An Advanced Psychometric Study of the Latinx Perceptions of Police Scale LPOPS

by

Elizabeth Altamirano

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Approved October 2022 by the
Graduate Supervisory Committee:

Frank Dillon, Chair
Cristalis Capielo
Edward D. Vargas

ARIZONA STATE UNIVERSITY

December 2022

ABSTRACT

As recent government administrations prioritized the criminalization and deportation of immigrants, Latinx are in danger of being targeted by police. Thus, it is important to investigate and assess Latinx views of the police in the US in order to create safe communities and reduce crime. To date, no instrument has captured Latinx perceptions of police beyond the frequency of past experience and global perception of the treatment of the general public. Therefore, creating a psychometrically supported measure that captures the unique perceptions of police among the Latinx population is necessary. The current study aims to psychometrically validate the Latinx Perceptions of Police Scale (LPOPS) (e.g., evidence of validity and reliability via confirmatory factor analysis, internal consistency, convergent and concurrent validity, mean differences among groups, and measurement invariance testing). The study's final analytic sample included 248 individuals self-identified as Latinx using an online survey. Results from the confirmatory factor analysis confirmed the three-factor model of the LPOPS with a Cronbach's alpha above 0.85. The LPOPS contains 19 items and three subscales: Police Views of Latinx, Anxiety of Interacting with Police Officers, and Fear of Police Abuse. Results from the Pearson bivariate analysis provided evidence of convergent validity as there were associations between the LPOPS subscales, past measures of view of police (e.g., Perception of Police Scale, Police and Law Enforcement Scale), and other psychological constructs (e.g., anxiety, depression, stress, discrimination). Further, results of the multi-group confirmatory analysis indicated that the LPOPS could be used among (race; skin-tone). Lastly, participants who reported darker skin tones reported higher mean scores on the Anxiety of Interacting with Police Officers and Fear of Police Abuse

subscales. By further validating a scale that captures perceptions of police among Latinx in a quantitative way, researchers can begin exploring its association with various mental health outcomes.

Keywords: police officers, immigrants, Latinos/as/xs, anxiety

DEDICATION

I want to dedicate my dissertation to my father Rene Altamirano who passed away on September 9, 2022, my mother Ana Altamirano, my partner Cam Henry, and my daughter Eleya Henry. I could not have done this without you all. I love you dearly.

ACKNOWLEDGMENTS

First and foremost, I want to acknowledge my advisor Dr. Frank Dillon and committee members Dr. Cristalis Capielo and Dr. Edward D. Vargas. Thank you for all your encouragement throughout this entire process. A special thanks goes out to my best friend Alexander Pompee for always being there for me and my cohort who has constantly motivated me throughout the years (Kevin Lau, Christina Lam, Jessica Border, Mercedes Anderson). It really takes a village, and I am so grateful to have such amazing support. I want to acknowledge my partner Camden Henry and my daughter Eleya Henry who were there with me every step of the way. Cam, you are truly such a special person, the only one that has been there for me through blood, sweat, and tears holding my hand. I love you very much. To my daughter, although you are only 3 years old I appreciate the patience you have had with me while I work on my dissertation because it took some time away from you. Your daily hugs and kisses really were the motivation for me to keep going. To my mother Ana Altamirano, I love you and thank you for all your love and support you have given me. To my father who is no longer with me physically, I cannot begin to thank you enough for always pushing me to pursue my education and instilling in me the value of learning. You taught me to be brave and always go after my dreams.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

The role of the police has been central to the United States' (US) approach to public safety, with approximately 800,000 law enforcement agencies across the country (Bureau of Justice Statistics, 2016). However, historically, these agencies were created to assist and sustain slavery as an institution. Historians have argued that the US's law enforcement system was created in the 1700s as a method of controlling freed slaves in the southern parts of America (Hollowell, 2009). Thus, the criminalization of Black and Latinx people was built into the foundational structure of the legal system and police practices (Jackson, 1989; Hollowell, 2009). The police's mistreatment of Black and Latinx people has a substantial historical context as racial bias in policing may be intentional, especially as it is at the core of its construction and initial purpose (Jackson, 1989). Nonetheless, racism in policing contributes to the system of oppression that shapes racial targeting (Jackson, 1989; Hollowell, 2009). This historical context assists researchers in understanding tension between the police and predominantly Black/Brown neighborhoods exists. Studies of the perceptions of law enforcement have mainly focused on African Americans since they are disproportionately targeted and have the highest rates of reported abuse by police (Bureau of Justice Statistics, 2015; Cheurprakobkit, & Bartsch, 2001; English et al., 2017; Jacob, 1971; Kahn & Martin, 2016; Lurigio et al., 2009; Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor, et al., 2020; Tyler, 2004; Warren, et al., 2006). Generally, these communities have reported greater negative perceptions of the police compared to White people, which may be attributed to the persistent racial bias and discrimination practices of law enforcement (Carbado & Rock,

2016; Carter, 1985; Culver, 2004; Decker, 1981; English et al., 2017; Kahn & Martin, 2016; Lurigio et al., 2009; Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor et al., 2020; Walker, 1997). In contrast, researchers have additionally defined positive perceptions of police as the belief that officers are "trustworthy, friendly, unbiased, fair and care about one's community" (Nadal & Davidoff, 2015; Taylor et al., 2020).

Latinx have a unique experience dealing with discrimination related to ethnic stereotypes (e.g., undocumented, in gangs) in addition to racial appearance (Dovidio et al., 2010). To date, Latinxs are considered the second most targeted victim group by police after African Americans (Foundation, 2016; The Guardian, 2016). Antonio Zambrano-Montes (died in 2015), Andres Guardado Michael (died in 2020), and Michael Ramos (died in 2020) are only a few of the Latinx victims of fatal police shootings (Gregory & Suter, 2020; Jarvis, 2015; Mcglinchy, 2020) that are comparable to the traumatic deaths of Breonna Taylor (died in 2020) and George Floyd (died in 2020), among others (Lartey, 2020; Ross, 2020).

Police brutality, such as excessive force (e.g., physical restraints, unwarranted use of weapons) (Solis et al., 2009), hate speech (Romero, 2006), sexual violence (Langenderfer-Magruder et al., 2016), and fatal police shootings (Durán, 2019) have been long reported in the Latinx community. Violent offenses date back to the 19th century when Mexicans were lynched by law enforcement officers in the West and Southwest (Hall, 2020). A further example of violent offenses by law enforcement includes when Rangers were used to police Mexicans in Texas. Looking at present day, to date, police officers have been found to be three times more likely to search and arrest Latinx drivers than White drivers (Baumgartner et al., 2020; Bureau of Justice Statistics, 2015; Fund, &

Fund, 2012; Mucchetti, 2005; US Department of Justice, 2011), despite having less evidence when conducting these same searches (Bureau of Justice Statistics, 2015).

In 2016, Latinx accounted for approximately 23% of all police searches and nearly 30% of all arrests although they only account for 18% of the US population (The Guardian, 2016). Furthermore, in the same year, 16% of fatal police shootings were Latinx victims, further demonstrating the disproportionate number of Latinx fatalities in comparison to White fatalities (The Guardian, 2016). While these numbers are alarming, in reality, the number of cases may even be larger as cases tend to be under-reported and records incomplete since national databases rely heavily on law enforcement agencies' self-reporting (Fund & Fund, 2012). In addition, Latinx individuals are often labeled as White, making it difficult to find accurate data (see Latino Justice report).

Given the long history of tense relations between the Latinx community and law enforcement, understanding Latinx perceptions of police is of utmost importance. Research supports that elucidating perceptions of the police can assist in implementing effective and trustworthy police practices, sustaining safe communities, and reducing crime (Culver, 2004; Human Right, 2019; Janneta & Beiler, 2015). However, given the historical and political events that have negatively impacted the Latinx community (Becerra, et al., 2013; Escobar, 1999; Menjívar, & Bejarano, 2004; Theodore & Habans, 2016), it is also important to study Latinx views towards police.

Thus far, limited psychometrically validated measures have been used to evaluate the perceptions of police among marginalized samples (English et al., 2017; Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor et al., 2020); these are additionally nonspecific to Latinx populations in the US. The quantitative measures that do exist in

psychology have exclusively focused on comparing the rates of negative encounters with police between Black and White populations (English et al., 2017), and general perceptions of public treatment of law enforcement (Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor et al., 2020; Tyler, 2005). While measures that assess the frequency of negative police encounters are important to investigate, these are limited as they only capture those with previous experiences with law enforcement (e.g., those accused by police of having or selling drugs) (English et al., 2017) and neglects individuals who may strongly fear and avoid these interactions without having any direct encounters. Thus, individuals may form negative perceptions regardless of their direct experiences with police or lack thereof and may be influenced by external factors such as family, friends, cultural norms, media coverage, and/or society (Altamirano, 2018). Therefore, frequency measures are not sufficient in examining ethnic minorities' perceptions of police as they exclude individuals with no direct experiences with the police.

Furthermore, studies investigating the perceptions of police typically only capture how police treat the general public (Schuck et al., 2005; Taylor et al., 2020). Racial/ethnic-specific issues are often only included by comparing racial/ethnic groups or averaging scores on items that include only positive statements about police (e.g., police are fair to all) (Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor et al., 2020). Lower scores are interpreted as having a more negative perception of the police and higher scores indicate more positive perceptions (Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor et al., 2020). However, this method neglects to capture specific race/ethnic-based experiences of how police treat different groups which may influence Latinx perceptions of police. Thus, asking relatively positive questions is not adequate for capturing Latinx

perceptions of police, which are often influenced by specific experiences (e.g., being profiled as undocumented). By examining perceptions specific to the Latinx community, researchers can provide more insight into the discrimination police have towards Latinx.

The current study seeks to explore additional psychometric properties' evidence of validity and reliability via confirmatory factor analysis, internal consistency, measurement invariance testing, and mean differences among groups of a quantitative assessment in development titled the *Latinx Perceptions of Police Scale* (LPOPS; Altamirano, 2018) among US Latinx adults. The scale intends to broaden our field's understanding of Latinx experiences with the police (Altamirano, 2018). An exploratory factor analysis (EFA; Worthington, & Whittaker, 2006), and preliminary psychometrics were conducted in a previous study that provided evidence of the factor structure of the LPOPS, which included three factors/subscales: *Police Views of Latinxs* (PVL; Altamirano, 2018), *Anxiety of Interacting with Police* (AIP; Altamirano, 2018), and *Fear of Police Abuse* (FPA; Altamirano, 2018) among Latinx adults in the US (see Table 1). An additional psychometric study that includes a confirmatory factor analysis (CFA; Worthington, & Whittaker, 2006) is needed to further establish evidence of reliability and the construct validity of this scale.

In addition to confirming the LPOPS factor structure, the current study will yield evidence of convergent validity for the LPOPS by conducting bivariate correlations between LPOPS and other closely related scales (e.g., rates of negative experiences with police and general perceptions of police) (English et al., 2017; Nadal & Davidoff, 2015). Convergent validity refers to how closely a new scale is related to other measures that capture the same or similar constructs (Krabbe, 2016). Additionally, convergent validity

helps determine whether the new scale is distinct from other measures by assessing uniqueness in latent variables of the proposed scale (Krabbe, 2016). Therefore, establishing convergent validity is an important aspect of determining the psychometric properties of the LPOPS.

Further, the proposed study seeks to obtain additional validity estimates by conducting a *multigroup confirmatory factor analysis* (MG-CFA; Xu, H., & Tracey, 2017) to test the assumption measurement invariance across Latinx groups based on varying racial identifications (i.e., Afro-Latinx, White Latinx) and selected skin tone (i.e., darker or lighter skin tones). "Measurement variance or non-equivalence of an instrument is introduced when groups of participants experience or conceptualize a construct differently (Meredith, 1993; Vandenberg & Lance, 2000; Widaman & Reise, 1997; Xu, H., & Tracey, 2017)" (Dillon et al, 2015). "Determining the measurement invariance of an instrument allows researchers to assess whether the construct and scores of a measure are comprehended and measured across salient participant groups" (Dillon et al, 2015) (e.g., based on racial identifications); "the continued use of measures with different conceptual meanings across racial groups may render invalid analyses when comparing such groups (Burlew et al., 2009)" (Dillon et al, 2015).

Furthermore, another goal of the current study is to determine the group means differences in scores by conducting a multivariate analysis of variance (MANOVA; French et al., 2008). A MANOVA allows researchers to evaluate distinctions in population means on more than one dependent variable across levels (French et al., 2008). More specifically, a MANOVA will assist in exploring if there are statistically significant means differences in LPOPS subscale scores when comparing race

identification (i.e., Afro-Latinx, White Latinx) and skin tone (i.e., dark skin, lighter skin). Providing inclusive multicultural research when investigating the groups' differences in the LPOPS scores by race identity and skin tone is essential to understand the nuances of Latinx perceptions of the police.

Organization of Proposal

The following dissertation proposal contains Chapter 2 which presents (a) the summary of the scale developmental procedures and results of the initial EFA of the LPOPS, (b) the importance of CFA and other validity analysis, (c) the rationale for MG-CFA analysis to test measurement invariance of the LPOPS, (d) the rationale for MANOVA to test group differences, and (f) the research questions and hypothesis of the current study. In Chapter 3, the proposed methodology is outlined, including (a) the procedures, measures, and steps for the CFA, (b) other validity analysis (e.g., convergent validity), (c) MG-CFA analysis to assess measurement invariance, and (d) MANOVA to compare groups on different outcomes in the LPOPS. Chapter 4 outlines the results from this study. Chapter 5 discusses implications for the study, future research, and limitations.

CHAPTER 2

LITERATURE REVIEW

The rationale and initial construction of the LPOPS are summarized in this section.

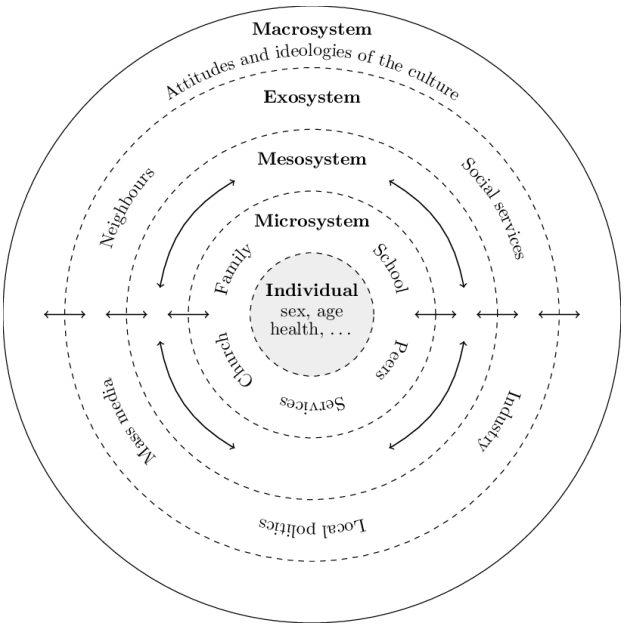
Overall, the development of the LPOPS broadly draws upon existing measurement and psychometric principles (Altamirano, 2018; Worthington & Whitaker, 2006). Several researchers have described guidelines to follow to ensure best practice in scale development (De Vellis, 2012; Worthington & Whitaker, 2006). Per these recommendations, a sequential procedure was used to create a multidimensional scale measuring the perception of police among Latinx. These steps include (1) item development using a multidisciplinary and theoretical approach, (2) the creation of subscales with internal and external revision of items, and (3) conducting an EFA analysis (Altamirano, 2018).

Theoretical Framework

The Bronfenbrenner's Socio-Ecological Systems Model (SESM; Bronfenbrenner & Morris, 2006) served as the theoretical framework for the development of LPOPS and its subscales, PVL, AIP, and FPA (see Altamirano, 2018). According to Bronfenbrenner's SESM, "the human experience results from reciprocal interactions between individuals and their environments, varying as a function of the individual, his or her context and culture, and over time" (APA, 2012, p. 4). Within the SESM, five systems influence an individual's development and beliefs: microsystem, mesosystem, exosystem, macrosystem, and chronosystem (see Figure 1) (Bronfenbrenner & Morris, 2006; Dahlgren & Whitehead, 1991; Serdarevic & Chronister, 2005).

Figure 1

Bronfenbrenner's Ecological Theory Model



First, the microsystem entails the relationship and interaction between the individuals' characteristics and their immediate or day to day environments (e.g., family, school, and neighborhood) (Bronfenbrenner & Morris, 2006; Dahlgren & Whitehead, 1991; Serdarevic & Chronister, 2005). Second, the mesosystem explains how outside factors and structures (e.g., police station proximity) interreact with one's immediate surroundings, thus influencing each other (Bronfenbrenner & Morris, 2006; Dahlgren & Whitehead, 1991; Serdarevic & Chronister, 2005). Next, the exosystem refers to the parts of the environment which have a profound influence on one's development, even though an individual may not directly experience them (e.g., peers and family members experience with discrimination) (Bronfenbrenner & Morris, 2006; Dahlgren & Whitehead, 1991; Serdarevic & Chronister, 2005). Further, the macrosystem contains the values and cultural norms in which an individual resides in (e.g., Western Culture)

(Bronfenbrenner & Morris, 2006; Dahlgren & Whitehead, 1991; Serdarevic & Chronister, 2005). Lastly, the chronosystem explains how sociohistorical events trickle down to each system (e.g., deportation enforcement regulations) (Bronfenbrenner & Morris, 2006; Dahlgren & Whitehead, 1991; Serdarevic & Chronister, 2005).

Many factors influence negative views of police in all levels of the SESM and have lasting consequences in the Latinx community. The SESM helps scholars understand the different systemic factors that influence police perceptions among Latinx, such as immigration status (microsystem), stereotypes (macrosystem), news reports on police brutality (exosystem and chronosystem), socio-cultural values (macrosystem), fear of deportation (microsystem), poverty (microsystem), discrimination (macrosystem), and/or language barriers (microsystem) (Adler, 2006; Becerra et al., 2013; Carter, 1983, 1985; Culver, 2004; Davis et at., 2001; Herbst & Walker, 2001; Menjivar & Bejarano, 2004; Kidd and Chayet, 1984; Vidales, 2007). Thus, the different levels in the SESM provide a structure for how interactions between the legal system and society may influence Latinx understanding of the role of police and their negative perceptions of them (see Altamirano, 2018).

Along with those themes, Latinx participants have macrosystemic concerns about the legitimacy of police officers and the procedural fairness of these law enforcement organizations due to past treatment (Engel, 2005; Smith & Holmes, 2003; Tyler, 2001). For instance, news outlets underreport Latinx experiences with police brutality, which could be due to the White and Black binary concept that excludes critical examination of other ethnic minority experiences (e.g., Latinx, Asian, & Native Americans) (Wu, 2014). Therefore, although Latinx experience frequent occurrences of unfair treatment by police,

their cases are often unnoticed and underreported. Moreover, harmful stereotypes that Latinx are criminals and do not contribute to this country add to their unfair treatment and discrimination within the SESM system (Dovidio et al., 2010).

Furthermore, public policy in the macrosystem of the SESM explains how Latinx issues have primarily centered around immigration and deportation as Latinx immigrants comprise the majority of the undocumented population in the US (Alder, 2006; Patler & Pirtle, 2018; Pew Research Center, 2013). Consequently, Latinxs are more likely to be stereotyped as undocumented, which encourages rather than condemns the negative actions of police towards them (Down, 2016). Many law enforcement agencies have agreed to uphold the responsibilities of *Immigration and Customs Enforcement* (ICE; U.S. ICE, 2016), empowering police to abuse, racially profile, pull over, and/or arrest Latinx disproportionately in comparison to other racial groups (Adler, 2006; Androff et al., 2011; Hernandez, 2005). The legal and social construct of illegality provides an apparatus for sustaining vulnerability and traceability among Latinx in the US that has lasting effects in all systems of SESM (De Genova, 2002, 2004, 2007).

Moreover, in the macrosystem, hatred toward Latinx is further influenced by Trump's 2016 presidential campaign, which spearheaded harmful rhetoric on deporting undocumented individuals, particularly of Mexican descent (Andrade, 2019). The Trump administration further increased collaboration with state and local law enforcement organizations to support and fund federal immigration enforcement strategies to detain and deport undocumented immigrants (Andrade, 2019; Menjívar, Gómez Cervantes, & Alvord, 2018; U.S. Immigration and Customs Enforcement, 2016).

While reports of crime declined in high-density Latinx cities due to mistrust and fear of deportation for themselves or family members, police harassment toward these communities increased due to the pursuit of detaining undocumented immigrants (Menjívar, Gómez Cervantes, & Alvord, 2018; Steinberg, 2008). Further, reported abuse in immigration detention centers (Blunt, 2017) may contribute to Latinx mistrust and fear of police. Many captive immigrants have been denied basic rights, such as medical care, food, hygiene, and access to mental health professionals. Latinx communities are highly aware of these inhumane conditions (Blunt, 2017) and, although these injustices have been vocalized by victims, the number of reported deaths in the centers continue to increase. Within the microsystemic mechanisms of the SESM, "cognitive messages received from friends and family could suggest that it is safer to stay away from police and not expose anyone who may be undocumented" (Altamirano, 2018). For example, the W.K. Kellogg Foundation, Univision, and The Denver (2014) conducted a survey that found that 68% of Latinxs in their sample worry about excessive use of force by police and approximately 18% reported that friends or family have experienced police brutality. As the US-Mexico border becomes more restricted though immigration enforcement (Kanstroom, 2007, Menjívar, Gómez Cervantes, & Alvord, 2018), the humiliation and apprehension attached to immigration laws may foster negative perceptions of police and subject Latinx to more targeted harassment (Menjivar, 2014). Thus, the SESM system explains how Latinx perceptions may be influenced and developed throughout their lives.

Furthermore, the chronosystem of the SESM allows for examination of the history of the establishment of law enforcement and how institutionalized racism has played a role in its development and modern-day application (Durr, 2015; Potter, 2013). Dating

back to the 1700s, Southern states formed slave patrols in which white men would enforce laws related to slavery (Durr, 2015; Klockars, 1996; Potter, 2013). These men often located and returned enslaved Blacks who had escaped and punished those whom they believed violated rules (Durr, 2015). By the 19th century, police departments were formed to regulate the economic and political interests of others rather than to prevent crime (Durr, 2015; Potter, 2013). The first police forces were overwhelmingly white males who were expected to control the underclass, which was identified as African Americans, immigrants, and the poor (Durr, 2015; Hawkins, & Thomas, 2013; Potter, 2013). Police violence, corruption, and abuse were common practices against the vulnerable population in the 1900s (Barker, 2011; Durr, 2015; Potter, 2013). Unfortunately, the history of institutional racism in law enforcement agencies has carryover effects that continue to influence the culture of police departments today and contribute to racial biases, discrimination, and enforcement of systemic oppression against ethnic minorities (Nadal & Davidoff, 2015). Scholars have claimed that the slave patrol origins, coupled with a lack of nonwhite officers and adequate police training, continue to contribute to cases of police brutality among African Americans and Latinx (Lemieux et al., 2020). Thus, the SESM systems guide theorists and researchers in understanding how the treatment of ethnic minorities influences perceptions of police among Latinx.

LPOPS Subscales

The SESM and past literature review assisted in identifying three dimensions in the LPOPS (i.e., PVL, AIP, FPA). When creating items for each subscale, the SESM

explanation of the macrosystem, chronosystem and its influence on the microsystem assisted in creating unique items that are specific to the Latinx community (e.g., profiled as undocumented, viewed as criminals). The next sections explain in detail each subscale of the LPOPS and its operational definitions.

Police Views of Latinxs

When developing items that ultimately converged on the PVL subscale, researchers drew from past literature on racial profiling and immigration enforcement efforts of Latinx (Alaniz, 1998; Altamirano, 2018; Warren et al., 2006; Weitzer & Tuch, 2002). Scholars define racial profiling as "the act of suspecting or targeting a person based on assumed characteristics or behavior of a racial or ethnic group, rather than on individual suspicion" (Weitzer & Tuch, 2002). Scholars have suggested that experiences of racial profiling have shaped negative views of police among ethnic minorities (Harris, 1999; Weitzer & Tuch, 2002; Welch, 2007). As stated previously, desire for the police to enforce federal immigration laws in efforts to increase deportation, have increased (Kanstroom, 2007, Menjívar, Gómez Cervantes, & Alvord, 2018). Within these efforts, Latinxs have become more vulnerable to racial profiling by police (Kanstroom, 2007, Menjívar, Gómez Cervantes, & Alvord, 2018). Consequently, the police may have developed certain stereotypes about Latinx (e.g., criminals, undocumented) which can expose them to racial profiling and discrimination at the hands of police (Kanstroom, 2007, Menjívar, Gómez Cervantes, & Alvord, 2018). Thus, the PVL subscale explains how race and ethnicity can play a role in how an individual is treated by police within the macrosystem of the SESM (Bronfenbrenner & Morris, 2006).

Real-life examples of racial profiling and discrimination by police exist within the Latinx community with unfortunate traumatic outcomes. For example, in 2012, Manuel Diaz, 25, was shot and killed by police officer Nick Bennallack in Anaheim, California (City News Service, 2017). Officer Bennallack claimed that he suspected Diaz was in a gang based on his dress code and feared for his life (City News Service, 2017). However, no firearm was recovered at the scene (City News Service, 2017). The federal jury ruled in favor of the officer and did not hold Bennallack accountable for excessive force or other claims (City News Service, 2017). The Latinx community was outraged by this event, which sparked violence and street protests in response to the killing of an unarmed Latino (City News Service, 2017). In June 2020, "Sean Monterrosa, 22, was shot dead in Vallejo, California by police responding to calls of looting" (The Guardian, 2020). The police suspected him of being the violator although they had no evidence (City News Service, 2017). The victim was shot through the car windshield and no firearms were found at the scene (City News Service, 2017). Many citizens in the Vallejo and Bay Area were furious as the city had a long history of police violence, excessive force complaints, and high-profile killings (e.g., Willie McCoy) (City News Service, 2017).

Another example occurred in Brooklyn, New York in 2003, whereby the Acosta family was approached and apprehended by police officers when celebrating US Independence Day on their porch after an officer yanked a radio the family was playing out of its electrical socket (Lee, 2003). At least eight Acosta family members, ranging from 12 to 62 years old, were injured and five arrested (Lee, 2003). One victim was 62-year-old grandmother Margarita, who had her shirt torn entirely off, leaving her in just a white lace bra while being arrested. It is unclear why the police approached them, and the

family expressed feelings of discrimination due to being Latinx and being racially profiled (Lee, 2003). These examples demonstrate how Latinx are often racially profiled by police and subjected to believing that they are viewed negatively by law enforcement as a whole (Lee, 2003).

Thus, items from the PVL assess beliefs that could be influenced by experiences of being racially profiled, discriminated against, and/or stereotyped. The PVL subscale is defined in this study as " awareness, feelings, and behaviors that indicate stereotypes that police may have about Latinxs" (Altamirano, 2018). The PVL subscale consists of eight items (e.g., "I feel that police officers believe Latinxs do NOT contribute to this country") and indicated an excellent internal consistency estimate (Altamirano, 2018).

Anxiety of Interacting with Police

When developing items that ultimately converged on the AIP subscale, researchers drew on past literature pertaining to anxiety among Latinx (see Altamirano, 2018). Anxiety may alter the dynamic of how an individual interacts with the police (Altamirano, 2018). The anxiety of police plays a role in the mesosystem of the SESM (Bronfenbrenner & Morris, 2006). Mesosystemic interactions between individuals and police, as well as their family and friends, can all shape negative perceptions of police. To avoid police interactions and, therefore, reduce anxiety symptoms (e.g., increased heart rate, headaches, panic attacks), Latinx may go to great lengths and put themselves in further danger. For example, in February 2015 in Pasco, Florida, police killed an unarmed man named Antonio Zambrano-Montes, 35 (Jarvis, 2015). He allegedly threw rocks and ran because he was anxious about speaking with the police (Jarvis, 2015). The police began chasing Zambrano-Montes, and ultimately, fatally shot him (Jarvis, 2015).

In another instance, in June 2020, Andres Guardado, 18, was chased and killed by police officers in Los Angeles, California (Gregory & Suter, 2020). Police claimed they saw Guardado with a handgun and he ran when he saw the sight of them (Gregory & Suter, 2020). Guardado worked as a security guard in the auto body shop (Gregory & Suter, 2020). The owner of the shop believes Guardado ran because he was scared for his life when police pulled their gun on him (Gregory & Suter, 2020). These examples demonstrate how Latinxs are often anxious about interreacting with police, sometimes even to the point of avoiding them altogether.

Furthermore, negative outcomes of situations in which Latinxs have sought police protection has sent a message to the public against seeking help (Altamirano, 2018). For example, in 2003, 15-year-old Mario Madrigal Jr. was shot 10 times by three police officers in Mesa, Arizona, resulting in his death after a first response call stating that Mario was suicidal and planning on hurting himself with a kitchen knife (Hoffmann, 2007). Mario was killed under the claim that the officers felt their lives were threatened (Hoffmann, 2007). Mario's family believes he was not a threat to anyone's life but his own that night, yet, he was shot due to the police's inability to handle a mental health crisis (Hoffmann, 2007). The police officers were not criminally charged as the shooting was justified under Arizona law (Hoffmann, 2007). Unfortunately, such cases are common and may have caused Latinxs to avoid calling the police when needed for their protection.

Thus, factor 2 of the LPOPS, AIP, consists of items that measure the affective behaviors of interacting with police officers. The AIP subscale is defined in this study as "feelings around being nervous and/or anxious when thinking about possibly interacting

with a police officer in the future" (Altamirano, 2018). This subscale consists of 6 items (e.g., "I feel anxious when a police officer stops me and talks to me") and indicated an excellent internal consistency estimate (see Altamirano, 2018).

Fear of Police Abuse

When developing items that ultimately converged on the FPA subscale, researchers drew on past literature related to perceptions of fear among Latinx and other ethnic minorities (see Altamirano, 2018). Latinx, in general, hold a higher level of fear towards police when compared to other racial groups besides Blacks (Lurigio, Greenleaf, & Flexon, 2009; Menjívar & Bejarano, 2004; Mirande, 1980; Solis, Portillos, & Brunson, 2009; Theodore, 2013; Theodore & Habans, 2016). Moreover, other studies report that Latinx citizens hold lower levels of trust and confidence in police officers in comparison to other racial groups, besides Black (Reisig, & Parks 2000, Schuck, & Rosenbaum, 2005; Rosenbaum, Schuck, Costello, Hawkins, & Ring 2005; Schuck, Rosenbaum, & Hawkins, 2008). Quantitative instruments that measure the fear of police define fear through a general lens (Reisig & Parks, 2000; Schuck & Rosenbaum, 2005; Schuck, Rosenbaum, & Hawkins, 2008). However, Latinx populations have unique fears around police abuse that other racial groups may not experience. Being more specific is important, considering. For example, during a qualitative study conducted in Arizona, Central American Latinx participants reported fearing the consequences of a family member being deported by police and unfair treatment due to their ethnicity (Menjivar & Bejarano, 2004).

National and local cases of police harassment and violence suggest how fear of police abuse among Latinx may have developed. For example, in 2014, Ramsey Orta

filmed the killing of Eric Garner, a Black man put in a fatal chokehold by police for illegally selling cigarettes in Staten Island, New York (Jones, 2019). The NYPD continuously harassed Orta after the video's release, eventually leading to his "coincidental" imprisonment (Jones, 2019). During an interview with Chloé Jones (2019), Orta reported constant abuse (e.g., being threatened, beaten, poisoned) by correctional officers while serving his time and fearing for his life. Orta reported that he felt his actions would bring justice to his friend Eric Garner (Jones, 2019). However, Officer Daniel Pantaleo would not be indicted by a grand jury and Orta would continue to suffer targeted harassment by the police for exposing the NYPD (Jones, 2019).

Following the events of Eric Garner, two Mexican-American siblings, Jonathan and Cindy Daza, were harassed and told to shut down their fruit stand in September 2014 (Torres, 2014). The confrontation suddenly escalated when Cindy placed herself between the police officer and her brother Jonathan to protect the latter (Torres, 2014). Jonathan, 22, was apprehended by several police officers, with one going as far as walking over and kicking him in the back (Torres, 2014). Cindy rushed to her suffocating brother's aid as he yelled "I can't breathe" and ended up being apprehended herself (Torres, 2014). Both siblings reported fearing for their lives that day (Torres, 2014). Fortunately, they lived to tell their story however they were exposed to the tragic reality of police abuse (Torres, 2014).

Furthermore, Latinx often see and hear recordings of their family and friends being fatally shot by police, consequently developing a fear of experiencing abuse themselves. For example, in April 2020, Michael Ramos, 42, died from multiple gunshot wounds by a police officer in Austin, Texas (Mcglinchy, 2020). A YouTube video

captures the incident and shows Ramos with his hands in the air at the time of the shooting (Mcglinchy, 2020). This incident was followed by another video in May 2020, which showed an LAPD officer repeatedly punching Richard Castillo in Los Angeles, California, even though Castillo was handcuffed and not resisting arrest (Mcglinchy, 2020). Castillo made a statement indicating he feared for his life and thought he would die that day (Mcglinchy, 2020). These examples demonstrate how fear of police abuse could develop among Latinx, even when innocent.

Thus, factor 3, FAP, captures an individual's "distress surrounding police taking advantage of or physically harming them" (Altamirano, 2018). This study defines the FAP subscale as "feelings centered around fear of police harming them, using excessive force, treating them unfairly, accusing them of a crime, and/or experiencing police brutality given their position in society" (Altamirano, 2018). This subscale consists of five items (i.e., "I am afraid that a police officer will arrest me even although I am innocent") and indicated an excellent internal consistency estimate (see Altamirano, 2018).

It is important to clarify that although fear and anxiety may occur together, these concepts are not interchangeable (Berk, 2001; Lang, 1985). Fear is an emotion that manifests in response to a known or definite threat (Berk, 2001; Lang, 1985). In this case, the FAP subscale captures fear of abuse by police among Latinx (e.g., excessive force, etc.). Items of the FAP subscale were created to provide specific examples of maltreatment by police (e.g., I am afraid police officers will physically hurt me) (Altamirano, 2018). Whereas, anxiety is the mind and body's reaction to stressful, dangerous, or unfamiliar situations (Lang, 1985). In this case, the AIP subscale captures

only the anxiety associated with police interaction (e.g., I feel nervous when I have to talk with a police officer) (Altamirano, 2018). Thus, the LPOPS' subscales AIP and FPA capture two separate experiences that can produce anxiety or fear (Altamirano, 2018). In the EFA study, the results of factor loadings demonstrated how these two factors (i.e., AIP & FPA) loaded separately; therefore, participants viewed these subscales as distinctive experiences (Altamirano, 2018).

CFA Analysis & Validity

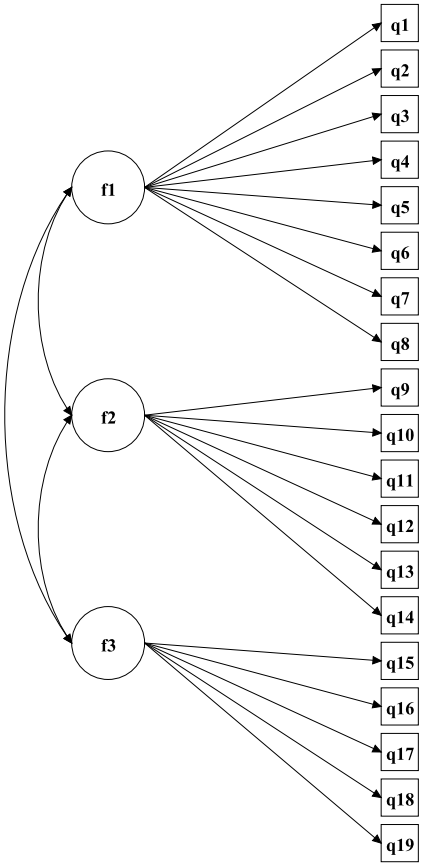
In the initial scale development study for the LPOPS, results provide a compelling argument for psychometric evidence and the three-factor structure of the LPOPS (see Appendix A). However, a CFA is needed to further provide additional evidence of the construct's validity by demonstrating whether the theorized factor structure can be replicated in a new sample of participants (Kahn, 2006; Kyriazos, 2018; Mvududu, & Sink, 2013; Worthington, & Whittaker, 2006). Hence, one aim of the current study is to further validate the LPOPS by conducting a CFA.

Both EFA and CFA assist researchers in establishing the validity of scales (Kahn, 2006; Mvududu, & Sink, 2013; Worthington, & Whittaker, 2006). Once a researcher has a theoretically and empirically meaningful factor structure via EFA, the next step would be to specify the resulting factor solution using structural equation modeling (SEM) which will help support the existence of the factor structure and the construct validity of the scale (Kahn, 2006; Mvududu, & Sink, 2013; Worthington, & Whittaker, 2006). A CFA being part SEM is needed to confirm that a hypothesized factor structure provides a good fit for the new sample (Kahn, 2006; Mvududu, & Sink, 2013; Worthington, & Whittaker, 2006). In other words, the goodness of fit (GOF) analysis indicates how well

the model fits a set of latent variables previously determined by the EFA (Kahn, 2006; Mvududu, & Sink, 2013; Schumacker, 1992; Worthington, & Whittaker, 2006). In addition, CFA allows for even more complex hypotheses to be tested, such as direct comparisons of factor structures across different groups, which is important when conducting cross-cultural research (Kahn, 2006; Mvududu, & Sink, 2013; Worthington, & Whittaker, 2006; Xu, & Tracey, 2017).

Figure 2

Predicted CFA Model



Note. f1 = Police Views of Latinx (PVL); f2 = Anxiety of Interacting With Police (AIP); f3 = Fear of Police Abuse (FPA).

Additionally, other forms of validity are important criteria for analyzing the quality of a measurement. For example, convergent validity indicates how well a new scale compares to a well-established scale within the same sample (Carlson, & Herdman, 2012; Worthington, & Whittaker, 2006). In the initial study, I hypothesized that LPOPS' subscales would positively correlate with past measures capturing police experiences, thus establishing evidence of convergent validity. A scale called Police and Law Enforcement (PLE; English et al., 2017) includes five items centered around the frequency in which individuals experienced a negative interaction with a police officer. The PLE study primarily focused on the experiences of African American men. A PLE example item included: "in the past 5 years, how often did a police or law enforcement accuse you of having or selling drugs?" (English et al., 2017). In the EFA study, the LPOPS' subscales demonstrate convergent validity due to positive correlations with PLE (see Altamirano, 2018).

Moreover, another scaled titled *Dimensions of Attitude Toward Police* (DATP; Schuck et al., 2005) had four dimensions to assess perceptions of police: neighborhood, global, police services, and fear of the police. The "Fear of Police" subscale included two questions concerning the individual's experience and that of their children and family. For example, "Are you sometimes afraid that police will stop you and threaten to arrest you when you are completely innocent?" (Schuck et al., 2005). The "Global Perceptions of Law Enforcement" subscales asked questions about their general views of police within the context of their community. Evidence of convergent validity was established as results displayed significantly positive associations between LPOPS' subscales and DATP's subscales (see Altamirano, 2018). Thus, results showed that LPOPS' subscales

and two previous measures, PLE and DATP, were closely related yet distinct, proving LPOPS' validity in capturing different aspects of views of the police (see Altamirano, 2018).

Another validity estimate that was investigated in the EFA study of the LPOPS was criterion validity, which means the degree to which a new scale can predict or is closely related to similar variables (Hinkin, 1995). Thus, I hypothesized that LPOPS' subscales would positively correlate with psychological distress (i.e., anxiety) and a measure of ethnic/racial discrimination. As expected, all three subscales of the LPOPS correlated with the outcome variables of anxiety and ethnic/racial discrimination significantly, thus establishing evidence of criterion validity (see Altamirano, 2018). This finding was particularly important to know because a Latinx client dealing with anxiety may have increased levels of anxiety depending on their perceptions of the police (Altamirano, 2018). Understanding these perceptions can assist in making further progress in therapy and begin reducing certain anxieties that could be tied to police officers (Altamirano, 2018).

In the proposed study, I seek to take a step further in describing evidence of convergent validity by examining relations between the newly developed measure titled *Perceptions of Police Scale* (POPS; Nadal & Davidoff, 2015) with the LPOPS subscales. The POPS is a 12-item questionnaire that was designed to measure general attitudes toward the police and perceptions of police bias (Nadal & Davidoff, 2015; Taylor et al., 2020). The items are not specific to racial/ethnicity identification; however, questions are positive and therefore predicted to moderately correlate negatively with the LPOPS'

subscales but will be distinct as they capture different and unique dimensions of views of police experienced by Latinx adults in the US.

MG-CFA & Measurement Invariance Rationale

In addition to discriminant validity, this study will aim to test whether a three-factor structure of the LPOPS fits different groups based on race. More specifically, I aim to determine whether the LPOPS will indicate measurement invariance across Latinx groups based on skin tone and racial identification. The LPOPS is expected to meet the assumption of measurement invariance as the Latinx community as a whole experiences racial profiling, police violence, and discrimination. Police mistreatment of Black and Latinx has a substantial historical context as racial bias in policing may be intentional due to it being at the core of its construction and initial purpose (Jackson, 1989). As mentioned previously, historians have argued that the US law enforcement system was created in the 1700s as a method of controlling freed slaves in the southern parts of America (Hollowell, 2009). Thus, the criminalization of Blacks and Latinx was built into the structure of the legal system and police practices in general (Jackson, 1989; Hollowell, 2009). Nonetheless, racism in policing contributes to the system of oppression that shapes racial targeting (Jackson, 1989; Hollowell, 2009). Latinx have a "unique experience dealing with discrimination related to ethnic stereotypes" (e.g., undocumented, in gangs) in addition to racial appearance (Roth, 2010). Thus, I hypothesize that the assumption of measurement invariance will be met for all Latinx.

This will be accomplished by conducting an MG-CFA, which provides a means to test the measurement invariance of a scale (Burlew et al., 2009; Xu, H., & Tracey, 2017). It is widely known that psychological knowledge gathered from one cultural group

cannot be automatically generalized to another (Burlew et al., 2009; Xu, H., & Tracey, 2017). Without evidence of measurement invariance of a scale, researchers are unable to make a proper comparison of scores across groups (Burlew et al., 2009; Xu, H., & Tracey, 2017). With the rise of multicultural awareness within counseling psychology, conducting a measurement invariance analysis is an important tool that addresses the cross-cultural validity of newly developed scales (Burlew et al., 2009; Xu, H., & Tracey, 2017). Therefore, measurement invariance through MG-CFA is necessary and important to help researchers and psychologists understand how psychological constructs, specifically LPOPS, is perceived cross-culturally (Burlew et al., 2009; Xu, H., & Tracey, 2017).

However, I also predict that, after establishing measurement invariance between groups, Afro-Latinx with darker skin tones will have higher score means on LPOPS' subscales compared to White Latinx with lighter skin tones. A higher score means among this group would indicate that Afro-Latinx may have more negative perceptions of police in comparison to White Latinx which may be associated with their racial identity and skin tone. To further explain the rationale for this prediction, it is important to understand the term Afro-Latinx and their unique experiences that differ from other Latinx. Afro-Latinx have been described as "people of African descent in Mexico, Central and South America, the Spanish-speaking Caribbean, and, by extension, those of African descent in the United States whose origins are in Latin America and the Caribbean" (Flores, & Román, 2009). Afro-Latinx face similar systemic oppression and discrimination as African Americans due to their typically darker complexions in comparison to White passing Latinx (Latorre, 2012). This could be further explained by the concept of race in

the US as it plays a role in assuming an individual belongs to a certain group. The American Psychological Association (APA) (2019) defined race as "the social construction and categorization of people based on perceived shared physical traits that result in the maintenance of a sociopolitical hierarchy". The term race was created to categorize individuals by the US government and its ideology stems from the African slavery era (Brunsma, & Rockquemore, 2002). Therefore, although Afro-Latinx might not see themselves as solely Black, they will be treated as such by the police based on the race they appear to be, consequently making them more vulnerable to police abuse.

Furthermore, the concepts of anti-blackness and colorism influence how Blacks and Afro-Latinx are mistreated in the US. Scholars have defined anti-blackness as "more than just racism against black people" (Ohito, 2021).. The term anti-blackness illuminates' societies inability to recognize black people's humanity which includes disregard and disgust for their existence (Ross, 2020). Whereas the term "colorism" is defined as having prejudice and/or discrimination against someone of a dark skin tone (Dixon & Telles, 2017; Hunter, 2007). Colorism influences the practices of anti-blackness as dark skin has been solely used to identify African Americans. The idea of anti-blackness makes African Americans and, consequently, Afro-Latinx more vulnerable to police abuse in comparison to other racial groups.

Having lighter skin grants certain privileges that date back to the period of slavery. To further explain, mixed-race slaves with lighter skin tones were allowed to have household jobs, granted more educational opportunities, provided better food, clothing, and shelter (Ryabov, 2013); they were often seen as superior to dark-skinned African American slaves (Ryabov, 2013). These ideas carried on after the abolition of

slavery as the "one-drop rule" indicated that individuals with one-drop of Black blood would be considered Black and would be treated as such regardless if they were mixed (Liz, 2018). Consequently, it was easier to try to identify Blacks based on their distinct features and skin tone, thus creating biases and stereotypes of Blacks and forming anti-blackness practices among Whites (Ross, 2020). Unfortunately, the history of colorism has carried on past the Civil Rights Movement and is present today in the US. The general public has viewed Blacks with darker skin tones as unattractive, criminal, unintelligent, and lazy (Maddox & Gray, 2002; Hochschild, 2007). Conversely, Whites have been associated with more positive views (e.g., successful, educated, intelligent) (Maddox & Gray, 2002; Hochschild, 2007). Thus, racial identity and skin tone may contribute to Afro-Latinx's higher score means on the LPOPS subscales compared to White-Latinx, with higher scores indicating that Afro-Latinx may have more negative perceptions of police. However, as the Latinx community is overall impacted by police brutality, these groups will demonstrate measurement invariance.

The Current Study

Aim 1: The first aim of the proposed study is to confirm the three-factor solution in a new independent sample from the initial EFA study by providing evidence of validity and reliability via CFA and the testing internal consistency of the LPOPS (see Figure 2).

Aim 2: The second aim of the proposed study is to demonstrate the evidence of convergent validity by conducting a bivariate correlation between LPOPS, similar preexisting measures (e.g., PLE & POPS) (English et al., 2015; Nadal & Davidoff, 2015), and other psychological constructs (e.g., anxiety, depression, stress, discrimination).

Aim 3: The third aim of the proposed study is to obtain additional validity estimates by conducting an MG-CFA to test the assumption measurement invariance across racial identifications (i.e., Afro-Latinx, White Latinx) and selected skin tone (i.e., light-skinned Latinx, medium or darker skinned Latinx).

Aim 4: The fourth aim of the proposed study is to determine the group means differences in scores by conducting a MANOVA across racial identifications (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) and selected skin tones (i.e., light-skinned Latinx, medium or darker skinned Latinx).

The current study hypothesizes the following for each of the study aims:

Hypothesis (H)1: A three-factor structure model which includes LPOPS subscales is hypothesized to emerge through a CFA analysis based on the initial EFA results in Study 1 with excellent reliability estimates.

(H)2: To establish evidence of convergent validity, LPOPS subscales will be positively and negatively correlated with past measures capturing police experiences (e.g., PLE & POPS) (English et al., 2017; Nadal & Davidoff, 2015). In addition, LPOPS subscales will be positively correlated with other psychological constructs (e.g., anxiety, depression, stress, discrimination).

(H)3: LPOPS subscales will show evidence of measurement invariance among self-reported racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned), and skin-tone groups (i.e., light-skinned Latinx, medium or darker skinned Latinx).

(H)4: There will be higher mean scores on LPOPS subscales among

different racial identity groups (i.e., racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned), indicating more negative perceptions endorsed by one group, an indicator of concurrent validity.

(H)5: There will be higher mean scores on LPOPS subscales among darker skin (mixed race or darker skinned Latinx) compared to lighter skin toned Latinx (e.g., light-skinned Latinx, medium or darker skinned Latinx); indicating more negative perceptions endorsed by one group, an indicator of concurrent validity.

CHAPTER 3

METHODS

Procedures

This study's protocol was approved by the Arizona State University Institutional Review Board. The web-based survey was available in the English language. To determine eligibility for participation, a brief screener was completed prior to the respondent being prompted to answer the survey's questions. To qualify for inclusion, participants must self-identify as Latinx, be 18 years of age or older, and currently live in the United States (see Appendix B). An electronic consent form was provided at the beginning of the survey and participants consented by clicking "I agree" (see Appendix C). Participants were informed that no identifiable information would be collected and survey completion times ranged from 15 to 25 minutes.

The recruitment of participants involved convenience sampling via snowball and target sampling. To recruit this specific population, paid advertisement through social media, such as Facebook and Instagram, was used (see flyer in Appendix D). The advertisement was in the English language and included links to the web-based survey. Participants that completed the survey were eligible to enter into a raffle to win one of 50 $25 Amazon gift cards. Data validity checks were used to detect random responses and verify that participants spent the minimum amount of time needed to answer the questions. For example, three validity questions (e.g., please mark "agree" for this item) were randomly placed throughout the survey to identify and remove participants that might not have responded to the survey carefully (Meade & Craig, 2012) (see Appendix E). In addition, Qualtrics data validity checks were used to screen for malingering

persons through a “CAPTCHA” test (i.e., human versus robot screening) (see https://www.qualtrics.com/support/survey-platform/survey-module/editing-questions/question-types-guide/advanced/captcha-verification/).

Power Analyses

Based on the framework proposed by MacCallum, Browne, and Sugawara (1996), and using the R code generator developed by Preacher and Coffman (2006), a priori sample size analysis with an alpha of .05 level (one-tailed test), *df* of 165 (for confirmatory factor analysis), and statistical power of .80, was conducted. The effect size (ε) is defined as RMSEA, and a null value of ε0 = .06 was adopted as .06 is the cutoff value for model evaluation in this study. Under these conditions, the minimum required sample sizes for the different values of ε were 92 (ε1 = 0), 96 (ε1 = .01), 107 (ε1 = .02), 134 (ε1 = .03), 205 (ε1 = .04), and 534 (ε1 = .05). This result indicated that the size of the sample must be between 92 and 534 in order to yield an excellent fitting model, even with varying effect sizes.

Participants

A total of 363 individuals responded to the study announcement and met the eligibility criteria. One hundred and fifteen participants were excluded as they did not answer more than 10% of the survey or failed to pass the validity check questions. The final analytic sample contained 248 participants that self-identified as Latinos/as/xs. Participants were aged between 18 and 76 years old (M = 32.03, SD = 10.35). Additionally, the sample included a diverse group of Latinx across gender, race/ethnicity, and education levels, among other factors (see Table 4). Further, the sample included participants that identified as Mexican, Mexican American, or Chicano (n = 165, 57.3%),

Puerto Rican (n = 21, 8.5%), and of other indicated countries such as Honduras, Cuba, Colombia, Dominican Republic, Guatemala, Peru, El Salvador, Venezuela, and Spain (n = 69, 27.8%).

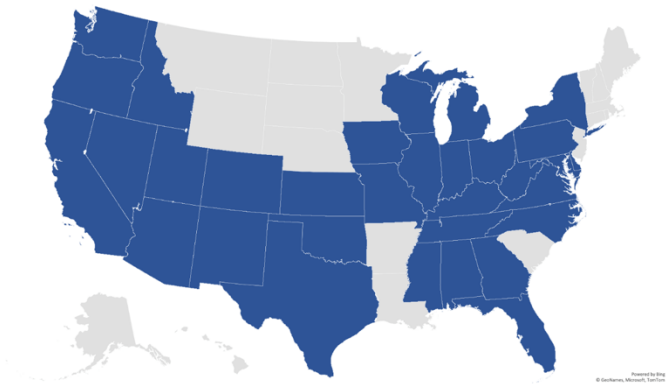
Figure 3 includes a map of the participants' geographical locations, which was provided through obtaining their zip codes. The participants represented 30 U.S. States, with the majority hailing from California, Florida, New York, Arizona, New Mexico, Texas, and Georgia.

Measures

Demographic Variables. Participants were asked to complete a series of demographic questions, including gender, sexual orientation, language preference, state of residence status, income, immigration history, education, marital status, tenure in the US (see Table 1), and geographical location based on zip code (see Figure 3).

Figure 3

Map of Geographical Locations by Zip Code



Note: States in blue represent US States in which the survey participants are from, as indicated by obtained zip code data.

Puerto Rican Racial Terms. Due to Latinx using terminology along a "dark" to "light" skin color spectrum (see Figure 4; Roth, 2012) to describe race, participants were

also asked to describe their race using such terms to address aims three and four of the study. The racial term options provided to participants on the demographic questionnaire were adapted from Lloréns et al. (2017) and Roth (2012) (see Figure 4). AfroPuerto Rican/AfroPuertorriqueña/o, AfroBoricua, and Afrodescendant were also included in the list of racial terms (Capielo et al., 2021). The terms were translated and placed in categories by scholars to identify a different method of indicating whether an individual identifies as White-Latinx or Afro-Latinx (see Lloréns et al., 2017; Roth, 2012). This supported method was utilized as a way to capture heterogeneity in racial identity among Latinx populations as opposed to traditional race categories (e.g., White, Black, Asian, Native American, etc.). Racial identification was split into two groups: White-Latinx (light-skinned) (n =161) and Afro-Latinx (mixed race, dark-skinned) (n = 87) based on Lloréns et al. (2017) classifications (see Figure 4) (see Appendix F) (See Table 2 for more information).

Figure 4

Puerto Rican Racial Terms

Puerto Rican Racial Terms

Term	Skin color description (Lloréns et al., 2017)	Skin color description (Roth, 2012)
Afro-descendent	Dark skin	Not included
Negro/a (Black)	Dark skin	Black
Negrito/a (Little black)	Dark skin	Black
Prieto/a (Dark skin)	—	Dark skin
Piel oscura (Dark skin)	Dark skin	Dark skin
Moreno/a	Dark skin	Dark skin mulato/a
Mulato/a (Mulatto)	Dark skin	Dark skin; Mixed-race
Trigueño/a (Wheat-hue)	Dark skin	Mixed-race; Similar to mulato
Piel canela (Cinnamon skin)	Dark skin	Brown skin; Mixed-race
Café con leche (Coffee with milk)	Light skin	Brown skin; Mixed-race
Jabao/a	—	Fair skin with curly hair
Jincho/a	—	Fair skin; pale skin
Piel clara (Light skin)	Light skin	Light skin
Blanquito/a (Little White)	Light skin	White belonging to the upper class
Blanco/a (White)	Light skin	White

Table 1

Demographic Characteristics of the Sample

Category	*n*	*%*
Gender		
Male	66	26.6
Female	172	69.4
Non-Binary	7	2.8
Transgender	1	0.4
Other	2	0.8
Residency Status		
U.S. Citizen	190	76.6
U.S. Permanent Resident	18	7.3
Student Visa	6	2.4
Work Visa	3	1.2
Work Authorization	1	0.4
DACA	13	5.2
Undocumented	14	5.6
Refugee	3	1.2
Race Identity		
Latinx, Hispanic	239	96.4
White	32	12.9
African American, Black	13	5.2
Asian American/Asian	3	1.2
Pacific Islander	1	0.4
Native American	11	4.4
Middle Eastern or Arab	2	0.8
Other	9	3.6
Hispanic Origin		
Mexican, Mexican American, Chicano	157	63.3
Puerto Rican	21	8.5
Dominican	7	2.8
Brazilian	2	0.8
Other (Colombian, Honduran, etc)	60	24.2
Relationship Status		
Single	81	32.7
In a committed relationship	49	19.8
Common-law union	1	0.4
Domestic partner	8	3.2
Engaged	7	2.8

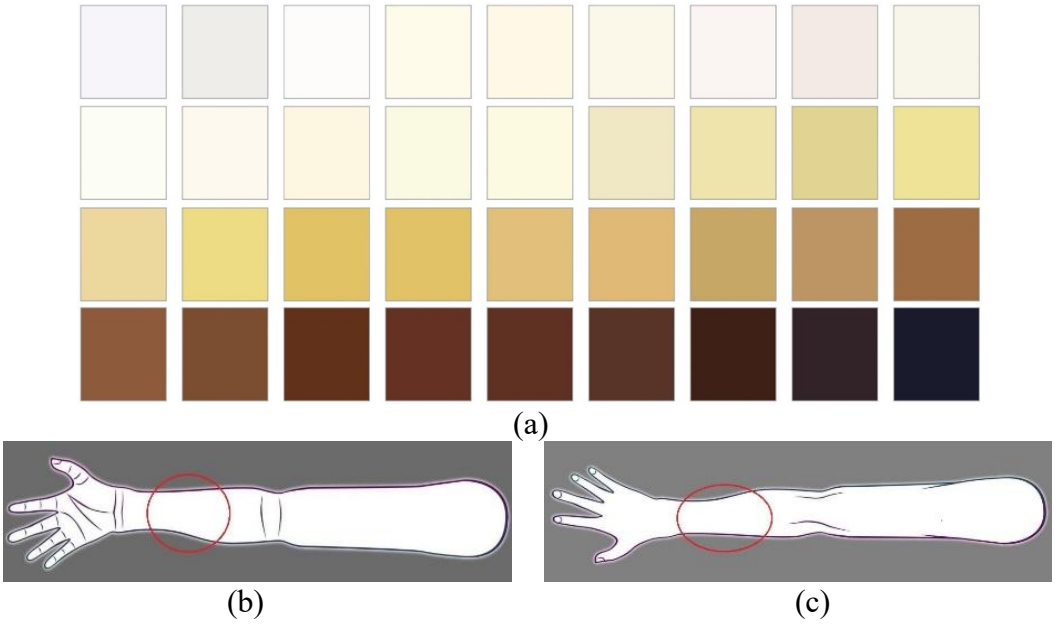
Married	90	36.3
Divorced	10	4.0
Widowed	1	0.4
Other	1	0.4
Sexual Orientation		
Bisexual or pansexual	36	14.5
Gay or lesbian	17	6.9
Heterosexual or straight	169	68.1
Asexual	5	2.0
Pansexual	14	5.6
Other	7	2.8
Education Level		
Less than High School	3	1.2
Some High School (no degree graduate)	2	0.8
High School degree or GED	36	14.5
Trade or vocational school degree	9	3.6
Some College (no degree)	67	27
College Degree (e.g., B.A., B.S.)	68	27.4
Some graduate degree	20	8.1
Advanced degree (e.g., M.A., Ph.D.,)	43	17.3
Immigration from Another Country		
Yes	95	38.3
No	153	61.7
Average Household Income		
Less than 10,000	20	8.1
$10,000 – 20,000	28	11.3
$21,000 – 30,000	30	12.1
$31,000 – 40,000	38	15.3
$50,000 – 74,999	64	25.8
$75,000 – 99,999	36	14.5
$100,000 – 149,999	19	7.7
Greater than $150,000	13	5.2

Note. $N = 248$.

` **Skin Color Chart.** Given that one of the study's aims is to determine differences in experiences between white-passing and darker-skinned Latinx individuals, participants were asked to rate their skin tone and perceived ethnic appearance. An adapted version of the Felix von Luschan skin color chart (Treesirichod, Chansakulporn, & Wattanapan, 2014) was used to measure each participant's skin tone (see Figure 5). This chart measures human pigmentation on a range from 1 to 36, with higher numbers indicating darker skin pigmentation. Participants reported their skin tone using the dorsal forearm region and the medial forearm region based on the 36 pigmentations (Treesirichod et al., 2014) (see Figure 5). Using a sample of individuals in India, Treesirichod et al. (2014) observed a strong correlation (r = .90) between the Felix von Luschan skin color chart and narrow-band reflectance spectrophotometer (NBRS), which is a machine used to determine skin color. Further, Mexameter et al. (2013) also found a strong correlation between the Felix von Luschan skin color chart and different NBRS reports in a US Black and Latinx sample, with figures of .88 and .70, respectively. To create two groups, the sample was split using the median score to determine the mid-point of responses (i.e., 18). Skin blots 1-18 were considered as White-Latinx light-skinned and skin blots 19-36 were considered as Afro-Latinx dark-skinned, resulting in a sample of (n = 105) light-skinned and (n =143) medium, dark-skinned. Skin blots 1-18 are white shades, whereas 19-36 blots are medium to dark skin tones. (See Table 2 for more information).

Figure 5

Skin Color Chart



(a)

(b) (c)

Note. (a) Treesirichod et al., 2014; (b) Location of posterior forearm skin measurement (facultative); and (c) Location of anterior forearm skin measurement (constitutive).

Table 2

Demographic Information Racial Identification & Skin tone

Category	Description	*n*	%
Racial Identification			
Afro-Boricua	Dark Skin	6	2.4
Afro-descendant	Dark Skin	10	4.0
Café con leche (Coffee with Milk)	Light Skin	32	3.1
Afro-puertorriqueño(a)	Dark Skin	3	1.2
Blanco(a)/blanquito(a) (White)	Light Skin	42	0
Jincho(a)/jinchito(a)	Light Skin	2	0.8
Mulato(a)/mulatito(a)	Dark Skin	10	4.0
Negro(a)/negrito(a) (Little Black)	Dark Skin	18	7.3
Piel canela (Cinnamon Skin)	Dark Skin	32	12.9
White	Light Skin	54	21.8
Jaba(a)/jabaito(a)	Light Skin	2	0.8
Light skin	Light Skin	76	30.6
Piel morena	Dark Skin	62	25.0
Black	Dark Skin	11	4.4
Trigueño(a)/trigueñito(a)	Dark Skin	21	8.5
Dark skin	Dark Skin	14	5.6
Other		35	14.1
Skin Color Blot			
Blot 1-18	Lighter Skin	105	42.3
Blots 19- 36	Medium, Darker Skin	143	57.7

Note. N = 248. Racial identity groups were split into White-Latinx (Lighter Skinned) *n* = 161 and Afro-Latinx (Mixed-Race Darker Skinned) *n* = 87. Skin blots were obtained through the skin color chart (Treesirichod et al., 2014).

Latinx Perceptions of Police Officers (LPOPS). To assess Latinx adults' perceptions of the police, participants were provided a 19-item LPOPS scale which consisted of the following subscales: PVL, AIP, and FPA (see Altamirano, 2018). Responses were recorded on a four-point Likert-type scale ranging from (1) strongly

disagree to (4) strongly agree. The previous EFA study demonstrated good reliability as it had an excellent internal consistency of subscales with Latinx (PVL α = .93, AIP α = .94, & FAP α = .95; Altamirano, 2018). Evidence of concurrent and discriminant validity was established by correlating with a past measure of perceptions of police (i.e., PLE & Dimensions of Attitude Toward Police). Additionally, the LPOPS' subscales were found to be positively associated with anxiety and ethnic/racial discrimination measures (Altamirano, 2018). Scores were calculated by averaging each of the subscales. Higher scores indicated higher levels of negative perceptions, anxiety, and/or fear of police. In the current sample, reliability alphas for the subscales were (α = .93 for PVL), (α = .96) for AIP, (α = .94) for FPA, and (α =.97) for total score (See Appendix G).

Police and Law Enforcement Scale (PLE). To assess the frequency of negative past experiences with police officers among participants, I administered the PLE (English et al., 2017). The PLE is a five-item scale and responses were recorded using a six-point Likert scale ranging from 1 (never) to 6 (always). The PLE measure demonstrated internal consistency (α = .87) across samples of ethnic minorities. In addition, the PLE showed concurrent validity and convergent/discriminant validity displayed by positive association with measures that assess racial discrimination (i.e., Adofo racial discrimination measure) and depression (English et al, 2017). Researchers established both configural and metric invariance of the PLE across participants with a history of incarceration and without a history of incarceration (English et al., 2017). Scores were calculated by taking the average of all five items and creating a composite score, with high scores indicating more negative past experiences with police officers; this instrument was used to yield evidence of concurrent and discriminant validity with the

recently created LPOPS subscales (PVL, AIP, & FPA). In the current sample, the reliability alphas for the scales were (α =.84) (See Appendix H).

Perceptions of Police Scale (POPS). To assess general attitudes toward the police and perceptions of police bias, the POPS was administered (Nadal & Davidoff, 2015). The POPS is a 12-item self-reported questionnaire on a five-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree) (see Appendix G). Higher scores indicated more favorable perceptions of police, whereas lower scores represented more negative perceptions of police. Nadal and Davidoff (2015) reported full-scale reliability with an excellent internal consistency of α =.94, in addition to subscales (General Attitudes toward Police α = .93) and (Perception of Police Bias α = .88) with adequate to excellent internal consistency. This measure was validated using the data-splitting technique to conduct an EFA and CFA analysis among a sample of 326 students attending a large Northeastern institution and the larger community. Among this sample, 31.7% of the participants identified as Latinx. Further, two tests of measurement invariance were established between POPS and subscales by first comparing race (i.e., Black versus White) and then testing sexual orientation (i.e., heterosexual and homosexual) (Taylor et al., 2020). Scores were calculated by creating a composite score from the average of all twelve items; high scores indicated greater frequency of past experiences with police officers. This instrument was used to yield evidence of concurrent and discriminant validity with the recently created LPOPS subscales (PVL, AIP, & FPA & LPOPS Total). In the current sample, reliability alphas for the scales were (α =.96) for GAP, (α =.95) for PPB, and (α =.86) for total (See Appendix I).

Perceived Ethnic Discrimination Questionnaire Brief (PEDQ). To assess perceived ethnic discrimination within an interpersonal and social context, the Perceived Ethnic Discrimination Questionnaire Brief was administered (PEDQ; Brondolo et al., 2005). Responses to the 17 items were recorded on a five-point Likert scale ranging from 1 (never*)* to 5 (constantly*)*. Overall ethnic discrimination scales were calculated by averaging the composite scores and the reliability coefficient for the PEDQ was (α = .93) (See Appendix J).

Depression, Anxiety, and Stress Scales (DASS-21). To assess psychological distress, participants were administered the "DASS-21, a self-report measure in which participants rate the frequency and severity of experiencing negative emotions over the previous week" (Norton, 2007). Frequency/severity ratings are made on a series of four-point Likert scales ranging from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time. The reliability and validity of the DASS scales have been consistently demonstrated (Antony et al., 1998; Beck & Steer, 1990; Brown et al., 1997; Lovibond & Lovibond, 1995). Scores were calculated by averaging each of the subscales, with higher scores indicating higher levels of anxiety, depression, and stress among participants. In the current sample, reliability alphas for the scales were (α =.87) for anxiety, (α =.91) for depression, and (α =.90) for stress (See Appendix K).

Analytic Plan

A preliminary analysis focused on data handling procedures and descriptive statistics whereby I first analyzed all data for adherence to normality assumptions needed for analysis was conducted (Tabachnick & Fidell, 2013). The data was screened for missing data and tested for statistical assumptions, including univariate outliers and

normality (Tabachnick & Fidell, 2019). A total of 75 cases were started with blank responses to the actual survey. Additionally, a total of 30 participants partially completed the demographic portion of the survey, yet did not proceed with the remaining portion. A total of 10 participants did not pass the validity check questions and these cases were deleted prior to the data analyses. Among the 248 participants, there was no missing data, and the assumptions of normality were met based on skewness values falling between -2 and 2 and kurtosis values falling between -7 and 7 (Tabachnick & Fidell, 2007; West, Finch, & Curran, 1995). Upon the completion of the data cleaning procedures, descriptive statistics were conducted to identify sample characteristics. Table 7 highlights the mean, standard deviation, score range, and Cronbach's alpha for each measure (see Table 7).

Hypothesis 1: A three-factor structure model which includes LPOPS subscales is hypothesized to emerge through a CFA analysis based on the initial EFA results in Study 1 with excellent reliability estimates.

A confirmatory factor analysis (CFA) was conducted using Mplus statistical software (Muthén & Muthén, 2017) to confirm the fit of a three-factor solution of LPOPS. The fit of the CFA model to the data was evaluated using standard SEM fit indices (cf. Kline, 2005): two "absolute" fit indices and two "relative" fit indices. The two "absolute" fit indices compared the covariance structure of the hypothesized three-factor structure model to the covariance structure observed in the data. As absolute fit indices, the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) were used, whereas the two "relative" fit indices compared the fit of the specified model against that of a null model with no paths or latent variables. As relative fit indices, the comparative fit index (CFI) and Tucker-Lewis Index (TLI) were

used and guidelines proposed by Kline (2010) were adhered to in order to confirm an excellent fit of the model (CFI ≥ .95, TLI ≥ .90, RMSEA ≤ .08, SRMR ≤ .06) or adequate fit of the model (CFI ≥ .90 and RMSEA ≤ .08) (Byrne, 2001; Hancock & Freeman, 2001; Hu & Bentler, 1999; McDonald & Ho, 2002; Tomarken & Waller, 2005). If the model failed to at least adequately fit the data, modification indices were assessed for potentially correlated residual terms from the same subscales and/or indicators that only patterned weakly on their respective latent factors were deleted; the model was then re-estimated until arriving at an acceptable fit. Lastly, to provide initial internal consistency reliability estimates, Cronbach's alphas (Cronbach, 1951) were calculated for LPOPS subscales.

Hypothesis 2: LPOPS subscales will be positively correlated with the past measures capturing police experiences and perceptions Police and Law Enforcement Scale (PLE), and Perceptions of Police Scale (POPS). In addition, LPOPS subscales will be positively correlated with other psychological constructs (e.g., anxiety, depression, stress, discrimination).

To assess the convergent validity of the LPOPS subscales, bivariate correlations were conducted between the proposed scale and scales assessing the frequency of negative experiences with police (i.e., PLE), general perception of police (i.e., POPS), Depression, Anxiety, and Stress Scales (DASS-21), and Perceived Ethnic Discrimination Questionnaire Brief (PEDQ).

Hypothesis 3: LPOPS subscales will show evidence of measurement invariance among self-identified racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned), and skin-tone groups (e.g., light-skinned Latinx, medium or darker skinned Latinx).

A multigroup confirmatory factor analysis (MG-CFA) using Mplus statistical software was conducted to compare the hypothesized three-factor structure of the LPOPS across racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) and skin-tone groups (e.g., light-skinned Latinx, medium or darker skinned Latinx). The MG-CFA can test measurement invariance that allows researchers to ensure the LPOPS measures the same underlying construct across different subgroups (Sass et al., 2014). Additionally, maximum likelihood parameter estimates were used as the data is distributed relatively normal (Kline, 2010). Further, the same multiple fit indices to evaluate model fit as described above were utilized (see Hypothesis 1).

Two series of MG-CFAs were conducted to determine measurement invariance across racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) and skin-tone groups (e.g., light-skinned Latinx, medium or darker skinned Latinx). In the current study, groups were compared to establish configural, metric, and scalar invariance for the LPOPS subscales. "The configural model indicates whether the same general factor structure of a scale (e.g., acceptable model fit, number of factors, allocation of items to specific factors) is observed across groups. Next, a metric model in which factor loadings are constrained to equality between groups was estimated; a metric invariance is useful as it suggests that the construct of interest has the same meaning across groups" (Taylor et al., 2020). Finally, "the metric model fit was compared with a scalar model in which item thresholds (i.e., observed variable means) were constrained to equality between groups" (Taylor et al., 2020). The scalar invariance helps to justify mean comparisons across groups by suggesting that the starting value of

the factor scores for the scales are the same across groups and is without concern of measurement bias (Burlew et al., 2009).

Hypotheses 4 and 5: There will be higher mean scores on LPOPS subscales among (a) participants identifying as Afro-Latinx and (b) darker skin-toned participants compared to lighter skin-toned.

After determining measurement invariance properties, a MANOVA was conducted using SPSS to test research hypotheses regarding the mean differences in LPOPS subscale scores between racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) and skin-tone groups (e.g., light-skinned Latinx, medium or darker skinned Latinx). MANOVA was performed to examine whether there are within-group differences on dichotomized demographic variables of racial identity and skin tone classification as independent variables and LPOPS subscales as the dependent variable.

CHAPTER 4

RESULTS

Confirmatory Factor Analysis Results

Data screening was conducted (see Chapter 3). In the final sample ($N = 248$), there was no missing data and the study variables appeared to approximate a symmetrical, normal distribution. The data met assumptions normality as skewness values were between -2 and 2 and kurtosis values were between -7 and 7 (Tabachnick & Fidell, 2007; West, Finch, & Curran, 1995) (see Figure 9). Next, a series of confirmatory factor analyses (CFA) were conducted using Mplus 8.0 statistical software (Muthén & Muthén, 1998–2011) to confirm the fit of a three-factor solution of LPOPS with a sample of 248 participants. Measurement model fit was assessed using the confirmatory fit index (CFI), root means square error of approximation (RMSEA; Kline, 2005), and standardized root means square residual (SRMR) (see Chapter 3).

The hypothesized model resulted in a significant chi-square test (χ^2 (149) = 515.7, $p < .01$), which initially indicated a potential poor model fit. However, scholars have noted that chi-square tests of model fit may frequently be significant with large sample sizes, even if the model fits well (Brown, 2006). "Interpreting the χ^2 is a complicated challenge as it fails to adequately consider assumptions of multivariate normality and sensitivity to sample size, which may negatively impair its ability to discriminate between poor and good fit" (Allen, 2022). To correct for these noteworthy limitations, other fit indices should be considered. As described in Chapter 3, a measurement model with excellent fit to the data has a CFI ≥ .95 and RMSEA ≤ .06 and SRMR ≤ .05; while an adequately fitting model has CFI ≥ .90 and RMSEA ≤ .08 (Byrne, 2001; Hancock &

Freeman, 2001; Hu & Bentler, 1999; McDonald & Ho, 2002; Tomarken & Waller, 2005). The results of the RMSEA of the model used in the CFA was 0.09, indicating an inadequate model fit (Brown, 2006; Kline, 2010). The SRMR was 0.05, indicating an excellent model fit (Kline, 2010; Browne & Cudeck, 1993; Hu & Bentler, 1999). Finally, the TLI of 0.88 and CFI of 0.89 were lower than the predetermined cutoffs of 0.90 and 0.95, respectively (Kline, 2010), indicating inadequate model fit.

Modified Model

To improve the model's fit, model modification indices were examined. The residuals of items 15 and 16 from the FPA subscale were correlated to improve model fit. Allowing these residuals to be correlated was theoretically justified because each item was loaded on the same factor and similarly measured constructs related to fear of police. The new model resulted in a significant chi-square test (χ^2 (148) = 413.36 $p < .01$); the CFI > .90, indicated an improved model fit. Additionally, the RMSEA of the model used in the CFA was 0.08, and the SRMR was .05, both indicating adequate model fit (Kline, 2010). The model also demonstrated good relative fit in terms of the TLI being 0.91 (Kline, 2010). A comparison between the two model fits is illustrated in Table 3. Further, the second model with correlated residuals is depicted in the path diagram (see Figure 6).

Table 3

Confirmatory Factor Analysis Fit Indices Comparison Summary

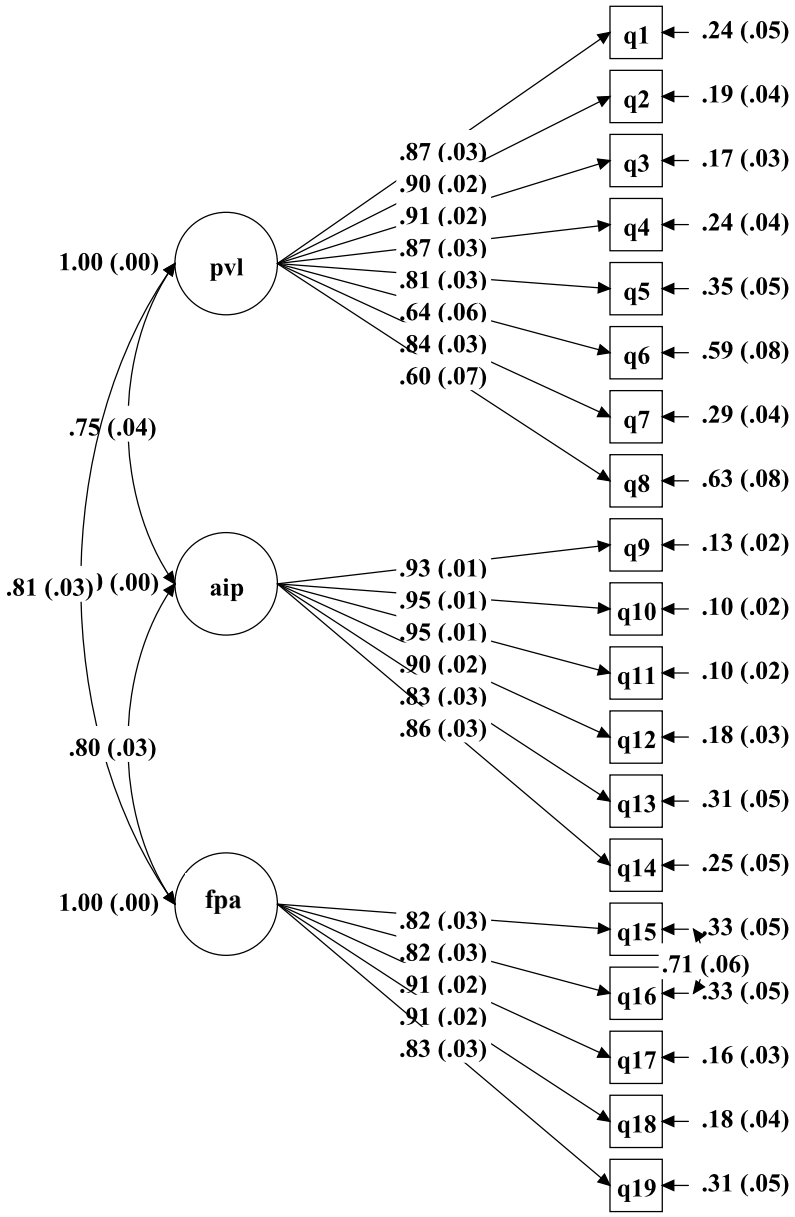
Index	Hypothesized Model	Revised Model^
χ^2	515.7**	413.36 **
df	149	148
CFI	0.89	0.92
SRMR	0.05	0.05
RMSEA	0.10	0.08
90% CI	[0.09, 0.19]	[0.07, 0.09]
TLI	0.88	0.91

Note. The revised model correlates the residuals of item 15 and 16. **$p < .01$

Cronbach's alphas for the total scale and three subscales were calculated among the sample of participants in this study, resulting in ($\alpha = 0.93$) for the Perceptions of Latinx PVL subscale, ($\alpha = 0.96$) for the Anxiety of Interacting with Police AIP subscale, ($\alpha = 0.94$) for FPA subscale, and ($\alpha = 0.97$) for the overall scale. Additionally, all subscales were significantly ($p < .05$) correlated with each other (see Table 11). The PVL subscale was positively correlated with the AIP subscale ($r = .73$, $p < .01$) and FPA subscale ($r = .77$, $p < .01$), and the AIP subscale was positively correlated with the FPA subscale ($r = .80$, $p < .01$) (see Table 4) (See Table 5 for Factor Loadings).

Figure 6

CFA 3-Factor Structure Goodness-of-Fit Model



Note. [1] pvl = Police Views of Latinx; [2] aip = Anxiety of Interacting With Police; [3]fpa = Fear of Police Abuse.

Table 4

Descriptive statistics for the LPOPS

	No. of items	*M (SD)*	Skewness	Kurtosis	Alpha
Factor 1 PVL[1]	8	2.80 (0.76)	-0.55	-0.24	.93
Factor 2 AIP[2]	6	3.01 (0.90)	-0.90	-0.09	.96
Factor 3 FPA[3]	5	2.71 (0.91)	-0.34	-0.79	.94
LPOPS: (factors 1, 2, 3)	19	2.87 (0.78)	-0.75	-0.14	.97

Note. N = 248. [1]Factor 1, Police Views of Latinx (PVL); [2]Factor 2 Anxiety of Interacting with Police (AIP); [3]Factor 3 Fear of Police Abuse (FPA).

Table 5

Results From a CFA of Latinx Perceptions of Police Scale (LPOPS) Questionnaire

LPOPS item	Factor loading		
	1	2	3
Factor 1: Police Views of Latinx (PVL)			
3. I feel that police officers treat Latinx like criminals.	**.91**		
2. I feel that police officers are rude to Latinx.	**.90**		
1. I feel that police officers do NOT treat Latinx with respect.	**.87**		
4. I feel that police officers do NOT care about the rights of Latinx.	**.87**		
7. I feel that police officers are likely to assume that Latinx are criminals.	**.84**		
5. I feel that police officers believe Latinx do NOT contribute to this country.	**.80**		
6. I feel that police officers treat Latinx fairly. (R)	**.64**		
8. I feel that police officers care about the well-being of Latinx. (R)	**.60**		
Factor 2: Anxiety of Interacting with Police Officers (AIP)			
10. I feel anxious when a police officer stops me and talks to me.		**.95**	
11. I feel nervous when I have to talk with a police officer.		**.95**	
9. I feel nervous when I have to explain myself to a police officer.		**.93**	
12. I find interacting with police officers stressful.		**.90**	
14. I am worried that when talking to a police officer, I will have a negative experience.		**.86**	
13. I feel anxious having to report a crime to police officers.		**.82**	
Factor 3: Fear of Police Abuse (FPA)			
17. I am afraid that a police officer will arrest me even although I am innocent.			**.91**
18. I am afraid police officers will accuse me of a crime I did not commit.			**.90**
19. I am afraid that police officers might take advantage of me.			**.83**
16. I am afraid that a police officer might hurt me.			**.82**
15. I am afraid police officers will physically hurt me.			**.81**

Note. $N = 248$. Factor loadings above .30 are in bold. Reverse-scored items are denoted with an (R).

Correlations Among Study Variables

Bivariate correlations were conducted between study variables to test hypotheses and examine the validity of the proposed LPOPS. Within this model, concurrent and discriminant validity was established; the correlations among all study variables are presented in Table 7. Results from the Pearson bivariate analysis indicated that the existing measure Perceptions of Police Scale (POPS) significantly negatively correlated with the LPOPS subscales Police Views of Latinx (PVL) (r = -.81, p < .01), Anxiety of Interacting with Police (AIP) (r = -.71, p < .01), Fear of Police (FPA) (r = -.74, p < .01), and LPOPS (factor 1, 2, 3) (r = -.83, p < .01). Further, POP's subscale General Attitudes toward Police (GAP) significantly negatively correlated with PVL (r = -.80, p < .010), AIP (r = -.69, p < .01), FPA (r = -.72, p < .01), and LPOPS (factor 1, 2, 3) (r = -.81, p < .01). Lastly, POP's Perceptions of Police Bias subscale (PPB) significantly negatively correlated with PVL (r = -.76, p < .01)., AIP (r = -.67 p < .01), FPA (r = -.71 p < .01), and LPOPS (factor 1, 2, 3) (r = -.78, p < .01).

Similarly, the existing measure Police & Law Enforcement Scale (PLE) significantly positively correlated with LPOPS subscales PVL (r = .43, p < .01), AIP (r = .44, p < .010,) and FPA (r = .54, p < .01). LPOPS (factor 1, 2, & 3) significantly positively correlated with PLE (r = .51, p < .01).

Further, Anxiety significantly positively correlated with LPOPS subscales PVL (r = .36, p < .01), AIP (r = .45, p < .01), FPA (r = .46, p < .01), and LPOPS (factor 1, 2, & 3) (r = .46, p < .01). Depression significantly positively correlated with LPOPS subscales PVL (r = -.30, p < .01), AIP (r = .39, p < .01), FPA (r = .39, p < .01), LPOPS (factor 1, 2, & 3) Depression (r = .39, p < .01). Finally, Stress significantly positively correlated with

LPOPS subscales PVL Stress ($r = .40$, $p < .01$), AIP Stress ($r = .50$, $p < .010$, FPA Stress ($r = .49$, $p < .01$), and LPOPS (factor 1, 2, & 3) Stress ($r = .50$, $p < .01$).

Finally, Perceived Ethnic Discrimination Questionnaire (PEDQ) significantly positively correlated with LPOPS subscale PVL ($r = .46$, $p < .01$), AIP ($r = .46$, $p < .01$), FPA ($r = .58$, $p < .01$), and LPOPS (factor 1, 2, & 3) ($r = .54$, $p < .01$) (See Table 6).

Table 6

Bivariate correlations, means, and standard deviations for study variables: CFA sample

Variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	***M (SD)***
1. PVL	--											2.79 (.76)
2. AIP	.73**	--										3.09 (.90)
3. FPA	.77**	0.80**	--									2.71 (.91)
4. Total	--	--	--	--								2.86 (.78)
5. POPS	-.81**	-.71**	-.74**	-.83**	--							2.22 (.73)
6. GAPS	-.80**	-.69**	-.72**	-.81**	-.99**	--						2.33 (.75)
7. PPB	-.76**	-.67**	-.71**	-.78**	.90**	.84**	--					1.91 (.74)
8. PLE	.43**	.44**	.54**	.51**	-.43**	-.45**	-.34**	--				0.87 (.04)
9. Anxi.	.36**	.45**	.46**	.46**	-.33**	-.34**	-.26**	.45**	--			13.13 (5.16)
10. Dep.	.30**	.39**	.39**	.39**	-.34**	-.35**	-.28**	.35**	.77**	--		14.01 (5.57)
11. Stre.	.40**	.50**	.49**	.50**	-.41**	-.40**	-.37**	-.37**	.80**	.82**	--	15.02 (5.44)
12. PEDQ	.46**	.46**	.58**	.54**	-.41**	-.42**	-.32**	.56*	.55**	.45**	.55**	2.33 (.86)

Note. $^{**}p < .01$; 1 = Police View of Latinx; 2 = Anxiety of Interacting with Police; 3 = Fear of Police Abuse; 4 = LPOPS total; 5 = Perceptions of Police Scale; 6 = General Attitudes toward Police Subscale; 7= Perceptions of Police Bias Subscale; 8=Police & Law Enforcement Scale; 9 = Anxiety; 10 = Depression; 11 = Stress; 12 = The Perceived Ethnic Discrimination Questionnaire.

Multi-Group Confirmatory Factor Analysis (MG-CFA)

The LPOPS measurement model was fit as a multigroup CFA (MG-CFA) model with parameters free to vary across different groups to test the assumption of measurement invariance (e.g., configural, metric, scalar). "A MG-CFA is an extension of the typical CFA; however, instead of fitting a single model to the data set", the data set was split into groups (e.g., racial identification groups, skin-tone groups) "to determine model fit for each group separately, and later draw multi-group comparisons" (Lee, 2018). This procedure allows researchers to examine whether respondents from different groups interpret the same measure in a conceptually similar way (Bialosiewicz, Murphy, & Berry, 2005). "The three typical phases of measurement invariance testing are configural, metric, and scalar" (Lee, 2018), which will be used in this study.

Before beginning the measurement invariance procedure, the data was divided into two groups with two categories in each (see Chapter 3). Scholarly researchers suggest that obtaining racial/ethnic identity through the Puerto Rican endemic racial term and a skin tone measure is a more culturally responsive way of collecting this information from Latinx individuals. For the racial identification items, it has been documented that Latinx often use racial terminology aside from standard racial U.S. racial categories (e.g., white, black) to describe race along a skin color spectrum that goes from "dark" to "light" (see Figure 4; Roth, 2012); this often leads many Latinx to mark "white" as a form of anti-blackness practices. Therefore, based on Lloréns et al. (2017) and Roth (2012), these terms were used to divide the sample into those who self-identified as White Latinx (light-skinned) and those who self-identified as Afro-Latinx (mixed race or darker skinned). In Group 1, racial identification was split into two samples: (1) White-Latinx

(light-skinned) (n =161) and (2) Afro-Latinx (mixed and dark-skinned) (n = 87) (see Table). This group was then subjected to measure invariance testing to address aim three.

Furthermore, skin tone measure was used to obtain a more accurate representation of how individuals may present physically, regardless of their own self-reporting of their racial identity. Skin-tone is a fitting measure to address potential biases racial identification can present among the Latinx community. In group two, skin tone was divided into two samples based on color blots and medium score (i.e., 18), splitting color blots at two levels: White-Latinx (light-skinned) (n =105) and Afro-Latinx (dark-skinned) (n = 143). White-Latinx light-skinned was considered skin blots 1-18 and Afro-Latinx dark-skinned were skin blots 19-36 (see Chapter 3). The sample size based on skin tone changed in terms of who identified as mixed race and darker-skinned Latinx, justifying both measures for measurement invariance testing.

Configural invariance was the first level of invariance examined. "To test configural invariance, the model specified was fit onto each of the groups, leaving all factor loadings and item intercepts free to vary for each group" (Lee, 2018). Configural invariance is important to test as it allows researchers to compare model fit across different groups, suggesting the overall factor structure holds up similarly for these groups. Configural invariance is indicated if the four base measurement models (one for each group) meet the aforementioned thresholds for model fit indices (TLI and CFI $\geq$.90, RMSEA and SRMR $\leq$.08). The fit indices fell within acceptable ranges to suggest configural invariance; therefore, the models were appropriate for further metric and scalar invariance testing. Configural invariance indicated that the LPOPS had the same three-factor structure for racial identifications (e.g., Afro-Latinx, White-Latinx) and skin tone

groups (i.e., light-skinned Latinx, medium or darker skinned Latinx). Factor loadings and item intercepts were constrained across the different groups to test metric or scalar invariance, respectively (Meredith, 1993; Vandenberg & Lance, 2000, CFA; Milfont & Fischer, 2015). In testing differences in model fit between the types of invariances beyond configural model, the difference in chi-square values ($\Delta\chi^2$) between models was used (Byrne, 2001).

Metric invariance was tested next, "in which factor loadings constrained to equality between groups were estimated. Determining metric invariance is important because it suggests that the construct of interest has the same pattern of factor loadings on items across groups (Taylor et al., 2020). In other words, the assumed scale intervals are the same across groups due to the loadings being the same in each group. This is critical to determine because, although the model may have the same model fit, the factor loadings of the items may not be similar across groups, hence changing the meaning of each subscale score.

Results indicated that the racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) met criteria for metric invariance by yielding a non-significant change in chi-square fit values between configural and metric models (see Table 7). Skin-tone groups (i.e., light-skinned Latinx, medium or darker skinned Latinx) also yielded a non-significant change in chi-square fit values between configural and metric models (see Table 8). Thus, factor loadings of items in the measure are the same across racial identification (e.g., Afro-Latinx, White-Latinx) and skin tone (e.g., dark-skinned, light-skinned) samples.

Lastly, strong or scalar invariance (i.e., invariance of intercepts) was assessed in which item thresholds (i.e., observed variable means) were constrained to equality between groups. Scalar invariance allows enables the validation of "multi-group comparisons of factor means (e.g., t-tests or ANOVA) and confidence that any statistically significant differences in group means are not due to differences in scale properties" (Lee, 2018) between the groups. Additionally, the assumption of scalar invariance suggests that the starting value of the factors for the scale is the same across groups and without concern of measurement bias (Burlew et al., 2009).

Results indicated that the racial identification groups (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) indicated a non-significant change in chi-square fit values between metric and scalar models (see Table 7). Skin-tone groups (i.e., light-skinned Latinx, medium or darker skinned Latinx) suggested a non-significant change in chi-square fit values between metric and scalar models (see Table 8). The model passed the scalar level of invariance testing, indicating that scale items assessed the same level, amount, or degree of the construct in both samples.

Table 7

Multigroup Confirmatory Factor Analysis Fit Indices Comparison Summary of Racial Identification

Index Race	χ^2	*df*	$\Delta\chi^2$	Δ\df	χ^2 differences test p	CFI	SRMR	RMSEA (90% CI)	RMSEA
Base model: Afro Latinx	400.4	148				0.90			
Base Model: White	438	148				0.90			
Configural invariance	825.5**	296				0.91	.05	(.10, .12)	.10
Metric invariance	833.4**	312	7.8	16	0.95	0.91	.06	(.10, .12)	.10
Scalar invariance	845.2**	328	19.6	32	0.95	0.91	.06	(.10, .12)	.10

Note. df = degrees of freedom; CFI = comparative fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; CI = confidence interval. The revised model correlates the residuals of items 15 and 16. $p < .01$**.

Table 8

Multigroup Confirmatory Factor Analysis Fit Indices Comparison Summary of Skin-tone

Index Race	χ^2	*df*	$\Delta\chi^2$	Δ*df*	χ^2 differences test p	CFI	SRMR	RMSEA (90% CI)	RMSEA
Base model: Afro Latinx	433.8	148				0.90			
Base Model: White	359.5	148				0.90			
Configural invariance	793.3**	296				0.91	.05	(0.10, 0.12)	.10
Metric invariance	805.1**	312	11.76	16	.75	0.91	.06	(0.10, 0.12)	.10
Scalar invariance	820.5**	328	27.20	32	.70	0.91	.06	(0.10, 0.12)	.10

Note. df = degrees of freedom; CFI = comparative fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; CI = confidence interval. The revised model correlates the residuals of items 15 and 16.

**$p < .01$.

Multivariate Analysis of Variance MANOVA

Since configural, metric, and scalar invariance were established, a two (racial identification) by two (skin tone) one-way MANOVA using SPSS was evaluated to determine the group differences for the LPOPS subscales and LPOPS total scale score. Racial identity and skin tone were theorized as contributing to Afro-Latinx's higher score means on the LPOPS subscales compared to White-Latinx, with higher scores indicating that Afro-Latinx may have more negative perceptions of police based on this group having more experiences with discrimination. As previously discussed, groups were divided between racial identification (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) and skin-tone (e.g., light-skinned Latinx, mixed race or darker skinned Latinx) (see Chapter 3, Chapter 4 MG-CFA). First, analysis results revealed there was a non-significant main effect for racial identification on LPOPS' subscales ($F(3, 242) = 0.82$, $p > .05$; Wilk's Lambda = 0.99, $\eta^2 = 0.01$). However, results revealed a multivariate main effect for skin tone on LPOPS factors ($F(3, 242) = 2.95$, $p < .05$; Wilk's Lambda = 0.96, $\eta^2 = 0.03$) (see Table 9). The mean and standard deviations for racial identification and skin tone on the Latinx Perceptions of Police factors are reported in Table 10.

Table 9

Multivariate ANOVA Results

	Wilks's λ	F	*df*	Error *df*	*p*	η^2
Racial Identification	.99	0.82	3	242	.25	.017
Skin tone*	.96	3.19	3	242	.02*	.038
Race x Skin tone	.98	1.67	3	242	.17	.020

Note. $p < .05$ *

Table 10

Means and Standard Deviations by Racial Identification and Skin Tone Groups

Categories	Afro-Latinx (dark-skinned)			White-Latinx (light-skinned)		
	M	*SD*	*n*	*M*	*SD*	*n*
Factor 1						
Racial Identification	2.86	.78	161	2.74	.74	87
Skin tone	2.87	.78	143	2.69	.72	105
Factor 2						
Racial Identification	3.12	.93	161	3.07	.88	87
Skin tone	3.21	.86	143	2.93	.93	105
Factor 3						
Racial Identification	2.75	.98	161	2.67	.86	87
Skin tone	2.85	.92	143	2.52	.87	105
Factor 1, 2, 3						
Racial Identification	2.91	.82	161	2.82	.73	87
Skin tone	2.97	.78	143	2.72	.75	105

Note. [1] Factor 1 = PVL Police Views of Latinx [2] Factor 2 = AIP Anxiety of Interacting with Police [3] Factor 3 = FPA Fear of Police Abuse

Because there were significant main effects on skin tone, follow-up ANOVAs were performed. The first univariate test for the PVL subscale did not reveal a significant main effect for skin tone, ($F(1, 246) = 3.53$, $p < .05$, $\eta^2 = .01$). However, the univariate test for the AIP subscale revealed a significant main effect for skin tone, ($F(1, 246) = 5.86$, $p < .05$, $\eta^2 = .01$) (see Table 11). The results further indicated that participants who identified as dark-skinned ($M = 3.21$) reported slightly higher scores on the AIP subscale in comparison to participants who self-identified as lighter-skinned ($M = 2.93$) (see Table 12). Similarly, the univariate test for the FPA subscale revealed a significant main effect for skin tone, ($F(1, 246) = 6.47$, $p < .01$, $\eta^2 = .03$) (see Table 11); participants who identified as dark-skinned ($M = 2.85$) reported slightly higher scores on the FPA subscale in comparison to participants who self-identified as lighter-skinned ($M = 2.52$) (see Table 15). Finally, the univariate test for LPOPS (factors 1, 2, 3) revealed a significant main effect for skin tone, ($F(1, 246) = 7.86$, $p < .01$, $\eta^2 = .02$) (see Table 12); Participants who identified as dark-skinned ($M = 2.97$) reported slightly higher scores on LPOPS (three factors) in comparison to participants who self-identified as lighter-skinned ($M = 2.72$) (see Table 11).

Table 11

Univariate ANOVA Tests Results for Skin-Tone Groups

	Mean Square	F	*p*	η^2
Factor 1: PVL	2.04	3.53	.06	.01
Factor 2: AIP	4.69	5.86	.01*	.02
Factor 3: FPA	6.47	7.86	.005**	.03
LPOPS: Factor 1, 2, 3	3.82	6.40	.01*	.02

Note. $p < .01$ ** $p < .05$ *. Measured for Skin Tone. [1] Factor 1 = PVL Police Views of Latinx [2] Factor 2 = AIP Anxiety of Interacting with Police [3] Factor 3 = FPA Fear of Police Abuse.

CHAPTER 5

DISCUSSION

The purpose of this study is to validate a scale which assesses perceptions of police among Latinx. The confirmatory factor analysis validated a three-factor structure that emerged from the exploratory factor analysis (EFA) previously conducted (Altamirano, 2018). Other hypotheses were tested, including: (1) the scale's correlations and its subscales with other constructs (e.g., police and law enforcement scales, perceptions of police, anxiety, depression, stress, discrimination), (2) measurement invariance of the LPOPS across racial groups (e.g., Afro-Latinx, White Latinx) and skin tone groups (e.g., dark-skinned versus light-skinned), and (3) the mean differences between the two groups. Overall, the majority of the results supported the research hypotheses and will be discussed further below.

This study is comprised of five aims. For the first aim, I hypothesized a three-factor structure model would emerge through a CFA analysis based on the initial EFA study. In the initial scale development study for the LPOPS, results provide a compelling argument for psychometric evidence and the three-factor structure (see Altamirano, 2018). The EFA analysis revealed three latent factors: (1) Police Views of Latinx (PVL) assesses whether beliefs are influenced by racial profiling, discrimination, and/or stereotyping by police for being Latinx; (2) Anxiety of Interacting with Police (AIP) assesses issues in how Latinx expect themselves to react in the presence of police (i.e., nervous, anxious, stressful); and (3) Fear of Police Abuse (FAP) captures the fear of physical abuse (e.g., excessive force, etc.) by police (see Chapter 1).

Two CFA analyses were conducted in order to explore the validity and reliability of the LPOPS scale. Additionally, the CFA would validate the goodness of fit for the three-factor model of the LPOPS identified in Chapter 4 (e.g., PVL, AIP, FPA). The first analysis indicated a poor model fit. Yet, the fit indices were close to the cutoff requirements of a good model fit, making it possible for further testing. Therefore, adjustments were made to implement the recommendations of model modification indices. Within the FPA scale, two items were set to correlate with each other to improve the model fit (i.e., 15 "I am afraid police officers will physically hurt me", and 16 "I am afraid that a police officer might hurt me"). This adjustment was justified not only by the high correlation revealed in the model modification indices but also by how similar their verbiage is. Ultimately, the second CFA revealed a good fit when correlating these two items. In summation, the CFA shows that the LPOPS three-factor model is appropriate and well-fitting for assessment of the latent variables common to perceptions and beliefs about police.

For the second aim, I hypothesized the LPOPS scale would show evidence of convergent validity by conducting a bivariate correlation between LPOPS, other preexisting measures (e.g., PLE & POPS), and other psychological constructs (e.g., anxiety, depression, stress, discrimination). The results of the validity testing supported the proposed hypotheses.

First, all three LPOPS factors (PVL, AIP, FPA) were negatively associated with the Perceptions of Police Scale (POPS; Nadal & Davidoff, 2015). POPS's items are centered around positive biases about police. Therefore, the LPOPS, which has mostly negative biased questions, was expected to correlate negatively.

Second, all three LPOPS factors (PVL, AIP, FPA) were positively associated with the Police and Law Enforcement scale (PLE; English et al., 2017). This was also expected as the PLE's items measure experience frequency. Thus, the more experiences reported, the higher the scores on the LPOPS subscales. Results showed that LPOPS subscales and two previous measures (POPS and PLE) were closely related, yet distinctly proving LPOPS validity in capturing different aspects of views of the police.

Third, all three LPOPS factors (PVL, AIP, FPA) were positively associated with existing anxiety, depression, stress, and discrimination measures. This could be explained by the fact that LPOPS items measure beliefs and experiences related to anxiety, depression, stress, and discrimination. This is consistent with past research that reports that higher negative biases towards police are associated with increased levels of discrimination and other psychological constructs (English et al., 2017; Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor et al., 2020; Tyler, 2005).

For the third aim, it was hypothesized that the LPOPS subscales would show evidence of measurement invariance (e.g., configural, metric, scalar) among racial identifications (i.e., White Latinx light-skinned; Afro-Latinx mixed race or darker skinned) and skin tones groups (i.e., light-skinned Latinx, medium or darker skinned Latinx). The results supported the hypothesis; LPOPS met the assumption of measurement invariance (e.g., configural, metric, scalar) across racial identification and skin tone groups. The configural invariance testing supported the comparable understanding of perceptions of police as measured by the LPOPS in racial identification and skin tone groups. Additionally, results of metric invariance testing suggest that the LPOPS items' contents are similarly understood by these groups. Thus, the LPOPS

effectively functions as a measure of its intended construct for these groups. Thus, researchers can assume there are similar normative levels of each structure model and factor's items of the LPOPS across these groups. Furthermore, scalar invariance was also established, "which demonstrates that the average level of endorsement of the items and underlying constructs endorsed by the measure are equivalent across these groups" (Dillon et al, 2013); this allows for confident assessment of mean differences in the construct of interest. Overall, the perception of police conceptually via LPOPS was equivalent across groups despite theorized and documented differences in their experiences (Hernández, 2002; Rivera Ortiz & Lind, 2001).

Finally, the fourth aim hypothesized that there would be higher mean scores on LPOPS subscales among racial identity (i.e., Afro-Latinx & White Latinx) and skin tone groups (i.e., darker skin Latinx & lighter skinned Latinx), indicating more negative perceptions endorsed by one group, an indicator of concurrent validity. First, the hypotheses for racial identity groups were not supported and showed no significant difference in mean scores between racial identification groups; this could be due to issues with self-identification. For example, researchers have stated that the "majority of dark-skinned Puerto Ricans do not identify as Black or AfroPuerto Rican (Quiñones Rivera, 2006)"(Capielo Rosario et al., 2021). "Instead, Puerto Ricans use racial terminology such as café con leche (coffee with milk; see Figure 4; Quiñones Rivera, 2006) to convey racial mixing and a link to their White European roots to dissociate from this supposed inferiority" (Capielo Rosario et al., 2021). Therefore, self-disclosure of how an individual views themselves in this study may not be accurate to how they present to the world.; the sample may have had someone who more closely identifies with whiteness but may be

viewed as Afro-Latinx by others. The practice of linking to their White European roots is a common experience among the Latinx community because of colorism and internalized racism promoting anti-blackness. Therefore, it is important to note that, although an individual might view themselves as white, it does not necessarily mean that they are considered white globally. This explains why there are no mean differences between the two groups, as identifying as white (n = 87) is more prevalent than dark-skinned (n =167) within this sample.

In comparison to racial identification groups, the hypothesis related to skin tone groups was partially supported. LPOPS subscales (e.g., AIP, FPA) based on skin tone classification displayed significant mean differences in scores. Individuals marked in darker skin-tone categories other than white scored significantly higher than those who marked their skin tone as being a white shade for AIP and FPA subscales. This runs parallel with the idea of darker-skinned Latinx facing more discrimination than lighter-skinned Latinx. Various studies that document how light-skinned or White Latinx being favored over dark-skinned Latinx (colorism) in the judicial system puts Afro-Latinx at greater risk of experiencing harsher punishments (Hernández, 2002; Rivera Ortiz & Lind, 2001). However, the PVL subscale did not show there was a significant mean difference between groups. This could be due to the AIP and FPA subscale items targeting individual experience while the PVL subscale targets police views about the community. This is interesting because, regardless of self-perception, the AIP and FPA subscales indicate an increase in discriminatory experiences due to skin tone. However, the PVL, which ironically measures global perceptions about police treatment towards the Latinx community, does not. When analyzing the mean difference in the PVL subscale,

participants may have rated similarly based on structural and internalized racism, which plays a role in how Latinx may view the role of law enforcement. In summary, internalized racism creates the notion that Latinx are not discriminated against because they do not consider themselves Black; therefore, the police's view of the Latinx community will not change based on skin tone. The AIP and FPA discredit this notion as they also show that PVL subscale participants may feel the same about how society may view them collectively. However, as individuals, darker skin-tone matters during discrimination experiences and police brutality. White Latinx will not traditionally have the same encounters with police as those with darker skin, making their ratings lower on the AIP and FPA sub-scales.

Limitations

There are several limitations within this study. First, participants were recruited using an online based survey, making it a convenience sample. The sample was required to have computer and internet access in order to participate in this study. Issues associated with self-report (e.g., skin-tone) should be considered in the context of the study's findings. Scholars have suggested that the most reliable way to collect skin tone measurement is by self-report and observer rating (Quinones Rivera, 2006; Capielo Rosario et al., 2019; Capielo Rosario et al., 2021), however, this method could account for potential biases regarding self-perceived identity because of internalized racism and colorism. Obtaining an observer rating would address this issue.

The Latinx community tends to perceive themselves as whiter than they actually might be perceived to be. Therefore, the three darkest skin-tone ratings on the color chart were not reported, even despite attempting to recruit participants of all tones, therefore

potentially missing a significant perceptive. Being able to split into three color groups (light-skinned, medium, and dark-skinned) could provide further insight on how the LPOPS may be different across varying skin-tones and phenotypes. The subgroup (e.g., the darkest skin) could provide a unique aspect to these variables and should be further explored, as they may experience high rates of negative perceptions of police due to the United States' political climate against Latinx.

Given the cross-sectional nature of the study, we are unable to determine causal relations among study variables. Not being able to offer the survey in Spanish limits the population that can actually participate. Racial identification is also a factor, given that 63.3% of the sample identified as being of Mexican-origin but the racial identification terms used in this study are not validated within the Mexican community. Although the sample distribution was aligned with the report of the Census (2022), the terms used might not have been significant enough for sorting within the Mexican community. Since research show that the terms only serve Puerto Rican and Dominican communities, further research may need to be added for more representation of other Latinx subgroups.

Despite best efforts to reach a diverse audience, the sample contains a significant number of females, heterosexuals, and U.S. citizens or permanent residents. Although the initial EFA (e.g., Altamirano, 2018) included a more even distribution between males and females than this study, future studies should attempt to address this limitation to ensure factor structure is confirmed with males. Statistics show that Black and Brown males are more likely to be targeted by police in comparison to others (Becerra, et al., 2013; Escobar, 1999; Menjívar, & Bejarano, 2004; Theodore & Habans, 2016). Therefore, Latinx males are more likely to face oppression, discrimination, and brutality by police in

comparison to their female counterparts. Though this study included a confirmatory factor analysis, further testing is needed to establish the degree of measurement invariance across Spanish versions. The survey was not available in Spanish and could have restricted the type of individuals able to participate as they were required to know how to read English. It is important to build inclusive measures for Spanish-speaking Latinx.

Clinical Implications & Future Directions

With the recent widespread police brutality protests in the US, the LPOPS is a necessary tool. Significant social and geopolitical changes over the past two decades have influenced how individuals in the United States (US) view and treat Latinx, particularly Afro-Latinx. Although law enforcement has been in charge of the apprehension of criminals, prevention of crime, and most importantly providing protection and assistance to the general public (Bureau of Justice Statistics, 2016), police brutality and racial profiling against the Latinx community has occurred for centuries (Andrade, 2019; Menjívar, Gómez Cervantes, & Alvord, 2018). Recent government administrations prioritized the criminalization and deportation of immigrants, putting Latinx in danger of being targeted by police (Andrade, 2019; Menjívar, Gómez Cervantes, & Alvord, 2018).

The LPOPS is the first to evaluate specific views of police among the Latinx community by focusing on their unique experiences and beliefs. This is significant as perception measurements of law enforcement officials typically neglect ethnicity/race by only assessing global police perceptions or the frequency of past experiences (English et al., 2017; Nadal & Davidoff, 2015). Civil rights advocates have listed the damaging effects of racial discrimination by police and law enforcement bodies on Blacks (English

et al., 2017; Nadal & Davidoff, 2015; Schuck et al., 2005; Taylor et al., 2020; Tyler, 2005). Although a good number of social science research supports these findings, there is a scarcity of research which investigates how the Latinx community may also have been affected. The LPOPS scale provides researchers with a way to understand how Latinx have been affected by police brutality. In terms of policy, these subscales bring attention to the ongoing debate about how the role of police in local, state, and national discourse may have contributed to an increase in discrimination against Latinx (Romero, 2006). Police practices often target those that are darker-skinned, making Afro-Latinx vulnerable to discrimination and racial profiling from law enforcement. Having a measure that helps capture these issues adds to the body of police brutality research and prevention.

The LPOPS was created to provide a way to gain insight and direct information about how the Latinx community may view police officers. The LPOPS is an important measure to use as it can help in building trust for law enforcement agencies when it comes to public safety, crime reporting, and reducing crime through understanding Latinx experiences. It was also created to guide researchers, clinical practitioners, community agencies, and others toward encouraging new policies regarding the role of police when it comes to immigration issues. LPOPS provides a tool to help them understand where the Latinx community may stand when it comes to the role of police in their everyday lives. LPOPS could be used by administrating all 19 items or the three individual subscales. For example, if you wanted to know how much fear a Latinx individual may have towards police, you would administer the Fear of Police Abuse Scale consisting of five items. In another case, you may only want to know how a Latinx

individual's perceives police and the way that police may view Latinx. The sub-scales measure three unique aspects that would be taken individually or together depending on the overall goal of the measure's administration. Unfortunately, we live in a society that has allowed police officers to avoid repairing damaged relationships or understand what the community is feeling. Overall, the LPOPS could allow for better police training, particularly in highly density Latinx areas, in order to see what the general public thinks of them.

Furthermore, the assessment of measurement invariance conducted provided evidence to support the assumption that LPOPS has psychometric properties that represent common elements between identified groups (i.e., racial identification and skin-tone). An important aspect of this study was the methods in which data collection of race and skin tone was gathered. Past research has suggested that the Latinx community has a "complex racial system by adopting strategies that allow them to distance themselves from Blackness by using racial identification labels that convey a connection to White European roots (Quinones Rivera, 2006)" (Capielo Rosario et al., 2021). "The psychological literature, unfortunately, has also contributed to subduing the experiences of Latinx of African descent by generally studying them as a racially monolithic groups (Adames et al., 2018; Lopez, 2008)" (Capielo Rosario et al., 2021). This study addresses these limitations by gathering data that truly represents the experiences of Latinx by not limiting how race is often categorized. For this study, "testing for measurement invariance plays an integral role in psychological research, ensuring that comparisons across various groups of participants are both meaningful and valid" (Lee, 2018). Chan (2011) states that "we cannot assume the same construct is being assessed across groups

by the same measure" without tests of measurement invariance (p. 108). "Measurement invariance testing is, therefore, a critical addition to the statistical procedures that help to increase the validity of research" (Lee, 2018). When considering future directions, this measure should be evaluated with different samples such as language, geographic location, sexual orientation, and residency status to increase universal use. Additionally, future studies should account for military service and location based on U.S. region/zip code differences. For example, a cross-validation study with a MG-CFA is also needed to further tests and establish the psychometric properties of this scale and assess the degree of invariance across English and Spanish versions.

Future studies are also needed to understand how the race of police (e.g., White, Black, Latinx) could impact how participants may answer the LPOPS sub-scales. It could be assumed that LPOPS ratings will increase due to participants answering the questions differently based on knowing the officer's race, especially considering numerous cases of white police officers targeting black and brown individuals. It is important to know if the perceptions of police would be changed based on identified race or if they are all viewed the same. Therefore, this is an aspect that should not be overlooked.

Conclusion

The results of the study supported the majority of the hypotheses concerning validity of the LPOPS is a unique scale that captures perceptions of police among Latinx. Its three-factor structure has been confirmed and validated through several statistical techniques among Latinx from the U.S. This study adds to the existing body of literature indicating that Latinx may hold certain biases towards police due to their experiences with discrimination and racism (English et al., 2017; Nadal & Davidoff, 2015). Findings

from this study help us gain better understanding of the unique experiences Latinx have when it comes to policing. The overall goal is to help others rethink how we can best support and change some of the policies surrounding policing strategies in this country. As a whole, the Latinx community are impacted by racial profiling, police violence, and discrimination (Andrade, 2019; Menjívar, Gómez Cervantes, & Alvord, 2018). The LPOPS scales can assist in understanding some of these concepts affecting Latinx on a daily basis. Future research should focus on further investigating how diversity factors such as language, geographic location, sexual orientation, and residency status affects the psychometric properties of the LPOPS.

REFERENCES

Adler, R. H. (2006). “But they claimed to be police, not la migra!”: The interaction of residency status, class, and ethnicity in a (Post-PATRIOT Act) New Jersey neighborhood. *American Behavioral Scientist, 50*(48), 48-69.

Adames, H. Y, Chavez-Duenas, N. Y., Sharma, S., & ˜ La Roche, M. J. (2018). Intersectionality in psychotherapy: The experiences of an Afrolatinx queer immigrant. Psychotherapy, 55(1), 73–79. https:// doi.org/10.1037/pst0000152

Alaniz, M. L., Cartmill, R. S., & Parker, R. N. (1998). Immigrants and violence: The importance of neighborhood context. *Hispanic Journal of Behavioral Sciences*, *20*(2), 155-174.

Allen, B. N. (2022). Development of A New Measure to Assess for Poverty-Based Stress: The Poverty-Based Stressor Scale (PBSS).

Altamirano, E. (2018). *The Development of Perceptions of Police Officers Scale (POPS) in Latinos/as in the US* (Master's thesis, Arizona State University).

American Psychological Association. (2002). Guidelines on Multicultural Education, Training, Education, Research, Practice, and Organizational Change for Psychologist. *Washington, DC: American Psychological Association*. Retrieved from http://www.apa.org/pi/oema/resources/policy/multicultural-guideline.pdf

American Psychological Association (2019). APA Guidelines on Race and Ethnicity in Psychology. *APA Council of Representatives.* Retrieved from https://www.apa.org/about/policy/guidelines-race-ethnicity.pdf

Andrade, L. M. (2019). “The war still continues”: The importance of positive validation for undocumented community college students after Trump’s presidential victory. *Journal of Hispanic Higher Education*, *18*(3), 273-289.

Aragona, M., Catino, E., Pucci, D., Carrer, S., Colosimo, F., La- fuente, M., et al. (2010). The relation- ship between somatization and posttraumatic symptoms among

immigrants receiving primary care services. *Journal of Trauma & Stress, 23*, 615-22.

Barker, T. (2011). *Police ethics: Crisis in law enforcement*. Charles C Thomas Publisher.

Baumgartner, F. R., Bell, K., Beyer, L., Boldrin, T., Doyle, L., Govan, L., ... & Leger, M. (2020). Intersectional Encounters, Representative Bureaucracy, and the Routine Traffic Stop. *Policy Studies Journal*.

Beaton, D., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2002). Recommendations for the cross-cultural adaptation of health status measures. New York: *American Academy of Orthopaedic Surgeons*, 12, 1-9.

Becerra, D., Androff, D., Cimino, A., Alex Wagaman, M., & Blanchard, K. N. (2013). The impact of perceived discrimination and immigration policies upon perceptions of quality of life among Latinos in the United States. *Race and Social Problems, 5*(1), 65-78.

Behavior during Traffic and Street Stops, (2011). *US Department of Justice.* Retrieved from https://www.bjs.gov/ content/pub/pdf/pbtss11.pdf.

Berk, M. L., & Schur, C. L. (2001). The effect of fear on access to care among undocumented Latino immigrants. Journal of Immigrant Health, 3(3), 151-156.

Bingenheimer, J. B., Raudenbush, S. W., Leventhal, T., & Brooks-Gunn, J. (2005). Measurement equivalence and differential item functioning in family psychology. Journal of Family Psychology, 19, 441–455.

Blunt, M., (2017, May 8). Systemic indifference: dangerous & substandard medical care in US immigration detention. *Human Rights Watch.* Retrieved from https://www.hrw.org/report/2017/05/08/systemic-indifference/dangerous-substandard-medical-care-us-immigration-detention

Brondolo, E., Kelly, K. P., Coakley, V., Gordon, T., Thompson, S., Levy, E., Cassells, A., Tobin, J. N., Sweeney, M., & Contrada, R. J. (2005). The perceived ethnic discrimination questionnaire: Development and preliminary validation of a

community version 1. Journal of Applied Social Psychology, 35(2), 335–365. https://doi.org/10.1111/j.1559- 1816.2005.tb02124.x

Bronfenbrenner, U., & Morris, P.A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), Handbook of child psychology: Vol. 1. Theoretical models of human development (6th ed., pp. 993-1023). Hoboken, NJ: Wiley.

Brunsma, D. L., & Rockquemore, K. A. (2002). What does "Black" mean? Exploring the epistemological stranglehold of racial categorization. *Critical Sociology*, *28*(1-2), 101-121.

Bureau of Justice Statistics. (2016). National sources of law enforcement employment data.

Bureau of Justice Statistics. (2015). Report: From 2002-11 Blacks Were 2.5 Times More Likely than Whites to Experience Nonfatal Force by Police. Retrieved from https://www.bjs.gov/ content/pub/press/punf0211pr.cfm.

Burlew, A. K., Feaster, D., Brecht, M. L., & Hubbard, R. (2009). Measurement and data analysis in research addressing health disparities in substance abuse. *Journal of Substance Abuse Treatment*, *36*(1), 25-43.

Byrne, B. M. (2001). Structural equation modeling with AMOS. New Jersey: Erlbaum.

Capielo Rosario, C., Adames, H. Y., Chavez-Duenas, ˜ N. Y, & Rentería, R. (2019a). Acculturation profiles of central Florida Puerto Ricans: Examining the influence of perceived ethnic-racial discrimination and neighborhood ethnic-racial composition. Journal of Cross-Cultural Psychology, 50(4), 556–576. https://doi.org/10.1177/ 0022022119835979

Capielo Rosario, C., Schaefer, A., Ballesteros, J., Rentería, R., & David, E. J. R. (2019b). A Caballo Regalao no se le Mira el Colmillo: Colonial mentality and Puerto Rican depression. Journal of Counseling Psychology, 66(4), 396–408. https:// doi.org/10.1037/cou0000347

Capielo Rosario, C., Faison, A., Winn, L., Caldera, K., & Lobos, J. (2021). No son complejos: An intersectional evaluation of AfroPuerto Rican health. *Journal of Latinx Psychology*, *9*(1), 45.

Carbado, D. W., & Rock, P. (2016). What Exposes African Americans to Police Violence. *Harv. CR-CLL Rev.*, *51*, 159.

Carter, D. L. (1985). Hispanic perception of police performance: An empirical assessment. *Journal of Criminal Justice*, *13*(6), 487-500.

Carlson, K. D., & Herdman, A. O. (2012). Understanding the impact of convergent validity on research results. *Organizational Research Methods*, *15*(1), 17-32.

Chan, D. (2011). Advances in analytical strategies. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (Vol. 1, pp. 85–113). Washington, DC: American Psychological Association. doi:10.1037/12169-004

Cheurprakobkit, S., & Bartsch, R. A. (2001). Police performance: A model for assessing citizens' satisfaction and the importance of police attributes. *Police Quarterly*, *4*(4), 449-468.

City News Service, (2017, November 2). Anaheim officer who shot and killed fleeing 25-year-old used excessive force, jury finds. *Los Angeles Times.* Retrieved from https://www.latimes.com/local/lanow/la-me-ln-anaheim-excessive-force-20171102-story.html#:~:text=California-,Anaheim%20officer%20who%20shot%20and%20killed%20fleeing%2025%2Dyear%2Dold,25%2Dyear%2Dold%20Diaz.

Coard, S. I., Breland, M., & Raskin, P. (2001). Perceptions of and preferences for skin color, Black racial identity, and self-esteem among African Americans. *Journal of Applied Social Science, 31*, 2256-2274.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3), 297-334.

Culver, L. (2004). The impact of new immigration patterns on the provision of police services in midwestern communities. *Journal of Criminal Justice*, *32*(4), 329-344.

Davis, R. C., Erez, E., & Avitabile, N. (2001). Access to justice for immigrants who are victimized: The perspectives of police and prosecutors. *Criminal Justice Policy Review*, *12*(3), 183-196.

Decker, S. H. (1981). Citizen attitudes toward the police: A review of past findings and suggestions for future policy. *Journal of Police Science and Administration*, *9*(1), 80-87.

De Genova, N. P. (2002). Migrant "illegality" and deportability in everyday life. *Annual Review of Anthropology, 31*(1), 419-447.

De Genova, N. (2004). The legal production of Mexican/migrant “illegality.” *Latino Studies, 2*, 160-185.

De Genova, N. (2007). The production of culprits: From deportability to detainability in the aftermath of “homeland security.” *Citizenship Studies, 11*(5), 421-48.

Dillon, F. R. (2013). Measurement equivalence of the Revised Helping Alliance Questionnaire across African American and non-Latino White substance using adult outpatients. *Journal of substance abuse treatment*, *45*(2), 173-178.

Dillon, F. R., Whiteman, K., & Duan, R. (2015). Measurement invariance of the Short Inventory of Problems-Revised across African-American and non-Latino White substance users. *Journal of Ethnic and Cultural Diversity in Social Work*, *24*(2), 109-129.

Dovidio, J. F., Gluszek, A., John, M. S., Ditlmann, R., & Lagunes, P. (2010). Understanding bias toward Latinos: Discrimination, dimensions of difference, and experience of exclusion. *Journal of Social Issues*, *66*(1), 59-78.

Downs, K. (2016). Why aren’t more people talking about Latinos killed by police? *PBS news hour.* Retrieved from https://www.pbs.org/newshour/nation/black-men-werent-unarmed-people-killed-police-last-week

Durán, R. J. (2019). Officer-Involved Shootings of Latinos. *Gringo Injustice: Insider Perspectives on Police, Gangs, and Law*.

Durr, M. (2015). What is the difference between slave patrols and modern day policing? Institutional violence in a community of color. *Critical Sociology*, *41*(6), 873-879.

Engel, R. S. (2005). Citizens' perceptions of distributive and procedural injustice during traffic stops with police. *Journal of Research in Crime and Delinquency*, *42*(4), 445-481.

English, D., Bowleg, L., Tschann, J. M., Agnas, P. R., Malebranche, J. D. (2017). Measuring black men's police-based discrimination experiences development and validation of the police and law enforcement (PLE) scale. Cultural, Diversity, and Ethnic Minority Psychology.

Escobar, E. J. (1999). *Race, police, and the making of a political identity: Mexican Americans and the Los Angeles Police Department, 1900-1945* (Vol. 7). Univ of California Press.

Flores, J., & Román, M. J. (2009). Triple-consciousness? Approaches to Afro-Latino culture in the United States. *Latin American and Caribbean Ethnic Studies*, *4*(3), 319-328.

French, A., Macedo, M., Poulsen, J., Waterson, T., & Yu, A. (2008). Multivariate analysis of variance (MANOVA).

Foundation, G. A. (2016). Stop ignoring the police killing of Latinos. *Aljazeera America.* Retrieved from http://america.aljazeera.com/opinions/2016/2/stop-ignoring-the-police-killings-of-latinos.html

Fund, D. R., & Fund, W. G. (2012). at The Sentencing Project. *The Sentencing Project is a national non-profit organization engaged in research and advocacy on criminal justice issues. The work of The Sentencing Project is supported by many individual donors and contributions from the following*.

Gregory, J., & Suter, J., (2020, July 8). Andres Guardado case: independent autopsy reveals 18-year-old was shot 5 times in back by sheriff's deputies. *abc 7*. Retrieved from https://abc7.com/andres-guardado-shooting-sheriff-alex-villanueva-la-county-sheriffs-department-gardena-deputy/6306779/

Hall, R. E. (2020). They Lynched Mexican-Americans Too: A Question of Anglo Colorism. *Hispanic Journal of Behavioral Sciences*, 42(1), 62-76.

Hawkins, H., & Thomas, R. (2013). White policing of black populations: A history of race and social control in America. *Out of order*, 65-86.

Herbst, L., & Walker, S. (2001). Language barriers in the delivery of police services: A study of police and Hispanic interactions in a midwestern city. *Journal of Criminal Justice*, *29*(4), 329-340.

Hernández, K. T. (2002). Multiracial matrix: The role of race ideology in the enforcement of antidiscrination laws, a United States-Latin American comparison. Cornell Law Review, 87(5), 1093–1176.

Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of management*, *21*(5), 967-988.

Jackson, P. I. (1989). *Minority group threat, crime, and policing: Social context and social control*. Greenwood Publishing Group.

Jacob, H. (1971). Black and white perceptions of justice in the city. *Law & Society Review*, *6*(1), 69-89.

Janneta, J., & Beiler, S. (2015). Policing 2016. To Deliver Safety, Police Need Legitimacy and Accountability.

Jarvis, B., (2015, May 26). 17 Shots in Pasco. *Seattle Met*. Retrieved from https://www.seattlemet.com/news-and-city-life/2015/05/pasco-and-the-shooting-of-antonio-zambrano-montes

Kahn, J. H. (2006). Factor analysis in counseling psychology research, training, and practice: Principles, advances, and applications. *The counseling psychologist*, *34*(5), 684-718.

Kahn, K. B., & Martin, K. D. (2016). Policing and race: Disparate treatment, perceptions, and policy responses. *Social Issues and Policy Review*, 10, 82–121.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford.

Kline, R. B. (2010). *Principles and practice of structural equation modeling* (3nd ed.). New York: Guilford.

Klockars, C. B. (1996). A theory of excessive force and its control. *Police violence: Understanding and controlling police abuse of force*, 1-22.

Krabbe, P. (2016). The measurement of health and health status: concepts, methods and applications from a multidisciplinary perspective. *Academic Press*.

Krell, J., (2014, November 12). Poll of Latino families finds optimism despite many obstacles. *W.K. Kellogg Foundation.* Retrieved from https://www.wkkf.org/news-and-media/article/2014/11/poll-of-latino-families-finds-optimism-despite-many-obstacles

Kyriazos, T. A. (2018). Applied psychometrics: sample size and sample power considerations in factor analysis (EFA, CFA) and SEM in general. *Psychology*, *9*(08), 2207.

Lang, P. J. (1985). The cognitive psychophysiology of emotion: Fear and anxiety.

Langenderfer-Magruder, L., Walls, N. E., Kattari, S. K., Whitfield, D. L., & Ramos, D. (2016). Sexual victimization and subsequent police reporting by gender identity among lesbian, gay, bisexual, transgender, and queer adults. *Violence and victims*, *31*(2), 320-331.

Lartey, J., (2020, August 8). Why it's not so simple to arrest the cops who shot Breonna Taylor. *The Marshall Project.* Retrieved from https://www.themarshallproject.org/2020/08/08/why-it-s-not-so-simple-to-arrest-the-cops-who-shot-breonna-taylor

Latorre, S. (2012). Afro-Latino/a identities: Challenges, history, and perspectives. *Anthurium: A Caribbean Studies Journal*, *9*(5).

Lee, C., (2003, July 29). Overheated in sunset park. *The Village Voice.* Retrieved from https://www.villagevoice.com/2003/07/29/overheated-in-sunset-park/

Lee, S. T. (2018). Testing for measurement invariance: Does your measure mean the same thing for different participants?. *APS Observer*, *31*(8).

Lemieux, C. M., Kim, Y. K., Brown, K. M., Chaney, C. D., Robertson, R. V., & Borskey, E. J. (2020). Assessing Police Violence and Bias Against Black US Americans: Development and Validation of the Beliefs About Law Enforcement Scale. *Journal of Social Work Education*, 1-19.

Liz, J. (2018). "The Fixity of Whiteness": Genetic Admixture and the Legacy of the One-Drop Rule. *Critical Philosophy of Race*, *6*(2), 239-261.

Lloréns, H., García-Quijano, C. G., & Godreau, I. (2017). Racismo en Puerto Rico: Surveying perceptions of racism. Centro Journal, 29(3), 154–183.

Lo´pez, I. (2008a). "But you don't look Puerto Rican": The moderating effect of ethnic identity on the relation between skin color and self-esteem among Puerto Rican women. Cultural Diversity and Ethnic Minority Psychology, 14(2), 102–108. https:// doi.org/10.1037/1099-9809.14.2.102

Lo´pez, I. (2008b). Puerto Rican phenotype: Understanding its historical underpinnings and psychological associations. Hispanic Journal of Behavioral Sciences, 30(2), 161–180. https://doi.org/10.1177/ 0739986307313116

Lurigio, A. J., Greenleaf, R. G., & Flexon, J. L. (2009). The effects of race on relationships with the police: A survey of African American and Latino youths in Chicago. *W. Criminology Rev.*, *10*, 29.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological methods*, 1(2), 130.

Maddox, K. B., & Gray, S. A. (2002). Cognitive representations of Black Americans: Reexploring the role of skin tone. *Personality and Social Psychology Bulletin*, *28*(2), 250-259.

Mcglinchy, A., (2020, May 20). Austin police report confirms Michael Ramos was fatally shot, says officer considered car a weapon. *KUT 90.5 Austin's NPR Station*. Retrieved from https://www.kut.org/post/austin-police-report-confirms-michael-ramos-was-fatally-shot-says-officer-considered-car-weapon

Menjívar, C., & Bejarano, C. (2004). Latino immigrants' perceptions of crime and police authorities in the United States: A case study from the Phoenix metropolitan area. *Ethnic and racial studies*, *27*(1), 120-148.

Menjívar, C., Gómez Cervantes, A., & Alvord, D. (2018). The expansion of "crimmigration," mass detention, and deportation. *Sociology Compass*, *12*(4), e12573.

Menjívar, C., & Kanstroom, D. (2014). Eds. Constructing immigrant "illegality": Critiques, experiences, and responses. New York: Cambridge University Press.

Meredith, W. (1993). Measurement invariance, factor analysis and factorial invariance. *Psychometrika*, *58*(4), 525-543.

Mirande, A. (1980). Fear of crime and fear of the police in a Chicano community. *Sociology and Social Research*, *64*(4), 528-541.

Mucchetti, A. E. (2005). Driving while brown: A proposal for ending racial profiling in emerging Latino communities. *Harv. Latino L. Rev.*, *8*, 1.

Muthén, L. K., & Muthén, B. (2018). Mplus. *The comprehensive modelling program for applied researchers: user's guide, 5*.

Muthén, B., & Muthén, L. (2017). Mplus. In *Handbook of item response theory* (pp. 507-518). Chapman and Hall/CRC.

Mvududu, N. H., & Sink, C. A. (2013). Factor analysis in counseling research and practice. *Counseling Outcome Research and Evaluation*, *4*(2), 75-98.

Nadal, K. L., & Davidoff, K. C. (2015). Perceptions of Police (POPS): Measuring attitudes towards law enforcement and beliefs about police bias. *Journal of Psychology and Behavioral Sciences*, 3, 1–9.

Norton, P. J. (2007). Depression Anxiety and Stress Scales (DASS-21): Psychometric analysis across four racial groups. *Anxiety, stress, and coping*, *20*(3), 253-265.

Quinones Rivera, M. (2006). From Trigue ˜ nita to Afroâ ˜ Puerto Rican: Intersections of the racialized, gendered, and sexualized body in Puerto Rico and the U.S. Mainland. Meridians (Middletown, Conn.), 7(1), 162–182. https://doi.org/10.2979/MER.2006.7.1.162.

Ohito, E. O. (2021). How to be an antiracist teacher educator in the United States: A sketch of a Black male pedagogic provocateur. *Teaching and Teacher Education*, *98*, 103235.

Patler, C., & Pirtle, W. L. (2018). From undocumented to lawfully present: Do changes to legal status impact psychological wellbeing among latino immigrant young adults?. *Social Science & Medicine*, *199*, 39-48.

Pew Research Center. (2013). *A nation of immigrants: A portrait of the 40 million, including 11 million unauthorized.* Washington, DC: January. Retrieved October 12, 2013, from http://www.pewhispanic.org/2013/01/29/a-nation-of-immigrants/

People killed by police in the U.S. (2016). *The Guardian*. Retrieved from https://www.theguardian.com/us-news/ng-interactive/2015/jun/01/the-counted-map-us-police-killings

Potter, G. (2013). The history of policing in the United States. Retrieved from https://plsonline.eku.edu/insidelook/history-policing-united-states-part-1

Preacher, K. J., & Coffman, D. L. (2006). Computing power and minimum sample size for RMSEA.

Romero, M. (2006). Racial profiling and immigration law enforcement: Rounding up of usual suspects in the Latino community. *Critical Sociology*, *32*(2-3), 447-473.

Rivera Ortiz, M. A., & Lind, S. (2001). Justicia negra: casos y cosas. Ediciones Situm.

Rosenbaum, D. P., Schuck, A. M., Costello, S. K., Hawkins, D. F., & Ring, M. K. (2005). Attitudes toward the police: The effects of direct and vicarious experience. *Police quarterly*, *8*(3), 343-365.

Ross, K. M., (2020, June 4). Call it what it is: Anti-blackness. *The New York Times.* Retrieved from https://www.nytimes.com/2020/06/04/opinion/george-floyd-anti-blackness.html

Roth, W. (2012). Race migrations: Latinos and the cultural transformation of race. Stanford University Press. https://doi.org/10.1515/9780804782531

Ryabov, I. (2013). Colorism and school-to-work and school-to-college transitions of African American adolescents. *Race and Social Problems*, *5*(1), 15-27.

Schuck, A. M., & Rosenbaum, D. P. (2005). Global and neighborhood attitudes toward the police: Differentiation by race, ethnicity, and type of contact. Journal of Quantitative Criminology, 21, 391-418.

Schuck, A. M., Rosenbaum, D. P., & Hawkins, D. F. (2008). The influence of race/ethnicity, social class, and neighborhood context on residents' attitudes toward the police. *Police quarterly*, *11*(4), 496-519.

Schumacker, R. E. (1992). Goodness of Fit Criteria in Structural Equation Models.

Serdarevic, M., & Chronister, K.M. (2005). Research with immigrant populations: The application of an ecological framework to mental health research with immigrant populations. *The International Journal of Mental Health Promotion, 7*, 2, 24-34.

Solis, C., Portillos, E. L., & Brunson, R. K. (2009). Latino youths' experiences with and perceptions of involuntary police encounters. *The Annals of the American Academy of Political and Social Science*, *623*(1), 39-51.

Smith, B. W., & Holmes, M. D. (2003). Community accountability, minority threat, and police brutality: An examination of civil rights criminal complaints. *Criminology*, *41*(4), 1035-1064.

Steinberg, N. (2008). *Caught in the middle: Undocumented immigrants between federal enforcement and local integration. Policy analysis exercise.* Boston, MA: The Urban Institute.

Walker, S. (1997). Complaints against the police: A focus group study of citizen perceptions, goals, and expectations. *Criminal Justice Review*, *22*(2), 207-226.

Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The counseling psychologist*, *34*(6), 806-838.

Tabachnick, B. & Fidell, L. (2001). *Using multivariate statistics*. Needham Heights: Allyn & Bacon.

Taylor, T. O., Wilcox, M. M., & Monceaux, C. P. (2020, June 4). Race and Sexual Orientation: An Intersectional Analysis and Confirmatory Factor Analysis of the Perceptions of Police Scale. *Psychology of Sexual Orientation and Gender Diversity*. Advance online publication.

American Psychological Association (2019). APA Guidelines on Race and Ethnicity in Psychology. *APA Council of Representatives.* Retrieved from https://www.apa.org/about/policy/guidelines-race-ethnicity.pdf

The Leadership Conference on Civil and Human Rights (2019). New era of public safety: an advocacy toolkit for fair, safe, and effective community policing. Retrieved from https://civilrights.org/wp-content/uploads/Toolkit.pdf

Theodore, N. (2013). *Insecure communities: Latino perceptions of police involvement in immigration enforcement*. Chicago, IL: Department of Urban Planning and Policy, University of Illinois at Chicago.

Theodore, N., & Habans, R. (2016). Policing immigrant communities: Latino perceptions of police involvement in immigration enforcement. *Journal of Ethnic and Migration Studies*, *42*(6), 970-988.

Torres, J., (2014, September 17). Street vendor says he was beaten by police in Brooklyn. *abc 7*. Retrieved from https://abc7ny.com/street-vendor-police-brutality-nypd-new-york-city/313590/

Tyler, T. R. (2001). Public trust and confidence in legal authorities: What do majority and minority group members want from the law and legal institutions?. *Behavioral Sciences & the Law*, *19*(2), 215-235.

Tyler, T. R. (2005). Policing in black and white: Ethnic group differences in trust and confidence in the police. *Police quarterly*, *8*(3), 322-342.

Tyler, T. R., & Wakslak, C. J. (2004). Profiling and police legitimacy: Procedural justice, attributions of motive, and acceptance of police authority. *Criminology*, *42*(2), 253-282.

U.S. Immigration and Customs Enforcement. (2016). *FY 2016 ICE Immigration Removals.* Retrieved from https://www.ice.gov/removal-statistics/2016

Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational research methods*, *3*(1), 4-70.

Warren, P., Tomaskovic-Devey, Donald., Smith, W., Zingraff, M., & Mason, M. (2006). Driving while black: Bias processes and racial disparity in police stops. *Criminology*, *44*(3), 709-738.

Weitzer, R. (1996). Racial discrimination in the criminal justice system: Findings and problems in the literature. *Journal of Criminal Justice*, *24*(4), 309-322.

Weitzer, R., & Tuch, S. A. (2002). Perceptions of racial profiling: Race, class, and personal experience. *Criminology*, *40*(2), 435-456.

Weitzer, R. (2002). Incidents of police misconduct and public opinion. Journal of Criminal Justice, 30, 397-408.

Widaman, K. F., & Reise, S. P. (1997). Exploring the measurement invariance of psychological instruments: Applications in the substance use domain.

Wu, Y. (2014). Race/ethnicity and perceptions of the police: A comparison of White, Black, Asian and Hispanic Americans. *Policing and society*, *24*(2), 135-157.

Xu, H., & Tracey, T. J. (2017). Use of multi-group confirmatory factor analysis in examining measurement invariance in counseling psychology research.

APPENDIX A

EFA RESULTS

Summary of Final Exploratory Factor Analysis Results for Latinx Perceptions of Police Officers Scale (LPOPS) (N = 288)

	Factor Loadings		
Items:19	Factor 1 Police Views of Latinx *8 items*	Factor 2 Anxiety of Interacting with Police Officers *6 items*	Factor 3 Fear of Police Abuse *5 items*
I feel that police officers do NOT treat Latinx with respect.	**.91**	-.01	.06
I feel that police officers are rude to Latinx.	**.86**	-.03	-.00
I feel that police officers treat Latinx like criminals.	**.85**	-.02	-.01
I feel that police officers do NOT care about the rights of Latinx.	**.83**	.02	-.09
I feel that police officers believe Latinx do NOT contribute to this country.	**.80**	-.02	-.03
I feel that police officers treat Latinx fairly. Reverse Coded	**.64**	.00	.07
I feel that police officers are likely to assume that Latinx are criminals.	**.59**	-.15	-.13
I feel that police officers care about the well-being of Latinx. Reverse Coded	**.55**	.05	-.12
I feel nervous when I have to explain myself to a police officer.	.00	**-.97**	.11
I feel anxious when a police officer stops me and talks to me.	-.03	**-.89**	-.00
I feel nervous when I have to talk with a police officer.	.06	**-.87**	.02
I find interacting with police officers stressful.	.09	**-.70**	-.11
I feel anxious having to report a crime to police officers.	-.05	**-.68**	-.14
I am worried that when talking to a police officer, I will have a negative experience.	.08	**-.68**	15-.

I am afraid police officers will physically hurt me.	-.00	.05	**-.95**
I am afraid that a police officer might hurt me.	.01	.00	**-.87**
I am afraid that a police officer will arrest me even although I am innocent.	.02	-.11	**-.79**
I am afraid police officers will accuse me of a crime I did not commit.	.04	-.09	**-.76**
I am afraid that police officers might take advantage of me.	.10	-.07	**-.74**
Eigenvalues	11.43	1.39	.78
% of variance	60.17	7.36	4.11

Note: Factor loadings over .50 appear in bold

APPENDIX B

SCREENING SURVEY

1. Are you at least 18 years of age?
    - o Yes
    - o No

2. How do you identify yourself (choose one or more)?
    - ☐ African American/Black
    - ☐ Asian American/Asian (incl. Indian, Filipino)
    - ☐ Pacific Islander
    - ☐ White
    - ☐ Hispanic/Latina/o/x
    - ☐ Native American/American Indian

APPENDIX C

INFORMED CONSENT

Dear Participant,

I am a doctoral student from Arizona State University interested in examining how Latinx individuals view police officers in the United States. The survey is expected to take approximately 20 to 30 minutes to complete.

You must be at least 18 years old and self-identify as Latinx to participate. Your participation is voluntary. By completing this survey and clicking agree below, you are indicating your consent to participate in the study. There is no foreseeable risk for participants completing this study. Some questions address experiences with violence and mental health, and thus some people may find these topics sensitive. Your responses will be anonymous. De-identified data collected as a part of current study will be shared with others (e.g., investigators or researchers) for future research purposes or other uses (e.g., conferences, research manuscripts). This deidentified data will be made available to other researchers online in a secure password protected account. In addition, the results of this study may be used in reports, presentations, or publications but your name will not be known, and results will only be shared in the aggregate form. More specifically this study will be used for dissertation requirements.

Once you complete the survey you will get a chance to participate in a raffle to win one out of 50 Amazon gift cards. Your name and email entered will not be linked to your survey responses and therefore will remain anonymous.

If you have any questions concerning the research study, please contact the graduate researcher at ealtami2@asu.edu (Elizabeth Altamirano) or the principal investigator Frank.Dillon@asu.edu (Frank Dillon PhD). If you have any questions about your rights as a subject/participant in this research, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Sincerely,
Elizabeth Altamirano
Doctoral Candidate
Counseling and Counseling Psychology
College of Integrative Sciences and Arts
Arizona State University
446 Payne Hall Tempe,
AZ, 85287-0811
ealtami2@asu.edu

ASU IRB STUDY # ‘STUDY00014663

This research will be reviewed and approved by the Social Behavioral IRB.
You may talk to them at (480) 965-6788 or by email at research.integrity@asu.edu if:
Your questions, concerns, or complaints are not being answered by the research team.
You cannot reach the research team.
You want to talk to someone besides the research team.
You have questions about your rights as a research participant.
You want to get information or provide input about this research.

APPENDIX D

RECRUITMENT FLYER

Arizona State University

SEEKING RESEARCH PARTICIPANTS

TELL US ABOUT YOUR POLICE INTERACTIONS & MENTAL HEALTH

REQUIREMENTS

18 YEARS OLD & UP

SELF-IDENTIFY AS LATINO/A/X

ENTER FOR A CHANCE TO WIN $25 AMAZON GIFT CARD

20 TO 30 MINUTES
ONLINE QUESTIONNAIRE
RESPONSES ARE ANONYMOUS
SCAN HERE

THIS STUDY IS CONDUCTED BY RESEARCHERS
ELIZABETH ALTAMIRANO (EALTAMI@ASU.EDU)
&
FRANK DILLON (FRANK.DILLON@ASU.EDU)

APPENDIX E

VALIDITY CHECKS

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. Please select ‘Neither Agree nor Disagree’ for this question.

2. Please select ‘Yes’ for this question.
   - o Yes
   - o No

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

3. Please select ‘Disagree’ for this question.

APPENDIX F

DEMOGRAPHIC QUESTIONS

Instructions: In order to make sure we have a representative sample of everyone across America, let's start with a few basic demographic questions to ensure this study is inclusive of all Americans.

Q1 What is your age?

Q2 What gender do you identify as?

- o Female
- o Male
- o Transgender
- o Gender-nonbinary
- o Not listed Other (please specify)

Q3 Please specify if.

- o Male to Female
- o Female to Male
- o Not listed

Q4 What is your sexual orientation?

- o Asexual
- o Bisexual
- o Straight/Heterosexual
- o Gay/Lesbian/Homosexual
- o Pansexual
- o Other (please specify)

Q5 What is your relationship status?

- o Single
- o In a committed relationship
- o Common-law union
- o Domestic partner
- o Engaged
- o Married
- o Divorced
- o Widowed
- o Other (please specify)

Q6 How do you identify yourself (choose one or more)?

- ▢ White
- ▢ African American/Black
- ▢ Asian American/Asian (incl. Indian, Filipino)
- ▢ Pacific Islander
- ▢ Native American/American Indian
- ▢ Hispanic or Latino

- ▢ Middle Eastern or Arab
- ▢ Other (please specifiy)

Q7 Are you of Hispanic, Latina/o/x, or Spanish origin? Please select one. If "Other" please specify.

- o No, not of Hispanic, Latina/o or Spanish origin
- o Yes, Mexican, Mexican American, Chicano
- o Yes, Puerto Rican
- o Yes, Haitian
- o Yes, Dominican
- o Yes, Brazilian
- o Yes, another Hispanic, Latina/o/x or Spanish origin: (ex: Colombian, Honduran, Venezuelan, Spaniard, etc.) (please specify)

Q8 The terms below may be used by Puerto Ricans & Latinxs/os/as to describe themselves or other Puerto Ricans & Latinxs/os/as. Which of the terms below have YOU or OTHERS used to describe you? You may choose more than one option.

- ▢ Afro-Boricua
- ▢ Afro-descendant
- ▢ Café con leche
- ▢ Afro-puertorriqueño(a)
- ▢ Blanco(a)/blanquito(a)
- ▢ Jincho(a)/jinchito(a)
- ▢ Mulato(a)/mulatito(a)
- ▢ Negro(a)/negrito(a)
- ▢ Piel canela
- ▢ White
- ▢ Jaba(a)/jabaito(a)
- ▢ Light skin
- ▢ Piel morena
- ▢ Black
- ▢ Trigueño(a)/trigueñito(a)
- ▢ Dark skin
- ▢ Other (please specify)

Q9
Did you immigrate to the United States from another country?

- o Yes
- o No

Skip To: Q10 If Q9 = YES

Q10 If you were not born in the United States, how long have you lived in the United States?

Display This Question:
If Q9 = YES

Q11 If you did immigrate to the United States, which country did you immigrate from?

Q12 Which statement best describes your generational status?

- o I was not born in the United States. (1)
- o I was born in the U.S., and both parents were born in another country
- o I was born in the U.S., one parent was born in the U.S., and the other parent was born in another country
- o I was born in the U.S., both parents were born in the U.S., and all grandparents were born in another country
- o I was born in the U.S., both parents were born in U.S., one grandparent was born in the U.S and the other in another country
- o I was born in the U.S., both parents and all grandparents were born in the U.S.
- o Other (please specify)

Skip To: Q13 If Q12 = (1)

Display This Question:
If Q12 = 1

Q13 If you were not born in the United States, which country where you born in? (please specify)

Q14 What is the highest level of education you have completed?

- o Less than high school
- o Some high school but no degree
- o High school degree (or GED)
- o Trade or technical school
- o Some college, no degree
- o College degree (e.g., B.A., B.S.)
- o Some graduate school
- o Advanced degree (e.g., M.A., Ph.D.)

Q15 Are you a full time student?

- o Yes
- o No

Q16 In what ZIP code is your home located? (enter 5-digit ZIP code; for example, 00544 or 94305) (please specify)

Q17 What is your approximate average household income?

- o Less than $10,000
- o $10,000 - 20,000
- o $21,000 - 30,000
- o $31,000 - 40,000
- o $50,000 - $74,999
- o $75,000 - $99,999
- o $100,000 - $149,999
- o Greater than $150,000

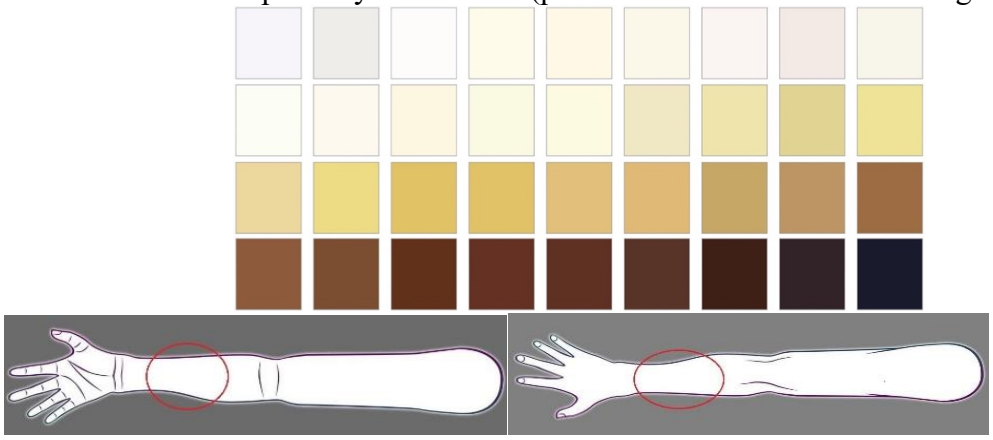
Q18 How many individuals live in your household?

Q19 What is your residency status?

- o U.S. citizen
- o U.S. Permanent Resident
- o Student Visa
- o Work Visa
- o Work Authorization
- o DACA
- o Undocumented
- o Refugee

Q20 & Q21
Using the color scale below, mark with an X the color that best approximates the skin tone on the interior part of your forearm (part of the arm shown on the diagram below).

Using the color scale below, mark with an X the color that best approximates the skin tone on the exterior part of your forearm (part of the arm shown on the diagram below).



APPENDIX G

LATINX PERCEPTIONS OF POLICE SCALE

Revised Item Pool

Instructions: Please reflect on your general experiences as a Latinx in the United States up until now, and please rate your agreement with the following statements according to how you feel today.

Please note that the term "Latinx" refers to a person of Mexican, South or Central American, or other Spanish culture or origin regardless of race. We use the term "U.S." to refer to "United States."

Please rate how much you agree or disagree with the following statements.

(1) Strongly disagree
(2) Disagree
(3) Agree
(4) Strongly Agree
(99) No answer

Item Number	Item Text
1	I feel that police officers do NOT treat Latinx with respect.
2	I feel that police officers are rude to Latinx.
3	I feel that police officers treat Latinx like criminals.
4	I feel that police officers do NOT care about the rights of Latinx.
5	I feel that police officers believe Latinx do NOT contribute to this country.
6	I feel that police officers treat Latinx fairly. (R)
7	I feel that police officers are likely to assume that Latinx are criminals.
8	I feel that police officers care about the well-being of Latinx. (R)
9	I feel nervous when I have to explain myself to a police officer.
10	I feel anxious when a police officer stops me and talks to me.
11	I feel nervous when I have to talk with a police officer.
12	I find interacting with police officers stressful.
13	I feel anxious having to report a crime to police officers.
14	I am worried that when talking to a police officer, I will have a negative experience.
15	I am afraid police officers will physically hurt me.
16	I am afraid that a police officer might hurt me.
17	I am afraid that a police officer will arrest me even although I am innocent.
18	I am afraid police officers will accuse me of a crime I did not commit.
19	I am afraid that police officers might take advantage of me.

APPENDIX H

POLICE & LAW ENFORCMENT SCALE

Instructions: In the past 5 years, how often have police or law enforcement?

(1) Never
(2) Almost Never
(3) Rarely
(4) Usually
(5) Almost Always
(6) Always
(99) No answer

Item Number	Item Text
1	Accused you of having or selling drugs?
2	Been verbally abusive to you?
3	Been physically abusive to you?
4	Treated you unfairly because of how you dress?
5	My past experiences with police officers have been positive.
6	Pulled you over for no reason while you were driving?

APPENDIX I

PERCEPTIONS OF POLICE SCALE

Instructions: Please rate how much you agree or disagree with the following statements.

(1) Strongly Agree
(2) Agree
(3) Neither Agree nor Disagree
(4) Disagree
(5) Strongly Disagree
(99) No answer

Item Number	Item Text
1	Police officers protect me
2	Police officers treat all people fairly
3	I like the police
4	The police are good people
5	The police provide safety
6	The police are helpful
7	The police are trustworthy
8	The police are reliable
9	Police officers care about my community
10	Police officers are friendly
11	Police officers are unbiased
12	The police do not discriminate

Note. General Attitudes toward Police Subscale are items 1-9; Perceptions of Police Bias Subscale are items 10-12.

APPENDIX J

PERCEIVED ETHNIC DISCRIMINATION QUESTIONNAIRE

Instructions: We want to ask you similar questions to the ones above but this time we want you to think of your skin color or appearance. Using the scale below, let us know how often any of the things listed below has happened to you because of your skin color?

(1) Never
(2) A Little
(3) Sometimes
(4) Often
(5) Very Often
(99) No answer

Item Number	Item Text
1	Have you been treated unfairly by teachers, principals, or other staff at school?
2	Have others thought you couldn't do things or handle a job?
3	Have others threatened to hurt you (ex: said they would hit you)?
4	Have others actually hurt you or tried to hurt you (ex: kicked or hit you)?
5	Have policemen or security officers been unfair to you?
6	Have others threatened to damage your property?
7	Have others actually damaged your property?
8	Have others made you feel like an outsider who doesn't fit in because of your dress, speech, or other characteristics related to your ethnicity?
9	Have you been treated unfairly by co-workers or classmates?
10	Have others hinted that you are dishonest or can't be trusted?
11	Have people been nice to you to your face, but said bad things about you behind your back?
12	Have people who speak a different language made you feel like an outsider?
13	Have others ignored you or not paid attention to you?
14	Has your boss or supervisor been unfair to you?
15	Have others hinted that you must not be clean?
16	Have people not trusted you?
17	Has it been hinted that you must be lazy?

APPENDIX K

DASS 21 QUESTIONARIE

Instructions: The following items ask about different experiences people sometime have. Please read each statement and indicate how much the statement applied to you over the past week.

(1) Did not apply to me at all
(2) Applied to me to some degree, or some of the time
(3) Applied to me to a considerable degree, or a good part of time
(4) Applied to me very much, or most of the time
(5) (99) No answer

Item Number	Item Text
1	I found it hard to wind down.
2	I was aware of dryness of my mouth.
3	I couldn't seem to experience any positive feeling at all.
4	I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).
5	I found it difficult to work up the initiative to do things.
6	I tended to over-react to situations.
7	I experienced trembling (e.g., in the hands).
8	I felt that I was using a lot of nervous energy.
9	I was worried about situations in which I might panic and make a fool of myself.
10	I felt that I had nothing to look forward to.
11	I found myself getting agitated.
12	I found it difficult to relax.
13	I felt down-hearted and blue.
14	I was intolerant of anything that kept me from getting on with what I was doing.
15	I felt I was close to panic.
16	I was unable to become enthusiastic about anything.
17	I felt I wasn't worth much as a person.
18	I felt that I was rather touchy.
19	I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).
20	I felt scared without any good reason.
21	I felt that life was meaningless.

APPENDIX L

IRB APPROVAL

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Frank Dillon
CISA: Counseling and Counseling Psychology
480/727-4506
Frank.Dillon@asu.edu

Dear Frank Dillon:

On 10/4/2021 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	An Advanced Psychometric Study of the Latinx Perceptions of Police Scale (LPOPS)
Investigator:	Frank Dillon
IRB ID:	STUDY00014663
Funding:	Name: Graduate College
Grant Title:	
Grant ID:	
Documents Reviewed:	• AppID362244 (1).PDF, Category: Sponsor Attachment; • Consent Form .pdf, Category: Consent Form; • Dissertation Questionnarie.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dr. Dillon CITI Training, Category: Other; • Elizabeth Altamirano CITI Training, Category: Other; • Elizabeth Altamirano_IRB Social Behavioral 2019_posted 09082021_4.docx, Category: IRB Protocol; • recruitment_method_email_Elizabeth Altamirano.pdf, Category: Recruitment Materials;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 10/4/2021.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

REMINDER - All in-person interactions with human subjects require the completion of the ASU Daily Health Check by the ASU members prior to the interaction and the use of face coverings by researchers, research teams and research participants during the interaction. These requirements will minimize risk, protect health and support a safe research environment. These requirements apply both on- and off-campus.

The above change is effective as of July 29th 2021 until further notice and replaces all previously published guidance. Thank you for your continued commitment to ensuring a healthy and productive ASU community.

Sincerely,

IRB Administrator

cc: Elizabeth Altamirano
Elizabeth Altamirano