



Faculty Publications

---

2017

## Racial Discrimination and Psychological Health Among Polynesians in the U.S.

Kawika Allen

*Brigham Young University*, [gekawika\\_allen@byu.edu](mailto:gekawika_allen@byu.edu)

Hokule'a Conklin

*Brigham Young University*

Davis K. Kane

*Brigham Young University*

Follow this and additional works at: <https://scholarsarchive.byu.edu/facpub>



Part of the [Mental and Social Health Commons](#)

---

### BYU ScholarsArchive Citation

Allen, Kawika; Conklin, Hokule'a; and Kane, Davis K., "Racial Discrimination and Psychological Health Among Polynesians in the U.S." (2017). *Faculty Publications*. 3181.

<https://scholarsarchive.byu.edu/facpub/3181>

This Peer-Reviewed Article is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Faculty Publications by an authorized administrator of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

# Cultural Diversity and Ethnic Minority Psychology

## Racial Discrimination and Psychological Health Among Polynesians in the U.S

G. E. Kawika Allen, Hokule'a Conklin, and Davis K. Kane

Online First Publication, January 12, 2017. <http://dx.doi.org/10.1037/cdp0000133>

### CITATION

Allen, G. E. K., Conklin, H.'a, & Kane, D. K. (2017, January 12). Racial Discrimination and Psychological Health Among Polynesians in the U.S. *Cultural Diversity and Ethnic Minority Psychology*. Advance online publication. <http://dx.doi.org/10.1037/cdp0000133>

# Racial Discrimination and Psychological Health Among Polynesians in the U.S

G. E. Kawika Allen, Hokule'a Conklin, and Davis K. Kane  
Brigham Young University

**Objectives:** There is a dearth of research on the mental health of Polynesians residing in the United States. The aims of this study were to examine experiences of racial discrimination, self-esteem, trait anger, satisfaction with life, and psychological well-being among 628 Polynesians (e.g., Native Hawaiian, Tongan, Samoan, Fijian, Tahitian, Maori; 60% women ( $n = 378$ ) and 40% men ( $n = 249$ ); mean age = 28.7). **Method:** Measures were administered through an online survey to 628 Polynesians residing in the United States. Comparison analyses between men and women, correlations, and path analyses were analyzed for this Polynesian sample. **Results:** Polynesian women showed higher levels of self-esteem and lower levels of depression and anxiety. Racial discrimination was inversely correlated with self-esteem and satisfaction with life, and positively linked to trait anger, depression, anxiety, and stress. Self-esteem had an indirect effect on the relationship between racial discrimination and satisfaction with life. **Conclusions:** Mental health professionals need to be aware of racial discrimination on psychological health and incorporate the value of self-esteem in the psychological treatment of Polynesians. Additional results are provided and implications of these findings are outlined.

**Keywords:** racial discrimination, self-esteem, psychological health, Polynesian in the United States

Racial discrimination has received increased attention in the psychological literature over the past two decades (Conklin, 2010; Speliotes et al., 2010; Sue & Sue, 2012). Broman (1997) defined racial discrimination as “actions, practices, and/or behaviors by members of socially dominant groups that have a differential and negative impact on members of socially subordinate groups” (p. 37). Racial discrimination refers to *behaviors*, whereas racial prejudice refers to *attitudes* toward a socially marginalized group (Clark, Anderson, Clark, & Williams, 1999). Additionally, scholars have linked attitudes and behaviors to racial discrimination by defining it as racial microaggressions (Sue, 2010; Sue, Bucceri, Lin, Nadal, & Torino, 2009). These researchers have described these behaviors as everyday slights, indignities, put-downs, and insults by individuals toward a marginalized group. However, these behaviors are initiated by deep-rooted attitudes and thoughts often times outside of one’s conscious awareness leading to unconscious manifestations of a worldview of inclusion/exclusion and superiority/inferiority (Sue, 2010). Subsequently, given these attitudes and behaviors of racial discrimination, extensive empirical findings suggest that racial discrimination leads to increased

psychological distress and diminished psychological well-being among marginalized groups (Schmitt & Branscombe, 2002).

In literature reviews conducted by Williams, Neighbors, and Jackson (2003) and Paradies (2006), the general findings among studies published between 2000 and 2006 are that experiences of racial/ethnic discrimination predict increased psychological distress (e.g., depression, anxiety, stress), and decreased psychological well-being (e.g., self-esteem and satisfaction with life). Recently published meta-analyses support these findings (Pascoe & Smart Richman, 2009; Schmitt, Branscombe, Postmes, & Garcia, 2014). These findings are also consistent among Asian and Asian Americans (Lee & Ahn, 2011) and Black Americans (Pieterse, Todd, Neville, & Carter, 2012).

Theoretical research also appears to support the notion that racial discrimination has deleterious consequences for psychological health. The biopsychosocial model theorized by Clark et al. (1999) is possibly the most comprehensive (Lee & Ahn, 2011). This model posits that experiences of racial/ethnic discrimination are linked to psychological and physiological stress responses that are detrimental to psychological and physical health. This theoretical approach offers an important rationale for continued investigations regarding the association between racial discrimination and psychological health. For example, understanding racial discrimination as an environmental stressor, combined with comorbid occurrences of life, can lead to an increase in stress, anxiety, anger, and depression. (Lovibond & Lovibond, 1995; Simons et al., 2006). Moreover, Clark et al.’s (1999) model also assumes that psychological and behavior factors, such as self-esteem and trait anger, moderate the racial discrimination-psychological health link and offer an explanation for why racial discrimination may have a differential impact on well-being.

Psychological literature has also investigated the indirect and moderating effects of self-esteem on the link between racial dis-

---

G. E. Kawika Allen, Department of Counseling Psychology and Special Education, Brigham Young University, McKay School of Education; Hokule'a Conklin, Counseling and Psychological Services, Brigham Young University; Davis K. Kane, Department of Counseling Psychology and Special Education, Brigham Young University, McKay School of Education.

Correspondence concerning this article should be addressed to G. E. Kawika Allen, Department of Counseling Psychology and Special Education, Brigham Young University, McKay School of Education, 273 MCKB, Provo, UT 84602. E-mail: gekawika\_allen@byu.edu

crimination and psychological health. Studies have found that self-esteem increased the relationship, in that higher self-esteem increased the adverse effects of racial discrimination on psychological health (Fischer & Shaw, 1999; Kourí et al., 1998). Other studies found that self-esteem demonstrated a buffering effect (e.g., Bodkin-Andrews, Seaton, Nelson, Craven, & Yeung, 2010), in that higher self-esteem attenuated the adverse effects of racial discrimination on psychological health. Given the mixed results regarding the indirect and moderating effects of self-esteem, more research is needed.

Studies have also shown that racial discrimination is linked to increased anger, which also increases unhealthy behaviors and poorer physical health (Simons et al., 2006; Terrell, Miller, Foster, & Watkins, 2006). For instance, Terrell and colleagues (2006) found that participants who reported higher levels of racial discrimination-induced anger were significantly more likely to report drinking behaviors. Other studies have reported that anger mediated the relationships between racial discrimination and substance abuse (Gibbons et al., 2010, 2012), as well as high blood pressure (Borrell et al., 2010; Williams & Mohammed, 2009). Further investigation is needed to determine how anger is related to internalizing reactions to racial discrimination (e.g., anxiety, stress, depression), especially among understudied ethnic minority groups.

Further research also analyzed how the frequency, severity, and effects of racial discrimination differed according to gender. Seaton, Caldwell, Sellers, and Jackson (2010) conducted a study with African American and Caribbean Black adolescents and found that for both groups, males reported higher levels of racial discrimination and lower satisfaction with life, compared with females. Elderly Caribbean Black females reported higher levels of depressive symptoms and lower satisfaction with life, compared with elderly African American males. In contrast, Pascoe and Smart Richman (2009) found no significant differences in the frequency and severity of experiences of racial discrimination across gender for Asian American, African American, Latino American, Native American, and European American populations. Pascoe and Richman also found no significant differences across ethnicities, but according to Schmitt et al. (2014), there were marginally significant differences between African Americans, Arab/Middle Eastern Americans, Asian Americans, Latino Americans, and other multiracial or highly infrequent and specific populations. Moreover, Utsey, Chae, Brown, and Kelly (2002) found that African Americans perceived significantly more racial discrimination than Asian and Latino Americans. Further research is needed to determine gender differences in the frequency, severity, and effects of racial discrimination with other underrepresented populations.

Existing research also shows that racial/ethnic minorities are exposed to higher levels of racial discrimination, and are more severely affected (Banks, Kohn-Wood, & Spencer, 2006; Paradies, 2006; Roberts, Swanson, & Murphy, 2004; Schmitt & Branscombe, 2002; Schmitt et al., 2014; Williams et al., 2003). Research documenting this association has been conducted for various racial/ethnic minority groups, which include Arab Americans (Ahmed, Kia-Keating, & Tsai, 2011), African Americans (Seaton et al., 2010), Asian Americans (Wei, Heppner, Ku, & Liao, 2010), Latinos/as (Huynh, Devos, & Dunbar, 2012), and Native Americans (Pascoe & Smart Richman, 2009). In sum, the link between racial

discrimination and psychological health has been well documented among ethnic minorities in the United States.

Given these recent studies, there is evidence that the link between racial discrimination and psychological well-being exists for understudied racial/ethnic minorities, and could be generalizable across these minority groups. In addition, research on these populations offer greater clarity on the moderating/indirect effects of self-esteem, as well as possible differences across gender, since current psychological research is replete with mixed results. This study focuses on these variables with a population that has not been represented in the psychological literature—Polynesians.

Polynesians are individuals in the United States that originate from a group of islands located within the Polynesian triangle (Allen, Garriott, Reyes, & Hsieh, 2013; Allen & Heppner, 2011; Allen & Smith, 2015). This island group includes Hawai'i, the Kingdom of Tonga, Samoa and American Samoa, Tahiti, Cook Islands, New Zealand, Fiji, French Polynesia, Easter Island, and Marquesas Islands. Polynesians have resided in the United States for many years, and between the years 2000 to 2010 some estimates suggest that the Polynesian population has increased by approximately 40% (Allen & Heppner, 2011; U.S. Census Bureau, 2010). In some states in the Midwest, specifically Kansas City and Independence, there have been a substantial increase of Samoans and Tongans since the early 1960s (Allen & Heppner, 2011).

According to the 2010 United States Census, there were approximately 1.27 million Polynesians in combination with other ethnicities (i.e., White, Asian, African American) residing in the United States. More specifically, there were approximately 311,313 Polynesians (alone, not in combination with other ethnicities or Pacific Islanders; e.g., White, Asian, African American; Native Hawaiians, Samoans, Tongans alone) residing in the United States (0.1% of the U.S. population). The 2010 United States Census also provided population estimates for specific Polynesian races (alone, not in combination): Native Hawaiian (156,146), Samoan (109,637), Tongan (41,219), Tahitian (966), and Other Polynesian (3,345). Moreover, about 71% of Polynesians live in the western and midwestern states, including Hawaii, California, Washington, Utah, Nevada, and Texas, with a smaller proportion living in the east, such as Florida and New York. Despite the rapid and continual growth of this population, and their cultural, historical, linguistic, and religious uniqueness, there is a dearth of psychological research on Polynesians (Allen & Heppner, 2011; Allen & Smith, 2015).

As was mentioned earlier, ethnic minorities, including Native Americans, Latino Americans, and Asian Americans, experience more racial discrimination compared with ethnically dominant groups (e.g., European Americans). Polynesians are also an ethnic minority within the United States, and so it would not be surprising to find that they are also exposed to higher instances of racial discrimination. Often, racial discrimination exists as a result of the social disparities between ethnic minorities and the general United States populations. For example, research among Native Hawaiians have shown that they are more likely than the majority population to hold low paying jobs, to be undereducated, and to reside in substandard living conditions (Kaholokula et al., 2012). As a result, Native Hawaiians generally report feeling socially alienated and stigmatized (Okamura, 2008).

Recent research also provides convincing implications for a link between racial discrimination and psychological well-being in

Polynesians. For example, a 17-year longitudinal study indicated that racial discrimination was a significant presenting concern for Polynesian college students in the United States (Allen, Cox, et al., 2016). In a study conducted among Native Hawaiians, racial discrimination was shown to be a significant stress inducer that may affect Native Hawaiians' physical health due to cortisol dysregulation (Kaholokula et al., 2012). Also in a study conducted among Polynesians in New Zealand, *Maori* (the indigenous people of New Zealand) were 10 times more likely to experience instances of racial discrimination compared with, local Asians, Europeans, and other Polynesians. Although there is limited psychological research related to colonization and other Polynesian groups in general, some research shows that oppressed Polynesian populations, such as Native Hawaiians, have a high prevalence of every category of medical disease, social pathology, and psychological maladaptation compared with the general population (Kaholokula, 2016; Kaholokula et al., 2014; McCubbin, 2006).

### Purpose of This Study

The rationale for this study incorporates an intersectional perspective on racial discrimination based on multiple social categories (Cole, 2009). Cole (2009) purports that this intersectionality is a theoretical lens through which multiple levels can be evaluated. This study examines intersections of racial group (Polynesian heritage) and gender (male and female) concerning levels and differences on racial discrimination and other psychological variables. Furthermore, building on recent Polynesian psychological studies (Allen et al., 2013; Allen & Heppner, 2011; Allen & Smith, 2015), we sought to continue the progress of psychological investigation with Polynesian individuals in the United States, and specifically attempt to understand how racial discrimination may be correlated with other psychological variables, including, anger, depression, anxiety, stress, self-esteem, and satisfaction with life. Furthermore, existing research among ethnic diverse populations in the United States also examined indirect effects of self-esteem and anger between racial discrimination and various psychological variables (Bodkin-Andrews et al., 2010; Fischer & Shaw, 1999; Gibbons et al., 2010, 2012; Kourí et al., 1998). Thus, we sought to examine indirect effects among similar variables with Polynesians: specifically, the indirect effects of self-esteem and trait anger between the relationship of racial discrimination and outcome study variables (i.e., life satisfaction, depression, anxiety, and stress). Investigating the association of racial discrimination and psychological distress as well as potential indirect effects of racial discrimination on well-being among Polynesians not only can increase our understanding of this issue among this population, but also guide mental health professionals to provide assistance to this community (Allen et al., 2013; Allen & Heppner, 2011; Allen, Kim, Smith, & Hafoka, 2016; Allen & Smith, 2015). The following research questions were generated based on existing literature on racial discrimination and psychological variables among ethnically diverse individuals in the United States and recent published research with Polynesians (Allen et al., 2013; Allen & Heppner, 2011; Allen, Kim, et al., 2016).

*Research Question 1:* Do Polynesians show elevated means on racial discrimination, self-esteem, and anger, and lower means on depression, anxiety, and stress?

*Research Question 2:* Do Polynesians men and women significantly differ across study variables; specifically, racial discrimination, anger, self-esteem, depression, and anxiety?

*Research Question 3:* Do Polynesians exhibit positive correlations between racial discrimination and psychological distress variables, specifically trait anger, depression, anxiety, and stress, and an inverse correlation with self-esteem and satisfaction with life?

*Research Question 4:* For Polynesians, is there an indirect effect of self-esteem or trait anger between racial discrimination and psychological well-being variables (i.e., satisfaction with life, depression, anxiety, stress)?

## Method

### Participants

The sample for this study included 628 Polynesians (378, 60% women; 249, 40% men) residing in the United States. Participants were recruited from multiple locations across the United States based on the survey reports of the geographical locations where participants completed the study. The following are the subgroups of Polynesians in this sample: Tongan (221; 35%), Samoan (143; 22%), Native Hawaiian (64; 10%), Fijian (39; 6%), Tahitian (24; 4%), Maori (15; 2%), multiracial Polynesian heritage (122; 21%). Ninety-eight percent of these Polynesians reported a Christian religion background (e.g., Catholic, Protestant, Baptist, Latter-day Saint). Their ages ranged from 18 to 76 years, with a mean of 28.7 years. Regarding highest education level, 14% earned a high school diploma level, 40% reported attending some college, 25% indicated receiving a 4-year degree, 7% received a master's degree, 1.3% reported achieving a doctorate-level degree (e.g., PhD, MD, JD), and the remaining 12.7% did not graduate from high school. Table 1 provides details of the sample description.

### Procedure

This current study was approved by an institutional review board and proper consent procedures and all other forms were approved to use. Participants were recruited with announcements distributed nationwide via email to Polynesian organizations, associations, and networks across the United States and social media including Facebook. Participants completed the survey online through Qualtrics, receiving a \$10 gift card as an incentive and compensation for their time. Regarding cultural appropriateness and the high likelihood of increasing the sample size, we believed that inviting Polynesian individuals through personal networks, emails, and social media would be an effective method of collecting data. Two doctoral students who assisted in the data collection regularly emailed the study link to various organizations and posted the Qualtrics link on their Facebook profile, which contains roughly 80% Polynesian individuals. The completion rate was tracked by following up with those participants who received the link via email and through Facebook by asking participants to message back indicating if they had or hadn't taken the study. The number of those who indicated by email and through Facebook that they had participated in the study corresponded with the

Table 1  
*Sample Description of Polynesians in the United States*

Sample	Tongan	Samoan	Native Hawaiian	Fijian	Tahitian	Maori	Multiracial Polynesian
Gender							
Male	89	55	28	26	8	2	41
Female	132	88	36	13	16	13	81
Age Mean							
Male	27.5	30.1	30.8	26.7	29.6	22.5	29.5
Female	26.8	31.8	30.8	29.1	31.5	25.1	27.5
Education							
Male							
Less HS	1						2
HS	12	8	10	3	1		
SC	43	21	6	7	2	1	18
2Y	9	5	3	7	2		3
4Y	13	17	6	9	3	1	12
M	11	4	2				3
D							1
PD			1				2
Female							
Less HS	3		1				
HS	19	12	3	1	2	1	11
SC	48	46	9	4	6	6	28
2Y	20	11	4	3	2		9
4Y	32	14	14	4	5	4	26
M	7	5	5	1	1	2	5
D	1						
PD	1						1

Note. Less HS = less than high school; HS = high school; SC = some college; 2Y = 2-year college degree; 4Y = 4-year college degree; M = master's degree; D = doctoral degree (PhD, PsyD); PD = professional degree (JD, MD).

Qualtrics number of participants completing the study, resulting in a completion rate of 84%.

## Instruments

**Racial discrimination.** The Daily Life Experience subscale of the Racism and Life Experience Scale (Harrell, 1994) was used in this study. Participants' experiences with racial discrimination related to microaggressions were assessed using this 18-item scale that asked how often they may have experienced racial hassles during the past year (Harrell, 1994). The reported normative sample for this measure was racial minority groups in the United States: more specifically African Americans. Sample items include: "Others reacting to you as if they were afraid or intimidated," "Being insulted, called a name or harassed," "Today, I was ignored, overlooked, or not given service," and "Not being taken seriously." Participants were asked to rate each racial hassle they had experienced using a 6-point response scale assessing how often the event occurred over the past year (0 = *never*; 5 = *once a week or more*;  $\alpha = .89$ ; Harrell, 1994). The Cronbach's alpha for this study was .94.

**The Trait Anger Scale (TAS).** The TAS (Spielberger, Jacobs, Russell, & Crane, 1983) is a 15-item self-report scale assessing anger as a personality trait in terms of the frequency of angry states experienced over time (1 = *almost never*, 2 = *sometimes*, 3 = *often*, 4 = *almost always*). The reported normative sample for this measure was college students and Navy recruits and did not report other demographic indicators such as ethnic minorities. Sample items include: "I have a fiery temper," "I am

quick tempered," "I fly off the handle," and "It makes me furious when I am criticized in front of others. The alpha coefficient among college student participants was reported at .87 for Forgiveness, Vengeful Rumination, Affective Traits 195 males and .87 for females. Among Navy recruits, alpha coefficients were .87 for males and .84 for females. The Cronbach's alpha for this study was .92.

**Depression Anxiety Stress Scale-21 (DASS-21).** The DASS-21 (Lovibond & Lovibond, 1995) contains the following three subscales with each subscale containing seven items: Depression (DEP), Anxiety (ANX), and Stress (STR). The normative sample for this measure was reported to be "nonclinical" and "general public" but did not report racial background of participants or any other demographical information (Henry & Crawford, 2005). Sample items are: Depression ("I felt downhearted and blue"), Anxiety ("I felt I was close to panic"), and Stress ("I found it hard to wind down"). The DASS-21 assesses the emotional levels of depression, anxiety, and stress over the past week, and is rated on a 4-point scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). Cronbach's alpha for the DASS-21 ranged from .84 to .91 across subscales, respectively (Lovibond & Lovibond, 1995). For each of the subscale scores for this study, the Cronbach's alpha was .88 (ANX), .90 (DEP), .87 (STR). For the overall scale, the Cronbach's alpha was .95.

**Rosenberg Self-Esteem Scale (RSES).** The RSES (Rosenberg, 1965) was used to assess self-esteem, as it has been frequently used among racially diverse populations (Phinney, 1996; Speight, Vera, & Derrickson, 1996). The RSES consists of 10

Likert-type items ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The normative sample for this measure consisted of American adolescents but did not report the racial background of participants. Higher scores mean higher self-esteem. The RSES is designed to measure one’s self-esteem (i.e., “On the whole, I am satisfied with myself” or “At times, I think I am no good at all”) and has good internal reliability ( $\alpha = .92$ ; Allen & Wang, 2014; Rosenberg, 1965). Given that some items are negatively worded, authors reverse-scored those for accuracy and consistency in scores. The Cronbach’s alpha for this study was .84.

**Satisfaction With Life Scale (SWLS).** The SWLS (Diener, Emmons, Larsen, & Griffin, 1985) is a 5-item Likert-type instrument ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) designed to assess global cognitive judgments of satisfaction with one’s life (i.e., “I am satisfied with my life”). The normative sample for this measure consisted of both college students and elderly persons but did not report the racial background of participants or any other demographical data. The internal consistency of the SWLS and alpha coefficients have repeatedly exceeded .80 in various studies (Pavot & Diener, 1993). In Diener and colleagues’ (1985) original study, they found an alpha coefficient of .87 (Allen & Wang, 2014). The Cronbach’s alpha for this study was .85.

**Data Analysis**

The analyses and justification for each are addressed in this paragraph. Authors examined means and standard deviations as a method to generally understand where this sample of Polynesians is positioned on each scale. Correlational analyses were performed to better understand what variable relationships are present across variables. The authors sought to confirm the reliability of each scale for this Polynesian sample by providing Cronbach’s alpha estimates, and the statistically significant findings of the present study supported the construct validity of the measures that were used. Indirect effects were also analyzed across different combinations of variables for additional specificity regarding which variable is accounting for the results.

**Results**

After respondents failed all three validity check items (e.g., “Please click ‘Strongly Agree’ for this question. This is a validity question check ensuring that you are answering the questions to the best of your ability and in a consistent manner”) or had missed over 5% of the items were removed from the data set. The remaining 628 participants comprised the sample from the original 924. As missing data of less than 5% is considered inconsequential (Schafer, 1999), missing values at the item level were replaced using series means in SPSS by calculating the mean for that item across participants. The mean and standard deviations are presented Table 2. Cronbach’s alpha estimates of each variable, along with the correlations among the study variables, are presented in Table 3. An indirect effect model is presented in Table 4, as well as an indirect effect path diagram (Figure 1).

For Research Question 1, means in the midrange (neither high or low) were found with this sample of Polynesians on racial discrimination ( $M = 2.9$ ; on a 6-point response scale). Higher scores mean more racial discrimination experiences. However, means on self-esteem ( $M = 3.1$ ; on a 4-point scale, compared with normed

Table 2  
*Descriptive Statistics and Significant T-Test Results for Study Variables for Polynesian Men and Women*

Measure	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i> value
DLE				
Total	2.94	.89		
Male	2.81	.90		
Female	2.83	.90		
RSES			-2.30	.02
Total	3.15	.48		
Male	3.11	.50		
Female	3.22	.47		
TAS				
Total	1.80	.55		
Male	1.81	.62		
Female	1.83	.51		
SWLS				
Total	5.04	1.2		
Male	4.92	1.2		
Female	5.01	1.2		
DEP			3.20	.001
Total	1.73	.61		
Male	1.80	.69		
Female	1.61	.55		
ANX			2.86	.004
Total	1.71	.63		
Male	1.83	.70		
Female	1.62	.58		
STR				
Total	1.90	.60		
Male	1.93	.64		
Female	1.92	.58		

Note.  $N = 628$ . DLE = Daily Life Experiences; RSES = Rosenberg Self-Esteem Scale; TAS = Trait Anger Scale; SWLS = Satisfaction with Life Scale; DEP = depression; ANX = anxiety; STR = stress.

score of 2.2; Sinclair et al., 2010) and satisfaction with life ( $M = 5.0$  compared with normed score of 4.6; Pavot & Diener, 1993) were on the higher end, above midrange of each scale item. Additionally, lower means on trait anger ( $M = 1.8$  compared with normed score of 2.0; Spielberger et al., 1983), depression ( $M = 1.7$  compared with normed score of 2.1), anxiety ( $M = 1.7$  compared with normed score of 1.8), and stress ( $M = 1.9$  compared with normed score of 3.4) were found. A small portion related to means on depression, anxiety, and stress for this sample were reported in a previous study (Allen, Kim, et al., 2016). However, this study reveals new findings with other variables specific to racial discrimination, trait anger, satisfaction with life, and self-esteem.

For Research Question 2, an independent sample *t* test was conducted to determine whether study variables varied as a function of participants’ gender. The results indicated that Polynesian women reported significantly higher on self-esteem than Polynesian men,  $t = -2.30, p = .02$ , but men scored significantly higher on depression,  $t = 3.20, p < .001$  and anxiety,  $t = 2.86, p = .004$  than women. For the remaining study variables, there were no significant differences between men and women.

Regarding bivariate correlations and Research Question 3, racial discrimination was positively correlated with depression,  $r = .31, p < .001$ , anxiety,  $r = .32, p < .001$ , stress,  $r = .33, p < .001$ , and trait anger,  $r = .28, p < .001$ , and inversely correlated with self-esteem,  $r = -.30, p < .001$  and satisfaction with life,  $r = -.13, p < .001$ .

Table 3  
Intercorrelations of Study Variables

Variables	1	2	3	4	5	6	7	Alpha
DLE								.94
RSES	-.30							.84
TAS	.28	-.30						.92
SWLS	-.13	.30	-.17					.85
DEP	.31	-.63	.30	-.17				.90
ANX	.32	-.54	.28	-.12	.80			.88
STR	.33	-.57	.40	-.13	.81	.80		.87

Note.  $N = 628$ . All correlations were statistically significant at the .01 level, two-tailed. Cronbach's alpha coefficients are also provided. DLE = Daily Life Experiences; RSES = Rosenberg Self-Esteem Scale; TAS = Trait Anger Scale; SWLS = Satisfaction with Life Scale; DEP = depression; ANX = anxiety; STR = stress.

### Indirect Effect Analysis

We used the SPSS macro PROCESS (Hayes, 2013) to conduct the indirect analysis. PROCESS offers bootstrap estimates to calculate bias-corrected confidence intervals for the indirect effects. This bootstrapping method, which has advantages over the causal steps approach (Baron & Kenny, 1986) and the Sobel (1982) test, has been recommended as the method of choice for testing indirect effects (Allen & Wang, 2014; Hayes, 2009). The procedure, which involves resampling multiple times and estimating the sampling distribution from all of the resamples, enhances estimation accuracy of the indirect effects (Preacher & Hayes, 2008). In this study we estimated the mean of 95% confidence intervals (CI) of indirect effects derived from 10,000 bootstrap samples. If the upper and lower bounds of the CI do not include zero, then the presence of an indirect effect can be concluded with 95% confidence.

For Research Question 4, statistically significant correlations were found for all study variables enabling us to run indirect effect analyses. Thus, we examined the indirect effects of self-esteem and trait anger between racial discrimination and outcome variables (satisfaction with life, depression, anxiety, stress). The only significant indirect effect variable found was self-esteem between racial discrimination and satisfaction with life (see Table 4). Bootstrapping results indicated that self-esteem had an indirect effect on the link between racial discrimination and satisfaction with life (95% CI [-.22, -.08]; indirect effect = -.14,  $SE = .13$ ,  $p < .001$ , total effect = -.22,  $SE = .07$ ,  $t = -3.23$ ,  $p < .01$ ; direct

Table 4  
Regression Results for Mediation: (Discrimination → Self-Esteem → Satisfaction With Life)

Predictor	DV = Attitudes ( $R^2 = .10$ )			$p$
	$B$	$SE$	$t$	
Constant	-.134	.054	-3.41	<.001
Discrimination	-.049	-.055	-1.23	<.219
Self-esteem	.289	.101	7.32	<.001
	Effect	Boot $SE$	95% CI	
Indirect effect	-.14	.03	[-.22, -.08]	

Note.  $N = 628$ . Polynesians in the United States. All  $p$  values, two-tailed. DV = dependent variable; CI = confidence interval.

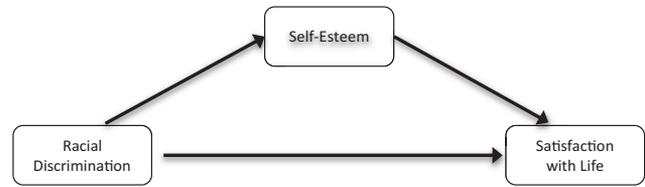


Figure 1. Mediation model examining the mediating effect of self-esteem on the relationship between racial discrimination and satisfaction with life among Polynesians in the United States.

effect = -.07,  $SE = .07$ ,  $t = -1.11$ ,  $p = .27$ ). The authors also sought to examine if covariates including gender, age, and educational level would also yield indirect effects in the path analysis with racial discrimination, self-esteem, and satisfaction with life. Results indicated that only educational level as a covariate showed an indirect effect on satisfaction with life ( $B = .20$ ,  $p < .001$ ).

### Discussion

The elevated means on racial discrimination for this sample of Polynesians residing in the United States was not necessarily a unique finding since previous research also supports this result with Polynesian college students in the United States (Allen, Cox, et al., 2016). However, elevated means on self-esteem and satisfaction with life were also found, which could be perceived as resilient aspects in the presence of racial discrimination experiences. Their lower mean levels on trait anger, depression, anxiety, and stress further support this finding. From the theoretical lens of intersectionality related to racial discrimination (Cole, 2009), there were differences on multiple levels regarding racial group and gender on some study variables. Specifically, Polynesian men and women differed on self-esteem, depression, and anxiety where men showed significantly higher levels on depression and anxiety while women scored higher on self-esteem. These results were unexpected, given some existing research on ethnic minorities in the United States where women endorsed higher levels of depression and anxiety and lower levels of self-esteem (Cassidy, O'Connor, Howe, & Warden, 2004; Finch, Kolody, & Vega, 2000).

Perhaps one of the most noteworthy results from this study on Polynesians is that racial discrimination was positively correlated with all four psychological distress indicators: anger, depression, anxiety, and stress. Similar to existing research (Ahmed et al., 2011; Huynh et al., 2012; Pascoe & Smart Richman, 2009; Wei et al., 2010) regarding the link between racial discrimination and psychological struggles among other ethnic minority groups, it seems that Polynesians also experience similar difficulties. In fact, the link between experiences of racial discrimination and psychological distress was more pronounced for this sample compared with other racial and ethnic groups in previous meta-analyses (Conklin, 2010; Lee & Ahn, 2011; Pieterse et al., 2012; Schmitt et al., 2014). Furthermore, consistent with other findings, racial discrimination in this sample of Polynesians was also found to be inversely associated with satisfaction with life and self-esteem (Fischer & Shaw, 1999; Simons et al., 2006; Terrell et al., 2006). Conceptually, the inverse association between racial discrimination and satisfaction with life as well as self-esteem, combined

with the positive relationship between racial discrimination and trait anger, may suggest that racial discrimination has a negative impact on well-being. Although some research has found the link among racial discrimination, anger, and delinquent behaviors (Simons et al., 2006; Terrell et al., 2006); further exploration into aggression and violence as a potential outlet for Polynesians due to experiences of racial discrimination is needed.

Existing research related to the effective cultural characteristic of acceptance, reframing, and striving as a coping mechanism for Polynesians with distress has been recently reported (Allen & Heppner, 2011; Allen & Smith, 2015). This result had implications of resilience in the face of psychological struggles, including discrimination (Allen & Heppner, 2011). Given this result, this study sought to examine other potential characteristics in Polynesian individuals that could possibly buffer the effects of racial discrimination on psychological health. When we tested conceptualized indirect models based on our research questions and existing research, only self-esteem had a significant indirect effect on the relationship between racial discrimination and satisfaction with life. In other words, the lack of satisfaction with life that Polynesians may experience in response to perceived racial discrimination could be potentially assuaged, in part, due to an indirect effect of self-esteem. More specifically, higher levels of racial discrimination are associated with lower levels of satisfaction with life; however, these lower levels of satisfaction with life could be assuaged by healthy self-esteem. This result supports existing research (e.g., Bodkin-Andrews et al., 2010) demonstrating that self-esteem could be a buffering effect against racial discrimination experiences. This finding can also help therapists understand the powerful and positive influence of a healthy self-esteem in sessions with Polynesians. However, this concept of self-esteem could also be attributed to their ethnic identity, which has been shown to be a significant protective factor against psychological difficulties (Allen et al., 2013). Further studies with Polynesians could examine the link between ethnic identity and self-esteem.

Furthermore, we conducted additional indirect effect analyses, which revealed that trait anger did not sufficiently explain the relationship between racial discrimination and satisfaction with life. This was contrary to what we had expected, given previous findings that show anger to mediate the relationship with discrimination experiences and physical health variables (Borrell et al., 2010; Simons et al., 2006; Terrell et al., 2006; Williams & Mohammed, 2009). Given that educational level was found to have an indirect effect on satisfaction with life when included in the path analysis, additional information and research are needed to understand the influence of education on psychological health among Polynesians.

Some limitations characterize the present results. The majority of the study's sample consisted of Tongans, Samoans, and Native Hawaiians and lacked sample representation from other Polynesian groups (i.e., Maori, Fijian, Tahitian). This could affect the generalizability of the study across all Polynesian individuals in the United States. Also, 98% had a Christian religious background and no children/adolescents were included. In future studies, more diverse samples should be pursued to better represent all Polynesian ethnic groups with diverse religious backgrounds, including children and adolescents as well as older Polynesians. Population representativeness was somewhat limited, given that Facebook

was one of the recruitment methods, which restricted the range of participants to college students and a mean age of 28.7. This study is also limited by its cross-sectional correlational design, and as with all cross-sectional correlational studies, no causal statements can be made regarding the findings. Comparison tests between Polynesian ethnic subgroups related to educational level, interaction effects, ethnic representativeness, and other subgroup characteristics were not performed due to the significant unequal subgroup sample sizes. Sample bias could have also existed with the method of recruitment solely through social media. Notwithstanding these limitations, the findings have several important implications. Similar to past findings (Allen, Cox, et al., 2016; Allen & Heppner, 2011), racial discrimination was a prevalent factor in the well-being of Polynesians. Service providers who work with Polynesians should be mindful of the relationship between racial discrimination and psychological health and seek to understand their experiences of racial discrimination early in therapy. In particular, the results confirming the importance of self-esteem as a potential buffering component to allay experiences of racial discrimination could be important to discuss during therapy with Polynesian clients. Also, it would be important to work from within the cultural norms and values to know how to best alleviate the effects of racial discrimination. For example, existing research suggests that family support and religious/spiritual living, as well as open discussions with family members can serve as helpful coping strategies (Allen & Heppner, 2011; Allen & Smith, 2015). The collectivistic nature of Polynesian family systems and religious congregations (Allen, Cox, et al., 2016; Allen, Kim, et al., 2016) should be incorporated when discussing treatment, particularly when stress and/or trauma could be associated with racial discrimination (Allen & Smith, 2015). Future studies could also include factors examining various demographic variables such as acculturation, English proficiency, United States residency, and other relevant factors that would offer additional understanding regarding experiences of various Polynesians residing in the United States. For example, this study was not able to differentiate between the racial discrimination experiences of International Polynesians and Polynesians living in the United States. In sum, mental health professionals should carefully consider the psychological well-being of Polynesians when experiences of discrimination are present.

## References

- Ahmed, S. R., Kia-Keating, M., & Tsai, K. H. (2011). A structural model of racial discrimination, acculturative stress, and cultural resources among Arab American adolescents. *American Journal of Community Psychology, 48*, 181–192. <http://dx.doi.org/10.1007/s10464-011-9424-3>
- Allen, G. E. K., Cox, J., Smith, T. B., Hafoka, O., Griner, D., & Beecher, M. (2016). Psychotherapy utilization and presenting concerns among Polynesian American college students. *The Counseling Psychologist, 44*, 28–49. <http://dx.doi.org/10.1177/0011000015617534>
- Allen, G. E. K., Garriott, P. O., Reyes, C. J., & Hsieh, C. (2013). Racial identity, phenotype, and self-esteem among biracial Polynesian/White individuals. *Family Relations: An Interdisciplinary Journal of Applied Family Studies, 62*, 82–91. <http://dx.doi.org/10.1111/j.1741-3729.2012.00743.x>
- Allen, G. E. K., & Heppner, P. P. (2011). Religiosity, coping, and psychological well-being among Latter-day Saint Polynesians in the U.S. *Asian American Journal of Psychology, 2*, 13–24. <http://dx.doi.org/10.1037/a0023266>

- Allen, G. E. K., Kim, B. S. K., Smith, T. B., & Hafoka, O. (2016). Counseling attitudes and stigma among Polynesian Americans. *The Counseling Psychologist, 44*, 6–27. <http://dx.doi.org/10.1177/0011000015618762>
- Allen, G. E., & Smith, T. B. (2015). Collectivistic coping strategies for distress among Polynesian Americans. *Psychological Services, 12*, 322–329. <http://dx.doi.org/10.1037/ser0000039>
- Allen, G. E. K., & Wang, K. T. (2014). Examining religious commitment, perfectionism, scrupulosity, and well-being among LDS individuals. *Psychology of Religion and Spirituality, 6*, 257–264. <http://dx.doi.org/10.1037/a0035197>
- Banks, K. H., Kohn-Wood, L. P., & Spencer, M. (2006). An examination of the African American experience of everyday discrimination and symptoms of psychological distress. *Community Mental Health Journal, 42*, 555–570. <http://dx.doi.org/10.1007/s10597-006-9052-9>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182. <http://dx.doi.org/10.1037/0022-3514.51.6.1173>
- Bodkin-Andrews, G. H., Seaton, M., Nelson, G. F., Craven, R. G., & Yeung, A. S. (2010). Questioning the general self-esteem vaccine: General self-esteem, racial discrimination, and standardised achievement across indigenous and non-indigenous students. *Australian Journal of Guidance and Counselling, 20*, 1–21. <http://dx.doi.org/10.1375/ajgc.20.1.1>
- Borrell, L. N., Diez Roux, A. V., Jacobs, D. R., Jr., Shea, S., Jackson, S. A., Shrager, S., & Blumenthal, R. S. (2010). Perceived racial/ethnic discrimination, smoking and alcohol consumption in the Multi-Ethnic Study of Atherosclerosis (MESA). *Preventive Medicine: An International Journal Devoted to Practice and Theory, 51*, 307–312. <http://dx.doi.org/10.1016/j.ypmed.2010.05.017>
- Broman, C. L. (1997). Race-related factors and life satisfaction among African Americans. *Journal of Black Psychology, 23*, 36–49. <http://dx.doi.org/10.1177/00957984970231004>
- Cassidy, C., O'Connor, R. C., Howe, C., & Warden, D. (2004). Perceived discrimination and psychological distress: The role of personal and ethnic self-esteem. *Journal of Counseling Psychology, 51*, 329–339. <http://dx.doi.org/10.1037/0022-0167.51.3.329>
- Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans. A biopsychosocial model. *American Psychologist, 54*, 805–816. <http://dx.doi.org/10.1037/0003-066X.54.10.805>
- Cole, E. R. (2009). Intersectionality and research in psychology. *American Psychologist, 64*, 170–180. <http://dx.doi.org/10.1037/a0014564>
- Conklin, H. (2010). *Perceived racism and mental health: A meta-analytic review* (Unpublished dissertation). Brigham Young University, Provo, UT.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment, 49*, 71–75. [http://dx.doi.org/10.1207/s15327752jpa4901\\_13](http://dx.doi.org/10.1207/s15327752jpa4901_13)
- Finch, B. K., Kolody, B., & Vega, W. A. (2000). Perceived discrimination and depression among Mexican-origin adults in California. *Journal of Health and Social Behavior, 41*, 295–313. <http://dx.doi.org/10.2307/2676322>
- Fischer, A. R., & Shaw, C. M. (1999). African Americans' mental health and perceptions of racist discrimination: The moderating effects of racial socialization experiences and self-esteem. *Journal of Counseling Psychology, 46*, 395–407. <http://dx.doi.org/10.1037/0022-0167.46.3.395>
- Gibbons, F. X., Etcheverry, P. E., Stock, M. L., Gerrard, M., Weng, C. Y., Kiviniemi, M., & O'Hara, R. E. (2010). Exploring the link between racial discrimination and substance use: What mediates? What buffers? *Journal of Personality and Social Psychology, 99*, 785–801. <http://dx.doi.org/10.1037/a0019880>
- Gibbons, F. X., Roberts, M. E., Gerrard, M., Li, Z., Beach, S. R., Simons, R. L., . . . Philibert, R. A. (2012). The impact of stress on the life history strategies of African American adolescents: Cognitions, genetic moderation, and the role of discrimination. *Developmental Psychology, 48*, 722–739. <http://dx.doi.org/10.1037/a0026599>
- Harrell, S. P. (1994). *The Racism and Life Experience Scales*. Unpublished manuscript.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Hayes, M. H. (2009). *Statistical digital signal processing and modeling*. New York, NY: Wiley.
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 44*, 227–239. <http://dx.doi.org/10.1348/014466505X29657>
- Huynh, Q. L. H., Devos, T., & Dunbar, C. M. (2012). The psychological costs of painless but recurring experiences of racial discrimination. *Cultural Diversity & Ethnic Minority Psychology, 18*, 26–34.
- Kaholokula, J. K., Grandinetti, A., Keller, S., Nacapoy, A. H., Kingi, T. K., & Mau, M. K. (2012). Association between perceived racism and physiological stress indices in Native Hawaiians. *Journal of Behavioral Medicine, 35*, 27–37. <http://dx.doi.org/10.1007/s10865-011-9330-z>
- Kaholokula, J. K. (2016). Racism and physical health disparities. In A. N. Alvarez, C. T. H. Liang, & H. A. Neville (Eds.), *The cost of racism for people of color: Contextualizing experiences of discrimination* (pp. 163–188). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/14852-008>
- Kaholokula, J. K., Townsend, C., Sinclair, K. 'i., Palakiko, D.-M., Mahiki, E., Yoshimura, S. R., . . . Mau, M. K. L. M. (2014). The PILI 'Ohana Project: A community-academic partnership to eliminate obesity disparities in Native Hawaiian and Pacific Islander communities. In V. M. Brennan, S. K. Kumanyika, & R. E. Zambrana (Eds.), *Obesity interventions in underserved communities: Evidence and directions* (pp. 313–324). Baltimore, MD: Johns Hopkins University Press.
- Kourí, G., Guzmán, M. G., Valdés, L., Carbonel, I., del Rosario, D., Vazquez, S., . . . Cabrera, M. V. (1998). Reemergence of dengue in Cuba: A 1997 epidemic in Santiago de Cuba. *Emerging Infectious Diseases, 4*, 85–92. <http://dx.doi.org/10.3201/eid0401.980111>
- Lee, D. L., & Ahn, S. (2011). Racial discrimination and Asian mental health: A meta-analysis. *The Counseling Psychologist, 39*, 463–489. <http://dx.doi.org/10.1177/0011000010381791>
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy, 33*, 335–343. [http://dx.doi.org/10.1016/0005-7967\(94\)00075-U](http://dx.doi.org/10.1016/0005-7967(94)00075-U)
- McCubbin, L. D. (2006). Indigenous values, cultural safety and improving health care: The case of Native Hawaiians. *Contemporary Nurse, 22*, 214–217. <http://dx.doi.org/10.5172/conu.2006.22.2.214>
- Okamura, J. (2008). *Ethnicity and inequality in Hawai'i*. Philadelphia, PA: Temple University Press.
- Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology, 35*, 888–901. <http://dx.doi.org/10.1093/ije/dyl056>
- Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin, 135*, 531–554. <http://dx.doi.org/10.1037/a0016059>
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment, 5*, 164–172. <http://dx.doi.org/10.1037/1040-3590.5.2.164>
- Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist, 51*, 918–927. <http://dx.doi.org/10.1037/0003-066X.51.9.918>

- Pieterse, A. L., Todd, N. R., Neville, H. A., & Carter, R. T. (2012). Perceived racism and mental health among Black American adults: A meta-analytic review. *Journal of Counseling Psychology, 59*, 1–9. <http://dx.doi.org/10.1037/a0026208>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891. <http://dx.doi.org/10.3758/BRM.40.3.879>
- Roberts, R. K., Swanson, N. G., & Murphy, L. R. (2004). Discrimination and occupational mental health. *Journal of Mental Health, 13*, 129–142. <http://dx.doi.org/10.1080/09638230410001669264>
- Rosenberg, M. (1965). *Rosenberg Self-Esteem Scale (RSE): Acceptance and commitment therapy measures package*. Princeton, NJ: Princeton University Press.
- Schafer, J. L. (1999). Multiple imputation: A primer. *Statistical Methods in Medical Research, 8*, 3–15. <http://dx.doi.org/10.1191/096228099671525676>
- Schmitt, M. T., & Branscombe, N. R. (2002). The meaning and consequences of perceived discrimination in disadvantaged and privileged social groups. *European Review of Social Psychology, 12*, 167–199. <http://dx.doi.org/10.1080/14792772143000058>
- Schmitt, M. T., Branscombe, N. R., Postmes, T., & Garcia, A. (2014). The consequences of perceived discrimination for psychological well-being: A meta-analytic review. *Psychological Bulletin, 140*, 921–948. <http://dx.doi.org/10.1037/a0035754>
- Seaton, E. K., Caldwell, C. H., Sellers, R. M., & Jackson, J. S. (2010). An intersectional approach for understanding perceived discrimination and psychological well-being among African American and Caribbean Black youth. *Developmental Psychology, 46*, 1372–1379. <http://dx.doi.org/10.1037/a0019869>
- Simons, R. L., Simons, L. G., Burt, C. H., Drummund, H., Stewart, E., Brody, G. H., . . . Cutrona, C. (2006). Supportive parenting moderates the effect of discrimination upon anger, hostile view of relationships, and violence among African American boys. *Journal of Health and Social Behavior, 47*, 373–389. <http://dx.doi.org/10.1177/002214650604700405>
- Sinclair, S. J., Blais, M. A., Gansler, D. A., Sandberg, E., Bistis, K., & LoCicero, A. (2010). Psychometric properties of the Rosenberg Self-Esteem Scale: Overall and across demographic groups living within the United States. *Evaluation & the Health Professions, 33*, 56–80. <http://dx.doi.org/10.1177/0163278709356187>
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models? *Sociological Methodology, 13*, 290–312. <http://dx.doi.org/10.2307/270723>
- Speight, S. L., Vera, E. M., & Derrickson, K. B. (1996). Racial self-designation, racial identity, and self-esteem revisited. *Journal of Black Psychology, 22*, 37–52. <http://dx.doi.org/10.1177/00957984960221004>
- Speliotes, E. K., Willer, C. J., Berndt, S. I., Monda, K. L., Thorleifsson, G., Jackson, A. U., . . . the MAGIC, & the Procardis Consortium. (2010). Association analyses of 249,796 individuals reveal 18 new loci associated with body mass index. *Nature Genetics, 42*, 937–948. <http://dx.doi.org/10.1038/ng.686>
- Spielberger, C. D., Jacobs, G., Russell, S., & Crane, R. S. (1983). Assessment of anger: The State-Trait Anger Scale. *Advances in Personality Assessment, 2*, 159–187.
- Sue, D. W. (2010). *Microaggressions in everyday life: Race, gender, and sexual orientation*. New York, NY: Wiley.
- Sue, D. W., Bucceri, J., Lin, A. I., Nadal, K. L., & Torino, G. C. (2009). Racial microaggressions and the Asian American experience. *Asian American Journal of Psychology, 1*, 88–101. <http://dx.doi.org/10.1037/1948-1985.S.1.88>
- Sue, D. W., & Sue, D. (2012). *Counseling the culturally diverse: Theory and practice*. New York, NY: Wiley.
- Terrell, F., Miller, A. R., Foster, K., & Watkins, C. E., Jr. (2006). Racial discrimination-induced anger and alcohol use among black adolescents. *Adolescence, 41*, 485–492.
- U.S. Census Bureau. (2010). Overview of race and Hispanic origin: 2010. Retrieved from <http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf>
- Utsey, S. O., Chae, M. H., Brown, C. F., & Kelly, D. (2002). Effect of ethnic group membership on ethnic identity, race-related stress, and quality of life. *Cultural Diversity and Ethnic Minority Psychology, 8*, 366–377. <http://dx.doi.org/10.1037/1099-9809.8.4.367>
- Wei, G., Beroukhim, R., Mermel, C. H., Porter, D., Raychaudhuri, S., Donovan, J., . . . Meyerson, M. (2010). The landscape of somatic copy-number alteration across human cancers. *Nature, 463*, 899–905.
- Wei, M., Heppner, P. P., Ku, T. Y., & Liao, K. Y. H. (2010). Racial discrimination stress, coping, and depressive symptoms among Asian Americans: A moderation analysis. *Asian American Journal of Psychology, 1*, 136–150. <http://dx.doi.org/10.1037/a0020157>
- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine, 32*, 20–47. <http://dx.doi.org/10.1007/s10865-008-9185-0>
- Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health, 93*, 200–208. <http://dx.doi.org/10.2105/AJPH.93.2.200>