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Development and Validation of the Assessment of Racial Microaggressions in Academic Settings (ARMAS) Scale

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DEVELOPMENT AND VALIDATION OF THE ASSESSMENT OF RACIAL
MICROAGGRESSIONS IN ACADEMIC SETTINGS (ARMAS) SCALE

BY

YARIMAR ORTIZ-FRONTERA

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
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OF
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ABSTRACT

Racial Microaggressions (RM) in academic settings can have pervasive effects on students of color, specifically in graduate programs. A national sample (N = 289) was collected from programs approved by APA in order to validate a newly developed Scale called Assessment of Racial Microaggressions in Academic Settings (ARMAS). An exploratory factor analyses was conducted which yielded eight factors: (1) Ascription of Intelligence, (2) Assumptions of being a foreigner, (3) Multicultural issues seen as not a priority and being treated differently (4) Invisibility/Felt ignored, (5) Assumptions about me and my work with clients/representing entire race, (6) Colorblindness, (7) Assumptions of professional advantage because of race/ethnicity, and (8) Stereotypical assumptions about my race/ethnicity. Reliability along with discriminant and convergent validity was analyzed. Results of the study suggest that the ARMAS is a valid and reliable measure of RMs in academic settings.

Additional results indicate that half of the sample considered dropping-out more frequently during the first three years of their programs. Higher scores in the ARMAS were in factors that are unique of this study of RMs in academic settings (*Assumptions about me and my work with clients*, and *Assumptions of professional advantage because of race/ethnicity*). Participants' main reasons for dropping out included: lack of support from faculty, lack of confidence, overwhelmed about academic demands and RMs. Microinvalidations was one of the top three reasons for dropping out for Black, American Indian/Alaska Native, and Multiracial graduate students. Practical implications to support graduate students of color and future directions for research are discussed.

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CHAPTER 1

INTRODUCTION

Racial Microaggressions (RMs) adversely affect the mental health and academic engagement of students of color in various academic settings. Specifically, RMs include communications that consciously or unconsciously convey a derogatory message to a person of color and can adversely affect the mental health (Sue et al, 2008), self-esteem (Nadal, Griffin, Wong, Hamit, & Rasmus, 2014), and self-efficacy (Blume et al., 2012) of students of color. RMs also negatively affect the academic engagement of students of color (Clark et al. 2012). Due to their adverse impacts, RMs could depress retention and graduation rates of people of color in graduate programs in psychology, which in turn could contribute to the shortage of ethnic minority professionals in fields such as Psychology (Ortiz-Frontera, 2013).

Racial Microaggressions

Racism is a delicate topic in many social contexts. Since the Civil Rights movement, society has tried to have a more egalitarian view of races (Dovidio & Gaertner, 2000; Sue et al., 2007). As a consequence, racism in its blatant or overt form is prohibited by law, to the extent that nowadays many can argue that racism does not exist and that it is not a problem in the US. However, contemporary researchers contest that idea by presenting studies that suggest the existence of forms of modern racism that are covert and subtle (Dovidio, Gaertner, Kawakami & Hodson, 2002). Pearson, Dovidio and Gaertner (2009) developed the theory of aversive racism, which is defined as “a form of prejudice characterizing the thoughts, feelings, and behaviors

of the majority of well-intentioned and ostensibly non-prejudiced White Americans (p.315).”

Among these forms of racism, racial microaggressions deserve special consideration. The term racial microaggressions (RMs) was first introduced by Chester Pierce in 1978 and was defined as “subtle, stunning, often automatic, and non-verbal exchanges which are ‘put downs’” (Pierce, Carew, Pierce-Gonzalez & Willis, 1978, p. 66; as cited in Sue et al, 2007, p. 273).

Given their subtle nature, the occurrence and prevalence of RMs should be of special importance to mental health professions because of interactions with people of color who are clients and/or service providers. It is particularly important to investigate how racial microaggressions affect the daily life of Psychologists of color who serve a diverse population in the US and those who are currently in graduate school training about to join the field.

There are several studies that have evaluated RMs on university campuses, in the counseling process, and among faculty in university environments. For example, a study conducted by Sue and colleagues (2007) discusses what racial microaggressions are as well as their clinical implications. Specifically, they analyzed the literature in social and counseling psychology and analyzed personal narratives provided by both White psychologists and psychologists of color that described examples of RMs experienced in everyday life. Following their review of the literature, the authors defined RMs as “brief and commonplace daily verbal, behavioral, and environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults to the target person or group (p.273).” Based on

their literature review, the authors classified RMs into three distinct forms: microassaults, microinsults, and microinvalidations.

Microassaults are conscious and intentional discriminatory actions characterized by a verbal or non-verbal attack with the intention of hurting the victim. Examples of microassaults include using racial epithets, displaying White supremacist symbols (e.g. swastikas) or preventing one's son or daughter from dating outside of their race. Microinsults are verbal, nonverbal, and environmental communications that slightly convey rudeness and insensitivity aimed at demeaning a person's racial heritage or identity. An example of a microinsult is when an employee asks a co-worker of color how she got her job, implying she may have landed it through an affirmative action or quota system. Microinvalidations are communications that subtly exclude, negate, or nullify the thoughts, feelings or experiential reality of a person of color. For example, a White person asking a Latino/a where they were born, conveying the message that they are perpetual foreigners in their own land.

The collection of personal narratives helped the researchers to code the information from the narratives and classify it into nine different categories of microaggressions with distinct themes; these are: (1) alien in own land, (2) ascription of intelligence, (3) color blindness, (4) assumptions of criminality or criminal status, (5) denial of individual racism, (6) myth of meritocracy, (7) pathologizing cultural values/communication styles, (8) second-class citizen and (9) environmental microaggressions. While this study provided a lot of the initial foundation for the study of RMs, it had some limitations. First, the study only focused on clinical implications of RMs in the context of the therapeutic relationship between a White

therapist and client of color. Second, it was qualitative and provided no means to characterize the effect of RMs on mental health in a quantitative fashion. The authors mentioned the importance of doing more research in this area on how microaggressions are manifested in society and ways to eventually eliminate them.

Several studies have explored how racial microaggressions are experienced by different minority groups, including African Americans (Sue et al., 2008), Latina/os (Rivera, Forquer & Rangel, 2010), Asian Americans (Sue, Bucceri, Lin, Nadal, & Torino, 2010), indigenous people (Hill, Kim, & Williams, 2010, Clark et al., 2011), and students of color (Sue, Lin, Torino, Capodilupo, & Rivera, 2009). These researchers found that people of color experiencing different RMs in their everyday lives are subject to pervasive and negative impacts on their mental health (Nadal, 2011, Sue et al., 2008).

People of color who experience microaggressions in their everyday lives are subject to pervasive and negative impacts on their mental health (Nadal, 2011; Sue et al., 2008). Previous studies confirm that perceived discrimination by African Americans is related to poor psychological outcomes (Clark, Anderson, Clark, & Williams, 1999). Specifically, a study by Kessler, Mickelson and Williams (1999) reported that 25% of African American participants in their study sample reported frequent day-to-day discrimination experiences. This finding suggests that African Americans dealing with discrimination experiences (such as RMs) on a daily basis are susceptible to negative influences on their psychological well-being (Torres, Driscoll, & Burrow, 2010). More recently, another study confirmed that RMs affect negatively the mental health of people of color (Nadal, Griffin, Wong, Hamit, & Rasmus, 2014a).

In the 2014 study Nadal and colleagues found that higher frequencies of RM events negatively predicted the mental health of participants. They also found a significant correlation between RMs and depressive symptoms and negative affect (Nadal et al., 2014a).

The literature suggests that the ambiguous and unconscious nature of RMs (sometimes for both the victim and the perpetrator) produces more pervasive effects on the psychological well-being of people of color than overt forms of discrimination (Solórzano, Ceja, & Yosso, 2000). Sue and colleagues (2007) suggest that the accumulation of daily RMs has an adverse effect on the psychological functioning of ethnic minorities. Moreover, these experiences would add to the stresses of other, normal life demands (Torres, Driscoll, & Burrow, 2010), compounding the negative effects of RMs on the mental health of people of color. Graduate students of color who are dealing with RMs, besides the pressure and regular demands of graduate school, might be at greater risk to have mental health problems, in which RMs can act insidiously to cause such problems.

A report written by the The Graduate Assembly (2014) about the well-being of graduate students from the University of Berkeley, found that 47% of PhD students and 37% of Master's students scored as depressed. Furthermore, in the social sciences degree programs 28% of the graduate students reported depressive symptoms (The Graduate Assembly, 2014). In general, graduate students experience a lot of stress and are susceptible to develop depressive symptoms. In addition, for graduate students of color the risk for mental health concerns is exacerbated due to not feeling welcomed and their culture not being valued (Solórzano, Ceja & Yosso, 2000; The Graduate

Assembly, 2014, Yosso, Smith, Ceja & Solórzano, 2009). Therefore, the frequent exposure to RMs could, in turn, affect their retention and the completion of their graduate degrees.

Self-esteem is another area in which RMs are reported to have a negative impact. A study found that RMs negatively predicts lower self-esteem in people of color (Nadal, Wong, Griffin, Davidoff, & Sriken, 2014b). In other words, the more RM experiences the participants had, the lower they reported their self-esteem. The study also found that the RMs occurring in educational and workplace environments were particularly harmful to the participant's self-esteem.

Clash of Racial Realities

The racial realities of students of color are different from what their White counterparts experience. Studies have found that, for example, African Americans believe that racism is something they constantly have to deal with, while most White Americans tend to minimize and say that racism is a thing of the past (Sue, 2010). For example, when African Americans are asked how much discrimination still exists against them today most say "a lot", while only 10% of Whites said "a lot". Another study found that over 50% of Whites believe that people of color have gained equality and think that they are doing better than they really are, which is contradictory to the perceptions of people of color in areas such as employment, education, and housing opportunities (Harris Poll, 1994; as cited in Sue, 2010). Studies suggest that the gap between Black and White perceptions are astounding (Sue, 2010). Across African Americans, Asian Americans, and Latino/Hispanic Americans, there is agreement that White Americans believe they are superior, entitled to control others and insensitive to

race issues (Harris Poll, 1994; as cited in Sue, 2010, p. 45). In regards to racial discrimination and bias, there is a big gap in the perception of its existence between Whites and people of color. Only 6% of White people have reported racial discrimination and unfair treatment from the police versus 92% of Black people (Ranskin & Reason, 1998; as cited in Watkins, 2012). In this same line, recent incidents involving the shooting of black men by the police has provoked many protests around the country, suggesting bias against black men. When Mr. Philando Castile was stopped by an officer he informed him that he carried a permit for a firearm. When the officer asked for identification, Mr. Castile was reaching for his wallet, but the officer proceeded to shoot him three times. A recent article by the New York Times explained that the victim, Mr. Castile, was disproportionately stopped by the police for minor traffic infractions, a total of 49 times in 13 years, about once every three months (LaFraniere & Smith, 2016). The article mentioned that a study found that “African Americans and Native Americans in Minneapolis were eight times more likely than Whites to be charged with a low-level infraction” (LaFraniere & Smith, 2016). Due to the subtleness and ambiguity of RMs, there is a conflict about their actual existence. When there is discussion about RMs the perpetrator, imposing his racial reality, oftentimes invalidates the experiences of people of color (Watkins, 2012).

Although research suggests that the perceptions of people of color about race issues are different, there are some notable criticisms against RMs. For example, Thomas, (2008) argued that RMs are portraying minorities as weak and overly sensitive, and that analysis of situations in terms of RM is one-sided in blaming the

perpetrators. Thomas, (2008) suggested an “interpersonal complementarity” process where both parties could discuss and contribute to the outcome. Moreover, he refers to RMs as nonsense not worthy of the hand-wringing reactions that people of color are having (Sue, 2010). Additionally, he criticizes RMs by stating that everyone experiences verbal, behavioral or environmental indignities regardless of their race. Even though all groups experience insult and slights in their lives, it is important to note that equating the experience of a political conservative with the experiences of racism is wrong (Sue, 2010). Thomas is imposing the race reality of White Americans, who historically have had more power, on those who have less power and have been marginalized. These realities are completely different with respect to choice. Whereas everyone can choose their political affiliation and decide or not to expose themselves to being offended, people of color cannot escape their realities; they are born with them and cannot change the color of their skin to avoid these experiences. In general, the perception by others of RMs as doing minimal harm is something people of color face frequently when deciding to discuss it (Sue, 2010). Even though RMs vary in severity, and some may seem innocent, each one nevertheless contributes to the accumulation of racial indignities that can cause harm to people of color (Sue, 2010).

Another area where there is gap in perception in an academic interaction is between the faculty advisor and the graduate student of color. A qualitative study found that there was a difference in perceptions of professional advantage because of the race or ethnicity of the student. The study analyzed race as currency, which “referred to the social value placed on one’s race,” whether it was a benefit or a

disadvantage (Barker, 2011, p. 393). In this case, the faculty advisors, who identified as White Europeans, viewed their students' race mostly as an advantage. However, some advisors expressed concerns for their students that in their future jobs they might not be taken seriously because of assumptions that they got the job because of their race. Conversely, graduate students of color (African American) perceived their race as only a liability and not a benefit for their future academic careers (Barker, 2011). In other words, students of color felt that they constantly have to prove themselves in their academic careers more than does a student from the majority race. The perceptions of the majority race faculty and peers on this issue are dramatically different and sometimes invalidating.

Racial Microaggressions in Academic Settings

A study of RMs in academic settings found that African American participants experienced different forms of RM in the classroom and other social spaces, inflicted by White peers, faculty and members of the administration and staff of their campus (Watkins et al., 2010; as cited in Nadal, Wong, Griffin, Davidoff, & Sriken, 2014). Similar findings were found in the study of RMs in school psychology, where RMs were experienced by graduate students of color in classrooms, field and practicum settings, and social events sponsored by the department/university; perpetrators were White peers and faculty in the classroom, mainly staff and supervisor in field and practicum settings, and mainly White peers in social events (Ortiz-Frontera, Vaccaro, & Collyer, 2014).

Frequent RMs in academic settings contribute to the perception of an unwelcoming and hostile campus climate. Many students of color have reported

feeling invisible, due to their experiences as African Americans being omitted, distorted and stereotyped in their classes (Solórzano, Ceja, & Yosso, & 2000, p. 65). The African American participants in the study also felt that faculty maintained low expectations of them, and that regular negative interactions have made them doubt their own abilities and intelligence. Participants also felt isolated, especially when others did not consider them to be part of study groups. The effects of dealing with all these RM experiences left them feeling drained and mentally exhausted because they have had to constantly prove themselves in the academic setting. The study also found that in social spaces within and around the campus, participants experienced more overt racism, rather than more covert and subtle forms of racism in academic settings (Solórzano, Ceja, & Yosso, & 2000). Thus, frequent experiences with RMs of students of color could produce negative perceptions of the campus racial climate. The effects of RMs in students of color are deleterious, affecting their mental health, self, esteem, and interfering with their academic performance.

RMs also affect the academic engagement and sense of belonging of students of color (Clark, Mercer, Zeigler-Hill, & Dufrene, 2012). In one study, Clark and colleagues (2012) evaluated the factors that could be barriers to the success of ethnic minority graduate students in the field of School Psychology. Specifically, these researchers assessed academic achievement and social and emotional experiences (belongingness and emotional distress). They found that ethnic minority students experienced a higher level of emotional distress, a lower level of belongingness and more negative race-related experiences with lower perception of belongingness (Clark et al., 2012). Therefore, if students feel that professors and peers do not socially

support them, RMs could negatively affect their psychological adjustment.

Furthermore, these negative consequences could hinder the necessary efforts aimed at promoting academic achievement and, consequently, retention within the graduate program/university (Clark et al., 2012; Solórzano et al., 2007).

Retention and Attrition of Students of Color

The US is becoming more diverse and there is a need for more psychologists and other mental health professionals of color to represent this growing diversity. According to the American Psychological Association (APA) Office of Ethnic Minority Affairs report on the status of ethnic minority persons in psychology fields, there is a shortage of psychologists from ethnic minority backgrounds at all levels of education and in the field generally (APA, 2008). For instance, in 2004, only 5.8% of regular members in APA were from ethnic minority backgrounds. In the same year, there were 27.2% ethnic minority students in APA approved Masters programs. Meanwhile, doctoral ethnic minority students comprised 20.1% of students in APA programs. This contrast between APA student and regular memberships could suggest that ethnic minority graduate students are either leaving graduate programs or that some of them might not necessarily choose to join the field following graduation. Also, there is a notable decline in the participation of ethnic minorities in postdoctoral fellowships that might signal a decline in the number of future ethnic minority psychology faculty and researchers (APA, 2008). Therefore, there are fewer ethnic minorities in doctoral programs, postdoctoral programs, and faculty/research positions. Consequently, this difference could suggest that there is a problem with retention of graduate students of ethnic minority backgrounds in psychology. The higher

percentages of ethnic minority students in graduate programs may also predict a higher percentage of regular APA members in the future (APA, 2008). Although, a greater recruitment does not necessarily mean a substantive increase of ethnic minorities completing their degrees (Griffin, Muniz, & Smith, 2016). On the other hand, even 25 or 30% people of color representation in psychology may quickly fall short of the corresponding percentage in the general population.

While it is important to continue the efforts of increasing recruitment of ethnic minorities in graduate programs, there is a great need to also promote equity in their education outcomes and the quality of their experiences, as well as their retention (Griffin, Muniz, & Smith, 2016). For this reason, it is critical to increase and retain graduate students of color in psychology and other mental health fields who could better serve the evolving population of children in the schools and clients generally.

Generally, graduate student retention is problematic, especially in doctoral programs with only 57% of students completing their degree across disciplines (Council of Graduate Schools, 2008). The report by the Council of Graduate School (2008) showed that the rate of completion of doctoral programs in social sciences is 56%. More specifically, the same report found that in psychology doctoral programs only 65% of students complete their degree. Thus, 35% of students who enter a doctoral program did not attain the degree. The main reasons for dropping included student-program mismatch, program difficulty, absence of financial support, and lack of community support within departments and campuses (Wojcik, 2012). Unfortunately, there was no specific data from APA available to me that depicts the number of students of color who might have dropped down to a master's degree or

decide to leave their graduate programs altogether. However, The Council of Graduate Schools (2008) found that within the area of social sciences, the lowest rate of doctoral degree completion was among Asian students (44%), followed by African American students (47%), Hispanic students (55%) and White students (57%). At a glance, the numbers suggest that all racial groups complete their degree at comparable rates, however, it is important to reiterate that the rate of recruitment is much less for students of color. Another study by Maton, Kohout, Wicherski, Leary, and Vinokurov (2006) found no growth in the percentage of PhD degrees received by students of color since 1999, and that the growth of African American and Hispanic/Latino(a) students showed little to no growth since 1997. Similarly, they found that faculty of color in psychology is low and this trend has not changed considerably (Maton et al., 2006). Thus, the recruitment of graduate students of color has not changed much in almost 20 years, and these students also are more likely to leave their programs than their counterparts (Rogers & Molina, 2006).

Campus Climate and Attrition

Racial and ethnic minority students are at greater risk for attrition due to higher negative experiences with departmental integration and socialization, access to financial resources, interactions with faculty, and racial climate, among other variables (Griffin, Muniz, & Smith, 2016). A constant variable in the study of persistence and attrition of students of color is the campus racial climate, particularly in predominantly white institutions (PWI). Students of color have reported feelings or perceptions of discrimination, stereotypes, and prejudice on campus, including beliefs about how the

PWI addresses racial diversity issues on campus (Hurtado, Milem, Clayton-Pedersen, & Allen, 1999; as cited in Johnson, Wasserman, Yildirim, & Yonai, 2014).

Consistently, research has found during 20 years that students of color perceive campus climate more negatively than do White students, suggesting that indeed, students of color have negative race-related experiences in PWI (Harper & Hurtado, 2007; as cited in Johnson et al., 2014). In turn, these negative race-related experiences, including RMs, affect psychological processes and persistence in their degree programs (Johnson et al., 2014). In other words, the decision to stay in a program is negatively affected by the hostile campus climate. Additionally, a study by Wei, Ku, & Liao (2011) and Johnson et al., (2014) reported that for students of color at PWIs a unique form of stress that they experience with more frequency was race-related stress in their academic environment, which had negative effects on their degree persistence decisions. Thus, if a campus climate is supportive and positive towards students of color it can lead to better student outcomes and persistence. In contrast, a negative campus climate towards students of color may be associated with poor academic performance and high dropout rates, particularly among African Americans students (Solórzano, Ceja, & Yosso, 2000). For this reason, it is important to pay attention to the racial campus climate and take steps to monitor the frequency of RMs and create interventions.

Measuring Racial Microaggressions

The majority of the research examining the occurrence and prevalence of RMs is qualitative, given that RMs are a relatively recent topic of study. Recently, there has been a move for more quantitative studies, mostly in the field of scale development, to

measure RMs. Currently, there are three scales published in peer-reviewed journals. The first published scale was the Inventory of Microaggressions against Black Individuals (IMABI) (Mercer, Zeigler-Hill, Wallace, & Hayes, 2011). The IMABI was developed and validated using a university sample, where Black or African American undergraduate students answered a 14-item scale capturing both microinsults and microinvalidations, but highly focused on the latter (Mercer et al., 2011). The measure was associated with general distress and perceived stress and had good reliability ($r = .79$) and validity. Another measure that was developed shortly after by Nadal (2011) is the Racial and Ethnic Microaggression Scale (REMS). In the development and validation of the REMS, Nadal (2011) used a community and university sample representing several racial groups. The REMS reports having an overall Cronbach's alpha of .91 and subscales ranging from .78 to .87. The validity of the REMS was assessed by analyzing correlations with scales that measure modern racism such as the Racism and Life Experiences-Self-Administration Version (RaLES-S; Utsey, 1998, as cited in Nadal, 2011). The high correlations obtained suggest that the REMS is a valid measure of racial microaggressions. Similarly, Torres-Harding and colleagues (2012) developed and validated a measure of RMs called the Racial Microaggressions Scale (RMAS) using a community and university sample including several racial groups. The scale had a very good internal consistency with an overall Cronbach's alpha of .945 for all of the 52-items. The RMAS is a reliable and valid measure of RM in people of color.

The scales described above appear to have good reliability and validity to measure RMs for both general community sample and college samples. However, to

the best of my knowledge, there is no RM scale that measures the occurrence or prevalence of microaggressions in academic settings and addressing academic-related activities for students of color, particularly in psychology. The literature has found that the most frequent setting where people of color experienced more RM was in the school setting or the workplace (Nadal et al., 2014a). Thus, a special focus should be provided and for that reason a specific measure of RM in the school setting and workplace is needed. The lack of such a scale is a major limitation to academic achievement efforts since RMs could pose a serious menace to retention and academic success. For that reason, the purpose of this study is to develop and validate a scale measuring RM experienced by graduate students of color in psychology and other related fields that have a required practicum or field component. The present study will extend prior work by the author on RMs by developing and testing a quantitative measure to assess the themes found in previous research (Ortiz-Frontera, 2013, see Appendix 1). Most importantly, the goal of developing this scale is to assist university programs or departments in psychology and related fields in assessing the types of RMs and settings where RMs may occur, and consequently begin prevention and intervention efforts. In order to obtain a clear description of the problem, there is a need for a measurement tool that assesses the specific and unique RM experiences among graduate students of color in academic settings. The results of this study provides valuable information that could assist in the creation of interventions tailored by race to support graduate students through the completion of their graduate degrees. The new scale, ARMAS, can be utilized by departments to monitor RMs across time and evaluate progress or problems in the racial climate.

For the current study, the following research questions have been developed:

(1) What are the psychometric properties of the newly developed measure ARMAS?

And, (2) are RM experiences a factor in graduate student consideration of leaving their graduate programs?

CHAPTER 2

SCALE DEVELOPMENT AND PILOT STUDY

Scale Development

The purpose of this stage of the study was to develop items that would create the Assessment of Racial Microaggressions in Academic Settings (ARMAS) scale. The following discussion provides a description of the item creation process, including a discussion of the previous study the author conducted where written responses of students of color in psychology were utilized to assist in creation of items for the ARMAS scale (Ortiz-Frontera, 2015). In addition, the process of an expert review of the items, and a small pilot study are described.

Item Development

The instrument development process started with an in-depth review of the construct and the content of the scale based on theory. In this case, the studies have been based on the RM theory proposed by Sue and colleagues in 2007 (Sue et al., 2007). Having a clear understanding of the theory is important to achieve the clarity the scale warrants (DeVellis, 2012).

A previous study conducted by the author investigated whether graduate students of color in school psychology programs around the US experienced RMs, and if so, how they coped with these experiences (Ortiz-Frontera, 2013). Part of the study included open-ended questions where participants described their RM experiences on three different settings: classrooms, practicum/field experiences and in social events sponsored by programs (Ortiz-Frontera, Vaccaro & Collyer, 2015). Next, the open-ended questions also asked participants to describe the ways they coped with their RM

experiences in the specified settings. Then, participants' responses were qualitatively coded into themes based on Sue's RM theory (Ortiz-Frontera, 2015). The specific responses and the themes that arose from this data assisted in the creation of 47 items for the ARMAS. The initial items were then reviewed by an expert panel to assess item quality, face validity and content validity.

Expert Panel Review

The expert panel consisted of faculty who are the committee members of the author. The expert panel included three faculty members. One was a female professor and researcher, an expert on human development and multicultural issues on college campuses. She has studied RM and is very knowledgeable of the theory proposed by Sue and colleagues (Sue, 2007). Another was a male professor with research expertise on peace and nonviolence and social psychology. The third member was a male professor expert on nonviolence training and school psychology. The panel reviewed all items of the ARMAS to assess item quality, face validity and content validity. After receiving panel feedback related to the need for more items, 25 more items were added. Also, the existing items were clarified and modified. This process happened again to review the new items. Based on the final feedback, a total of 72 items were created.

Pilot Study

A small pilot study ($N = 17$) was conducted in order to have a better idea of how the newly developed measure would fare with a sample from local state graduate programs in Psychology and Social Work. The purpose of this pilot study was to assess the items' wording and clarity, decide upon scale length, and delete weak items.

Also, the pilot study provided feedback on the format of the Likert categories. Even though six items were deleted at first, with changes in phrasing the researcher decided to keep three of those items. Then, two more items were added based on the feedback provided by participants and consistent with themes based on theory. This resulted in 71 items on the ARMAS for the validation phase. More details about the characteristics of the sample are provided below.

Method

Participants

The sample of the pilot study consisted of $N = 17$ participants ($N_{\text{Males}} = 1$, 6% and $N_{\text{Females}} = 16$, 94%), all from local graduate programs. The participants' ages fell into the following age ranges: 22-25 (41%), 26-30 (41%), and 31-35 (17.6%). The sample included graduate students of color ($n = 12$, 70.6%), and international graduate students as well ($n = 3$, 17.6%). In the study, the percentage of participants by race is as follows: Hispanic or Latino/a ($n = 7$, 41.2 %), Black ($n = 5$, 29.4%), White ($n = 3$, 17.6%), Asian ($n = 1$, 5.9%), and Multiracial ($n = 1$, 5.9%).

The majority of the participants spoke English as their first language ($n = 14$, 82.4%). The three remaining participants spoke another language as their primary tongue; these included Icelandic ($n = 1$, 5.9%), Turkish ($n = 1$, 5.9%) and Spanish ($n = 1$, 5.9%). The highest degree completed from participants was a Master's degree ($n = 10$, 58.8%), followed by Bachelor's degree ($n = 7$, 41.2%). Most of the pilot study participants were enrolled in a Doctoral program ($n = 12$, 70.6%), followed by a Master's program ($n = 5$, 29.4%). Participants were mostly in the first ($n = 6$, 35.3%)

and fourth year ($n = 5$, 29.4%) of their programs; the remaining participants were in second and fifth year, each representing 17.6% of the sample.

The number of faculty of color in the participants' programs ranged from zero to "four or more." The largest group (47.1%) reported that in their program there were no faculty of color; 23.5% reported two faculty of color; and 17% reported one. Only one participant reported having four or more faculty of color in their graduate program. Similarly, students reported the number of graduate students enrolled in their programs. The majority of participants (64.7%) reported having between four and six graduate students of color in their programs, followed by 17.6% each reporting having from seven to nine or 10 or more graduate students of color in their programs.

Measures

The pilot study measures consisted of a packet of questionnaires including a consent form, the newly developed ARMAS, open-ended questions evaluating ARMAS, questions about considering dropping out of the graduate program, a demographic questionnaire and three additional measures to assess validity. The measures to assess validity are the Racial and Ethnic Microaggressions Scale (REMS), and The Buss-Perry Aggression Scale. More information about these scales will be provided below.

Demographic Questionnaire. A demographic questionnaire was provided to the participants to identify their sex, age, race, ethnicity, level of education, program in psychology or related field (specialist, masters or doctoral level), year in psychology program and expected graduation date (Appendix B).

ARMAS Scale. The newly developed scale containing 71 items was administered to the pilot study sample. The pilot study version of the ARMAS can be found in Appendix C. The responses were on a Likert scale of six points. The Likert responses were meant to indicate the number of times RM occurred in the past year. These are the six Likert points, *0 = I did not experience this event in the past year, 1 = I experienced this event 1 time in the past year, 2 = I experienced this event 2 times in the past year, 3 = I experienced this event 3 times in the past year, 4 = I experienced this event 4 times in the past year, and 5 = I experienced this event 5 or more times in the past year.*

ARMAS Scale Evaluation Open-ended Questions. The package will include three open-ended questions with the purpose of evaluating the scale (Appendix D). The questions were adapted from Nadal (2011), and are the following: “(1) Please describe what you believe these questions were trying to measure, (2) Please write three keywords or key phrases that can be used to label the various experiences that are described above., and (3) Do you remember any questions or experiences that were not written in a clear or concise manner? If so, please list them.” (adapted from Nadal, 2011).

Consideration of Dropping Out. The questions on this section asked participants if they have ever considered dropping out of their graduate programs, in what year of the program they considered it, and possible reasons for considering dropping out. The open ended questions asked participants to describe instances where they had considered leaving their graduate program and how they coped with

these thoughts, in addition to including what made them stay in their programs. (See Appendix E).

Racial and Ethnic Microaggressions Scale (REMS). This scale, developed by Nadal (2011), is a 45-item scale that uses dichotomous answers (1 and 0). The REMS was included in the package for the purpose of evaluating convergent validity with the new developed scale ARMAS. For this study, only five of the six subscales were tested, yielding a 38-item version of REMS (See Appendix F).

The Aggression Questionnaire. The scale was developed by Buss and Perry (1992). The Aggression Questionnaire has 29-items that were included in the measure package for the purpose of evaluating discriminant validity with the new scale ARMAS. The Buss-Perry Aggression questionnaire and its subscales can be found in Appendices G and H.

Procedure

The development of the items of the new scale ARMAS was based on the theory and taxonomy proposed by Sue and colleagues (2007), as well as the findings from Ortiz-Frontera, Vaccaro & Collyer (2015) (See Appendix A). To develop the ARMAS scale, the author created items from each category or theme found in her 2015 study. A committee member reviewed the items and approved final copy for IRB review and then pilot study. An invitation to participate in the pilot study was sent to the psychology and social work graduate programs in Rhode Island via email asking participants to access the survey through Survey Monkey. The data collection spanned six weeks (January to mid-February 2016) with most participation during the last week of January and first two weeks of February coinciding with the beginning of

spring semesters in most programs. Participation criteria included: (a) Participants must be graduate students in Psychology or Mental Health related fields with a practicum component, (b) from a racial/ethnic minority background, and (c) at least have completed two months of graduate school work. Next, participants filled out the survey ARMAS along with the other measures in the packet to assess validity and reliability.

CHAPTER 3

ARMAS SCALE INITIAL VALIDATION

The purpose of this study was to validate an instrument that would measure RM experiences of graduate students of color and international students in academic settings in a systematic way. An Exploratory Factor Analysis (EFA) was conducted to determine the underlying factor structure, as well as initial psychometric properties of the ARMAS scale. The psychometric properties were analyzed by conducting reliability and validity analyses. Based on the theory and previous studies, I hypothesized that the scale would have a multidimensional structure.

Method

Participants

For this validation study, a national sample was utilized and consisted of $N = 289$ participants ($N_{\text{Males}} = 38, 13.2\%$ and $N_{\text{Females}} = 248, 86.4\%$). This sample represented about 4% of the total population of graduate students of color ($N = 7, 108$) in psychology (APA, 2004). The participants' ages were represented in the following age ranges: 18-21 (1%), 22-25 (33.7%), 26-30 (45.1%), followed by the 31-35 age range (11.4%) and 36 or older (8.7%). There were participants who identified as transgender or questioning (3.8%). The sample included international graduate students as well ($n = 32, 11\%$). In the study, the proportion of participants by race is as follows: Blacks ($n = 84, 29.2\%$), Hispanic or Latino/a ($n = 59, 21\%$), Asian ($n = 53, 18.4\%$), Multiracial ($n = 43, 15\%$), White ($n = 37, 13\%$), and American Indian or Alaska Native ($n = 7, 2.4\%$), additionally there were one percentage of not identified race. The participants who identified as White were mostly White Americans from

European ascendancy or ethnicity (n = 31), international students from Morocco and North African ethnicities respectively (n = 2), Middle Eastern/Arab Americans (n = 2), Serbian/Yugoslavian American (n = 1), and one Filipino American (n = 1).

Few participants decided not to disclose their race (n = 5, 1.7%). In the validation sample, the majority of participants spoke only English (n = 147, 62%). Only 43.1% reported speaking a language other than English as their primary language.

The sample also had participants of color who graduated from their programs less than a year previously (n = 14, 5%). In the sample, there were also first generation graduate students (n = 111, 39%). The highest degrees attained in the sample were a master's degree (n = 150, 52%), a bachelor's degree (n = 128, 44.4%), or a doctorate (n = 8, 2.8%). The majority of the participants were from doctoral programs (n = 194, 67.4%), master's programs (n = 84, 29.2%), and specialist level programs (n = 10, 4%). The sample had graduate students represented across different years in their program; first year (n = 84, 30%), second year (n = 68, 24.2%), third year (n = 39, 44.4%), fourth year (n = 36, 12.8%), fifth year (n = 46, 16.4%), and in sixth year or more (n = 16, 6%). The participants in this sample reported the number of faculty of color in their programs as follows; zero (n = 58, 20.1%), one (n = 55, 19%), two (n = 53, 18.3%), three (n = 38, 13%), 4 or more (n = 60, 21%), not sure (n = 20, 7%). They also reported the approximate number of graduate students of color in their programs; these include: zero (n = 3, 1%), one to three students (n = 56, 19.4%), four to six (n = 83, 29%), seven to nine (n = 46, 16%), 10 or more students of color (n = 80, 28%), and 25 participants or about 9% of the sample were not sure the number of graduate

students of color enrolled in their programs. The majority of participants reported that their program was located in an urban area (n = 210, 80%), followed by a rural area (n = 49, 17%), and suburban (n = 29, 10%).

Measures

Similarly to the pilot study, the measures used in this study consisted of a packet of questionnaires including a consent form, the newly developed ARMAS (after pilot revisions), open-ended questions evaluating ARMAS, questions asking participants whether they had considered dropping out of their graduate programs, a demographic questionnaire and two additional measures to assess validity. The two measures to assess validity were the Racial and Ethnic Microaggressions Scale (REMS), and The Buss-Perry Aggression Scale. More information about these scales will be provided below.

Demographic Questionnaire. A demographic questionnaire was provided to the participants to identify their sex, age, race, ethnicity, level of education, program in psychology or related field (specialist, masters or doctoral level), year in psychology program, number of faculty and students of color in their program and the region where their program is located in the US.

ARMAS Scale. After the pilot revisions, the updated ARMAS scale containing 71 items, as shown in Appendix C, was administered to the new sample. For this study, the Likert scale changed to a five-point response format. For this study, participants indicated the frequency of RM experiences in the past year in the participant's graduate program and/or practicum settings. These are the response options: *1 = I never experienced this event in the past year, 2 = I rarely experienced*

this event in the past year, 3 = I sometimes experienced this event in the past year, 4 = I often experienced this event in the past year, and 5 = I always experienced this event in the past year.

ARMAS Scale Evaluation Open-ended Questions. The study also included three open-ended questions with the purpose of evaluating the scale. The questions were adapted from Nadal (2011), and are the following: “(1) Describe what you believe these questions were trying to measure, (2) Write three keywords or key phrases that can be used to label the various experiences that are described above, and (3) Do you remember any questions or experiences that were not written in a clear or concise manner? If so, please list them.” (adapted from Nadal, 2011).

Consideration of Dropping Out. The second part of the study aimed to investigate whether students experiencing RM have also considered dropping out of their graduate programs at some point in their graduate careers. Additionally, they were asked in what year in their graduate career they considered leaving their programs and the reasons. Closed and open-ended questions were used in this assessment, (Appendix E).

Racial and Ethnic Microaggressions Scale (REMS). The scale developed by Nadal (2011) is a 45-item scale that uses dichotomous answers (1 and 0). For the purpose of this study, only five of the six subscales were tested. The Environmental Microaggressions Subscale within REMS was eliminated because the items were not applicable for RM in academic settings. The REMS was administered for the purpose of evaluating convergent validity with the new ARMAS scale.

The Aggression Questionnaire. The scale was developed by Buss and Perry (1992). The Aggression Questionnaire has 29-items and was administered to participants in order to evaluate discriminant validity with the new scale ARMAS.

Procedure

Similar to the pilot study, an invitation to participate in the validation study was sent to the psychology and social work graduate programs around the US. As a guide, the list of graduate psychology programs approved by the American Psychological Association (APA) was used for all states. The email was addressed to program directors and faculty for them to distribute on their students' email lists. Next, students who met the criteria for participation accessed a link to the survey via Survey Monkey. The participation criteria included: (a) Participants must be graduate students in Psychology or Mental Health related fields with a practicum component, (b) from a racial/ethnic minority background, and (c) have completed at least two months of graduate school. The email invitation can be found in Appendix B. The letter of consent was the first document, reminding students that participation is voluntary along with a description of potential risks and benefits of participating in the study. Then, participants filled out the ARMAS survey along with the other measures in the packet to assess validity and reliability, and the consideration of dropping out questions. At the end of the survey, participants were given the option to participate in a raffle of four gift cards of \$25.00 from www.Amazon.com as an incentive. The data collection time for the validation study was open for first three weeks during the month of March 2016. The collection of data was closed on March 24th.

Results

After the collection process, the data were downloaded from Survey Monkey and exported into the statistical analysis program SPSS Version 22. Descriptive statistics, exploratory factor analysis, Cronbach alpha reliability and Pearson correlations for validity assessment were performed. Primary interest was in the psychometric properties of the newly developed measure ARMAS.

Before the analyses, the data was cleaned, deleting participants with missing values. The missing values were attributed to those who only answered the demographic questionnaire, or had an incomplete ARMAS. Based on these characteristics, 25 entries were deleted. There were other missing values, most notably toward the end of the surveys, usually in the last assessment about aggression. The completion time of the packet of surveys was approximately 20-25 minutes.

Exploratory Factor Analysis

The internal structure of a new scale is usually examined by conducting an exploratory factor analysis (EFA). This EFA helps the investigator to determine the number of latent variables on a set of items, explain the variability between the items that will later create factors, and assist in defining the meaning of the factors that are accounting for the variation in the new instrument (DeVellis, 2012).

First, to evaluate whether the data was suitable for a factor analysis the sample size had to be considered. It is noted that there is a lack of agreement in the literature regarding the right sample size (Williams, Brown & Onsman, 2010). However, studies have found that in the majority of cases, using a sample size of 150 participants should be adequate to assess EFA accurately (Guadagnoli & Velicer, 1988; as cited in Hinkin,

1995). The ARMAS scale had $N = 289$ observations, so the sample size is deemed suitable for factor analysis.

Before running the EFA, two tests were done to evaluate the suitability of the data for factor analysis (Williams, Brown & Onsman, 2010). These tests were the Kaiser-Meyer-Olkin (KMO), a measure of sampling adequacy, and the Bartlett's Test of Sphericity (Williams, Brown & Onsman, 2010). The KMO index of 0.50 or larger is considered suitable for factor analysis (Williams, Brown & Onsman, 2010). For this study, the KMO had an index of 0.90, suggesting that the sample in this study is adequate for factor analysis. Moreover, it indicates that the extracted variables will account for a substantial amount of the variance. Then, the Bartlett's Test of Sphericity was significant ($p < .0001$), indicating suitability for factor analysis.

Next, the EFA was run specifying the extraction methods as Principal axis factoring (PAF). In addition, since the factors are correlated it was determined that Oblique rotation was an appropriate method, specifically Promax rotation (Furr & Bacharach, 2008). Choosing a rotation assists by providing a way of presenting the results in a manner that is easier to interpret (Williams, Brown & Onsman, 2010). This extraction method was chosen because Principal components analysis (PCA) is usually recommended when no priori theory exists, and this validation study is based on the RM theory proposed by Sue and colleagues (2007).

Furthermore, the criteria utilized for factor extraction were based on Thompson and Daniel (1988), where multiple decisions or criteria were reviewed to reach a decision on the number of factors to extract. The first criterion that was analyzed was the eigenvalues that were greater than one. Based on this criteria, the ARMAS had 16

factors, (See Appendix J). Secondly, the Scree Test plot was analyzed (Tabachnick & Fidell, 1989). The Scree Test consists of identifying the point the slope starts to become flat (Furr & Bacharach, 2008). This test is subjective and it requires the researcher's judgment. In this case, it was determined that the slope became flatter between factors eight and nine (see Figure 1). However, another extraction technique was used called Parallel Analysis (PA) to confirm the number of factors. This technique is described as more thorough and one of the best methods for deciding amount of factors for extraction, although underused because of its limited availability on popular statistical programs (Williams, Brown, & Onsman, 2010). In PA, sometimes called the Monte Carlo PA, the eigenvalues are tested and compared with other random order eigenvalues until the factors that are kept are those that are greater than the random ordered eigenvalues (Williams, Brown, & Onsman, 2010). Since SPSS did not have the automatic command, an online script with the code for PA was used to run it on SPSS (O'Connor, 2000). Results suggests that there is 95% confidence that the eigenvalues extracted will be not due to chance; see Table 1 below. Based on this PA procedure, nine factors would qualify. However, the factor nine difference was very small and a decision to keep eight factors was confirmed. The final ARMAS-47 factor structure is shown in Table 2.

Figure 1. Scree Plot for ARMAS extracting factors between 8 and 9

The PA determined with confidence that for the ARMAS eight factors will be extracted explaining 65% of the variance. In addition, to survive item deletion the items needed to have a loading of .40 or higher on one factor (Furr & Bacharach, 2008). Based on this criterion, 24 items were deleted. The process of item deletion was done deleting one item at a time to see carefully how deleting one affected the other items. After this process of item deletion, the final ARMAS consisted of 47 items (see Appendix I).

Table 1. Parallel Analysis with random order eigenvalues

Factor number	Actual Eigenvalue from EFA	Random order from PA	Decision
1	21.618	1.6635	Accept
2	4.574	1.4410	Accept
3	2.633	1.4336	Accept
4	2.380	1.3513	Accept
5	2.048	1.2886	Accept
6	1.775	1.2257	Accept
7	1.599	1.1679	Accept
8	1.339	1.1169	Accept

9	1.136	1.0686	Reject
10	1.003	1.021	Reject

Factor naming

It was found that the ARMAS had a multidimensional structure with eight factors (see Appendix I. Higher scores on any of these factors suggest that the participant is having higher frequency of RMs related to a specific area. The first factor is called *Ascription of intelligence* and consisted of nine items accounting for 32% of the total variance. The items described experiences where perpetrators were surprised by participants' capabilities and/or their intelligence was questioned. Factor two, or *Assumption of being a foreigner*, consisted of nine items as well, accounting for 9% of the variance. The items were related to the assumption that an ethnic minority must be a foreigner, or an alien in own land issue. The third factor was called *Multicultural issues seen as not a priority and being treated differently*, which had eight items accounting for 5.4% of the variance. The items in factor three described instances where the multicultural issues were seen as a waste of time and other items related to being treated differently by faculty because of race/ethnicity. Factor four was named *Invisibility/Felt ignored*, with five items accounting for 4.7% of the variance in the sample. The items in factor four describe the experiences of participants' feeling invisible and ignored in their programs, by being the last one picked to do something or not being invited to a study group or social event. Next, factor five is called *Assumptions about me and my work with clients and representing entire race*, which consisted of six items and accounting for 3.9% of the variance. The items described experiences of being constantly assigned cases with clients from ethnic minority backgrounds, and/or being asked to provide examples or opinions about your race/ethnic group in a discussion. Then,

Factor six is called *Colorblindness*, which consisted of four items that accounted for 3.7% of the variance. The items in this factor describe experiences where perpetrators negate or nullify the fact of a person's race and ethnicity by telling people of color that they do not see race or color. Factor seven was named *Assumptions of professional advantage because of race/ethnicity*, and had three items that accounted for 3.3% of the variance. These items describe comments and assumptions related to having an advantage when looking for jobs in psychology or mental health fields because of race and ethnicity characteristics, not because they are qualified as well. The eighth and last factor extracted is called *Stereotypical assumptions about my race/ethnicity*, with three items; it accounted for 2.9% of the variance in the sample. The items describe experiences related to stereotypical assumptions about food, cultural dances, and religion.

Table 2
Factor Loadings for Exploratory Factor Analysis with Promax Rotation of the ARMAS Scale

Items	Factors							
	1	2	3	4	5	6	7	8
1	0.964							
2	0.873							
3	0.794							
4	0.719							
5	0.676							
6	0.658							
7	0.575							
8	0.554							
9	0.454							
10		0.922						
11		0.837						
12		0.714						
13		0.668						
14		0.647						
15		0.571						
16		0.552						

17	0.551						
18	0.543						
19		0.814					
20		0.772					
21		0.695					
22		0.667					
23		0.52					
24		0.505					
25		0.503					
26		0.477					
27			0.867				
28			0.708				
29			0.656				
30			0.639				
31			0.595				
32				0.716			
33				0.692			
34				0.651			
35				0.59			
36				0.52			
37				0.505			
38					0.801		
39					0.792		
40					0.621		
41					0.553		
42						0.866	
43						0.84	
44						0.608	
45							0.682
46							0.652
47							0.527

Note. Extraction Method used was Principal Axis Factoring and the Rotation method chosen was Promax.

Reliability

The Cronbach's alpha reliability coefficients or internal consistency were analyzed for the ARMAS-47 and its factors. The reliability coefficient for all items on the ARMAS was ($\alpha = .95$), a strong level of reliability as internal consistency. The reliability coefficients for the factors were as follows: *Ascription of Intelligence* ($\alpha =$

.92), *Assumptions of being a foreigner* ($\alpha = .90$), *Multicultural issues seen as not a priority and being treated differently* ($\alpha = .89$), *Invisibility/Felt ignored* ($\alpha = .86$), *Assumptions about me and my work with clients/representing entire race* ($\alpha = .82$), *Colorblindness* ($\alpha = .86$), *Assumptions of professional advantage because of race/ethnicity* ($\alpha = .84$), and *Stereotypical assumptions about my race/ethnicity* ($\alpha = .70$). Each of these Cronbach's alpha coefficients demonstrates acceptable to strong reliability of the factors/subscale scores.

Convergent Validity

The Racial and Ethnic Microaggressions Scale (REMS) (Nadal, 2011) was utilized to assess convergent validity. It was hypothesized that the REMS would be positively related to the ARMAS-47. The results suggest that the ARMAS factors were significantly and positively related to the REMS subscales in all correlations between their factors ranging from ($r = .187$ to $r = .66$, $p < .001$), see table 3. There were eight correlations that were below $r = .30$, which suggests that there was no linear relationship. The low correlations included: REMS_A and Factor 2 ($r = .25$, $p < .05$), REMS_B and Factor 2 ($r = .20$, $p < .05$), REMS_C and Factor 2 ($r = .26$, $p < .05$), REMS_C and Factor 4 ($r = .24$, $p < .05$), REMS_D and Factor 4, REMS_A and Factor 7 ($r = .20$, $p < .05$), REMS_F and Factor 7 ($r = .19$, $p < .05$), and REMS_B and Factor 8 ($r = .25$, $p < .05$). Apart from these correlations, the majority of the correlations ranged from a weak to moderate positive relationships.

Only one association was not significant, the correlation between ARMAS factor seven, *Assumptions of professional advantage because of race/ethnicity* and the REMS_B Second-class citizen and assumption of criminality subscale ($r = .032$, $p >$

.05). This non-significant correlation could be due to the characteristics of the sample being graduate students in academic settings. Perhaps they experience less assumptions of criminality due the nature of the academic setting, which could be different in this respect from a community setting.

Discriminant Validity

The Buss-Perry Aggression scale was utilized to measure discriminant validity with the ARMAS-47. The hypothesis was that there would be low correlations between the factors from these measures. The Pearson correlation results found five significant correlations at $p < .05$, but these were low enough to suggest no linear relationship between the factors of the two measures. The significant low correlations were between the Buss-Perry-*Hostility* subscale and Factor two, *Assumptions of being a foreigner*, ($r = .132$, $p < .05$), Buss-Perry-*Hostility* subscale and Factor three, *Multicultural issues seen as not a priority and being treated differently* ($r = .131$, $p < .05$), and between Buss-Perry-*Hostility* subscale and Factor four, *Invisibility/Felt ignored* ($r = .16$, $p < .05$). Also, there were significant low correlations between the Buss-Perry-*Verbal Aggression* subscale and Factor three, *Multicultural issues seen as not a priority and being treated differently* ($r = .142$, $p < .05$), and the Buss-Perry-*Anger* subscale and Factor three, *Multicultural issues seen as not a priority and being treated differently* ($r = .144$, $p < .05$). As expected, the statistically significant correlations between factors from both measures were low. These results suggest that the ARMAS-47 is relatively independent of the Buss-Perry aggression measure, and this finding strengthens the case that ARMAS-47 is a valid and appropriate measure of RM in academic settings, as distinct from a measure of aggression.

Table 3

Pearson Correlations Between ARMAS Factors and The REMS Subscales

REMS Subscales	ARMAS Factors							
	1	2	3	4	5	6	7	8
REMS_A	.653**	.248**	.467**	.362**	.454**	.346**	.197**	.328**
sig	0	0	0	0	0	0	0.001	0
REMS_B	.450**	.204**	.433**	.425**	.381**	.387**	0.032	.252**
sig	0	0.001	0	0	0	0	0.601	0
REMS_C	.319**	.261**	.531**	.241**	.415**	.614**	.315**	.349**
sig	0	0	0	0	0	0	0	0
REMS_D	.297**	.652**	.389**	.201**	.401**	.344**	.510**	.548**
sig	0	0	0	0.001	0	0	0	0
REMS_F	.656**	.337**	.661**	.572**	.439**	.419**	.187**	.299**
sig	0	0	0	0	0	0	0.002	0

Note. Pearson correlations significant at $p < .00$

CHAPTER 4

RACIAL MICROAGGRESSIONS ASSESSMENT USING ARMAS

The purpose of this section is to evaluate how the ARMAS-47 performs as a measure of RM in academic settings and to compare it with a demographic variable, in this case race, to answer the following question: Is there any significant difference between the ARMAS-47 scores across racial groups? In addition, are these RM experiences impacting graduate student consideration of leaving their graduate programs?

The results on this section were analyzed by looking at average scores of the ARMAS-47 factors by race groups. This data is illustrated in Figure 2. These results suggest that for factor one (Ascription of Intelligence), American Indian and Alaska Natives scored the highest, followed by Black participants and those who declined to identify their race. Those participants who declined to identify their race, most were international students and identified their ethnicity ($n = 5$), African, Moroccan, Arab and two Arab Americans. For factor two (Assumptions of being foreigner), participants who declined to identify their race had the highest scores, followed by Asian and Hispanic or Latino/a participants. On factor 3 (Multicultural issues seen as not a priority and being treated differently) have higher scores for American Indian and Alaska Native, then Asian and Black participants. Next, factor 4 (Invisibility/Felt ignored) showed higher scores of participants who chose to not disclose their race, followed by American Indian and Alaska Natives and Asians. For Factor 5 (Assumptions about me and my work with clients/representing entire race), the ARMAS-47 scores were higher for American Indian and Alaska Natives, and then

Hispanic or Latino/a and Asian participants. Colorblindness is the theme for factor six, and the racial groups that rated it higher were American Indian and Alaska Natives, Asian and Black participants. Factor seven (Assumptions of professional advantage because of race/ethnicity), were endorsed more often by Hispanic or Latino/a participants, followed by Asians and American Indian and Alaska Natives. Finally, for factor eight (Stereotypical assumptions about my race/ethnicity), scored the high among American Indian and Alaska Native, followed by participants who declined to identify race and Asians in the sample.

Furthermore, these findings suggest that factor five (Assumptions about me and my work with clients/representing entire race), was the factor with the higher scores across the race groups with the exception of those participants who declined to identify their race and Hispanic or Latino/a participants. Even though, participants endorsed more this factor five, there was not a significant difference as seen below in the ANOVA results, due to probably the large variability of responses.

Moreover, Hispanic or Latino participants scored the highest on Factor 7 (Assumptions of professional advantage because of race/ethnicity). These high scores are both in factors that are unique of this study, and specific to RMs in academic settings in psychology. White participants' scores were consistently lower than those of participants of color. The data is in agreement with previous findings that White individuals experience with RMs is different than those of people of color (Sue, 2010).

Figure 2. Average ARMAS scores of factors by race. In this analysis, data from the entire sample was utilized (N = 289). Standard errors are represented in the figure by the error bars attached to each column. Factor names are the following; (1) Ascription of Intelligence, (2) Assumptions of being a foreigner, (3) Multicultural issues seen as not a priority and being treated differently (4) Invisibility/Felt ignored, (5) Assumptions about me and my work with clients/representing entire race, (6) Colorblindness, (7) Assumptions of professional advantage because of race/ethnicity, and (8) Stereotypical assumptions about my race/ethnicity.

One-Way Analysis of Variance (ANOVA)

A one-way Analysis of Variance (ANOVA) was calculated on participants' ARMAS subscale scores to answer the question whether there are differences on microaggressions by race as measured by the ARMAS-47. Overall, the analyses were significant for six factors. These are: Factor one, *Ascription of Intelligence* $F(6, 281) = 3.24, p < .05$, Factor two, *Assumptions of being a foreigner* $F(6, 281) = 12.7, p < .000$, Factor three, *Multicultural issues seen as not a priority and being treated*

differently $F(6, 281) = 3.54, p < .000$), Factor four, *Invisibility/Felt ignored* $F(6, 281) = 3.42, p < .05$), Factor seven, *Assumptions of professional advantage because of race/ethnicity* $(6, 280) = 21.53, p < .000$) and Factor eight, *Stereotypical assumptions about my race/ethnicity* $(6, 281) = 4.53, p < .000$). However, factors five and six (*Assumptions about me and my work with clients/representing entire race*, and *Colorblindness*) were non-significant.

To determine which race(s) and factors were different, Post hoc Tukey HSD tests were conducted. Results indicated several significant differences at $p < .05$. Only the significant mean differences were included in Table 4.

Table 4

Summary of Significant Multiple Comparisons Between ARMAS Factors and Race Groups. A Positive Mean Difference Indicates That the Score was Higher for the First-Mentioned Group

Factors	Mean _{difference}	p-value
Factor 1. Ascription of Intelligence		
American Indian or Alaska Native v. White	0.99	0.014
American Indian or Alaska Native v. Multiracial	0.94	0.021
Factor 2. Assumptions of being a foreigner		
Asian v. White	0.76	0.0001
Asian v. Black	0.87	0.0001
Asian v. Multiracial	0.61	0.001
Hispanic or Latino v. White	0.59	0.001
Hispanic or Latino v. Black	0.7	0.0001
Hispanic or Latino v. Multiracial	0.441	0.03
Factor 3. Multicultural issues seen as not a priority and being treated differently		
Asian v. White	0.67	0.003
Black v. White	0.61	0.004
Hispanic or Latino v. White	0.55	0.025
American Indian or Alaska Native v. White	1.02	0.042
Factor 4. Invisibility/Felt ignored		
Asian v. White	0.44	0.014
Factor 7. Assumptions of professional advantage because of race/ethnicity		
Asian v. White	0.69	0.009

Asian v. Black	0.7	0.0001
Hispanic or Latino v. White	1.6	0.0001
Hispanic or Latino v. Asian	0.92	0.0001
Hispanic or Latino v. Black	1.62	0.0001
Hispanic or Latino v. Multiracial	1.28	0.0001
Factor 8. Stereotypical assumptions about my race/ethnicity		
Asian v. Black	0.42	0.007
American Indian or Alaska Native v. Black	0.26	0.021

Note. Data represents a Post hoc Tukey HSD summary of multiple comparisons of significant groups with $p < .05$.

Using ARMAS to assess dropout considerations

Half of the participants reported that they have considered dropping out (n = 145, 50%). The highest percentage of students reported having considered dropping out during the first year (n = 99, 34%), followed by when they were on their second year (n = 70, 24%), third year (n = 42, 15%), fourth year (n = 10, 2.5%), and fifth or more year (n = 6, 2%). For those participants who reported that they had considerations of dropping out, the majority are females (85%) between the ages of 26-30 (49%). Only 11.4% are international students. The race distribution of the participants who have considered leaving the program is as follows, White (n = 14, 10.6%), Asian (n = 30, 23%), Black, (n = 37, 28%), Hispanic or Latino (n = 28, 21%), American Indian or Alaska Native (n = 4, 3%), and Multiracial (n = 19, 14%).

The results on this section were analyzed by looking at average scores of the ARMAS-47 factors by race groups in this subsample (n = 145) of participants who indicated they have had drop out considerations. This data is illustrated in Figure 3. Taking this subsample, it was found that for factor one, (Ascription of Intelligence), the higher scores was endorsed by American Indian and Alaska Natives, followed by Hispanic or Latino/a, and Black participants. For factor two, (Assumptions of being a

foreigner), higher scores were reported by Asian, Hispanic or Latino and then American Indian or Alaska Native participants. Factor three (Multicultural issues seen as not a priority and being treated differently), scores were higher for American Indian and Alaska Natives, followed by Asian and Hispanic or Latino/a participants. Next, factor four (Invisibility/Felt ignored) participants who had higher scores were Asians, American Indian and Alaska Native, followed by Blacks. Factor five (Assumptions about me and my work with clients/representing entire race) was endorsed more by American Indian and Alaska Natives, which was the highest score in this subsample, followed by Hispanic or Latino/a and Asians. The following factor six (Colorblindness) had higher scores among American Indian and Alaska Natives, Asian and Black participants. Then, factor seven (Assumptions of professional advantage because of race/ethnicity) scores were higher among Hispanic or Latino/a participants, followed by Asians and Blacks. Finally, for factor eight (Stereotypical assumptions about my race/ethnicity) participants who identified as American Indian and Alaska Natives had higher scores, followed by Asian and Hispanic or Latino/a.

Comparably to the whole sample results, factor five (Assumptions about me and my work with clients/representing entire race) appears to be the factors that across race groups was rated the highest, except for Hispanic or Latino/a participants who endorsed more frequently items in factor seven (Assumptions of professional advantage because of race/ethnicity). This data suggests that the graduate students in this sample experience RM events more frequently related to those RM that are unique to this study of and their specific experiences in academic settings.

Figure 3. Average ARMAS scores (Yes to drop out responses only, $n = 145$) of factors by race. Standard errors are represented in the figure by the error bars attached to each column. Factor names are the following; (1) Ascription of Intelligence, (2) Assumptions of being a foreigner, (3) Multicultural issues seen as not a priority and being treated differently (4) Invisibility/Felt ignored, (5) Assumptions about me and my work with clients/representing entire race, (6) Colorblindness, (7) Assumptions of professional advantage because of race/ethnicity, and (8) Stereotypical assumptions about my race/ethnicity.

Next, a one-way ANOVA was conducted to determine whether there is a

difference between these participants ($n = 145$) who reported having considered

dropping out and their race. Significant differences were found for factors two

(*Assumptions of being a foreigner*) $F(5, 126) = 9.09, p < .05$, factor three

(*Multicultural issues seen as not a priority and being treated differently*) $F(5, 126) =$

$2.37, p < .05$, factor seven (*Assumptions of professional advantage because of*

race/ethnicity) $F(5, 126) = 12.7, p < .05$), and factor eight (*Stereotypical assumptions about my race/ethnicity*) $F(5, 126) = 3.28, p < .05$).

Post hoc Tukey tests suggests that there are significant differences, by races on those factors that were significant. Results indicated several significant differences at $p < .05$. For the purpose of this paper, the significant mean differences were included in Table 5.

Table 5

Summary of Significant Multiple Comparisons Between ARMAS Factors and Race Groups for Participants That Considered Dropping Out (N = 145). A Positive Mean Difference Indicates That the Score was Higher for the First-Mentioned Group

Factors	Mean _{difference}	p-value
Factor 2. Assumptions of being a foreigner		
Asian v. White	0.7	0.032
Asian v. Black	1.04	0.0001
Hispanic or Latino v. Black	0.8	0.0001
Hispanic or Latino v. Multiracial	0.615	0.048
Factor 7. Assumptions of professional advantage because of race/ethnicity		
Asian v. Black	0.68	0.04
Hispanic or Latino v. White	1.54	0.0001
Hispanic or Latino v. Asian	1.06	0.0001
Hispanic or Latino v. Black	1.74	0.0001
Hispanic or Latino v. Multiracial	1.49	0.0001
Factor 8. Stereotypical assumptions about my race/ethnicity		
American Indian or Alaska Native v. Black	1.31	0.014

Additionally, we asked participants to choose what reasons they had when they were considering dropping out of their programs. To see the difference among race groups and their reasons to dropout see Figure 4 below.

Figure 4. Percentage of the reasons to dropout by race groups. The reasons to dropout are the following FD = Financial Difficulties, FI = Family Issues, HI = Health Issues, OA = Overwhelmed about academic demands, LS = Lack of support from faculty, NP = Not enough professors of my race, FP = Few peers of my race, LC = Lack of confidence in my abilities, IR = Institutional Racism, DF = Difficulty having friendships with non-minorities, MI = Microinsult, MA = Microassault, and MV = Microinvalidations.

Results in Figure 4 indicate that White participants' top three reasons to dropout were similar to Asian participants, both reported being overwhelmed about academic demands, lack of support from faculty, and lack of confidence in their own abilities. Black participants reported that top three main reasons to dropout was lack of support from faculty, not having enough professors of their race, and microinvalidations. Hispanic or Latino/a graduate students reported the main reasons to be lack of support from faculty, lack of confidence in their own abilities, and overwhelmed about academic demands. Participants who were American Indian or Alaska Natives reported their reasons to consider dropping out of their programs included lack of support of faculty, lack of confidence in their own abilities and microinvalidations. Lastly, Multiracial participants reported their reasons to dropout as being overwhelmed about academic demands, lack of confidence in their own abilities and microinvalidations.

In terms of RMs, these results are in agreement with previous findings where people of color tended to experience more frequent events related to microinvalidations and then microinsults, especially in the school or workplace settings. Microinvalidations were part of the top three reasons to dropout for Blacks, American Indian and Alaska Natives, and Multiracial graduate students.

CHAPTER 5

GENERAL DISCUSSION

The term Racial Microaggressions is defined as “brief and commonplace daily verbal, behavioral, and environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults to the target person or group” (Sue et al, 2007, p.273). Microaggressions exists in both social and academic collegiate environments (Solórzano, Ceja and Yosso, 2000). For that reason, it is important to explore RM in academic settings and ways to support graduate students of color while completing their academic degrees in order to continue diversifying all levels of education.

Summary

Racial Microaggressions (RM) in academic settings can have pervasive effects on students of color, specifically in graduate programs. A national sample (N = 289) was collected from programs approved by APA in order to validate a newly developed instrument called Assessment of Racial Microaggressions in Academic Settings (ARMAS). An exploratory factor analyses was conducted which yielded eight factors, these are: (1) *Ascription of Intelligence*, (2) *Assumptions of being a foreigner*, (3) *Multicultural issues seen as not a priority and being treated differently*, (4) *Invisibility/Felt ignored*, (5) *Assumptions about me and my work with clients/representing entire race*, (6) *Colorblindness*, (7) *Assumptions of professional advantage because of race/ethnicity*, and (8) *Stereotypical assumptions about my race/ethnicity*.

Reliability along with discriminant and convergent validity was analyzed. Results of the study suggest that the ARMAS is a valid and reliable measure of RMs in academic settings.

Further results suggest that half of the sample experienced RMs and considered dropping-out of their programs more frequently during the first three years of their graduate programs. Furthermore, the findings suggest that factor five (Assumptions about me and my work with clients/representing entire race), was the factor with the higher scores across the race groups with the exception of those participants who declined to identify their race and Hispanic or Latino/a participants. Additionally, Hispanic or Latino participants scored the highest on Factor 7 (Assumptions of professional advantage because of race/ethnicity). These high scores are both in factors that are unique of this study, and specific to RMs in academic settings in psychology. White participants' scores were consistently lower than those of participants of color. The data is in agreement with previous findings that White individuals experience with RMs is different than those of people of color (Sue, 2010).

Looking at the reasons students had when they considered dropping out of their programs suggest that the top main reasons for White, Asian and Hispanic or Latino/a students included: being overwhelmed about academic demands, lack of support from faculty, and lack of confidence in their own abilities. However, Black participants reported lack of support from faculty, not enough professors of my race and microinvalidations. One of the top three reasons for dropping out of their graduate programs for Black, American Indian/Alaska Native, and Multiracial graduate students was microinvalidations.

Limitations

There were several limitations. The data collection was online and participants were not supervised, there was no opportunity to make sure they were in fact graduate students of color in psychology. Also, the study required self-report of their experiences with RMs and these are difficult to assess because of different factors such as being aware of RM and the capacity of recall of RM events (Ortiz-Frontera, 2013). Additionally, the ARMAS-47 needs further evaluation of its psychometric properties and check replicability and consistency. There was also variability in the responses leading large standard deviations. A more interdisciplinary sample is needed so the ARMAS could be tested for validity of RMs in different fields and academic settings.

Implications

The ARMAS measure could serve as an initial assessment that will help recruiters, faculty, and program directors who work in higher education to assess RM experiences of their students. This will foster awareness of RMs and consequently will aid in the creation of prevention and intervention strategies to minimize harmful RM experiences. The information from the measure will aid in tailoring of coping strategies by race. Research suggests that all students of color will benefit from emotional support, but in addition to that Black students successfully coped with RM using religion and spirituality strategies (Ortiz-Frontera, 2013). In addition, American Indian and Alaska Native appeared to experience frequent RMs and more research on RMs with this racial group is warranted to understand their specific experiences (Hill, Kim, & Williams, 2010).

Faculty can employ the findings to help create mentoring programs or support groups for students of color to foster retention and graduation. Moreover, this RM measure is important because it will provide graduate students of color with validation of their experiences and may help to create ways that they can positively cope with RM. Another important implication of this RM scale tailored for academic settings in psychology and related fields, is that it will help the program to assess and reinforce its multicultural training at the program level and possibly throughout the campus and across time to track progress (APA, 2008). While doing this, departments of psychology will promote acceptance of and a welcoming environment for graduate students of color, enhancing their confidence, self-efficacy and academic engagement in order to succeed and complete their graduate degree and eventually join their field.

In order to foster a positive and welcoming environment to students of color in academic settings, students color would benefit from creating counter spaces where they can be involved with other graduate students of color going through similar experiences to obtain emotional support and peer mentoring (Ortiz-Frontera, 2013; Solórzano, Ceja, & Yosso, 2000). For example, creating a graduate students of color organization or student network managed by students and possibly overseen by the graduate school diversity officer could be a safe counter space for students coping with RMs (Good, Halpin, & Halpin, 2000; Grier-Reed, 2010). Building community within the department and campus is important for students to feel welcome and valued (Yosso, Smith, Ceja, & Solórzano, 2009).

It is important to provide and encourage access to mental health counselors on campus so graduate students of color have a safe place to vent and cope with possible

depressive symptoms (The Graduate Assembly, 2014). A systematic training of faculty on effective mentorship practices is needed to better the graduate experience and reduce the risk of attrition (Griffin, Muniz, & Smith, 2016).

Future directions

Future directions are to continue to explore more carefully the validity of the ARMAS in comparison with other already published RM scales and possibly test reliability and validity with a different sample. Additionally, it would be useful to create an abbreviated scale to save time in the administration and scoring, especially for quick use in departments and programs to assess RM. Using the new measure of RM, faculty could investigate other variables that they might be concerned about, such as anxiety and self-efficacy.

Additionally, graduate programs using a training program related to diversity and RM awareness can use the ARMAS in their graduate programs to help monitoring progress on multicultural competence, and identification of programs needing special attention.

Appendix A

Note: Racial Microaggression Categories and Themes from Ortiz-Frontera, Vaccaro, & Collyer (2015). This figure is a modified version from Sue (2010) p. 29. In the original taxonomy (Sue, 2010) there were two themes that did not emerge in this study. These are: Assumption of Criminal Status and Denial of Individual Racism.

Appendix B

Demographic Questionnaire

What is your age? Please write.

What is your sex?

- ☐ Female
- ☐ Male
- ☐ Other: _____
- ☐

Where were you born?

- ☐ United States
- ☐ Other: _____

What is your race?

- ☐ White (Non-Hispanic or Latino/a)
- ☐ Asian
- ☐ Black
- ☐ Hispanic or Latino
- ☐ American Indian or Alaska Native
- ☐ Native Hawaiians or Other Pacific Islander
- ☐ Multiracial
- ☐ Would rather not say
- ☐ Other: _____

What is your ethnicity?

- ☐ African American
- ☐ Dominican American
- ☐
- ☐
- ☐
- ☐ Filipino American
- ☐ Puerto Rican
- ☐ Mexican/Chicano/a American
- ☐ Would rather not say
- ☐ Two ethnicities or more: _____
- ☐ Other: _____

What is your primary language?

- ☐ English
- ☐ Spanish
- ☐ Portuguese
- ☐ Mandarin
- ☐ Other: _____

What is your secondary language, if any?

- ☐ English
- ☐ Spanish
- ☐ Portuguese
- ☐ Mandarin
- ☐ Other: _____
- ☐ No second language

What is your highest level of education completed?

- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Specialist level
- ☐ Doctorate
- ☐ Other: _____

In what level of graduate program in school psychology are you in?

- ☐ Specialist level program
- ☐ Doctoral program
- ☐ Other: _____

In what year are you?

- ☐ 1st year
- ☐ 2nd year
- ☐ 3rd year
- ☐ 4th or more

Please write your expected graduation date? (i.e., May, 2017)

In your graduate program, the number of faculty of color is?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3 or more
- ☐ Don't know

In your graduate program, the number of graduate students of color is?

- ☐ 0
- ☐ 1-3
- ☐ 4-6

- ☐ 7 or more
- ☐ Don't know

Is your graduate program on a:

- ☐ Urban area
- ☐ Rural area
- ☐ Other: _____

In what general region of the US is your graduate program located?

- ☐ The Midwest
- ☐ The North-East
- ☐ The South
- ☐ The West

Appendix C

Assessment of Racial Microaggressions in Academic Settings (ARMAS)

Directions: For every statement please select the frequency of your experiences in the past year.

0 = I did not experience this event in the past year, 1 = I experienced this event 1 time in the past year, 2 = I experienced this event 2 times in the past year, 3 = I experienced this event 3 times in the past year, 4 = I experienced this event 4 times in the past year, and 5 = I experienced this event 5 or more times in the past year.

○ **Ascription of Intelligence**

1. People are often surprised by my skills because of my race
2. People are surprised when I contribute good points to discussions in my classes because of my race
3. I get nominated for leadership roles within my program because of my race
4. I often second guess my academic or practicum work because of my race
5. People ask me to contribute to class discussions
6. I receive compliments because of my race
7. People are surprised when I get good grades because of my race
8. People are surprised when I get better grades than them because of my race
9. People assume I am not as academically strong as other students in my program because of my race
10. My academic work is often corroborated because of my race
11. My answers on a classroom discussion are often corroborated because of my race
12. People comment on how articulated I am because of my race
13. People ask if I am undergraduate student because of my race

○ **Second Class-Citizen**

a. Invisibility/Felt ignored

1. When group assignments are required I am often left without a partner(s) because of my race
2. In group assignments or discussions I am the last one picked because of my race
3. I feel ignored in my program because of my race
4. I feel ignored by staff on my practicum placement because of my race

5. My answers are often ignored or verified during classes or meetings because of my race
6. Sometimes my comments are disregarded because of my race
7. In a practicum setting I felt that staff ignored me because of my race
8. I do not get invited to social gatherings outside of the program because of my race
9. In social gatherings people do not talk to me much because of my race
10. People ask if I am part of the office or cleaning staff because of my race

b. Cultural assumption about me and my clients

1. In my practicum placement I am usually confused as a parent or a visitor because of my race
2. I am automatically assigned cases of clients from racial minority backgrounds because of my race
3. I received compliments on how well I work with clients from racial minority backgrounds because of my race
4. In my practicum I hear people making negative comments about clients from race/ethnic minority backgrounds
5. People assume I only work with clients from racial/ethnic minority backgrounds because of my race
6. People trust my work with clients from racial/ethnic minority backgrounds

○ **Pathologizing cultural values/communication styles**

a. Cultural and language assumptions

1. People ask me to say words on a different language other than English because of my race
2. People assume that I speak a certain language because of my race
3. People ask me whether I only eat certain foods because of my race
4. People assume that I am from a certain race/ethnicity because of my race
5. People assume I can dance because of my race
6. People ask me to perform a cultural dance because of my race

○ **Colorblindness**

1. People have told me that they don't see color
2. I have heard people say that they never look at color
3. People have told me that they have friends of all races
4. People have said to me that they see me as a person not a race
5. I have heard people say that we are all human and we don't need to be classified in races

○ **Myth of Meritocracy**

a. Diversity Issues are not important/not a priority

1. I have heard people say that multicultural classes are not needed in the program
2. People avoid discussions about race/ethnicity in the classrooms
3. People avoid discussions about race/ethnicity in social or informal events
4. People avoid discussions about race/ethnicity in my practicum placement
5. There is a lack of diversity in my program
6. People say that focusing on multicultural and diversity issues is a waste of time
7. People say that there is too much emphasis on racial/ethnic minority issues
8. The majority of the classroom discussions are from a white perspective
9. I have heard people say that people of color are overly sensitive
10. People assume that I got a scholarship or a graduate assistantship only because of my race/ethnicity
11. People say that I will find a job quickly because of my race/ethnicity
12. People say that I'm lucky to be bilingual
13. People say that I will be paid more on my job because I'm bilingual

○ **Alien in own land**

a. Asked to represent entire race

1. I am often asked my perspective on things because of my race
2. People assume that I'm not from the US
3. People assume that I don't speak English
4. People ask me from what country I'm from
5. In classroom discussions people ask me what I think about a topic related to race/ethnicity

b. Exoticization and Assumption of Similarity

1. I get confused with other students who are from a similar race/ethnicity background
2. People often comment that I don't look like others from my race/ethnicity
3. People ask me to dance or do things assumed to be associated with my race/ethnicity
4. I have been complimented on my appearance based on my race/ethnic background
5. People are surprised when they learn my race/ethnic background
6. I am complimented on my accent
7. People have said that I speak English very well
8. People are surprised that I don't have an accent

9. People asked how did I learn English so well
10. People don't believe me when I tell them where my family is from
11. People have said that I don't look as a person from my race/ethnic background
12. People have commented on how unique my name is because of my race/ethnic background
13. People have complimented my name because of my race/ethnic background
14. People have asked if they can call me by a different name rather than my ethnic name

Appendix D

ARMAS Scale Evaluation Open-Ended Question (Adapted from Nadal, 2011)

- (1) Describe what you believe the last questions were trying to measure.
- (2) Write three keywords or key phrases that can be used to label or explain the various experiences that are described above.
- (3) Do you remember any questions or experiences that were not written in a clear or concise manner? If so, please list them.

Appendix E

Drop-out Consideration Questions

1. Have you ever considered leaving your graduate program?
 - ☐ Yes
 - ☐ No
2. In what year of the program did you consider leaving your graduate program? Please select all that apply.
 - ☐ 1st year
 - ☐ 2nd year
 - ☐ 3rd year
 - ☐ 4th year
 - ☐ 5th year or more
3. What reason(s) may have impacted your consideration of possibly leaving the graduate program? Please select all that apply.
 - ☐ Financial difficulties
 - ☐ Family issues
 - ☐ Health issues
 - ☐ Overwhelmed about academic demands
 - ☐ Lack of support from faculty
 - ☐ Not having enough professors of my race
 - ☐ Few students/peers of my race
 - ☐ Lack of confidence in my own ability to succeed
 - ☐ Racist institutional policies and practices
 - ☐ Difficulty having friendships with non-minorities
 - ☐ Rude and insensitive treatment because of race
 - ☐ Being discriminated against
 - ☐ Subtle or blatant race-related communications that made me feel inadequate
4. Describe the reasons you had when you contemplated the possibility of leaving the graduate program.
5. Describe the reasons why you decided to stay in your graduate program.
6. Describe how you coped with having thoughts of leaving the graduate program.

Appendix F

Racial and Ethnic Microaggressions Scale and its subscales (REMS) (Nadal, 2011)

Instructions: Think about your experiences with race. Please read each item and think of how many times this event has happened to you in the **PAST YEAR**.

0 = I did not experience this event.

1 = I experienced this event at least once in the past six months.

1. I was ignored at school or at work because of my race.
2. Someone's body language showed they were scared of me, because of my race.
3. Someone assumed that I spoke a language other than English.
4. I was told that I should not complain about race.
5. Someone assumed that I grew up in a particular neighborhood because of my race.
6. Someone avoided walking near me on the street because of my race.
7. Someone told me that she or he was colorblind.
8. Someone avoided sitting next to me in a public space (e.g., restaurants, movie theaters, subways, buses) because of my race.
9. Someone assumed that I would not be intelligent because of my race.
10. I was told that I complain about race too much.
11. I received substandard service in stores compared to customers of other racial groups.
12. I observed people of my race in prominent positions at my workplace or school.
13. Someone wanted to date me only because of my race.
14. I was told that people of all racial groups experience the same obstacles.
15. My opinion was overlooked in a group discussion because of my race.
16. Someone assumed that my work would be inferior to people of other racial groups.
17. Someone acted surprised at my scholastic or professional success because of my race.
18. I observed that people of my race were the CEOs of major corporations.
19. I observed people of my race portrayed positively on television.
20. Someone did not believe me when I told them I was born in the US.
21. Someone assumed that I would not be educated because of my race.
22. Someone told me that I was "articulate" after she/he assumed I wouldn't be.
23. Someone told me that all people in my racial group are all the same.
24. I observed people of my race portrayed positively in magazines.
25. An employer or co-worker was unfriendly or unwelcoming toward me because of my race.
26. I was told that people of color do not experience racism anymore.
27. Someone told me that they "don't see color."
28. I read popular books or magazines in which a majority of contributions featured people from my racial group.
29. Someone asked me to teach them words in my "native language."

30. Someone told me that they do not see race.
31. Someone clenched her/his purse or wallet upon seeing me because of my race.
32. Someone assumed that I would have a lower education because of my race.
33. Someone of a different racial group has stated that there is no difference between the two of us.
34. Someone assumed that I would physically hurt them because of my race.
35. Someone assumed that I ate foods associated with my race/culture every day.
36. Someone assumed that I held a lower paying job because of my race.
37. I observed people of my race portrayed positively in movies.
38. Someone assumed that I was poor because of my race.
39. Someone told me that people should not think about race anymore.
40. Someone avoided eye contact with me because of my race.
41. I observed that someone of my race is a government official in my state
42. Someone told me that all people in my racial group look alike.
43. Someone objectified one of my physical features because of my race.
44. An employer or co-worker treated me differently than White co-workers.
45. Someone assumed that I speak similar languages to other people in my race.

REMS Subscales and items.

REMS_A: Assumptions of Inferiority Subscale

Items: 5, 9, 17, 21, 22, 32, 36, 38

REMS_B: Second-Class Citizen and Assumptions of Criminality Subscale

Items: 2, 6, 8, 11, 31, 34, 40

REMS_C: Microinvalidations Subscale

Items: 4, 7, 10, 14, 26, 27, 30, 33, 39

REMS_D: Exoticization and Assumptions of Similarity Subscale

Items: 3, 13, 20, 23, 29, 35, 42, 43, 45

REMS_E: Environmental Microaggressions Subscale (eliminated)

Items: 12, 18, 19, 24, 28, 37, 41

REMS_F: Workplace and School Microaggressions Subscale

Items: 1, 15, 16, 25, 44

Appendix G

Buss-Perry Scale and its subscales (Buss & Perry,1992)

Please rate each of the following items in terms of how characteristic they are of you.
Use
the following scale for answering these items.

1	2	3	4	5	6	7
Extremely						Extremely
Uncharacteristic						Characteristic
of me						of me

- 1) Once in a while I can't control the urge to strike another person.
- 2) Given enough provocation, I may hit another person.
- 3) If somebody hits me, I hit back.
- 4) I get into fights a little more than the average person.
- 5) If I have to resort to violence to protect my rights, I will.
- 6) There are people who pushed me so far that we came to blows.
- 7) I can think of no good reason for ever hitting a person.
- 8) I have threatened people I know.
- 9) I have become so mad that I have broken things.
- 10) I tell my friends openly when I disagree with them.
- 11) I often find myself disagreeing with people.
- 12) When people annoy me, I may tell them what I think of them.
- 13) I can't help getting into arguments when people disagree with me.
- 14) My friends say that I'm somewhat argumentative.
- 15) I flare up quickly but get over it quickly.
- 16) When frustrated, I let my irritation show.
- 17) I sometimes feel like a powder keg ready to explode.
- 18) I am an even-tempered person.
- 19) Some of my friends think I'm a hothead.
- 20) Sometimes I fly off the handle for no good reason.
- 21) I have trouble controlling my temper.
- 22) I am sometimes eaten up with jealousy.
- 23) At times I feel I have gotten a raw deal out of life.
- 24) Other people always seem to get the breaks.
- 25) I wonder why sometimes I feel so bitter about things.
- 26) I know that "friends" talk about me behind my back.
- 27) I am suspicious of overly friendly strangers.
- 28) I sometimes feel that people are laughing at me behind me back.
- 29) When people are especially nice, I wonder what they want.

Appendix H

Buss-Perry items by subscales

A. Physical Aggression (PA)

Items: 1, 2, 3, 4, 5, 6, *7, 8, and 9

B. Verbal Aggression (VA)

Items: 10, 11, 12, 13, and 14

C. Anger (A)

Items: 15, 16, 17, *18, 19, 20, and 21

D. Hostility (H)

Items: 22, 23, 24, 25, 26, 27, 28, and 29

Note: items with an (*) 7 and 18 are reversely scored.

Appendix I

ARMAS-47 Final Scale: Factor and Items

Factor 1: Ascription of Intelligence

1. Professors/Peers/Practicum or Program Staff were surprised by my academic performance because of my race/ethnicity.
2. Professors/Peers/Practicum or Program Staff were surprised when I got good grades because of my race/ethnicity.
3. Professors/Peers/Practicum or Program Staff assumed my work would be inferior because of my race/ethnicity.
4. Professors/Peers/Practicum or Program Staff assumed I was not as academically strong as other students in my class because of my race/ethnicity.
5. My peers were surprised when I got better grades than them because of my race/ethnicity.
6. I received compliments from professors/peers/practicum or program staff about my intelligence because of my race/ethnicity.
7. Professors/Peers/Practicum or Program Staff were surprised when I contributed good points to discussions in my classes/practicum because of my race/ethnicity.
8. My academic/practicum work was corroborated for mistakes because of my race/ethnicity.
9. At meetings or during classes, my comments were disregarded because of my race/ethnicity.

Factor 2: Assumptions of being a foreigner

10. Professors/Peers/Practicum or Program Staff said that I speak English very well.
11. Professors/Peers/Practicum or Program Staff asked how did I learn English so well.
12. Professors/Peers/Practicum or Program Staff assumed that I was an international student.
13. Professors/Peers/Practicum or Program Staff asked me from what country I was from.
14. Professors/Peers/Practicum or Program Staff complimented me on my accent.
15. Professors/Peers/Practicum or Program Staff are surprised that I do not have an accent.
16. Professors/Peers/Practicum or Program Staff assumed that I do not speak English.
17. Professors/Peers/Practicum or Program Staff assumed I spoke a certain language because of my race/ethnicity.
18. Professors/Peers/Practicum or Program Staff asked me to say words on a different language other than English because of my race/ethnicity.

Factor 3: Multicultural issues seen as not a priority and being treated differently

19. Professors/Peers avoided discussions about race/ethnicity in the classrooms.

20. I heard Professors/Peers/Practicum or Program Staff say that multicultural classes are not needed in the program.
21. Professors/Peers/Practicum or Program Staff said that focusing on multicultural and diversity issues was a waste of time.
22. Professors/Peers/Practicum or Program Staff avoided discussions about race/ethnicity in social or informal events.
23. Professors/Peers/Practicum or Program Staff said that there is too much emphasis on racial/ethnic minority issues.
24. Professors/Peers/Practicum or Program Staff have treated me differently because of my race/ethnicity.
25. I felt disregarded in my program/practicum because of my race/ethnicity.
26. Professors/Peers/Practicum or Program Staff have been unfriendly because of my race/ethnicity.

Factor 4: Invisibility/Felt ignored

27. I was not invited to study groups by my peers because of my race/ethnicity.
28. At group assignments in my classes, I was left without a partner because of my race/ethnicity.
29. In social gatherings Professors/Peers/Practicum or Program Staff did not talk to me much because of my race/ethnicity.
30. I was not invited to social gatherings outside of the program because of my race/ethnicity.
31. In group assignments or discussions, I was the last one picked because of my race/ethnicity.

Factor 5: Assumptions about me and my work with clients/representing entire race.

32. I received compliments on how well I worked with clients from racial minority backgrounds because of my race/ethnicity.
33. In classroom discussions, Professors/Peers/ asked my opinion on a topic related to race/ethnicity.
34. Professors/Peers/Practicum or Program Staff trusted my work with clients from racial/ethnic minority backgrounds.
35. I was assigned more cases of clients from racial minority backgrounds because of my race.
36. As part of my classes or at practicum, I was asked to give my perspective on issues (i.e. poverty, education gap, social inequality, politics, etc.) because of my race/ethnicity.
37. In classroom discussions, I was asked to represent the perspective of my entire race/ethnicity.

Factor 6: Colorblindness

- 38. I have heard Professors/Peers/Practicum or Program Staff say that they never look at color.
- 39. Professors/Peers/Practicum or Program Staff have told me that they do not see color.
- 40. Professors/Peers/Practicum or Program Staff have said to me that they see me as a person not a race
- 41. I have heard Professors/Peers/Practicum or Program Staff say that we are all human and we don't need to be classified in races.

Factor 7: Assumptions of professional advantage because of race/ethnicity

- 42. Professors/Peers/Practicum or Program Staff said that I will be paid more money on my job because I am bilingual.
- 43. Professors/Peers/Practicum or Program Staff told me that I am lucky to be bilingual.
- 44. Professors/Peers/Practicum or Program Staff told me that I will find a job quickly because of my race/ethnicity.

Factor 8: Stereotypical assumptions about my race/ethnicity

- 45. Professors/Peers/Practicum or Program Staff asked me to perform a cultural dance because of my race/ethnicity.
- 46. Professors/Peers/Practicum or Program Staff asked me whether I only eat certain foods because of my race/ethnicity
- 47. Professors/Peers/Practicum or Program Staff assumed I am from a certain religion because of my race/ethnicity.

BIBLIOGRAPHY

- Agresti, A. & Finlay, B. (2009). *Statistical Methods for the Social Sciences*. New Jersey: Pearson Prentice Hall.
- American Psychological Association. (2002). *Ethical principles of psychologists and code of conduct*. Retrieved from <http://www.apa.org/ethics/code/index.aspx>.
- American Psychological Association. (2003). *Guidelines on multicultural education, training, research, practice, and organizational change for psychologists*. *American Psychologist*, 58, 377–402.
- American Psychological Association. (1993). *Resolution on ethnic minority recruitment and retention*. Retrieved from <http://www.apa.org/pi/oema/programs/recruitment/resolution-1993.aspx>.
- American Psychological Association, Office of Ethnic Minority Affairs. (2008). *A portrait of success and challenge—Progress report: 1997–2005*. Washington, DC: Author. Retrieved from www.apa.org/pi/oema/cemrrat_report.html.
- Arroyos-Jurado, E., Fernández, I., & Navarro, R. L. (2010). Multiculturalism and diversity: Implications for the training of school psychologists. In E. García-Vásquez, T. D. Crespi, C. A. Riccio (Eds.), *Handbook of education, training, and supervision of school psychologists in school and community*, Vol 1: Foundations of professional practice (pp. 129-147). New York, NY: Routledge/Taylor & Francis Group.
- Blume, A. W., Lovato, L. V., Thyken, B. N., & Denny, N. (2012). The relationship of

- microaggressions with alcohol use and anxiety among ethnic minority students in a historically white institution. *Cultural Diversity and Ethnic Minority Psychology*, 18, 45–54. doi:10.1037/a0025457.
- Brondolo, E, Brady, N., Pencille, M., Beatty, D. & Contrada, R. J. (2009). Coping with Racism: A Selective Review of Literature and a Theoretical, and Methodological Critique. *Journal of Behavioral Medicine*, 32, 64–88. doi:10.1007/s10865-008-9193-0.
- Barker, M. J. (2011). Racial context, currency and connections: Black doctoral student and white advisor perspectives on cross-race advising. *Innovations in Educations and Teaching International*, 48, 387-400.
- Buss, A. H., & Perry, M. P. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63, 452-459.
- Carver, C. S. (1997) You Want to Measure Coping But Your Protocol's Too Long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92-100.
- Carver, C. S., Scheier, M. F., & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*. 66, 184-195.
- Clark C. R., Mercer, S. H., Zeigler-Hill, V. & Dufrene, B. A. (2012). Barriers to the success of ethnic minority students in school psychology graduate programs. *School Psychology Review*, 41, 176-192.
- Clark, D., Spanierman, L. B., Reed, T. D., Soble, J. R., & Cabana, S. (2011).

- Documenting Weblog expressions of racial microaggressions that target American Indians. *Journal of Diversity in Higher Education*, 4, 39–50. doi:10.1037/a0021762.
- Cone, J.D. & Foster, S. L. (2006). *Dissertation and thesis from start to finish. Psychology and related fields*. (2nd Ed.). Washington, DC: American Psychological Association.
- Constantine, M. (2007). Racial microaggressions against African American clients in cross-racial counseling relationships. *Journal of Counseling Psychology*, 54, 1–16.
- Constantine, M. G., Smith, L., Redington, R. M., & Owens, D. (2008). Racial microaggressions against black counseling and counseling psychology faculty: A central challenge in the multicultural counseling movement. *Journal of Counseling & Development*, 86, 348–355.
- Constantine, M. G., & Sue, D. W. (2007). Perceptions of racial microaggressions among black supervisees in cross-racial dyads. *Journal of Counseling Psychology*, 54, 142–153. doi:10.1037/0022-0167.54.2.142.
- Curtis, M. J., Grier, J. E. & Hunley, S. A. (2003). The changing face of School Psychology: Trends in data and projections for the future. *School Psychology Quarterly*, 18, 409-430.
- Curtis, M. J., Lopez, A. D., Castillo, J. M., Batsche, G. M., Minch, D., & Smith, J. C. (2008). The status of school psychology: Demographic characteristics, employment conditions, professional practices, and continuing professional development. *Communique*, 36, 27–29.
- Davis, A., McIntosh, D., Phelps, L., & Kehle, T. (2004). Addressing the shortage of

- school psychologists: A summative overview. *Psychology in the Schools*, 41, 489–495. doi:10.1002/pits.10192.
- DeVellis, R. F. (2012). *Scale Development: Theory and applications*. (3rd ed.) Los Angeles, CA: SAGE.
- Dovidio, J. F., & Gaertner, S. L. (2000). Aversive racism and selective decisions: 1989–1999. *Psychological Science*, 11, 315–319.
- Dovidio, J. F., Gaertner, S. L., Kawakami, K., & Hodson, G. (2002). Why can't we all just get along? Interpersonal biases and interracial distrust. *Cultural Diversity and Ethnic Minority Psychology*, 8(2), 88–102.
- Fagan, T. P. & Wise, P.S. (2007) *School psychology, past, present, and future*. (3rd ed.) Bethesda, MD: NASP.
- Furr, R. M. & Bacharach, V. R. (2008). *Psychometrics: An introduction*. Los Angeles, CA: SAGE Publications.
- Gomez, M., Khurshid, A., Freitag, M. B., & Lachuk, A. (2011). Microaggressions in graduate students' lives: How they are encountered and their consequences. *Teaching and Teacher Education: An International Journal of Research and Studies*, 27(8), 1189–1199.
- Good, J. M., Halpin, G., & Halpin, G. (2000). A promising prospect for minority retention: Students becoming peer mentors. *Journal of Negro Education*, 69, 375-383.
- Goodstein, R. (2008). What's missing from the dialogue on racial microaggressions in counseling and therapy. *American Psychologist*, 63(4), 276–277. doi:10.1037/0003-066X.63.4.276.

- Grier-Reed, T. L. (2010). The African American student network: Creating sanctuaries and counterpaces for coping with racial microaggressions in higher education settings. *American Counseling Association, 49*, 181-188.
- Griffin, K. A., Muniz, M., & Smith, E. J. (2016). Graduate diversity officers and efforts to retain students of color. *Journal of Student Affairs Research and Practice, 54*, 26-38.
- Hernández, P., Carranza, M., & Almeida, R. (2010). Mental health professionals' adaptive responses to racial microaggressions: An exploratory study. *Professional Psychology: Research and Practice, 41*, 202–209.
doi:10.1037/a0018445.
- Hill, J. S., Kim, S., & Williams, C. D. (2010). *The context of racial microaggressions against indigenous peoples: Same old racism or something new?* In D. W. Sue (Ed.), *Microaggressions and marginality: Manifestation, dynamics and impact* (pp. 105–122). New York, NY: Wiley.
- Johnson, D. R., Wasserman, T. H., Yildirim, N., & Yonai, B. A. (2014). Examining the effects of stress and campus climate on the persistence of students of color and white students: An application of Bean and Eaton's psychological model of retention. *Research Higher Education, 55*, 75-100.
- LaFraniere & Smith, (2016, July). Philando Castile Was Pulled Over 49 Times in 13 Years, Often for Minor Infractions. *The New York Times* Retrieved from http://mobile.nytimes.com/2016/07/17/us/before-philando-castiles-fatal-encounter-a-costly-trail-of-minor-traffic-stops.html?campaign_id=A100&campaign_type=Email&referer=

- Leong, F. T., Austin, J. T. (Eds.). (2006). *The psychology research handbook. A guide for graduate students and research assistants*. (2nd Ed.). Thousand Oaks: Sage Publications.
- Maton, K. I., Kohout, J. L., Wicherski, M., Leary, G. E., & Vinokurov, A. (2006). Minority students of color and the graduate pipeline: Disquieting and encouraging trends, 1989–2003. *American Psychologist*, *61*, 117–131.
- McCabe, J. (2009). Racial and gender microaggressions on a predominately White campus: Experiences of black, Latina/o and white undergraduates. *Race, Gender and Class*, *16*, 133–151.
- Mercer, S. H., Zeigler-Hill, V., Wallace, M., & Hayes, D. M. (2011). Development and initial Validation of the Inventory of microaggressions against black individuals. *Journal of Counseling Psychology*, *58*, 457–469.
doi:10.1037/a0024937.
- Michael-Makri, S. (2010). Racial and ethnic minority graduate experiences with racial microaggressions in CACREP-Accredited programs. (Doctoral dissertation). Retrieved from ProQuest LLC.
- Nadal, K. L., Davidoff, K. C., Davis, L. S., & Wong, Y. (2014). Emotional, Behavioral, and Cognitive Reactions to Microaggressions: Transgender Perspectives. *Psychology of Sexual Orientation and Gender Diversity*. Advance online publication. <http://dx.doi.org/10.1037/sgd0000011>
- Nadal, K. L. (2011). The Racial and Ethnic Microaggressions Scale (REMS): Construction, Reliability, and Validity. *Journal of Counseling Psychology*. *Journal of Counseling Psychology*, *58*, 470-480.

- Nadal, Griffin, Wong, Hamit, & Rasmus, (2014a) mental health
- Nadal, K. L., Wong, Y., Griffin, K. E., Davidoff, K., & Sriken, J. (2014b). The adverse impact of racial microaggressions on college students' self-esteem. *Journal of College Student Development*, 55, 461-474.
- National Association of School Psychologists. (2010) *Principles for professional ethics*. Retrieved from [http:// www.nasponline.org/standards/2010standards/1_%20Ethical%20Principles.pdf](http://www.nasponline.org/standards/2010standards/1_%20Ethical%20Principles.pdf).
- O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instrumentation, and Computers*, 32, 396-402.
- Ortiz-Frontera, Y. (2013). Racial microaggression experiences and coping mechanisms of graduate students in School psychology programs. (Master's thesis). Retrieved from ProQuest LLC.
- Ortiz-Frontera, Y., Vaccaro, A., & Collyer, C. E. (2015). Microaggression experiences of graduate students in School Psychology. National Association for School Psychology, Orlando FL, February 2015.
- Pearlin, L. I. & Schooler, C. (1978). The Structure of Coping. *Journal of Health and Social Behavior*, 19, 2-21.
- Rivera, D. P., Forquer, E. E., & Rangel, R. (2010). *Microaggressions and the life experience of Latina/o Americans*. In D. W. Sue (Ed.), *Microaggressions and marginality: Manifestations, dynamics, and impact* (pp. 59–83). New York, NY: Wiley.
- Salazar, C. F. (2009). Strategies to Survive and Thrive in Academia: The Collective

- Voices of Counseling Faculty of Color. *International Journal for the Advancement of Counseling*, 31, 181-198.
- Sauceda, E. (2010). Ethnic identity, perceptions of racial microaggressions, and perceptions of university environment as predictors of coping among Latina/o graduate students. (Doctoral dissertation). Retrieved from Proquest LLC.
- Solórzano, D., Ceja, M., & Yosso, T. (2000). Critical race theory, racial microaggressions and campus racial climate: The experiences of African American college students. *Journal of Negro Education*, 69, 60–73.
- Stevens, J. (1996). *Applied multivariate statistics for the social sciences* (3rd ed.) Mahwah, NJ: Lawrence Erlbaum.
- Sue, D. W. (2009). Racial microaggressions and worldviews. *American Psychologist*, 64, 220–221. doi:10.1037/a0015310.
- Sue, D. W. (2010a). *Microaggressions in everyday life: race, gender, and sexual orientation*. Hoboken, NJ: John Wiley & Sons Inc.
- Sue, D. W. (2010b). *Microaggressions and marginality: manifestation, dynamics, and impact*. Hoboken, NJ: John Wiley & Sons Inc.
- Sue, D. W., Bucceri, J., Lin, A. I., Nadal, K. L., & Torino, G. C. (2009a). Racial microaggressions and the Asian American experience. *Asian American Journal of Psychology*, 5(1). doi:10.1037/1948-1985.S.1.88.
- Sue, D. W., Capodilupo, C. M., & Holder, A. B. (2008a). Racial microaggressions in the life experience of black Americans. *Professional Psychology: Research & Practice*, 39, 329–336. doi:10.1037/0735-7028.39.3.329.
- Sue, D. W., Capodilupo, C. M., Nadal, K., & Torino, G. L. (2008b). Racial

- microaggressions and the power to define reality. *American Psychologist*, 277–279. doi:10.1037/0-03-066X.63.4. 277.
- Sue, D. W., Capodilupo, C., Torino, G., Bucceri, J., Holder, A., Nadal, K., et al. (2007a). Racial microaggressions in everyday life: implications for clinical practice. *American Psychologist*, 62, 271–286.
- Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. B., Nadal, K. L., et al. (2007b). Racial microaggression in everyday life. *American Psychologist*, 62, 271–286. doi:10.1037/0003-066X.62.4.271.
- Sue, D. W., & Constantine, M. G. (2007). Racial microaggressions as instigators of difficult dialogues on race: Implications for student affairs educators and students. *College Student Affairs Journal*, 26(2), 136–143.
- Sue, D. W., Lin, A. I., & Rivera, D. P. (2009b). *Racial microaggressions in the workplace: Manifestations and impact*. In J. L. Chin (Ed.), *Diversity in mind and in action* (Vol. 2, pp. 157–172). Santa Barbara, CA: ABC-CLIO.
- Sue, D. W., Lin, A. I., Torino, G. C., Capodilupo, C. M., & Rivera, D. P. (2009c). Racial microaggressions and difficult dialogues on race in the classroom. *Cultural Diversity and Ethnic Minority Psychology*, 15, 183–190. doi:10.1037/a0014191.
- Tabachnick, B. G. & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Pearson Education.
- The Graduate Assembly. (2014). Graduate student happiness and well-being report. University of Berkeley. Retrieved from http://ga.berkeley.edu/wp-content/uploads/2015/04/wellbeingreport_2014.pdf

- Thompson, B. & Daniel, L. G. (1996). Factor analytic evidence for the construct validity of scores: A historical overview and some guidelines. *Educational and Psychological Measurement*, 56, 197-208.
- U.S. Department of Education, National Center for Education Statistics. (2008). *The condition of education 2008* (NCES 2008-031). Washington, DC: U.S. Government Printing Office.
- Williams, B., Brown, T., & Onsman, A. (2010). Exploratory factor Analysis: A five-step guide for novices. *Australian Journal of Paramedicine*, 8, 1-13.
- Wojcik, E. (2012). Time to bail? How to know if you're experiencing a temporary disillusionment with your psychology graduate program or if you're ready to call it quits. *GradPsych Magazine*. Retrieved from <http://www.apa.org/gradpsych/2012/01/bail.aspx>
- Yosso, T. J., Smith, W. A., Ceja, M., & Solórzano, D. G. (2009). Critical race theory, racial microaggressions, and campus racial climate for Latina/o undergraduates. *Harvard Educational Review*, 79, 659-690.