vignette PWUD's were rated worse when using powder cocaine ($M = 4.020$, $SD = 11.700$) and Black vignettes were rated worse when using crack cocaine ($M = 42.220$, $SD = 10.998$). Marijuana use elicited the least stigma for both the White ($M = 34.640$, $SD = 11.026$) and Black vignettes ($M = 30.833$, $SD = 10.868$) although Black vignettes who use marijuana elicited less stigma than the white vignette with the same drug type preference (See Table 10 and Figure 6).

Table 10

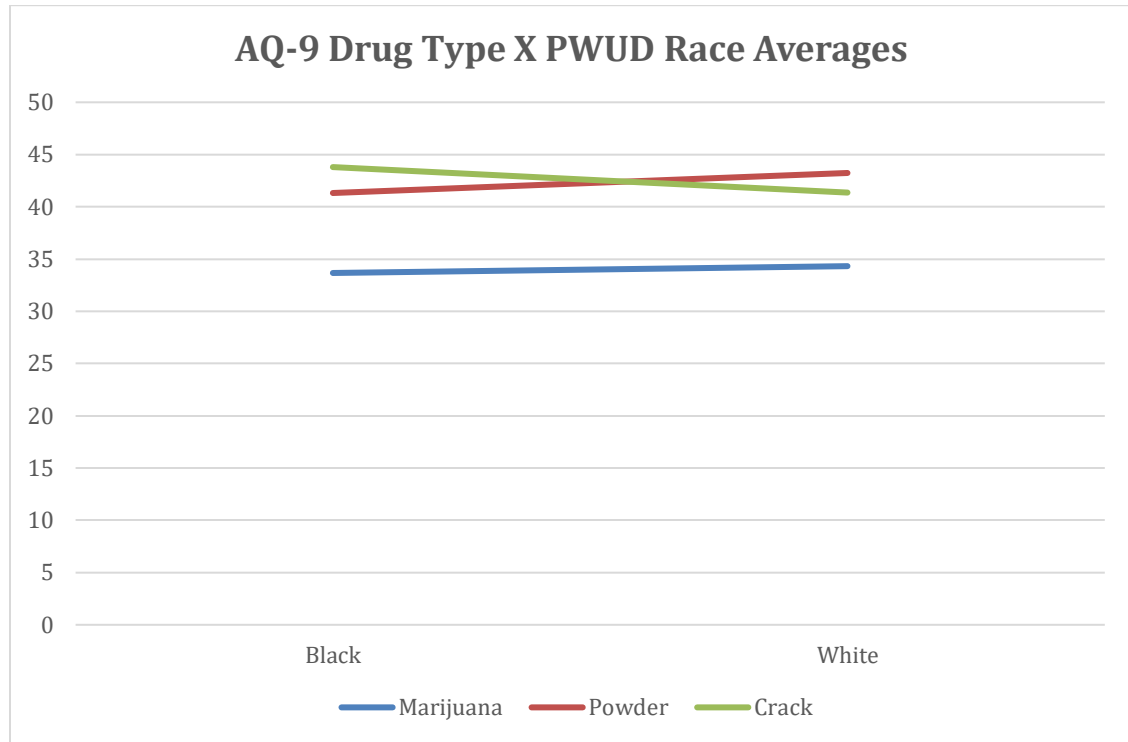
AQ-9 Drug Type X PWUD Race Means and Standard Deviations

Drug Type*	Black PWUD		White PWUD	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Marijuana	33.667	10.515	34.320	10.038
Powder	41.320	8.702	43.234	9.519
Crack	43.800	9.891	41.359	9.043

* $F(2, 275) = 3.717$, $p = .026$, $\eta^2 = .026$

Figure 5

Graph of AQ-9 Drug Type X PWUD Race Averages



Like the previous two measures, the AQ-9 analysis also showed a significant covariate effect of the Exposure to Drug Users Index Scores with a F-ratio of $F(1, 275) = 10.466, p = 0.001, \eta^2 = 0.037$. Again, higher scores predicted lower stigma endorsement on the AQ-9 ($B = -1.269$). Reliability analysis of the current study's AQ-9 scores show an acceptable Cronbach's alpha of $\alpha = .769$.

CHAPTER IV

IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

Discussion

The current study sought to further understanding of the influence of PWUD attributes on drug use stigma expression in the context of the racially disparate drug arrest and sentencing rates. Specifically, this study's focus was developed from research suggesting the unequal treatment of racialized drug types by the media, the law, and law enforcement. The findings of the current study corroborate findings of past research and present new intersectional insight to the long-term impact of the war on drugs on the public opinion. First, while finding a significant main effect for drug type on the SDS-SU, there were no significant differences in desire for social distance for crack cocaine and powder cocaine, implying that the two are now viewed equally negatively, despite the efforts of the war on drugs. Further, while there are no overt biases between the drugs, the racial stereotypes of drug use established by the media during the war on drugs appear to still be relevant to the attitudes, affect, and behavioral intentions toward PWUD and predict the strength of stigma endorsement. Additionally, the significant main effect for race of the stigma endorser predicting affective reactions to PWUD, and the significant interaction between PWUD's race and the stigma endorser's race suggests that there may be some underlying racial tensions that emerge when considering drug use. Lastly, while there was a significant main effect for participant's race predicting affective

reactions to PWUD, there were no significant main effect for PWUD's race on any of the measures, suggesting an absence of overt racial bias.

SDS-SU

The significant main effect for drug type on the SDS-SU indicates that various drug types invoke differential desire for social distance among White and Black participants as well as the whole participant group. This result supports the hypothesis that drug type would significantly predict drug use stigma and provides further support for past research indicating differential drug use stigma endorsement based on drug of choice (Sattler et al., 2017, Sorsdahl et al., 2012). Interestingly, while marijuana was viewed significantly differently from both crack and powder cocaine, the difference between the two harder drugs was not significant. This appears to be a departure from beliefs in the 1980s during which it was widely believed that crack cocaine posed a greater social threat and potential for abuse than did powder cocaine (Walker & Mezuk, 2018). This result may be due to the age demographics of the current sample. Because the sample is from a college population, over 86% of the sample are 21 or younger, indicating that the vast majority of the sample was too young to have lived through the peak of the war, and possibly too young to have felt the effects of the moral panic surrounding crack cocaine. Instead, the result could be an indication of a changing zeitgeist in younger members of American society to a more tolerant view of crack cocaine use.

The landscape of drug use has changed drastically since the 1980s' war on drugs. While dealing with waves of increased opioid use, crack cocaine uses and powder

cocaine use has stabilized after peak use in the early 1990s (Brownstein, 2015). Rather than the focus of drug policy being on cocaine use, attentions have shifted toward rising opioid use. Along with a shift in focus, the approach to dealing with drug use has been altered as well. The Obama administration approached drug abuse more from a public health perspective rather than a criminal justice stance and began a new focus on prevention and treatment policies over incarceration (Sirin, 2011). In 2010, the Obama administration passed the Fair Sentencing Act (FSA) which reduced the 100-to-1 crack to powder sentencing disparity down to 18-to-1 (Sirin, 2011). Additionally, President Obama fought to have \$203 million in increased funding for drug prevention programs plus \$137 million to help fund early intervention and treatment programs (Sirin, 2011). The shift in public policy in addition to the shift in focus to opioid use may begin to explain the non-significant difference between crack and powder cocaine. The combination of decreased panic surrounding crack cocaine and greater reliance on a prevention and treatment may have impacted the way crack cocaine is viewed in comparison to other hard drugs.

Although the FSA took steps toward reducing racial disparities due to drug charges, the current study's results call the standing 18-to-1 crack to powder cocaine sentencing ratio into question (Walker & Mezuk, 2018). While the current data suggests a shifting perspective of these drug types, the law lags behind the changing times. So, while both crack and powder cocaine users experience nearly the same level of social rejection, crack cocaine use has the added risk of extra legal ramifications. This is especially detrimental to users of lower socioeconomic status, with crack cocaine being a

cheap alternative to its powdered relative, making it more accessible to those in lower socioeconomic statuses (Palamar et al., 2015).

In addition to experiencing rejection from employers, coworkers, neighbors, and friends, crack cocaine users are also having to navigate increased scrutiny from police officers and law makers seemingly based on socioeconomic status (Minior et al., 2003). This essentially continues the work from the war on drugs, making those of lower socioeconomic status, and by extension minorities, suffer more at the hands of the law despite there being an absence of overt biases based on the two types of cocaine (Palamar et al., 2015). Although beyond the scope of the current study, an investigation into the effects of socioeconomic status on drug use stigma expression is warranted based on the findings of the current study. Future studies have the opportunity to further intersectional research by accounting for socioeconomic status, race, and drug type. Like the significant interaction effect found on the AS-SU, the interaction effect of race and socioeconomic status may reveal an increased risk for stigma when PWUD fits accessible stereotypes of socioeconomic status and race.

AS-SU

The AS-SU found a significant main effect for the participant's race predicting drug use stigma, supporting the study's hypothesis. These results suggest that Asian participants endorse the greatest desire for social distance from PWUD while Black participants endorsed the least. These results support and further research suggesting greater support for punitive responses to drug use among White people and greater support for rehabilitation among Black people (Nielsen, 2010). Taken together, the

results paint a racial divide with regards to drug use stigma. While some racial groups may interact with PWUD with sympathy, others appear to display greater levels of hostility. This may further divide society along racial lines in an area that is already racially charged. As previously stated, Black people bore the brunt of the war on drugs, which may explain the more positive emotional reactions (Tonry, 2012).

To explain the racial gap in punitive attitudes, sociologists propose the conflict perspective in the field of criminology, which suggests that the criminal justice system is in place to protect the interests of the dominant group (i.e., White Americans; Johnson, 2008). White people who identify stronger associations between crime and the Black population are more likely to support stricter, punitive policies such as mandatory minimum sentencing and capital punishment, a trend that was not seen in the Black and Hispanic populations (Ghandnoosh, 2014). Conversely, Black opposition to punitive measures, especially in relationship with perceived racial fairness of the criminal justice system, may have played a role in the observed results (Johnson, 2008). The results of the study suggest that the collective experience of devaluation based on drug use associations may have had a long-term impact on the views of drug use for the Black community. Although unable to draw causal conclusions from the current study, the results were able to further knowledge of racial trends of drug use stigma—especially with regard to non-Black minorities—which can be useful when considering variables of interest in future drug use stigma studies.

The significant interaction between PWUD's race and participant's race on both the AS-SU and SDS-SU suggest that PWUD of different races prompt differential levels

of stigma based on the race of the person judging them. While there is no established literature on this relationship, the significant result highlights the potential of interactions between perceiver and target attributes that can produce differential stigma. While past research has supported differential mental illness and substance use stigma by race, the implications of the novel finding suggests that both the race of the stigma target and perceiver should be considered when assessing racialized drug use stigma (Corrigan & Watson, 2007; Stickney et al., 2012). While utilizing a diverse sample, this study was able to establish seminal data on the complexity of racial relations within drug use stigma. While Kulesza et al. (2016) found no explicit impact of race on drug use stigma, their sample was composed largely of well-educated White people and were therefore unable to account variance among minority populations. Additionally, past research has found that White participants endorse lower levels of explicit racial bias, which may have influenced their findings (Dovidio et al., 2008). The significant interaction between the races of the target and perceiver suggests that Kulesza et al.'s (2016) results, which focused mainly on White perceptions, may be due to the way perceptions of drug use vary by race. The explicit impact of race on drug use stigma may be better understood by considering how different ethnic communities view racialized drug use.

AQ-9

The racial stereotypes associated with crack cocaine and powder cocaine appear to have continued into the modern day based on the results of AQ-9, which measured a range of attitudes, affective reactions, and behavioral intentions. The significant interaction between PWUD's race and drug type preference supports the study's

hypothesis and hints at the long lasting implications of media coverage during the war on drugs. Racially stereotypical drug use established by the media may have functioned to instigate a greater degree of stigma according to the current study: being Black and using crack cocaine elicited more stigma endorsement and being White and powder cocaine use had a similar outcome. This result suggests that participants responded the most negatively when drug use fits racial stereotypes, regardless of PWUD's race.

It was during the 1980s that newsprint and television media began to cover the “crack epidemic,” fueling a moral panic while relating crack cocaine use to poor, minority users, particularly Black users (Anderson et al., 2015; Hartman & Golub, 1999). Some research has identified media coverage as playing an important role in the judgement of criminal justice officials and the passage of criminal justice policy, but it appears that the sensationalized media may have had far reaching implications for individual assessments of drug use as well (Gilliam et al., 2002; Hartley & Miller, 2010). Although several years have passed since the peak of the war, it appears that the stereotypes established during the 1980s have remained stubbornly relevant in the minds of the general public as indicated by the significant interaction result. This result comes in spite of the majority of the current sample being too young to have lived through the peak of the war, and yet, it appears the stereotypes appear to have some relevance to them.

Increases in negative, attitudes, affective reactions, and behavioral intentions suggest that Black crack cocaine users and White powder cocaine users may experience more tension in their everyday interactions with others. This is an important finding for

intersectional research and details the lived experience of many PWUD that fit racial stereotypes of drug use. Experiencing high levels of negative emotional reactions to drug use may ingrain in a user the belief that they are a burden to society, which can have a negative impact on their health and further isolate them from their resources (Couto e Cruz et al., 2018; Young et al., 2005). In a review of drug use stigma literature Kulesza, Larimer and Rao (2014) found that between five studies that examined stigma and mental health, only one did not find a significant relationship between stigma and overall psychological well-being. The remaining four studies consistently found stigma to be negatively related to overall mental health, and positively related to symptoms of depression and anxiety (Kulesza, Larimer, & Rao 2014). One study in Australia found that discrimination related to injecting drug use was associated with a multitude of negative physical health outcomes in addition to poorer overall mental health (Couto e Cruz et al., 2018). These negative mental and physical outcomes are manifested as an increased likelihood of reporting poorer physical health, poorer mental health and wellbeing, increased experience of overdose, increased abscesses or infections from injecting, and poorer general health.

Links between drug use and poorer health outcomes emphasize the need for PWUD's medical access, but research suggests that shame, guilt, and embarrassment resulting from stigma may prove to be a barrier to seeking treatment (Hammarlund et al., 2018). The increased risk of stigma for stereotype confirming PWUD may have important implications for the treatment their of substance use disorders. It appears that PWUD that fit accessible racial stereotypes may be more at risk for internalizing negative

beliefs due to negative interactions with others, which can deter them from seeking help (Muncan et al., 2020; Von Hippel et al., 2018). The White House Conference on Mental Illness and the Surgeon General released a report in 1999 declaring stigma the “primary barrier” to seeking treatment (Pescosolido et al., 2010). Likewise in McKnight et al.’s (2017) study, drug use stigma has been shown to decrease the likelihood of having a regular doctor, as well as self-reported use of health-promoting behaviors. Stigma may also be a barrier to reporting drug or alcohol use to healthcare professionals, creating a complication for the provision of appropriate care (Kulesza, Ramsey, et al., 2014; Ross et al., 2007). Avoidance of disclosure may be a valid self-defense behavior as negative attitudes toward substance misuse are common among health care providers and can contribute to suboptimal health care (Sattler et al., 2017; Van Boekel et al., 2014). Health care workers should be cognizant of the trends seen in the results in order to prevent stereotype confirming PWUD from being isolated from appropriate health care.

PWUD Race

While there was a significant interaction effect between PWUD’s race and drug type preference on the AS-SU and another significant interaction effect between PWUD’s race and participant’s race on the SDS-SU and AS-SU, there was no main effect for PWUD’s race for any of the three measures. These results matched previous research suggesting an absence of overt or explicit racial influence on drug use stigma expression (Kulesza et al., 2016; Kulesza, Larmier, & Rao et al., 2014). As past research has suggested, overt beliefs, which can be modified to satisfy social desirability, may display less bias than implicit beliefs (Kulesza et al., 2016; Von Hippel et al, 2008). The

study's focus on race was not expressed to participants prior to the study in order to avoid participants altering their responses in order to appear racially unbiased, but this was not a true test of implicit biases. More biased responses may have been elicited if the data was able to draw conclusions about implicit biases rather than just overt biases. Kulesza et al's (2016) study that found that while explicitly, participants endorsed helping over punishing PWUD, implicitly, they endorsed the opposite. Further, their results suggest that these implicit addiction stigmas are sensitive to the race of PWUD. Similar results to the Kulesza et al's (2016) study may be found if future studies replicate the current design but arrange for the race variable to be presented in an implicit cue.

The data of the current study collected in summer 2020 should also be taken in the context of current events, especially concerning racial equality. The tragic events involving Mike Brown, Eric Garner, George Floyd, Breonna Taylor, Philando Castille, and countless others have thrust the Black Lives Matter Movement into the forefront of the American mind. The protests of 2020 that ensued following the death of George Floyd at the hands of Minneapolis Police officers, resulted in the largest civil movement in American history (Buchanan et al., 2020). Four separate polls ballpark protest participation between 15 and 26 million Americans over approximately one month of protests (Buchanan et al., 2020). These staggering numbers hint at a shift in public opinion, a shift backed by a Monmouth University poll showing 76% of Americans consider racism and discrimination a "big problem" in America, a 25-point increase from polls in 2015. This trend is largely bolstered by increases in support from non-Black Americans, with polls showing 63% of non-Black minorities believe Black Americans

are more likely than White Americans to experience excessive force at the hands of police, which is a 24-point increase from 2015 polls (Monmouth University, 2020). Additionally, the polls show a 24-point increase in White endorsement of this belief over the same time period. Although not directly tied to drug use, it is possible these trends have affected the outcomes of the current study, especially when considering the potential of police interaction due to drug use. The salience of racial inequities in 2020 may have made participants more cognizant of the race of the vignette PWUD and could have triggered a stronger social desirability response, especially for those of non-Black minority and White participants. This, in turn, could have contributed to lowering the racial influence on drug use stigma scores.

Covariate Analysis: Exposure

The covariate, exposure to PWUD, significantly predicted stigma scores on all measures included in the current study and consistently predicted lower scores. Familiarity may provide individuals with more experiences that humanize PWUDs, allowing an individual insight to the causes and outcomes of drug use. It is possible that previous exposure allows individuals more opportunities to identify stereotype disconfirming information from their experiences, separating drug use from stereotypes of danger and immorality. Unfortunately, while this relationship exists, stigma surrounding drug use promotes secrecy, especially concerning the harder drugs in the study which show increases in drug use stigma scores on two of three measures (Vogel et al., 2013). These high levels of stigma may function to decrease admitted drug use, thereby decreasing the chances of familiarity for the general public. Further, this creates a

vicious cycle in which the stigmatized hide drug use out of fear of prejudice or discrimination, essentially lowering chances of exposure for others, increasing levels of stigma in the public, and subsequently reinforcing this secretive behavior.

Limitations

Although the first study of knowledge to consider drug use stigma from both race and racialized drug types together, due to time restraints, the study was rather limited in scope. Only two races and three drug type variables could be considered, despite evidence that other races and drug types could produce differential stigma expression. Relatedly, other variables such as gender, age, socioeconomic status, duration of drug use, and skin tone, which could likewise produce differential stigma expression, were not included. Another limitation of the study's design is the nature of the inventory items. First, there was no test for reliability for the crack cocaine version of the Exposure to Drug Users Index. Additionally, there is a chance that participants modified their answers due to social desirability (Kulesza et al., 2016). Lastly, there was no test for race retention of the vignette example, so it is unclear if participants considered or even remembered the race of the vignette example in their responses.

Despite these limitations, the current study was able to establish new knowledge and support past findings on the impact of PWUD variables on the drug use stigma expression. Taken in the context of racially disparate treatment of drug crimes, the results emphasize the areas in which the war on drugs have had a lasting impact. First, this was the first study of knowledge to examine the combined effect of race and racialized drug types on drug use stigma measures. Although the race variable itself was not related to

stigma expression, the interaction result hints that more intersectional research is needed to identify the explicit impact of race. Additionally, this was the first study of knowledge to directly compare the stigma of crack cocaine to powder cocaine, which suggested a shift in perspective from the height of the war on drugs. This new knowledge lays out the groundwork to consider the still existing sentencing differences between the two drugs. Lastly, this was the first study of knowledge to examine the interaction effect of PWUD's race and stigma endorsers' race on drug use stigma measures, with results showing significant relationships for two of the three measures. This novel finding can help guide future studies when selecting variables of interest when studying racialized drug use stigma.

The findings of the study help to frame the larger issue of systemic inequality during a time where many are seeking answers to the racial injustices seen on TV and social media. The death of George Floyd has not only brought police brutality into question, but differential treatment of drug use by police as well. The defense attorneys for the officer on trial for George Floyd's death hinged their case on Floyd's death being caused by drug overdose. This strategy capitalizes on public fear and mistrust of drug use to deflect blame. This action follows the historic precedence of stalling conversation about racial biases by scapegoating substance use. This study intended to begin the work to unpack this relationship between racial biases and stigma responses to drug use by improving understanding of racialized drug types and how these may vary across a racially diverse sample. While the country fights to improve systemic inequalities, further intersectional studies like this one may allow researchers to bring covert racism to light.

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APPENDIX A

Vignettes

Vignette:

1. Your friend wants to introduce you to their acquaintance. They tell you their friend is 24-year-old White man who regularly uses marijuana.
2. Your friend wants to introduce you to their acquaintance. They tell you their friend is 24-year-old White man who regularly uses powder cocaine.
3. Your friend wants to introduce you to their acquaintance. They tell you their friend is 24-year-old White man who regularly uses crack cocaine.
4. Your friend wants to introduce you to their acquaintance. They tell you their friend is 24-year-old Black man who regularly uses marijuana.
5. Your friend wants to introduce you to their acquaintance. They tell you their friend is 24-year-old Black man who regularly uses powder cocaine.
6. Your friend wants to introduce you to their acquaintance. They tell you their friend is 24-year-old Black man who regularly uses crack cocaine.

APPENDIX B

SDS-SU

SDS-SU

Please rate the statements below on the following scale:

- 1=definitely willing**
- 2=probably willing**
- 3=probably unwilling**
- 4=definitely unwilling**

1. How would you feel about renting a room in your home to this person?
2. How about as a worker on the same job as this person?
3. How would you feel having this person as a neighbor?
4. How about as the caretaker of your children for a couple of hours?
5. How about having your children marry this person?
6. How would you feel about introducing this person to a young woman/man you are friendly with?
7. How would you feel about recommending this person for a job working for a friend of yours?

APPENDIX C

AS-SU

AS-SU

Indicate how you would feel if you interacted with the person described in the vignette. Two opposite emotions will be presented on a 7-point bipolar scale, with 1 representing one extreme, 7 representing the other, and 4 being neutral.

Pessimistic 1 2 3 4 5 6 7 Optimistic

Tranquil 1 2 3 4 5 6 7 Anxious

Supportive 1 2 3 4 5 6 7 Resentful

Fearful 1 2 3 4 5 6 7 Confident

Empathic 1 2 3 4 5 6 7 Angry

Disgusted 1 2 3 4 5 6 7 Sympathetic

Apprehensive 1 2 3 4 5 6 7 Comfortable

Irritable 1 2 3 4 5 6 7 Patient

Relaxed 1 2 3 4 5 6 7 Tense

Calm 1 2 3 4 5 6 7 Nervous

APPENDIX D

AQ-9

AQ-9

Imagine you were to meet the person described in the vignette. Respond to each of the following prompts accordingly. Indicate your answer on the 9-point scale with 1 indicating "not at all", 9 indicating "very much" and 5 indicating neutrality.

1. I would feel pity for this person.

1	2	3	4	5	6	7	8	9	
none at all									very much

2. How dangerous would you feel this person is?

1	2	3	4	5	6	7	8	9	
not at all									very much

3. How scared of this person would you feel?

1	2	3	4	5	6	7	8	9	
not at all									very much

4. I would think that it was this person's own fault that they are in their present condition.

1	2	3	4	5	6	7	8	9	
not at all									very much

5. I think it would be best for this person's community if he were put away in a psychiatric hospital or prison.

1	2	3	4	5	6	7	8	9	
not at all									very much

6. How angry would you feel at this person?

1	2	3	4	5	6	7	8	9	
not at all									very much

7. How likely is it that you would help this person?

1	2	3	4	5	6	7	8	9	
definitely would help									definitely would not help

8. I would try to stay away from this person.

1	2	3	4	5	6	7	8	9	
not at all									very much

9. How much do you agree that this person should be forced into treatment with his doctor even if they do not want to?

1	2	3	4	5	6	7	8	9	
not at all									very much

APPENDIX E

Demographic Questionnaire

Demographic Questionnaire

1. What is your age?
2. Race/ethnicity?
 - a. Native American/Alaska Native
 - b. Asian
 - c. Black or African American
 - d. Hispanic
 - e. Native Hawaiian/Pacific Islander
 - f. White
 - g. Two or more/Other
3. Gender?
 - a. Man
 - b. Woman
 - c. Trans Man
 - d. Trans Woman
 - e. Non-Binary/Other