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Perceived Ethnic/Racial Discrimination and the Health of Latino Young Adults:  
The Moderating Role of Ethnic/Racial Identity Development

A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy

In

Psychological Sciences

by

Maria De Jesus Ramirez Loyola

Committee in charge:

Professor Deborah Wiebe, Chair  
Professor Mayra Bamaca  
Professor Linda Cameron  
Professor Matthew Zawadzki

2023

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The Dissertation of Maria De Jesus Ramirez Loyola is approved, and it is acceptable in quality and form for publication on microfilm and electronically:

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University of California, Merced

2023

## TABLE OF CONTENTS

List of Tables.....	v
List of Figures.....	vi
Acknowledgements.....	vii
Curriculum Vitae.....	viii
Abstract.....	xv
Introduction.....	1
Method.....	9
Results.....	13
Discussion.....	16
References.....	22

## LIST OF TABLES

<b>Table 1.</b> Number and Percentage of Participant Sociodemographic Characteristics.....	29
<b>Table 2.</b> Means, Standard Deviations, and Correlations Among Study Variables.....	30
<b>Table 3.</b> Moderating Effects of ERI Developmental Dimensions in the Associations Between PERD and Latino Young Adult Health.....	31
<b>Table 4.</b> Moderating Effects of ERI Developmental Dimensions in the Associations Between General Discrimination and Latino Young Adult Health.....	32
<b>Table 5.</b> Exploratory Analysis Assessing the Moderating Effect of ERI Commitment in PERD-Health Associations Among Latino Young.....	33
<b>Table 6.</b> Exploratory Analysis Assessing the Moderating Effect of ERI Exploration in PERD-Health Associations Among Latino Young Adults.....	34
<b>Table 7.</b> Exploratory Analysis Assessing the Moderating Effects of ERI Developmental Dimensions in the Associations Between an Alternative PERD Variable and the Health of Latino Young Adults.....	35
<b>Table 8.</b> Exploratory Analysis Assessing the Moderating Effect of an ERI Developmental Composite Score in PERD-Health Associations Among Latino Young Adults.....	36
<b>Table 9.</b> Exploratory Analysis Assessing the Moderating Effect of an Achieved ERI Typology in PERD-Health Associations Among Latino Young Adults.....	37

## LIST OF FIGURES

- Figure 1.** Conceptual Relationships Among PERD, Latino Health, and ERI.....38
- Figure 2.** Frequency of Perceived Reason (s) for Discrimination Experiences.....39

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I also thank all my friends who have all been incredibly caring and supportive. You are like family to me. I cannot imagine how I would have achieved all the great things I did without your support and constant encouragement, thank you for always listening.



## CURRICULUM VITAE

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---

### EDUCATION

**Ph.D., Psychological Sciences**, University of California, Merced (Expected 2023)  
Dissertation – *Perceived Ethnic/Racial Discrimination and the Health of Latino Young Adults: The Moderating Role of Ethnic/Racial Identity Development*

**M.A., Psychological Sciences**, University of California, Merced (2018)  
Thesis – *Stress-Related Positive and Negative Affect and Type 1 Diabetes Management in Early Emerging Adulthood*

**B.A., Psychology, High Honors**, University of California, Riverside (2016)  
Honors thesis – *The Role of Religiosity and Spirituality in Waiting Experiences*

### PUBLICATIONS

#### **Research Publications**

- Wiebe, D.J., Berg, C.A., Munion, A.K., **Ramirez Loyola, M.D.**, Mello, D., Butner, J.L., Suchy, Y., Marino, J. (in press). Executive functioning, daily self-regulation, and diabetes management while transitioning into emerging adulthood. *Annals of Behavioral Medicine*.
- Disla, J., Main, A., Yung, S.T., **Ramirez Loyola, M.D.**, Wiebe, D.J., Cameron, L., Çakan, N., Raymond, J.K. (in press). Parent affective responses to adolescent disclosures and the timing of future disclosures in the context of type 1 diabetes management. *Journal of Family Psychology*.
- Camfield, E., Fugere, T., Barnes, J., **Ramirez Loyola, M.D.** (2022). Cultivating student resilience to resist institutional replication. *Hybrid Pedagogy*.  
<https://hybridpedagogy.org/cultivating-student-resilience-to-resist-institutional-replication/>
- Alegria, K.E., Fleszar, S., Hua, J.N., **Ramirez Loyola, M.D.**, Resuschel, H., Song, A.V. (2022). How socioeconomic status and acculturation relate to dietary behaviors within Latino Populations. *American Journal of Health Promotion*. Advance online publication <https://doi.org/10.1177/08901171211059806>
- Sweeny, K., Tran, B. Q., & **Ramirez Loyola, M. D.** (2021). Religiosity as a predictor of worry during stressful periods of uncertainty. *Psychology of Religion and Spirituality*. Advance online publication <https://doi.org/10.1037/rel0000413>
- **Ramirez Loyola, M.D.**, & Sweeny, K. (2015). The role of religiosity and spirituality in waiting experiences. *University of California, Riverside Undergraduate Research Journal*, 9,109-114.

## Chapters

- Wiebe, D.J., Song, A. V., **Ramirez Loyola, M.D.** (2018). What are the mechanisms linking personality and health? .C. Johansen (Ed.). Personality and Health. San Diego, CA: Elsevier

## Other Reports

- **Ramirez Loyola, M.A.** (2021, May 28). UC Merced Free Speech Week 2019-2020 VOICE Awardee Report. Report Link: <https://bit.ly/3wE2ZRX>
- People First Workgroup. (2020, December 18). COVID-19 October 2020 Experience Survey Summary. UC Merced. Report Link: <https://bit.ly/3nxXnFh>
- Trafa, A., **Ramirez Loyola, M.D.** (2020, December 16). Rethinking Self-Care for Graduate Students During a Pandemic. Health Equity Special Interest Group Newsletter. Society of Behavioral Medicine.
- Alnagar, H., **Ramirez Loyola, M.D.**, Danube, C. (2020, July 28). COVID-19 May 2020 Experience Survey Narrative Summary. UC Merced. Report Link: <https://bit.ly/3mJHb3w>.
- Beverly, L., Hughes, A., Nelson, L., **Ramirez Loyola, M.D.**, Vela, A. (2019, July 22). Understanding Diabetes Distress. Society of Behavioral Medicine Healthy Living.

## CONFERENCE PRESENTATIONS

### Oral Research Presentations

- Camfield, E., Barnes, J., Gaona, A., Moore, J., **Ramirez Loyola, M.D.** (2022, June 6). Reframing Resilience to Promote Care (Not Conformity). [70-minute workshop]. 2022 Elon Teaching and Learning Conference. (Virtual Conference).
- Ting Yung, S., Main, A., Wiebe, D., **Ramirez Loyola, M.D.**, Cameron, L., Raymond, J. (2021, April 7-9). Associations Between Emotion Expressions, Familism Values, and Physical/Mental Health in Latinx Adolescents with Type 1 Diabetes. [Flash talk presentation]. 2021 Society for Research in Child Development Virtual Biennial Meeting. (Virtual Conference).
- Kroenke, C., Johnson Shen, M., Alcaraz, K.I., **Ramirez Loyola, M.D.**, Carson, T.L., Breland, J.K. (2021, April 12- 16). Population health and health equity approaches to inform health research and reduce health disparities. [Panel presentation]. 42nd Society of Behavioral Medicine Conference. (Virtual Conference).
- Camfield, E., Barnes, J., Gaona, A., **Ramirez Loyola, M.D.**, Moore, J. (2021, January 20-23). Teaching Resilience: It Takes More Than Grit. [Panel presentation]. Association of American Colleges & Universities 2021 Annual Meeting “Revolutionizing Higher Education After COVID-19”. (Virtual conference).
- Wiebe, D.J., Berg, C., Mello, D., Campbell, M.S., **Ramirez Loyola, M.D.**, Beam, A. (2020, April 1-4). Maternal Depressive Symptoms, Parental Involvement and Type 1 Diabetes Management During Late Adolescence. [Symposium talk accepted for presentation]. 41 st Society of Behavioral Medicine Conference, San Francisco, CA. (Conference canceled).
- Berg, C., Tracey, E.L., Bunter, J., **Ramirez Loyola, M.D.**, Wiebe, D.J. (2020, April 1-4). Additive Effects of Global Stress and Daily General and Type 1 Diabetes Stressors During Emerging Adulthood. [Symposium talk accepted for presentation].

41 st Society of Behavioral Medicine Conference, San Francisco, CA. (Conference canceled).

- Alegria, K.E., Fleszar, S., Hua, J.N., **Ramirez Loyola, M.D.**, Resuschel, H., Song, A.V. (2019, March 6-9). How socioeconomic status and acculturation relate to dietary behaviors within Latino populations. [Symposium talk]. 40th Society of Behavioral Medicine Conference, Washington, D.C.
- **Ramirez Loyola, M.D.**, Wiebe, D.J., Berg, C.A. (2018, April 11-14). Adherence and affective reactivity to daily diabetes stress among late adolescents and emerging adults with type 1 diabetes. [Symposium talk]. 39th Society of Behavioral Medicine Conference, New Orleans, Louisiana.
- Wiebe, D.J., **Ramirez Loyola, M.D.**, Mello, D., Marino, J., Munion, A., Butner, J., Berg, C. (2018, April 11-14). Executive functions and daily self-regulation to support adherence across the transition into emerging adulthood. [Symposium talk]. 39th Society of Behavioral Medicine Conference, New Orleans, Louisiana.
- **Ramirez Loyola, M. D.** (2015, April 10-12). Influences of religiosity and spirituality on waiting experiences. [Symposium talk]. 42nd Annual Western Regional Honors Conference, University of Nevada, Reno.

#### **Poster Presentations**

- **Ramirez Loyola, M.D.**, Wiebe, D.J. (2020, April 1-4). Illness Perceptions, Depressive Symptoms, and Type 1 Diabetes Management Among Latino and Non-Latino White Early Adolescents. [Poster accepted for presentation]. 41 st Society of Behavioral Medicine Conference, San Francisco, CA. (Conference canceled)
- **Ramirez Loyola, M.**, Trung Le, K. K., Tran, B. Q., Vazquez, V., Dias, J. W., & Rosenblum, L. D. (2014, April). Effects of shadowing delay on processing of auditory and visual speech. [Poster]. UC Riverside's 8th Annual Undergraduate Research, Scholarship & Creative Activity Symposium, Riverside, CA.

#### **OTHER SELECT PROFESSIONAL PRESENTATIONS**

##### **University of California, Merced**

- Alnagar, H., **Ramirez Loyola, M.D.**, Danube, C. (2020, December 18). People First Workgroup COVID-19 Follow Up Experience Survey Update and Recommendations. Townhall, University of California, Merced. [Presentation given to over 250 employees].
- **Ramirez Loyola, M.D.**, Alnagar, H. (2020, December 16). Office of Equity, Diversity, and Inclusion. Leadership Council Meeting, University of California, Merced. [Presentation given to over 200 leadership members].
- **Ramirez Loyola, M.D.** (2020, March 6). Career Opportunities for Undocumented Scholars. Educator's Conference: College Access and Success for Undocumented Scholars Program, University of California, Merced. [Invited talk presented to over 80 educators].

#### **PROFESSIONAL EXPERIENCE**

##### **University of California, Merced - Merced, CA**

**01/2023 - Present**

##### ***Graduate Dean's Dissertation Fellow***

- Responsible for all dissertation related research activities needed to complete a Ph.D.

(e.g., study design, data analysis, manuscript development)

- Led all aspects of a cross-sectional research study which collected data from 700+ Latino/a/x young adults using online surveys that included multiple quantitative and open-ended qualitative questions to better understand resilience processes in the associations between perceived ethnic/racial discrimination and health among this population

**University of California, Merced - Merced, CA**

**08/2022 - 12/2022**

***Teaching Fellow / Health Disparities***

- Responsible for the grading of about 84 undergraduate students in an upper division course
- Helped undergraduates gain a conceptual understanding of health equity theory and how social determinants of health—including public policy and social injustices (e.g., discrimination)—play a pivotal role in health outcomes to facilitate their understanding of health disparities experienced by various marginalized populations
- Tutored, counseled, and provided academic support to undergraduates during weekly office hours
- Over 95% of my students earned a passing grade

**University of California, Merced - Merced, CA**

**01/2020 – 08/2022**

***Doctoral Researcher / Division of Equity, Justice, and Inclusive Excellence (EJIE)***

- Worked cross-functionally with various stakeholders to design and implement 40+ events/ programs/informational resources across multiple DEI topics (e.g., free speech) to inform and empower diverse audiences (e.g., faculty, staff, students) as a founding member of EJIE
- Served as a lead and core-partner in unit specific and campus-wide strategic planning initiatives to help guide the direction of future DEI work across campus
- Developed and implemented surveys and data collection strategies for 10+ programs/events lead by EJIE across different audiences within a complex organization (e.g., HBCU/HSI Research Col(Lab)) after conducting 1:1 and group informational meetings to identify critical needs

**University of California, Merced - Merced, CA**

**07/2020 – 08/2020**

***Instructor of Record / Health Psychology***

- Responsible for 100% of the teaching and 100% of the grading of about 30 undergraduate students in a 6-week long upper division course
- Helped undergraduates gain a conceptual understanding of theory and research about psychological, behavioral, and cognitive processes as they related with staying healthy, getting sick, and coping with and managing disease
- Tutored, counseled, and provided academic support to undergraduates during weekly office hours
- Over 95% of my students earned a passing grade

**University of California, Merced - Merced, CA**

**08/2019 – 12/2019**

***Teaching Assistant / Psychological Perspectives on Cultural, Racial, and Ethnic Diversity***

- Responsible for 70% of the grading of about 80 undergraduate students in an upper division course
- Developed and presented 2 full weeks of lectures for 2 sections of the course (about

- 160 students total) when the instructor of record was unavailable
- Helped undergraduates understand the influence of culture/race/ethnic diversity on psychological theories of mental processes and human behavior and how these relate to research methods, human development, and health
  - Tutored, counseled, and provided academic support to undergraduates during weekly office hours
  - 100% of my students earned a passing grade

**University of California, Merced - Merced, CA**

**08/2019 – 05/2021**

***UndocuScholars Academy Co-Facilitator***

- Conducted 50% of the student assignment feedback of about 75 undocumented undergraduate students during a small-group interactive seminar series aimed at empowering students via career/professional skills development and identity exploration
- Led the review of and optimization of application materials, data collection metrics, and session topics to improve participant satisfaction in collaboration with various members of the Center for Career & Professional Advancement and Services for Undocumented Students
- Worked cross-functionally with career specialists, student success professionals, and outside speakers to develop and implement student-centric informational programming during the 8-week seminar series
- Created bi-annual presentations evaluating the seminar series and included data-visualization components to highlight participant pre-and post-academy advancement in key learning areas (e.g., understanding of graduate and professional school application processes)

**University of California, Merced - Merced, CA**

**08/2016 - Present**

***Doctoral Student | Psychological Sciences***

- Communicated insights to different audiences in 5+ empirical research papers, 10+ presentations at scientific conferences, and 3+ invited talks in other professional settings
- Collaborated on 10+ research projects from beginning-to-end (e.g., literature review, data analysis, manuscript write-up, and conference presentations) within the health psychology field utilizing varying methodological designs (e.g., longitudinal, cross-sectional, and ecological momentary assessment) and both quantitative and select qualitative data
- Defined research populations of interest, established inclusion criteria, and developed recruitment strategies
- Mentored 5+ undergraduate research assistants and other advanced scholars regarding research processes and pursuing a graduate degree

**SELECT AWARDS AND HONORS**

Spring 2023	Legacy Award   University of California, Merced
Spring 2023	Graduate Dean’s Dissertation Fellowship   University of California, Merced
2021	Graduate Student Research Support Award   University of California, Merced

- 2021 Free Speech Week Spotlight | INSIGHT Into Diversity
- 2020 Outstanding Teaching Award | University of California, Merced
- 2019 Psychological Sciences Excellence in Teaching Award | University of California, Merced
- 2019-2021 William R. Shadish Award for Leadership and Service | University of California, Merced
- 2019-2021 Graduate Fellowship | CA Campus Catalyst Grant Awarded to the University of California, Merced from Immigrants Rising
- 2018 Research Awards | Society of Behavioral Medicine
  - Diabetes Special Interest Group Abstract Award
  - Meritorious Student Abstract Award
  - Citation Abstract Award
- 2018 Honorable Mention | Ford Foundation Predoctoral Fellowship
- 2018-2019 Faculty Mentor Program Fellow | University of California, Merced
- 2016-2017 Eugene Cota-Robles Fellow | University of California, Merced
- 2016 Graduation with High Honors | University of California, Riverside

**SELECT PROFESSIONAL AND COMMUNITY SERVICE**

**Service to University of California, Merced**

- 2020-2022 Graduate Student Representative | UC President’s Chicano/Latino Advisory Council
- 2020-2021 Chancellor’s Advisory Council on Campus Climate, Culture, and Inclusion
- 2019-2020 Climate, Diversity, and Equity Officer | Graduate Student Association
- 2018-2019 Graduate Student Representative | Associate Chancellor of Diversity, Equity, and Inclusion Search Advisory Committee
- 2018-2020 Graduate Advisory Board Member | Health Sciences Research Institute
- 2019-2020 Graduate Dean’s Advisory Council on Diversity (also served from 2017-2018)

**Service to Field and External Organizations**

- 2019-2021 Student Liaison, Health Equity Special Interest Group | Society of Behavioral Medicine
- 2019-2021 Student Co-Chair, Diabetes Special Interest Group | Society of Behavioral Medicine
- 2018 Merced County Science Fair Judge | Merced City School District
- 2017 Scientist on call for “Ask a Scientist” nights | Merced City School District

**CERTIFICATIONS**

- Fall 2021 Racial Battle Fatigue Manage Student Frictions Surrounding Race, Engage in Self-Care & Encourage Dialogue to Move Equity Forward on Your Campus | PaperClip Communications
- Spring 2020 Certificate of Quantitative Methods | University of California, Merced

- 2017-2018 Center for Engaged Teaching and Learning: Teaching Matters Series  
Pedagogy Certifications | University of California, Merced
- Improving Teaching by Assessing Learning
  - Developing Teaching Strategies
  - Mastering the Classroom with 1st Generation College Students

**PROFESSIONAL MEMBERSHIPS**

- 2021-2022 National Association of Diversity Officers in Higher Education  
(NADOHE)
- 2020-Present Resilience Research Group | University of California, Merced
- 2017-Present Health Sciences Research Institute | University of California, Merced
- 2016-2022 Society of Behavioral Medicine

## ABSTRACT

### Perceived Ethnic/Racial Discrimination and the Health of Latino Young Adults: The Moderating Role of Ethnic/Racial Identity Development

by Maria De Jesus Ramirez Loyola in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Psychological Sciences

University of California, Merced

2023

Dr. Deborah Wiebe, Chair

Perceived ethnic/racial discrimination (PERD) is a psychosocial stressor that may undermine the health of people of color, but these associations have been understudied among Latino young adults. Ethnic/racial identity (ERI) has been proposed to be a moderator of PERD-health associations, but theoretically-based moderation effects have been inconsistently tested and results within the broader literature have been mixed. The current study examined whether ERI developmental dimensions (i.e., commitment and exploration) may individually moderate associations between PERD and the health of Latino youth, and whether ERI commitment may have stronger buffering effects among those who are higher on ERI exploration. Latino young adults (N = 702; ages 18-25; 70% female) were recruited using both a campus-based (N = 511) and a national online recruitment system (N = 191). Participants completed online surveys measuring PERD, ERI developmental dimensions, psychological distress, general physical health perceptions, and sociodemographic variables. Data were analyzed using moderated moderation models in the PROCESS macro version 4.2. As expected, heightened PERD was associated with poorer health (i.e., heightened psychological distress and poorer general physical health perceptions). However, neither ERI exploration nor ERI commitment moderated these PERD-health associations, and the hypothesized moderated moderation effect was not significant. The findings of the current study support a growing body of work which suggests that PERD can undermine both the psychological and physical health of Latino young adults in the USA, but raise questions about whether and how ERI development may moderate PERD-health associations among Latino youth. Implications for future research are discussed.



## INTRODUCTION

With a population of 62.1 million in 2020, Latino/a/x/Hispanic individuals (hereafter Latinos) reflect the largest ethnic/racial group in California and the second fastest growing ethnic/racial group in the USA more broadly (Krogstad et al., 2021). Despite their growing numbers, Latinos frequently face negative stereotypes as perpetual foreigners and are often seen as “other” and/or portrayed as a “threat” in the White dominated USA (Chavez, 2013; Huynh et al., 2011). Importantly, the propagation of the “Latino threat” narrative coupled with increases in anti-immigrant sentiment across the USA may make Latinos’ membership in a marginalized ethnic/racial group especially salient and place them at increased risk of experiencing discrimination (Findling et al., 2019; Huynh et al., 2011).

Perceived ethnic/racial discrimination (PERD) can be defined as the self-reported perception of experiencing differential or unfair treatment (e.g., social exclusion, denial of services, harassment) due to one’s ethnic/racial background or to characteristics associated with ethnicity/race (e.g., language, skin color, hair texture) (Allen, 2019; Carter et al., 2019; Pascoe & Smart Richman, 2009; Williams & Mohammed, 2013). Although PERD has been conceptualized as a psychosocial stressor that undermines health, a growing literature indicates there are moderating factors that may allow some individuals to thrive while others experience poor health in the face of PERD.

Ethnic/racial identity (ERI) has been proposed as one important variable that may buffer the negative associations between heightened PERD and poor health among people of color (e.g., Neblett et al., 2012). However, these associations have not been well-studied among Latinos (e.g., Andrade et al., 2021). The broad goal of the current study is to enhance our understanding of associations among PERD, ERI, and the health of Latino young adults in the USA.

### **PERD Associations with Health in Latino Young Adults**

#### ***Young Adulthood as an Important Time of Development to Study PERD and Health Among Latinos***

Young adulthood may be a critical developmental period for better understanding how PERD may specifically impact the health of Latinos. Young adulthood (ages 18-25) has been described as a high-risk developmental period marked by changing life situations and social transitions (e.g., moving out of the parental home, entering new work and school settings, developing new peer groups and beginning serious romantic relationships) (Arnett, 2015; Mulye et al., 2009; Scales et al., 2016). PERD appears to differ across the lifespan, with some research suggesting young adults experience heightened PERD compared to other age groups (e.g., Gee et al., 2019). For example, findings from a large nationally representative sample found that Latinos aged 18-29 had higher odds of reporting PERD than older Latinos (Findling et al., 2019). It is possible that Latino young adults experience heightened PERD because normative life transitions create new opportunities to experience minority stress (e.g., experiencing negative immigration related comments in new work or school settings due to being Latino). Such minority stress can undermine Latino health not only in the short term, but also by setting the stage for health at later stages in life. Recent longitudinal research found that higher PERD experienced during the transition from late adolescence into young adulthood may

significantly undermine the physical and mental health of people of color during middle age (i.e., ages 45-53; Yang et al., 2019).

### ***PERD and Psychological Distress***

Latinos experience various mental health challenges during young adulthood including psychological distress (American Psychiatric Association, 2017). Although prevalence rates of serious psychological distress among Latinos aged 18 and over are similar to non-Latino Whites (i.e., 12.2% among Latinos vs. 12.7% among Non-Latino Whites; SAMHSA, 2020), incidence rates have been increasing in recent years. For example, a recent longitudinal study found that 18.3% of Latinos over the age of 18 reported experiencing psychological distress in 2020 compared to 4.4% in 2018, an increase of 13.9 percentage points (McGuinty et al., 2022). Importantly, recent work suggests that young adults experience higher rates of psychological distress compared to other older age groups (Granieri et al., 2021; Pilar Matud et al., 2020; McGuinty et al., 2022). This is concerning because, in addition to increased risk for poor mental health during young adulthood, Latinos also experience disparities in both access to and quality of mental health treatment (Cabassa et al., 2006; Keyes et al., 2012; Menendez et al., 2020). Such patterns may undermine seeking care for future health and well-being.

A large literature suggests that PERD is consistently associated with negative mental health indicators (e.g., psychological distress), but most of the available literature among young adults has focused on other ethnic/racial groups (e.g., African Americans) or included only small numbers of Latinos within the larger sample (Andrade et al., 2021; Paradies et al., 2015; Williams & Mohammed, 2009; Yip et al., 2019). The literature among Latino adults suggests a positive association between PERD and psychological distress (Negi, 2019; Torres et al., 2011), with some research even suggesting that Latino adults may be more negatively affected by PERD than other ethnic/racial groups (e.g., African Americans; Paradies et al., 2015).

Research examining PERD and psychological distress among Latino young adults in the USA is more limited. We are aware of three studies examining this association in Latino young adults, with both cross-sectional (Andrade et al., 2021; Ogan et al., 2022) and longitudinal studies (Brown et al., 2022) supporting associations between heightened PERD and increased psychological distress. Interestingly, Brown's recent longitudinal study using a weekly diary found that experiencing higher levels of PERD (between-effects) and more PERD than usual on any given week (within-effects) were both associated with poorer mental well-being among Latino young adults (e.g., increased anxiety and depressive symptoms). Thus, although research is limited, there is evidence that PERD may play an important role in Latino experiences of heightened psychological distress during young adulthood.

### ***PERD and Physical Health***

Less is known about how PERD may be associated with the physical health of Latino young adults (Yip et al., 2019). A recent review examining associations between PERD and Latino health identified a total of 10 studies that had focused on physical health outcomes among Latinos (Andrade et al., 2021). Heightened PERD was associated with poorer self-reported physical health among both Latino adults (Flores et al., 2008; White et al., 2019) and adolescents (Huynh & Fuligni, 2010). PERD was also associated with higher objective indicators of poor health including poorer sleep (Garcini et al.,

2018) and higher diastolic and systolic blood pressure (Beatty Moody et al., 2016; McClure et al., 2010) among Latino adults in the USA.

We are aware of two studies that have examined associations of PERD with physical health outcomes among Latino young adults. One study among Latino college students found that heightened experiences of PERD during the transition from late adolescence into young adulthood can serve as a source of chronic stress which places increased burden on the body's stress response system—as indexed by lower cardiovascular and neuroendocrine stress reactivity—which may be a risk marker for later health problems (Sladek et al., 2021). A second longitudinal study revealed that higher PERD during freshman year in college was associated with poorer self-reported physical health status three years later among Latino young adults (Del Toro & Hughes, 2020). Thus, although limited, the available research suggests that higher PERD may undermine the physical health of Latino young adults. This is concerning because research suggests that about 1 in 5 Latinos avoid seeking medical care, even when they really needed it, because they are worried about experiencing PERD or being treated poorly due to their ethnicity/race (Findling et al., 2019).

### **Ethnic/Racial Identity (ERI) as a Moderator of PERD-Health Associations Among Latino Young Adults**

#### ***ERI Defined***

With evidence that PERD can undermine the health of Latino young adults in the USA, researchers have begun to focus on identifying resilience factors that may ameliorate negative associations between PERD and health outcomes in this population. ERI may be one important variable that may serve as a source of resilience in the associations between heightened PERD and poor health among people of color, including Latinos (e.g., Neblett et al., 2012). ERI can broadly be defined as a complex multidimensional construct that reflects the beliefs and attitudes that individuals have about their ethnic/racial group membership and the processes by which those beliefs and attitudes developed (Umaña-Taylor et al., 2014; Umaña-Taylor & Rivas-Drake, 2021). Such aspects of ERI are theorized to buffer the adverse effects of PERD by helping people of color cope with and navigate through the racialized and inequitable situations they may experience in the USA (Neblett et al., 2012; Umaña-Taylor et al., 2014; Yip et al., 2019).

Several theoretical and methodological approaches have been utilized to examine ERI as a moderator of PERD, but there is no consensus on which approach is best (e.g., Phinney & Ong, 2007; Umaña-Taylor et al., 2014, Yip, 2018). The present study utilized a developmental perspective of ERI because this is the most well-developed literature demonstrating that ERI may buffer the adverse health effects of PERD and matches well to the identity developments that occur during young adulthood. From a developmental perspective, ERI is rooted in models of identity development (Erikson, 1968; Phinney, 1992) where two broad dimensions—exploration and commitment—capture how one's ethnic experiences and heritage become incorporated into one's sense of self. ERI *exploration* reflects trying out and learning about one's ethnic/racial group, while ERI *commitment* reflects the extent to which one has gained a sense of clarity about the ethnic/racial aspect of one's identity.

As a key developmental task—especially for minority youth—ERI development begins during early adolescence after individuals have developed the ability to identify and categorize themselves and others using ERI labels (e.g., Latino, Asian, African American, White etc.; Umaña-Taylor et al., 2014). Theoretically, ERI development is a progression where individuals initially start with low levels of both ERI commitment and exploration, and later progress to more advanced stages over time (e.g., Erikson, 1968; Umaña-Taylor & Rivas-Drake, 2021). Some researchers have identified four ERI statuses based on early theoretical work regarding identity development (Erikson, 1968; Marcia, 1980; Phinney, 1989). These statuses or typologies reflect combinations of low and high levels of ERI commitment and exploration, including: 1) diffused (i.e., low ERI exploration and low ERI commitment); 2) foreclosed (i.e., low ERI exploration and high ERI commitment); 3) moratorium (i.e., high ERI exploration and low ERI commitment); and 4) achieved (i.e., high ERI exploration and high ERI commitment). Theoretically, individuals who are high in both ERI commitment and exploration should have the healthiest outcomes (e.g., low psychological distress and better general health perceptions) in the face of PERD (e.g., Erikson, 1968; Umana-Taylor & Rivas-Drake, 2021).

Although ERI developmental theory has focused heavily on adolescence, it is clear that identity development continues to occur across the lifespan and becomes increasingly important during life transitions like those inherent to the developmental period of young adulthood (ages 18-25) (e.g., Arnett, 2015; Erikson, 1968; Eriksson et al., 2020; Schwartz et al., 2013). Life transitions such as entering new school/work settings, moving out of the parental home and having children may spur ERI development as individuals are forced to reassess who they are within the context of their new settings and social interactions (e.g., Williams et al., 2020; Maehler 2022; Syed et al., 2007; Phinney, 2006;). For example, as children of Latino immigrant’s transition from adolescence into young adulthood, they move away from identifying as just American into using a multitude of other labels (e.g., identify using racial, bicultural, pan-ethnic, or national identities; van der Does & Adem, 2019). This evolution in ERI may occur because Latino young adults are exposed to new identity relevant experiences, which allow them to learn more about their ethnic/racial group. Latino young adults entering their first semester of college may engage in activities or classes (e.g., Latino cultural clubs; Chicano History) that allow them to explore cultural (e.g., food, music, language) and historical aspects (e.g., immigration patterns and policies) specific to their ethnic/racial group. Such explorations may push them to reconceptualize who they are now as Latino college students as they seek to identify an ERI label that they feel comfortable with and committed to (“Latinx/a/os in higher education: exploring identity, pathways, and success”, 2018).

### ***Evidence of ERI as a Moderator***

Research examining ERI developmental dimensions as a moderator of PERD-health associations has been most commonly analyzed using a univariate composite score, where subscale scores for ERI commitment and exploration are summed or averaged (e.g., Yip et al., 2019). This approach has yielded some inconsistent findings, but a meta-analysis conducted by Yip and colleagues (2019) concluded that a composite ERI developmental score buffers associations between heightened PERD and negative

mental health outcomes (e.g., depression). The moderating role of an ERI composite score in the associations between PERD and physical health could not be examined due to a lack of available studies. Creating a composite of ERI commitment and exploration may appear justified as these ERI dimensions are positively correlated. However, researchers have criticized this approach because it renders the two conceptually distinct developmental dimensions of ERI indistinguishable and obscures important nuances of how these two different dimensions may individually and interactively impact associations between PERD and health (e.g., Phinney & Ong, 2007; Umaña-Taylor et al., 2014; Umaña-Taylor & Rivas-Drake, 2021; Yip et al., 2019).

More recently, researchers have begun to examine ERI commitment and exploration individually to clarify inconsistencies in the literature and better understand how these developmental dimensions may moderate associations between PERD and health (e.g., Umaña-Taylor et al., 2014). Both theory and research suggest that ERI commitment and exploration should differentially moderate associations between heightened PERD and poor health among Latinos and others of color (Erikson, 1968; Phinney, 1992; Phinney & Ong, 2007; Umaña-Taylor et al., 2014; Umana-Taylor & Rivas-Drake, 2021; Yip et al., 2019). Individuals with high ERI commitment are theorized to experience little or no decline in health in the face of heightened PERD because they may have a higher sense of belonging and may cope better with PERD once they have self-identified as members of an ethnic/racial group to which they are committed and feel they belong (e.g., Umaña-Taylor et al., 2014). In contrast, ERI exploration has been theorized to be an *exacerbator*, such that individuals high in ERI exploration experience *worse* health outcomes than those with low exploration in the face of heightened PERD (e.g., Umana-Taylor & Rivas-Drake, 2021). This is because uncertainty regarding one's ethnicity/race may limit one's ability to cope effectively with PERD (e.g., Umaña-Taylor et al., 2014). If accurate, these distinctions make analyses of a composite ERI score particularly problematic.

Findings generally support the theorized buffering effect of ERI commitment and the exacerbating effects of ERI exploration in the face of PERD (e.g., see Yip, 2018, for review). For example, a daily diary study among Latino adults found that the association between higher PERD and increased next day depression was buffered by high ERI commitment and exacerbated by high ERI exploration (Torres & Ong, 2010). Moreover, a recent longitudinal study among Latinos and other ethnically/racially diverse adolescents found that that the association between PERD and poorer mental health (e.g., decreased problem-solving coping) was ameliorated for individuals who reported higher ERI commitment (Yip et al., 2021). Although Yip and colleagues (2021) also found evidence supporting the theorized exacerbating effect of ERI exploration in the association between heightened PERD and poor mental health, it was only significant for anxiety (out of multiple markers of positive and negative mental health indicators). Specifically, the positive association between PERD and increased anxiety was stronger among those who reported increased ERI exploration compared to those who reported low ERI exploration. Collectively, the findings in Yip et al., (2021) are consistent with meta-analytic conclusions about the different ways in which the two ERI developmental dimensions may differentially moderate associations between PERD and mental health

outcomes (e.g., Yip et al., 2019) and support the need for additional research to better understand these nuanced relationships.

There is also emerging evidence to suggest that the moderating effects of ERI developmental dimensions are particularly important to study among Latino young adults. For example, the most comprehensive meta-analysis to-date concluded that the strongest exacerbating effect for ERI exploration in the face of PERD occurred during young adulthood (i.e., age 24), compared to adolescence and adulthood (Yip et al., 2019). These authors argued that young adulthood is an understudied, but promising focus for future research to advance our understanding of how ERI developmental dimensions may moderate the associations between PERD and health. This same meta-analysis reported that the buffering effect of ERI commitment in the face of PERD may function differently among Latinos, with Latinos displaying stronger buffering effects compared to other ethnic/racial groups (i.e., Asian Americans; Yip et al., 2019). However, these results must be interpreted with caution given that less than 7 relevant studies were identified. Overall, the information described above highlights the importance of examining ERI-PERD-health associations among Latino youth.

### ***A Major Research Gap: Theorized Interactions Between ERI Commitment and Exploration***

Findings described thus far provide promising evidence that ERI commitment should individually serve as a buffer while ERI exploration may individually exacerbate negative associations between PERD and Latino health. However, ERI developmental theory suggests that individuals who feel highly committed to their ethnic/racial identity may be better able to navigate PERD experiences if they have arrived at a clear sense of self via in-depth exploration (e.g., Erikson, 1968; Umana-Taylor & Rivas-Drake, 2021). That is, one would expect a statistical interaction such that the potential buffering effects of ERI commitment may be enhanced among individuals with high vs low levels of exploration. Moreover, it is also possible that ERI exploration may not always serve as an exacerbator in the face of PERD, especially when such explorations result in a strong commitment to one's ethnic/racial identity.

The specific statistical interaction between ERI commitment and exploration has not been examined in the current literature to our knowledge. However, researchers have explored the possibility that the developmental dimensions of ERI may jointly moderate associations between PERD and Latino health by examining the four ERI statuses/typologies described above (i.e., diffused, foreclosed, moratorium, achieved; Erikson, 1968; Marcia, 1980; Phinney, 1989). This approach has yielded quite mixed findings. Although Romero et al. (2014), found that ERI achieved status (i.e., high ERI exploration and high ERI commitment) buffered negative associations between PERD and self-esteem, others have found no moderation effects (e.g., Toomey et al., 2013) and even exacerbating effects for ERI achieved status (e.g., Greene et al., 2006). Such mixed findings may reflect different approaches for identifying ERI developmental statuses, as studies have often used sample dependent approaches (e.g., median splits) which raise concerns about the replicability of identified groups across studies.

Overall, the available literature suggests that ERI commitment and exploration—on their own—should differentially moderate negative associations between PERD and Latino health. While promising, more information is needed to better understand if ERI

commitment ameliorates and ERI exploration exacerbates-health associations among Latino young adults. Additionally, research is needed to determine whether the potential buffering effects of ERI commitment are strengthened among Latino young adults who also report high ERI exploration (i.e., whether there is a statistical interaction between these two developmental dimensions). Doing so will directly examine an important theoretical argument while furthering knowledge of the potentially nuanced protective nature of ERI developmental processes. In line with a recent call to action by Umaña-Taylor & Rivas-Drake (2021), the current study examined how ERI commitment and ERI exploration may—independently and interactively—moderate associations between PERD and the health of Latino young adults.

### ***The Moderating Role of ERI is Critically Understudied among Latino Young Adults***

Despite the growing literature demonstrating the potential importance of ERI in PERD-health associations, Latinos remain underrepresented within the relevant literatures. For example, a recent meta-analysis that examined the moderating role of ERI in the associations between PERD and health among different ethnic/racial groups reported that only 11 of 51 studies examining developmental dimensions of ERI contained Latino samples (Yip et al., 2019). Of these, 7 focused on negative mental health outcomes (including 1 study on psychological distress) and 1 study focused on physical health (i.e., sleep). Furthermore, only 3 of the 11 studies focused on Latino young adults (i.e., ages 18-25). Such findings suggest that Latinos in general, and Latino young adults in particular, remain critically understudied, especially in the context of associations among ERI, PERD, and Latino physical health. Examining these associations in the Latino context is important, given emerging evidence that ERI may develop differently and have differing moderating effects across race/ethnic groups. For instance, some work suggests that ERI development among Latinos may occur differently from other ethnic groups, with family socialization processes creating stronger links between commitment and exploration across time (Douglas & Umana-Taylor, 2015). There also is recent evidence that ERI developmental dimensions may have stronger effects among Latinos (e.g., Yip et al., 2019). Overall, it is clear additional research is needed among Latinos to help advance our understanding of the associations between PERD, health, and ERI among this ethnic/racial group.

### **Overview of the Current Study**

ERI has been identified as a developmental competency that may buffer or exacerbate the links between PERD and health, but there is limited research examining these associations among Latinos specifically (Allen, 2019; Lewis et al., 2015; Pascoe & Smart Richman, 2009; SAMHSA, 2020; Yip et al., 2019). As displayed in Figure 1, the current study examined how ERI developmental dimensions may—independently and interactively—moderate associations between PERD and the health of Latino young adults. This research addresses gaps in the literature regarding not only the moderating role of *individual* ERI developmental dimensions among Latino young adults, but also the potential moderating role that *interactions* between ERI commitment and exploration may have. These “moderated moderation” patterns of ERI commitment and exploration have long been theorized but have rarely been tested directly; we are unaware of any examination of these processes in the context of Latino health. Examining these theorized associations is important to advance ERI theory, clarify mixed findings in the literature

and facilitate the development of more targeted interventions in the future. The current study had the following aims:

**Primary Aim 1) Examine how PERD may be associated with the psychological distress and physical health of Latino young adults in the USA.** Given the available literature, we expect that higher PERD will be associated with worse health outcomes (i.e., higher psychological distress and poorer general physical health perceptions) among Latino young adults.

**Primary Aim 2) Assess how ERI commitment and exploration may *individually* moderate associations between PERD and the health of Latino young adults.** We expect that a) higher ERI commitment will buffer the associations between heightened PERD and poorer health outcomes among Latino young adults while b) higher ERI exploration will exacerbate these associations.

**Primary Aim 3) Explore how ERI developmental dimensions (i.e., ERI commitment and exploration) may *interactively* moderate associations between PERD and the health of Latino young adults.** Given the state of the relevant literature among Latinos (e.g., Green et al., 2006; Toomey et al., 2013; Yip et al., 2019), we tentatively expect that individuals high on ERI commitment will experience a stronger buffering effect in the face of PERD when they also report higher levels of ERI exploration compared to those lower on ERI exploration.



## METHOD

### Participants

The current study collected data using online cross-sectional survey methods. Participants (N= 702) consisted of young adults (aged 18-25) who identified as Latino/a/x or Hispanic, currently lived in the USA, and self-reported that they are proficient in the English language. English proficiency is on the rise among Latinos in the USA and research suggests that 72% of Latinos aged five and older spoke English proficiently in 2019 (Krogstad et al., 2022). To allow for a large and representative sample, participants were recruited online using both a campus-based online recruitment system (SONA) and national online recruitment through Prolific. Data collection occurred throughout 2022 during the COVID-19 global health pandemic after most students had returned to in-person classes after multiple years of remote learning (e.g., Kauhanen et al., 2022).

### Procedure

The current study was approved by the institutional research review board. Individuals interested and eligible to participate in the study were directed to the online survey, which was administered via the Qualtrics survey software platform. Participants were prompted to provide electronic consent before they were presented with the survey questions. The online survey took approximately 60 minutes to complete. Participants recruited through SONA received 1 SONA credit, while those recruited via Prolific received \$9.60 for their participation. The \$9.60 compensation value was identified using the hourly wage recommended by Prolific during the design phase of the survey.

### Measures

**Demographic information.** Participants were asked to report their *birthdate* (i.e., “What is your birthdate?”), *gender* (e.g., male, female, transgender, non-binary), *nativity* (i.e., “Were you born in the United States of America? Yes/No”), *country of origin* (i.e., individuals who select “No” in the nativity question were asked “In what country were you born?”), and *length of time in the USA* (i.e., “How many years have you lived in the U.S.?”). Participant *age* (i.e., years old) was calculated by subtracting participant’s *birthdate* from the date they completed the online survey. In alignment with prior research that has examined associations between discrimination and Latino health (Andrade et al., 2021) *gender*, *nativity*, *length of time in the USA*, and *age* were considered as potential covariates within the current study.

**Developmental Dimensions of Ethnic/Racial Identity (ERI).** The Multigroup Ethnic Identity Measure-Revised (MEIM-R) was utilized to assess the exploration and commitment dimensions of ERI (Phinney & Ong, 2007). The MEIM-R is a reliable and valid measure of the developmental dimensions of ERI across different populations, including young adults and diverse ethnic/racial groups (e.g., Latinos), with Cronbach’s  $\alpha$  near or above 0.70 (Brown et al., 2014; Herrington et al., 2016). Confirmatory factor analysis indicates the MEIM-R consists of two conceptually distinct but positively related factors that map onto the developmental dimensions of commitment and exploration (Brown et al., 2014). Participants were first instructed that “People may use different terms to describe their ethnicity/race like Latinx, Mexican-American, Puerto Rican, Afro-Latino, Chicano, or Hispanic for example.” Then they were asked to fill in the blank of

an open-ended question that asks, “In terms of ethnic/racial group, I consider myself to be \_\_\_.” For descriptive purposes, responses were coded as belonging to one of the following ethnic/racial self-identification types: pan-ethnic (i.e., Latino/a/x or Hispanic), country/region of origin specific (e.g., Mexican), American only (i.e., USA born or American), hyphenated (e.g., Afro-Latino), multiple ERI labels (e.g., Latino, Mexican, Hispanic), and other. Participants then responded to six items using a five-point Likert scale (i.e., 1=strongly disagree, 3= neutral, and 5= strongly agree), with three items assessing commitment (e.g., “I feel a strong attachment towards my own ethnic/racial group”) and three items assessing exploration (e.g., “I have spent time trying to find out more about my ethnic/racial group, such as its history, traditions, and customs”). An average score of the items in each of the ERI dimension subscales was calculated, with higher scores representing higher levels of ERI commitment and exploration. In the current study the MEIM-R items were a reliable measure of ERI commitment ( $\alpha = .87$ ) and ERI exploration ( $\alpha = .82$ ).

**Perceived Ethnic/Racial Discrimination (PERD).** A two-stage approach was taken to assess PERD using the Everyday Discrimination Scale (EDS) (Williams et al., 1997). Research suggests that the EDS is a valid and reliable unidimensional measure of perceived discrimination, with Cronbach’s  $\alpha$  ranging from 0.80-0.88 (Slemon et al., 2021). Participants were first asked to rate the frequency of experiencing nine forms of discrimination in day-to-day life (e.g., “You are treated with less respect than other people are”) using the following Likert scale: Almost every day (5), At least once a week (4), A few times a month (3), A few times a year (2); Less than once a year (1); Never (0). As recommended by Slemon et al. (2021), participants were then prompted to identify the perceived reason(s) for those experiences with options to select all applicable from the following reasons: 1) Your Ancestry or National Origin 2) Your Gender; 3) Your Race/ Ethnicity; 4) Your Age; 5) Your Religion; 6) Your Height; 7) Your Weight; 8) Some other Aspect of Your Physical Appearance; 9) Your Sexual Orientation; 10) Your Education or Income Level; and 11) A Physical Disability. To account for the fact that participants could select multiple perceived reasons for their discrimination experiences we calculated a variable that reflected the total number of reasons selected by participants and explored the need to include this variable as a covariate in the analyses. For our primary aims, an average score of the nine EDS items was calculated for individuals who endorse race/ethnicity as a perceived reason for their experiences of discrimination. The EDS items were a reliable measure of PERD in the current sample ( $\alpha = .91$ ). Higher average scores represent higher levels of PERD. Individuals who did not select race/ethnicity as a perceived reason for their experiences of discrimination were coded as zero. Given that this approach to computing a PERD score resulted in a positively skewed PERD variable (due to the zero responses), we examined whether the assumptions underlying regression-based analysis were met and explored the need for a transformation of this variable. We added a constant of one to all of the raw PERD scores, and then conducted a square root transformation of the variable. Analyses conducted with the original versus the transformed PERD variables, did not result in objectively different results. Thus, the results depicted in the current manuscript are those of the raw PERD variable.

**Psychological distress.** The Kessler Psychological Distress Scale (K10) was developed as a brief measure of psychological distress based on questions about anxiety and depressive symptoms that an individual experienced in the past 4-weeks (Kessler et al., 2002). The K10 was designed for use in the general population and consists of 10 questions (e.g., “In the past 4 weeks, about how often did you feel tired out for no good reason?”) that are answered using a five-point Likert scale, ranging from 1 (none of the time) to 5 (all of the time). Research indicates that a unidimensional model of the K10 provides good fit and is a valid and reliable measure of psychological distress among various populations, including Latinos, with Cronbach’s  $\alpha$  at or above 0.90 (e.g., Kroska et al., 2020; Nobles et al., 2017). In the current sample, the K-10 items were a reliable measure of psychological distress ( $\alpha = .93$ ). Responses were summed to calculate an overall psychological distress score, with higher scores reflecting higher distress.

**General physical health perceptions.** The five items assessing general health in the RAND 36-item Short Form Health Survey (SF-36; Hays et al., 1993) were utilized to assess general health perceptions. The SF-36 was designed for use in both clinical and non-clinical populations and is one of the most commonly used measures of health-related quality of life across eight health dimensions (i.e., physical functioning, role limitations caused by physical health problems, role limitations caused by emotional problems, social functioning, emotional well-being, energy/fatigue, pain, and general health perceptions; Kaplan & Hays, 2022). The SF-36 is a valid and reliable measure of general health perceptions among various populations, including Latinos, with Cronbach’s  $\alpha$  at or above 0.70 (e.g., Traino et al., 2021). The general health perception items include a rating of participants’ overall general health using a 5-point Likert scale (i.e., 1=excellent, 2=very good, 3= good, 4=fair, 5=poor), as well as four general physical health statements (e.g., “I seem to get sick a little easier than other people”) that are rated using a 5-point Likert scale (i.e., 1=definitely true, 2=mostly true, 3=don’t know, 4=mostly false, 5=definitely false). Following scoring guidelines from RAND (Hays et al., 1993), responses for each relevant item were first recorded to a 0 to 100 range before being averaged to create scores for each participant. Higher scores reflect better general physical health perceptions. The relevant five items from the SF-36 scale were a reliable measure of general physical health perceptions in the current sample ( $\alpha = .79$ ).

### **Analytic Plan**

All statistical analyses were conducted using SPSS version 29. A criterion significance level of  $p < 0.05$  was utilized when relevant. First, descriptive analyses (e.g., frequencies, means, standard deviations) were conducted for all variables of interest to understand distributions and identify outliers. To examine Aims 1-3, moderation analyses were conducted using the PROCESS macro version 4.2 proposed by (Hays, 2017). PROCESS is considered advantageous because it simultaneously estimates all of the proposed paths in the model outlined through the specific aims (see Figure 1). We used a moderated moderation PROCESS model (i.e., model 3) to investigate associations between PERD and the health of Latino young adults, as well as the independent and interactive moderating effects of ERI developmental dimensions. The moderated moderation model specifically tests whether the moderating effect of ERI commitment on PERD-health associations is further moderated by ERI exploration (i.e., it tests the ERI commitment X ERI exploration X PERD interaction). A total of two models were

estimated (i.e., one model per outcome) for the primary analyses examining Aims 1-3. Because gender, nativity, time in the USA, age, the total number of perceived discrimination reasons, and data source (i.e., SONA/Prolific) were correlated with at least one of the primary study variables (see Table 2), these were treated as covariates in all PROCESS analyses. All analyses reported below were conducted combining the Prolific and SONA samples. It should be noted, however, that analyses of these groups separately yielded similar findings (i.e., the same significant effects in the same direction emerged).

It should be noted that the relevant literature examining the moderating role of ERI developmental dimensions in the associations between discrimination and Latino health has specifically focused on ethnic/racial discrimination experiences (i.e., PERD). However, it is conceivable that ERI developmental dimensions may buffer any form of discrimination. If so, this would suggest somewhat different or additional processes underlying the benefits or risks of ERI. For example, in addition to benefits associated with a heightened sense of belonging to one's ethnic group, commitment may also enhance positive affect and self-affirmation, both of which have been shown to have broad benefits to health and well-being (e.g., Diamond & Aspinwall, 2003; Harris et al., 2020; Pressman, Jenkins, & Moskowitz, 2019). Although the study was not designed to test these possibilities directly, we explored this possibility in the analyses. To do so, we created a general discrimination score by averaging the ratings of the nine EDS items, regardless of the perceived reason(s) for the discrimination experiences. The same two models described above were estimated using the general discrimination score rather than the PERD variable.

## RESULTS

The present study analyzed data from 702 young adults who identified as Latino/a/x or Hispanic, currently lived in the USA, and self-reported that they were fluent in English. At the time of the study, participants had an average age of 21.17 (SD= 1.69) years. As displayed in Table 1, participants in the full sample were 70% female; 88.9% self-reported being US-born; and 92% reported being current U.S citizens. In terms of ethnic/racial self-identification, most participants (i.e., 51.3%) reported using pan-ethnic labels (e.g., Hispanic) to describe their ethnic/racial identity. Overall, 96.2% of participants indicated that they were currently enrolled as full-time students with 94.8% of participants reporting that they were currently attending a four-year university/college. In the current study, participants from SONA and Prolific statistically differed in PERD  $t(692) = 2.31, p = .021, d = .20, 95\% \text{ CI } [.03, .32]$  with individuals from SONA reporting higher levels of PERD (M= 1.01, SD= 1.07) than those from Prolific (M= .51, SD= .98). Participants also differed in reported levels of psychological distress  $t(688) = 2.92, p = .004, d = .25, 95\% \text{ CI } [.78, 3.96]$ , with higher levels of psychological distress reported by those from SONA (M= 27.64, SD= 9.56) than those from Prolific (M= 25.27, SD= 9.27). Participants from SONA and Prolific did not significantly differ from each other in regard to general discrimination, ERI exploration and commitment, or general physical health perceptions. Participants from SONA were also more likely to identify as female compared to those from Prolific (80.4% vs 48.4%),  $\chi^2(1) = 68.02, p < .001$ .

As displayed in Figure 2, ethnicity/race emerged as the most commonly identified perceived source of discrimination in the current study. Gender and age were also commonly endorsed sources of discrimination. Participants endorsed an average of 2.98 (SD= 1.81) perceived reasons for their self-reported discrimination experiences with most endorsing no more than three reasons (Mode= 3) from the eleven available options in the EDS. As seen in Table 2, individuals who reported a higher number of total reasons for their self-reported discrimination experiences also reported higher discrimination, heightened ERI exploration, heightened psychological distress, and poorer general physical health perceptions. However, the total number of perceived reasons for participants' discrimination experiences was unrelated with ERI commitment.

### **Correlations Among Study Variables**

Table 2 also displays bivariate correlations among all other study variables. As expected, PERD and general discrimination were positively correlated, and both aspects of discrimination were associated with heightened psychological distress and reports of poorer general physical health perceptions. Consistent with prior research, higher ERI exploration was associated with higher ERI commitment and higher PERD. High ERI commitment was also associated with heightened general discrimination. Latino young adults who reported higher ERI exploration also reported heightened psychological distress. In contrast, ERI commitment was unrelated to reports of discrimination and to psychological distress. However, Latino young adults who reported higher ERI commitment also reported more positive general physical health perceptions.

## **PROCESS Models Assessing Discrimination and ERI Associations with Latino Health**

PROCESS model results for analyses involving PERD are provided in Table 3, while results for analyses involving general discrimination are provided in Table 4. As hypothesized, both PERD and general discrimination were associated with heightened psychological distress and more negative general physical health perceptions among this sample of Latino young adults. Although not part of the primary aims, it is also notable that higher ERI commitment was associated with better Latino health (i.e., lower psychological distress and more positive general physical health perceptions) in PERD-related PROCESS models. Conversely, ERI commitment was significantly associated with general physical health perceptions, but not psychological distress in PROCESS models that included general discrimination. Interestingly, ERI exploration was generally unrelated with the health of Latino young adults in either PERD or general discrimination PROCESS models.

In contrast to hypotheses, there was no evidence that ERI developmental dimensions either individually or interactively moderated the associations of discrimination (i.e., either PERD or general discrimination) with reported psychological or physical health among Latino young adults. That is, there were no significant interactions between discrimination and ERI developmental dimensions in all PROCESS analyses conducted in the current study.

### **Supplemental Analysis**

We considered that the lack of evidence for moderation by ERI developmental dimensions may have occurred because we examined ERI commitment and exploration simultaneously. These variables were moderately correlated with each other making it possible that examining their “independent” effects undermined our ability to identify moderating effects for either variable. To explore this possibility, we conducted additional analyses to examine the moderating effects of each ERI developmental dimension individually in separate analyses. Neither ERI commitment (Table 5) nor ERI exploration (Table 6) individually moderated PERD associations with Latino health outcomes.

We also considered whether the lack of significant moderation results was related to how PERD and ERI developmental dimensions were operationalized in the current study. There have been differing approaches to these variables in the broader literature, with some studies excluding participants from PERD-related analyses if they did not endorse race/ethnicity as a source of discrimination (e.g., Slemon et al., 2021). To explore this possibility, we examined whether findings differed when we analyzed data only including individuals who reported that their discrimination experiences were due to ethnicity/race (i.e., excluding the 278 participants in the current study who did not endorse ethnicity/race as a perceived source of discrimination). As noted in Table 7, neither ERI commitment nor ERI exploration significantly moderated PERD-health associations in the current study using this alternative approach to operationalizing PERD.

Given the lack of consensus within the broader literature about how to best define and operationalize ERI dimensions (e.g., Umaña-Taylor et al., 2014), we also conducted

supplemental analyses using two approaches for capturing ERI developmental dimensions: a) a composite ERI score was computed by averaging across the six items of the MEIM-R scale; and b) an ERI typology score that captured combinations of high ERI commitment and high ERI exploration (i.e., achieved ERI) based on median splits in the current sample (e.g., Yip et al., 2019). As displayed in Tables 8 and 9, none of the alternative operationalizations of ERI developmental dimension were found to moderate associations between PERD and the health of Latino young adults.

## DISCUSSION

The present study was the first study to our knowledge to examine how ERI developmental dimensions may—individually and interactively—moderate associations between perceptions of discrimination and the health of Latino young adults. In line with a growing body of work, higher levels of both PERD and general discrimination were associated with heightened psychological distress and poorer general physical health perceptions. However, ERI developmental dimensions did not significantly moderate these discrimination-health associations among this sample of Latino youth. These findings are consistent with the notion that discrimination undermines the health of Latino young adults during a critical developmental period, but the nuanced role of ERI exploration and ERI commitment in these associations remains unclear.

In line with hypotheses and the broader literature (e.g., Brown et al., 2022; Ogan et al., 2022), heightened PERD was associated with worse psychological and physical health among Latino young adults. Although a large literature has consistently identified associations between PERD and poor mental health among adults and people of color (e.g., Yip et al., 2019), few studies have examined these associations among Latino young adults in particular (e.g., Andrade et al., 2021). Further, to our knowledge only two studies have examined PERD associations with physical health in Latino young adults in the USA (i.e., Del Toro & Hughes, 2002; Sladek et al., 2021). Thus, our findings contribute to this limited literature suggesting that heightened PERD may undermine not only mental health, but also (self-reported) physical health among Latino youth. It is important to note that the significant associations between heightened PERD and poor health among Latino youth were present above and beyond covariates that are commonly examined (e.g., nativity, gender, length of time in the USA; Andrade et al., 2021). This suggests that these associations may be unique to the experience of PERD rather than reflecting broader sociodemographic factors that may undermine Latino health.

To better understand if it was PERD per se, or discrimination of any sort that matters for Latino youth, we also examined the associations between general discrimination (regardless of the perceived reasons) and the health of Latino young adults. It is notable that general discrimination appeared to be as or more strongly associated with the health variables than did PERD. However, it is important to note that general discrimination was strongly correlated with PERD, and that the associations between PERD and health were significant even when the total number of perceived reasons for participants' discrimination experiences was covaried. Such findings suggest that discrimination in general is a source of stress that can undermine the health and well-being of Latino young adults (e.g., Lewis et al., 2015), but there may be something unique about PERD experiences among this population that needs to be better understood. Future research should explore how other potentially important variables (e.g., ethnic-racial socialization among Latino families; see Ayón et al., 2020 for a relevant review) may be associated with PERD experiences among Latinos in the USA to better identify individuals who may be most at risk for PERD.

In the current study, we examined the role of ERI identity development as a potential resource among Latino young adults. Although not part of the specific aims, we



found that ERI commitment was associated with less psychological distress and more positive general physical health perceptions. This is consistent with prior work in primarily non-Latino samples and extends this work to the Latino context (Yip et al., 2019). It is possible that Latino young adults who feel like they have identified an ethnic/racial group with whom they belong and are committed to may be better able to identify potential sources of social support among individuals with similar lived experiences. This possibility is consistent with findings that heightened social connection (e.g., family and friend support) were associated with better self-reported mental and physical health among Latinos aged 18 and older in the USA (Mulvaney-Day et al., 2007).

In contrast to ERI commitment, ERI exploration was generally not significantly associated with Latino health outcomes. It is unclear why ERI exploration was unrelated with Latino health in the current sample, but it is possible that the current study did not capture the dynamic nature of ERI exploration needed to understand how it may be associated with health during young adulthood. For instance, recent research among Latino college students found that ERI commitment remains relatively stable across the transition from adolescent into young adulthood, while ERI exploration continues to increase in a linear fashion across time (Sladek et al., 2023). Moreover, some researchers have argued that while high levels of ERI exploration alone may be harmful to a person's health and well-being and may exacerbate the adverse associations between PERD and health, there may also be instances in which ERI exploration is beneficial (e.g., Umaña-Taylor & Rivas-Drake, 2021). For example, individuals who become involved in ethnically/culturally oriented activities (e.g., joining a Spanish club) as they navigate through college may feel safer and more comfortable with learning about their ethnic/racial group (e.g., ERI exploration), which may benefit their health and well-being through enhanced self-esteem and sense of belonging ("Latinx/a/os in higher education: exploring identity, pathways, and success", 2018). Such positive and negative features of exploration may have undermined our ability to discern a significant association with the health variables. Future research should employ longitudinal methods to facilitate the identification of how contextual changes in ERI exploration over time may be associated with Latino health outcomes to better understand at what point ERI exploration may undermine and/or benefit the health of Latino youth.

To our knowledge this is the first study that examined how ERI developmental dimensions may independently and interactively moderate PERD-health associations among Latino young adults. Contrary to hypotheses, we found no evidence that ERI developmental dimensions moderated associations between discrimination, regardless of which aspect of ERI (i.e., exploration or commitment), discrimination (i.e., PERD and general discrimination), or health (i.e., psychological-distress or physical health reports) was measured. Although our findings are somewhat in line with the broader literature, which has shown mixed results about the moderating role of ERI (e.g., Yip, 2018), this robust pattern was unexpected. For example, although prior work has not specifically examined the theorized "moderated moderation" effect of ERI developmental dimensions, we were particularly surprised that ERI commitment did not individually demonstrate buffering effects. This is a finding that has been more consistently reported in the literature and was found in a recent meta-analytic review of the moderating role of

ERI development in PERD-health associations (Yip et al., 2019). In addition, prior work has suggested that the moderating effect of ERI commitment may be stronger among Latinos than among other ethnic/racial groups (i.e., Asian Americans; Yip et al., 2019).

We considered the possibility that these unexpected findings reflected how we operationalized PERD and ERI, given the lack of consistency in how these variables have been defined, measured, and operationalized in the literature (e.g., Lewis et al., 2015; Umaña-Taylor et al., 2014). We further considered whether analyses regarding the individual versus independent moderating effects of each ERI developmental dimension yielded different findings. These supplemental analyses continued to show no evidence that ERI developmental dimensions moderated PERD-health associations in the current sample. It is conceivable that these findings reflected our explicit focus on Latino young adults. The existing literature has generally focused on other ethnic/racial groups or included a small number of Latinos within the larger sample (Yip et al., 2019). Some have argued that ERI development occurs differently among Latino versus other ethnic/racial groups, making it conceivable that ERI also functions differently in this sociocultural context (e.g., Douglas & Umaña-Taylor, 2015). For example, research among Latino children suggests that increases in anti-immigrant sentiment and policies in the USA create a hyperstigmatization of Latino identity which places Latino families in an unenviable position where discussions about ethnicity/race and discrimination are embedded within a political environment (e.g., discussions about ERI often include conversations about the deportability of parents, family members, or other community members; Ayón, 2016). Future research should explore how potentially important sociocultural variables (e.g., familial ethnic-racial socialization) may set the context for ERI-PERD-health associations among different ethnic/racial groups in the USA to better understand if ERI may function differently among Latinos.

The current study focused on ERI developmental dimensions as the ERI construct of interest. This approach has been used in the most well-developed literature examining ERI-PERD-health associations (e.g., Yip et al., 2019; Umaña-Taylor & Rivas-Drake, 2021) and maps well to the identity developments that occur during young adulthood. However, it is possible that the present findings may not generalize when other ERI constructs are measured. Although there is no consensus about the best way to define and assess ERI, some researchers have argued that there are two broad components (i.e., developmental and content) that capture the multifaceted nature of ERI (Umaña-Taylor et al., 2014; Umaña-Taylor & Rivas-Drake, 2021). The content dimensions of ERI focus on assessing the meaning and significance of one's ethnic/racial group membership and are mainly based on social/personality psychology models of identity development (Sellers et al., 1998; Tajfel & Turner, 1986). Content dimensions of ERI consist of a) *centrality* which reflects the degree to which ethnicity/race is reflected as an important aspect of one's self-concept; b) *private regard* which captures one's personal feelings and attitudes about one's own ethnic/racial group; and c) *public regard* which reflects the extent to which individuals feel others view their ethnic/racial group positively or negatively.

There have been recent calls to integrate ERI developmental and content dimensions to obtain a more complete perspective on how ERI may moderate PERD-health associations among people of color (e.g., Umaña-Taylor & Rivas-Drake, 2021). It is possible that an interaction between ERI exploration and ERI public/private regard, for

instance, may illuminate important nuances regarding when ERI exploration may exacerbate or buffer negative PERD-health associations. For example, ERI exploration that occurs in the context of safe and encouraging environments when individuals believe that others view their ethnic/racial group positively (i.e., positive public regard) may function differently than when individuals believe that others view their ethnic/racial group negatively (i.e., negative public regard). Promising research among Black and Latino adolescents suggests that individuals who explore and develop clarity around their ethnic/racial background (i.e., high ERI commitment and high ERI exploration) while also building positive self-concepts regarding their ethnic/racial identity (i.e., positive private regard) may experience better academic outcomes and psychological health (e.g., decreased depressive symptoms; Wantchekon & Umaña-Taylor, 2021). This interesting emerging body of ERI research highlights the need for future research that considers how ERI developmental and content dimensions may jointly moderate PERD-health associations among people of color.

### **Limitations and Suggestions for Future Research**

A strength of the present study is that we tested a theory-based model of how ERI may moderate PERD-health associations in the understudied and vulnerable population of Latino young adults. Nevertheless, this intentional focus on Latino young adults may limit the generalizability of the findings. The most comprehensive meta-analysis to date that has explored the moderating role of ERI in PERD-health associations argued that young adulthood was a promising developmental period to better understand these associations given that this was the developmental period when ERI exploration had the strongest effects (Yip et al., 2019). However, it is unclear whether the findings in the current sample would emerge among younger or older Latinos. Future work that includes older and younger Latinos may clarify whether the moderating role of ERI developmental dimensions differs as a function of the developmental period being considered. Moreover, the Latino young adults in the current sample predominantly identified as female, making it possible that the associations between PERD, ERI, and health among Latino males was under-examined. Correlational findings suggested that females reported heightened PERD, heightened psychological distress, and poorer general physical health perceptions than males, making it possible that findings will not generalize to male samples. It should be noted, however, that gender was not significantly associated with health variables when other covariates were included in the full PROCESS models.

Given the cross-sectional nature of the current study, no causal or temporal conclusions about the associations between PERD, Latino health, and ERI developmental dimensions can be made. Individuals who are distressed or prone to perceive negative health symptoms may be more likely to attend to negative experiences such as discrimination to explain or understand their symptom experiences. It is also important to note that, although we identified psychological distress and general physical health perceptions as important health outcomes to consider during young adulthood among Latinos, ERI may moderate PERD-health associations differently depending on the health outcome in question (e.g., Andrade, 2021; Yip et al., 2019; Yip, 2018). All variables were also based on subjective self-report measures, making it possible that shared method variance contributed to some findings. It is also possible that different findings may have been observed if objective measures of health were utilized. The

literature on "skin deep resilience" demonstrates that some individuals may report positive adjustment while having underlying physiological signatures of stress (e.g., Berger & Sarnyai, 2015; Chen et al., 2019). This may be particularly true for individuals who are actively coping with discrimination experiences, making future research that includes physiological markers of stress (e.g., salivary cortisol) in research among Latino young adults particularly important.

We also acknowledge that a majority of our sample was recruited from a Hispanic-Serving Institution (HSI) in California, where more than 53% of the student population identified as Latino/Hispanic at the time data were collected (López, 2021). It is possible that the results may not generalize to Latino young adults from communities with different ethnic/racial diversity. Although it is reasonable to expect that Latino young adults may potentially experience lower rates of PERD at an HSI institution, the findings of the current study suggest that PERD is relatively common even in the HSI context. In fact, HSI participants reported higher levels of PERD than those recruited at the national level. Concerns have begun to emerge within higher education that gaining an HSI designation does not mean that an institution is providing the structural support needed to meet the needs and challenges experienced by Latino students (e.g., Garcia, 2019). It is possible that a lack of adequate Latino "servingness" at some HSI's may contribute to PERD experiences among young adults. It is possible that attending an HSI may also contribute to increased ERI exploration, which has been associated with heightened awareness of and attentiveness to PERD (e.g., Meca et al., 2020). Future research should expand the current study to include a larger number of Latinos recruited from varied social contexts (e.g., various higher education institutions) to allow for greater regional diversity among Latino young adults.

Beyond the HSI context, it is notable that the Latino young adults in the current sample were predominantly college attending individuals who had returned to in-person learning after multiple years of remote learning due to the COVID-19 pandemic. Given the many challenges inherent with the COVID-19 pandemic that Latino young adults may have had to navigate before and during data collection (e.g., lack of opportunities for socialization, physical health risk, economic instability), our study findings may have been shaped by this context in unpredictable ways. For example, a recent review article concluded that the mental health of children and young adults worsened due to the global health pandemic (Kauhanen et al., 2022). It is conceivable that college students' perceptions of discrimination or approaches to exploring their ethnic/racial identity upon returning to in-person learning were also influenced by this context.

### **Conclusions**

The current findings are consistent with a growing body of work suggesting that PERD undermines both psychological and physical well-being among Latino young adults in the USA (e.g., Andrade, 2021, Brown et al., 2022; Ogan et al., 2022). Although ERI developmental dimensions have long been proposed as a potentially important resource in the face of PERD-health associations (e.g., Yip, 2018), we found no evidence that ERI commitment or ERI exploration independently or interactively moderate those associations. If the findings of the current study suggesting that ERI developmental dimensions do not serve as a source of resilience in the face of PERD among Latino young adults are replicated, researchers may consider alternative sources of resilience

that have stronger influences on PERD-health associations. For example, ERI developmental dimensions have theoretically been conceptualized to buffer PERD because they may provide a sense of belonging and effective coping resources (e.g., Neblett et al., 2012). Directly examining these more proximal factors as modifiable sources of resilience may be useful to advance our understanding of resilience in the face of PERD.

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**Table 1**  
*Number and Percentage of Participant Sociodemographic Characteristics*

Variable	SONA (N= 511)		Prolific (N= 191)		Full Sample (N= 702)	
	N	%	N	%	N	%
Gender						
Male	98	19.2	94	49.2	192	27.4
Female	403	79	88	46.1	491	70
Transgender	0	0	1	.5	1	.1
Non-Binary	7	1.4	7	3.7	14	2
Other	2	.4	1	.5	3	.4
Nativity						
US-born	424	86	184	96.3	608	88.9
Foreign-born	69	14	7	3.7	76	11.1
Reported countries of origin by foreign-born individuals <sup>1</sup>						
Colombia	0	0	1	14.3	1	1.3
Cuba	0	0	1	14.3	1	1.3
El Salvador	7	10.1	1	14.3	8	10.5
Guatemala	3	4.3	0	0	3	3.9
Honduras	1	1.4	0	0	1	1.3
Mexico	58	84.1	2	28.6	60	78.9
Venezuela	0	0	1	14.3	1	1.3
Other	0	0	1	14.3	1	1.3
Current immigration/residency status						
U.S. citizen	451	89.1	189	99.5	640	92
U.S. permanent resident	9	1.8	0	0	9	1.3
Student visa (e.g., F, J, M visa)	0	0	0	0	0	0
Deferred action for childhood arrivals (DACA) status	24	4.7	1	.5	25	3.6
Undocumented	17	3.4	0	0	17	2.4
Temporary protected status (TPS)	0	0	0	0	0	0
Other	5	1	0	0	5	.7
Ethnic/racial identity (ERI) label						
Pan-ethnic (e.g., Hispanic)	250	49.4	106	56.4	356	51.3
Country/region of origin specific (e.g., Mexican)	84	16.6	38	20.2	122	17.6
American/US-born only	0	0	0	0	0	0
Hyphenated ERI label (e.g., Afro-Latinx)	147	29.1	37	19.7	184	26.5
Multiple ERI labels (e.g., Latina and Salvadorian)	24	4.7	6	3.2	30	4.3
Other	1	.2	1	.5	2	.3
Currently in school <sup>2</sup>	499	97.7	115	61.5	614	88
School type <sup>3</sup>						
High school	0	0	1	.9	1	.2
Technical school	0	0	2	1.7	2	.3
Community college	0	0	24	20.9	24	3.9
4-year university/college	499	97.7	83	72.2	582	94.8
Other	0	0	5	4.3	5	.8
Student status <sup>3</sup>						
Part-time student	9	1.8	14	12.2	23	3.8
Full-time student	489	98.2	101	87.8	590	96.2
Financial situation						
Financially supported by parents	171	34	52	27.4	223	32.2
Financially supported by parents, but have an independent source of income	112	22.3	72	37.9	184	26.6
Financially supporting myself, but parents regularly help out	135	26.8	34	17.9	169	24.4
Financially independent of parents	85	16.9	32	16.8	117	16.9
Current work experience						
Not currently working	259	51.3	79	41.6	338	48.6
Working in a part-time job	217	43	63	33.2	280	40.3
Working full-time in a job that is not long-term	26	5.1	32	16.8	58	8.3
Working full-time in a job that is a long-term occupational goal	3	.6	16	8.4	19	2.7

*Note.* <sup>1</sup>Only individuals who selected “No” when asked if they were born in the United States of America were asked to indicate their country of origin. <sup>2</sup>Reflects the number and percentage of participants answering “Yes” to this question. <sup>3</sup>Only individuals who selected “Yes” when asked if they were currently in school were asked to indicate the school type and their student status.

**Table 2**  
*Means, Standard Deviations, and Correlations Among Study Variables*

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. PERD	.96	1.05											
2. General Discrimination	1.37	.95	.71**										
3. ERI Exploration	3.74	.95	.17**	.14**									
4. ERI Commitment	3.97	.93	.08	.01	.55**								
5. Psychological Distress	26.99	9.53	.24**	.39**	.09†	-.03							
6. General Physical Health Perceptions	60.83	19.49	-.19**	-.24**	-.01	.09†	-.32**						
7. Gender <sup>a</sup>	--	--	.12*	.09†	.07	.04	.15**	-.09†					
8. Nativity <sup>b</sup>	--	--	.02	-.03	.02	.11*	-.05	.04	.06				
9. Time in the USA	19.94	2.87	.03	.02	.01	-.17**	.01	-.08†	-.08†	-.54**			
10. Age	21.17	1.69	.02	-.01	.02	-.10†	-.03	-.04	-.12*	.09†	.49**		
11. PDR Total	2.98	1.81	.51**	.42**	.17**	.03	.25**	-.22**	.29**	.02	-.02	.01	
12. Data Source <sup>c</sup>	--	--	-.09†	-.07	-.00	-.05	-.11*	.03	-.32**	-.15**	.27**	.33**	-.18**

*Note.* N= 702. M and SD are used to represent mean and standard deviation, respectively. PERD= perceived ethnic/racial discrimination. <sup>a</sup>0= male and 1=female. <sup>b</sup>0= US-born and 1= foreign-born. PDR Total= total number of perceived discrimination reasons. <sup>c</sup>0=SONA and 1= Prolific. †p < .05. \*p < .01. \*\* p < .001

**Table 3**  
*Moderating Effects of ERI Developmental Dimensions in the Associations Between PERD and Latino Young Adult Health*

Variable	Psychological Distress			General Physical Health Perceptions				
	B (SE)	t	p-value	95% CI	B (SE)	t	p-value	95% CI
Constant	23.74 (.488)	4.87	.000	[14.16, 33.31]	73.17 (10.22)	7.16	.000	[53.10, 93.24]
<b>Conditional Effects</b>								
PERD	1.22 (.43)	2.81	.005	[.37, 2.07]	-1.93 (.92)	-2.09	.037	[-3.74, -.12]
ERI Commitment	-1.03 (.48)	-2.12	.034	[-1.98, -.08]	2.89 (1.01)	2.85	.005	[.90, 4.59]
ERI Exploration	.68 (.47)	1.47	.143	[-.23, 1.60]	-.54 (.98)	-.55	.583	[-2.46, 1.38]
<b>Conditional Interaction Effects</b>								
PERD x ERI Commitment	.64 (.48)	1.34	.181	[-.30, 1.58]	-.38 (1.00)	-.39	.699	[-2.36, 1.59]
PERD x ERI Exploration	.26 (.45)	.57	.569	[-.63, 1.14]	-.50 (.94)	-.53	.594	[-2.36, 1.35]
ERI Commitment x ERI Exploration	-.19 (.31)	-.60	.550	[-.82, .43]	.96 (.69)	1.39	.164	[-.39, 2.32]
PERD x ERI Commitment x ERI Exploration	.50 (.33)	1.51	.130	[-.15, 1.15]	-.25 (.70)	-.36	.716	[-1.63, 1.12]
<b>Covariates</b>								
Gender <sup>a</sup>	1.38 (.88)	1.57	.120	[-.36, 3.11]	-1.74 (1.85)	-.94	.347	[-5.38, 1.89]
Nativity <sup>b</sup>	-2.86 (1.53)	-1.87	.062	[-5.87, .14]	-.39 (3.23)	-.12	.903	[-6.73, 5.94]
Length of Time in the USA	-.18 (.19)	-.93	.353	[-.55, .20]	-.43 (.40)	-1.06	.290	[-1.21, .36]
Age	.23 (.29)	.79	.429	[-.34, .79]	.11 (.60)	.18	.859	[-1.08, 1.29]
PDR Total	.59 (.24)	2.42	.016	[.11, 1.07]	-1.63 (.51)	-3.19	.002	[-2.64, -.63]
Data Source <sup>c</sup>	-2.20 (.92)	-2.40	.017	[-4.00, -.40]	-.08 (1.92)	-.04	.968	[-3.85, 3.70]
	R <sup>2</sup> = .108				R <sup>2</sup> = .078			
	3-way interaction Δ R <sup>2</sup> = .003				3-way interaction Δ R <sup>2</sup> = .000			

*Note.* Unstandardized beta coefficients are reported. ERI= ethnic/racial identity. PERD= perceived ethnic/racial discrimination. <sup>a</sup> 0= male and 1=female. <sup>b</sup> 0= US-born and 1= foreign-born. <sup>c</sup> 0= SONA and 1= Prolific. PDR Total= total number of perceived discrimination reasons. PERD, ERI commitment, and ERI exploration were mean centered prior to analysis.

**Table 4**  
*Moderating Effects of ERI Developmental Dimensions in the Associations Between General Discrimination and Latino Young Adult Health*

Variable	Psychological Distress			General Physical Health Perceptions					
	B (SE)	t	p-value	95% CI	B (SE)	t	p-value	95% CI	
Constant	23.57 (4.67)	5.05	.000	[14.41, 32.73]	73.47 (10.07)	7.29	.000	[53.69, 93.25]	
<b>Conditional Effects</b>									
GenDis	3.11 (.45)	6.98	.000	[2.24, 3.99]	-4.04 (.97)	-4.16	.000	[-5.95, -2.14]	
ERI Commitment	-.75 (.47)	-1.62	.105	[-1.67, .16]	2.46 (1.01)	2.45	.015	[.48, 4.43]	
ERI Exploration	.47 (.45)	1.05	.294	[-.41, 1.36]	-.20 (.97)	-.20	.841	[-2.11, 1.72]	
<b>Conditional Interaction Effects</b>									
GenDis x ERI Commitment	.34 (.52)	.65	.515	[-.68, 1.35]	-1.08 (1.12)	-.96	.336	[-3.27, 1.12]	
GenDis x ERI Exploration	.11 (.47)	.24	.812	[-.81, 1.04]	.06 (1.02)	.06	.950	[-1.94, 2.07]	
ERI Commitment x ERI Exploration	-.09 (.31)	-.29	.774	[-.69, .52]	.98 (.68)	1.42	.152	[-.36, 2.32]	
GenDis x ERI Commitment x ERI Exploration	.46 (.36)	1.27	.205	[-.25, 1.18]	.88 (.80)	1.10	.270	[-.69, 2.45]	
<b>Covariates</b>									
Gender <sup>a</sup>	1.52 (.85)	1.80	.073	[-.14, 3.19]	-1.82 (1.83)	-.99	.321	[-5.42, 1.78]	
Nativity <sup>b</sup>	-2.41 (1.47)	-1.65	.100	[-5.29, .46]	-.97 (3.19)	-.30	.761	[-7.22, 5.29]	
Length of Time in the USA	-.15 (.18)	-.81	.421	[-.51, .21]	-.41 (.40)	-1.04	.297	[-1.19, .36]	
Age	.24 (.28)	.88	.380	[-.30, .78]	.05 (.59)	.09	.927	[-1.11, 1.22]	
PDR Total	.28 (.22)	1.25	.210	[-.16, .72]	-1.44 (.48)	-2.99	.003	[-2.39, -.49]	
Data Source	-2.08 (.88)	-2.36	.019	[-3.81, -.35]	-.15 (1.91)	-.08	.937	[-3.89, 3.59]	
	R <sup>2</sup> = .178			R <sup>2</sup> = .097					
	3-way interaction $\Delta$ R <sup>2</sup> = .002			3-way interaction $\Delta$ R <sup>2</sup> = .002					

*Note.* Unstandardized beta coefficients are reported. ERI= ethnic/racial identity. GenDis= general discrimination. <sup>a</sup> 0= male and 1=female. <sup>b</sup> 0= US-born and 1= foreign-born. <sup>c</sup> 0= SONA and 1= Prolific. PDR Total= total number of perceived discrimination reasons. General discrimination, ERI commitment, and ERI exploration were mean centered prior to analysis.



**Table 5**  
*Exploratory Analysis Assessing the Moderating Effect of ERI Commitment in PERD-Health Associations Among Latino Young Adults*

Variable	Psychological Distress			General Physical Health Perceptions				
	B (SE)	t	p-value	95% CI	B (SE)	t	p-value	95% CI
Constant	22.91 (4.83)	4.74	.000	[13.42, 32.39]	73.93 (10.09)	7.33	.000	[54.13, 93.74]
PERD	1.51 (.40)	3.82	.000	[.74, 2.29]	-2.12 (.84)	-2.53	.012	[-3.77, -.47]
ERI Commitment	-.47 (.38)	-1.22	.222	[-1.22, .28]	2.08 (.81)	2.57	.010	[.49, 3.67]
PERD x ERI Commitment	.61 (.38)	1.59	.113	[-.14, 1.37]	-.49 (.81)	-.60	.547	[-2.08, 1.10]
<b>Covariates</b>								
Gender <sup>a</sup>	1.27 (.88)	1.44	.150	[-.46, 3.00]	-1.64 (1.84)	-.89	.374	[-5.26, 1.98]
Nativity <sup>b</sup>	-2.86 (1.53)	-1.87	.062	[-5.87, .15]	-.34 (3.22)	-.11	.915	[-6.67, 5.98]
Length of Time in the USA	-.18 (.19)	-.92	.359	[-.55, .20]	-.44 (.40)	-1.12	.264	[-1.23, .34]
Age	.26 (.29)	.91	.365	[-.30, .83]	.10 (.60)	.17	.863	[-1.07, 1.28]
PDR Total	.62 (.24)	2.57	.011	[.15, 1.10]	-1.63 (.51)	-3.21	.001	[-2.63, -.63]
Data Source <sup>c</sup>	-2.18 (.91)	-2.38	.018	[-3.97, -.38]	-.18 (1.91)	-.09	.925	[-3.94, 3.58]
	R <sup>2</sup> = .099				R <sup>2</sup> = .072			
	2-way interaction $\Delta R^2 = .004$				2-way interaction $\Delta R^2 = .001$			

*Note.* Unstandardized beta coefficients are reported. PERD= perceived ethnic/racial discrimination. <sup>a</sup> 0= male and 1=female. <sup>b</sup> 0= US-born and 1= foreign-born. PDR Total= total number of perceived discrimination reasons. <sup>c</sup> 0= SONA and 1= Prolific. PERD and the ERI Commitment were mean centered prior to analysis.

**Table 6**  
*Exploratory Analysis Assessing the Moderating Effect of ERI Exploration in PERD-Health Associations Among Latino Young Adults*

Variable	Psychological Distress				General Physical Health Perceptions			
	B (SE)	t	p-value	95% CI	B (SE)	t	p-value	95% CI
Constant	21.93 (4.83)	4.54	.000	[12.43, 31.42]	77.61 (10.14)	7.65	.000	[57.70, 97.51]
PERD	1.41 (.40)	3.53	.000	[.63, 2.20]	-1.96 (.85)	-2.30	.022	[-3.63, -.29]
ERI Exploration	.22 (.38)	.57	.568	[-.53, .96]	.72 (.81)	.89	.375	[-.87, 2.30]
PERD x ERI Exploration	.44 (.37)	1.21	.227	[-.28, 1.16]	-.54 (.77)	-.70	.484	[-2.06, .97]
<b>Covariates</b>								
Gender <sup>a</sup>	1.26 (.89)	1.42	.156	[-.48, 3.00]	-1.62 (1.86)	-.87	.383	[-5.26, 2.02]
Nativity <sup>b</sup>	-2.82 (1.53)	-1.84	.066	[-5.83, .19]	-.28 (3.23)	-.09	.930	[-6.63, 6.07]
Length of Time in the USA	-.13 (.19)	-.69	.489	[-.50, .24]	-.55 (.40)	-1.39	.164	[-1.33, .23]
Age	.26 (.29)	.91	.362	[-.30, .83]	.05 (.60)	.08	.936	[-1.13, 1.23]
PDR Total	.63 (.24)	2.59	.010	[.15, 1.11]	-1.72 (.51)	-3.36	.001	[-2.72, -.71]
Data Source <sup>c</sup>	-2.12 (.92)	-2.31	.021	[-3.92, -.32]	-.23 (1.93)	-.12	.901	[-4.01, 3.55]
	R <sup>2</sup> = .096				R <sup>2</sup> = .065			
	2-way interaction Δ R <sup>2</sup> = .002				2-way interaction Δ R <sup>2</sup> = .001			

*Note.* Unstandardized beta coefficients are reported. PERD= perceived ethnic/racial discrimination. <sup>a</sup> 0= male and 1= female. <sup>b</sup> 0= US-born and 1= foreign-born. PDR Total= total number of perceived discrimination reasons. <sup>c</sup> 0= SONA and 1= Prolific. PERD and the ERI Exploration were mean centered prior to analysis.



**Table 8**

*Exploratory Analysis Assessing the Moderating Effect of an ERI Developmental Composite Score in PERD-Health Associations Among Latino Young Adults*

Variable	Psychological Distress			General Physical Health Perceptions				
	B (SE)	t	p-value	95% CI	B (SE)	t	p-value	95% CI
Constant	22.04 (4.84)	4.56	.000	[12.54, 31.53]	77.24 (10.08)	7.66	.000	[57.44, 97.04]
PERD	1.46 (.40)	3.66	.000	[.68, 2.25]	-2.18 (.84)	-2.58	.010	[-3.84, -.52]
ERI Composite	-.19 (.43)	-.45	.655	[-1.04, .66]	1.93 (.92)	2.11	.035	[.13, 3.73]
PERD x ERI Composite	.69 (.42)	1.62	.106	[-.15, 1.52]	-.72 (.89)	-.81	.418	[-2.47, 1.03]
<b>Covariates</b>								
Gender <sup>a</sup>	1.32 (.89)	1.49	.136	[-.42, 3.07]	-1.81 (1.85)	-.98	.329	[-5.44, 1.82]
Nativity <sup>b</sup>	-2.82 (1.53)	-1.84	.067	[-5.83, .19]	-.27 (3.22)	-.08	.933	[-6.59, 6.05]
Length of Time in the USA	-.15 (.19)	-.78	.438	[-.52, .23]	-.50 (.40)	-1.26	.208	[-1.28, .28]
Age	.27 (.29)	.93	.351	[-.30, .84]	.01 (.60)	.02	.984	[-1.17, 1.19]
PDR Total	.63 (.24)	2.61	.009	[.16, 1.11]	-1.68 (.51)	-3.31	.001	[-2.68, -.68]
Data Source <sup>c</sup>	-2.13 (.92)	-2.32	.021	[-3.93, -.33]	-.16 (1.92)	-.08	.936	[-3.92, 3.61]
	R <sup>2</sup> = .098				R <sup>2</sup> = .072			
	2-way interaction Δ R <sup>2</sup> = .004				2-way interaction Δ R <sup>2</sup> = .001			

*Note.* Unstandardized beta coefficients are reported. ERI Composite= ethnic/racial identity developmental composite score which is calculated by averaging across the six items of the MEIM-R scale. PERD= perceived ethnic/racial discrimination. <sup>a</sup> 0= male and 1=female. <sup>b</sup> 0= US-born and 1= foreign-born. PDR Total= total number of perceived discrimination reasons. <sup>c</sup> 0= SONA and 1= Prolific. PERD and the ERI Composite were mean centered prior to analysis.

Table 9

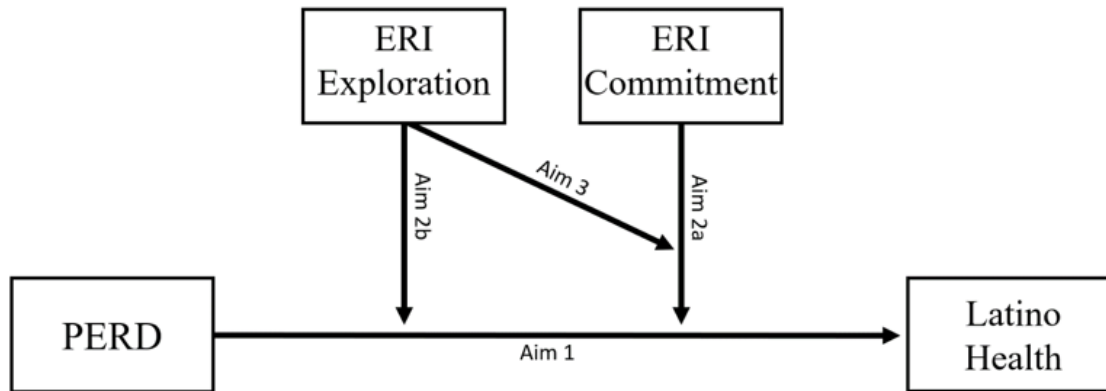
*Exploratory Analysis Assessing the Moderating Effect of an Achieved ERI Typology in PERD-Health Associations Among Latino Young Adults*

Variable	Psychological Distress			General Physical Health Perceptions				
	B (SE)	t	p-value	95% CI	B (SE)	t	p-value	95% CI
Constant	22.49 (4.81)	4.67	.000	[13.04, 31.95]	75.34 (10.09)	7.46	.000	[55.52, 95.16]
PERD	1.14 (.50)	2.31	.022	[-.17, 2.12]	-1.70 (1.06)	-1.61	.108	[-3.77, .38]
Achieved ERI	-1.33 (.73)	-1.83	.068	[-2.76, .10]	3.59 (1.53)	-1.61	.109	[-3.77, .38]
PERD x Achieved ERI	.92 (.69)	1.33	.184	[-.44, 2.28]	-.91 (1.46)	-.62	.534	[-3.79, 1.97]
<b>Covariates</b>								
Gender <sup>a</sup>	1.22 (.88)	1.28	.167	[-.51, 2.95]	-1.59 (1.84)	-.86	.391	[-5.21, 2.04]
Nativity <sup>b</sup>	-2.83 (1.53)	-1.91	.056	[-5.93, .08]	.05 (3.23)	.02	.987	[-6.29, 6.39]
Length of Time in the USA	-.17 (.19)	-.87	.383	[-.54, .21]	-.48 (.40)	-1.21	.228	[-1.26, .30]
Age	.30 (.29)	1.03	.302	[-.27, .86]	-.00 (.60)	-.01	.994	[-1.19, 1.18]
PDR Total	.63 (.24)	2.61	.009	[-.16, 1.11]	-1.66 (.51)	-3.26	.001	[-2.66, -.66]
Data Source <sup>c</sup>	-2.23 (.92)	-2.43	.015	[-4.03, -.43]	.06 (1.93)	.03	.975	[-3.72, 3.84]
	R <sup>2</sup> = .098				R <sup>2</sup> = .068			
	2-way interaction $\Delta$ R <sup>2</sup> = .003				2-way interaction $\Delta$ R <sup>2</sup> = .001			

*Note.* Unstandardized beta coefficients are reported. Achieved ERI = individuals who reported high ethnic/racial exploration and high ERI commitment after conducting a median split of the originally calculated ERI exploration and commitment scores; 0= other ERI typology and 1= achieved ERI typology. PERD= perceived ethnic/racial discrimination. <sup>a</sup>0= male and 1=female. <sup>b</sup>0= US-born and 1= foreign-born. PDR Total= total number of perceived discrimination reasons. <sup>c</sup>0= SONA and 1= Prolific. PERD was mean centered prior to analysis.

**Figure 1**

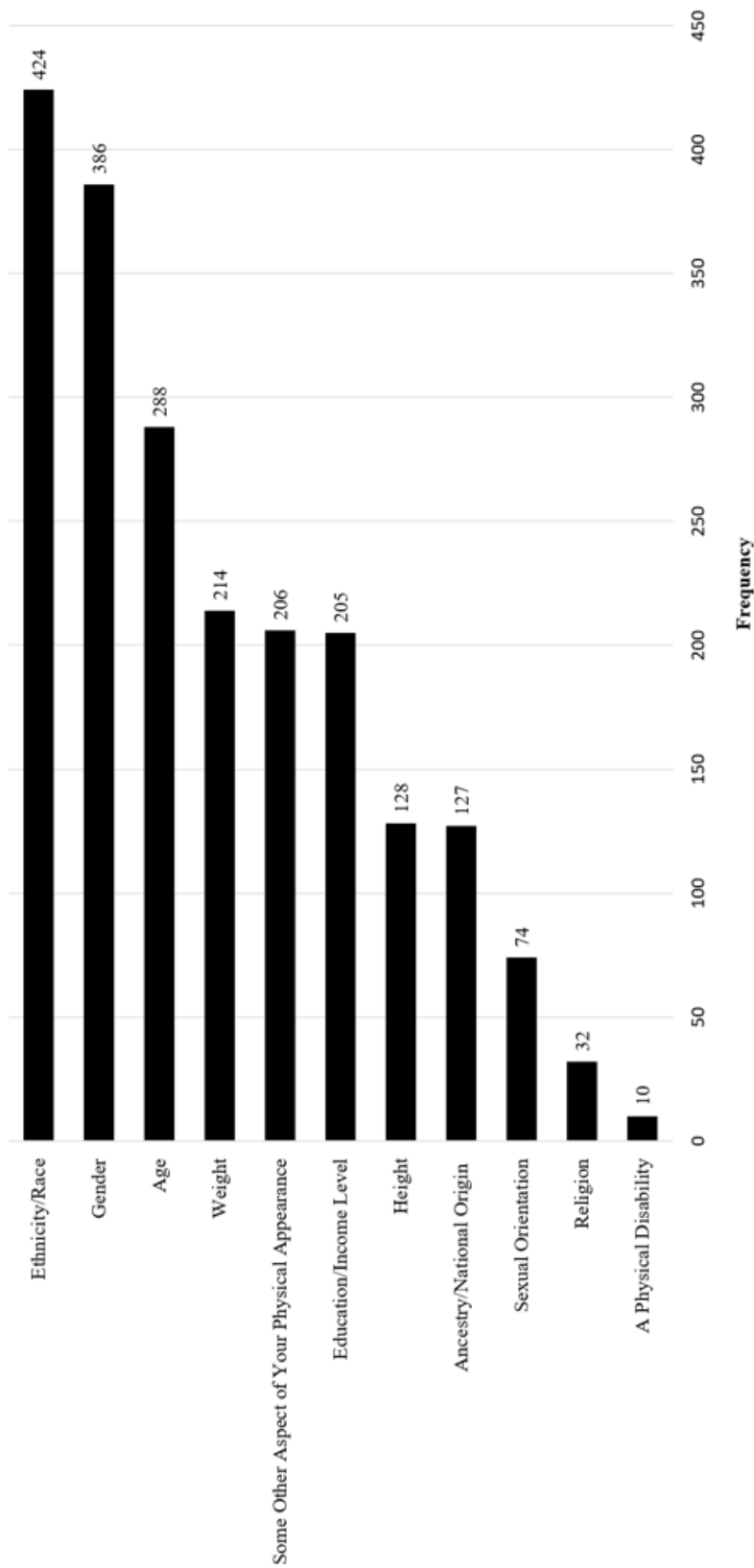
*Conceptual Relationships Among PERD, Latino Health, and ERI*



*Note.* This figure demonstrates a conceptual framework of the relationships between perceived ethnic/racial discrimination (PERD), the health of Latino young adults, and the moderating role of ethnic/racial identity (ERI) developmental dimensions. Conceptual paths are labeled with their corresponding aim within the broader study.

**Figure 2**

*Frequency of Perceived Reason (s) for Discrimination Experiences*



*Note.* As recommended by Slemon et al. (2021), participants were able to select all applicable perceived reasons for their experiences of discrimination from eleven listed options in the Everyday Discrimination Scale (Williams et al., 1997). In the current study, most participants selected no more than three perceived reasons for their self-reported experiences of discrimination. 55 people declined to provide a reason for their perceived discrimination experiences.