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Pepperdine University

Graduate School of Education and Psychology

A SYSTEMATIC REVIEW OF RISK AND PROTECTIVE FACTORS FOR MENTAL HEALTH AMONG LATINX COLLEGE STUDENTS

A clinical dissertation submitted in partial satisfaction
of the requirements for the degree of
Doctor of Psychology
by

Melissa Gavilanes

April, 2024

Thema Bryant, Ph.D. – Dissertation Chairperson

This clinical dissertation, written by

Melissa Gavilanes

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

Doctoral Committee:

Thema Bryant, PhD, Chairperson

Shelly Harrell, PhD

Carrie Castañeda-Sound, PhD

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To my mom, dad, sister, and brother-in-law, thank you for always believing in me. I would not be the person I am today without your love and words of wisdom. Thank you for teaching me to persevere.

To Cole, who has been by my side throughout this program. Thank you for your unconditional love and understanding as I’ve grown as a person, partner, and psychologist. You are my rock.

VITA

Melissa Gavilanes

EDUCATION

Doctor of Psychology (Psy.D.) – Clinical Psychology **September 2020 – Expected 2024**
Pepperdine Graduate School of Education and Psychology (APA Full Accreditation) – Los Angeles, CA

- ***Dissertation:*** Risk and Protective Factors for Mental Health Among Latinx College Students
  Passed Preliminary Oral Examination: Passed with Distinction, February 2021
  Dissertation Committee: Thema Bryant-Davis, Ph.D., Shelly Harrell, Ph.D.
  Passed Final Oral Examination: Passed, December 2023
  Dissertation Committee: Thema Bryant-Davis, Ph.D., Shelly Harrell, Ph.D., Carrie Castenada-Sound, Ph.D.
- ***Clinical Comprehensive Examination**:* Passed, May 2021
- ***Assessment Comprehensive Exam:*** Passed, October 2022

Master of Arts (M.A.) – Clinical Psychology **August 2018 – May 2020**
California State University, Northridge (CSUN) – Northridge, CA

Bachelor of Arts (B.A.) – Psychology **August 2014 – May 2017**
Loyola Marymount University (LMU) – Los Angeles, CA

Awards, Grants, and Scholarships

Pepperdine Colleagues Grant – Pepperdine Graduate School of Education and Psychology
Graduate Equity Fellowship – California State University, Northridge
McNair Scholars Program Membership and Research Stipend Award – Loyola Marymount University

CLINICAL EXPERIENCE

University of California, Irvine Counseling Center **August 2023 – Present**
Doctoral Intern
Training Director: Chun-Chung Choi, Ph.D.
Supervisors: Anushree Belur, Psy.D., Elmer Guardado Psy.D., Nicole Chow, Psy.D. (Interim Supervisor)

- Provide individual therapy via a short-term treatment model through in-person and telehealth delivery to undergraduate and graduate students
- Co-facilitate the *Befriending Your Body* therapy group in the Spring of 2024, and teach a 5 week-long *Goals in Action* course to a group of undergraduate in the Winter of 2024 to promote adaptive coping and goal setting skills respectively
- Receive weekly individual and group supervision and participate in weekly seminars and case consultations to increase knowledge and psychotherapy skills based on training goals (i.e., developing crisis intervention and assessment skills and strengthening multi-cultural therapy skills)
- Receive training in and administer intelligence, cognitive, achievement, psychodiagnostics, and emotional assessment batteries (i.e., WAIS-IV, WCJ-IV, WMS-IV, Nelson-Denny, DKEFS Trail Making Subtest, BDI-II, and BAI) to provide students with necessary academic and personal accommodations for learning disabilities
- Cover weekly crisis care shifts attending to students with urgent concerns, performing thorough risk assessments, triaging, consulting with CC staff and campus community partners, and providing resources and support

- Conduct initial assessments with students to determine fit for available clinical services, conduct risk assessments, provide available resources, and connect if needed with case management services
- Manage client charts via an EHR (i.e., PNC) and maintain up-to-date progress notes and initial assessments to ensure proper documentation of treatment and interventions, and adherence to legal and ethical standards
- Maintain a strong relationship with the Latinx Resource Center as a co-liaison, to provide the center with support for students via presentations, Placitas, and informal chats with students
- Participate in varying outreach activities involving tabling, presentations, workshops, panels to provide targeted psychoeducation and a welcoming presence to a variety of clubs, organizations, schools, and student groups

Los Angeles Job Corps Center **August 2022 – June 2022**
Pre–Doctoral Extern
Director and Supervisor: Kandice Timmons, Psy.D.

- Received training in and provide CBT, 3rd wave CBT, and multicultural therapy through a brief treatment model via individual telehealth and in-person psychotherapy to transition age youth (16-24 years) in a residential setting
- Received weekly individual and group supervision and participate in weekly didactics to increase knowledge and psychotherapy skills based on training goals (i.e., developing crisis intervention and assessment skills and strengthening multi-cultural therapy skills)
- Co-facilitated a process therapy group and a psychoeducational group to engage the student population to promote mental health and increase social, emotional, and behavioral functioning
- Received training in and administer intelligence, cognitive, achievement, psychodiagnostics, and emotional assessment batteries to provide students with necessary academic and personal accommodations for ADHD and learning disabilities
- Conducted monthly chronic care check-ins to assess mental status, mood, and well-being for students with serious mental health conditions or challenges
- Managed client charts and maintain up-to-date progress notes to ensure proper documentation of treatment and interventions, and adherence to legal and ethical standards
- Engaged in monthly outreach with students and faculty to promote mental health psychoeducation
- Consulted with the multidisciplinary team consisting of psychiatrists, nurses, career counselors, and substance abuse counselors to coordinate holistic and individualized treatment plans

Boys Hope Girls Hope of California **May 2022 – September 2022**
Pre-Doctoral Extern
Supervisor: Susan Himelstein, Ph.D.

- Trained in clinical interviewing, assessment administration, scoring, interpretation, and report writing of an assessment battery consisting of a clinical interview, WISC-V, WRAT-5, VMI, the Roberts, Child Sentence Completion, and MACI-II to an adolescent seeking admission into the Girls Hope of California program
- Received supervision on scoring, interpreting, and reporting of the results of the assessment battery
- Scored and interpreted assessment data and incorporated the data into brief and agency reports to aid Girls Hope in their admissions process

Pepperdine University Counseling Center **August 2021 – May 2022**
Pre-Doctoral Extern
Supervisor: Gloria Walters, Ph.D.

- Trained and provided individual telehealth and in-person psychotherapy CBT through a brief treatment model to the undergraduate and graduate student population
- Cofacilitated a process therapy group on inter- and intrapersonal skills for graduate students, and a skills-based group for undergraduate and graduate students on anxiety management skills
- Received individual and group supervision to increase skills in psychotherapy and psychological assessment
- Consulted with staff psychologists and a multidisciplinary team of medical doctors, nurses, a psychiatrist, an eating disorder specialist, and a nutritionist as needed
- Administered mood and crisis assessment measures (i.e., BDI-II, BAI, BHI, and BSI) to clients in crisis and consulted with a full-time staff psychologist in accordance with center protocol
- Engaged in monthly outreach events to promote mental well-being, screen for possible mental disorders, and deliver psychoeducation to promote center services and well-being
- Developed, coordinated, and facilitated a Latinx student support group to create a safe and open space for Latinx-identifying students to discuss their experiences on and off campus
- Managed client charts and maintained up to date progress notes and year-end measures to ensure proper documentation of treatment and interventions to adhere to legal and ethical standards

Pepperdine University West LA Community Counseling Center **September 2021 – November 2022**
Practicum Student
Supervisor: Carl King, Ph.D.

- Trained in and provided CBT and 3rd wave CBT (i.e., ACT) to a culturally diverse adult (18+) population in an outpatient setting with after-hours coverage via telehealth
- Enhanced intake interviewing and initial evaluation skills to continue developing differential diagnosis, case conceptualization, and treatment planning skills
- Conducted and generated strengths-based intake reports to conceptualize client challenges and develop treatment plans
- Maintained client charts and track session fee payments via the SimplePractice online platform
- Administered assessment measures of onset and incidence of symptoms or presenting problems, symptom tracking, and evaluation of other psychiatric symptoms and behaviors every 5 weeks

Rich and Associates Social Skills Summer Outpatient Treatment Program **June 2021 – July 2021**
Pre-Doctoral Extern
Supervisor: Seth Shaffer, Psy.D.

- Trained in and provided group therapy and behavior management to children and adolescents (5-15 years old) in an outpatient summer camp setting to promote social and emotional skills development
- Tracked social skills for five clients each week, to provide feedback and review behavior plans with each client
- Completed brief summaries of client progress on behavior plans
- Received group supervision to increase knowledge and understanding of group therapy processes and group development
- Learned and adjusted group therapy interventions utilizing play therapy materials for group interventions

South Los Angeles Trauma Recovery Center **August 2020 – August 2021**
Practicum Student
Individual Supervisor: Carissa Gustafson, Psy.D.

- Trained in and provided evidence-based 3rd wave CBT (i.e., ACT and DBT) techniques and the Attachment, Regulation, and Competency (ARC) framework via telehealth to a child and adolescent population with histories of complex trauma
- Conducted and generated strengths-based intake reports to conceptualize client challenges and develop treatment plans
- Administered measures of historical trauma, onset and incidence of trauma symptoms or presenting problems, and other psychiatric symptoms and behaviors associated with exposure to trauma to clients at baseline, mid-treatment, and termination of treatment
- Facilitated case management services to clients and their families to assist in the attainment of various social and physical needs
- Fostered and sustained relationships with other professionals such as individuals within the South LA Crossroads office, social workers, school administrative staff, community organizations, and social services
- Developed and facilitated a community presentation for parents on how to support their children behavioral and emotional needs

Anxiety and Mood Disorder Clinic – CSUN **August 2018 – May 2020**
Practicum Student
Clinic Supervisors: Jill Razani, Ph.D. (2018-2019), Maura Mitrushina, Ph.D. (2019-2020)

- Trained in and provided CBT to a diverse community adult population presenting with anxiety and mood disorders on a sliding scale fee
- Received group supervision and didactic training to create a foundation of CBT theoretical understanding, skills, and interventions
- Managed client charts ensuring accurate documentation of counseling services and adherence to clinic policies
- Administered semi-structured phone intakes to potential clients and assigned intakes to other trainees on a weekly basis
- Scored and administered mood assessment measures to clients at baseline, mid-treatment, and termination to determine current symptoms progress tracking

Assessment Clinic – CSUN **August 2019 – May 2020**
Practicum Student
Clinic Supervisor: Gary Katz, Ph.D.

- Trained in the assessment of intelligence, cognitive, achievement, emotional, and behavioral assessments including the WAIS-IV, WISC-V, WRAT-5, Woodcock Johnson IV, and the BASC-3
- Received group supervision to increase assessment knowledge and skills, including guidance on report writing
- Administered and observed administration of assessments to children, adolescents, and adults from school and personal referral sources
- Scored and interpreted assessment results to compose assessment reports that were disseminated and presented to the parent of the child or the adult
- Managed case files of the child, or adult tested for educational, occupational, or personal evaluation

SCHOLARSHIP AND RESEARCH

Publications:

Arentoft, A., Troxell, K., Alvarez, K., Aghvinian, M., Rivera Mindt, M., Cherner, M., Van Dyk, K., Razani, J., Roxas, M., **Gavilanes, M**. (2022). HIV antiretroviral medication neuropenetrance and neurocognitive outcomes in HIV+ adults: A review of the literature examining the central nervous system penetration effectiveness score. *Viruses, 14* (6), 1151. https://doi.org/10.3390/v14061151.

Conference Presentations:

Gavilanes, M., Alvarez, K., Troxell, K., Ortega, N., Roxas, M., Van Dyk, K. & Arentoft, A. (2020*). The relationship between cognitive flexibility, cognitive failures, and the experience of depression and anxiety symptoms in HIV+ individuals.* Poster presented at the 48th Annual Meeting of the International Neuropsychological Society Annual Meeting, Denver, CO.

Alvarez, K., Aghvinian, M., **Gavilanes, M.**, Mossman, L., & Arentoft, A. (2019*). Lifetime and recent alcohol use is associated with learning memory and working memory performance in HIV+ individuals.* Poster presented at the 2019 International Neuropsychological Society Annual Meeting, New York City, NY.

Mossman, L., Aghvinian, M., Alvarez, K., **Gavilanes, M**., Troxell, K., & Arentoft, A. (2019). *Zenith Viral Load and Neuropsychological Functioning in HIV+ Individuals with Undetectable Viral Load.* Poster presented at the 47th Annual Meeting of the International Neuropsychological Society, New York, New York.

Machón, R. A., Muldoon, N., Leung, S. **Gavilanes, M.**, & Shodahl, S. (2018). *College students' future expectations are related to their socioeconomic background.* Oral presentation at the 9th Annual Undergraduate Research Symposium at Loyola Marymount University, Los Angeles, CA.

Machón, R. A., **Gavilanes, M**., Shodahl, S., Muldoon, N., & Leung, S. (2018). *What role does religiosity play in college students' value orientation and ethics?* Oral presentation at the 9th Annual Undergraduate Research Symposium at Loyola Marymount University, Los Angeles, CA.

Machón, R. A**., Gavilanes, M.**, Shodahl, S., Muldoon, N., & Leung, S. (2018). *What role does religiosity play in college students' value orientation and ethics?* Poster presented at the 29th Association for Psychological Science Annual Conference, Boston, MA.

Machón, R. A., Muldoon, N., Leung, S,. **Gavilanes, M**., & Shodahl, S. (2018). *College students' future expectations are related to their socioeconomic background.* Poster presented at the 29th Association for Psychological Science Annual Conference, Boston, MA.

Invited Presentations and Community Outreach:

Gavilanes, M. (2023) *Risk and Protective Factors Among Latinx College Students' Mental Health.* Presentation delivered to the American Psychological Association Board of Directors.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2023). *Self-Care*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2023). *Relationships and Coping with Break-Ups*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2023). *Grief and Loss.* Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2023). *Sexual Assault Prevention Month Presentation*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2023*). Mental Health Awareness Month*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2023). *LGBTQIA+ Community and Pride Month*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., Gavilanes, M., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2023). *Trauma Awareness.* Presentation delivered to students and staff at Los Angeles Job Corps.

Gavilanes, M. (2023). *ISTEPS Stress Reduction Presentation*. Presentation adapted by S. Surapaneni and delivered to international students within the ISTEPS program at UCI.

Dalton, I., **Gavilanes, M.** (2023) *Latinx Self-Care and Mental Health*. Presentation for the Latinx Resource Center delivered to first year Latinx students at UCI.

Timmons, K., **Gavilanes, M**., Lowery, Z., Martins, K., & Walker, C. (2022). *Suicide Prevention and Awareness*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2022). *Intimate Partner Violence and Domestic Violence Awareness Month*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M.,** Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2022). *Bullying and Spreading Kindness*. Presentation delivered to students and staff at Los Angeles Job Corps.

Timmons, K., **Gavilanes, M**., Hernandez, A., Lowery, Z., Martins, K., & Walker, C. (2022). *Mental Health During the Holidays*. Presentation delivered to students and staff at Los Angeles Job Corps.

Wood, L., **Gavilanes, M**., Dowlou, G., & Mouda, R. (2021). *Helping kids manage their emotions and behaviors. Presentation delivered to parents at the Lynwood Unified School District.*

Gavilanes, M. (2020). *The experience of anxiety and depression in Latinx college students* [Webinar]. Presentation delivered to students at Pepperdine University.

Invited Panels:

Bryant-Davis, T. *Caring for self and each other: Elevating mental health and well-being for young women of color*. (2021). Workshop by The Steve Fund. Panel Member. [Video]

PEER CONSULTATION EXPERIENCE

Pepperdine University West LA Community Counseling Center **September 2022 – July 2023**
Clinical Peer Consultant
Supervisor: Aaron Aviera, Ph.D.

- Delivered weekly individual peer consultation to first- and second-year doctoral level therapists to promote the development of their therapeutic and clinical writing skills
- Participated in didactic seminars facilitated by Drs. Edward Shafranske and Carol Falender, regarding the competencies of supervision
- Reviewed written intake reports and session recordings to provide feedback on case conceptualization, diagnosis, treatment planning, and legal and ethical issues
- Evaluated progress and areas of continued growth to be communicated to the doctoral students' main clinical supervisor
- Partook in weekly case conferences and provide feedback to doctoral students to increase case conceptualization and diagnostic skills
- Cofacilitated case conferences in second half of training year

RESEARCH EXPERIENCE

CSUN ACENT Lab **August 2018 – September 2020**

Research Assistant

PI: Alyssa Arentoft, Ph.D.

NIH Grant #SC2MH118473

- Participated in a NIH-funded research project regarding health risk behaviors and neuropsychological functioning in HIV+ adults
- Administered a neuropsychological battery consisting of a clinical and psychiatric interview and several WAIS-IV subtests, the CPT-III, Trail Making Test Parts A and B, COWAT, FAS, Activities of Daily Living, BDI-II, and the BAI to adult participants
- Scored 40 test batteries and analyzed data of 112 participants to evaluate results
- Trained incoming lab members on database management, neuropsychological test administration, and scoring to ensure lab members were familiar with study and lab protocol
- Contributed to one manuscript based on data from the current NIH funded study for future publications on the effects of health risk behaviors in HIV+ individuals on executive functioning • Published a literature review on HIV antiretroviral medication neuropenetrance and neurocognitive outcomes in HIV+ adults

LMU Research Lab **November 2016 – September 2018**

Research Assistant

Supervisor: Ricardo Machón, Ph.D.

- Assisted in and spearheaded a research project with Dr. Ricardo Machòn examining surveys taken by 200 LMU students, concerning the relationships between students' level of religiosity and their level of value orientation for a manuscript
- Aided Dr. Ricardo Machòn and colleagues on a research project examining the relationship between college students' future expectations and their socioeconomic status for a manuscript
- Ran various statistical analyses, prepared posters, oral presentations, and manuscripts for publication
- Trained incoming lab members in database management, poster and presentation preparation, and manuscript writing for preparation in lab protocol

TEACHING EXPERIENCE

GSEP Assessment Teaching Assistant **August 2021 – May 2023**

Supervisor: Susan Himelstein, Ph.D., Caroline Keatinge, Ph.D.

- Delivered a range of teaching and assessment activities including tutorials directed towards the delivery of intelligence, cognitive, projective, emotional, and behavioral assessments at a master's and Doctoral level
- Supported assessment faculty with grading of class assignments and scoring of assessments, providing detailed feedback to students
- Provided support and guidance for students in assessment and professional development

Instructional Student Assistant **August 2018 – June 2020**

Department of Psychology, CSUN

- Assisted various faculty in the Psychology Department with grading exams, assignments, and quizzes for various classes within the psychology department utilizing organizational and critical thinking skills
- Trained in and utilized scoring software to assist in grade recording
- Proctored exams for faculty with medium to large class sizes and ensure proper collection of exams to prevent academic dishonesty
- Maintained and fostered working relationships with faculty and administrative staff of the Psychology Department

Resident Advisor/ Teaching Assistant/ Member **August 2016 – May 2017**

Academic Community of Excellence, LMU

- Created weekly lesson plans for the undergraduate sophomore class (i.e., how to format a resume, creating a LinkedIn profile, and how to research graduate school programs)
- Mentored psychology majors to provide additional academic, personal, and occupational support, and connected them to professors and other potential professional mentors
- Composed a residential experience plan, designed to lay out the role of residence hall in the program to maximize the benefits of a living learning community for the students

WORK EXPERIENCE

Graduate Assistant **June 2022 – July 2023**

GSEP Online Psychology Programs, Pepperdine University

- Managed desk copy request process, ordering and tracking desk copies of adopted course textbooks for newly hired or new to section faculty
- Assisted the program administrative assistant with maintaining and updating the desk copy request database each semester
- Coordinated purchasing of textbooks and delivery of texts to instructors

Graduate Assistant **August 2020 – August 2021**

Center for Global Partnerships and Learning, Pepperdine University, Los Angeles, CA

- Connected students with resources to aid in research publication and presentation through virtual office hours, one-on-one meetings, and monthly series and workshops
- Assisted in the creation and management of the Scholarship without Borders Research journal in recruiting peer reviewers and eliciting submissions
- Tracked all students receiving services from Scholarship Without Borders, and presented information to the Dean of the education division

PROFESSIONAL AFFILIATIONS

- American Psychological Association – Graduate Student Member
- APA Division 45: Society for the Psychological Student of Culture, Ethnicity and Race – Graduate Student Member
- The National Latinx Psychological Association – Graduate Student Member
- California Latinx Psychological Association – Graduate Student Member

- International Neuropsychology Society – Graduate Student Member
- Psi Chi – Psychology Honors Society
- Association for Psychological Science

ADDITIONAL SKILLS

- **Research**: Qualtrics, SONA (subject pool management)
- **Statistics**: R, SPSS
- **Productivity**: Excel, Word, Google Suite, and PowerPoint
- **EHR**: PNC, Titanium, SimplePractice

ABSTRACT

A quantitative studies systematic review with narrative synthesis was conducted to explore the risk and protective factors among Latinx college students' mental health. This systematic review also aimed to identify the relevant demographic variability to the mental health of Latinx college students, and the relationship between mental health and academic performance within this population. Data was collected from four electronic databases and included peer-reviewed articles published between 2000 and 2022, conducted within the United States, participants over the age of 17, and samples comprised of or including Latinx college students. Studies utilizing quantitative designs, and quantitative portions of mixed method designs were included for analysis. Sixty studies were identified as providing information on risk factors and protective factors for mental health, and academic performance variables. A wide array of risk factors were identified and categorized into four main themes: identity and culture, college/work, social interactions, and stressors. Protective factors were identified and categorized within four main themes: identity and culture, college/ work, social interactions, and coping. A total of 58 mental health outcomes were examined and categorized within the following themes: Academics/college, symptoms, stress, belonging, coping, and suicide. Differences within the demographic variability of the samples included entirely Latinx versus mixed samples, and gender. Lastly, risk factors, protective factors, and mental health outcomes, were found to be related to academic performance variables. Risk and protective factors among Latinx college students' mental health highlights the nuances of context. Meanwhile, the number of mental health outcomes and the categories in which they fall demonstrate the uncoordinated plethora of research foci. This diversity indicated that the demographic variability relevant to mental health of Latinx college students was limited to broader observations. Yet, utilizing the surplus of

variables emphasized the need to expand upon our understanding of academic performance to capture how mental health and additional variables either worsen or improve academic performance. Academia is called to take this niche topic out of obscurity and into the forefront of research to encourage colleges and universities to provide well-funded services and programs aimed at supporting these students’ mental health, academic performance, and personhood.

Chapter One: Introduction and Review of The Literature

Statement of the Problem

For most, college presents a new set of challenges and opportunities for growth. To better understand and meet the needs of students, universities have provided a wide array of resources for students. These resources target aspects of students' lives that may help or hinder their academic success. But what of populations historically excluded in the U.S. and on college campuses? People of color have advocated for resources unique to their needs, and this advocacy has been especially present within the college environment (Lipson et al., 2018). Latinx students, in particular, are historically excluded in higher education and therefore need access to mental health interventions addressing culture-specific disorders, symptoms, symptom presentation, and other unique needs within the context of the college environment (CCMH, 2015).

As of 2016, the U.S. Census reported Latinx students comprised 22.7% of all students enrolled in school (k-12, colleges, and universities), and over the past two decades college enrollment by Latinx has tripled (U.S. Census Bureau & Bauman, 2018). Furthermore, between 2011 and 2016, the enrollment of Latinx students in 4-year universities increased by 700,000 (U.S. Census Bureau & Bauman, 2018). Although there is a significant upwards trend of Latinx enrollment in higher education, significant differences in enrollment between Latinx students and students of other races and ethnicities persist. Emphasizing this, the number of individuals who have not completed high school or are enrolled in school is higher within the Latinx population than non-Latinx groups (U.S. Census Bureau & Bauman, 2018). The Latinx presence on college campuses must be served actively and effectively through culturally informed services to support a historically disenfranchised and excluded population in the U.S. Educational System.

The presence of a mental disorder increases the risk of dropping out of school prior to graduation for any student (Borges et al., 2011; Fletcher, 2008; Lee et al., 2009; Roeser et al., 1998; Veldman et al., 2014). To address this for Latinx students, implementing culturally informed services may increase graduation rates and academic performance. Understanding which mental health challenges are commonly seen at college counseling centers may better inform culturally informed interventions to serve Latinx student needs more effectively. But what makes a student more or less at risk for a mental disorder or issue? Researchers and clinicians focusing on college students need to recognize and address the impact of risk and protective factors of mental health on Latinx students to support their mental wellness and academic progress.

In examining mental health services provided to Latinx college students, several gaps in the literature emerge. Several systematic reviews examining the experiences and success of Latinx college students identify a need for a greater understanding of societal structures which influence these outcomes (Crisp et al., 2015; Ives & Castillo-Montoya, 2020; Winterer et al., 2020). First, studies on the efficacy of various mental health interventions for Latinx college students are virtually non-existent. Second, studies and articles addressing how mental health services can be adapted to be more culturally informed are rarely found. Although many studies on risk and protective factors of mental wellness exist, their application to therapeutic and preventative services is not widely published (DeFreitas et al., 2018).

It is crucial for mental health professionals to be aware of the factors that may impair or promote mental wellness and consider them in treatment or prevention programs. The number of Latinx individuals in the U.S. and the enrollment of Latinx students in higher education is growing rapidly (U.S. Census Bureau & Bauman, 2018). Therefore, it is of the utmost importance that mental health professionals on college campuses become familiar with what culturally informed therapeutic interventions and preventative programs are available and accessible to Latinx students.

College Student Mental Health

College students comprise a unique group in the U.S. with their own set of factors that influence their mental health. The literature has supported the assertion that mental health problems among the college student population are quite common (Blanco et al., 2008). This may be due to the following factors: academic load, increased responsibility, increased independence, interpersonal relationships, and introductions to differing viewpoints. Many students must additionally meet work and family demands on top of their academic responsibilities. Considering that the onset of many mental health disorders is in early adulthood, when many college students face new pressures, the experience of mental health issues or problems becomes more common (Blanco et al., 2008). One study observed that 75% of individuals with a mental health disorder have their first onset by age 25 (Kessler et al., 2007), further supporting this claim.

Prevalence rates for various mental health disorders and challenges continue to support this. A review study by Kang and colleagues (2021) examined studies published between 2009 and 2019 and determined the following prevalence rates for mental health disorders among college students: 19 to 48% for eating disorders, 2 to 12.27% for compulsive disorders, 22% for depression, 8% for PTSD, and 9.4 to 36% for sleep disorders. Another study found that of a sample of approximately 155,000 students, 26.9% screened positive for depression, with depression increasing from 24.8% to 29.9% between 2009 and 2019 (Lipson et al., 2019). In the same sample, 8.2% of students reported experiencing suicidal ideation, with the positive screenings increasing from 5.8% to 10.8% over the same decade. With concerning prevalence rates of mental health challenges experienced by college students, an upwards trend has been identified in the utilization of psychological services on college campuses (Lipson et al., 2019). Specifically, the rate of treatment at college counseling centers increased from 19% in 2007 to 34% in 2017. The same study identified lifetime diagnoses for students increasing from 22 to 36% between those same years. Interestingly, mental health stigma decreased between 2007 and 2017, which researchers concluded may have, in part, contributed to the increased utilization of services. Due to increasing prevalence rates of disorders on college campuses, there is an ever-growing need for counseling centers and institutions to provide students with specialized services.

Specifically, many articles appear to focus on suicidality and other serious mental health concerns. Most recently, within the Covid-19 pandemic, the perceived risk of contracting coronavirus was linked to greater depression, anxiety, and stress among college students (Haliwa et al., 2021). On the other hand, the same study found mindfulness and greater social support were linked to better psychological health, including less depression and greater life satisfaction. Lamis and Lester (2013) found college students experiencing feelings of hopelessness and burdensomeness were at a greater risk for suicidal ideation. Moreover, perceived reasons for living served as protective factors against suicidal ideation. A systematic review of the literature on suicide risk and college students indicated that self-reported depression, cumulative stressful life events, sleep difficulties, disconnection from others, and feelings of hopelessness increased suicide risk for college students (Li et al., 2019). Reasons to live and hope decreased a student's suicide risk. Interestingly, recent literature on risk and protective factors for college students' mental health addresses the Covid-19 pandemic and utilizes suicidal ideation or risk as a mental health outcome.

Latinx College Students

The population of Latinx individuals living in the U.S. as of the 2019 Census totaled 60,572,237 (U.S. Census, 2021b). The U.S. census indicates 16.4% of the nation was comprised of Latinx individuals in 2010, which grew to 18.5% in 2019, roughly a 13% increase in the span of 9 years (Census, 2021a). Keeping these statistics in mind, it is crucial to recognize the growing number of Latinx college students enrolling in higher education. While Latinx students continue to be markedly and historically excluded within colleges and universities, the percentage of Latinx students enrolled in 4-year universities increased by 48% between the Fall of 2009 and the Fall of 2019 (U.S. Department of Education, NCES, & Dean, 2021). To accommodate Latinx students' needs, universities may obtain the title of a Hispanic Serving Institution (H.S.I.), granted when Latinx students comprise 25% of full-time undergraduate enrollment (U.S. Department of Education, 2019).

With the steady rise in Latinx enrollment in higher education, Latinx students are facing challenges due to their ethnic and racial identities, which are salient in the growing xenophobic, racist, and discriminatory rhetoric encouraged by political leaders in the U.S. Possibly due to their growing yet still historically excluded presence, the Latinx college student world is unique due to the distinctive experience of Latinx individuals within the U.S. For example, the negative atmosphere and climate in education following President Donald Trump's election, otherwise known as the "Trump Effect," has been found to negatively impact Latinx college students (Munoz et al., 2018). Specifically, in considering Latinx students' experiences, one can imagine a profound and negative effect on undocumented Latinx students' well-being. Anti-immigration rhetoric normalized during the election and presidency of Donald Trump, and the elimination of the Deferred Action for Childhood Arrivals (DACA) stand as two examples of racist nativism and the destruction of opportunities to build solidarity within the Latinx communities in higher education (Munoz et al., 2018). Considering the unique experience Latinx students navigate, the effects of discrimination and negative sociopolitical climates on Latinx students' mental health must be explored. One study conducted by Hope and colleagues (2018) found a significant interaction effect between depressive symptoms and political activism for Latinx college students. The same study named political activism as a mitigator of adverse effects of racial or ethnic discrimination on experiences of stress and depressive symptoms.

Latinx Mental Health

Today, Latinx individuals living in the U.S. face many unique challenges as a minority group, including navigating acculturation and acculturative stress. Arbona and Jimenez (2014) found the stress of being in a minoritized group alone can exacerbate mental health concerns. One study found a lifetime psychiatric disorder prevalence estimate of 28% for Latinx men and 30.2% for Latinx women (Alegria et al., 2008). With respect to variability within the larger Latinx population, Puerto Ricans were found within this study to have the highest overall prevalence rate for psychiatric disorders of all Latinx ethnic groups.

Commonly experienced concerns within the Latinx community are that of depression and anxiety. Internalizing symptoms of depression and anxiety are commonly experienced by Latinx individuals under acculturative stress (Smokowski et al., 2008). Although the literature presents mixed findings, many studies conclude that depression and anxiety prevalence rates among Latinx Americans are lower than non-Latinx whites (American Psychiatric Association, 2021; Asnaani et al., 2010; Breslau et al., 2005). Specifically, Asnaani and colleagues (2010) found in their samples the prevalence rates of non-Latinx whites to be 12.1% for social anxiety disorder 8.6% for generalized anxiety disorder, whereas Latinx have prevalence rates of 8.2% and 5.8%, respectively; with these low utilization of mental health services possibly attributed to accessibility and mounting stigma. Another study's findings concluded Latinx are at lower risk for depression, generalized anxiety disorder, and social phobias than non-Latinx whites (Breslau et al., 2005). The American Psychiatric Association reported prevalence of serious mental illness rose from 4% to 6.4% in Latinx Americans ages 18-25, and 2.2% to 3.9% ages 26-49 between 2008 and 2018 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018). Additionally, major depressive episodes among Latinx Americans rose 12.6% to 15.1% for ages 12-17, 8-12% for ages 18-25, and 4.5-6% for ages 26-49 between 2015 and 2018.

Despite evidence supporting lower prevalence rates for the Latinx population in the U.S., there is evidence to support increased internalizing symptomatology among Latinx youth. Internalizing symptoms are inwardly experienced, such as anxiety, depression, or somatic complaints, whereas externalizing symptoms are outwardly expressed, such as impulsivity or hostility (Levesque, 2011). Within community and treatment-seeking samples, higher rates of somatization were found among Latinx individuals when compared to non-Latinx whites, which may explain the lower rates and risk for anxiety and depressive disorders in Hispanics due to cultural differences in mental health disorder somatization, accessibility, and cultural stigma (Escobar et al., 1983). Somatization of symptoms may be considered a culturally appropriate expression of psychological problems, as cognitive symptoms represent mental health dysfunction and are often stigmatized cross-culturally (Varela et al., 2009).

Furthermore, the utilization of mental health services among the Latinx warrants attention. Utilization of mental health services among Latinx youth was found to be significantly lower than that in non-Latinx white youth, further illustrating the gap of mental health services between Latinx and non-Latinx whites (Gudiño et al., 2009; Kataoka et al., 2002). The American Psychiatric Association (2021) has identified that Latinx or Hispanic individuals are more prone to pursue help for a mental disorder, illness, or issue from a primary care provider than a mental health specialist. Multiple studies have identified a trend of the underutilization of conventional psychological services by Latinx-Americans (Cabassa et al., 2006; Cardemil et al., 2007; Downs & Eisenberg, 2012; Kearney et al., 2005; Mills, 2012; Prieto et al., 2001; Roberts et al., 2010). Despite the underutilization of services, Nadeem and colleagues (2008) found that Latinas endorsed enjoying therapy similarly to their white counterparts in their sample. Furthermore, ¼ of participants in a study conducted by Cardemil and colleagues (2007) endorsed using alternative services to promote mental wellness consistent with their own traditions, including priests or indigenous healers. The Latinx population has been found to utilize non-conventional forms of mental health services more than non-Latinx populations; however, two studies suggested that preference of conventional over non-conventional mental health services was endorsed in the Latinx population so long as conventional services were aligned with traditional values (Arcury et al., 2019; Mills, 2012). Although the literature indicates that Latinx groups experience mental disorders and psychological problems at a lower rate than non-Hispanic whites, there may be several underlying factors which may explain the between-group differences. Underutilization and underreporting of symptoms may be to blame.

Furthermore, several studies have found acculturative stress may place an individual at an increased risk for anxiety or depressive disorders, behavioral problems, suicidal ideation, identity confusion, decreased familial cohesiveness, and increased family conflicts (Alegría et al., 2008; Burnam et al., 1987; Hoovey & Magana, 2000; Pociano et al., 2020; Smokowski et al., 2008; Wang et al., 2016). The acculturation process is multifaceted, where two or more different groups or cultures interact, leading to changes in cultural attitudes, beliefs, values, behaviors, practices, and identification (Berry, 2003; Sam & Berry, 2010, Schwartz et al., 2010). This process may occur at various levels, including individual or group. The impact of acculturation is dependent on factors such as cultural behaviors, practices, identifications, and values of the individual's own culture and the host or receiving culture.

Understanding acculturation as a psychological construct with consequences on the immigrant populations and future generations' adjustment and mental health is imperative to understanding the current state of Latinx mental health. For many Latinx immigrants and Latinx members living in the U.S. for generations, two main challenges exist; navigating how much of their traditional culture to keep and how much of the host (American) culture to adapt to (Berry et al., 1987). Acculturative stress and discrimination have both been found to positively correlate with anxious and depressive symptoms in Latinx individuals (Berkel et al., 2010; Chou et al., 2012; Hwang & Goto, 2009). Furthermore, increased rates of psychiatric disorders were found among third-generation, US-born, English language proficient Latinx individuals, supporting the idea that acculturative stress can increase the risk for psychological problems (Alegria et al., 2008).

Mental Health Risk and Protective Factors

When an individual experiences psychological distress, the emotional disturbance may impact social and daily functioning (Wheaton, 2007). As the distress becomes more severe, the individual is at risk of developing a psychological disorder or experiencing impaired psychological functioning (Barragan et al., 2015; Bratter & Eschbach, 2005; Kessler et al., 2003). Various biological, psychological, social, and cultural factors or characteristics are associated with increased or decreased likelihood for adverse mental health outcomes (SAMHSA, 2019). Risk factors increase the likelihood of negative outcomes, and in the case of mental health, risk factors increase an individual's likelihood to develop a mental disorder or mental health issue. Protective factors, on the other hand, are associated with a lower likelihood of negative mental health outcomes. It is risk and protective factors that shed light on the development of internalizing and externalizing problems (Matson et al., 2008). Risk and protective factors are either fixed or variable (SAMHSA, 2019). Examples of risk factors include acculturation, fear of deportation, discrimination, hopelessness, and poor self-efficacy (Hirsch et al., 2012; Kennard et al., 2006). Increased social support, including familism and religious support, may be protective factors for some groups (Corona et al., 2016; Rodriguez-Carrion et al., 2011; Zimet et al., 1988). The heterogeneity of risk and protective factors between groups points to how cultural differences between groups influence how a characteristic may increase or decrease the likelihood of a negative mental health outcome (Rivera et al., 2008). For example, for some groups increased familism may be a protective factor, while it may serve as a risk factor for others.

Latinx populations within the U.S. face their own set of risk and protective factors which impact their mental health. With suicide risk as the mental health outcome, prior suicide attempts, alcohol, and substance abuse, underutilization and barriers of access to mental health services, alienation, acculturative stress, family conflict, hopelessness, fatalism, and discrimination increase Latinx individuals risk for suicide (Cabassa et al., 2006; Caetano et al., 2013; Gomez et al., 2011; Jamieson & Romer, 2008; Olson et al., 2011; Suicide Prevention Resource Center [SPRC], 2011; U.S. Department of Health and Human Services [H.H.S.], 2021; Zayas et al., 2010; Zayas & Pilat, 2008). Moreover, effective mental health care, problem-solving skills, familism, ethnic affiliation, religiosity, moral objections to suicide, and caring from teachers serve as protective factors, reducing the risk of suicide for Latinx individuals (De Luca et al., 2012; H.H.S., 2021, Locke & Newcomb, 2005; Oquendo et al., 2005; Peña et al., 2011; Robinson et al., 2012; Umana-Taylor & Updegraff, 2007; Zayas et al., 2011). When considering specific mental health disorders, negative interactions with family members predicted the likelihood of a major depressive disorder diagnosis and suicidal ideation, and experiences of discrimination predicted a greater likelihood of suicidal ideation (Ai et al., 2014). The same study found acculturative stress, income, education level of 12 years, and living in the U.S. for less than 11 years, to be associated with generalized anxiety disorder. Social support, racial/ethnic identity, and religious involvement were not identified as protective factors in this study, as they were not influential on the diagnosis of a mental disorder.

Risk and Protective Factors Among Latinx College Students

The literature has explored the risk and protective factors for Latinx college students and presents findings that provide valuable information on the challenges and resources for their mental health (Billingsley & Hurd, 2019; Eisenberg et al., 2016; Gloria, 2002; Hope et al., 2018; Sims et al., 2020). Latinx students face a unique set of stressors and challenges such as discrimination, cultural isolation, lack of access to same-ethnicity role models, and low educational expectations (Gloria, 2002). These stressors have been linked to increased risk of academic attrition and mental health issues (Billingsley & Hurd, 2019; Eisenberg et al., 2016; Gloria, 2002; Hope et al., 2018). Sims and colleagues (2020) examined the political climate and sense of belonging for Latina undergraduates. Within their sample of 104 Latina undergrads at a West Coast university, researchers found that violence exposure and financial hardship were significantly related to higher levels of psychological distress (i.e., depression, anxiety, stress, and post-traumatic stress). Belonging was additionally linked to better mental health outcomes. Considering how vital a sense of belonging may be for a college student, it is essential to note that the study was conducted at a Hispanic Serving Institution where at least 25% of the student body identifies as Latinx.

Another study examining the relationship between cultural stressors, cultural values, and Latinx college students' mental health found positive associations between cultural stressors such as acculturative stress and discrimination and mental health symptoms (i.e., anxiety, depressive, psychological stress; Corona et al., 2016). Negative associations were found between cultural values of familismo, respeto, and religiosity, and mental health symptoms. A third study examining the relationship of acculturative stress and psychological functioning in a sample of 148 Mexican American college students found acculturative stress associated with higher levels of anxiety and depressive symptoms (Crockett et al., 2007). Active coping was associated with better adjustment (i.e., lower depression), but avoidant coping was associated with poorer adjustment (i.e., higher levels of depression and anxiety). Parental support and an active coping style in this study were found to buffer the effects of high acculturative stress on anxiety symptoms and depressive symptoms. Furthermore, peer support acted as a moderator between acculturative stress and anxiety symptoms. As research explores the protective and risk factors to Latinx college students' mental health, it is crucial to understand their impact within the context of the prevalence of mental disorders on college campuses.

Major Concepts

In exploring the risk and protective factors for Latinx college students’ mental health, several concepts emerged which warrant attention and definition. Several cultural values were consistently utilized as risk factors, protective factors, and mental health outcomes. Mentioned earlier were the values of respeto and familismo. Respeto is viewed as a value utilized in the socialization of children to instill the importance of the level of good manners and behavior necessitated in any given situation (Lopez et al., 2022). Familismo on the other hand is defined as a collective orientation, meaning it is a value which supports the goals of the group, and in this case, the family or community unit. More specifically, familismo is the value of collectivism over the needs of the individual, leading to strong connection and identification with the family (i.e., nuclear and extended) through the expression of loyalty, reciprocity, and unity (Lopez et al., 2022). Furthermore, a study by Corona and colleagues (2016) has expanded upon the value of familism or familismo to measure more specific constructs. This includes supportive, obligatory, and referent familism values. Supportive familism refers to the desire to maintain close relationships, familism obligation refers to providing tangible support to family, and familism referent refers to behaving in ways consistent with family expectations (Corona et al., 2016). Lastly concepts specific to the Latinx experience include SB 1108. This was an Arizona Senate Bill, nicknamed the anti-ethnic studies bill, proposing that the state eliminate any state funded ethnic studies programs and ethnic based organizations (O'Leary & Romero, 2011).

Rationale and Aims of the Proposed Research

With the population of Latinx individuals expected to make up 24% of the U.S.'s total population by the year 2050, it is critical to continue addressing the Latinx community's needs (U.S. Census Bureau, 2021b). Moreover, the number of Latinx students enrolling in colleges and universities continues to increase (U.S. Census Bureau & Bauman, 2018). With abundant literature detailing the onset of many mental disorders and other psychological problems beginning or exacerbated within college, young Latinx adults' mental health needs within higher education need to be addressed. One way in which this may be done is by exploring the risk and protective factors for Latinx students' mental health. Comprehensive identification of risk and protective factors relevant to Latinx student mental health has implications for both prevention and psychological treatment. No identified systematic reviews which amalgamate the existing literature explore this. This gap in the literature necessitates a systematic review to synthesize findings, provide implications for practice, and further elaborate on future research needs. The study proposed here aims to summarize existing research on mental health risk and protective factors among Latinx college students and identify the mental health outcomes associated with these factors.

Research Questions

The systematic review will address these aims through the following research questions:

1. What are identified mental health risk factors among Latinx college students?
2. What are identified mental health protective factors for Latinx college students?
3. What mental health outcomes has the literature examined concerning risk and protective factors for Latinx college students?
4. What demographic variability has been found relevant to the mental health of Latinx college students (e.g., gender, generation status, social class, specific ethnocultural group)?
5. What relationship has been found between mental health indicators and academic performance among Latinx college students?

Chapter Two: Methodology

Systematic Review Approach

The approach to this proposed systematic review focused on quantitative studies and quantitative sections of mixed method studies and utilized descriptive synthesis methods to evaluate the research on the risk and protective factors for mental health for Latinx college students. This study's protocol was informed by the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) checklist (Moher et al., 2015). Findings from this review were used to inform the implementation of culturally informed mental health services for Latinx college students.

Study Eligibility Criteria

Study Designs

Quantitative studies were included in this systematic review in an effort to identify the empirical evidence concerning Latinx college students' risk and protective factors to their mental health. All types of quantitative research studies (i.e., survey research, descriptive research, experimental research, correlational research, and causal-comparative research) and quantitative sections of mixed-methods studies were eligible for inclusion in this review. Studies utilizing control or comparison groups were eligible for inclusion included as well.

Types of Sources and Settings

All articles included in the study were peer-reviewed and published within the United States. Moreover, articles published after 2000 were included to ensure all studies were based on recent data and sociopolitical climate factors. Studies conducted within the United States were included to explore the mental health of Latinx-American college students. Studies conducted at colleges, universities, junior or community colleges, college counseling centers, student psychological services, or mental health clinics were all included.

Types of Participants

Studies with samples consisting of participants in college or attending a university or junior/community college were included. Participants 17 years and older were included to account for students in college but have yet to turn 18. No maximum age was set as adults can enroll in a university at any age. Additionally, all genders were eligible for inclusion included. Studies must have examined Latinx students, including the following labels or subcategories: Latino, Latina, Hispanic, Chicano, Afro-Latinx, or any other nationality within Latin America. This was set to ensure that all Latinx individuals were eligible for inclusion in the study to capture the entirety of the Latinx identity and within-group differences. For studies which reported on a Latinx group in addition to another racial or ethnic group, only the data from the Latinx group were included and examined. Studies examining participants within an inpatient setting for serious mental illness would have been excluded from this study to remove serious mental illness as a barrier to treatment and mental wellness.

Types of Variables

Studies that included measurement of risk and protective factors as predictors and correlates of mental health outcomes were the focus of studies sought for this review. Primary mental health outcomes included but were not limited to psychological distress, psychological stress, life satisfaction, self-esteem, anxiety, depression, or other mental disorder diagnoses. These outcomes were determined via surveys or measures completed via self-report or researcher/clinician (e.g., depression as determined by a score on the Beck Depression Inventory-II). Demographic characteristics of participants such as generational status, year in school, income level, social class, and socioeconomic status would be examined. Additionally, setting characteristics such as type of higher education environment, characteristics of the environment, and the study location were a focus of the study.

Search, Screening, and Selection Strategy

Search Terms

Search terms for each database revolved around five themes: Latinx identities, college students, risk factors, protective factors, and academic performance (see Appendix A). Latinx identity terms include Latin*, Latinx, Latino, Latina, "Latin American," Hispanic, Chican*, Xicano, "Afro-Latinx," Mexican, Cuban, "Puerto Rican," Dominican, Guatemalan, and Salvadorian. Latinx ethnic groups with significant populations within the United States were included to ensure a wide array of articles were examined. Search terms capturing the college student population included "college students," "university students," "undergrad*," "undergraduate students," "grad* students," "junior college students," and "community college students." Terms encompassing risk factors included "risk factors," "contributing factors," "predisposing factors," and predictors. Terms capturing protective factors included "protective factors," "promotive factors," and buffers. Mental health-related terms included in the search strategy include "mental wellness," "mental illness," "mental disorder," "psychological distress," "psychological stress," stress, depression, and anxiety. Terms capturing academic performance will include "academic performance," "academic retention," "academic success," and "academic attrition."

Specific combinations of each search term set were used. For example, terms reflecting the variety of Latinx identities, followed by an "AND" operator, the terms related to the college student identity, followed by an "AND" operator, the terms related to protective factors, followed by an "AND" operator, and finally the terms related to mental health outcomes. The following are three search syntax examples:

1. (Latin* or Latinx or Latino or Latina or "Latin American" or Hispanic or Chican* or Xicano or "Afro-Latinx" or Mexican or Cuban or "Puerto Rican" or Dominican or Guatemalan or Salvadorian) AND ("college students" or "university students" or "undergrad*" or "undergraduate students" or "grad* students" or "junior college students" or "community college students") AND ("risk factors" or "contributing factors" or "predisposing factors" or predictors) AND ("mental wellness" or "mental illness" or "mental disorder" or "psychological distress" or "psychological stress" or "suicidal ideation" or suicide or stress or depression or anxiety)
2. (Latin* or Latinx or Latino or Latina or "Latin American" or Hispanic or Chican* or Xicano or "Afro-Latinx" or Mexican or Cuban or "Puerto Rican" or Dominican or Guatemalan or Salvadorian) AND ("college students" or "university students" or "undergrad*" or "undergraduate students" or "grad* students" or "junior college students" or "community college students") AND ("protective factors" or "promotive factors" or buffers) AND ("mental wellness" or "mental illness" or "mental disorder" or "psychological distress" or "psychological stress" or "suicidal ideation" or suicide or stress or depression or anxiety)
3. (Latin* or Latinx or Latino or Latina or "Latin American" or Hispanic or Chican* or Xicano or "Afro-Latinx" or Mexican or Cuban or "Puerto Rican" or Dominican or Guatemalan or Salvadorian) AND ("college students" or "university students" or "undergrad*" or "undergraduate students" or "grad* students" or "junior college students" or "community college students") AND ("mental wellness" or "mental illness" or "mental

disorder" or "psychological distress" or "psychological stress" or "suicidal ideation" or suicide or stress or depression or anxiety) AND ("academic performance" or "academic retention" or "academic success" or "academic attrition")

Electronic Databases

Psych Info, Academic Search Complete, Education Resources Information Center (ERIC), and PubMed were used initially to search for previous systematic reviews which have covered or encompassed similar topics. The researcher searched the following databases for studies that met study eligibility criteria: Psych Info, Academic Search Complete, ERIC, and PubMed. All databases named above were searched starting in the Summer of 2022. Searches were completed a second time by another reviewer (a research assistant) to ensure accuracy of search and screening procedures such as using relevant databases, correct use of search syntax, and correct identification of articles that fit within inclusion and exclusion criteria.

Study Screening and Selection Process

The search and screening procedures were carefully documented and tracked to maintain organization. To systematically document the searches, a search documentation record was created via Microsoft Excel Spreadsheets (see Appendix B), which included articles identified using the search terms listed earlier via the abovementioned databases. Terms were combined systematically for each research question via a comprehensive search plan (see Appendix C), and the results of these searches were entered into and tracked through their own screening and selection record in a Microsoft Excel Spreadsheet (see Appendix D). The search documentation record tracks data such as search date, type of search, database source, search specifiers (year published, study setting, research variables), and the number of studies identified via each search.

The following step consisted of screening studies via titles, keywords, and abstracts. Any studies that did not meet these criteria were excluded. Then, a full-text review was completed for each article to confirm inclusion criteria were met (i.e., published within U.S., published after 2000, peer-reviewed, address Latinx and college student identities, risk and protective factors, and academic performance variables) and exclusion criteria (i.e., in-patient settings). In the subsequent phase, final decisions were made, and inclusion and exclusion criteria were carefully assessed to confirm the final selection of included articles. The research assistant served as an auditor to review decisions made for the inclusion and exclusion of studies. Any discrepancies were discussed between the research assistant and researcher, and the two formed a consensus. The full screening and selection process was documented in a PRISMA flow diagram (REF; see Appendix E).

Data Collection and Extraction

A standardized data extraction form which was previously pilot tested, was completed for each article by the researcher to extract data relevant to the research questions. The data extraction form was based on the Effective Practice and Organization of Care (EPOC) Data Collection Form (REF; see Appendix F; EPOC, 2013). Each data extraction form included the Study ID #, authors, year, full document title, and the research variables for each study reviewed. The data extraction form was organized into eight sections:

1. General study information (e.g., Date form completed, initials of person extracting data, source/publication type, source name, publication status, and year published)
2. Design Characteristics and Methodological Features (e.g., Aim of study, general method, design or specific research approach, measures of assessments used to measure research variables)

3. Assessment of Research Variables (e.g., Research variables, how they are assessed reliability/validity/utility)
    a. Latinx identity (e.g., Ethnicities of participants or study sample)
    b. Risk Factors (e.g., Risk factors identified)
    c. Protective Factors (e.g., Protective factors identified)
    d. Mental Health Outcomes: Primary mental health outcomes will include mental wellness, mental illness, mental disorder, psychological distress, psychological stress, stress, depression, and anxiety. Specific mental health outcome data will be documented and include information on how the outcome is being measured.
    e. Academic performance (e.g., GPA, year in college, number of extracurriculars)
4. Study Participant Characteristics and Recruitment (e.g., Population of interest, recruitment methods, sample size, age, gender, race/ethnicity/nationality, study location, year in school, generation status, socioeconomic status)
5. Setting Characteristic (Type of higher education environment: CCC, university, junior or community college, mental health clinic; Characteristics of Environment: Size of university, public, private, HSIs, State or general location in U.S. (i.e., North or South U.S.), study location in the U.S.)
6. Analysis Conducted (descriptive statistics used, inferential statistics used, quantitative analyses conducted)
7. Results (key results)
8. Conclusions and Follow-Up (key conclusions, recommendation for future research/directions, strengths and limitations, general take-aways, implications for practice, references to other relevant studies, other publications from this dataset)

Each study was reviewed, and the data were extracted and entered into the form. The researcher and research assistant reviewed completed data extraction forms to ensure accuracy and consistency in the use and completion of the data extraction form. The researcher then reviewed the data for a final assessment of inconsistency in the findings.

Quality Appraisal Methods

The reviewers (i.e., researcher and research assistant) determined the quality of each included article through the use of an Individual Quality Assessment form developed by the author's doctoral program (see Appendix G; Harrell, 2021). The form determined and rated the methodological and overall quality of the articles included in the present systematic review. This process was completed simultaneously with the data extraction process. The researcher reviewed and extracted data from each included study and critiqued the article, paying special attention to research methodology, analyses and presentation of findings, and discussion of findings.

The Quality Appraisal form will included the following domains and assessed the quality of each article via a rating on a scale of 0-3: strength of literature foundation and rationale for study, clarity and specificity of research aims/objectives/questions/hypotheses, quality of research design or methodological approach, sample selection and characteristics, data collection tools, data collection process, analysis and presentation of data, discussion of study limitations, and consideration of study limitations. The following were the Likert rating scale score identifiers: "3" = "strong,” "2" =" good/ adequate,” "1" =” "weak,” "0" =” "missing" and "N/A" = "not available." Any study with all scores of "3" were considered 'exemplary,' studies with mostly "2s" were considered 'strong,' studies with mostly "1's" were considered 'good' or 'adequate,' and studies with mostly "1s" were considered "weak." Articles assigned a “1” or “0” or “weak” score were not be included in the review to ensure all studies included in analyses are of adequate quality.

Database Organization and Management

All data collected and input into the extraction and quality appraisal forms were entered into a Microsoft Excel database (see Appendix H). This database included a tab with a spreadsheet containing all variables extracted from the data extraction and critical appraisal forms. Columns in the form included source, research variables (Latinx, college student, risk and protective factors, mental health outcomes, demographic variables, and academic performance), research method, specific research design or approach, measurements or assessments of research variables, sample size, sample characteristics (age, gender, race/ethnicity, year in school, city or state of study, setting, method of data collection), analyses used, and summaries of main findings and discussions. The search, screening, and selection process results are presented via the PRISMA-based diagram (see Figure 1).

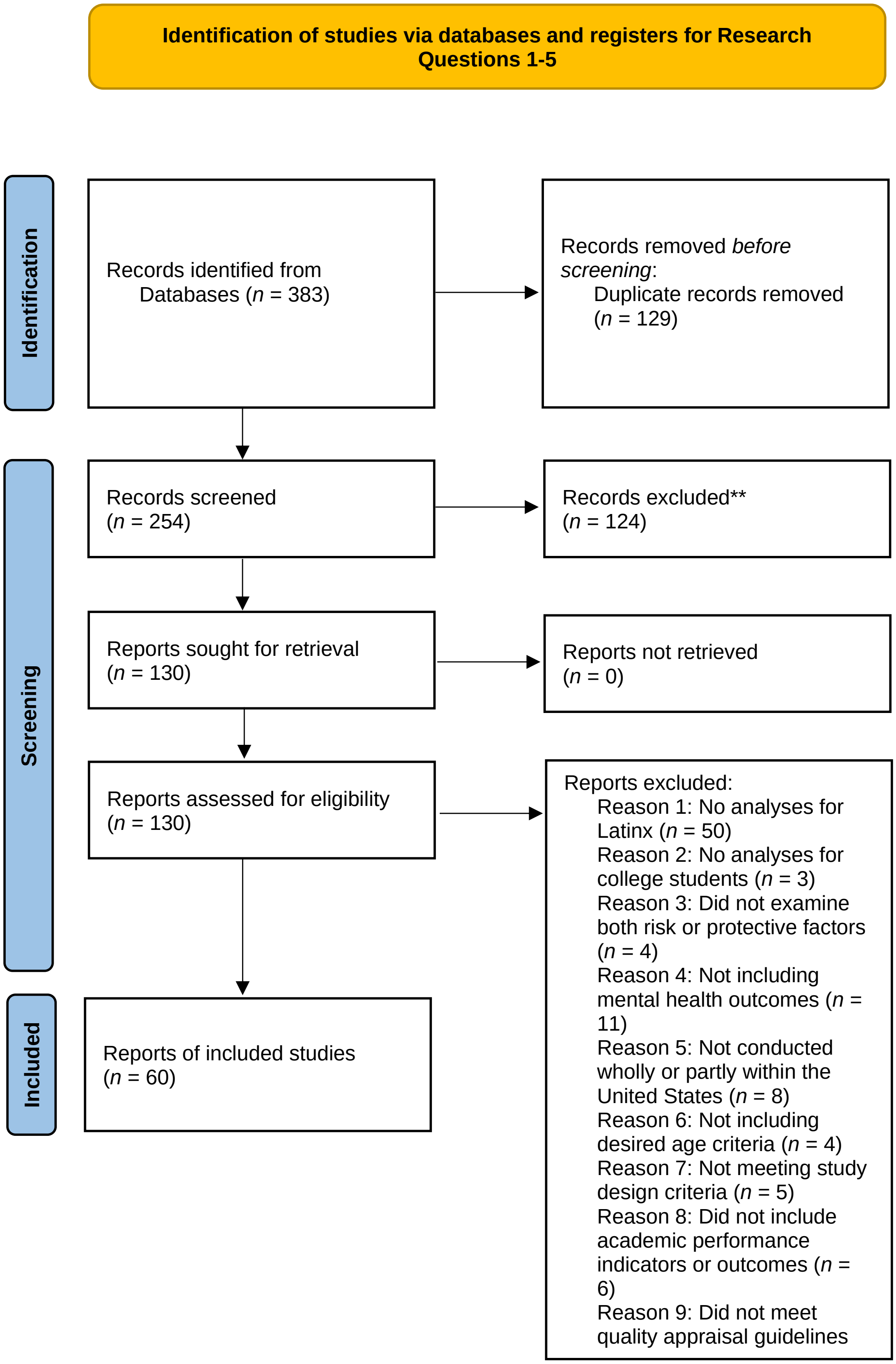
Data for each research question was then placed in individual spreadsheets. For example, data relevant to Research Question 1 was placed into a spreadsheet entitled RQ1, data relevant to Research Question 2 was placed into a spreadsheet entitled RQ2, and so on (see Appendix I). Data synthesis was based on observations and frequencies calculated via Microsoft Excel to identify patterns in the data located in the spreadsheets listed above. Findings were synthesized based on observations made from patterns in the data, and results were reported via a narrative synthesis. Evidence tables were used to display data collected, and various charts and figures illustrated the data.

Chapter Three: Results

A total of 383 publications were identified using electronic databases. After 129 duplicate records were removed using an automated feature of Microsoft Excel, 254 articles remained. Titles and abstracts were screened for identifiable inclusion and exclusion criteria, and 124 articles were excluded. As a result, 130 full-text articles were comprehensively assessed for eligibility. After assessing the full-text studies, 68 studies were excluded for various reasons, with some studies not meeting multiple inclusion criteria; including not providing analyses for Latinx students ($N = 50$), not examining or not conducting separate analyses for college students ($N = 3$), not examining risk factors or protective factors ($N = 4$), not including mental health outcomes ($N = 11$), not conducted wholly or partly in the U.S. (i.e., 50 states; $N = 8$), not including the desired age criteria (i.e., 17+; $N = 4$), and not meeting design criteria ($N = 5$). For Research Question 5, a total of six articles were excluded for not including any academic outcomes or indicators ($N = 6$). Lastly, two articles were excluded for not meeting quality appraisal guidelines. In total, 60 articles were included in the narrative synthesis and quantitative descriptive summaries.

Figure 1

PRISMA Flow Diagram

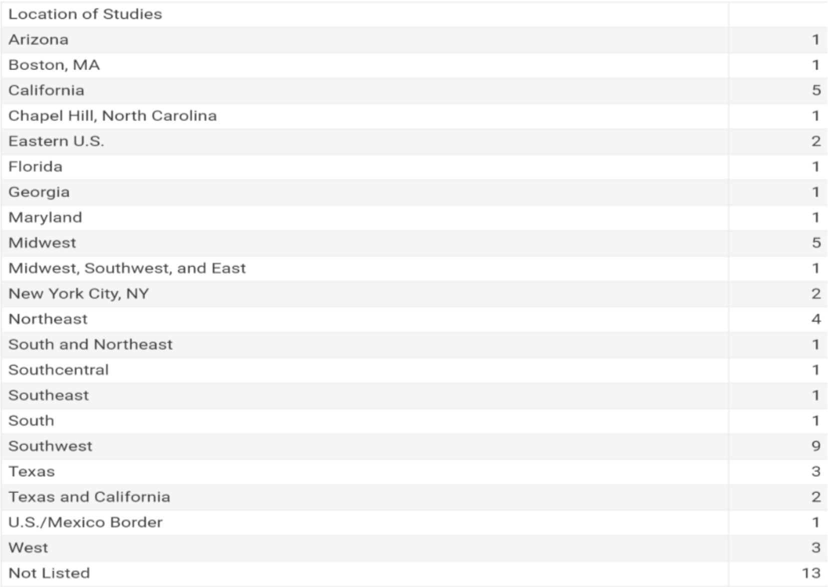

Identification of studies via databases and registers for Research Questions 1-5
Identification
Screening
Included
Records identified from Databases (*n* = 383)
Records removed *before screening*: Duplicate records removed (*n* = 129)
Records screened (*n* = 254)
Records excluded** (*n* = 124)
Reports sought for retrieval (*n* = 130)
Reports not retrieved (*n* = 0)
Reports assessed for eligibility (*n* = 130)
Reports excluded:
Reason 1: No analyses for Latinx (*n* = 50)
Reason 2: No analyses for college students (*n* = 3)
Reason 3: Did not examine both risk or protective factors (*n* = 4)
Reason 4: Not including mental health outcomes (*n* = 11)
Reason 5: Not conducted wholly or partly within the United States (*n* = 8)
Reason 6: Not including desired age criteria (*n* = 4)
Reason 7: Not meeting study design criteria (*n* = 5)
Reason 8: Did not include academic performance indicators or outcomes (*n* = 6)
Reason 9: Did not meet quality appraisal guidelines
Reports of included studies (*n* = 60)

General Characteristics of Included Studies

Author, publication year, title research methodology, study design characteristics, sample size, study participant characteristics (age, gender, sexual orientation, year in school, SES, income level, generation status), setting characteristics, and prevalent outcomes/main findings are included in Data Extraction Database (Appendix H). The included studies were published within the U.S. (see Table 1), and of the studies which included where the study took place, a minority did not list where the study was conducted (*N* = 13), and the remaining studies were conducted in Arizona (*N* = 1), Boston, MA (*N* = 1), California (*N* = 5), Chapel Hill, NC (*N* = 1), the Eastern US (*N* = 2), Florida (*N* = 1), Georgia (*N* = 1), Maryland (*N* = 1), the Midwest (*N* = 5), a combination of the Midwest, Southwest, and Eastern US (*N* = 1), New York City, NY (*N* = 2), the Northeast (*N* = 4), Southeastern US (*N* = 1), Southern US (*N* = 1), Southwestern US (*N* = 9), Texas (*N* = 3), Texas and California (*N* = 2), and the Western US (*N* = 3).

Table 1

Locations of All Studies Included



Location of Studies	
Arizona	1
Boston, MA	1
California	5
Chapel Hill, North Carolina	1
Eastern U.S.	2
Florida	1
Georgia	1
Maryland	1
Midwest	5
Midwest, Southwest, and East	1
New York City, NY	2
Northeast	4
South and Northeast	1
Southcentral	1
Southeast	1
South	1
Southwest	9
Texas	3
Texas and California	2
U.S./Mexico Border	1
West	3
Not Listed	13

All studies were published after 2000, with zero studies published between 2000 and 2005 (*N* = 0), several published between 2006-2010 (*N* = 6), several published between 2011-2015 (*N* = 9), the majority published between 2016-2020 (*N* = 19), and several published between 2021-2022 (*N* = 14). A majority of studies were of a qualitative methodology (*N* = 57), while several were of a mixed methods methodology (*N* = 3). Specific study designs included experimental (*N* = 3), non-experimental (*N* = 54) and quasi-experimental study designs (*N* = 3). More specifically the following research designs were identified directly by the studies: Longitudinal (*N* = 9), cross-sectional (*N* = 16) cross-lagged (*N* = 3), survey research (*N* = 12), and cohort designs (*N* = 2). The following sections will include results relevant to risk factors, protective factors, identified mental health outcomes, identified participant characteristics, and academic achievement and related outcomes.

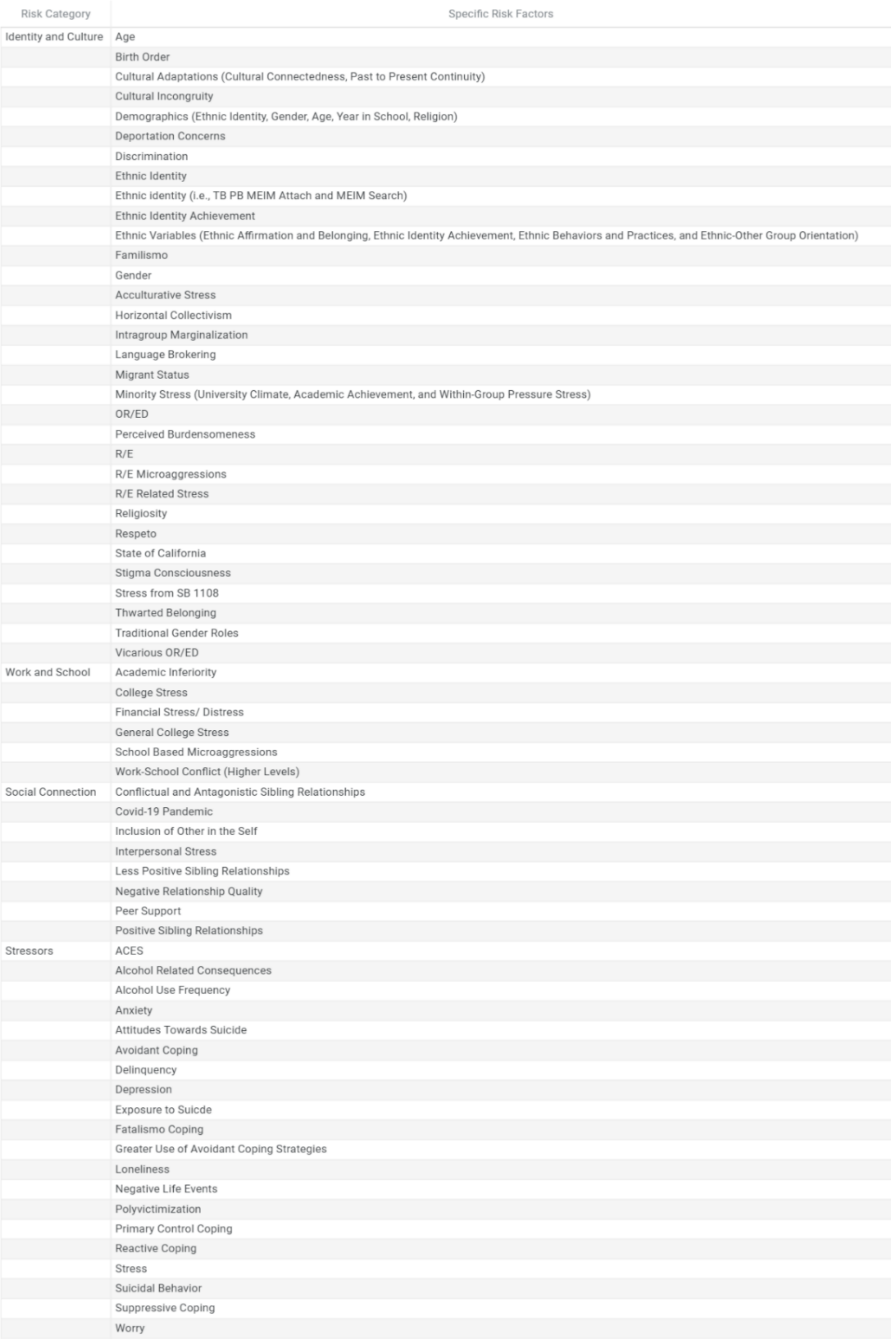
Identified Risk Factors

Research Question 1 focused on identifying the mental health risk factors among Latinx college students. Of the 60 studies included for review, 51 studies examined and identified risk factors. The following sections detail the results related to risk factors. These risk factors were identified using analyses which provided evidence of a link between the risk factor and the mental health outcome, including interactions, mediators, or moderators.

Several themes of identified risk factors emerged (not including interactions): identity and culture, work or school related, social connection, and stressors (see Appendix J). Of note, several risk factors such as acculturative stress may be placed into two categories (i.e., identity and culture, and stressors). To standardize the process of categorizing risk factors, the factors were placed in the categories which directly reflect their definition (see Table 2). For example, although acculturative stress captures aspects and constructs of identity, by definition it is a stressor, and was therefore placed in the stressors theme.

Table 2

Risk Categories and Specific Risk Factors



Risk Category	Specific Risk Factors
Identity and Culture	Age
	Birth Order
	Cultural Adaptations (Cultural Connectedness, Past to Present Continuity)
	Cultural Incongruity
	Demographics (Ethnic Identity, Gender, Age, Year in School, Religion)
	Deportation Concerns
	Discrimination
	Ethnic Identity
	Ethnic identity (i.e., TB PB MEIM Attach and MEIM Search)
	Ethnic Identity Achievement
	Ethnic Variables (Ethnic Affirmation and Belonging, Ethnic Identity Achievement, Ethnic Behaviors and Practices, and Ethnic-Other Group Orientation)
	Familismo
	Gender
	Acculturative Stress
	Horizontal Collectivism
	Intragroup Marginalization
	Language Brokering
	Migrant Status
	Minority Stress (University Climate, Academic Achievement, and Within-Group Pressure Stress)
	OR/ED
	Perceived Burdensomeness
	R/E
	R/E Microaggressions
	R/E Related Stress
	Religiosity
	Respeto
	State of California
	Stigma Consciousness
	Stress from SB 1108
	Thwarted Belonging
	Traditional Gender Roles
	Vicarious OR/ED
Work and School	Academic Inferiority
	College Stress
	Financial Stress/ Distress
	General College Stress
	School Based Microaggressions
	Work-School Conflict (Higher Levels)
Social Connection	Conflictual and Antagonistic Sibling Relationships
	Covid-19 Pandemic
	Inclusion of Other in the Self
	Interpersonal Stress
	Less Positive Sibling Relationships
	Negative Relationship Quality
	Peer Support
	Positive Sibling Relationships
Stressors	ACES
	Alcohol Related Consequences
	Alcohol Use Frequency
	Anxiety
	Attitudes Towards Suicide
	Avoidant Coping
	Delinquency
	Depression
	Exposure to Suicde
	Fatalismo Coping
	Greater Use of Avoidant Coping Strategies
	Loneliness
	Negative Life Events
	Polyvictimization
	Primary Control Coping
	Reactive Coping
	Stress
	Suicidal Behavior
	Suppressive Coping
	Worry

Within the theme of identity and culture, the following identified risk factors were indicated via the studies' analysis: An interaction indicated that higher levels of general college stress, minority college stress, and higher levels of ethnic identity were related to higher levels of depression. Additionally, higher levels of ethnic identity were associated with lower levels of depression, suicidal behaviors, and social anxiety symptoms. In consideration of ethnic identity, Latinx identity was related to higher rates of acculturation, questioning the helpfulness of mental health treatment, reporting a lack of time for mental health treatment, financial concerns, experiencing loss (i.e., death of a loved one) during the Covid-19 Pandemic, amotivation, R/E Institutional stress, anxiety, depression, and disengagement with political activism. Furthermore, Latinxs who displayed higher levels of perceived burdensomeness also displayed significantly lower levels of suicidal desire. Results also indicated that ethnic identity as measured by thwarted belonging, perceived burdensomeness (i.e., being a burden to others), multigroup ethnic identity attachment and multigroup ethnic identity search were related to greater suicide risk. Another study found that higher levels of R/E related stress were associated with higher levels of amotivation for Latinx participants.

Multiple studies identified several levels of connection to R/E as risk factors. For example, higher levels of ethnic affirmation and belonging were related to higher depressive symptoms. Higher levels of ethnic identity achievement were found to be related to higher levels suicidal behavior. Higher levels of ethnic group practices were related to higher levels of depressive symptoms and suicide behaviors. An interaction was identified where the relationship between higher levels of negative life events and suicidal behaviors were exacerbated by lower levels of other group orientation. Furthermore, an interaction was identified where Latinx identity and higher levels of ethnic affirmation and belonging, ethnic identity achievement, ethnic behaviors and practices, and ethnic other group orientation were related to higher levels of depressive symptoms and suicidal behaviors. Higher levels of cultural incongruity were found to be related to higher levels of depression, and lower levels of college adjustment. Higher levels of intragroup marginalization were related to higher levels of depression and lower levels of college adjustment.

Various findings were presented for discrimination as a risk factor, including some contradictory findings. An interaction of higher levels of discrimination and lower levels of ethnicity-based coping were related to higher reporting of alcohol use issues. More frequent experiences of discrimination were related to higher levels of depression and anxiety. Higher levels of discrimination were found to be related to several mental health outcomes including higher levels of PTSD symptoms, maladaptive alcohol use, anxiety, depressive symptoms, psychological stress, and academic distress. Another interaction identified that higher levels of perceived discrimination were related to higher levels of anxiety symptoms for participants with lower levels of family referents scores. A third interaction identified that higher levels of perceived discrimination were related to higher levels of anxiety for participants with higher levels of respeto. For participants perceiving a high degree of discrimination, higher levels of respeto were related to higher levels of anxiety, but this was not the case for those perceiving low discrimination. An association between perceived discrimination and anxiety symptoms was identified as significant for participants who scored low on religiosity compared to those who with high levels of religiosity. Furthermore, Latina college students who were older sisters reported more conflictual and antagonistic sibling relationships, or who perceived higher levels of discrimination also reported the most depressive symptoms**.** Yet, supportive familism values were found to weaken the association between perceived discrimination and Latina college students' depressive symptoms but strengthened associations between sisters' negative dyadic coping behaviors and depressive symptoms. Lastly, sisters' negative dyadic coping behaviors strengthened the positive association between perceived discrimination and depressive symptoms.

Other forms of discrimination were assessed and identified as risk factors. Higher levels of experienced microaggressions were related to higher levels of stress, and higher levels of depressive symptoms. Furthermore, higher levels of experienced microaggressions were related to higher levels of stress for participants with lower levels of political activism. Higher levels of online R/E discrimination were related to higher levels of depressive symptoms, generalized anxiety symptoms, and social anxiety symptoms. Additionally, online R/E discrimination and vicarious online R/E discrimination were associated with social anxiety for 1st generation college students, when comparing them to students with both parents born in the U.S.

Regarding specific experiences of the Latinx population within the U.S., two studies identified risk factors which highlight the complexity of the identity and Latinx experience. Results indicated that migrant status as a Mexican migrant farmworker was related to higher levels of anxiety, depression, and acculturative stress. Regarding deportation concerns, one study found that younger Latinx participants with higher levels deportation concerns (i.e., concerns for self and others) experience higher levels of anxiety.

Several studies identified gender as a risk factor for Latinx college student’s mental health and propose mixed findings (Arbona & Jiménez, 2014; Chang et al., 2016; Corona et al., 2016; Crocket et al., 2007; Mejía & McCarthy, 2010; Suárez-Orozco & Hernández, 2020). One study found that identifying as female, higher levels of ethnic variables (i.e., ethnic affirmation and belonging, ethnic identity achievement, ethnic behaviors and practices, and ethnic-other group orientation) and higher levels of negative life events were related to higher levels of depression. A second study found that undocumented Latinx female identified participants experienced higher levels of generalized anxiety than undocumented Latino males. A third study revealed that for Latina women, higher levels of avoidance coping was associated with higher levels of anxiety. The same study identified that men with higher levels of acculturative stress also had higher levels of anxiety. The fourth study exploring gender as a risk factor found that being female was associated with higher levels of depressive symptoms. The fifth study indicated that women reported higher levels of academic general college stress and academic achievement minority stress. Similarly, one study identified traditional gender roles as a risk factor, as higher levels of endorsed traditional gender roles were related to higher levels of acculturative stress. Moreover, higher levels of endorsed traditional gender roles and higher levels of familism obligations were associated with higher levels of psychological stress. A sixth study reported that for women, higher levels of avoidant coping were associated with higher levels of anxiety, but the same was not true for their male counterparts.

Age was identified as a risk factor by the two studies. One reported that an interaction between older age, higher levels of ethnic variables (i.e., ethnic affirmation and belonging, ethnic identity achievement, ethnic behaviors and practices, and ethnic-other group orientation) and higher levels of negative life events were related to higher levels of depressive symptoms and suicidal behaviors. A second study identified that older age and higher levels of worries about family deportation were related to higher levels of anxiety. This same study found that older age, higher levels of self and family deportations, and financial concerns were related to higher levels of anxiety.

Moreover, several studies examined the impact of religiosity on Latinx college students' mental health and present contradictory findings. One study identified that higher levels of religiosity were additionally related to higher levels in depressive symptoms. A second study found that higher levels of religiosity were associated with lower levels of avoidance self-efficacy. A third study reported that higher levels of acculturative stress were related to higher levels of anxiety symptoms when participants reported lower levels of religiosity. The same study found that higher levels of perceived discrimination were related to higher levels of anxiety symptoms for those reporting lower levels of religiosity.

Of note, multiple studies explored the Latinx experience through the lens of cultural values and present a nuanced picture of risk. A study examined the impact of SB 1108 on the mental health of Latinx college students and found that greater stress due to SB1108 was related to lower levels self-esteem and higher levels of depressive symptoms. Higher levels of acculturative stress were found to be related to higher levels of anxiety symptoms, depressive symptoms, and psychological stress. Several interactions which included acculturative stress as a risk factor were identified. One found that higher levels of acculturative stress and lower levels of parental support were related to higher levels of anxiety and depressive symptoms. Another interaction identified that higher levels of acculturative stress and lower levels of peer support were related to higher levels of anxiety. Higher levels of acculturative stress, lower levels of active coping, and higher levels of avoidant coping were found to be related to higher levels of depressive symptoms. Another study found that higher levels of acculturative stress were related to higher levels of anxiety symptoms, depressive symptoms, and psychological stress when participants reported lower levels of familism support or respeto. One research article identified that lower levels of time spent language brokering for parents is related to higher levels of school stress.

Lastly, other identity related variables were identified as risk factors. Higher levels of minority status stress were related to higher levels of depression. Younger siblings (i.e., birth order and female), higher levels of anxiety and higher levels of negative relationship qualities with siblings were associated with higher levels of academic stress. Being a female older sibling, lower levels of anxiety, and higher negative relationship quality with siblings were associated with higher levels of academic distress. Cultural adaptations as defined by higher levels of cultural connectedness was related to higher levels of anxiety and self-consciousness. Cultural adaptations as defined by past-to-present continuity were related to higher levels of insecurity and confusion. Having been in school for longer (i.e., year in school) was related to an increase in depressive symptoms.

Of the studies which provided evidence which identified risk factors within the theme of college and work-related risk factors the following identified risk factors were indicated via the studies’ analysis. Higher levels of financial stress and higher levels of positive sibling relationships were related to higher levels of depressive symptoms. Additionally, higher levels of financial distress at the beginning of freshmen year were related to higher levels of stress at the end of the year. Furthermore, higher levels of work and school demands were associated with higher levels of stress at work and at school. Higher levels of college stress were related to higher levels of depression. Higher levels of academic inferiority microaggressions were related to higher levels of depressive symptoms at the start and the end of the first year of college. Students located in the state of California were more likely to report higher levels of anxiety than students attending university in Texas. Higher levels of belief in system fairness were related to higher levels of experienced discrimination, especially for Latinx students whose families had been in the U.S. for fewer (vs. more) generations.

Of the studies which provided evidence which identified risk factors within the theme of social connection, the following identified risk factors were indicated via the studies' analysis. Higher levels of thwarted belonging, lower levels of perceived belonging, and higher levels of polyvictimization were related to higher levels of suicidal ideation. Furthermore, higher levels of polyvictimization were related to higher levels of suicidal ideation when higher levels of thwarted belonging and lower levels of perceived belonging were present. The Covid-19 pandemic was related to higher levels of depression and higher levels of loss as defined as the death of a loved one. Higher levels of inclusion of others in the self were related to higher levels of sadness. Moreover, higher levels of horizontal collectivism and higher levels of loneliness were related to higher levels of anxiety. Higher levels of interpersonal stress were related to higher levels of depressive symptoms, when the participants reported higher levels of less positive sibling relationships. Higher levels of perceived discrimination were related to higher levels of depressive symptoms, when sister's negative dyadic coping behaviors were present. Higher levels of ethnic stigma consciousness were associated with higher levels of psychological distress and evaluative concerns. Furthermore, higher levels of ethnic stigma consciousness were related to higher levels of psychological distress, when higher levels of evaluative concerns were present.

Lastly, of the studies which provided evidence of identified risk factors within the theme of stressors, the following identified risk factors were indicated via the studies' analyses. Lower levels of primary control coping were associated with higher levels of alcohol use issues. Moreover, higher levels of fatalism coping were related to higher levels of alcohol use issues.

Higher levels of avoidant coping were associated with higher levels of poor adjustment. Higher levels of stress were found to be related to the relationship between higher levels of suppressive and reactive coping, and higher levels of depressive symptoms. Furthermore, higher levels of depression were found to be related to the relationship between higher levels of suppressive and reactive coping, and higher levels of stress. Higher levels of adverse childhood experiences were related to higher levels of alcohol-related consequences and higher levels of depression. Higher levels of alcohol use consequences were related to higher levels of anxiety and adverse childhood experiences. Moreover, higher levels of alcohol use frequency were related to older age, lower levels of self-efficacy, and greater levels of anger. Higher levels of loneliness were related to higher levels of suicidal behavior, sadness, stress, and anxiety. Furthermore, higher levels of loneliness were associated with higher levels of sadness, when the participants endorsed lower levels of familism. Furthermore, higher levels of loneliness were associated with higher levels of anxiety, when the participants endorsed lower levels of social support. Higher levels of loneliness and higher levels of depression were associated with higher levels of suicide risk. In further consideration for depression, higher levels of depression were linked to higher levels of suicidal behavior, exposure to attempted suicide, exposure to completed suicide rates, suppressive coping, reactive coping, and stress. Higher levels of worry were associated with higher levels of pain anxiety. Higher levels of delinquency were also associated with higher levels of suicidal behavior. Furthermore, Latinx race/ethnicity was related to higher levels of suicidal ideation when lower levels of reflective rumination were present. Higher levels of anxiety were found to be related to higher levels of suppressive coping, reactive coping, and depressive symptoms. Higher levels of perceived stress were related to higher levels of anxiety and depressive symptoms. Lastly higher levels of financial distress at the beginning of freshmen year were related to higher stress at the end of the year.

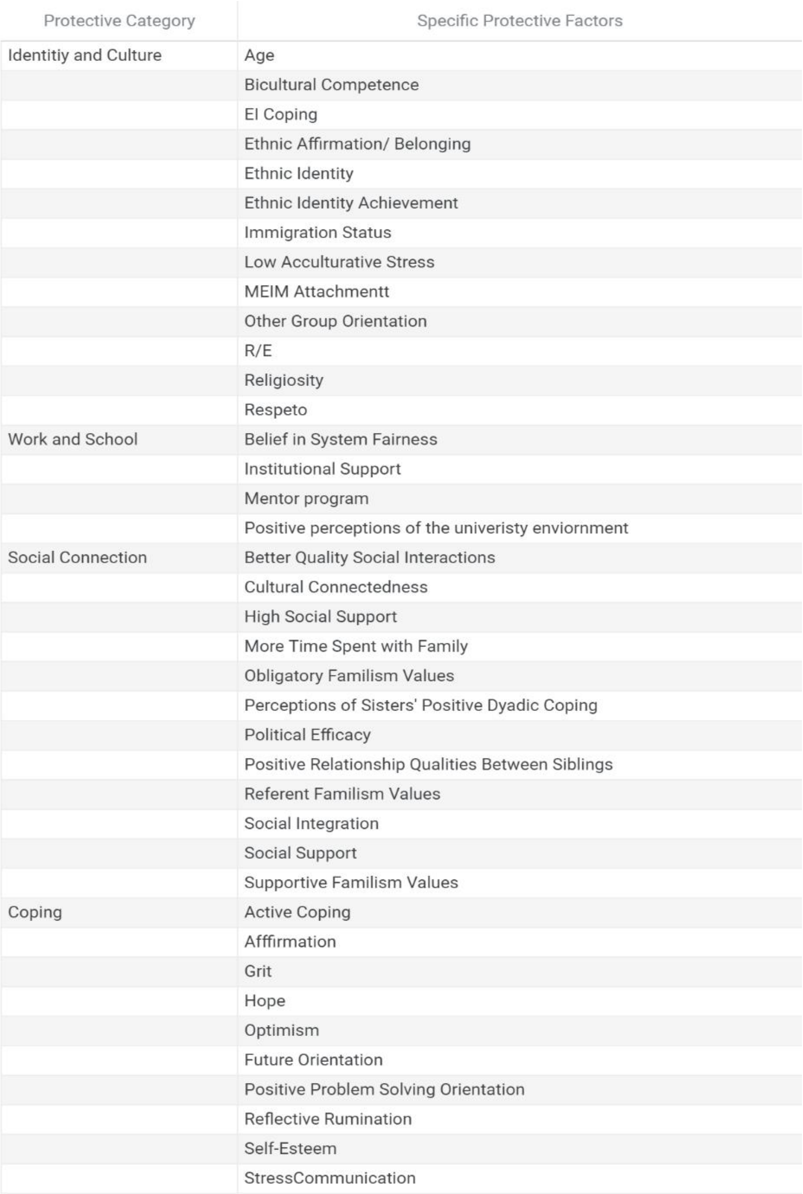
Identified Protective Factors

Research Question 2 focused on identifying protective factors for mental health among Latinx college students. Of the 60 studies included for review, 34 studies examined risk factors, and 30 articles identified protective factors (i.e., excluding interactions). The following sections detail the results related to protective factors.

The protective factors were identified using analyses which provided evidence of a link between the protective factor and the mental health outcome, and in some instances interactions, mediation, and moderation. Several themes of identified risk factors emerged: Identity or culture, work or school related, social connection, and coping (see Appendix K). Of note, several protective factors may be placed into two categories, so to standardize the process of categorizing, the factors were placed in the categories which directly reflect their definition (see Table 3).

Table 3

Protective Categories and Specific Protective Factors



Protective Category	Specific Protective Factors
Identitiy and Culture	Age
	Bicultural Competence
	EI Coping
	Ethnic Affirmation/ Belonging
	Ethnic Identity
	Ethnic Identity Achievement
	Immigration Status
	Low Acculturative Stress
	MEIM Attachmentt
	Other Group Orientation
	R/E
	Religiosity
	Respeto
Work and School	Belief in System Fairness
	Institutional Support
	Mentor program
	Positive perceptions of the univeristy enviornment
Social Connection	Better Quality Social Interactions
	Cultural Connectedness
	High Social Support
	More Time Spent with Family
	Obligatory Familism Values
	Perceptions of Sisters' Positive Dyadic Coping
	Political Efficacy
	Positive Relationship Qualities Between Siblings
	Referent Familism Values
	Social Integration
	Social Support
	Supportive Familism Values
Coping	Active Coping
	Afffirmation
	Grit
	Hope
	Optimism
	Future Orientation
	Positive Problem Solving Orientation
	Reflective Rumination
	Self-Esteem
	StressCommunication

Of the studies which identified protective factors within the theme of identity and culture, the following identified protective factors were indicated via the studies' analysis. Higher levels of ethnic identity were associated with higher levels of emotional well-being. Furthermore, the interaction between higher levels of ethnic identity and lower levels of acculturation were related to higher level of belonging and emotional wellbeing. The Latinx identity was related to lower levels of perceived burdensomeness and suicidal desire, and higher levels of grit and resilience. Moreover, higher levels of acculturative stress were not associated with higher levels of depressive symptoms when higher levels of ethnic affirmation and belonging and ethnic identity achievement were present. This finding is presented in opposition to the same study identifying a significant relationship between higher levels of acculturative stress related to higher levels of depression when higher levels of ethnic affirmation and belonging and ethnic identity were not present. Lower levels of ethnicity-based coping and higher levels of discrimination are related to lower levels of alcohol use levels. Experiencing academic inferiority microaggressions during high school were related to lower levels of depression symptoms, when lower levels of racial ethnic regard were reported. Lower levels of acculturative stress were related to higher levels of self-esteem for men with higher levels of other group orientation. Higher levels of ethnic identity attachment were related to lower levels of suicide risk. Age was additionally identified as a protective factor, as older age was associated with lower levels of anxiety.

Additional findings indicate that various identities and constructs of experienced identity serve as protective factors for Latinx college students. Higher levels of acculturative stress were not related to higher levels of anxiety symptoms when higher levels of religiosity were endorsed. Higher levels of perceived discrimination were not related to higher levels of anxiety symptoms when higher levels of religiosity were endorsed. Lower levels of acculturative stress were related to a higher sense of belonging and positive well-being. Higher levels of respeto were not related to higher levels of anxiety when lower levels of discrimination were present. Higher levels of grit were also related to lower levels of depression for non-citizens compared to citizens. Higher levels of R/E discrimination were not related to higher levels of stress and depressive symptoms for those with higher levels of political activism/efficacy. Moreover, 1st generation college student status was associated with lower levels of anxiety. Lastly, one study indicated that the more education a participant’s mother had, the higher the participant’s future aspirations.

Various cultural values and cultural related variables served as protective factors in juxtaposition to the earlier identified risk factors. Higher levels of familismo or familism were related to lower levels of mental health symptoms (i.e., depression, anxiety, and stress). Furthermore, higher levels of acculturative stress were not related to higher levels of depressive symptoms for those with higher levels of familism support. Higher levels of supportive, obligatory, and referent familism values were related to lower levels of depressive symptoms. Furthermore, higher levels of supportive familism values weakened the associated between higher levels of perceived discrimination and Latina college students’ depressive symptoms.

The following results provided evidence identifying protective factors within the theme of college and work-related protective factors, which highlight the protective effect of integrated layers of support. Higher levels of belief in system fairness at college entry were related to lower levels of depression and anxiety at the end of the school year. Furthermore, higher levels of belief in system fairness were associated with higher levels of better psychological health regardless of experienced discrimination levels. Higher levels of positive perceptions of the university environment were related to higher levels of college adjustment. Higher levels of instructor support were related to lower levels of anxiety. Participation in Latinx mentoring programs were related to higher levels of self-efficacy, sense of belonging, and lower levels of depression and stress.

Of the studies which provided evidence identifying protective factors within the theme of social connection, the following identified protective factors were indicated via the studies’ analysis. Higher levels of better-quality social interactions were related to higher levels of better subjective well-being, and lower levels of anxiousness and sadness. Higher levels of social support and higher levels of hope were related to lower levels of depressive symptoms. Higher levels of loneliness were not related to higher levels of stress and anxiety, when higher levels of social support were reported. More time spent with family was related to lower levels of school stress. Lower levels of anxiety were associated with higher levels of future aspirations for younger siblings with higher levels of positive sibling relationship quality, and for older siblings with low levels of positive sibling relationship quality. For those perceiving lower levels of negative dyadic coping from sisters, higher levels of perceived discrimination were not related to higher levels of depressive symptoms. Higher levels of social integration were related to higher levels of acceptance and support.

Several findings emphasize the protective nature of levels of connection or integration into social groups. Higher levels of loneliness were not significantly related to higher levels of sadness for those with higher levels of familism. Higher levels of cultural connectedness were related to higher levels of acceptance/support and confidence, and lower levels of anxiety/self-consciousness. Higher levels of social integration were related to higher levels of acceptance/support, and lower levels of reactive loneliness and anxiety/self-consciousness.

Lastly, of the studies which provided evidence identifying protective factors within the theme of coping, the following identified protective factors were indicated via the studies' analyses and several specifically focus on various forms of coping. Higher levels of active coping were related to better adjustment, and for those with higher levels of active coping, higher acculturative stress was related to lower levels of anxiety symptoms. Furthermore, higher acculturative stress was not related to higher levels of depressive symptoms for those reporting higher levels of active coping.

Other studies identify protective factors which underscore the skills and traits which protect against poorer mental health outcomes. A single affirmation intervention was related to higher levels of perceived adequacy, sense of belonging in school, and self-affirmation. Higher levels of grit were related to lower levels of depression. Those with higher levels of hope were less likely to be suicidal as a result of higher levels of depression. Higher levels of optimism were associated with lower levels of suicidal ideation. Higher levels of future orientation were associated with lower levels of suicidal ideation. Moreover, higher levels of positive problem-solving orientation were associated with lower levels of suicidal behavior among Latinas. The Latinx identity was associated with lower levels of suicidal ideation for those with lower levels of reflective rumination. Furthermore, Latinx identity was associated with lower levels of suicidal ideation for those with lower levels of reflective rumination and a BDI-II score above 8.65. Higher levels of self-esteem were not related to higher levels of stress for those with higher levels of engaged coping responses. Higher levels of stress communication were related to lower levels of depressive symptoms.

Non-Significant Findings

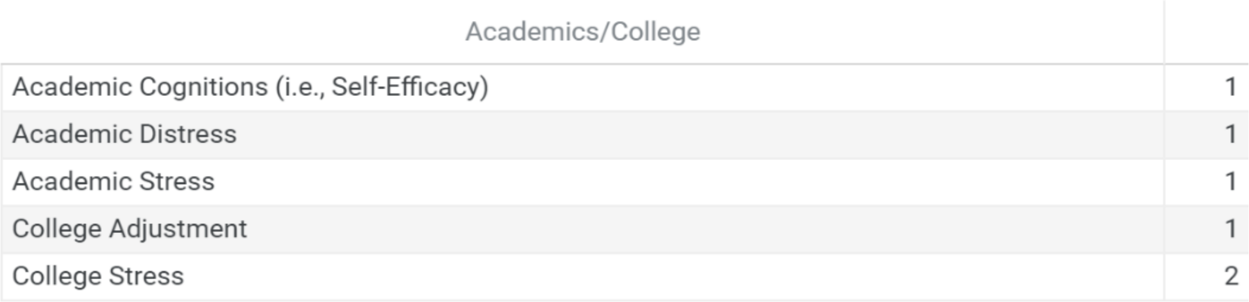
Within the findings, several previously identified protective factors, or factors expected to be protective, inversely served as risk factors. Latinx identity was not found to be related to higher levels of depressive symptoms, depressive disorder diagnosis, previous suicidal ideation, previous suicide attempts, and current suicidal ideation, according to one article. For one study, a variable which has previously been identified as both a risk and protective factor was found to serve as neither. Identifying as Latinx, did not increase or decrease levels of family achievement guilt, depressive symptoms, or self-esteem.

Examined Mental Health Outcomes

Regarding the mental health outcomes that the literature has examined in the studies identified for this review, all 60 studies included mental health variables, and 58 included mental health factors as the dependent variable or outcome (see Appendix L). Tables 4 through 9 list all of the examined mental health outcomes.

Table 4

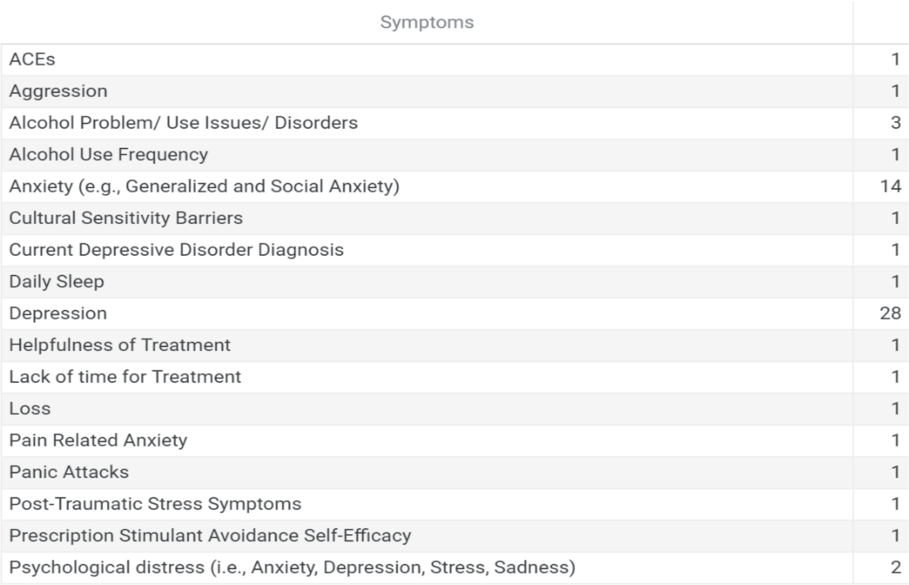
Work and School-Related Mental Health Outcomes



Academics/College	
Academic Cognitions (i.e., Self-Efficacy)	1
Academic Distress	1
Academic Stress	1
College Adjustment	1
College Stress	2

Table 5

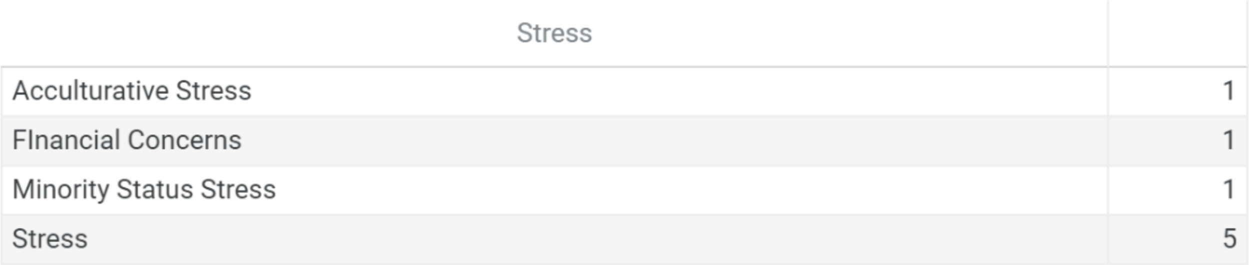
Symptom-Related Mental Health Outcomes



Symptoms	
ACEs	1
Aggression	1
Alcohol Problem/ Use Issues/ Disorders	3
Alcohol Use Frequency	1
Anxiety (e.g., Generalized and Social Anxiety)	14
Cultural Sensitivity Barriers	1
Current Depressive Disorder Diagnosis	1
Daily Sleep	1
Depression	28
Helpfulness of Treatment	1
Lack of time for Treatment	1
Loss	1
Pain Related Anxiety	1
Panic Attacks	1
Post-Traumatic Stress Symptoms	1
Prescription Stimulant Avoidance Self-Efficacy	1
Psychological distress (i.e., Anxiety, Depression, Stress, Sadness)	2

Table 6

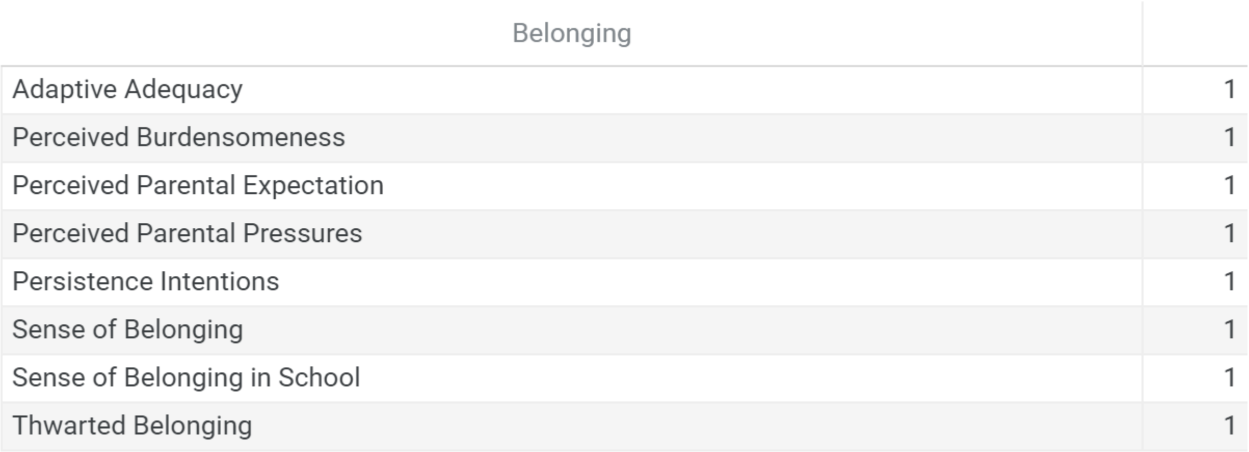
Stress-Related Mental Health Outcomes



Stress	
Acculturative Stress	1
FInancial Concerns	1
Minority Status Stress	1
Stress	5

Table 7

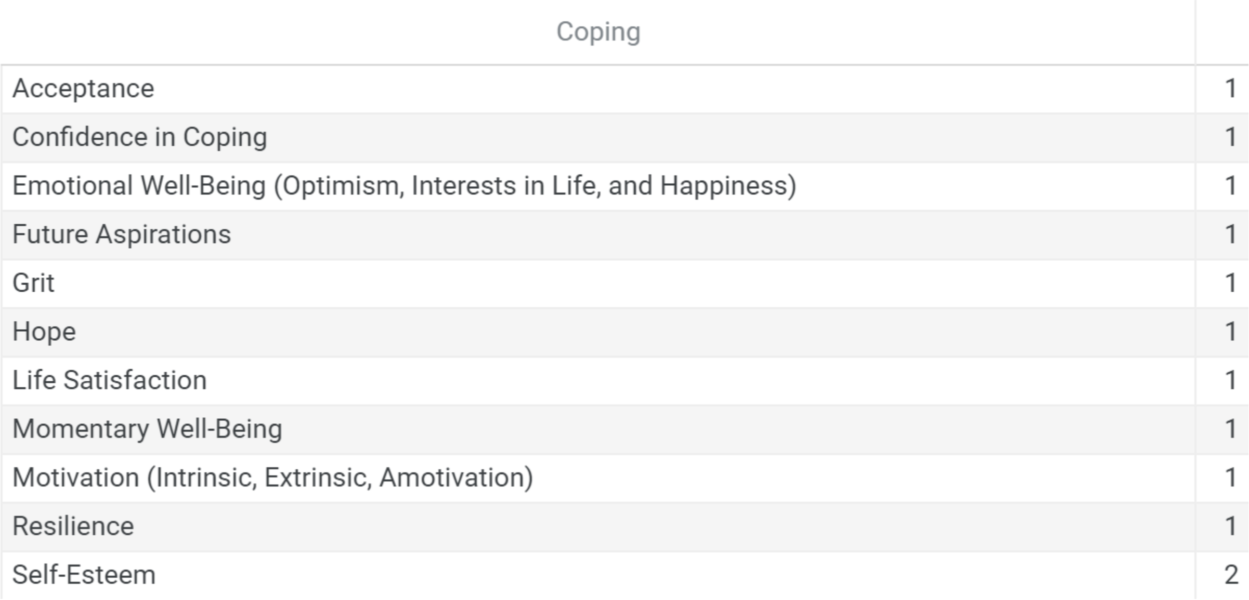
Social Connection-Related Mental Health Outcomes



Belonging	
Adaptive Adequacy	1
Perceived Burdensomeness	1
Perceived Parental Expectation	1
Perceived Parental Pressures	1
Persistence Intentions	1
Sense of Belonging	1
Sense of Belonging in School	1
Thwarted Belonging	1

Table 8

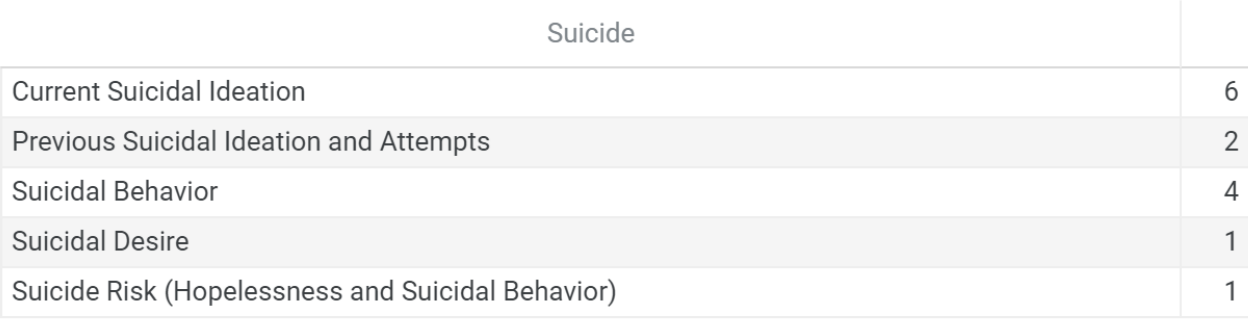
Coping-Related Mental Health Outcomes



Coping	
Acceptance	1
Confidence in Coping	1
Emotional Well-Being (Optimism, Interests in Life, and Happiness)	1
Future Aspirations	1
Grit	1
Hope	1
Life Satisfaction	1
Momentary Well-Being	1
Motivation (Intrinsic, Extrinsic, Amotivation)	1
Resilience	1
Self-Esteem	2

Table 9

Suicide-Related Mental Health Outcomes



Suicide	
Current Suicidal Ideation	6
Previous Suicidal Ideation and Attempts	2
Suicidal Behavior	4
Suicidal Desire	1
Suicide Risk (Hopelessness and Suicidal Behavior)	1

Of all of the mental health outcomes, the most commonly examined mental health outcomes included depression, anxiety, stress and current suicidal ideation.

Demographic Variability

Research Question 4 focused on the demographic variability found to be relevant to the mental health of Latinx college students. Specifically, Research Question 4 was designed to identify how studies examining the same mental risk factors, protective factors, and mental health outcomes differed on specific demographic variables. The following demographic variables were extracted from the studies, however a limited number were examined for this study: Latinx ethnicities/nationalities/countries of origin, sample size, age, gender, generation status, income level, social class/SES, year in school, HIS vs. historically white university, private vs. public universities, specific name of the university, student population breakdown, size of the university, and study/university location.

Latinx Identity

Of the 60 studies included in data analysis, 35 studies included samples comprised entirely of Latinx students and no other ethnic/racial groups. A majority of the 35 studies (N = 22) included identity or culturally focused risk factors, compared to ten of the 25 studies that had a racially diverse sample which included separate analyses for Latinx students. Additionally, 17 of the 35 studies with Latinx samples included analyses on interactions with identity or culturally focused risk factors. This is compared to eight of the 25 studies with racially diverse samples. When considering protective factors, 15 of the 35 articles include identity and culturally related protective factors, and 11 of 35 articles included analyses on interactions with identity or culturally focused protective factors. Of the 25 articles with racially/ethnically diverse samples, three articles included identity and culturally related protective factors, and three of 25 articles included analyses on interactions with identity or culturally focused protective factors. Lastly, 18 of the 35 articles with all Latinx samples examined depression as one of the mental health outcomes, and 5 articles examined suicide related outcomes. For the 25 articles with racially diverse samples, ten articles examined depression as a mental health outcome and six examined suicide related outcomes.

In regard to specific identified Latinx identities, the following ethnic identities or countries of descent were studied throughout the studies: Mexican, Guatemalan, Peruvian, Salvadorian, Columbian, Cuban, Honduran, Puerto Rican, broadly Central American, broadly South American, and "other."

First-Generation Student Status

A total of seven articles included demographic information on first-generation student status. Five of the seven articles identified risk factors related to identity or culture, and two articles included identified interactions which included identified risk factors related to identity or culture. Only one study identified a protective factor related to identity or culture, and two identified interactions including identified protective factors (i.e., related to identity and culture). The identified mental health outcomes for these articles were primarily focused on mental health symptoms (N = 7), and a minority examined mental health outcomes focused on positive adaptive aspects of mental health (i.e., future aspirations and motivation).

Generational Status

Several articles were identified as including demographic information on generational status within the U.S. (N = 15). Nine of the articles examined and identified risk factors related to identity and culture, and seven articles examined interactions including this same type of risk factor. When considering protective factors, eight articles included protective factors focused on identity and culture, and interactions containing the same type of variables. None of the 15 articles identifying the generational status of the participants examined mental health outcomes related to suicidality, however three examined adaptive mental health outcomes.

Income Level

Several articles were identified as including demographic information on income level (*N* = 15). One article stated that they included a demographic questionnaire asking about income level but did not provide further statistics. Another article defined income level as a combination of mother and father’s education level. As a result, 12 articles provided ranges for the participant’s self, parent, or family income levels. Six of the articles examined and identified risk factors related to identity and culture, and five articles examined interactions including this same type of risk factor. When considering protective factors, one article included protective factors focused on identity and culture, and two identified interactions containing the same type of variables. Three of the articles examined stress or distress related mental health outcomes, and only one included an adaptive mental health outcome.

Sample Size

All articles included their sample size, and several studies’ samples were comprised of 150 or fewer participants (i.e., whole sample or Latinx portion of sample; $N = 16$; $M = 97$). Ten articles included interactions between risk or protective factors and other variables and mental health outcomes, compared to 38 interactions among the studies with samples sizes over 150. Of the studies with a sample size below 150, seven examined depression as a mental health outcome, compared to 20 for those with sample sizes over 150. Of the studies with a sample size below 150, three examined suicidal ideation or related factors as a mental health outcome, compared to ten for those with sample sizes over 150. Lastly, of the studies with a sample size below 150, four examined adaptive mental health outcomes, compared to nine for those with sample sizes over 150.

Year in School

Several articles were identified as containing samples with an entire sample comprised of Freshmen or first-year students (*N* = 7). Four of these articles identified identity or culturally related risk factors, and two interactions with identity or culturally related risk factors, other variables, or mental health outcomes. Two of these articles identified identity or culturally related protective factors, and one interaction with identity or culturally related protective factors, other variables, or mental health outcomes. Of these studies, five examined depression as a mental health outcome.

Several articles were identified as containing samples with an entire sample comprised of a mix of years in school but also included graduate students (*N* = 5). Five of these articles identified identity or culturally related risk factors, and zero interactions with identity or culturally related risk factors, other variables, or mental health outcomes. One of these articles identified identity or culturally related protective factors, and zero interactions with identity or culturally related protective factors, other variables, or mental health outcomes. Of these studies, two examined depression as a mental health outcome, and all of the mental health outcomes examined were maladaptive.

The majority of articles were identified as containing samples with an entire sample comprised of a mix of years in school and did not include graduate students (*N* = 48). Several of these articles identified identity or culturally related risk factors (*N* = 24), and 22 interactions with identity or culturally related risk factors, other variables, or mental health outcomes. Several of these articles identified identity or culturally related protective factors (*N* = 15), and 14 interactions with identity or culturally related protective factors, other variables, or mental health outcomes. Of these studies, 21 examined depression as a mental health outcome.

Gender

Several articles were identified as containing samples that included genders beyond the male/female binary (*N* = 6). Six of these articles identified identity or culturally related risk factors, and one interaction with identity or culturally related risk factors, other variables, or mental health outcomes. Two of these articles identified identity or culturally related protective factors, and zero interactions with identity or culturally related protective factors, other variables, or mental health outcomes. Of these studies, five examined depression as a mental health outcome.

Several articles were identified as containing samples with an entire sample comprised of all females (*N* = 7). Three of these articles identified identity or culturally related risk factors, and two interactions with identity or culturally related risk factors, other variables, or mental health outcomes. Three of these articles identified identity or culturally related protective factors, and two interactions with identity or culturally related protective factors, other variables, or mental health outcomes. Of these studies, two examined depression as a mental health outcome.

The majority of articles were identified as containing samples with an entire sample comprised of samples that were majority female (*N* = 47). Several of these articles identified identity or culturally related risk factors (*N* = 22), and 20 interactions with identity or culturally related risk factors, other variables, or mental health outcomes. Several of these articles identified identity or culturally related protective factors (*N* = 13), and 13 interactions with identity or culturally related protective factors, other variables, or mental health outcomes. Of these studies, 20 examined depression as a mental health outcome.

Hispanic Serving Institutions

One article contained a sample from various types of universities including HSIs. The article identified only one identity or culturally related risk factors. The study examined suicidal ideation as a mental health outcome.

Several articles were identified as containing samples from a HSI (N = 7). Four of these articles identified identity or culturally related risk factors, and three interactions with identity or culturally related risk factors, other variables, or mental health outcomes. Two of these articles identified identity or culturally related protective factors, and two interactions with identity or culturally related protective factors, other variables, or mental health outcomes. Of these studies, five examined depression as a mental health outcome.

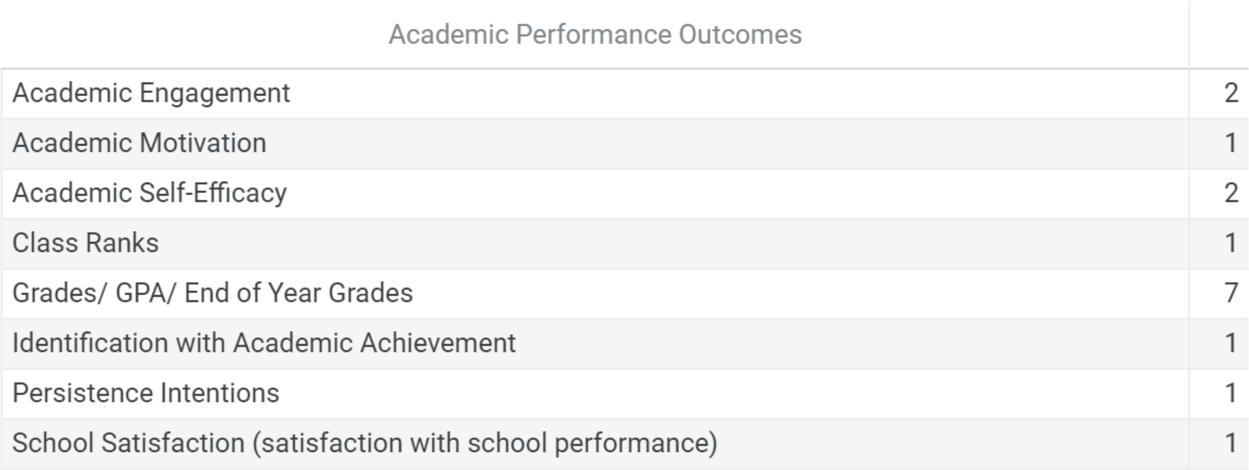
Several articles were identified as containing samples from Primarily White Institutions (PWIs; N = 3). Several of these articles identified identity or culturally related risk factors (N = 3), and two interactions with identity or culturally related risk factors, other variables, or mental health outcomes. An article identified identity or culturally related protective factors, and two interactions with identity or culturally related protective factors, other variables, or mental health outcomes were identified. Of these studies, two examined depression as a mental health outcome.

Mental Health and Academic Performance

Research Question 5 focused on the relationships identified between mental health variables/indicators and academic performance outcomes among Latinx college students. A total of 13 articles were identified as examining this relationship, and a total of 16 academic performance outcomes were identified (see Table 10; see Appendix M). Of note, the results present findings for variables which worsen or strengthen academic performance.

Table 10

Academic Performance Outcomes



Academic Performance Outcomes	
Academic Engagement	2
Academic Motivation	1
Academic Self-Efficacy	2
Class Ranks	1
Grades/ GPA/ End of Year Grades	7
Identification with Academic Achievement	1
Persistence Intentions	1
School Satisfaction (satisfaction with school performance)	1

Of the academic performance outcomes, college stress was negatively and significantly correlated with academic engagement. Higher levels of college stress experienced by Latinx college students were related to decreased academic engagement. Intrinsic motivation and self-efficacy were significantly and positively correlated with academic engagement. The more a student experienced intrinsic motivation and self-efficacy, the more they were academically engaged. Furthermore, positive sibling relationships also moderated the relationship between greater ethnicity-related social stress and less academic engagement.

Regarding academic motivation, another study identified a significant negative correlation between academic stress and academic motivation. The more academic stress a Latinx student experienced, the lower their levels of academic motivation. The same study identified interactions of positive sibling relationships moderating the relations between interpersonal stress and academic motivation, and the relation between ethnicity related social stress and academic motivation. More positive sibling relationships strengthened the positive relationship between greater interpersonal stress leading to greater academic motivation.

When examining academic self-efficacy several articles identified the impact of the variable on academic performance. For example, the effects of low acculturative stress and greater sense of belonging mediated the relationship between greater academic self-efficacy and a higher GPA. Another article identified academic self-efficacy as an academic performance outcome through the following finding: College stress was negatively associated with academic-self-efficacy. Higher levels of college stress were related to lower levels of academic self-efficacy.

Seven studies identified GPA and/or grades as academic performance outcomes related to mental health variables. One study found that low acculturative stress and a strong ethnic identity had significant positive effects on GPA. Another study reported that after the Covid-19 pandemic, students who had instructors who used a trauma informed approach while teaching received the grades they (i.e., the students) expected. A third study identified an interaction of immigrant status moderating the relationship between depression and college GPA. Specifically, non-citizens with lower levels of depression also had higher GPAs, while non-citizens with higher levels of depression had lower GPAs. A fourth study identified a significant positive correlation between GPA and acceptance and support. A fifth study indicated that higher levels of class-based rejection were associated with worse expected GPAs for students with higher levels of high entity beliefs. The sixth study that identified GPA as an academic performance outcome found that perceived parental expectations and perceived parental pressures were each negatively related to fall semester GPA for Latina college students. The last study found that Latinx dental students with high grit and resilience scores achieved higher GPAs.

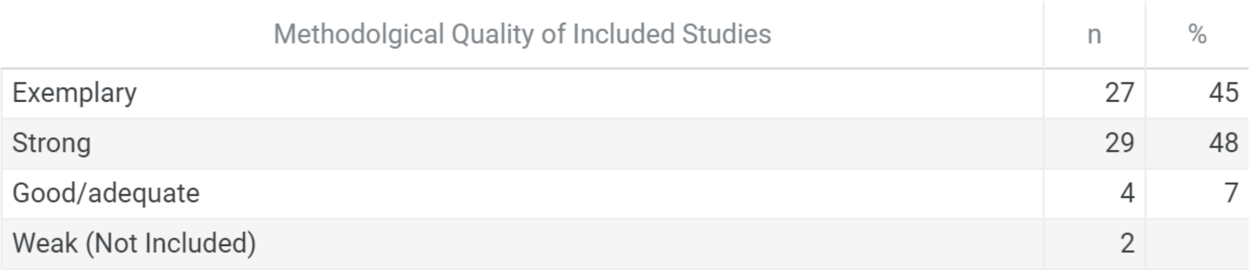
Additional academic performance outcomes were identified which do not serve as traditional modes of academic performance yet are directly related. In consideration of grit, when considering class rankings, one study identified that Latinx dental students with high grit and resilience scores achieved higher class rankings. When examining identification with academic achievement, one study identified that Latinx college students who identified with significant others who they considered to be high academic achievers were more likely to identify themselves with high academic achievement. Depression serves as a mediator between college stress and persistence intentions, as well as minority stress and persistence intentions (i.e., intention in earning a degree). Lastly, higher levels of suppressive coping as a moderator between increased levels of perceived stress and decreased levels of satisfaction with school performance.

Quality Appraisal

Table 11 displays the results of the quality appraisal. The results indicated that a majority of the studies were scored as strong (48%), while 45% of the studies were scored as exemplary. About 7% of studies were scored as good/adequate. A minority of studies were scored as weak ($N = 2$). These low-quality studies had one or a combination of the following: inadequate literature foundation and rationale, unclear hypothesis or research aims, lack of detail in sample selection and characteristics, did not report measures used to collect data, did not adequately report data collection process, unclear presentation of analyses, did not report study limitations, and a lack of consideration for diversity and culture. The two studies scored as “weak” were deemed inadequate for inclusion and were excluded from analyses, leaving a total of 60 studies to examine. High quality studies (i.e., exemplary) displayed a combination of the following characteristics: detail provided for sample and setting demographics, adequate sample size, clear research aims or hypotheses, consideration for Latinx culture and needs, detailed methodological design and data collection process, recognized study limitations, and provided detailed future recommendations.

Table 11

Overall Quality Appraisal of Included Studies



Methodolgical Quality of Included Studies	n	%
Exemplary	27	45
Strong	29	48
Good/adequate	4	7
Weak (Not Included)	2	

Chapter 4: Discussion

The aim of this systematic review was to summarize and synthesize research on the risk and protective factors of Latinx college students' mental health, with attention to the demographic variability and impact on academic performance. This chapter will discuss the implications of the findings relevant to the risk factors, protective factors, mental health outcomes, demographic variability, and academic performance outcomes.

Risk Factors

Many factors may potentially negatively impact the mental health of Latinx college students, and this review identified a wide array of these risk factors. Four themes emerged from the data, demonstrating the diversity of risk factors examined and identified throughout the identified literature.

Interestingly, a majority of identified risk factors examined identity or culturally related factors (N = 53; excluding interactions). The theme highlights the need to examine factors related to the Latinx identity and culture as various dimensions of identity and cultural values were identified as placing students at risk for poorer mental health outcomes. Various patterns emerged from this theme and warrant additional narrative analysis and exploration.

First, several of these identity or culturally related risk factors focused on one's relationship with their identity (N = 10). Ethnic identity was defined differently for these articles, primarily depending on the measure used. Various articles set out to operationally define ethnic identity as selecting the Latinx/Hispanic ethnicity off of a list of Racial/Ethnic identities, while other articles utilized a formalized measure such as the Multigroup Ethnic Identity Measure (Phinney, 1992). Given that ethnic identity was the most widely identified risk factor, insight into the state of the literature emerges. Latinx students' very identity was identified as risk factors when considering a variety of mental health outcomes. For example, higher levels of ethnic affirmation and belonging were related to higher depressive symptoms. This finding poses further questions, such as how a greater sense of affirmation and belonging to the Latinx identity could result in higher levels of depression, yet it is possible that as students feel more connected to being Latinx, they may have a greater awareness of various factors such as acculturation, discrimination, or sociopolitical issues regarding the Latinx identity. Therefore, greater connection to Latinx identity may result in greater familiarity with current stressors and risk factors, leading to higher levels of depression.

Additionally, identifying as Hispanic, Latin@, or Latinx was associated with a slew of poorer mental health outcomes. Although the ethnic affirmation and belonging finding indicates that the Latinx identity is related to various factors which can worsen mental health, these findings do little to identify what those additional factors are. Instead, the identified literature paints a picture of the Latinx identity in and of itself being dangerous to one's mental health. This dangerous conclusion creates room for further internalized racism and opportunities for discrimination. Although the information provided in these studies is valuable to understanding how Latinx students may be better supported within the university system, a need for more diverse aspects of the Latinx college student experience is needed to form a more complete picture of their mental health and needs of the community. Furthermore, future studies will need to examine whether it is the ethnic identity, the racial literacy or understanding, or the consciousness/ awareness regarding discrimination that causes or plays a role in ethnic identity relating to ethnic identity, affirmation, and belonging.

As a variety of factors ranged from examining negative experiences related to ethnic identity, simultaneously, identified risk factors were found to include belonging and ethnic affirmation, and cultural adaptations. Although these factors may serve as risk factors at face value, the context of the variable may lead to a plethora of mental health concerns as identified by the results of the current study. Ethnic identity achievement and cultural adaptations were two specific variables which at first glance may appear to serve as protective factors but were identified as risk factors. Although each study focused on the relationship of these risk factors to different mental health outcomes, these studies serve to highlight the dynamic nature of ethnic identity, context, and mental health.

Moreover, specific factors directly related to aspects of the Latinx experience or culture as risk factors were examined and captured in the current study. Some of these factors include familismo, respeto, stress from SB1108, and R/E discrimination. Considering that there are identity related experiences and cultural values that appear to be universally true across cultures, it is critical to introduce additional aspects of the Latinx experience which provide a more narrowed and specific focus to the impact of acculturation for these college students; familismo and respeto were two such factors. Although the two cultural values were examined in relation to different mental health outcomes, their inclusion within the literature demonstrates the importance for the academic and societal focus on how the Latinx culture within the American society may impact the Latinx college student experience. Similarly, to how greater ethnic identity correlated to poorer mental health outcomes, a study by Corona at colleagues (2016) indicated that respeto moderated the relationship between perceived discrimination and anxiety, meaning that those who endorsed greater levels of value for demonstrating respect for others and who also experienced greater levels of discrimination, were more likely to endorse higher levels of anxiety. Furthermore, greater familismo or familism values were found to moderate the relationship between sister’s negative dyadic coping behaviors and depressive symptoms. Again, greater connection with cultural identity and values when present alongside experience of a negative sociopolitical environment can be related to poorer mental health outcomes. But why is this? What it is about cultural values that lead to poorer mental health outcomes? Previous literature had found that acculturative stress, or the disagreement between cultural values of the home culture with that of the host culture, is related to a slew of poor mental health outcomes (i.e., substance abuse, depression, distress, eating disorder symptoms; Koneru et al., 2007). For Latinx college students, their culture values may not align with expectations of college life. For example, the value of familismo or obligatory familism may lead Latinx families to expect their child to come home every weekend or even attend a school closer to home, yet this may not correlate with the individual student's goals or desired college experience given that the experience is rooted in individualistic western culture. The impact of this dissonance on the mental health of Latinx college students may have been reflected by these findings which on the surface suggest their very identity leads to poorer mental health outcomes.

As dimensions of identity present a complicated picture of greater cultural connection leading to an assortment of poorer mental health outcomes, other variables related to identity and culture highlight how aspects of the Latinx experience place students at greater risk for poor mental health. For example, higher levels of experienced microaggressions were related to higher levels of stress for students who endorsed lower levels of political activism. This is reminiscent of liberation psychology, which emerged from Latinx cultural experiences (Burton & Guzzo, 2020). Understanding the oppression historically marginalized communities (i.e., the Latinx community within Latin American and the U.S.), may come from the direct experience of oppression, as was the case for Ignacio Martín-Baró, the founder of liberation psychology. The philosophy proposed that in addressing the oppressive sociopolitical structure through both conceptual and practical ways, we may begin to liberate ourselves from the oppression and therefore improve individual and community mental health. Similarly, the finding suggests that experiencing higher levels of microaggressions and its awareness without active attempts at liberation, are related to higher stress as oppression continues. Likewise, undocumented Latinas were found to experience higher levels of generalized anxiety as compared to their undocumented male counterparts.

These findings demonstrate that the everyday challenges students may face, whether on campus or on social media, have real and dangerous consequences to their mental health. It is first necessary to note how levels of political activism affect the relationship between experienced microaggressions and stress. Being politically active often means being familiar with current events which do not align with personal and political values. Being entrenched in this and actively working to dismantle systems of oppression are related to increased stress as one is required to think about the very oppression they or others face. Moreover, being undocumented in the United States may mean navigating a system designed to prevent one from receiving basic needs and opportunities such as employment. These findings then pose the question of how does a university system support Latinx students who may face racism both on campus, and on a systemic level via governmental and legal systems? Perhaps through educating the community and providing adequate resources for students facing a wide array of stressors, Latinx students would have a support net designed to prevent them from falling through the cracks.

Regarding identity, the findings on gender present a complex and nuanced area of the literature which warrants further exploration. Several findings proposed identifying as female to be a risk factor for poorer mental health outcomes. Similar to Latinx identity serving as a risk factor, is it the identity itself which sets students up for poorer mental health, or the underlying factors and sociopolitical constructs which are truly at play? It may be more likely that gender roles steeped in the U.S. and Latinx cultures in conjunction with institutionalized sexism may create additional challenges that female identified Latinxs face more often than identified males. Again, taking the identified literature at face value may build on existing structures of oppression. So how do academic institutions take these findings and incorporate them into systems of support for Latinx students? The answer may not be as simplistic and affordable as most institutions would like, however are extremely necessary to ensure mental well-being and academic success. Additional offices, employees, programs, and financial aid opportunities may appear to be logical solutions, yet they would increase the expenses of universities who have historically underfunded programs and resources for BIPOC and historically marginalized communities.

In consideration for risk factors that expand beyond identity and culture, several risk factors related to college and work were identified and present a similar picture to identity and culture. Higher levels of work and school demands were found to be related to higher levels of stress at work and school. It is logical to assume that greater demands lead to greater stress, but the literature presents a more complicated picture when considering that higher levels of beliefs in system fairness were related to higher levels of experienced discrimination. How could one who experiences greater demands to their time and energy via work or school which could potentially be influenced by identity and cultural values experience more stress be true, as a greater belief in system fairness is related to higher levels of perceived discrimination? How could both be simultaneously true? Again, the literature identified within the current study, while comprehensive in terms of the breadth of risk factors and mental health outcomes examined, leaves holes of information needed to understand the nuances of the Latinx experience as related to Latinx college students' mental health.

A lack of social connection also emerged as a theme amongst the risk factors, and supports the conclusions previously presented. Higher levels of thwarted belonging, lower levels of perceived belonging, and higher levels of polyvictimization were related to higher levels of suicidal ideation. Moreover, higher levels of ethnic stigma consciousness were related to higher levels of psychological distress, when higher levels of evaluative concerns were present. Not only is social support a necessary aspect of the human experience, but other research has also identified that for Latinx population, higher levels of social support are related to lower levels of anxiety, depression, mental health disorders, and psychological distress (Canino et al., 2008; Cruza-Guet et al., 2008; Rodriguez et al., 2003; Summer et al., 2010).

Therefore, in consideration of the literature, it is important to highlight the seriousness of the mental health outcomes found to be associated with the risk factors highlighted above. A lack of social connection, specifically through the lens of belonging and victimization was related to higher levels of suicidal ideation and psychological distress. Suicide is the second leading cause of death among college students in the U.S., and in 2015, young adults between the ages on 18-25 were more likely than adults of other ages to have serious thoughts of suicide, make suicide plans, or to have attempted suicide (Piscopo et al., 2016). Although this concept is not isolated to the Latinx college student population, when considering how a connection of ethnic identity may be related to a greater understanding and experience of stressors and challenges for the Latinx community, these findings are given further context for how feeling more isolated places them at greater risk for suicidal ideation or psychological distress**.** Moreover, existing maladaptive or unhealthy social connections introduce additional risk for Latinx college students. For example, being an older female sibling, lower levels of anxiety, and higher negative relationship quality with siblings are associated with higher levels of academic distress. How could lower levels of anxiety be associated with higher levels of academic distress? The inclusion of the additional factors of birth order, gender, and negative relationship quality with lower levels of anxiety potentially creates a situation in which older female identified siblings with poor relationships with siblings are more aware of the cultural values they are unable to live out (i.e., familismo). It is also possible that the other variables introduce other stressors which negatively impact the individual regardless of their level of anxiety. The pressure of being the eldest sibling from a collectivistic culture with poor relationship quality juxtaposed with individualistic western culture within the university system may be enough to create academic distress with or without anxiety. A third consideration may be the cultural expression of anxiety within the Latinx community, which may not be accurately captured yet by general anxiety measures or measures designed for the Latinxs.

An interesting aspect of identifying risk factors for Latinx college students' mental health was the inclusion of interactions. Although many correlations between risk factors and mental health outcomes were identified, the inclusion of interactions lead to more in depth and complex relationships between risk factors, various variables, and mental health outcomes. Several interactions demonstrated that with the inclusion of a moderator or mediator, correlation previously identified may have been deemed insignificant, or may have strengthened the relationship of the correlation. Additionally, some variables that were identified as protective factors in Research Question 2 were identified as risk factors when other variables were entered into interactions. For example, social support from family would ideally serve as a protective factor, yet when acculturative stress was present, high social support from family functioned as a risk factor. This may be due to cultural expectations around time and resources spent toward family support. Perhaps for some students, higher levels of family support translate to more time spent with family or more frequent interactions with family. For a busy college student attending a western school ingrained in an individualistic culture, higher levels of family support with higher levels of acculturations may lead to increased levels of stress or anxiety.

In consideration for the other themes identified from Research Question 1, a minority of the risk factors were categorized as college/work-related or related to negative social interactions or a lack of belonging. Despite few risk factors capturing these aspects of the Latinx college student experience, the small amount of risk factors highlights the need for additional research to integrate identity and culturally relevant factors with other areas of their lives. Cultural belonging only captures a subset of the experience but if a study were to include social belonging or academic belonging, the results may home in on nuances not yet captured in the literature.

Lastly, the final theme to emerge was stressors. These risk factors ranged from examining depression, to anxiety, to trauma. The many interactions identified extend beyond the existing findings to examine how mental health challenges may present alongside various other factors to negatively impact Latinx college student mental health (i.e., familism moderating the relationship between loneliness and a mental health outcome). Specifically, coping styles which highlight taking action to change a stressful situation or one’s emotions (i.e., primary control coping) or practice accepting one’s circumstances to focus on what can be controlled (fatalism coping) were related to higher levels of alcohol use issues. These findings highlight how the way in which a Latinx college student copes with the various stressors presented throughout this section may exacerbate the poorer mental health outcomes already experienced. The stressors already related to mental health need to be addressed to understand the complicated and intertwined ways in which these variables impact a college student’s mental health and personhood.

Protective Factors

Many factors may be related to a lower likelihood of poorer health outcomes, and the current study has demonstrated that previous studies have examined a wide array of these protective factors. Similarly to the risk factors, four themes emerged from the data demonstrating the diversity of protective factors examined and identified throughout the identified studies. Although similar patterns emerged, they stray away from the patterns emerging from the risk factor data. It is first necessary to acknowledge that fewer studies provided evidence for identified protective factors than risk factors. This may speak to the identified literature’s focus for highlighting more negative aspects of mental health, rather than positive aspects. Furthermore, this trend may allude to the focus on the negative impact of the Latinx identity or community, rather than highlighting the positive and healing elements.

The first theme of identity and culture presents findings which align with what the risk factors indicated. For example, higher levels of ethnic identity were associated with lower levels of depression, suicidal behaviors, and social anxiety symptoms, as well as higher levels of emotional well-being. Although greater connection to one’s ethnic identity may make one more aware of sociopolitical issues and racism, greater connection to identity and perhaps community has the ability to protect Latinx college students from poorer mental health outcomes with high risk such as suicidal behaviors. Similarly, for those experiencing lower levels of discrimination, there was no association between higher levels of respeto and higher levels of anxiety. Although current events and the national rhetoric have the power to impact a college student, lower levels of experienced discrimination have the potential to buffer the paradox of higher connection to ethnic identity and cultural values (i.e., respeto) with increased mental health issues. Creating safe and tolerant environments on college campuses, decreasing experienced racism, microaggressions, and discrimination has the ability to positively impact the mental health and college experience of Latinx college students.

In consideration of protective factors related to College and Work, findings revealed the need for systems of support on college campuses. For instance, higher levels of belief in system fairness were related to lower levels of depression and higher levels of better psychological health. For students who perceive and believe the college system to be fair, there is a decreased risk for poor mental health outcomes. This finding points to the need for fairer college systems that support and uplift students from historically disenfranchised communities. Furthermore, for Latinx students who had higher levels of instructor support, there was an association with lower levels of anxiety. Additionally, Latinx students who participated in a Latinx mentoring program reported higher levels of self-efficacy and a sense of belonging, and lower levels of depression and anxiety. Not only should the system itself be fair and supportive, but the individuals who make up these institutions must provide additional support ranging from professor interactions to program involvement. Feeling supported across multiple facets of the campus system has the ability to protect students from poorer mental health outcomes.

Just as institutional support is needed to buffer the negative effects of various risk factors, social interactions and support is critical for better mental health outcomes. One study indicated that higher levels of better-quality social interactions were related to higher levels of better subjective well-being, and lower levels of anxiousness and sadness. Another found that higher levels of social integration were related to higher levels of acceptance and support. Feeling connected to one’s support system in a positive and meaningful way may buffer the feelings of otherness that BIPOC, and in this case Latinx students, may often face. As mentioned earlier, increased experiences of discrimination or a lack of quality relationships have the potential to introduce a wide array of mental health concerns that supportive systems and relationships can buffer.

As better-quality social interactions are critical to Latinx students feeling supported, it is important to consider the support received from one's family and community. A study revealed that more time spent with family was associated with lower levels of school stress, and another study found that higher levels of familismo were related to lower levels of mental health symptoms (i.e., depression, anxiety, and stress). Latinx students who may value familismo and are able to spend increased quality time with family may perceive themselves to be supported within the context of the home. For students who may not share these values or do not have the ability to connect with family, universities may need to consider how to supplement additional support through community building. Yet once again, values specific to the Latinx community can buffer poorer mental health outcomes when in the context of support.

As the literature highlighted the importance of quality social interactions and support, the results also emphasized the need for adaptive coping skills. One study found that higher levels of active coping (i.e., problem focused coping) were related to better adjustment. Furthermore, in an experimental study one single affirmation intervention was found to be related to higher levels of perceived adequacy, sense of belonging in school, and self-affirmations. Although external support from other systems, communities, and individuals are important to the development of more positive mental health outcomes, internal coping strategies illuminate the need to address the ways in which Latinx students internally handle the various stressors and challenges they face. For example, higher levels of self-esteem were not related to higher levels of stress when higher levels of engaged coping (i.e., actively dealing with the stressor and associated emotions) were present. Managing stressors in a direct approach are found to reduce the likelihood for poorer mental health outcomes by multiple studies identified by this systematic review.

Furthermore, it is critical to acknowledge the wide variety of protective factors identified in the current study. Similar to risk factors, this pattern may point to the identified literature casting a wide net to capture the Latinx experience, yet simultaneously this presents challenges as it may be more difficult to find articles which provide supporting evidence. Additionally, there is a stark contrast between the 4 themes that emerged from the identified risk factors and protective factors. Although each had a theme of identity and culturally relevant and college related factors, the other two themes differ slightly. The third risk factor theme was identified as lack of social belonging and interactions, whereas the protective factor theme captured the exact opposite: social belonging and interactions. Lastly, whereas the theme of mental health factors emerged for the risk factors, a theme of coping emerged for the protective factors. Although coping can certainly be categorized as a facet of mental health, the theme of coping more accurately captured the trends among the protective factors.

Mental Health Outcomes

Just as it is necessary to identify the risk factors and protective factors for Latinx college students' mental health, much can be revealed by examining how studies defined mental health. Similarly to the risk and protective factors, several themes of mental health outcome emerged: academics/college, symptoms, stress, belonging, coping, and suicide. The examined literature identified a wide array of mental health outcomes, many of which overlapped identified risk and protective factors. This demonstrates the dynamic nature of Latinx college students' mental health, as a variable may serve various functions dependent on context. For example, hope served as a mental health outcome in one study, and higher levels of hope served as a protective factor in another.

The identified mental health outcomes also serve as a gauge for what the literature has deemed critical to study thus far. Given that depression, anxiety, stress, and current suicidal ideation were the most widely examined mental health outcomes in this review, a trend appears and showcases the norm to define mental health in terms of symptoms and disorders. Although this information is critical within the context of practicing within the scope of the DSM-5TR, one also starts to wonder whether part of the picture becomes obscured. What may be uncovered if the literature shifts its focus to areas of mental health that focus on culture and values? Or can the literature redefine its traditional concept of mental health into one that may be more inclusive towards existing concepts such as ethnic identity stress or attaque de nervios. Luckily, a few articles were identified in this review that presented culturally attuned mental health outcomes, and although the number of studies examining these outcomes may be vast this review emphasizes the niche nature of Latinx college students' mental health.

Demographic Variability

Research Question 4 focused on the demographic variability relevant to the mental health of Latinx college students. Many of the studies presented the demographic information of their samples, ideally presenting a wealth of information on how various identities, research components, or environmental factors may impact the mental health of Latinx college students. For example, a majority of the studies included in this review included samples that were entirely comprised of Latinx college students. Yet, due to the data extraction process and diverse set of mental health outcomes, risk factors, and protective factors, determining differences between a Latinx sample versus a mixed sample in respect to these factors becomes difficult to tease apart.

What can be extracted from these findings are broader differences between the groups in regard to what is being examined. For instance, 22 of the 35 studies which included an entirely Latinx sample examined identity or culturally focused risk factors and 17 protective factors, compared to only ten of the 25 studies identifying identity and culturally related risk factors and 11 protective factors, of the studies which had samples that included Latinx participants. There is a stark difference between the number of studies which aimed to study Latinx college students, essentially using the same sample as a comparison, whereas the studies which used samples including Latinx college students utilized the different R/E groups as comparisons. Although understanding the differences between Latinx college students and other R/E group college students is necessary to identify disparities and commonalities between the groups, solely focusing on the one group has the potential to lead to a richer understanding of the group's experience, when combined with existing information in comparison to other groups.

Furthermore, the several studies did include information on ethnic identity or country of descent. A majority of studies which included data on ethnic identity or country of descent examined Mexican/ Mexican American/ Chicano Latinx college students. Still, a majority of studies simply described the sample of interest as Latino, Latino/a, Latinx, or Hispanic. The lack of studies examining specific ethnic identities leave gaps in the literature to understand the between-group differences that exist within any race or culture.

A similar pattern is identified within gender. Only six articles created a methodology which measured and accounted for the participant's gender more inclusively, expanding beyond the gender binary. Six of these articles identified identity or culturally related risk factors, two identified identity or culturally related protective factors. When compared to the seven articles which included samples entirely comprised of female identified Latinx college students, three of these articles identified identity or culturally related risk factors, three identified identity or culturally related protective factors. Finally, within the 47 articles featuring samples of only males and females (i.e., all of which were majority female), 22 of these articles identified identity or culturally related risk factors, 13 identified identity or culturally related protective factors. A distinct lack of attention and recognition is paid to the wide diversity of genders that exist within the Latinx community in these studies. Furthermore, although all other studies have a majority female sample size, this begs the question whether every study thoroughly accounts for this imbalance of gender within its methodology and interpretation of results. Although the Latinx community is wholly underrepresented in the mental health and college student literature, Latinx identified males emerge as underrepresented as not a single studied identified in this review contained an all-male identified sample. Moreover, the studies which do attempt to include more a diverse grouping of gender-specific samples appear to include risk and protective factors which explore the impact of identity and culture on Latinx college students, however significance cannot be drawn from this observation as statistical analyses were not run on these results.

Mental Health and Academic Performance

Much of the identified on college student mental health focuses on how poorer or stronger mental health impacts students' academic performance. This review aimed to shift the focus onto mental health and its influences, yet it is additionally important to acknowledge the relationship between academic performance and mental health. Focusing on this relationship is necessary to acknowledge the importance of an education, and the stress that accompanies performing within the academic setting.

Seven total articles examined the relationship of grades, GPA, and end of year grades to mental health variables. These seven articles alone may have presented a wealth of information, however narrowly defining academic performance through the lens of grades neglects to acknowledge additional factors which may contribute to a Latinx college student's academic performance. In total eight different variables from a total of 13 articles were identified. For example, higher levels of college stress were found to be related to lower levels of academic engagement. Furthermore, higher levels of academic stress were related to lower levels of academic motivation. Here a trend emerges to highlight how various forms of stress are related to and potentially negatively impacted by academic performance variables. Moreover, some results revealed moderators between mental health variables and academic performance, such as higher levels of positive sibling relationships strengthening the positive relationship between greater interpersonal stress and greater academic motivation. This finding demonstrates how the addition of other factors, including the type of family relationship may negatively impact academic performance, via poorer mental health.

Luckily, variables that were previously identified as protective factors for Latinx college student's mental health were found to positively impact academic performance. Intrinsic motivation and self-efficacy were significantly and positively correlated with academic engagement, and Latinx dental students with high grit and resilience scores achieved higher class rankings.

Overall, these findings demonstrate how expanding the traditional understanding of a variable can open the door for a wealth of information. Overlap between risk factors, protective factors, and academic performance outcomes raise the question of how colleges and universities can address various experiences that tend to worsen mental health and academic performance and promote those which serve to better these same factors.

Lastly, whereas a theme of mental health factors emerged for the risk factors, a theme of coping emerged for the protective factors. Although coping can certainly be categorized as a facet of mental health, the theme of coping more accurately captured the trends among the protective factors.

Limitations

The current review aimed to offer a broad overview of the current state of the literature as it pertains to the risk and protective factors of Latinx college students. Firstly, although the inclusion and exclusion criteria, search terms, and searched databases were carefully planned to adequately address the research questions, only 60 studies were identified as meeting all of the requirements. More studies would need to be examined to truly examine the breadth of existing information on this topic, yet the small number of identified studies suggests that the topic itself is niche and not yet thoroughly explored. Secondly, a majority of all samples were comprised of female identified participants. This presents a separate challenge of ensuring that variables and results thoroughly address this gender disparity, yet the quality assurance process revealed very few studies did more than just name this limitation. Thirdly, due to the diversity of risk factors, protective factors, and mental health outcomes, identifying trends via the demographic variability was near impossible due to lack of comparable factors and findings. Again, expanding research in this area may allow for comparable findings to explore and dissect. Lastly, the author initially conceptualized Research Question 4 to identify how studies examining the same mental risk factors, protective factors, and mental health outcomes differed on specific demographic variables. For example, for the studies examining how financial stress impacts Latinx college student’s depression levels, were there any identified gender differences? Yet, due to the wide variety of risk factors, protective factors, and mental health outcomes many studies did not overlap between variables, making it nearly impossible to compare the demographic variability of studies. Future systematic reviews should aim to create a data extraction process which more accurately captures the demographic variability, via extracting additional data regarding the measures of the mental health outcomes (i.e., Study A females averaged a BDI-II score of 8, and Study A males averaged a BDI-II score of 10).

Future Directions

The entirety of the review highlights the need for additional research and evidence-based decision making on this growing student populating to drive the necessary reform and institutional support systems ensuring Latinx college student’s personal and academic success. Academics may be required to shift focus of groups and communities where research is defined as “niche,” and seek the answers to the questions raised in this review.

Furthermore, the implications of this review extend to colleges and universities, families, and students. Firstly, colleges and universities provide increased and adequate funding to offices that aim to support Latinx college students on and off campus. University Counseling Centers, Latinx resource centers, undocumented student centers, family centers, and student led R/E organizations all provide support through various avenues that may address the raised needs, yet for whatever reason the funding is not there. Stories of BIPOC students struggling to adjust to life on campus increase in frequency, especially as Latinx students grow in number within higher education. Therefore, all stakeholders within the university systems and academia must coordinate and strive to first acknowledge and then close the gaps which perpetuate lower degrees of success and increased mental health struggles.

We understand that as the Latinx population expands in the U.S. and an increasing number of Latinx students are attending college, students and families will continue to face the challenges of navigating institutions steeped in individualistic western culture. Families will continue to feel the disconnect between their children's beliefs, values, and actions and the culture in which they raised their children. Students will continue to struggle in systems designed to benefit others. So, what can families and students do to minimize the gap between their culture and the culture of college. The answer is inscrutable due to the complexity of culture itself. We as academics have no right to dictate which cultural elements to take and which to abandon for the purpose of supporting Latinx college students. Yet the literature can shift to focus on the protective variables and experiences which may increase mental well-being and academic performance.

Solutions become rather complicated and elusive as the focus shifts not to the implications for families and students, but to future steps taken by institutions of higher education. Therapists within the University College Counseling system or community based mental health play a role in this confusing problem. These mental health providers are on the front lines navigating systems concerned with profit and risk management, yet they are the ones to witness see the individual impact that these issues have on Latinx and other historically disenfranchised students. Therapists should familiarize themselves with these risk and protective factors within the context of culture to create preventative and treatment focused interventions, solidifying at least one layer of support provided by the university. Particularly, creating a presence outside of the Counseling Center is essential in making services accessible and targeting specific populations within the Latinx community at key times in their education (Tello & Lonn, 2017). Previous research has demonstrated entering college and approaching graduation are two critical points to deliver support for first generation Latinx students adjusting to major life transitions (Orbe, 2004). Therapists must also advocate for their needs and the needs of the students, as university leadership focuses on aspects of business which do not attend to the needs of historically minoritized students. Challenging the traditional institutional culture and values of profit may be one step in shaping the support systems designed for Latinx college students (Tello & Lonn, 2017). The aim of this study was to ultimately highlight the need for various systems within the lives of Latinx college students to collaboratively work towards providing adequate support, with special emphasis placed on the university system to fund this. By supporting Latinx college students, communities and universities will be funding and supporting the future of these systems.

REFERENCES

Ai, A. L., Pappas, C., & Simonsen, E. (2014). Risk and protective factors for three major mental health problems among Latino American men nationwide. *American Journal of Men's Health*, *9*(1), 64–75. https://doi.org/10.1177/1557988314528533

Alegría, M., Canino, G., Shrout, P. E., Woo, M., Duan, N., Vila, D., Torres, M., Chen, C. N., & Meng, X. L. (2008). Prevalence of mental illness in immigrant and non-immigrant U.S. Latino groups. *American Journal of Psychiatry*, *165*(3), 359–369. https://doi.org/10.1176/appi.ajp.2007.07040704

American Psychiatric Association. (2021). *DSM-5: Diagnostic and statistical manual of mental disorders*, (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Arbona, C., & Jimenez, C. (2014). Minority stress, ethnic identity, and depression among Latino/a college students. *Journal of Counseling Psychology*, *61*(1), 162–168. https://doi.org/10.1037/a0034914

Arcury, T. A., Furgurson, K. F., O'Hara, H. M., Miles, K., Chen, H., & Laurienti, P. J. (2019). Conventional and complementary therapy use among Mexican farmworkers in North Carolina: Applying the I-CAM-Q. *Journal of Agromedicine*, *24*(3), 257–267. https://doi.org/10.1080/1059924x.2019.1592049

Asnaani, A., Richey, J. A., Dimaite, R., Hinton, D. E., & Hofmann, S. G. (2010). A cross-ethnic comparison of lifetime prevalence rates of anxiety disorders. *Journal of Nervous & Mental Disease*, *198*(8), 551–555. https://doi.org/10.1097/nmd.0b013e3181ea169f

Barragán, A., Yamada, A. M., Lee, K. K., & Barrio, C. (2015). Correlates in the endorsement of psychotic symptoms and services use: Findings from the collaborative psychiatric epidemiology surveys. *Community Mental Health Journal*, *52*(6), 631–642. https://doi.org/10.1007/s10597-015-9850-z

Berkel, C., Knight, G. P., Zeiders, K. H., Tein, J. Y., Roosa, M. W., Gonzales, N. A., & Saenz, D. (2010). Discrimination and adjustment for Mexican American adolescents: A prospective examination of the benefits of culturally related values. *Journal of Research on Adolescence*, *20*(4), 893–915. https://doi.org/10.1111/j.1532-7795.2010.00668.x

Berry, J. W. (2003). Conceptual approaches to acculturation. In K. M. Chun, P. Balls Organista, & G. Marín (Eds.), *Acculturation: Advances in Theory, Measurement, and Applied Research* (pp. 17–37). American Psychological Association. https://doi.org/10.1037/10472-004

Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review*, *21*(3), 491–511. https://doi.org/10.2307/2546607

Billingsley, J. T., & Hurd, N. M. (2019). Discrimination, mental health and academic performance among historically excluded college students: The role of extracurricular activities at predominantly white institutions. *Social Psychology of Education*, *22*(2), 421–446. https://doi.org/10.1007/s11218-019-09484-8

Blanco, C., Okuda, M., Wright, C., Hasin, D. S., Grant, B. F., Liu, S. M., & Olfson, M. (2008). Mental health of college students and their non–college-attending peers. *Archives of General Psychiatry*, *65*(12), 1429–1437. https://doi.org/10.1001/archpsyc.65.12.1429

Borges, G., Mora-Icaza, M. E. M., Benjet, C., Lee, S., Lane, M., & Breslau, J. (2011). Influence of mental disorder on school dropout in Mexico. *Pan American Journal of Public Health*, *30*(5), 477–483.

Bratter, J. L., & Eschbach, K. (2005). Race/ethnic differences in nonspecific psychological distress: Evidence from the national health interview survey. *Social Science Quarterly*, *86*(3), 620–644. https://doi.org/10.1111/j.0038-4941.2005.00321.x

Breslau, J., Aguilae-Gaxiola, S., Kendler, K. S., Su, M., Williams, D., & Kessler, R. C. (2005). Specifying race-ethnic differences in risk for psychiatric disorder in a U.S.A. national sample. *Psychological Medicine*, *36*(1), 57–68. https://doi.org/10.1017/s0033291705006161

Burnam, M. A., Hough, R. L., Karno, M., Escobar, J. I., & Telles, C. A. (1987). Acculturation and lifetime prevalence of psychiatric disorders among Mexican Americans in Los Angeles. *Journal of Health and Social Behavior*, *28*(1), 89–102. https://doi.org/10.2307/2137143

Burton, M., & Guzzo, R. (2020). Liberation psychology. In L. Comas-Díaz & E. T. Rivera (Eds.), *Liberation psychology: Theory, method, practice, and social justice.* American Psychological Association. https://www.apa.org/pubs/books/liberation-psychology

Cabassa, L. J., Zayas, L. H., & Hansen, M. C. (2006). Latino adults' access to mental health care: A review of epidemiological studies. *Administration and Policy in Mental Health and Mental Health Services Research*, *33*(3), 316–330. https://doi.org/10.1007/s10488-006-0040-8

Caetano, R., Kaplan, M. S., Huguet, N., McFarland, B. H., Conner, K., Giesbrecht, N., & Nolte, K. B. (2013). Acute alcohol intoxication and suicide among United States ethnic/racial groups: Findings from the national violent death reporting system. *Alcoholism: Clinical and Experimental Research, 37*(5), 839–846. https://doi.org/10.1111/acer.12038

Canino, G., Vega, W. A., Sribney, W. M., Warner, L. A., & Alegría, M. (2008). Social relationships, social assimilation, and substance use disorders among adult Latinos in the U.S. *Journal of Drug Issues*, *38*(1), 69–101. https://doi.org/10.1177/002204260803800104

Cardemil, E. V., Adams, S. T., Calista, J. L., Connell, J., Encarnación, J., Esparza, N. K., Frohock, J., Hicks, E., Kim, S., Kokernak, G., McGrenra, M., Mestre, R., Pérez, M., Pinedo, T. M., Quagan, R., Rivera, C., Taucer, P., & Wang, E. (2007). The Latino mental health project: A local mental health needs assessment. *Administration and Policy in Mental Health and Mental Health Services Research*, *34*(4), 331–341. https://doi.org/10.1007/s10488-007-0113-3

Center for Collegiate Mental Health (CCMH). (2015). *2014 Annual Report* (Publication No. S.T.A. 15–30). Center for Collegiate Mental Health, Penn State University.

Chang, E. C., Yu, E. A., Yu, T., Kahle, E. R., Hernández, V., Kim, J. M., Jeglic, E. L., & Hirsch, J. K. (2016). Ethnic variables and negative life events as predictors of depressive symptoms and suicidal behaviors in Latino college students. *Hispanic Journal of Behavioral Sciences*, *38*(2), 206–221. https://doi.org/10.1177/0739986316641418

Chou, T., Asnaani, A., & Hofmann, S. G. (2012). Perception of racial discrimination and psychopathology across three U.S. ethnic minority groups. *Cultural Diversity & Ethnic Minority Psychology*, *18*(1), 74–81. https://doi.org/10.1037/a0025432

Corona, R., Rodríguez, V. M., McDonald, S. E., Velazquez, E., Rodríguez, A., & Fuentes, V. E. (2016). Associations between cultural stressors, cultural values, and Latina/o college students' mental health. *Journal of Youth and Adolescence*, *46*(1), 63–77. https://doi.org/10.1007/s10964-016-0600-5

Crisp, G., Taggart, A., & Nora, A. (2015). Undergraduate Latina/o students. *Review of Educational Research*, *85*(2), 249–274. https://doi.org/10.3102/0034654314551064

Crockett, L. J., Iturbide, M. I., Torres Stone, R. A., McGinley, M., Raffaelli, M., & Carlo, G. (2007). Acculturative stress, social support, and coping: Relations to psychological adjustment among Mexican American college students. *Cultural Diversity and Ethnic Minority Psychology*, *13*(4), 347–355. https://doi.org/10.1037/1099-9809.13.4.347

Cruza-Guet, M. C., Spokane, A. R., Caskie, G. I. L., Brown, S. C., & Szapocznik, J. (2008). The relationship between social support and psychological distress among Hispanic elders in Miami, Florida. *Journal of Counseling Psychology*, *55*(4), 427–441. https://doi.org/10.1037/a0013501

DeFreitas, S. C., Crone, T., DeLeon, M., & Ajayi, A. (2018). Perceived and personal mental health stigma in Latino and African American college students. *Frontiers in Public Health*, *6*, Article 49. https://doi.org/10.3389/fpubh.2018.00049

de Luca, S. M., Wyman, P., & Warren, K. (2012). Latina adolescent suicide ideations and attempts: Associations with connectedness to parents, peers, and teachers. *Suicide and Life-Threatening Behavior*, *42*(6), 672–683. https://doi.org/10.1111/j.1943-278x.2012.00121.x

Downs, M. F., & Eisenberg, D. (2012). Help seeking and treatment use among suicidal college students. *Journal of American College Health*, *60*(2), 104–114. https://doi.org/10.1080/07448481.2011.619611

Effective Practice and Organisation of Care (EPOC; 2013). *Data collection form.* EPOC Resources for review authors. Oslo: Norwegian Knowledge Centre for the Health Services. http://epoc.cochrane.org/epoc-specific-resources-review-authors

Eisenberg, D., Lipson, S. K., & Posselt, J. (2016). Promoting resilience, retention, and mental health. *New Directions for Student Services*, *2016*(156), 87–95. https://doi.org/10.1002/ss.20194

Escobar, J. I., Gomez, J., & Tuason, V. B. (1983). Depressive phenomenology in North and South American patients. *American Journal of Psychiatry*, *140*(1), 47–51. https://doi.org/10.1176/ajp.140.1.47

Fletcher, J. M. (2008). Adolescent depression: diagnosis, treatment, and educational attainment. *Health Economics*, *17*(11), 1215–1235. https://doi.org/10.1002/hec.1319

Gloria, A. M. (2002). Latino/a and African American students at predominantly White institutions: A psychosociocultural perspective of educational interactions and academic persistence. In J. Castellanos (Ed.), *The majority in the minority: Retaining Latina/o faculty, administrators, and students* (pp. 71–92). Stylus Publishing.

Gomez, J., Miranda, R., & Polanco, L. (2011). Acculturative stress, perceived discrimination, and vulnerability to suicide attempts among emerging adults. *Journal of Youth and Adolescence*, *40*(11), 1465–1476. https://doi.org/10.1007/s10964-011-9688-9

Gudiño, O. G., Lau, A. S., Yeh, M., McCabe, K. M., & Hough, R. L. (2008). Understanding racial/ethnic disparities in youth mental health services. *Journal of Emotional and Behavioral Disorders*, *17*(1), 3–16. https://doi.org/10.1177/1063426608317710

Haliwa, I., Spalding, R., Smith, K., Chappell, A., & Strough, J. (2021). Risk and protective factors for college students' psychological health during the COVID-19 pandemic. *Journal of American College Health*, *70*(8), 1–5. https://doi.org/10.1080/07448481.2020.1863413

Harrell, S. P. (2021, January). *Individual study quality appraisal form for systematic reviews*. Pepperdine University. https://drive.google.com/drive/u/1/search?q=quality%20appraisal

Hirsch, J. K., Visser, P. L., Chang, E. C., & Jeglic, E. L. (2012). Race and ethnic differences in hope and hopelessness as moderators of the association between depressive symptoms and suicidal behavior. *Journal of American College Health*, *60*(2), 115–125. https://doi.org/10.1080/07448481.2011.567402

Hope, E. C., Velez, G., Offidani-Bertrand, C., Keels, M., & Durkee, M. I. (2018). Political activism and mental health among Black and Latinx college students. *Cultural Diversity and Ethnic Minority Psychology*, *24*(1), 26–39. https://doi.org/10.1037/cdp0000144

Hovey, J. D., & Magaña, C. (2000). Acculturative stress, anxiety, and depression among Mexican immigrant farmworkers in the Midwest United States. *Journal of Immigrant Health*, *2*(3), 119–131. https://doi.org/10.1023/a:1009556802759

Hwang, W. C., & Goto, S. (2009). The impact of perceived racial discrimination on the mental health of Asian American and Latino college students. *Asian American Journal of Psychology*, *S*(1), 15–28. https://doi.org/10.1037/1948-1985.s.1.15

Ives, J., & Castillo-Montoya, M. (2020). First-Generation college students as academic learners: A systematic review. *Review of Educational Research*, *90*(2), 139–178. https://doi.org/10.3102/0034654319899707

Jamieson, P. E., & Romer, D. (2008). Unrealistic fatalism in U.S. youth ages 14 to 22: Prevalence and characteristics. *Journal of Adolescent Health*, *42*(2), 154–160. https://doi.org/10.1016/j.jadohealth.2007.07.010

Kang, H. K., Rhodes, C., Rivers, E., Thornton, C. P., & Rodney, T. (2021). Prevalence of mental health disorders among undergraduate university students in the United States: A review.

Journal of Psychosocial Nursing and Mental Health Services, *59*(2), 17–24. https://doi.org/10.3928/02793695-20201104-03

Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, *159*(9), 1548–1555. https://doi.org/10.1176/appi.ajp.159.9.1548

Kearney, L. K., Draper, M., & Barón, A. (2005). Counseling utilization by ethnic minority college students. *Cultural Diversity and Ethnic Minority Psychology*, *11*(3), 272–285. https://doi.org/10.1037/1099-9809.11.3.272

Kennard, B. D., Stewart, S. M., Hughes, J. L., Patel, P. G., & Emslie, G. J. (2006). Cognitions and depressive symptoms among ethnic minority adolescents. *Cultural Diversity and Ethnic Minority Psychology*, *12*(3), 578–591. https://doi.org/10.1037/1099-9809.12.3.578

Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Üstün, T. B. (2007). Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry*, *20*(4), 359–364. https://doi.org/10.1097/yco.0b013e32816ebc8c

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S. L. T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry*, *60*(2), 184–189. https://doi.org/10.1001/archpsyc.60.2.184

Koneru, V. K., De Mamani, A. G. W., Flynn, P. M., & Betancourt, H. (2007). Acculturation and mental health: Current findings and recommendations for future research. *Applied & Preventive Psychology*, *12*(2), 76–96. https://doi.org/10.1016/j.appsy.2007.07.016

Lamis, D. A., & Lester, D. (2013). Gender differences in risk and protective factors for suicidal ideation among college students. *Journal of College Student Psychotherapy*, *27*(1), 62–77. https://doi.org/10.1080/87568225.2013.739035

Lee, S., Tsang, A., Breslau, J., Aguilar-Gaxiola, S., Angermeyer, M., Borges, G., Bromet, E., Bruffaerts, R., de Girolamo, G., Fayyad, J., Gureje, O., Haro, J. M., Kawakami, N., Levinson, D., Browne, M. A. O., Ormel, J., Posada-Villa, J., Williams, D. R., & Kessler, R. C. (2009). Mental disorders and termination of education in high-income and low- and middle-income countries: Epidemiological study. *British Journal of Psychiatry*, *194*(5), 411–417. https://doi.org/10.1192/bjp.bp.108.054841

Levesque, R. J. R. (2011). Externalizing and internalizing symptoms. *Encyclopedia of Adolescence*, 903–905. https://doi.org/10.1007/978-1-4419-1695-2_539

Li, W., Dorstyn, D. S., & Jarmon, E. (2019). Identifying suicide risk among college students: A systematic review. *Death Studies*, *44*(7), 450–458. https://doi.org/10.1080/07481187.2019.1578305

Lipson, S. K., Kern, A., Eisenberg, D., & Breland-Noble, A. M. (2018). Mental health disparities among college students of color. *Journal of Adolescent Health*, *63*(3), 348–356. https://doi.org/10.1016/j.jadohealth.2018.04.014

Lipson, S. K., Lattie, E. G., & Eisenberg, D. (2019). Increased rates of mental health service utilization by U.S. college students: 10-Year population-Level trends (2007–2017). *Psychiatric Services*, *70*(1), 60–63. https://doi.org/10.1176/appi.ps.201800332

Locke, T. F., & Newcomb, M. D. (2005). Psychosocial predictors and correlates of suicidality in teenage Latino males. *Hispanic Journal of Behavioral Sciences*, *27*(3), 319–336. https://doi.org/10.1177/0739986305276745

Lopez, C., Vàzquez, M. M., & McCormick, A. S. (2022). Familismo, respeto, and bien educado: Traditional/cultural models and values in Latinos. In *Springer eBooks* (pp. 87–102). https://doi.org/10.1007/978-3-031-14470-7_6

Matson, J. L., Wilkins, J., & Macken, J. (2008). The relationship of challenging behaviors to severity and symptoms of autism spectrum disorders. *Journal of Mental Health Research in Intellectual Disabilities*, *2*(1), 29–44. https://doi.org/10.1080/19315860802611415

Mejía, O. L., & McCarthy, C. J. (2010). Acculturative stress, depression, and anxiety in migrant farmwork college students of Mexican heritage. *International Journal of Stress Management*, *17*(1), 1–20. https://doi.org/10.1037/a0018119

Mills, M. L. (2012). Unconventional mental health treatment: Reexamining the racial-ethnic disparity in treatment-seeking behavior. *Psychiatric Services*, *63*(2), 142–146. https://doi.org/10.1176/appi.ps.201100008

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, *4*(1), Article 1. https://doi.org/10.1186/2046-4053-4-1

Muñoz, S. M., Vigil, D., Jach, E. M., & Rodriguez-Gutierrez, M. M. (2018). Unpacking resilience and trauma: Examining the "Trump effect" in higher education for undocumented Latinx college students. *Association of Mexican American Educators Journal*, *12*(3), 33–52. https://doi.org/10.24974/amae.12.3.405

Nadeem, E., Lange, J. M., & Miranda, J. (2008). Mental health care preferences among low-income and minority women. *Archives of Women's Mental Health*, *11*(2), 93–102. https://doi.org/10.1007/s00737-008-0002-0

O’Leary, A. O., & Romero, A. (2011). *Chicana/o students respond to Arizona’s Anti-Ethnic Studies Bill, SB 1108: Civic engagement, ethnic identity, and well-being* (EJ925887). ERIC. https://eric.ed.gov/?id=EJ925887

Olson, L. M., Wahab, S., Thompson, C. W., & Durrant, L. (2011). Suicide notes among Native Americans, Hispanics, and Anglos. *Qualitative Health Research*, *21*(11), 1484–1494. https://doi.org/10.1177/1049732311412789

Oquendo, M. A., Dragatsi, D., Harkavy-Friedman, J., Dervic, K., Currier, D., Burke, A. K., Grunebaum, M. F., & Mann, J. J. (2005). Protective factors against suicidal behavior in Latinos. *Journal of Nervous & Mental Disease*, *193*(7), 438–443. https://doi.org/10.1097/01.nmd.0000168262.06163.31

Orbe, M. P. (2004). Negotiating multiple identities within multiple frames: An analysis of first-generation college students. *Communication Education*, *53*(2), 131–149. https://doi.org/10.1080/03634520410001682401

Peña, J. B., Kuhlberg, J. A., Zayas, L. H., Baumann, A. A., Gulbas, L., Hausmann-Stabile, C., & Nolle, A. P. (2011). Familism, family environment, and suicide attempts among Latina youth. *Suicide and Life-Threatening Behavior*, *41*(3), 330–341. https://doi.org/10.1111/j.1943-278x.2011.00032.x

Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with adolescents and young adults from diverse groups. *Journal of Adolescent Research*, *7*(2), 156–176. https://doi.org/10.1177/074355489272003

Piscopo, K., Lipari, R., Cooney, & Glasheen, C. (2016). *Suicidal thoughts and behavior among adults: Results from the 2015 national survey on drug use and health: NSDUH Data Review.* Substance Abuse and Mental Health Services Administration.

https://www.samhsa.gov/data/sites/default/files/NSDUH-DR-FFR3-2015/NSDUH-DR-FFR3-2015.pdf

Ponciano, C., Wang, C. D. C., & Jin, L. (2020). Attachment, acculturative stress, and mental health of Mexican immigrants. *Counselling Psychology Quarterly*, *35*(2), 1–16. https://doi.org/10.1080/09515070.2020.1813688

Prieto, L. R., McNeill, B. W., Walls, R. G., & Gómez, S. P. (2001). Chicanas/os and mental health services. *The Counseling Psychologist*, *29*(1), 18–54. https://doi.org/10.1177/0011000001291002

Rivera, F. I., Guarnaccia, P. J., Mulvaney-Day, N., Lin, J. Y., Torres, M., & Alegría, M. (2008). Family cohesion and its relationship to psychological distress among Latino groups. *Hispanic Journal of Behavioral Sciences*, *30*(3), 357–378. https://doi.org/10.1177/0739986308318713

Roberts, A. L., Gilman, S. E., Breslau, J., Breslau, N., & Koenen, K. C. (2010). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the United States. *Psychological Medicine*, *41*(1), 71–83. https://doi.org/10.1017/s0033291710000401

Robinson, J. A., Bolton, J. M., Rasic, D., & Sareen, J. (2012). Exploring the relationship between religious service attendance, mental disorders, and suicidality among different ethnic groups: Results from a nationally representative survey. *Depression and Anxiety*, *29*(11), 983–990. https://doi.org/10.1002/da.21978

Rodriguez, N., Mira, C. B., Myers, H. F., Morris, J., & Cardoza, D. (2003). Family or friends: Who plays a greater supportive role for Latino college students? *Cultural Diversity & Ethnic Minority Psychology*, *9*(3), 236–250. https://doi.org/10.1037/1099-9809.9.3.236

Rodríguez Carrión, D. M., Montalvo, S. S., & Martínez-Taboas, A. (2011). Contribución del manejo religioso a la calidad de vida y sintomatología depresiva en una muestra de hispanos que tienen un diagnóstico de cáncer [The religious management contribution to the quality of life and symptoms depression in a sample of Hispanics you have a diagnosis of cancer]. *Revista Puertorriqueña de Psicología*, *22*, 27–45.

Roeser, R. W., Eccles, J. S., & Strobel, K. R. (1998). Linking the study of schooling and mental health: Selected issues and empirical illustrations at. *Educational Psychologist*, *33*(4), 153–176. https://doi.org/10.1207/s15326985ep3304_2

Sam, D. L., & Berry, J. W. (2010). Acculturation: When individual and groups of different backgrounds meet. *Perspectives on Psychological Science*, *5*(4), 472–481. https://doi.org/10.1177/1745691610373075

Schwartz, S. J., Unger, J. B., Zamboanga, B. L., & Szapocznik, J. (2010). Rethinking the concept of acculturation: Implications for theory and research. *American Psychologist*, *65*(4), 237–251. https://doi.org/10.1037/a0019330

Sims, G. M., Kia-Keating, M., Liu, S. R., & Taghavi, I. (2020). Political climate and sense of belonging in higher education: Latina undergraduates and mental health. *Peace and Conflict: Journal of Peace Psychology*, *26*(4), 356–364. https://doi.org/10.1037/pac0000448

Smokowski, P. R., Rose, R., & Bacallao, M. L. (2008). Acculturation and Latino family processes: How cultural involvement, biculturalism, and acculturation gaps influence family dynamics. *Family Relations*, *57*(3), 295–308. https://doi.org/10.1111/j.1741-3729.2008.00501.x

Suárez-Orozco, C., & Hernández, G. L. (2020). “Waking up every day with the worry”: A mixed-methods study of anxiety in undocumented Latinx college students. *Frontiers in Psychiatry, 11*, Article 568167. https://doi.org/10.3389/fpsyt.2020.568167

Substance Abuse and Mental Health Services Administration (SAMHSA). (2019). *Risk and protective factors*. https://www.samhsa.gov/sites/default/files/20190718-samhsa-risk-protective-factors.pdf

Substance Abuse and Mental Health Services Administration (SAMHSA), & U.S. Department of Health and Human Services (H.H.S). (2018). *2018 national survey on drug use and health: Hispanics, Latino or Spanish origin or descent*. https://www.samhsa.gov/data/sites/default/files/reports/rpt23249/4_Hispanic_2020_01_14_508.pdf

Suicide Prevention Resource Center (SPRC), & Rodgers, P. (2011). *Understanding risk and protective factors for suicide: A primer for preventing suicide*. https://www.sprc.org/sites/default/files/migrate/library/RiskProtectiveFactorsPrimer.pdf

Sumner, L. A., Valentine, J., Eisenman, D., Ahmed, S., Myers, H. F., Wyatt, G. E., Liu, H., Zhang, M., & Rodríguez, M. (2010). The influence of prenatal trauma, stress, social support, and years of residency in the US on postpartum maternal health status among low-income Latinas. *Maternal and Child Health Journal, 15*(7), 1046–1054. https://doi.org/10.1007/s10995-010-0649-9

Tello, A. M., & Lonn, M. R. (2017). The role of high school and college counselors in supporting the psychosocial and emotional needs of Latinx First-Generation college students. *The Professional Counselor, 7*(4), 349–359. https://doi.org/10.15241/amt.7.4.349

Umaña-Taylor, A. J., & Updegraff, K. A. (2007). Latino adolescents' mental health: Exploring the interrelations among discrimination, ethnic identity, cultural orientation, self-esteem, and depressive symptoms. *Journal of Adolescence*, *30*(4), 549–567. https://doi.org/10.1016/j.adolescence.2006.08.002

U.S. Census Bureau. (2021a, May 18). *Population and housing unit estimates*. https://www.census.gov/programs-surveys/popest.html

US Census Bureau. (2021b, October 8). *The American Community—Hispanics: 2004*. Census.gov. https://www.census.gov/library/publications/2007/acs/acs-03.html#:~:text=The%202004%20ACS%20estimated%20the,household%20population%20(Table%201).&text=Hispanics%20of%20Mexican%20origin%2C%20with,Hispanic%20population%20(Table%202).

U.S. Census Bureau, & Bauman, K. (2018, January 19). *School enrollment of the Hispanic population: Two decades of growth*. https://www.census.gov/newsroom/blogs/random-samplings/2017/08/school_enrollmentof.html

U.S. Department of Education. (2019). *Hispanic-Serving institutions (HSIs): White House initiative on advancing educational equity, excellence, and economic opportunity for Hispanics*. https://sites.ed.gov/hispanic-initiative/hispanic-serving-institutions-hsis/

U.S. Department of Education, National Center for Education Statistics, & Dean, M. (2021, October 13). *Research roundup: NCES celebrates Hispanic heritage month*. Institute of Education Statistics. https://nces.ed.gov/blogs/nces/post/research-roundup-nces-celebrates-hispanic-heritage-month

U.S. Department of Health and Human Services (H.H.S.), & Office of the Surgeon General and National Action Alliance for Suicide Prevention. (2021, September). *2012 national* *strategy for suicide prevention: Goals and objectives for action*. Substance Abuse and Mental Health Services Administration. https://store.samhsa.gov/sites/default/files/d7/priv/full_report-rev.pdf

Varela, R. E., Sanchez-Sosa, J. J., Biggs, B. K., & Luis, T. M. (2009). Parenting strategies and socio-cultural influences in childhood anxiety: Mexican, Latin American descent, and European American families. *Journal of Anxiety Disorders*, *23*(5), 609–616. https://doi.org/10.1016/j.janxdis.2009.01.012

Veldman, K., Bültmann, U., Stewart, R. E., Ormel, J., Verhulst, F. C., & Reijneveld, S. A. (2014). Mental health problems and educational attainment in adolescence: 9-Year follow-up of the TRAILS study. *PLoS ONE*, *9*(12), e115070. https://doi.org/10.1371/journal.pone.0115070

Wang, C. D. C., Scalise, D. A., Barajas-Munoz, I. A., Julio, K., & Gomez, A. (2016). Attachment, acculturation, and psychosomatic complaints among Hispanic American university students. *Journal of College Counseling*, *19*(1), 45–60. https://doi.org/10.1002/jocc.12030

Wheaton, B. (2007). The twain meet: Distress, disorder and the continuing conundrum of categories (comment on horwitz). *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, *11*(3), 303–319. https://doi.org/10.1177/1363459307077545

Winterer, E. R., Froyd, J. E., Borrego, M., Martin, J. P., & Foster, M. (2020). Factors influencing the academic success of Latinx students matriculating at 2-year and transferring to 4-year US institutions—implications for STEM majors: A systematic review of the literature.

International Journal of STEM Education, *7*(1), Article 34. https://doi.org/10.1186/s40594-020-00215-6

Zayas, L., Gulbas, L. E., Fedoravicius, N., & Cabassa, L. J. (2010). Patterns of distress, precipitating events, and reflections on suicide attempts by young Latinas. *Social Science & Medicine*, *70*(11), 1773–1779. https://doi.org/10.1016/j.socscimed.2010.02.013

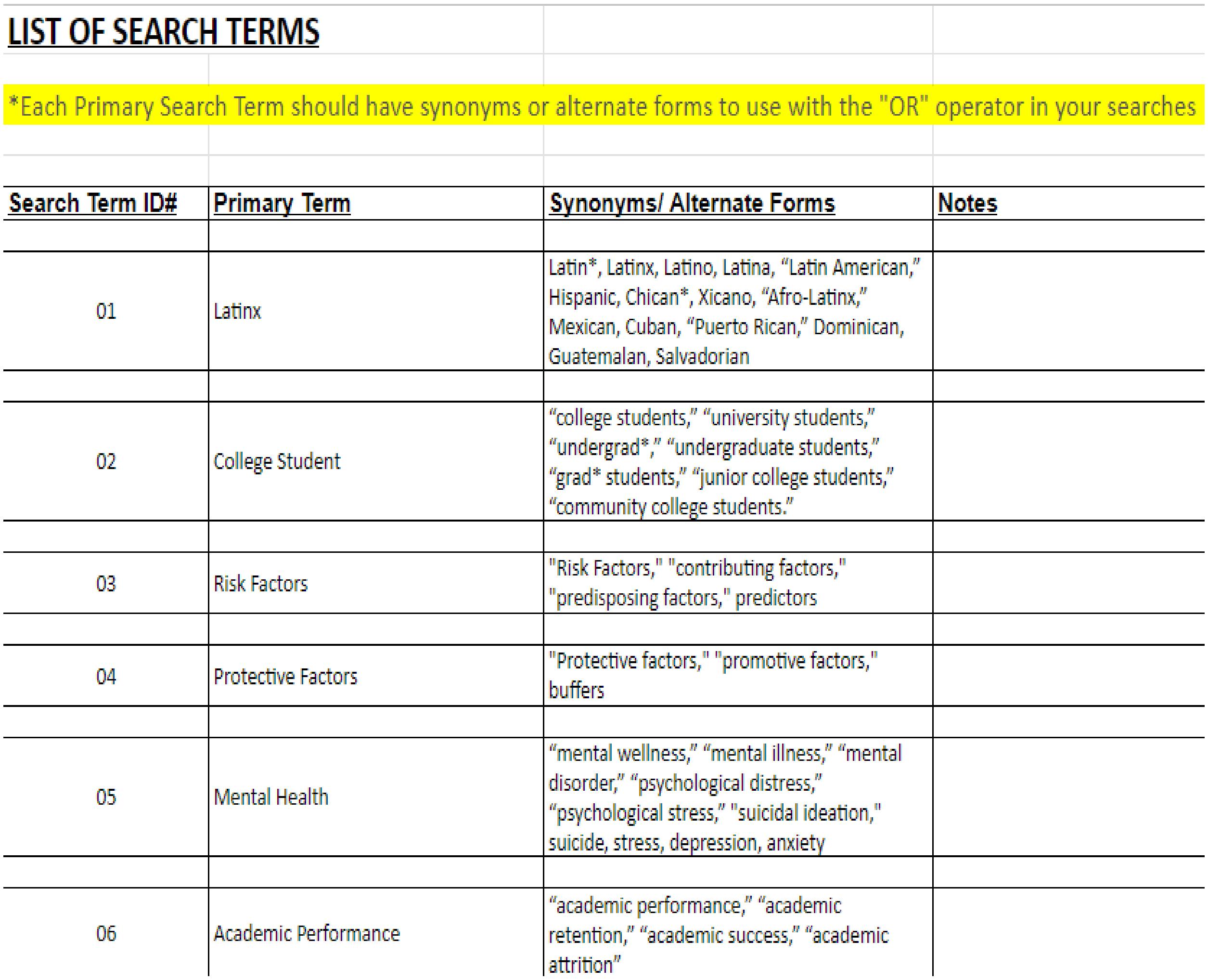
Zayas, L. H., Hausmann-Stabile, C., & Kuhlberg, J. (2011). Can better mother-daughter relations reduce the chance of a suicide attempt among Latinas? *Depression Research and Treatment*, *2011*, 1–7. https://doi.org/10.1155/2011/403602

Zayas, L. H., & Pilat, A. M. (2008). Suicidal behavior in Latinas: Explanatory cultural factors and implications for intervention. *Suicide and Life-Threatening Behavior*, *38*(3), 334–342. https://doi.org/10.1521/suli.2008.38.3.334

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, *52*(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2

APPENDIX A

List of Search Terms



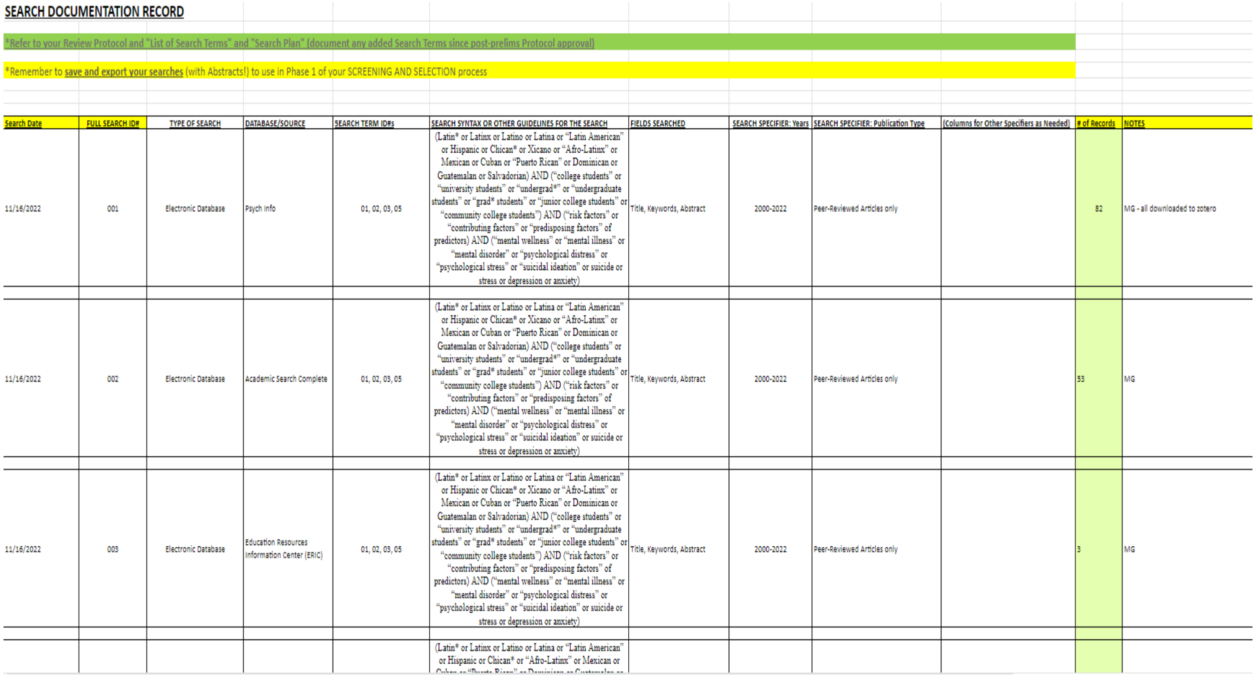
LIST OF SEARCH TERMS

*Each Primary Search Term should have synonyms or alternate forms to use with the "OR" operator in your searches

Search Term ID#	Primary Term	Synonyms/ Alternate Forms	Notes
01	Latinx	Latin*, Latinx, Latino, Latina, "Latin American," Hispanic, Chican*, Xicano, "Afro-Latinx," Mexican, Cuban, "Puerto Rican," Dominican, Guatemalan, Salvadorian	
02	College Student	"college students," "university students," "undergrad*," "undergraduate students," "grad* students," "junior college students," "community college students."	
03	Risk Factors	"Risk Factors," "contributing factors," "predisposing factors," predictors	
04	Protective Factors	"Protective factors," "promotive factors," buffers	
05	Mental Health	"mental wellness," "mental illness," "mental disorder," "psychological distress," "psychological stress," "suicidal ideation," suicide, stress, depression, anxiety	
06	Academic Performance	"academic performance," "academic retention," "academic success," "academic attrition"	

APPENDIX B

Search Documentation Record



SEARCH DOCUMENTATION RECORD

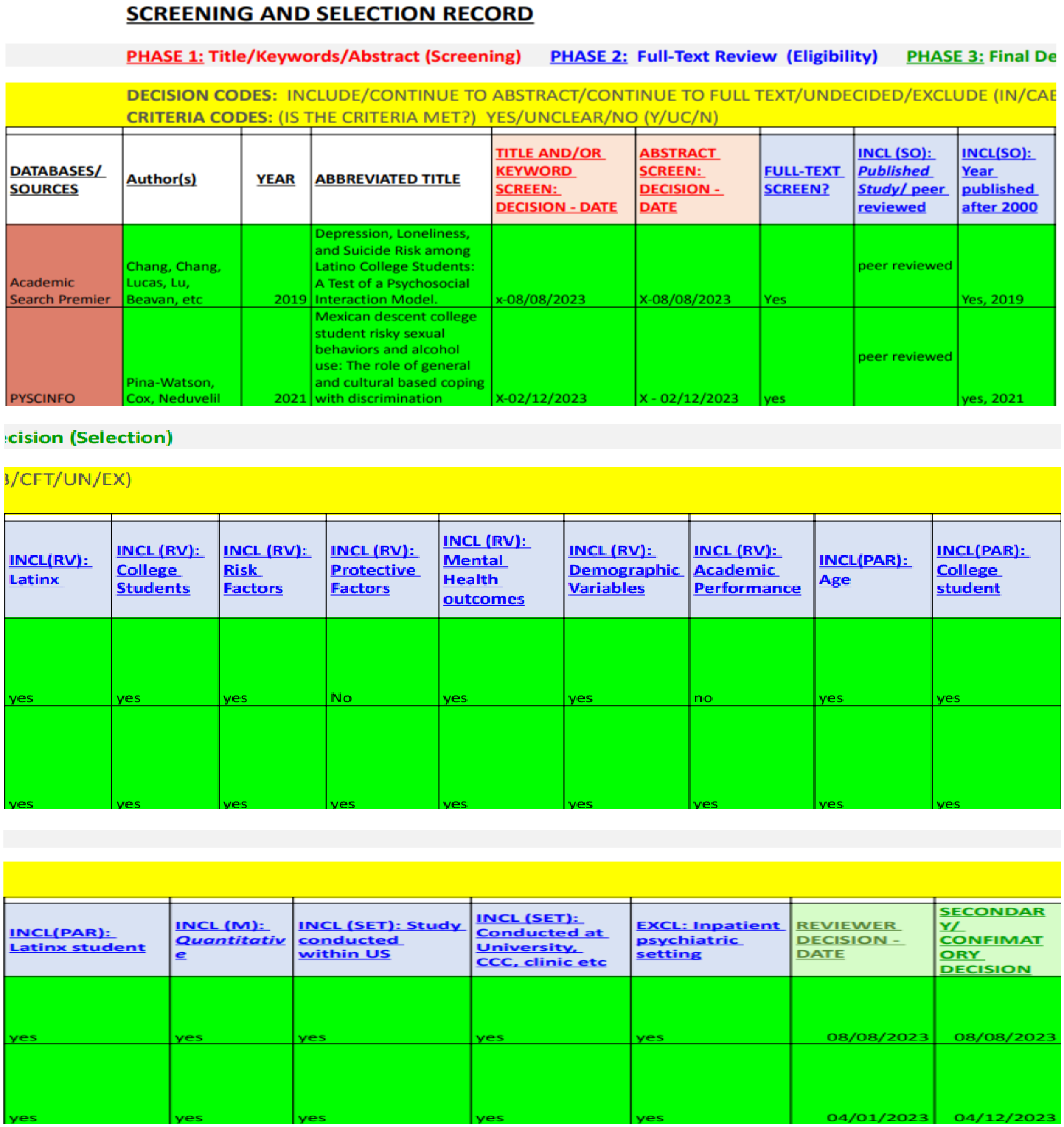
*Refer to your Review Protocol and "List of Search Terms" and "Search Plan" (document any added Search Terms since post-prelims Protocol approval)

*Remember to **save and export your searches** (with Abstracts!) to use in Phase 1 of your SCREENING AND SELECTION process

Search Date	FULL SEARCH ID#	TYPE OF SEARCH	DATABASE/SOURCE	SEARCH TERM ID#s	SEARCH SYNTAX OR OTHER GUIDELINES FOR THE SEARCH	FIELDS SEARCHED	SEARCH SPECIFIER: Years	SEARCH SPECIFIER: Publication Type	(Columns for Other Specifiers as Needed)	# of Records	NOTES
11/16/2022	001	Electronic Database	Psych Info	01, 02, 03, 05	(Latin* or Latinx or Latino or Latina or “Latin American” or Hispanic or Chican* or Xicano or “Afro-Latinx” or Mexican or Cuban or “Puerto Rican” or Dominican or Guatemalan or Salvadorian) AND (“college students” or “university students” or “undergrad*” or “undergraduate students” or “grad* students” or “junior college students” or “community college students”) AND (“risk factors” or “contributing factors” or “predisposing factors” of predictors) AND (“mental wellness” or “mental illness” or “mental disorder” or “psychological distress” or “psychological stress” or “suicidal ideation” or suicide or stress or depression or anxiety)	Title, Keywords, Abstract	2000-2022	Peer-Reviewed Articles only		82	MG - all downloaded to zotero
11/16/2022	002	Electronic Database	Academic Search Complete	01, 02, 03, 05	(Latin* or Latinx or Latino or Latina or “Latin American” or Hispanic or Chican* or Xicano or “Afro-Latinx” or Mexican or Cuban or “Puerto Rican” or Dominican or Guatemalan or Salvadorian) AND (“college students” or “university students” or “undergrad*” or “undergraduate students” or “grad* students” or “junior college students” or “community college students”) AND (“risk factors” or “contributing factors” or “predisposing factors” of predictors) AND (“mental wellness” or “mental illness” or “mental disorder” or “psychological distress” or “psychological stress” or “suicidal ideation” or suicide or stress or depression or anxiety)	Title, Keywords, Abstract	2000-2022	Peer-Reviewed Articles only		53	MG
11/16/2022	003	Electronic Database	Education Resources Information Center (ERIC)	01, 02, 03, 05	(Latin* or Latinx or Latino or Latina or “Latin American” or Hispanic or Chican* or Xicano or “Afro-Latinx” or Mexican or Cuban or “Puerto Rican” or Dominican or Guatemalan or Salvadorian) AND (“college students” or “university students” or “undergrad*” or “undergraduate students” or “grad* students” or “junior college students” or “community college students”) AND (“risk factors” or “contributing factors” or “predisposing factors” of predictors) AND (“mental wellness” or “mental illness” or “mental disorder” or “psychological distress” or “psychological stress” or “suicidal ideation” or suicide or stress or depression or anxiety)	Title, Keywords, Abstract	2000-2022	Peer-Reviewed Articles only		3	MG
					(Latin* or Latinx or Latino or Latina or “Latin American” or Hispanic or Chican* or “Afro-Latinx” or Mexican or						

APPENDIX C

Search Plan



SCREENING AND SELECTION RECORD

PHASE 1: Title/Keywords/Abstract (Screening) PHASE 2: Full-Text Review (Eligibility) PHASE 3: Final De

DECISION CODES: INCLUDE/CONTINUE TO ABSTRACT/CONTINUE TO FULL TEXT/UNDECIDED/EXCLUDE (IN/CAE
CRITERIA CODES: (IS THE CRITERIA MET?) YES/UNCLEAR/NO (Y/UC/N)

DATABASES/ SOURCES	Author(s)	YEAR	ABBREVIATED TITLE	TITLE AND/OR KEYWORD SCREEN: DECISION - DATE	ABSTRACT SCREEN: DECISION - DATE	FULL-TEXT SCREEN?	INCL (SO): *Published Study/ peer* reviewed	INCL(SO): Year published after 2000
Academic Search Premier	Chang, Chang, Lucas, Lu, Beavan, etc	2019	Depression, Loneliness, and Suicide Risk among Latino College Students: A Test of a Psychosocial Interaction Model.	x-08/08/2023	X-08/08/2023	Yes	peer reviewed	Yes, 2019
PYSCINFO	Pina-Watson, Cox, Neduvelil	2021	Mexican descent college student risky sexual behaviors and alcohol use: The role of general and cultural based coping with discrimination	X-02/12/2023	X - 02/12/2023	yes	peer reviewed	yes, 2021

ecision (Selection)

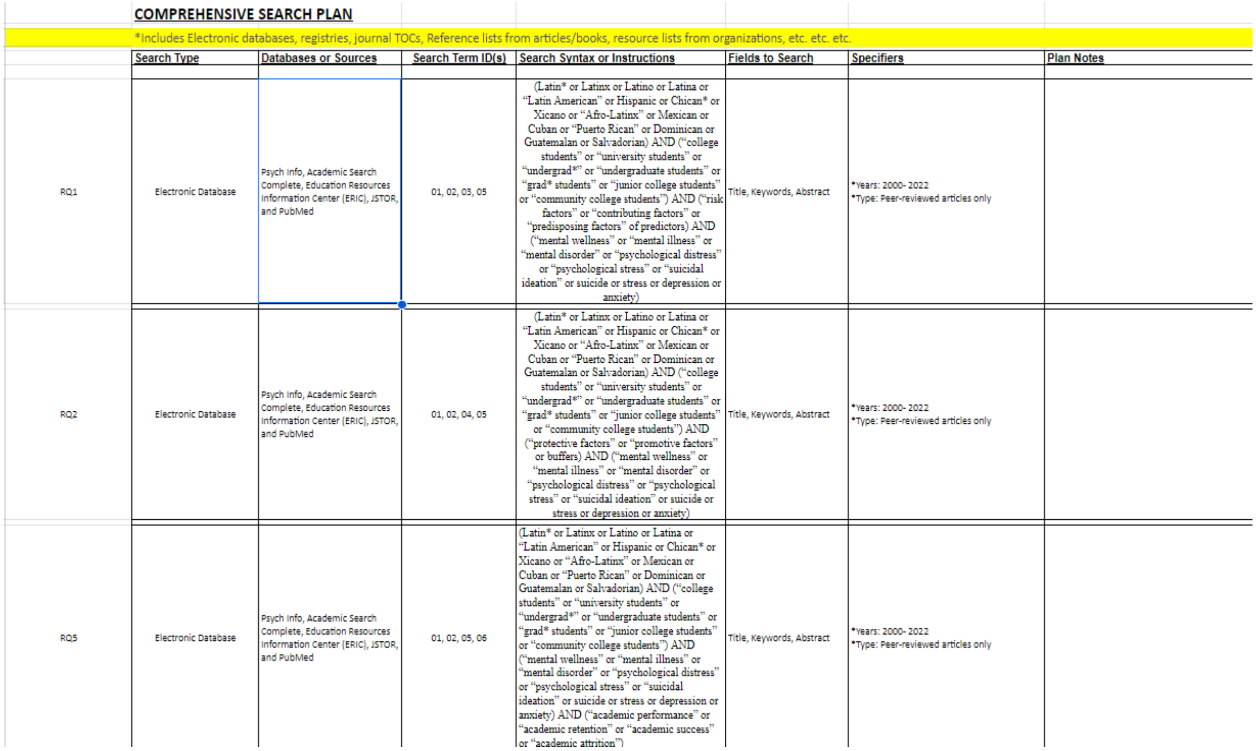
3/CFT/UN/EX)

INCL(RV): Latinx	INCL (RV): College Students	INCL (RV): Risk Factors	INCL (RV): Protective Factors	INCL (RV): Mental Health outcomes	INCL (RV): Demographic Variables	INCL (RV): Academic Performance	INCL(PAR): Age	INCL(PAR): College student
yes	yes	yes	No	yes	yes	no	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes	yes

INCL(PAR): Latinx student	INCL (M): *Quantitative*	INCL (SET): Study conducted within US	INCL (SET): Conducted at University, CCC, clinic etc	EXCL: Inpatient psychiatric setting	REVIEWER DECISION - DATE	SECONDARY/ CONFIMATORY DECISION
yes	yes	yes	yes	yes	08/08/2023	08/08/2023
yes	yes	yes	yes	yes	04/01/2023	04/12/2023

APPENDIX D

Search Documentation Record 2



COMPREHENSIVE SEARCH PLAN

*Includes Electronic databases, registries, journal TOCs, Reference lists from articles/books, resource lists from organizations, etc. etc. etc.

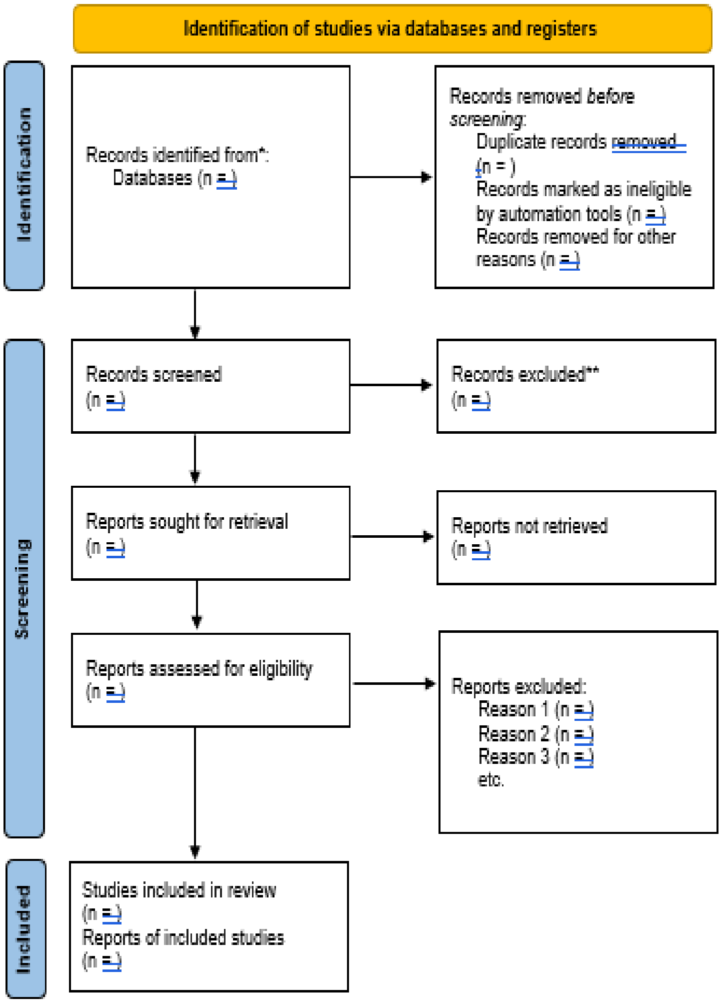
	Search Type	Databases or Sources	Search Term ID(s)	Search Syntax or Instructions	Fields to Search	Specifiers	Plan Notes
RQ1	Electronic Database	Psych Info, Academic Search Complete, Education Resources Information Center (ERIC), JSTOR, and PubMed	01, 02, 03, 05	(Latin* or Latinx or Latino or Latina or "Latin American" or Hispanic or Chican* or Xicano or "Afro-Latinx" or Mexican or Cuban or "Puerto Rican" or Dominican or Guatemalan or Salvadorian) AND ("college students" or "university students" or "undergrad*" or "undergraduate students" or "grad* students" or "junior college students" or "community college students") AND ("risk factors" or "contributing factors" or "predisposing factors" of predictors) AND ("mental wellness" or "mental illness" or "mental disorder" or "psychological distress" or "psychological stress" or "suicidal ideation" or suicide or stress or depression or anxiety)	Title, Keywords, Abstract	*Years: 2000- 2022 *Type: Peer-reviewed articles only	
RQ2	Electronic Database	Psych Info, Academic Search Complete, Education Resources Information Center (ERIC), JSTOR, and PubMed	01, 02, 04, 05	(Latin* or Latinx or Latino or Latina or "Latin American" or Hispanic or Chican* or Xicano or "Afro-Latinx" or Mexican or Cuban or "Puerto Rican" or Dominican or Guatemalan or Salvadorian) AND ("college students" or "university students" or "undergrad*" or "undergraduate students" or "grad* students" or "junior college students" or "community college students") AND ("protective factors" or "promotive factors" or buffers) AND ("mental wellness" or "mental illness" or "mental disorder" or "psychological distress" or "psychological stress" or "suicidal ideation" or suicide or stress or depression or anxiety)	Title, Keywords, Abstract	*Years: 2000- 2022 *Type: Peer-reviewed articles only	
RQ5	Electronic Database	Psych Info, Academic Search Complete, Education Resources Information Center (ERIC), JSTOR, and PubMed	01, 02, 05, 06	(Latin* or Latinx or Latino or Latina or "Latin American" or Hispanic or Chican* or Xicano or "Afro-Latinx" or Mexican or Cuban or "Puerto Rican" or Dominican or Guatemalan or Salvadorian) AND ("college students" or "university students" or "undergrad*" or "undergraduate students" or "grad* students" or "junior college students" or "community college students") AND ("mental wellness" or "mental illness" or "mental disorder" or "psychological distress" or "psychological stress" or "suicidal ideation" or suicide or stress or depression or anxiety) AND ("academic performance" or "academic retention" or "academic success" or "academic attrition")	Title, Keywords, Abstract	*Years: 2000- 2022 *Type: Peer-reviewed articles only	

*** Please contact the author for the complete Screening and Selection Record

APPENDIX E

PRISMA Flow Chart Template

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only


Identification of studies via databases and registers
Identification
Records identified from*:
Databases (n =)
Records removed before screening:
Duplicate records ~~removed~~ (n =)
Records marked as ineligible by automation tools (n =)
Records removed for other reasons (n =)
Screening
Records screened
(n =)
Records excluded**
(n =)
Reports sought for retrieval
(n =)
Reports not retrieved
(n =)
Reports assessed for eligibility
(n =)
Reports excluded:
Reason 1 (n =)
Reason 2 (n =)
Reason 3 (n =)
etc.
Included
Studies included in review
(n =)
Reports of included studies
(n =)

*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: http://www.prisma-statement.org/

APPENDIX F

Data Extraction Form Template

Modified from: *Effective Practice and Organisation of Care (EPOC). Data collection form. EPOC Resources for review authors. Oslo: Norwegian Knowledge Centre for the Health Services; 2013. Available at:* *http://epoc.cochrane.org/epoc-specific-resources-review-authors*

Data Collection and Extraction Form

Document ID#

Authors and Year (last names of authors and year of publication, e.g., Johnson, Jones, and Jackson

Full Document Title

Research Variables

Notes:

1. General Information

1. **Date form completed** *(dd/mm/yyyy)*	
2. **Initials/ID of person extracting data**	
3. **Source/Publication Type** *(journal, book, conference, report, dissertation, abstract, etc.)*	
4. **Source Name** *(Title of Journal, Book, Organization, etc.)*	
5. **Publication Status** *(Published, Unpublished)*	
6. **Year Published**	
7. **Notes:**	

2. Design Characteristics and Methodological Features

	Descriptions as stated in report/paper	**Location in text** *(pg & ¶/fig/table)*
8. **Aim of study**		
9. **General Method** (Quant, Qual, Mixed)		
10. **Design or Specific Research Approach**		
11. **Measures or Assessments used to measure RV's**		
12. **Notes:**		

3. Assessment of Research Variables

RESEARCH VARIABLES	**How Assessed** *(Measure, Observation, Interview Question, Archival, etc.)*	**Reliability/Validity/Utility**	**Location in text** *(pg & ¶/fig/table)*
13. **Latinx Identity**			
14. **College Student**			
15. **Risk Factor**			
16. **Protective Factor**			
17. **Mental Health Outcomes**			
18. **Demographic Variables**			
19. **Academic Performance**			
20. **Notes:**			

4. Study Participant Characteristics and Recruitment

	Description as stated in report/paper	Location in text *(pg & ¶/fig/table)*
21. **Population of Interest: Latinx Identity**		
22. **Population of Interest: College Students**		
23. **Recruitment Methods**		
24. **Sample Size**		
25. **Age**		
26. **Gender**		
27. **Generation Status**		
28. **Income Level**		
29. **Social Class or SES**		
30. **Year in School**		
31. **Notes :**		

5. Setting Characteristics

	Descriptions as stated in report/paper	Location in text *(pg & ¶/fig/table)*
32. **Type of Higher Education Environment (e.g., CCC, university, clinic)**		

33. **Characteristics of the Environment (e.g., Size of institution, public or private, HSI status, State or general location in US)**		
34. **Study Location in the US**		
35. **Notes:**		

6. Analyses Conducted

	Description as stated in report/paper	**Location in text** (pg & ¶/fig/table)
36. **Descriptive Statistics used**		
37. **Inferential Statistics used**		
38. **Quantitative Analyses conducted**		
39. **Notes :**		

7. Results

	Description as stated in report/paper	**Location in text** *(pg & ¶/fig/table)*
40. **Key Result #1**		
41. **Key Result #2**		

	Description as stated in report/paper	Location in text *(pg & ¶/fig/table)*
42. **Key Result #3**		
43. **Key Result #4**		
44. **Key Result #5**		
45. **Key Result #6**		
46. **Key Result #7**		
47. **Key Result #8**		
48. **Notes:**		

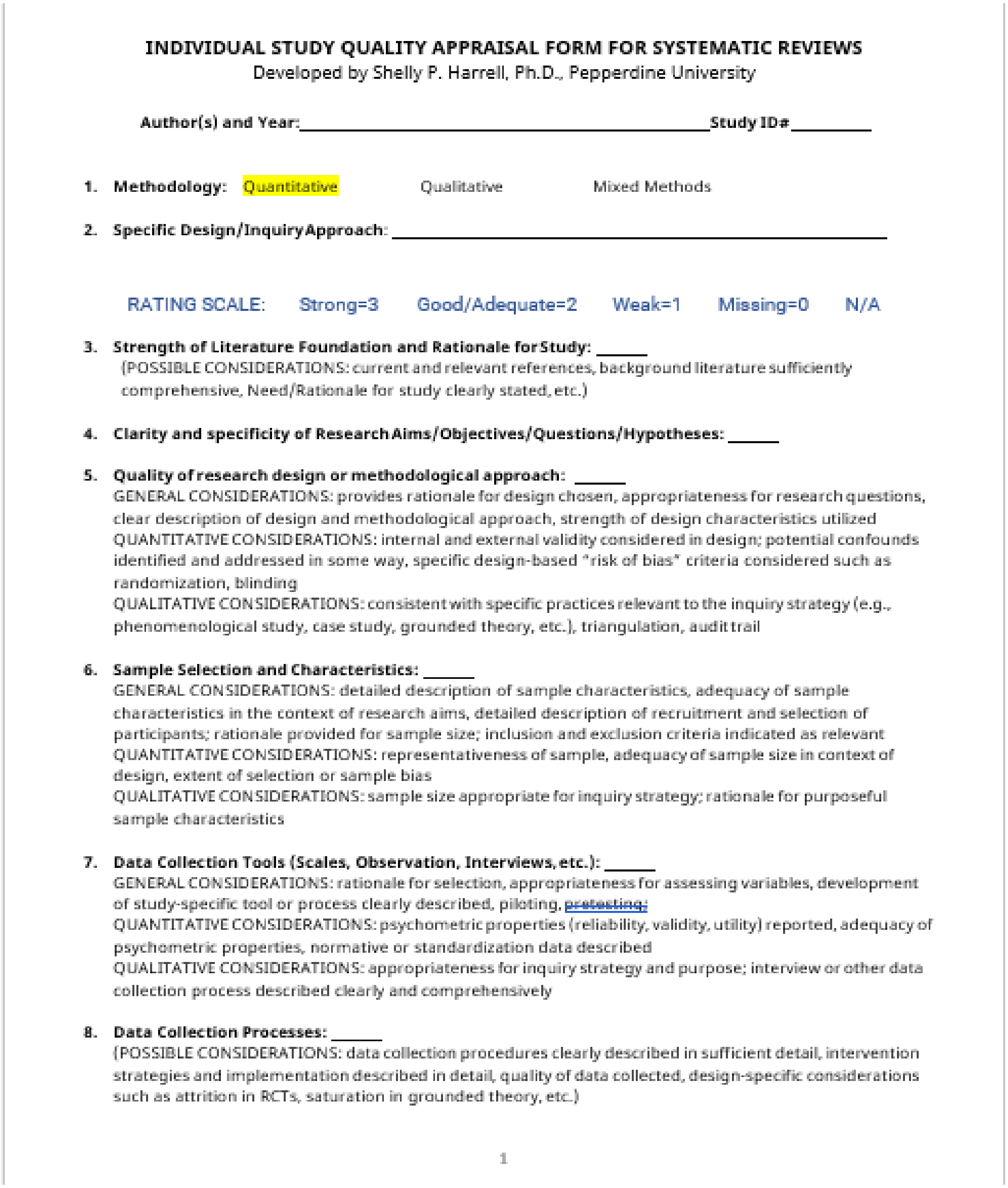
8. Conclusions and Follow-up

	Description as stated in report/paper	Location in text *(pg & ¶/fig/table)*
49. **Key conclusions of study authors**		
50. **Study Author's Recommendations for Future Research**		
51. **Does the study directly address your review question?** *(any issues of partial or indirect applicability)*		
52. **Your Take-Aways: General**		
53. **Your Take-Aways: Implications for Practice**		

54. **Salient Study Limitations (to inform Quality Appraisal)**		
55. **References to other relevant studies**		
56. **Other publications from this dataset**		
57. **Further study information needed?** *(from whom, what and when, contact info)*		
58. **Correspondence received** *(from whom, what and when)*		
59. **Notes:**		

APPENDIX G

Quality Assessment Form Template



INDIVIDUAL STUDY QUALITY APPRAISAL FORM FOR SYSTEMATIC REVIEWS

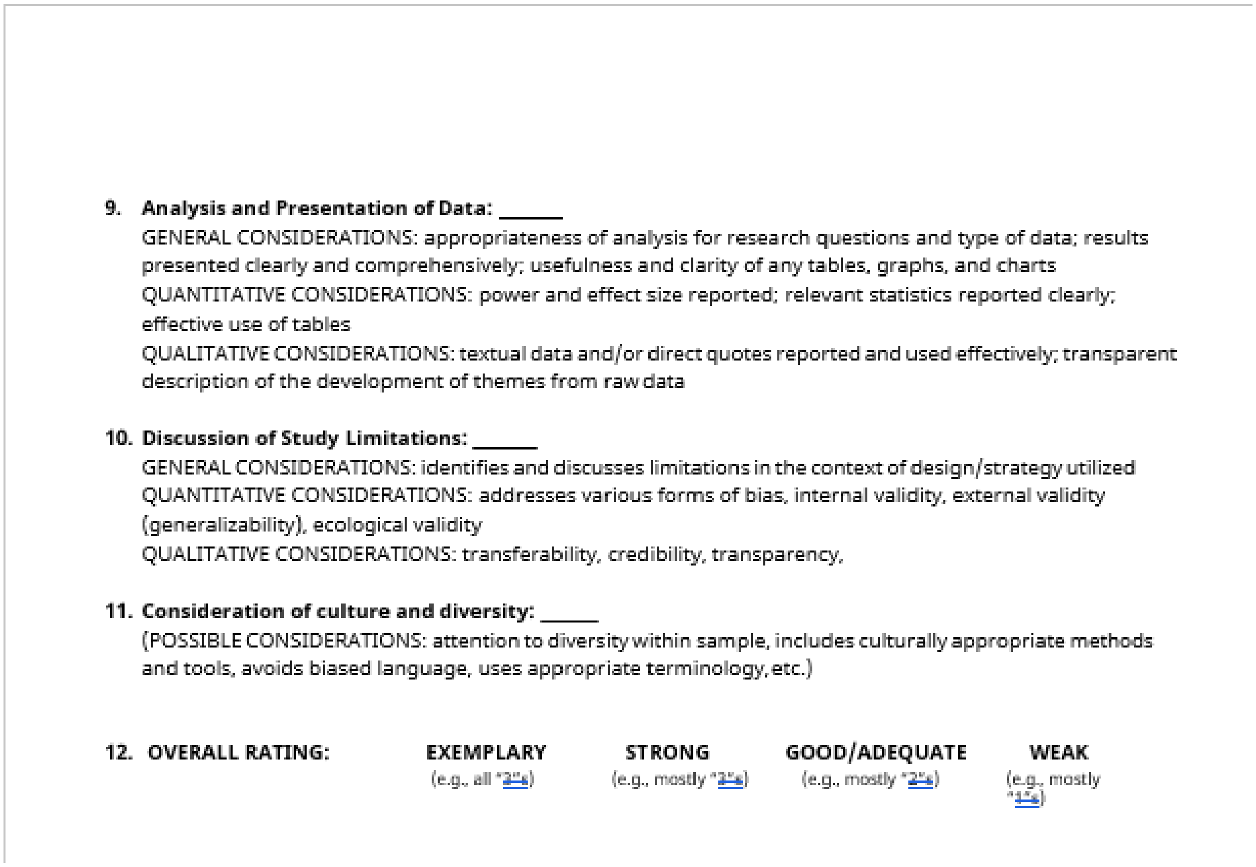
Developed by Shelly P. Harrell, Ph.D., Pepperdine University

Author(s) and Year:____**Study ID#**__________

1. **Methodology:** Quantitative Qualitative Mixed Methods
2. **Specific Design/Inquiry Approach:** ____

RATING SCALE: Strong=3 Good/Adequate=2 Weak=1 Missing=0 N/A

3. **Strength of Literature Foundation and Rationale for Study:** ______
   (POSSIBLE CONSIDERATIONS: current and relevant references, background literature sufficiently comprehensive, Need/Rationale for study clearly stated, etc.)
4. **Clarity and specificity of Research Aims/Objectives/Questions/Hypotheses:** ______
5. **Quality of research design or methodological approach:** ______
   GENERAL CONSIDERATIONS: provides rationale for design chosen, appropriateness for research questions, clear description of design and methodological approach, strength of design characteristics utilized
   QUANTITATIVE CONSIDERATIONS: internal and external validity considered in design; potential confounds identified and addressed in some way, specific design-based "risk of bias" criteria considered such as randomization, blinding
   QUALITATIVE CONSIDERATIONS: consistent with specific practices relevant to the inquiry strategy (e.g., phenomenological study, case study, grounded theory, etc.), triangulation, audit trail
6. **Sample Selection and Characteristics:** ______
   GENERAL CONSIDERATIONS: detailed description of sample characteristics, adequacy of sample characteristics in the context of research aims, detailed description of recruitment and selection of participants; rationale provided for sample size; inclusion and exclusion criteria indicated as relevant
   QUANTITATIVE CONSIDERATIONS: representativeness of sample, adequacy of sample size in context of design, extent of selection or sample bias
   QUALITATIVE CONSIDERATIONS: sample size appropriate for inquiry strategy; rationale for purposeful sample characteristics
7. **Data Collection Tools (Scales, Observation, Interviews, etc.):** ______
   GENERAL CONSIDERATIONS: rationale for selection, appropriateness for assessing variables, development of study-specific tool or process clearly described, piloting, pretesting;
   QUANTITATIVE CONSIDERATIONS: psychometric properties (reliability, validity, utility) reported, adequacy of psychometric properties, normative or standardization data described
   QUALITATIVE CONSIDERATIONS: appropriateness for inquiry strategy and purpose; interview or other data collection process described clearly and comprehensively
8. **Data Collection Processes:** ______
   (POSSIBLE CONSIDERATIONS: data collection procedures clearly described in sufficient detail, intervention strategies and implementation described in detail, quality of data collected, design-specific considerations such as attrition in RCTs, saturation in grounded theory, etc.)



9. Analysis and Presentation of Data: ______

GENERAL CONSIDERATIONS: appropriateness of analysis for research questions and type of data; results presented clearly and comprehensively; usefulness and clarity of any tables, graphs, and charts
QUANTITATIVE CONSIDERATIONS: power and effect size reported; relevant statistics reported clearly; effective use of tables
QUALITATIVE CONSIDERATIONS: textual data and/or direct quotes reported and used effectively; transparent description of the development of themes from raw data

10. Discussion of Study Limitations: ______

GENERAL CONSIDERATIONS: identifies and discusses limitations in the context of design/strategy utilized
QUANTITATIVE CONSIDERATIONS: addresses various forms of bias, internal validity, external validity (generalizability), ecological validity
QUALITATIVE CONSIDERATIONS: transferability, credibility, transparency,

11. Consideration of culture and diversity: ______

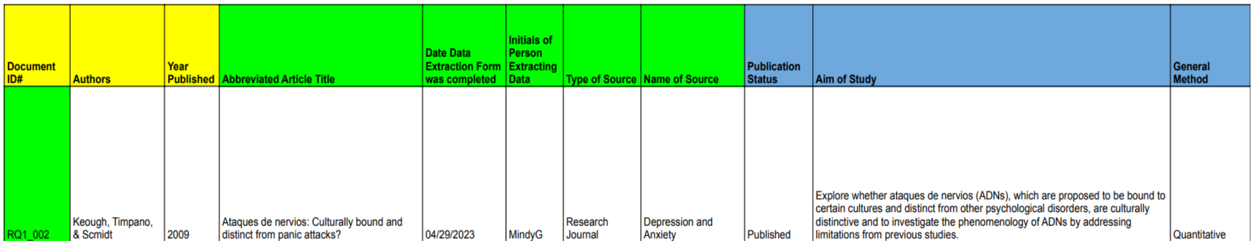
(POSSIBLE CONSIDERATIONS: attention to diversity within sample, includes culturally appropriate methods and tools, avoids biased language, uses appropriate terminology, etc.)

12. OVERALL RATING:	**EXEMPLARY**	**STRONG**	**GOOD/ADEQUATE**	**WEAK**
	(e.g., all "3"s)	(e.g., mostly "3"s)	(e.g., mostly "2"s)	(e.g., mostly "1"s)

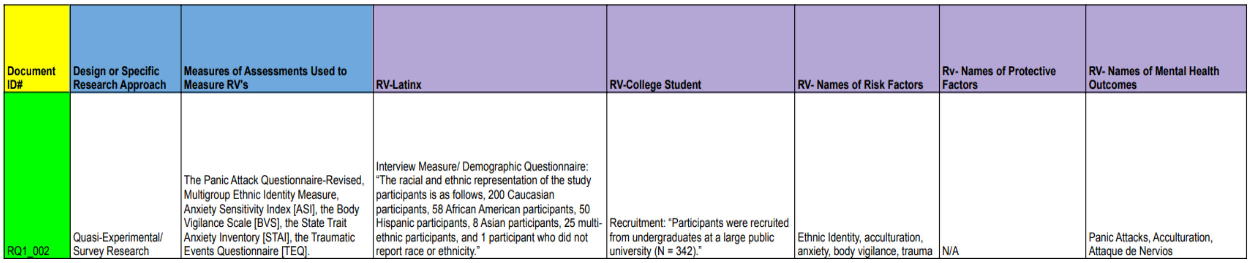
APPENDIX H

Data Extraction Database

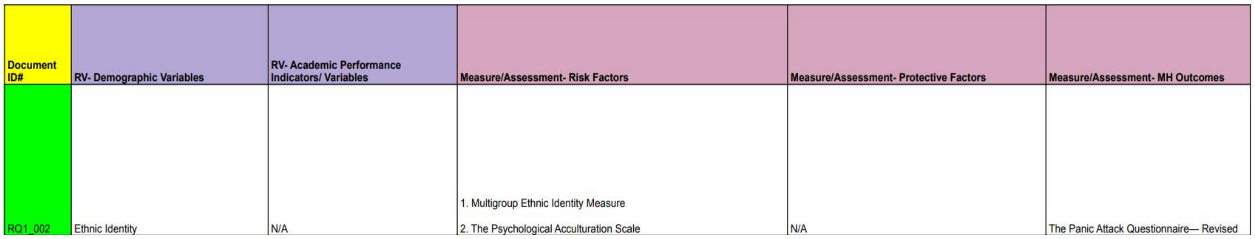
Please contact author for full extraction database.



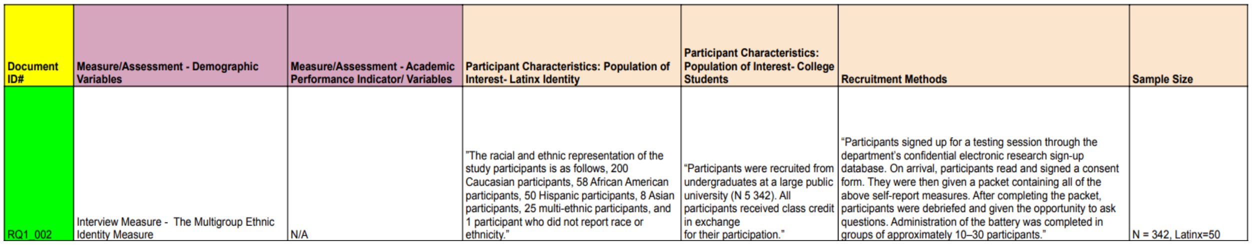
Document ID#	Authors	Year Published	Abbreviated Article Title	Date Data Extraction Form was completed	Initials of Person Extracting Data	Type of Source	Name of Source	Publication Status	Aim of Study	General Method
RQ1_002	Keough, Timpano, & Scmidt	2009	Ataques de nervios: Culturally bound and distinct from panic attacks?	04/29/2023	MindyG	Research Journal	Depression and Anxiety	Published	Explore whether ataques de nervios (ADNs), which are proposed to be bound to certain cultures and distinct from other psychological disorders, are culturally distinctive and to investigate the phenomenology of ADNs by addressing limitations from previous studies.	Quantitative



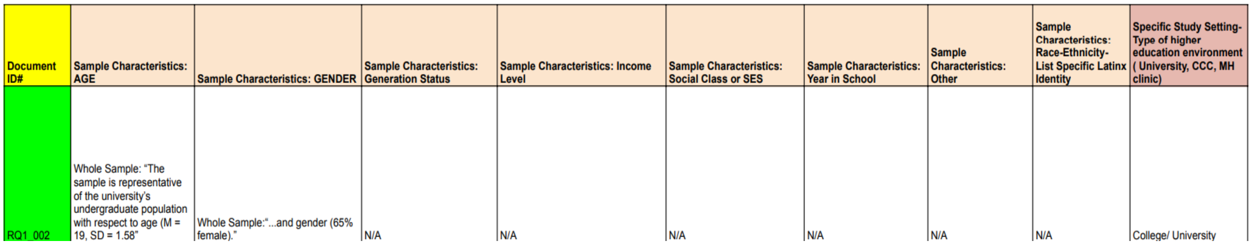
Document ID#	Design or Specific Research Approach	Measures of Assessments Used to Measure RV's	RV-Latinx	RV-College Student	RV- Names of Risk Factors	Rv- Names of Protective Factors	RV- Names of Mental Health Outcomes
RQ1_002	Quasi-Experimental/ Survey Research	The Panic Attack Questionnaire-Revised, Multigroup Ethnic Identity Measure, Anxiety Sensitivity Index [ASI], the Body Vigilance Scale [BVS], the State Trait Anxiety Inventory [STAI], the Traumatic Events Questionnaire [TEQ].	Interview Measure/ Demographic Questionnaire: "The racial and ethnic representation of the study participants is as follows, 200 Caucasian participants, 58 African American participants, 50 Hispanic participants, 8 Asian participants, 25 multi-ethnic participants, and 1 participant who did not report race or ethnicity."	Recruitment: "Participants were recruited from undergraduates at a large public university (N = 342)."	Ethnic Identity, acculturation, anxiety, body vigilance, trauma	N/A	Panic Attacks, Acculturation, Attaque de Nervios



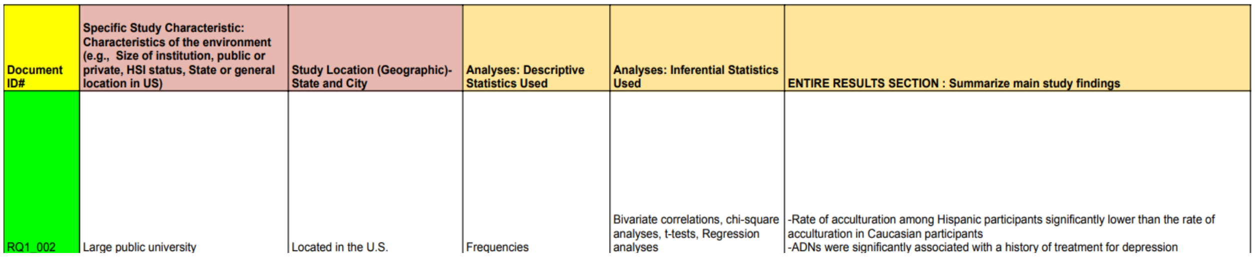
Document ID#	RV- Demographic Variables	RV- Academic Performance Indicators/ Variables	Measure/Assessment- Risk Factors	Measure/Assessment- Protective Factors	Measure/Assessment- MH Outcomes
RQ1_002	Ethnic Identity	N/A	1. Multigroup Ethnic Identity Measure 2. The Psychological Acculturation Scale	N/A	The Panic Attack Questionnaire— Revised



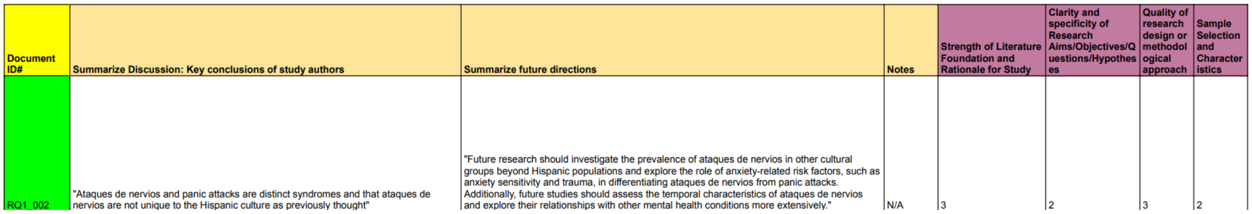
Document ID#	Measure/Assessment - Demographic Variables	Measure/Assessment - Academic Performance Indicator/ Variables	Participant Characteristics: Population of Interest- Latinx Identity	Participant Characteristics: Population of Interest- College Students	Recruitment Methods	Sample Size
RQ1_002	Interview Measure - The Multigroup Ethnic Identity Measure	N/A	"The racial and ethnic representation of the study participants is as follows, 200 Caucasian participants, 58 African American participants, 50 Hispanic participants, 8 Asian participants, 25 multi-ethnic participants, and 1 participant who did not report race or ethnicity."	"Participants were recruited from undergraduates at a large public university (N 5 342). All participants received class credit in exchange for their participation."	"Participants signed up for a testing session through the department's confidential electronic research sign-up database. On arrival, participants read and signed a consent form. They were then given a packet containing all of the above self-report measures. After completing the packet, participants were debriefed and given the opportunity to ask questions. Administration of the battery was completed in groups of approximately 10–30 participants."	N = 342, Latinx=50



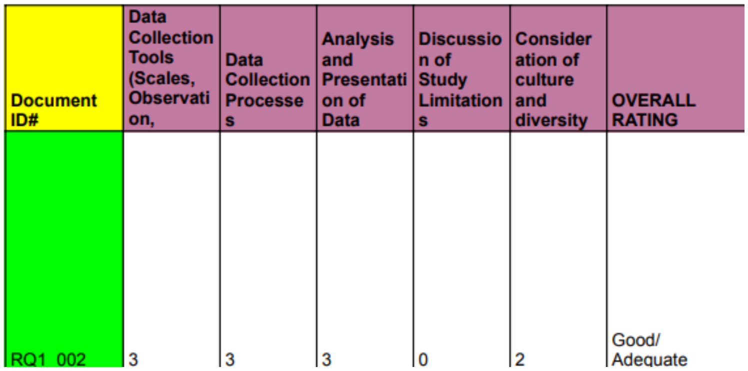
Document ID#	Sample Characteristics: AGE	Sample Characteristics: GENDER	Sample Characteristics: Generation Status	Sample Characteristics: Income Level	Sample Characteristics: Social Class or SES	Sample Characteristics: Year in School	Sample Characteristics: Other	Sample Characteristics: Race-Ethnicity-List Specific Latinx Identity	Specific Study Setting- Type of higher education environment (University, CCC, MH clinic)
RQ1_002	Whole Sample: "The sample is representative of the university's undergraduate population with respect to age (M = 19, SD = 1.58"	Whole Sample:"...and gender (65% female)."	N/A	N/A	N/A	N/A	N/A	N/A	College/ University



Document ID#	Specific Study Characteristic: Characteristics of the environment (e.g., Size of institution, public or private, HSI status, State or general location in US)	Study Location (Geographic)- State and City	Analyses: Descriptive Statistics Used	Analyses: Inferential Statistics Used	ENTIRE RESULTS SECTION : Summarize main study findings
RQ1_002	Large public university	Located in the U.S.	Frequencies	Bivariate correlations, chi-square analyses, t-tests, Regression analyses	-Rate of acculturation among Hispanic participants significantly lower than the rate of acculturation in Caucasian participants -ADNs were significantly associated with a history of treatment for depression



Document ID#	Summarize Discussion: Key conclusions of study authors	Summarize future directions	Notes	Strength of Literature Foundation and Rationale for Study	Clarity and specificity of Research Aims/Objectives/Questions/Hypotheses	Quality of research design or methodological approach	Sample Selection and Characteristics
RQ1_002	"Ataques de nervios and panic attacks are distinct syndromes and that ataques de nervios are not unique to the Hispanic culture as previously thought"	"Future research should investigate the prevalence of ataques de nervios in other cultural groups beyond Hispanic populations and explore the role of anxiety-related risk factors, such as anxiety sensitivity and trauma, in differentiating ataques de nervios from panic attacks. Additionally, future studies should assess the temporal characteristics of ataques de nervios and explore their relationships with other mental health conditions more extensively."	N/A	3	2	3	2



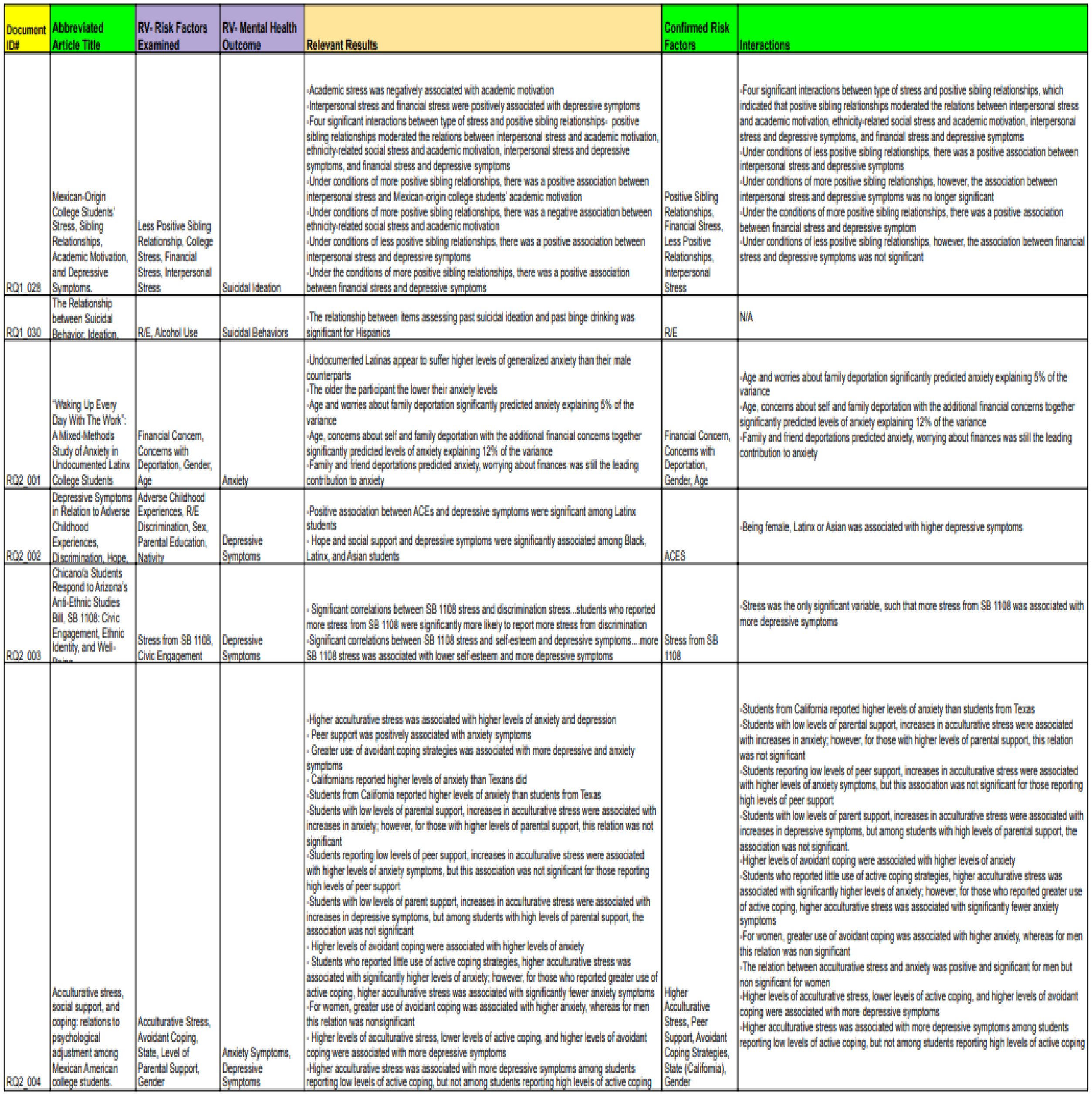
Document ID#	Data Collection Tools (Scales, Observation,	Data Collection Processes	Analysis and Presentation of Data	Discussion of Study Limitations	Consideration of culture and diversity	OVERALL RATING
RQ1_002	3	3	3	0	2	Good/ Adequate

APPENDIX I

Evidence Table 1: Research Question 1

Document ID#	Abbreviated Article Title	RV- Risk Factors Examined	RV- Mental Health Outcome	Relevant Results	Confirmed Risk Factors	Interactions
RQ1_002	Ataques de nervios: Culturally bound and distinct from panic attacks?	Ethnic Identity, Acculturation	Panic Attacks	- Rate of acculturation among Hispanic participants was significantly lower than the rate of acculturation in Caucasian participants and was consistent with the acculturation rate of Hispanic samples within the US -Rate of acculturation as measured by PAS did not correlate with endorsement of ADN...among Hispanic participants -Rate of acculturation as measured by PAS did not correlate with endorsement of ADN among Hispanic participants -Rate of acculturation as measured by the MEIM also did not correlate with ADN endorsement ... among Hispanic participants	Ethnic Identity	N/A
RQ1_003	Burdensomeness, belongingness, and suicidal desire among Hispanic/Latino individuals: Examining the effect of ethnicity in the interpersonal theory of suicide	Ethnic Identity	Suicidal Desire, Perceived Burdensomeness, Thwarted Belonging	-Correlation between ethnicity and thwarted belongingness was also not statistically significant, there was a significant association between Hispanic/Latino ethnicity and lower levels of perceived burdensomeness - Accounting for unequal variances in suicidal desire and perceived burdensomeness Hispanic/Latinos had significantly lower mean scores on current suicidal desire and perceived burdensomeness, than non-Hispanic Whites. The groups did not differ on their thwarted belongingness scores. -Hispanic/Latinos reported lower levels of suicidal desire and perceived burdensomeness compared to non-Hispanic Whites, but they did not display lower levels of thwarted belongingness	N/A	-Interaction of ethnicity and perceived burdensomeness, explained 21.4% of the variance in suicidal desire scores in the sample -Hispanic/Latinos reported lower levels of suicidal desire and perceived burdensomeness compared to non-Hispanic Whites, but did not display lower levels of thwarted belongingness
RQ1_005	Conflicting cultural pressures and the adjustment of Latino college students	Cultural Incongruity, Intragroup Marginalization	Depression, College Adjustment	- Intragroup marginalization, cultural incongruity, perceptions of the university environment, and perceived bicultural competence were each significantly related to college adjustment and drop-out intentions among Latino college students - Intragroup marginalization, cultural incongruity, and perceived bicultural competence were significantly related to depression - Intragroup marginalization was significantly and positively correlated with symptoms of depression and drop-out intentions and negatively correlated with college adjustment -Cultural incongruity was significantly and positively correlated with symptoms of depression and drop-out intentions and negatively correlated with college adjustment	Intragroup Marginalization, Cultural incongruity	N/A
RQ1_006	Discrimination, health, and the costs and benefits of believing in system fairness	Belief in System Fairness, Discrimination	Depression and Anxiety Symptomatology	- The consequences of discrimination for depression/anxiety symptomatology were more pronounced among those with families who have lived in the United States for fewer (vs. more) generations	N/A	-The consequences of discrimination for depression/anxiety symptomatology were more pronounced among those with families who have lived in the United States for fewer (vs. more) generations
RQ1_007	Ethnic identity and suicide risk among Hispanic/Latinx young adults: The impact of perceived burdensomeness and thwarted belongingness	Ethnic Identity (Thwarted Belonging, Perceived Burdensomeness, MEIM Attachment, MEIM Search)	Suicide Behavior/Risk	- Hispanic/Latinx participants: Suicide risk was significantly, positively related to perceived burdensomeness and thwarted belongingness, and negatively related to MEIM-attachment -Thwarted belongingness X perceived burdensomeness interaction was significantly related to suicide risk even after accounting for variance attributable to main effects and to MEIM- attachment - Lower levels of ethnic identity attachment were related to greater suicide risk. -Perceived burdensomeness mediated the relation between ethnic identity and suicide risk at higher levels of thwarted belongingness	Ethnic identity as measure by TB PB MEIM attach and MEIM search	- Perceived burdensomeness mediated the relation between ethnic identity and suicide risk at higher levels of thwarted belongingness - Thwarted belongingness X perceived burdensomeness interaction was significantly related to suicide risk even after accounting for variance attributable to main effects and to MEIM-attachment
RQ1_008	Mexican descent college student risky sexual behaviors and alcohol use: The role of general and cultural based coping with	Experienced Racism, Cultural Forms of Coping (Primary Control Coping, Fatalismo Coping), Discrimination, R/E	Alcohol Use Issues/Disorders	-Lower levels of primary control engaged coping and higher levels of fatalismo coping were related to higher reporting of alcohol use issues	Primary Control Coping, Fatalismo Coping, discrimination	-Interaction between discrimination and ethnicity based coping was significant related to higher reporting of alcohol issues -Those with high ethnicity-based coping, there was no significant relationship between discrimination and alcohol use issues
RQ1_010	Perceived burdensomeness (PB), thwarted belongingness (TB), childhood polyvictimization, interpersonal needs, suicidal ideation	Perceived Burdensomeness (PB), Thwarted Belongingness (TB), Childhood Polyvictimization	Suicidal Ideation	-Correlation between polyvictimization, PB, TB, and suicide ideation was low to moderate -No significant direct effect between childhood polyvictimization and suicidal ideation -Childhood polyvictimization had significant indirect effects on suicide ideation through PB and TB -Indirect effect of childhood polyvictimization on suicide ideation through PB was stronger than the indirect effect of childhood polyvictimization through TB - Polyvictimization was a risk factor of suicide ideation through PB and TB	Polyvictimization, TB, PB	-Childhood polyvictimization had significant indirect effects on suicide ideation through PB and TB
RQ1_012	Prescription stimulant misuse avoidance self-efficacy:	Religiosity	Prescription Stimulant Avoidance Self-Efficacy	-Increased religiosity was associated with a decreased level of avoidance self-efficacy for Latino students	Religiosity	N/A
RQ1_014	Protective and risk factors for increased alcohol use in latinx college students on the US/mexico border	Depression, Anxiety, Stress, Aggression, Adverse Childhood Experiences, Child of an Alcoholic, Alcohol Use Frequency, Alcohol Use Related Consequences	Alcohol Use Frequency, Alcohol Problem, Depression, Anxiety, Aggression, ACES	- Negative binomial regression analysis- age was positively associated with past month alcohol, and the GSE total score and was negatively associated with past month alcohol use -Linear regression model for alcohol-related consequences was statistically significant- Anxiety and ACEs were positively associated with alcohol-related consequences, holding past year alcohol use and stress constant -Alcohol use frequency was associated with increasing age, parental alcohol use disorder, greater anger, and lower self-efficacy -Alcohol related consequences were positively associated with anxiety and adverse childhood experiences	Anxiety, ACES, Alcohol Use Frequency, Alcohol Related Consequences	N/A
RQ1_015	Racial/ethnic discrimination, posttraumatic stress	R/E Discrimination and Alcohol Problems/ Disorders	Posttraumatic Stress Symptoms, Maladaptive Alcohol	- Experiences of discrimination at Time 1 were significantly and positively associated with PTSD symptoms at Time 2 and with alcohol problems at Time 2	R/E Discrimination	N/A
RQ1_016	Sex and racial/ethnic differences in suicidal consideration and suicide attempts among US college	R/E	Suicide Consideration and Attempts	- Compared with non-Hispanic Whites (Whites), racial/ethnic minority groups were more likely to consider suicide seriously all years - Multiple logistic regression of serious suicide consideration: Hispanics and women - Multiple logistic regression of serious suicide consideration: men and hispanics	R/E	N/A

Document ID#	Abbreviated Article Title	RV- Risk Factors Examined	RV- Mental Health Outcome	Relevant Results	Confirmed Risk Factors	Interactions
RQ1_017	Sociodemographic differences in barriers to mental health care among college students at elevated	R/E	Helpfulness of Treatment, Lack of Time, Cultural Sensitivity Barriers, Financial Concerns	-Odds for questioning the helpfulness of treatment were also significantly lower for Hispanics -Odds for endorsing lack of time were significantly lower for Hispanic students -Finances were a greater barrier for women, sexual and gender minority students, and Black and Hispanic students	R/E	N/A
RQ1_018	Suicidal behavior among Latina college students	Ethnic Identity, Loneliness, Depression, Hopelessness, Delinquency	Suicide Behaviors	-Suicidal behavior among Latina college students was predicted by loneliness, hopelessness, depression, and delinquency - Multivariate regression analyses - depression, loneliness, a less positive social problem-solving orientation, hopelessness, and delinquency, but not ethnic identification, were significant predictors of suicidality among Latina college students	Loneliness, Depression, Hopelessness, Delinquency	N/A
RQ1_019	Suicidal ideation among racial/ethnic minorities: Moderating effects of rumination and depressive symptoms	R/E, Brooding, Reflective Rumination, Depression, Hopelessness	Suicidal Ideation	-Three-way interaction among reflection, depressive symptoms, and Latino race/ethnicity -Latino race/ethnicity, compared with biracial race/ethnicity - positively associated with ideation at relatively low levels of reflection and negatively associated with ideation at moderate to high scores of reflection -Latino race/ethnicity, when compared with biracial race/ethnicity, interacted with reflection to negatively predict suicidal ideation only at BDI-II scores above 8.65	N/A	-Three-way interaction among reflection, depressive symptoms, and Latino race/ethnicity - Latino race/ethnicity, when compared with biracial race/ethnicity, interacted with reflection to negatively predict suicidal ideation only at BDI-II scores above 8.65
RQ1_020	Suicide risk factors for young adults: Testing a model across ethnicities	Attitudes Toward Suicide, Depression, Self-Harming Behavior, Exposure, Suicidal Behavior	Suicidal Ideation	- BDI--->SSB is significant - Attempt---> SSB is significant - SSB---> ASIQ is significant - Attempt ---> ASIQ is significant - Complete---> ASIQ is significant - BDI---> ASIQ is significant	Attitudes Towards Suicide, Depression, Suicidal Behavior, Exposure to Completed Suicide	N/A
RQ1_021	The Covid-19 pandemic and mental health of first-year college students: Examining the effect of Covid-19 stressors using longitudinal data	Covid-19 Related Stressors	Depression	-Effect of Covid-19 stressors on mental health: Hispanic Employed (Wave I) 0.629** Work reduction (student) 0.343 Work reduction (parent) 1 0.571** Distanced learning 0.308* Education technology 0.135 Covid-19 diagnosis 0.457* Covid-19 hospitalization 0.229** Social isolation (Wave II) 0.171 Social isolation (Wave I) 0.242	Covid-19 Related Stressors	N/A
RQ1_023	Worry among Latinx young adults: Relations to pain	Worry	Pain Related Anxiety	- Worry was positively correlated with pain anxiety	Worry	N/A
RQ1_024	Acculturative Stress, Depression, and Anxiety in Migrant Farm Work College Students of Mexican Heritage	Migrant Status, Language Preference	College Stress, Acculturative Stress, Depression, Anxiety	-Main effects were found for migrant status, and for sex, for the dependent variables of college stress and acculturative stress -Migrant status had a significant effect for acculturative stress, but not college stress -Migrant students reported experiencing higher levels of depressive symptoms and anxiety symptoms than non migrant students	Migrant Status	-Main effects were found for migrant status, and for sex, for the dependent variables of college stress and acculturative stress
RQ1_025	Ethnic Variables and Negative Life Events as Predictors of Depressive Symptoms and Suicidal Behaviors in Latino College Students: On the Centrality of Receptivo a los Demas	Ethnic Variables (Ethnic Affirmation and Belonging, Ethnic Identity Achievement, Ethnic Behaviors and Practices, and Ethnic-Other Group Orientation) and Demographics (Ethnic identity, Gender, Age, Year in School, Religion)	Depressive Symptoms, Suicidal Behavior	-Higher scores on the MEIM scales, including other group orientation, were associated with lower scores on the BDI-II and the SBQ-R -Higher scores on the LECCS were associated with higher scores on the two outcome measures -Set of demographic information scores was found to account for a small but significant 8% of variance in depressive symptoms scores -Set of ethnic variables was found to account for a small but significant 8% of additional variance in depressive symptoms scores -Negative life events was entered in the next step, it was found to be a significant unique predictor and to account for a medium and significant 15% of additional variance in depressive symptoms -Other Group Orientation × Negative Life Events interaction term emerged as the only significant unique predictor of depressive symptoms -Demographic variables, ethnic variables, and negative life events, was found to account for a large of significant variance in depressive symptoms -Set of ethnic variables was found to account for a small but significant 8% of variance in suicidal behaviors scores....Ethnic identity achievement emerged as significant unique predictor -Negative life events was entered in the next step, found to be a significant unique predictor and to account for a small but significant 6% of additional variance in suicidal behaviors -Positive association between negative life events and suicidal risk was stronger for Latinos with low, compared with high, other group orientation -Positive association between negative life events and depressive symptoms was stronger for Latinos with low other group orientation, compared with Latinos with high other group orientation	Ethnic Variables (Ethnic Affirmation and Belonging, Ethnic Identity Achievement, Ethnic Behaviors and Practices, and Ethnic-Other Group Orientation) and Demographics (Ethnic identity, Gender, Age, Year in School, Religion)	-Positive association between negative life events and depressive symptoms was stronger for Latinos with low other group orientation, compared with Latinos with high other group orientation - Other Group Orientation × Negative Life Events interaction term emerged as the only significant unique predictor of depressive symptoms - Demographic variables, ethnic variables, and negative life events, was found to account for a large 31% of significant variance in depressive symptomsthnic variables was found to account for a small but significant 8% of variance in suicidal behaviors scores -Negative life events was entered in the next step, it was found to be a significant unique predictor and to account for a small but significant 6% of additional variance in suicidal behaviors
RQ1_027	Horizontal Collectivism Moderates the Relationship Between in-the-Moment Social Connections and Well-Being Among Latino/a College Students.	Horizontal Collectivism, Inclusion of Other in the Self	Momentary Well-Being, Daily Sleep	-When a person reported more overlap in the inclusion of other in the self than typical, they reported feeling greater sadness -Horizontal collectivism moderated the relationship between inclusion of the other in self and anxiety such that when a person who endorsed higher (vs. lower) horizontal collectivism felt more inclusion of other in the self during a social interaction than typical, they reported feeling more anxious -When a person felt lonelier than typical, they reported poorer subjective well-being, more sadness, and more anxiety -On days that a person felt lonelier than typical, they reported poorer sleep quality the next morning -A person who less (vs. more) strongly values horizontal collectivism and felt more lonely than typical, they reported feeling more anxious	Horizontal Collectivism, Inclusion of Other in the Self	-Horizontal collectivism moderated the relationship between inclusion of the other in self and anxiety such that when a person who endorsed higher (vs. lower) horizontal collectivism felt more inclusion of other in the self during a social interaction than typical, they reported feeling more anxious -Horizontal collectivism did not moderate the relationship between inclusion of other in the self and any of the other outcomes -Horizontal collectivism did not moderate the relationship between loneliness and any of the other outcomes



Document ID#	Abbreviated Article Title	RV- Risk Factors Examined	RV- Mental Health Outcome	Relevant Results	Confirmed Risk Factors	Interactions
RQ1_028	Mexican-Origin College Students' Stress, Sibling Relationships, Academic Motivation, and Depressive Symptoms.	Less Positive Sibling Relationship, College Stress, Financial Stress, Interpersonal Stress	Suicidal Ideation	-Academic stress was negatively associated with academic motivation -Interpersonal stress and financial stress were positively associated with depressive symptoms -Four significant interactions between type of stress and positive sibling relationships- positive sibling relationships moderated the relations between interpersonal stress and academic motivation, ethnicity-related social stress and academic motivation, interpersonal stress and depressive symptoms, and financial stress and depressive symptoms -Under conditions of more positive sibling relationships, there was a positive association between interpersonal stress and Mexican-origin college students' academic motivation -Under conditions of more positive sibling relationships, there was a negative association between ethnicity-related social stress and academic motivation -Under conditions of less positive sibling relationships, there was a positive association between interpersonal stress and depressive symptoms -Under the conditions of more positive sibling relationships, there was a positive association between financial stress and depressive symptoms	Positive Sibling Relationships, Financial Stress, Less Positive Relationships, Interpersonal Stress	-Four significant interactions between type of stress and positive sibling relationships, which indicated that positive sibling relationships moderated the relations between interpersonal stress and academic motivation, ethnicity-related social stress and academic motivation, interpersonal stress and depressive symptoms, and financial stress and depressive symptoms -Under conditions of less positive sibling relationships, there was a positive association between interpersonal stress and depressive symptoms -Under conditions of more positive sibling relationships, however, the association between interpersonal stress and depressive symptoms was no longer significant -Under the conditions of more positive sibling relationships, there was a positive association between financial stress and depressive symptom -Under conditions of less positive sibling relationships, however, the association between financial stress and depressive symptoms was not significant
RQ1_030	The Relationship between Suicidal Behavior, Ideation,	R/E, Alcohol Use	Suicidal Behaviors	-The relationship between items assessing past suicidal ideation and past binge drinking was significant for Hispanics	R/E	N/A
RQ2_001	"Waking Up Every Day With The Work": A Mixed-Methods Study of Anxiety in Undocumented Latinx College Students	Financial Concern, Concerns with Deportation, Gender, Age	Anxiety	-Undocumented Latinas appear to suffer higher levels of generalized anxiety than their male counterparts -The older the participant the lower their anxiety levels -Age and worries about family deportation significantly predicted anxiety explaining 5% of the variance -Age, concerns about self and family deportation with the additional financial concerns together significantly predicted levels of anxiety explaining 12% of the variance -Family and friend deportations predicted anxiety, worrying about finances was still the leading contribution to anxiety	Financial Concern, Concerns with Deportation, Gender, Age	-Age and worries about family deportation significantly predicted anxiety explaining 5% of the variance -Age, concerns about self and family deportation with the additional financial concerns together significantly predicted levels of anxiety explaining 12% of the variance -Family and friend deportations predicted anxiety, worrying about finances was still the leading contribution to anxiety
RQ2_002	Depressive Symptoms in Relation to Adverse Childhood Experiences, Discrimination, Hope,	Adverse Childhood Experiences, R/E Discrimination, Sex, Parental Education, Nativity	Depressive Symptoms	-Positive association between ACEs and depressive symptoms were significant among Latinx students - Hope and social support and depressive symptoms were significantly associated among Black, Latinx, and Asian students	ACES	-Being female, Latinx or Asian was associated with higher depressive symptoms
RQ2_003	Chicano/a Students Respond to Arizona's Anti-Ethnic Studies Bill, SB 1108: Civic Engagement, Ethnic Identity, and Well-	Stress from SB 1108, Civic Engagement	Depressive Symptoms	- Significant correlations between SB 1108 stress and discrimination stress...students who reported more stress from SB 1108 were significantly more likely to report more stress from discrimination -Significant correlations between SB 1108 stress and self-esteem and depressive symptoms....more SB 1108 stress was associated with lower self-esteem and more depressive symptoms	Stress from SB 1108	-Stress was the only significant variable, such that more stress from SB 1108 was associated with more depressive symptoms
RQ2_004	Acculturative stress, social support, and coping: relations to psychological adjustment among Mexican American college students.	Acculturative Stress, Avoidant Coping, State, Level of Parental Support, Gender	Anxiety Symptoms, Depressive Symptoms	-Higher acculturative stress was associated with higher levels of anxiety and depression - Peer support was positively associated with anxiety symptoms - Greater use of avoidant coping strategies was associated with more depressive and anxiety symptoms - Californians reported higher levels of anxiety than Texans did -Students from California reported higher levels of anxiety than students from Texas -Students with low levels of parental support, increases in acculturative stress were associated with increases in anxiety; however, for those with higher levels of parental support, this relation was not significant -Students reporting low levels of peer support, increases in acculturative stress were associated with higher levels of anxiety symptoms, but this association was not significant for those reporting high levels of peer support -Students with low levels of parent support, increases in acculturative stress were associated with increases in depressive symptoms, but among students with high levels of parental support, the association was not significant - Higher levels of avoidant coping were associated with higher levels of anxiety - Students who reported little use of active coping strategies, higher acculturative stress was associated with significantly higher levels of anxiety; however, for those who reported greater use of active coping, higher acculturative stress was associated with significantly fewer anxiety symptoms -For women, greater use of avoidant coping was associated with higher anxiety, whereas for men this relation was nonsignificant - Higher levels of acculturative stress, lower levels of active coping, and higher levels of avoidant coping were associated with more depressive symptoms -Higher acculturative stress was associated with more depressive symptoms among students reporting low levels of active coping, but not among students reporting high levels of active coping	Higher Acculturative Stress, Peer Support, Avoidant Coping Strategies, State (California), Gender	-Students from California reported higher levels of anxiety than students from Texas -Students with low levels of parental support, increases in acculturative stress were associated with increases in anxiety; however, for those with higher levels of parental support, this relation was not significant -Students reporting low levels of peer support, increases in acculturative stress were associated with higher levels of anxiety symptoms, but this association was not significant for those reporting high levels of peer support -Students with low levels of parent support, increases in acculturative stress were associated with increases in depressive symptoms, but among students with high levels of parental support, the association was not significant. -Higher levels of avoidant coping were associated with higher levels of anxiety -Students who reported little use of active coping strategies, higher acculturative stress was associated with significantly higher levels of anxiety; however, for those who reported greater use of active coping, higher acculturative stress was associated with significantly fewer anxiety symptoms -For women, greater use of avoidant coping was associated with higher anxiety, whereas for men this relation was non significant -The relation between acculturative stress and anxiety was positive and significant for men but non significant for women -Higher levels of acculturative stress, lower levels of active coping, and higher levels of avoidant coping were associated with more depressive symptoms -Higher acculturative stress was associated with more depressive symptoms among students reporting low levels of active coping, but not among students reporting high levels of active coping

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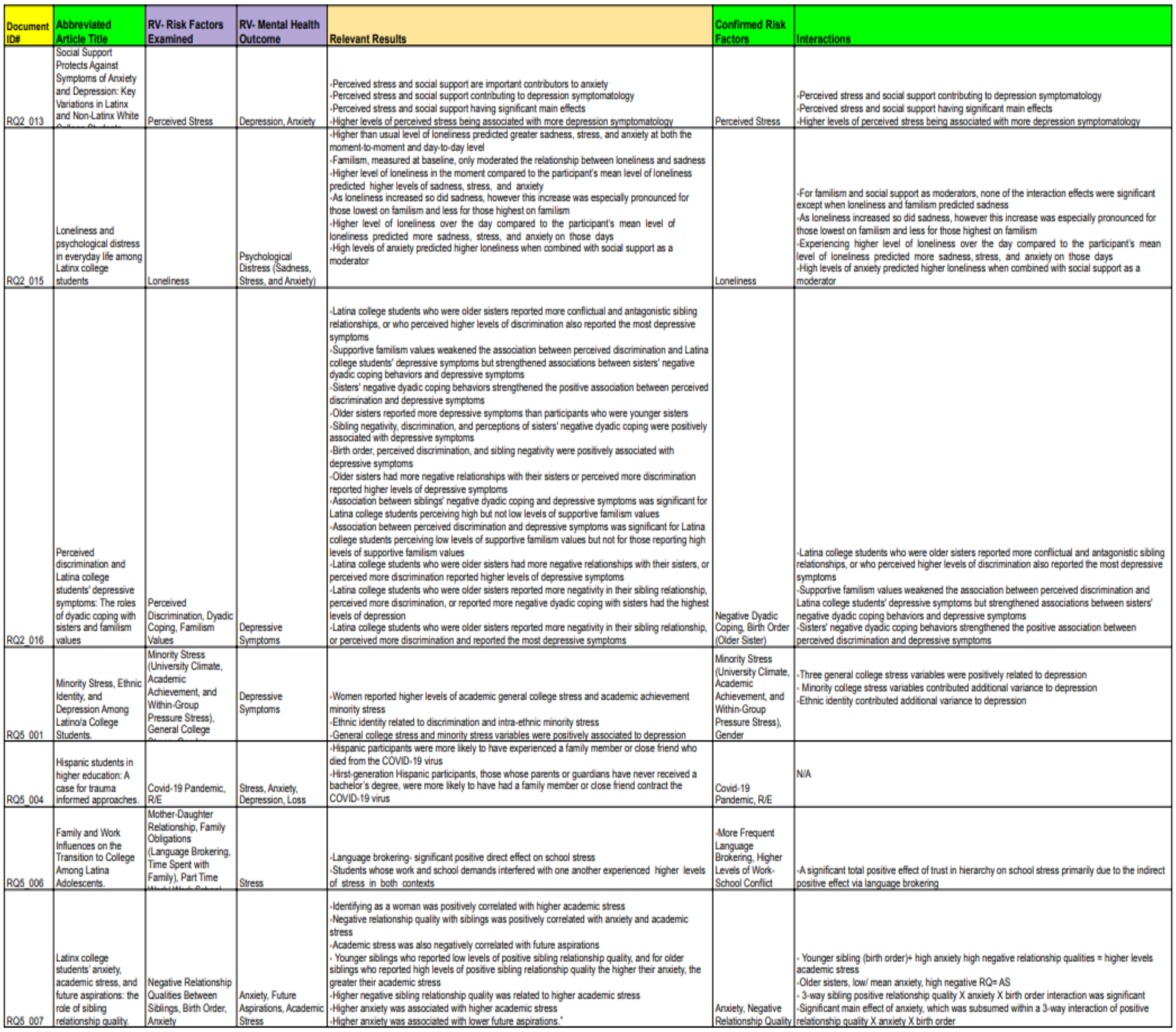
RQ2_006	Political Activism and Mental Health Among Black and Latinx College Students	R/E Microaggressions, Stress, Financial Distress	Stress, Anxiety, and Depressive Symptoms	-For Latinx students, R/E microaggressions had a low positive correlation with all of the mental health indicators with the exception of anxiety at Wave 1 -Stress at the beginning of freshman year and financial distress were positively related to end of the year stress -For Latinx students who were involved in fewer forms of political activism, there was a positive relationship between R/E microaggressions and stress at the end of freshman year -Depressive symptoms at the beginning of freshman year and financial distress were positively related to end of the year depressive symptoms	R/E Microaggressions	-For Latinx students who were involved in fewer forms of political activism, there was a positive relationship between R/E microaggressions and stress at the end of freshman year
RQ2_007	Online Discrimination and Mental Health Outcomes: The Moderating Roles of Ethnic Identity and Immigrant Generation Among Latinx Young Adults College Students	OR/ED, Vicarious OR/ED, Generation Status, Low Levels of EI	Depressive Symptoms, Generalized Anxiety Symptoms, Social Anxiety Symptoms	- Individual OR/ED and vicarious OR/ED were significant predictors of mental health - EI moderated the relationship between individual OR/ED and depressive symptoms as well as between vicarious OR/ED and social anxiety - Individual and vicarious OR/ED were more strongly related to SA for 1st generation students compared to students with two parents born in the U.S -Higher levels of individual OR/ED and Vicarious OR/ED were separately associated with elevated levels of GA, SA, and depression - Higher levels of individual OR/ED were associated with higher levels of SA, whereas higher levels of EI were associated with lower levels of SA -Strength of the relationship between OR/ED and SA differed significantly between the 1st generation and multi generational groups -Stronger relationship between individual OR/ED and SA for 1st generation students as compared to multi generation students ... levels of SA were comparable for both groups at lower levels of individual OR/ED -At higher levels of individual OR/ED, SA symptoms were substantially higher for 1st generation students than multi generation students -Higher levels of vicarious OR/ED were associated with higher levels of SA. -Stronger, positive relationship between vicarious OR/ED and SA for individuals with lower levels of EI, than for individuals with higher levels of EI - Higher levels of individual OR/ED were associated with greater GA symptoms -Higher levels of vicarious OR/ED were associated with greater GA symptoms. - Higher levels of individual OR/ED were associated with higher levels of depression -Stronger, significant, and positive relationship between individual OR/ED and depression for individuals with lower levels of EI than for individuals with higher levels of EI -Higher levels of vicarious OR/ED were associated with higher levels of depressive symptoms	OR/ED, Vicarious OR/ED	- Additionally, both individual and vicarious OR/ED were more strongly related to SA for 1st generation students compared to students with two parents born in the U.S
RQ2_008	Associations between Cultural Stressors, Cultural Values, and Latina/o College Students' Mental Health College Students	Perceived R/E Discrimination, Acculturative Stress, Familismo, Respeto, Religiosity, Traditional Gender roles, Gender	Mental Health Symptoms (i.e., Depression, Anxiety, Stress)	-Acculturative stress and perceived discrimination were positively correlated with depressive symptoms, anxiety symptoms, and psychological stress -Negative associations between familism support, familism referents, respeto, religiosity and mental health symptoms -Traditional gender role scores were significantly associated with higher levels of acculturative stress and perceived discrimination -Female was positively correlated with depressive symptoms -Greater acculturative stress was positively related to being the first to attend college in the family -Greater familism support was associated with lower levels of depressive and anxiety symptoms, and psychological stress -Latina/o college students with higher familism obligation scores and those who held more traditional gender role values were more likely to report greater psychological stress -Association between acculturative stress and depressive symptoms was significant for participants who were low on familism support, but was not significantly associated for those high on familism support -Perceived discrimination was significantly associated with anxiety symptoms for participants with low familism referents scores, the association was not significant for Latina/o college students with high familism referents scores -Relationship between acculturative stress and anxiety symptoms was significant for participants who endorsed lower levels of respeto, but not for those with high respect for the family -Participants perceiving a high degree of discrimination, the relationship between respeto and anxiety symptoms was significant but this was not the case for those perceiving low discrimination -Relationship between acculturative stress and anxiety symptoms was significant for participants with low levels of religiosity but not for those with higher levels of religiosity -Association between perceived discrimination and anxiety symptoms was significant for participants who scored low on religiosity compared to those who with high levels of religiosity -The relationship between acculturative stress and psychological stress was significant for participants with low levels of familism referents, but not for those with high levels	Perceived R/E Discrimination, Acculturative Stress, Familismo, Respeto, Religiosity, Traditional Gender roles, Gender	- Latina/o college students with higher familism obligation scores and those who held more traditional gender role values were more likely to report greater psychological stress -Acculturative stress and depressive symptoms was significant for participants who were low on familism support, but was not significantly associated for those high on familism support -Perceived discrimination was significantly associated with anxiety symptoms for participants with low familism referents scores, however, the association was not significant for Latina/o college students with high familism referents scores -Relationship between acculturative stress and anxiety symptoms was significant for participants who endorsed lower levels of respeto, but not for those with high respect for the family -The association between perceived discrimination and anxiety symptoms was also significantly moderated by respeto -For participants perceiving a high degree of discrimination, the relationship between respeto and anxiety symptoms was significant but this was not the case for those perceiving low discrimination -The relationship between acculturative stress and anxiety symptoms was significant for participants with low levels of religiosity, but not for those with higher levels of religiosity -association between perceived discrimination and anxiety symptoms was significant for participants who scored low on religiosity compared to those who with high levels of religiosity -The relationship between acculturative stress and psychological stress was significant for participants with low levels of familism referents but not for those with high levels



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RQ2_013	Social Support Protects Against Symptoms of Anxiety and Depression: Key Variations in Latinx and Non-Latinx White	Perceived Stress	Depression, Anxiety	-Perceived stress and social support are important contributors to anxiety -Perceived stress and social support contributing to depression symptomatology -Perceived stress and social support having significant main effects -Higher levels of perceived stress being associated with more depression symptomatology	Perceived Stress	-Perceived stress and social support contributing to depression symptomatology -Perceived stress and social support having significant main effects -Higher levels of perceived stress being associated with more depression symptomatology
RQ2_015	Loneliness and psychological distress in everyday life among Latinx college students	Loneliness	Psychological Distress (Sadness, Stress, and Anxiety)	-Higher than usual level of loneliness predicted greater sadness, stress, and anxiety at both the moment-to-moment and day-to-day level -Familism, measured at baseline, only moderated the relationship between loneliness and sadness -Higher level of loneliness in the moment compared to the participant's mean level of loneliness predicted higher levels of sadness, stress, and anxiety -As loneliness increased so did sadness, however this increase was especially pronounced for those lowest on familism and less for those highest on familism -Higher level of loneliness over the day compared to the participant's mean level of loneliness predicted more sadness, stress, and anxiety on those days -High levels of anxiety predicted higher loneliness when combined with social support as a moderator	Loneliness	-For familism and social support as moderators, none of the interaction effects were significant except when loneliness and familism predicted sadness -As loneliness increased so did sadness, however this increase was especially pronounced for those lowest on familism and less for those highest on familism -Experiencing higher level of loneliness over the day compared to the participant's mean level of loneliness predicted more sadness, stress, and anxiety on those days -High levels of anxiety predicted higher loneliness when combined with social support as a moderator
RQ2_016	Perceived discrimination and Latina college students' depressive symptoms: The roles of dyadic coping with sisters and familism values	Perceived Discrimination, Dyadic Coping, Familism Values	Depressive Symptoms	-Latina college students who were older sisters reported more conflictual and antagonistic sibling relationships, or who perceived higher levels of discrimination also reported the most depressive symptoms -Supportive familism values weakened the association between perceived discrimination and Latina college students' depressive symptoms but strengthened associations between sisters' negative dyadic coping behaviors and depressive symptoms -Sisters' negative dyadic coping behaviors strengthened the positive association between perceived discrimination and depressive symptoms -Older sisters reported more depressive symptoms than participants who were younger sisters -Sibling negativity, discrimination, and perceptions of sisters' negative dyadic coping were positively associated with depressive symptoms -Birth order, perceived discrimination, and sibling negativity were positively associated with depressive symptoms -Older sisters had more negative relationships with their sisters or perceived more discrimination reported higher levels of depressive symptoms -Association between siblings' negative dyadic coping and depressive symptoms was significant for Latina college students perceiving high but not low levels of supportive familism values -Association between perceived discrimination and depressive symptoms was significant for Latina college students perceiving low levels of supportive familism values but not for those reporting high levels of supportive familism values -Latina college students who were older sisters had more negative relationships with their sisters, or perceived more discrimination reported higher levels of depressive symptoms -Latina college students who were older sisters reported more negativity in their sibling relationship, perceived more discrimination, or reported more negative dyadic coping with sisters had the highest levels of depression -Latina college students who were older sisters reported more negativity in their sibling relationship, or perceived more discrimination and reported the most depressive symptoms	Negative Dyadic Coping, Birth Order (Older Sister)	-Latina college students who were older sisters reported more conflictual and antagonistic sibling relationships, or who perceived higher levels of discrimination also reported the most depressive symptoms -Supportive familism values weakened the association between perceived discrimination and Latina college students' depressive symptoms but strengthened associations between sisters' negative dyadic coping behaviors and depressive symptoms -Sisters' negative dyadic coping behaviors strengthened the positive association between perceived discrimination and depressive symptoms
RQ5_001	Minority Stress, Ethnic Identity, and Depression Among Latino/a College Students.	Minority Stress (University Climate, Academic Achievement, and Within-Group Pressure Stress), General College	Depressive Symptoms	-Women reported higher levels of academic general college stress and academic achievement minority stress -Ethnic identity related to discrimination and intra-ethnic minority stress -General college stress and minority stress variables were positively associated to depression	Minority Stress (University Climate, Academic Achievement, and Within-Group Pressure Stress), Gender	-Three general college stress variables were positively related to depression - Minority college stress variables contributed additional variance to depression -Ethnic identity contributed additional variance to depression
RQ5_004	Hispanic students in higher education: A case for trauma informed approaches.	Covid-19 Pandemic, R/E	Stress, Anxiety, Depression, Loss	-Hispanic participants were more likely to have experienced a family member or close friend who died from the COVID-19 virus -Hirst-generation Hispanic participants, those whose parents or guardians have never received a bachelor's degree, were more likely to have had a family member or close friend contract the COVID-19 virus	Covid-19 Pandemic, R/E	N/A
RQ5_006	Family and Work Influences on the Transition to College Among Latina Adolescents.	Mother-Daughter Relationship, Family Obligations (Language Brokering, Time Spent with Family), Part Time	Stress	-Language brokering- significant positive direct effect on school stress -Students whose work and school demands interfered with one another experienced higher levels of stress in both contexts	-More Frequent Language Brokering, Higher Levels of Work-School Conflict	-A significant total positive effect of trust in hierarchy on school stress primarily due to the indirect positive effect via language brokering
RQ5_007	Latinx college students' anxiety, academic stress, and future aspirations: the role of sibling relationship quality.	Negative Relationship Qualities Between Siblings, Birth Order, Anxiety	Anxiety, Future Aspirations, Academic Stress	-Identifying as a woman was positively correlated with higher academic stress -Negative relationship quality with siblings was positively correlated with anxiety and academic stress -Academic stress was also negatively correlated with future aspirations - Younger siblings who reported low levels of positive sibling relationship quality, and for older siblings who reported high levels of positive sibling relationship quality the higher their anxiety, the greater their academic stress -Higher negative sibling relationship quality was related to higher academic stress -Higher anxiety was associated with higher academic stress -Higher anxiety was associated with lower future aspirations."	Anxiety, Negative Relationship Quality	- Younger sibling (birth order)+ high anxiety high negative relationship qualities = higher levels academic stress -Older sisters, low/ mean anxiety, high negative RQ= AS - 3-way sibling positive relationship quality X anxiety X birth order interaction was significant -Significant main effect of anxiety, which was subsumed within a 3-way interaction of positive relationship quality X anxiety X birth order

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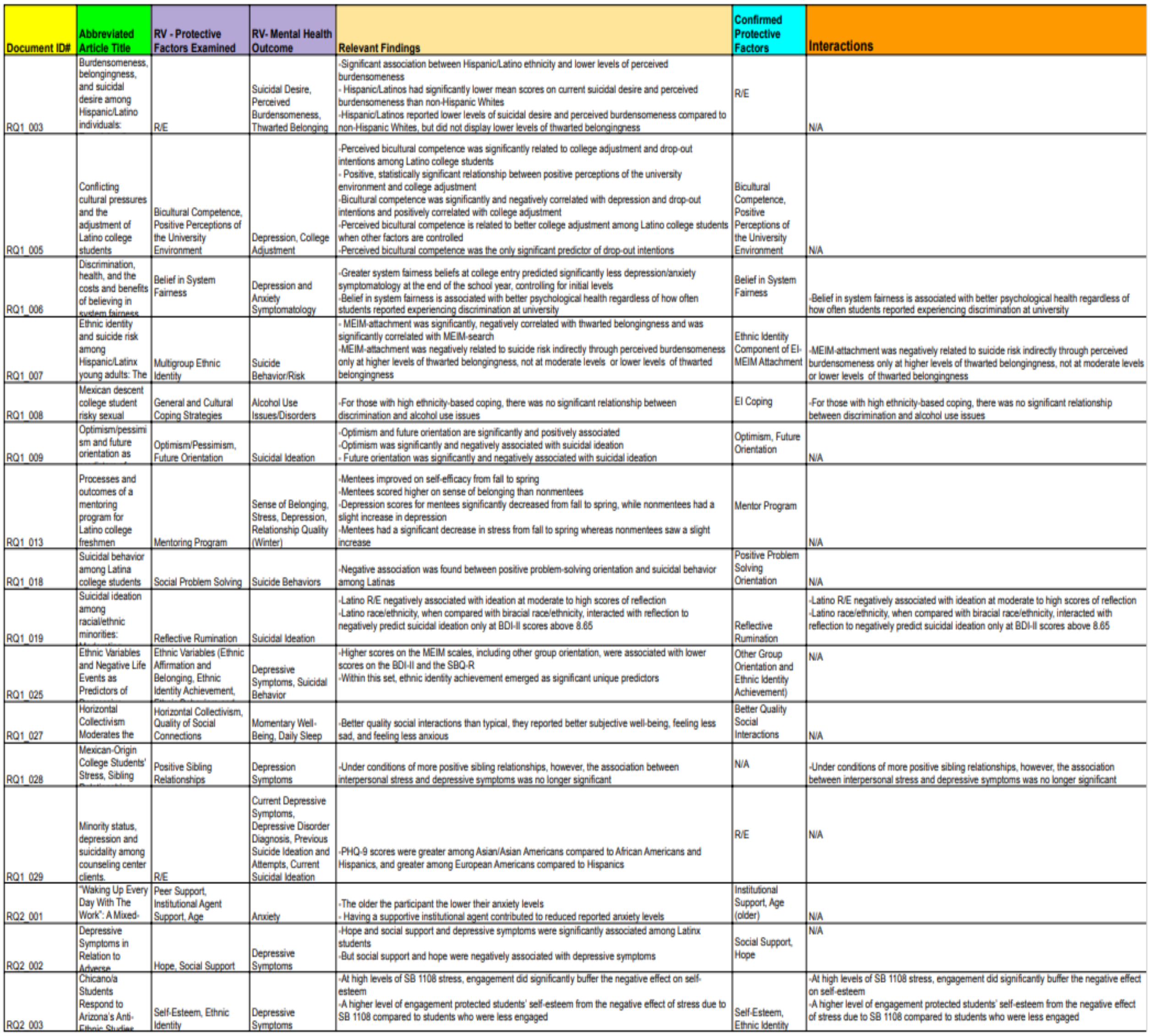
RQ5_010	College Stress, Minority Status Stress, Depression, Grades, and Persistence Intentions Among Hispanic Female Students: A Mediation Model	College Stress, Minority Status Stress	Persistence Intentions, Depression Symptoms, College Stress, Minority Status Stress	-College stress and minority status stress positively and directly predicted students' depression -Depression as well as college stress negatively and directly predicted persistence intentions -Having at least one college graduate parent was associated with stronger persistence intentions -Number of years in college was positively related to higher levels of degree persistence intentions -Stress variables accounted for 26% of the variance in depression. - 5.7% of the variance in persistence, and 6.5% of the variance in student's college GPA was accounted for by the stress and depression variables while controlling for parental education and college level -Depression mediated the relationship between college stress and persistence intentions -Depression also mediated the relation between minority status stress and persistence intentions	College Stress, Minority Stress	-Depression is one of the pathways through which typical college stress and minority status stress may result in lower levels of persistence intentions and, possibly, dropout behavior among Hispanic women enrolled in 4-year institutions. -Depression mediated the relationship between college stress and persistence intention -Depression also mediated the relation between minority status stress and persistence intentions
RQ5_012	Grit Under Duress: Stress, Strengths, and Academic Success Among Non-Citizen and Citizen Latina/o First Generation	Citizenship Status, Stress, First Generation Status/ Immigrant	Depression	-Immigrant status was a significant moderator between depression and college GPA. GPA was substantially lower for non-citizens with higher depression. -Immigrant status was also a significant moderator between grit and depression. More grit was related to less depression. But, there was a stronger relation between grit and depression for non-citizens than for citizens, with depression higher at lower levels of grit for non-citizens	N/A	-Immigrant status was a significant moderator between depression and college GPA. GPA was substantially lower for non-citizens with higher depression. -Immigrant status was also a significant moderator between grit and depression. More grit was related to less depression. But, there was a stronger relation between grit and depression for non-citizens than for citizens, with depression higher at lower levels of grit for non-citizens
RQ5_014	The Effect of Perceived College-Related Stress on Depression, Life Satisfaction, and School Satisfaction: The Coping Strategies of Hispanic College Students From a Hispanic Serving Institution	Perceived College-Related Stress, Suppressive Coping, Reactive Coping, Depression	Depression, Life Satisfaction	-Reactive and suppressive coping had separate but important moderating effects on perceived stress and well-being outcomes -Perceived stress was also associated with both depressive symptoms and life satisfaction indirectly through copying styles -Association between stress and depressive symptoms was greater in individuals with higher levels of reactive style than those with lower levels -Relationship between stress and depressive symptoms was greater in individuals with higher levels of suppressive coping style than those with lower levels of suppressive coping -Relationship between stress and school satisfaction was negative among individuals with higher levels of suppressive coping style, there was no such relationship in those with lower levels of suppressive coping -Higher levels of stress were related to higher levels of suppressive and reactive coping, were associated with more depressive symptoms -Higher levels of stress were associated with lower levels of reflective coping, which in turn were related to lower life satisfaction. Coping styles did not mediate the association between stress and school satisfaction -Stress is significantly associated with: Reflective coping: -.17* Suppressive coping: .46*** Reactive coping: .50*** Depressive symptoms: .68*** School satisfaction: -.17* Life satisfaction: -.47*** Depression is significantly associated with: Reflective coping: -.06 Suppressive coping: .42*** Reactive coping: .51*** Stress: .68*** School satisfaction: -.24** Life satisfaction: -.41***	Reactive Coping, Suppressive Coping, Perceived College-Related Stress, Depression	-Association between stress and depressive symptoms was greater in individuals with higher levels of reactive style than those with lower levels. -Suppressive coping style moderated the relationship between perceived stress and depressive symptoms, despite a marginal level of significance the relationship between stress and depressive symptoms was greater in individuals with higher levels of suppressive coping style than those with lower levels of suppressive coping -Higher levels of stress were related to higher levels of suppressive and reactive coping, which in turn were associated with more depressive symptoms -Higher levels of stress were associated with lower levels of reflective coping, which in turn were related to lower life satisfaction
RQ5_015	Cultural Adaptation to a University Campus: The Case of Latino Students	Cultural Adaptations (Cultural Connectedness, Past to Present Continuity)	Anxiety, Depression, Acceptance	-Social Integration was correlated positively with Acceptance/Support and negatively with Reactive Loneliness, Anxiety/Self-Consciousness, and Poor Health -Linked Cultural Connectedness to Acceptance/Support, Anxiety/Self-Consciousness, and Confidence -Students who value their cultural origins and the childhood lessons their parents taught them also feel conspicuous on campus -Linked Past-to-Present Continuity and Insecurity/ Confusion... The student who perceives continuity between his/her childhood experiences and relationships and his/her current situation does not feel confused, lost, and misunderstood on campus (and vice versa) -Reactive Loneliness was slightly related and, Confidence was slightly related	Cultural Adaptations (Cultural Connectedness, Past to Present Continuity)	N/A
RQ5_016	The Influence of Racism-Related Stress on the Academic Motivation of Black and Latino/a Students	Racism-Related Stress, R/E	Motivation (intrinsic, extrinsic, amotivation)	-Institutional racism-related stress was negatively correlated with extrinsic motivation but positively correlated with intrinsic motivation -Social-cognitive variables (academic engagement, social engagement, and self-efficacy) and intrinsic motivation -Institutional race related stress showed a negative correlation with extrinsic motivation as well as a positive correlation with amotivation - Latino/a students may show a higher level of extrinsic motivation than African American students -Latino/a students tended to show lower amotivation scores than African American students	R/E, and Related Stress	N/A

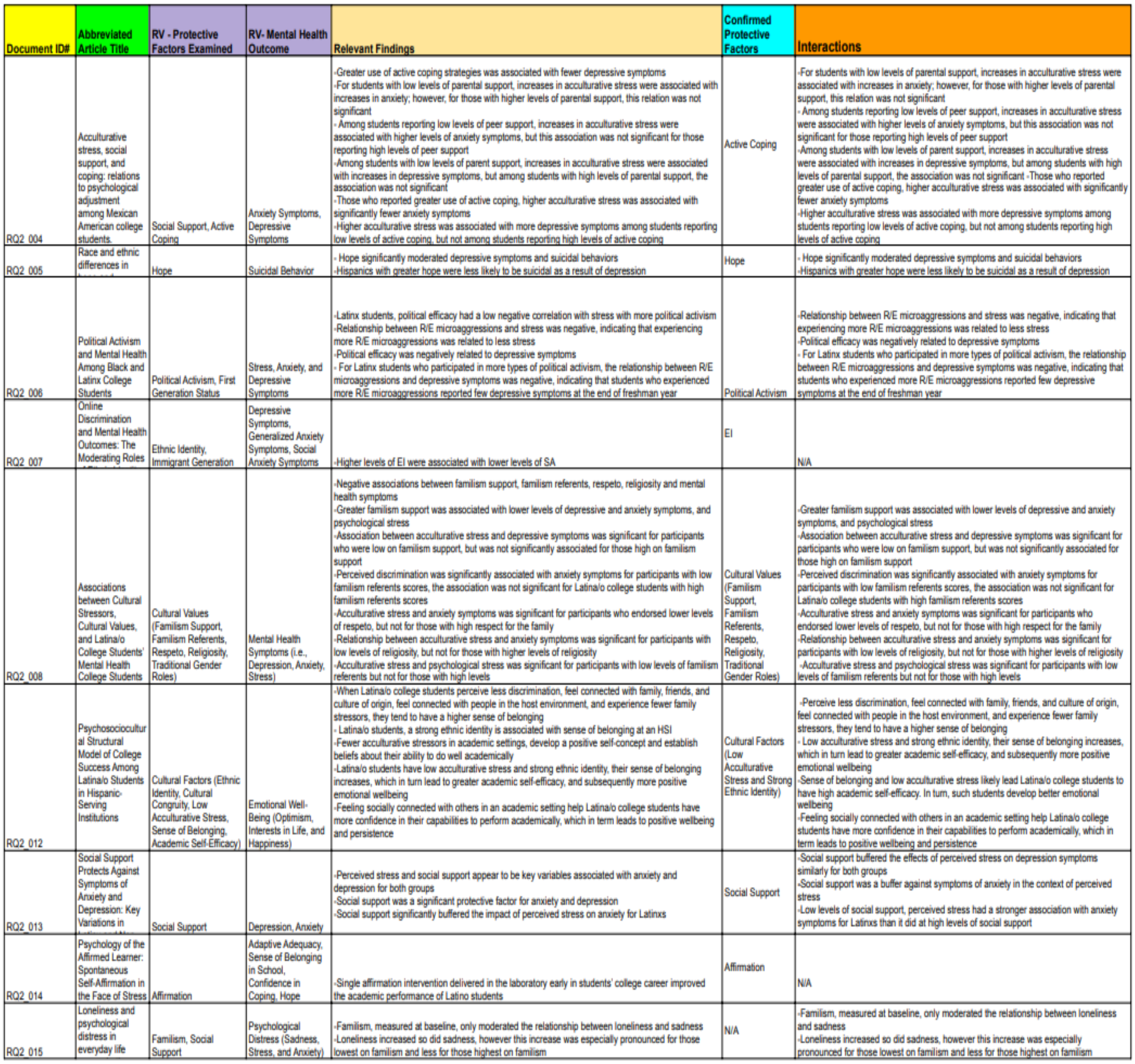
Document ID#	Abbreviated Article Title	RV- Risk Factors Examined	RV- Mental Health Outcome	Relevant Results	Confirmed Risk Factors	Interactions
RQ5_017	The Psychological and Academic Costs of School-Based Racial and Ethnic Microaggressions	School-Based Microaggressions, Academic Inferiority, Avoidant Coping	Depressive Symptoms	-Academic Inferiority microaggressions during high school were linked to greater depressive symptoms at the start of college -This influenced depressive symptoms at the end of first-year -Racial-ethnic public regard partially mediated the relationship between Academic Inferiority microaggressions and depressive symptoms at the start of college. -Academic Inferiority microaggressions during high school were associated with lower racial-ethnic public regard which was in turn associated with less depressive symptoms at the start of college -Racial-ethnic public regard at the start of college also yielded an indirect effect on depressive symptoms at the end of first-year -Academic Inferiority microaggressions experienced during first-year were associated with depressive symptoms at the end of first-year	School-Based Microaggressions, Avoidant Coping, Academic Inferiority	-Academic Inferiority microaggressions during high school were linked to greater depressive symptoms at the start of college ... which influenced depressive symptoms at the end of first-year through a significant indirect effect -Racial-ethnic public regard partially mediated the relationship between Academic Inferiority microaggressions and depressive symptoms at the start of college.
RQ5_021	The influence of race, sexual orientation and gender identity on mental health,	R/E	Anxiety Symptoms, Depressive Symptoms	-Relative to White students, Latinx, Black, and students identifying as "other" race/ethnicity had a significantly higher probability of screening positive for anxiety and/or depression in the March-December 2020 time period	R/E	N/A
RQ5_023	Perceived discrimination and academic distress	Perceived Discrimination	Academic Distress	- Perceived discrimination at Time 1 significantly and positively predicted academic distress at Time 2	Perceived Discrimination	N/A
RQ5_028	Stigma Consciousness and Evaluative Concerns: A Pathway to Psychological Distress	Stigma Consciousness, Evaluative Concerns Perfectionism	Psychological Distress (Anxiety and Depression)	-Significant relationships between the SCQ and other key study variables -SCQ scores were associated with poorer outcomes for the H/L group (e.g., higher EC and psychological distress) -Hispanic/Latinx students evaluative concerns served as a mechanism through which ethnic stigma consciousness related to psychological distress	Stigma consciousness	-Hispanic/Latinx students evaluative concerns served as a mechanism through which ethnic stigma consciousness related to psychological distress.
RQ5_029	Depression, Loneliness, and Suicide Risk among Latino College Students: A Test of a Psychosocial Interaction Model	Depression, Loneliness	Suicide Risk (Hopelessness and Suicidal Behaviors)	-Loneliness was positively associated with the two suicide risk measures 1 2 3 4 Depression Loneliness .61*** .54*** Hopelessness .61*** .54*** Suicidal behaviors .57*** .49*** .50*** -Psychosocial variables were found to account for a large percentage of the variance in hopelessness -Depression (β = 0.46) and loneliness (β = 0.26) emerged as unique predictors of hope -Psychosocial variables were found to account for a large percentage of the variance in suicidal behaviors	Depression, Loneliness	-Significant depression–loneliness interaction effect in predicting suicide risk. That is, the highest level of suicide risk was found among dysphoric Latino students who were also socially isolated

APPENDIX J

Evidence Table 2: Research Question 2



Document ID#	Abbreviated Article Title	RV - Protective Factors Examined	RV- Mental Health Outcome	Relevant Findings	Confirmed Protective Factors	Interactions
RQ1_003	Burdensomeness, belongingness, and suicidal desire among Hispanic/Latino individuals:	R/E	Suicidal Desire, Perceived Burdensomeness, Thwarted Belonging	-Significant association between Hispanic/Latino ethnicity and lower levels of perceived burdensomeness - Hispanic/Latinos had significantly lower mean scores on current suicidal desire and perceived burdensomeness than non-Hispanic Whites -Hispanic/Latinos reported lower levels of suicidal desire and perceived burdensomeness compared to non-Hispanic Whites, but did not display lower levels of thwarted belongingness	R/E	N/A
RQ1_005	Conflicting cultural pressures and the adjustment of Latino college students	Bicultural Competence, Positive Perceptions of the University Environment	Depression, College Adjustment	-Perceived bicultural competence was significantly related to college adjustment and drop-out intentions among Latino college students - Positive, statistically significant relationship between positive perceptions of the university environment and college adjustment -Bicultural competence was significantly and negatively correlated with depression and drop-out intentions and positively correlated with college adjustment -Perceived bicultural competence is related to better college adjustment among Latino college students when other factors are controlled -Perceived bicultural competence was the only significant predictor of drop-out intentions	Bicultural Competence, Positive Perceptions of the University Environment	N/A
RQ1_006	Discrimination, health, and the costs and benefits of believing in system fairness	Belief in System Fairness	Depression and Anxiety Symptomatology	-Greater system fairness beliefs at college entry predicted significantly less depression/anxiety symptomatology at the end of the school year, controlling for initial levels -Belief in system fairness is associated with better psychological health regardless of how often students reported experiencing discrimination at university	Belief in System Fairness	-Belief in system fairness is associated with better psychological health regardless of how often students reported experiencing discrimination at university
RQ1_007	Ethnic identity and suicide risk among Hispanic/Latinx young adults: The	Multigroup Ethnic Identity	Suicide Behavior/Risk	- MEIM-attachment was significantly, negatively correlated with thwarted belongingness and was significantly correlated with MEIM-search -MEIM-attachment was negatively related to suicide risk indirectly through perceived burdensomeness only at higher levels of thwarted belongingness, not at moderate levels or lower levels of thwarted belongingness	Ethnic Identity Component of EI-MEIM Attachment	-MEIM-attachment was negatively related to suicide risk indirectly through perceived burdensomeness only at higher levels of thwarted belongingness, not at moderate levels or lower levels of thwarted belongingness
RQ1_008	Mexican descent college student risky sexual	General and Cultural Coping Strategies	Alcohol Use Issues/Disorders	-For those with high ethnicity-based coping, there was no significant relationship between discrimination and alcohol use issues	EI Coping	-For those with high ethnicity-based coping, there was no significant relationship between discrimination and alcohol use issues
RQ1_009	Optimism/pessimism and future orientation as	Optimism/Pessimism, Future Orientation	Suicidal Ideation	-Optimism and future orientation are significantly and positively associated -Optimism was significantly and negatively associated with suicidal ideation - Future orientation was significantly and negatively associated with suicidal ideation	Optimism, Future Orientation	N/A
RQ1_013	Processes and outcomes of a mentoring program for Latino college freshmen	Mentoring Program	Sense of Belonging, Stress, Depression, Relationship Quality (Winter)	-Mentees improved on self-efficacy from fall to spring -Mentees scored higher on sense of belonging than nonmentees -Depression scores for mentees significantly decreased from fall to spring, while nonmentees had a slight increase in depression -Mentees had a significant decrease in stress from fall to spring whereas nonmentees saw a slight increase	Mentor Program	N/A
RQ1_018	Suicidal behavior among Latina college students	Social Problem Solving	Suicide Behaviors	-Negative association was found between positive problem-solving orientation and suicidal behavior among Latinas	Positive Problem Solving Orientation	N/A
RQ1_019	Suicidal ideation among racial/ethnic minorities:	Reflective Rumination	Suicidal Ideation	-Latino R/E negatively associated with ideation at moderate to high scores of reflection -Latino race/ethnicity, when compared with biracial race/ethnicity, interacted with reflection to negatively predict suicidal ideation only at BDI-II scores above 8.65	Reflective Rumination	-Latino R/E negatively associated with ideation at moderate to high scores of reflection -Latino race/ethnicity, when compared with biracial race/ethnicity, interacted with reflection to negatively predict suicidal ideation only at BDI-II scores above 8.65
RQ1_025	Ethnic Variables and Negative Life Events as Predictors of	Ethnic Variables (Ethnic Affirmation and Belonging, Ethnic Identity Achievement,	Depressive Symptoms, Suicidal Behavior	-Higher scores on the MEIM scales, including other group orientation, were associated with lower scores on the BDI-II and the SBQ-R -Within this set, ethnic identity achievement emerged as significant unique predictors	Other Group Orientation and Ethnic Identity Achievement)	N/A
RQ1_027	Horizontal Collectivism Moderates the	Horizontal Collectivism, Quality of Social Connections	Momentary Well-Being, Daily Sleep	-Better quality social interactions than typical, they reported better subjective well-being, feeling less sad, and feeling less anxious	Better Quality Social Interactions	N/A
RQ1_028	Mexican-Origin College Students' Stress, Sibling	Positive Sibling Relationships	Depression Symptoms	-Under conditions of more positive sibling relationships, however, the association between interpersonal stress and depressive symptoms was no longer significant	N/A	-Under conditions of more positive sibling relationships, however, the association between interpersonal stress and depressive symptoms was no longer significant
RQ1_029	Minority status, depression and suicidality among counseling center clients.	R/E	Current Depressive Symptoms, Depressive Disorder Diagnosis, Previous Suicide Ideation and Attempts, Current Suicidal Ideation	-PHQ-9 scores were greater among Asian/Asian Americans compared to African Americans and Hispanics, and greater among European Americans compared to Hispanics	R/E	N/A
RQ2_001	"Waking Up Every Day With The Work": A Mixed-	Peer Support, Institutional Agent Support, Age	Anxiety	-The older the participant the lower their anxiety levels - Having a supportive institutional agent contributed to reduced reported anxiety levels	Institutional Support, Age (older)	N/A
RQ2_002	Depressive Symptoms in Relation to Adverse	Hope, Social Support	Depressive Symptoms	-Hope and social support and depressive symptoms were significantly associated among Latinx students -But social support and hope were negatively associated with depressive symptoms	Social Support, Hope	N/A
RQ2_003	Chicano/a Students Respond to Arizona's Anti-Ethnic Studies	Self-Esteem, Ethnic Identity	Depressive Symptoms	-At high levels of SB 1108 stress, engagement did significantly buffer the negative effect on self-esteem -A higher level of engagement protected students' self-esteem from the negative effect of stress due to SB 1108 compared to students who were less engaged	Self-Esteem, Ethnic Identity	-At high levels of SB 1108 stress, engagement did significantly buffer the negative effect on self-esteem -A higher level of engagement protected students' self-esteem from the negative effect of stress due to SB 1108 compared to students who were less engaged



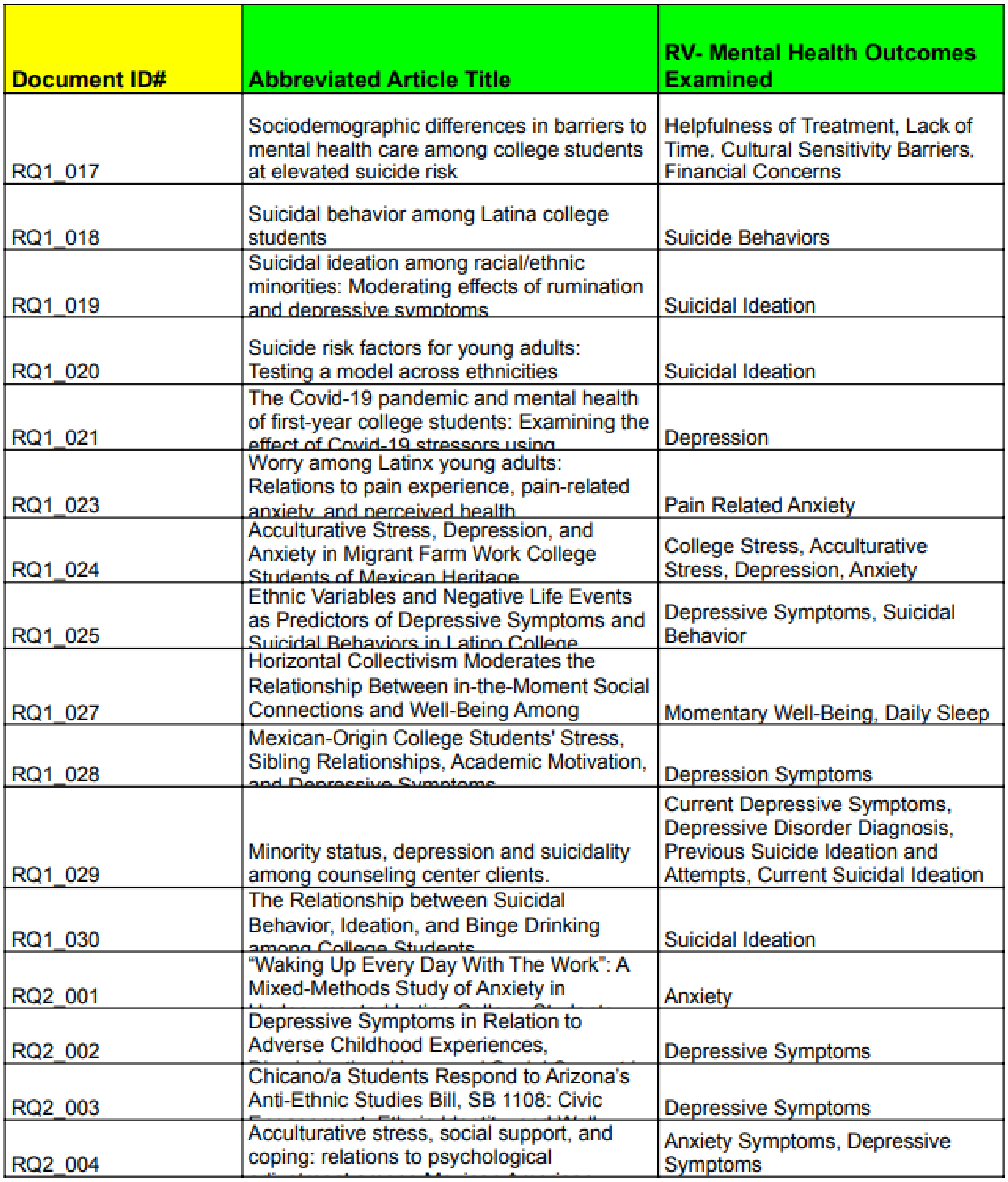
Document ID#	Abbreviated Article Title	RV - Protective Factors Examined	RV- Mental Health Outcome	Relevant Findings	Confirmed Protective Factors	Interactions
RQ2_004	Acculturative stress, social support, and coping: relations to psychological adjustment among Mexican American college students.	Social Support, Active Coping	Anxiety Symptoms, Depressive Symptoms	-Greater use of active coping strategies was associated with fewer depressive symptoms -For students with low levels of parental support, increases in acculturative stress were associated with increases in anxiety; however, for those with higher levels of parental support, this relation was not significant - Among students reporting low levels of peer support, increases in acculturative stress were associated with higher levels of anxiety symptoms, but this association was not significant for those reporting high levels of peer support -Among students with low levels of parent support, increases in acculturative stress were associated with increases in depressive symptoms, but among students with high levels of parental support, the association was not significant -Those who reported greater use of active coping, higher acculturative stress was associated with significantly fewer anxiety symptoms -Higher acculturative stress was associated with more depressive symptoms among students reporting low levels of active coping, but not among students reporting high levels of active coping	Active Coping	-For students with low levels of parental support, increases in acculturative stress were associated with increases in anxiety; however, for those with higher levels of parental support, this relation was not significant - Among students reporting low levels of peer support, increases in acculturative stress were associated with higher levels of anxiety symptoms, but this association was not significant for those reporting high levels of peer support -Among students with low levels of parent support, increases in acculturative stress were associated with increases in depressive symptoms, but among students with high levels of parental support, the association was not significant -Those who reported greater use of active coping, higher acculturative stress was associated with significantly fewer anxiety symptoms -Higher acculturative stress was associated with more depressive symptoms among students reporting low levels of active coping, but not among students reporting high levels of active coping
RQ2_005	Race and ethnic differences in	Hope	Suicidal Behavior	- Hope significantly moderated depressive symptoms and suicidal behaviors -Hispanics with greater hope were less likely to be suicidal as a result of depression	Hope	- Hope significantly moderated depressive symptoms and suicidal behaviors -Hispanics with greater hope were less likely to be suicidal as a result of depression
RQ2_006	Political Activism and Mental Health Among Black and Latinx College Students	Political Activism, First Generation Status	Stress, Anxiety, and Depressive Symptoms	-Latinx students, political efficacy had a low negative correlation with stress with more political activism -Relationship between R/E microaggressions and stress was negative, indicating that experiencing more R/E microaggressions was related to less stress -Political efficacy was negatively related to depressive symptoms - For Latinx students who participated in more types of political activism, the relationship between R/E microaggressions and depressive symptoms was negative, indicating that students who experienced more R/E microaggressions reported few depressive symptoms at the end of freshman year	Political Activism	-Relationship between R/E microaggressions and stress was negative, indicating that experiencing more R/E microaggressions was related to less stress -Political efficacy was negatively related to depressive symptoms - For Latinx students who participated in more types of political activism, the relationship between R/E microaggressions and depressive symptoms was negative, indicating that students who experienced more R/E microaggressions reported few depressive symptoms at the end of freshman year
RQ2_007	Online Discrimination and Mental Health Outcomes: The Moderating Roles	Ethnic Identity, Immigrant Generation	Depressive Symptoms, Generalized Anxiety Symptoms, Social Anxiety Symptoms	-Higher levels of EI were associated with lower levels of SA	EI	N/A
RQ2_008	Associations between Cultural Stressors, Cultural Values, and Latina/o College Students' Mental Health College Students	Cultural Values (Familism Support, Familism Referents, Respeto, Religiosity, Traditional Gender Roles)	Mental Health Symptoms (i.e., Depression, Anxiety, Stress)	-Negative associations between familism support, familism referents, respeto, religiosity and mental health symptoms -Greater familism support was associated with lower levels of depressive and anxiety symptoms, and psychological stress -Association between acculturative stress and depressive symptoms was significant for participants who were low on familism support, but was not significantly associated for those high on familism support -Perceived discrimination was significantly associated with anxiety symptoms for participants with low familism referents scores, the association was not significant for Latina/o college students with high familism referents scores -Acculturative stress and anxiety symptoms was significant for participants who endorsed lower levels of respeto, but not for those with high respect for the family -Relationship between acculturative stress and anxiety symptoms was significant for participants with low levels of religiosity, but not for those with higher levels of religiosity -Acculturative stress and psychological stress was significant for participants with low levels of familism referents but not for those with high levels	Cultural Values (Familism Support, Familism Referents, Respeto, Religiosity, Traditional Gender Roles)	-Greater familism support was associated with lower levels of depressive and anxiety symptoms, and psychological stress -Association between acculturative stress and depressive symptoms was significant for participants who were low on familism support, but was not significantly associated for those high on familism support -Perceived discrimination was significantly associated with anxiety symptoms for participants with low familism referents scores, the association was not significant for Latina/o college students with high familism referents scores -Acculturative stress and anxiety symptoms was significant for participants who endorsed lower levels of respeto, but not for those with high respect for the family -Relationship between acculturative stress and anxiety symptoms was significant for participants with low levels of religiosity, but not for those with higher levels of religiosity -Acculturative stress and psychological stress was significant for participants with low levels of familism referents but not for those with high levels
RQ2_012	Psychosociocultural Structural Model of College Success Among Latina/o Students in Hispanic-Serving Institutions	Cultural Factors (Ethnic Identity, Cultural Congruity, Low Acculturative Stress, Sense of Belonging, Academic Self-Efficacy)	Emotional Well-Being (Optimism, Interests in Life, and Happiness)	-When Latina/o college students perceive less discrimination, feel connected with family, friends, and culture of origin, feel connected with people in the host environment, and experience fewer family stressors, they tend to have a higher sense of belonging - Latina/o students, a strong ethnic identity is associated with sense of belonging at an HSI -Fewer acculturative stressors in academic settings, develop a positive self-concept and establish beliefs about their ability to do well academically -Latina/o students have low acculturative stress and strong ethnic identity, their sense of belonging increases, which in turn lead to greater academic self-efficacy, and subsequently more positive emotional wellbeing -Feeling socially connected with others in an academic setting help Latina/o college students have more confidence in their capabilities to perform academically, which in term leads to positive wellbeing and persistence	Cultural Factors (Low Acculturative Stress and Strong Ethnic Identity)	-Perceive less discrimination, feel connected with family, friends, and culture of origin, feel connected with people in the host environment, and experience fewer family stressors, they tend to have a higher sense of belonging - Low acculturative stress and strong ethnic identity, their sense of belonging increases, which in turn lead to greater academic self-efficacy, and subsequently more positive emotional wellbeing -Sense of belonging and low acculturative stress likely lead Latina/o college students to have high academic self-efficacy. In turn, such students develop better emotional wellbeing -Feeling socially connected with others in an academic setting help Latina/o college students have more confidence in their capabilities to perform academically, which in term leads to positive wellbeing and persistence
RQ2_013	Social Support Protects Against Symptoms of Anxiety and Depression: Key Variations in	Social Support	Depression, Anxiety	-Perceived stress and social support appear to be key variables associated with anxiety and depression for both groups -Social support was a significant protective factor for anxiety and depression -Social support significantly buffered the impact of perceived stress on anxiety for Latinxs	Social Support	-Social support buffered the effects of perceived stress on depression symptoms similarly for both groups -Social support was a buffer against symptoms of anxiety in the context of perceived stress -Low levels of social support, perceived stress had a stronger association with anxiety symptoms for Latinxs than it did at high levels of social support
RQ2_014	Psychology of the Affirmed Learner: Spontaneous Self-Affirmation in the Face of Stress	Affirmation	Adaptive Adequacy, Sense of Belonging in School, Confidence in Coping, Hope	-Single affirmation intervention delivered in the laboratory early in students' college career improved the academic performance of Latino students	Affirmation	N/A
RQ2_015	Loneliness and psychological distress in everyday life	Familism, Social Support	Psychological Distress (Sadness, Stress, and Anxiety)	-Familism, measured at baseline, only moderated the relationship between loneliness and sadness -Loneliness increased so did sadness, however this increase was especially pronounced for those lowest on familism and less for those highest on familism	N/A	-Familism, measured at baseline, only moderated the relationship between loneliness and sadness -Loneliness increased so did sadness, however this increase was especially pronounced for those lowest on familism and less for those highest on familism

Document ID#	Abbreviated Article Title	RV - Protective Factors Examined	RV- Mental Health Outcome	Relevant Findings	Confirmed Protective Factors	Interactions
RQ2_016	Perceived discrimination and Latina college students' depressive symptoms: The roles of dyadic coping with sisters and familism values	Dyadic Coping, Familism Values	Depressive Symptoms	-Latina college students who strongly endorsed supportive, obligatory, and referent familism values reported fewer depressive symptoms -Stress communication, supportive familism values, obligatory familism values, referent familism values, and perceptions of sisters' positive dyadic coping were negatively associated with depressive symptoms	Stress Communication, Supportive Familism Values, Obligatory Familism Values, Referent Familism Values, Perceptions of Sisters' Positive Dyadic Coping	-Association between perceived discrimination and depressive symptoms was significant for young women perceiving high levels of negative dyadic coping from sisters but not for those perceiving low levels of negative dyadic coping from sisters
RQ2_017	Protective Effects of Ethnic Identity on Mexican American College Students' Psychological Well-Being	Ethnic Identity	Depression, Self-Esteem	-For males orientation was positively associated with self-esteem -Depressive symptoms affirmation a significant negative predictor -Ethnic affirmation and belonging moderated the relation between acculturative stress and depression at low levels of acculturative stress but not at high levels of acculturative stress	Ethnic Affirmation/Belonging, Ethnic Identity Achievement, Other Group Orientation	-For women, ethnic affirmation/belonging and ethnic identity achievement moderated the relation between acculturative stress and depression at low but not high levels of acculturative stress. -Ethnic affirmation and belonging moderated the relation between acculturative stress and depression at low levels of acculturative stress but not at high levels of acculturative stress -Ethnic identity achievement moderating the relation between acculturative stress and depression at low (but not high) levels of acculturative stress -Men with high levels of other group orientation reported higher self-esteem at low levels of acculturative stress than at high levels of acculturative stress
RQ5_006	Family and Work Influences on the Transition to College Among Latina	Mother-Daughter Relationship, Family Obligations (Language Brokering, Time Spent with Family), Part Time	Stress	-Trust in hierarchy on school stress, primarily due to the indirect positive effect via language brokering -Spending time with family had a marginally significant negative direct effect on school stress -Students who worked more spend less time brokering for their parents and had lower school stress	More Time Spent with Family	-Students who worked more spent less time brokering for their parents and had lower school stress
RQ5_007	Latinx college students' anxiety, academic stress, and future aspirations: the role of sibling relationship quality.	Positive Relationship Qualities Between Siblings, Mother's Level of Education	Anxiety, Future Aspirations, Academic Stress	- Students who reported higher positive relationship quality with their sibling was positively correlated with greater future aspirations - 3-way sibling positive relationship quality X anxiety X birth order interaction was significant -The older the participant, the less academic stress they reported -The more education the participant's mother had, the higher future aspirations reported by participants -Younger siblings with high levels of positive sibling relationship quality, and for older siblings with low levels of positive sibling relationship quality, lower anxiety was associated with higher levels of future aspirations	Positive Relationship Qualities Between Siblings, Mother's Level of Education	- 3-way sibling positive relationship quality X anxiety X birth order interaction was significant -The older the participant, the less academic stress they reported -The more education the participant's mother had, the higher future aspirations reported by participants -Younger siblings with high levels of positive sibling relationship quality, and for older siblings with low levels of positive sibling relationship quality, lower anxiety was associated with higher levels of future aspirations
RQ5_012	Grit Under Duress: Stress, Strengths, and	Grit, Immigration Status	Depression	-Grit was high among both citizen and non-citizen Latina/o FGCSs -More grit was related to less depression	Grit, Immigration Status	N/A
RQ5_014	The Effect of Perceived College-Related Stress on Depression, Life	Reflective Coping	Depression, Life Satisfaction	-Association between stress and depressive symptoms was greater in individuals with higher levels of reactive style than those with lower levels -Relationship between stress and depressive symptoms was greater in individuals with higher levels of suppressive coping style than those with lower levels of suppressive coping.	N/A	-Association between stress and depressive symptoms was greater in individuals with higher levels of reactive style than those with lower levels -Relationship between stress and depressive symptoms was greater in individuals with higher levels of suppressive coping style than those with lower levels of suppressive coping.
RQ5_015	Cultural Adaptation to a University Campus: The	Social Integration, Cultural Connectedness	Anxiety, Depression, Acceptance	-Social Integration was correlated positively with Acceptance/Support -Linked Cultural Connectedness to Acceptance/Support and Confidence	Social Integration, Cultural Connectedness	N/A
RQ5_017	The Psychological and Academic Costs of School-Based Racial and Ethnic	R/E Public Regard	Depressive Symptoms	-Racial-ethnic public regard partially mediated the relationship between Academic Inferiority microaggressions and depressive symptoms at the start of college. Academic Inferiority microaggressions during high school were associated with lower racial-ethnic public regard which was in turn associated with less depressive symptoms at the start of college	N/A	-Racial-ethnic public regard partially mediated the relationship between Academic Inferiority microaggressions and depressive symptoms at the start of college. Academic Inferiority microaggressions during high school were associated with lower racial-ethnic public regard which was in turn associated with less depressive symptoms at the start of college
RQ5_025	Relationship of grit and resilience to dental students'	Grit, R/E	Grit, Resilience	-Hispanics reported significantly higher grit and resilience scores	R/E	N/A
RQ5_026	Family Achievement Guilt and Mental Well-	First Generation College Student Status	Depressive Symptoms, Self-Esteem	-Results indicated that there were no differences found for family achievement guilt, depressive symptoms, or self-esteem	N/A	N/A

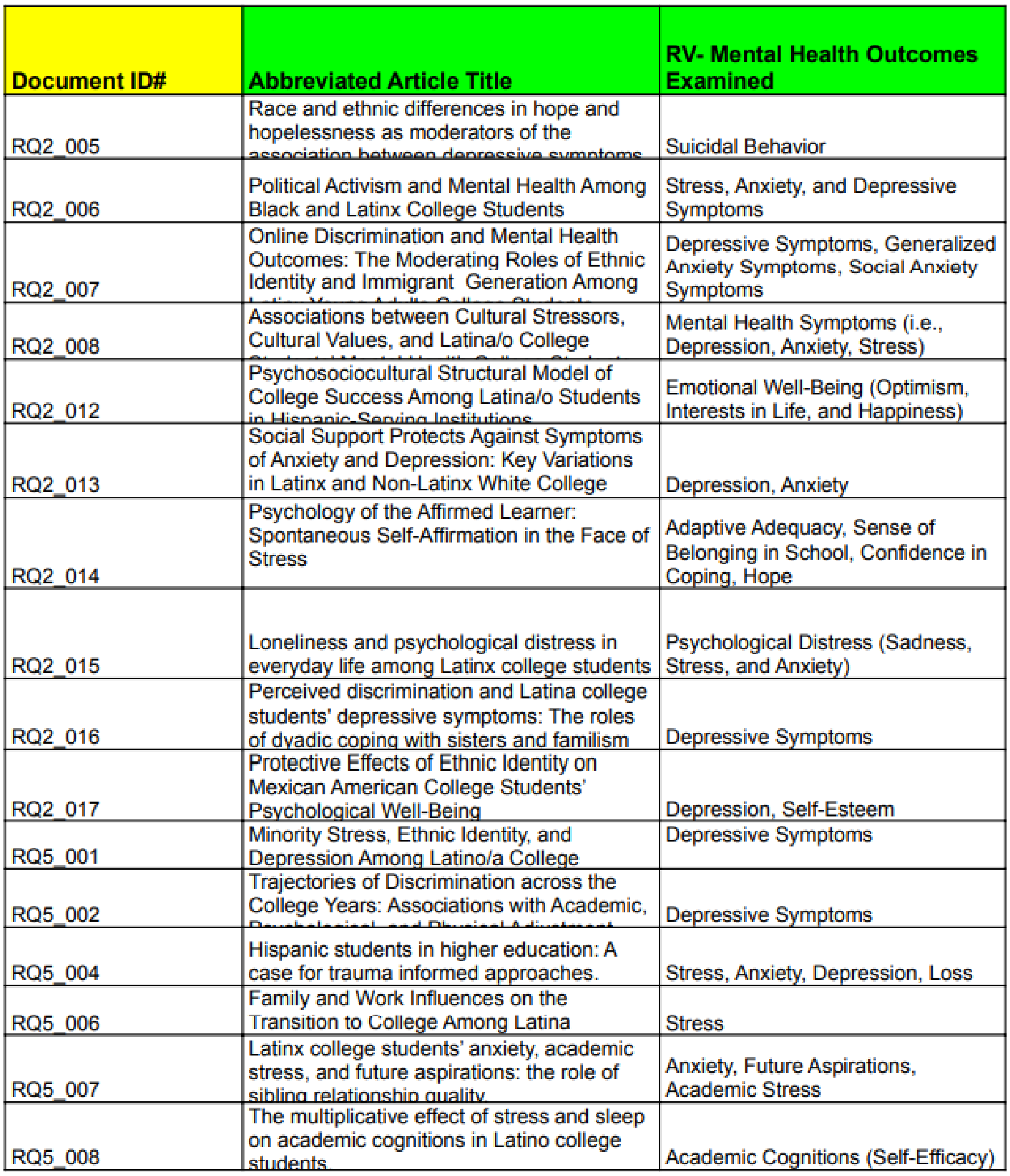
APPENDIX K

Evidence Table 3: Research Question 3

Document ID#	Abbreviated Article Title	RV- Mental Health Outcomes Examined
RQ1_002	Ataques de nervios: Culturally bound and distinct from panic attacks?	Panic Attacks
RQ1_003	Burdensomeness, belongingness, and suicidal desire among Hispanic/Latino individuals: Examining the effect of ethnicity in the interpersonal theory of suicide	Suicidal Desire, Perceived Burdensomeness, Thwarted Belonging
RQ1_005	Conflicting cultural pressures and the adjustment of Latino college students	Depression, College Adjustment
RQ1_006	Discrimination, health, and the costs and benefits of believing in system fairness	Depression and Anxiety Symptomatology
RQ1_007	Ethnic identity and suicide risk among Hispanic/Latinx young adults: The impact of perceived burdensomeness and thwarted belongingness	Suicide Behavior/Risk
RQ1_008	Mexican descent college student risky sexual behaviors and alcohol use: The role of general and cultural based coping with	Alcohol Use Issues/Disorders
RQ1_009	Optimism/pessimism and future orientation as predictors of suicidal ideation: Are there ethnic differences?	Suicidal Ideation
RQ1_010	Perceived burdensomeness (PB), thwarted belongingness (TB), childhood polyvictimization, interpersonal needs,	Suicidal Ideation
RQ1_012	Prescription stimulant misuse avoidance self-efficacy: Correlates and moderation by race/ethnicity	Prescription Stimulant Avoidance Self-Efficacy
RQ1_013	Processes and outcomes of a mentoring program for Latino college freshmen	Sense of Belonging, Stress, Depression, Relationship Quality (Winter)
RQ1_014	Protective and risk factors for increased alcohol use in latinx college students on the US/mexico border	Alcohol Use Frequency, Alcohol Problem, Depression, Anxiety, Aggression, ACES
RQ1_015	Racial/ethnic discrimination, posttraumatic stress symptoms, and alcohol problems in a longitudinal study of Hispanic/Latino college	Posttraumatic Stress Symptoms, Maladaptive Alcohol Use
RQ1_016	Sex and racial/ethnic differences in suicidal consideration and suicide attempts among US college students, 2011-2015	Suicide Consideration and Attempts



Document ID#	Abbreviated Article Title	RV- Mental Health Outcomes Examined
RQ1_017	Sociodemographic differences in barriers to mental health care among college students at elevated suicide risk	Helpfulness of Treatment, Lack of Time, Cultural Sensitivity Barriers, Financial Concerns
RQ1_018	Suicidal behavior among Latina college students	Suicide Behaviors
RQ1_019	Suicidal ideation among racial/ethnic minorities: Moderating effects of rumination and depressive symptoms	Suicidal Ideation
RQ1_020	Suicide risk factors for young adults: Testing a model across ethnicities	Suicidal Ideation
RQ1_021	The Covid-19 pandemic and mental health of first-year college students: Examining the effect of Covid-19 stressors using	Depression
RQ1_023	Worry among Latinx young adults: Relations to pain experience, pain-related anxiety, and perceived health	Pain Related Anxiety
RQ1_024	Acculturative Stress, Depression, and Anxiety in Migrant Farm Work College Students of Mexican Heritage	College Stress, Acculturative Stress, Depression, Anxiety
RQ1_025	Ethnic Variables and Negative Life Events as Predictors of Depressive Symptoms and Suicidal Behaviors in Latino College	Depressive Symptoms, Suicidal Behavior
RQ1_027	Horizontal Collectivism Moderates the Relationship Between in-the-Moment Social Connections and Well-Being Among	Momentary Well-Being, Daily Sleep
RQ1_028	Mexican-Origin College Students' Stress, Sibling Relationships, Academic Motivation, and Depressive Symptoms	Depression Symptoms
RQ1_029	Minority status, depression and suicidality among counseling center clients.	Current Depressive Symptoms, Depressive Disorder Diagnosis, Previous Suicide Ideation and Attempts, Current Suicidal Ideation
RQ1_030	The Relationship between Suicidal Behavior, Ideation, and Binge Drinking among College Students	Suicidal Ideation
RQ2_001	"Waking Up Every Day With The Work": A Mixed-Methods Study of Anxiety in	Anxiety
RQ2_002	Depressive Symptoms in Relation to Adverse Childhood Experiences,	Depressive Symptoms
RQ2_003	Chicano/a Students Respond to Arizona's Anti-Ethnic Studies Bill, SB 1108: Civic	Depressive Symptoms
RQ2_004	Acculturative stress, social support, and coping: relations to psychological	Anxiety Symptoms, Depressive Symptoms

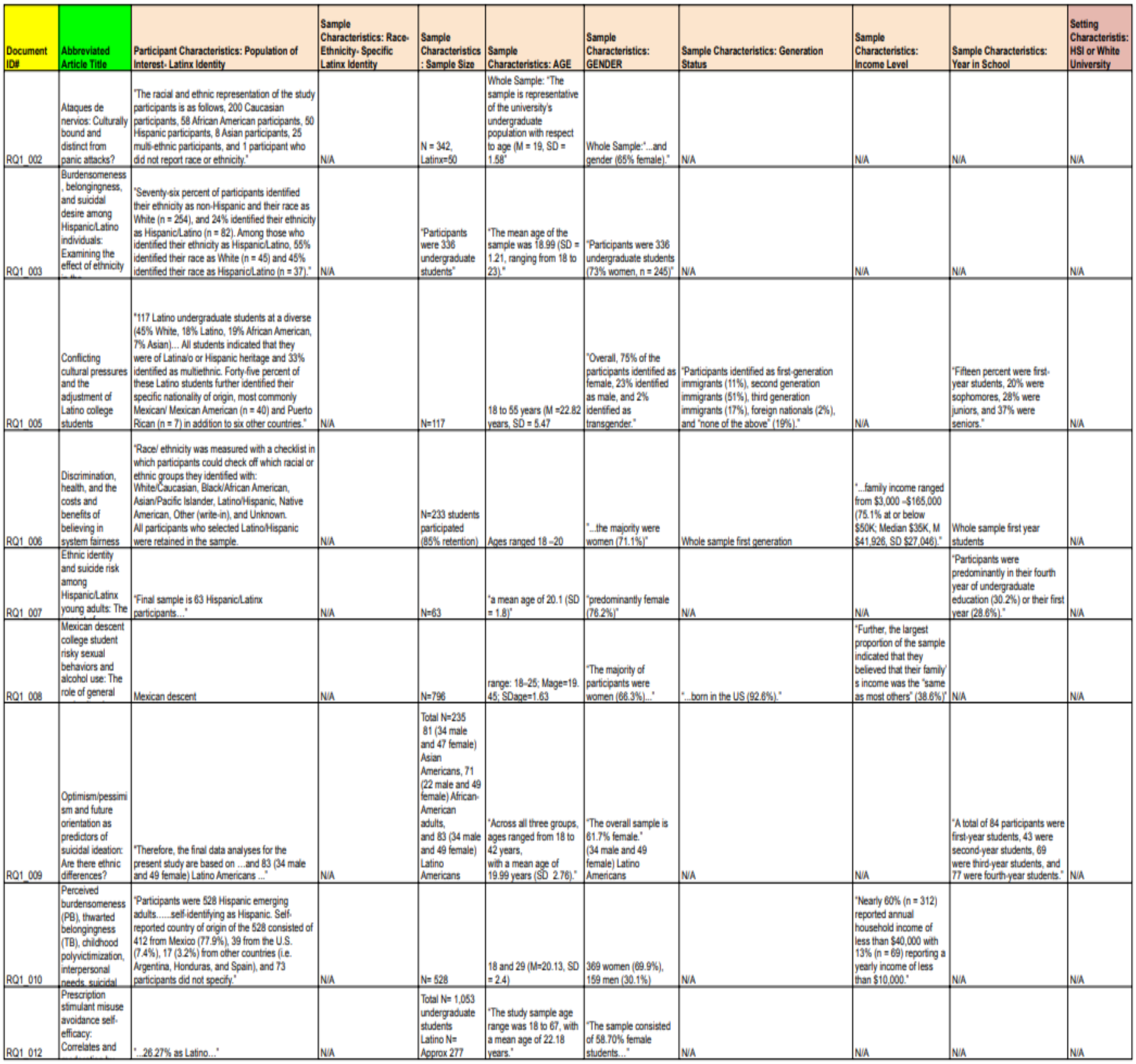


Document ID#	Abbreviated Article Title	RV- Mental Health Outcomes Examined
RQ2_005	Race and ethnic differences in hope and hopelessness as moderators of the association between depressive symptoms	Suicidal Behavior
RQ2_006	Political Activism and Mental Health Among Black and Latinx College Students	Stress, Anxiety, and Depressive Symptoms
RQ2_007	Online Discrimination and Mental Health Outcomes: The Moderating Roles of Ethnic Identity and Immigrant Generation Among	Depressive Symptoms, Generalized Anxiety Symptoms, Social Anxiety Symptoms
RQ2_008	Associations between Cultural Stressors, Cultural Values, and Latina/o College	Mental Health Symptoms (i.e., Depression, Anxiety, Stress)
RQ2_012	Psychosociocultural Structural Model of College Success Among Latina/o Students in Hispanic-Serving Institutions	Emotional Well-Being (Optimism, Interests in Life, and Happiness)
RQ2_013	Social Support Protects Against Symptoms of Anxiety and Depression: Key Variations in Latinx and Non-Latinx White College	Depression, Anxiety
RQ2_014	Psychology of the Affirmed Learner: Spontaneous Self-Affirmation in the Face of Stress	Adaptive Adequacy, Sense of Belonging in School, Confidence in Coping, Hope
RQ2_015	Loneliness and psychological distress in everyday life among Latinx college students	Psychological Distress (Sadness, Stress, and Anxiety)
RQ2_016	Perceived discrimination and Latina college students' depressive symptoms: The roles of dyadic coping with sisters and familism	Depressive Symptoms
RQ2_017	Protective Effects of Ethnic Identity on Mexican American College Students' Psychological Well-Being	Depression, Self-Esteem
RQ5_001	Minority Stress, Ethnic Identity, and Depression Among Latino/a College	Depressive Symptoms
RQ5_002	Trajectories of Discrimination across the College Years: Associations with Academic,	Depressive Symptoms
RQ5_004	Hispanic students in higher education: A case for trauma informed approaches.	Stress, Anxiety, Depression, Loss
RQ5_006	Family and Work Influences on the Transition to College Among Latina	Stress
RQ5_007	Latinx college students' anxiety, academic stress, and future aspirations: the role of sibling relationship quality	Anxiety, Future Aspirations, Academic Stress
RQ5_008	The multiplicative effect of stress and sleep on academic cognitions in Latino college students	Academic Cognitions (Self-Efficacy)

Document ID#	Abbreviated Article Title	RV- Mental Health Outcomes Examined
RQ5_010	College Stress, Minority Status Stress, Depression, Grades, and Persistence Intentions Among Hispanic Female	Persistence Intentions, Depression Symptoms, College Stress, Minority Status Stress
RQ5_012	Grit Under Duress: Stress, Strengths, and Academic Success Among Non-Citizen and	Depression
RQ5_014	The Effect of Perceived College-Related Stress on Depression, Life Satisfaction, and	Depression, Life Satisfaction
RQ5_015	Cultural Adaptation to a University Campus: The Case of Latino Students	Anxiety, Depression, Acceptance
RQ5_016	The Influence of Racism-Related Stress on the Academic Motivation of Black and Latino/a Students	Motivation (Intrinsic, Extrinsic, Amotivation)
RQ5_017	The Psychological and Academic Costs of School-Based Racial and Ethnic	Depressive Symptoms
RQ5_018	Social Class and Academic Achievement in College: The Interplay of Rejection Sensitivity and Entity Beliefs	N/A
RQ5_019	Implicit Identification with Academic Achievement among Latino College	N/A
RQ5_021	The influence of race, sexual orientation and gender identity on mental health, substance use, and academic persistence	Anxiety Symptoms, Depressive Symptoms
RQ5_023	Perceived discrimination and academic distress among Latinx college students: A cross-lagged longitudinal investigation.	Academic Distress
RQ5_024	The Influence of Perceived Parental Expectations and Pressures on Women's Academic Achievement During the First	Perceived Parental Expectation, Perceived Parental Pressures
RQ5_025	Relationship of grit and resilience to dental students' academic success.	Grit, Resilience
RQ5_026	Family Achievement Guilt and Mental Well-being of College Students	Depressive Symptoms, Self-Esteem
RQ5_028	Stigma Consciousness and Evaluative Concerns: A Pathway to Psychological Distress for Academically Stigmatized	Psychological Distress (Anxiety and Depression)
RQ5_029	Depression, Loneliness, and Suicide Risk among Latino College Students: A Test of a Psychosocial Interaction Model	Suicide Risk (Hopelessness and Suicidal Behaviors)

APPENDIX L

Evidence Table 4: Research Question 4



Document ID#	Abbreviated Article Title	Participant Characteristics: Population of Interest- Latinx Identity	Sample Characteristics: Race-Ethnicity- Specific Latinx Identity	Sample Characteristics : Sample Size	Sample Characteristics: AGE	Sample Characteristics: GENDER	Sample Characteristics: Generation Status	Sample Characteristics: Income Level	Sample Characteristics: Year in School	Setting Characteristis: HSI or White University
RQ1_002	Ataques de nervios: Culturally bound and distinct from panic attacks?	"The racial and ethnic representation of the study participants is as follows, 200 Caucasian participants, 58 African American participants, 50 Hispanic participants, 8 Asian participants, 25 multi-ethnic participants, and 1 participant who did not report race or ethnicity."	N/A	N = 342, Latinx=50	Whole Sample: "The sample is representative of the university's undergraduate population with respect to age (M = 19, SD = 1.58"	Whole Sample:"...and gender (65% female)."	N/A	N/A	N/A	N/A
RQ1_003	Burdensomeness, belongingness, and suicidal desire among Hispanic/Latino individuals: Examining the effect of ethnicity	"Seventy-six percent of participants identified their ethnicity as non-Hispanic and their race as White (n = 254), and 24% identified their ethnicity as Hispanic/Latino (n = 82). Among those who identified their ethnicity as Hispanic/Latino, 55% identified their race as White (n = 45) and 45% identified their race as Hispanic/Latino (n = 37)."	N/A	"Participants were 336 undergraduate students"	"The mean age of the sample was 18.99 (SD = 1.21, ranging from 18 to 23)."	"Participants were 336 undergraduate students (73% women, n = 245)"	N/A	N/A	N/A	N/A
RQ1_005	Conflicting cultural pressures and the adjustment of Latino college students	"117 Latino undergraduate students at a diverse (45% White, 18% Latino, 19% African American, 7% Asian)... All students indicated that they were of Latina/o or Hispanic heritage and 33% identified as multiethnic. Forty-five percent of these Latino students further identified their specific nationality of origin, most commonly Mexican/ Mexican American (n = 40) and Puerto Rican (n = 7) in addition to six other countries."	N/A	N=117	18 to 55 years (M =22.82 years, SD = 5.47	"Overall, 75% of the participants identified as female, 23% identified as male, and 2% identified as transgender."	"Participants identified as first-generation immigrants (11%), second generation immigrants (51%), third generation immigrants (17%), foreign nationals (2%), and "none of the above" (19%)."	N/A	"Fifteen percent were first-year students, 20% were sophomores, 28% were juniors, and 37% were seniors."	N/A
RQ1_006	Discrimination, health, and the costs and benefits of believing in system fairness	"Race/ ethnicity was measured with a checklist in which participants could check off which racial or ethnic groups they identified with: White/Caucasian, Black/African American, Asian/Pacific Islander, Latino/Hispanic, Native American, Other (write-in), and Unknown. All participants who selected Latino/Hispanic were retained in the sample.	N/A	N=233 students participated (85% retention)	Ages ranged 18 –20	"...the majority were women (71.1%)"	Whole sample first generation	"...family income ranged from $3,000 –$165,000 (75.1% at or below $50K; Median $35K, M $41,926, SD $27,046)."	Whole sample first year students	N/A
RQ1_007	Ethnic identity and suicide risk among Hispanic/Latinx young adults: The	"Final sample is 63 Hispanic/Latinx participants..."	N/A	N=63	"a mean age of 20.1 (SD = 1.8)"	"predominantly female (76.2%)"	N/A	N/A	"Participants were predominantly in their fourth year of undergraduate education (30.2%) or their first year (28.6%)."	N/A
RQ1_008	Mexican descent college student risky sexual behaviors and alcohol use: The role of general	Mexican descent	N/A	N=796	range: 18–25; Mage=19.45; SDage=1.63	"The majority of participants were women (66.3%)..."	"...born in the US (92.6%)."	"Further, the largest proportion of the sample indicated that they believed that their family's income was the "same as most others" (38.6%)"	N/A	N/A
RQ1_009	Optimism/pessimism and future orientation as predictors of suicidal ideation: Are there ethnic differences?	"Therefore, the final data analyses for the present study are based on ...and 83 (34 male and 49 female) Latino Americans ..."	N/A	Total N=235 81 (34 male and 47 female) Asian Americans, 71 (22 male and 49 female) African-American adults, and 83 (34 male and 49 female) Latino Americans	"Across all three groups, ages ranged from 18 to 42 years, with a mean age of 19.99 years (SD 2.76)."	"The overall sample is 61.7% female." (34 male and 49 female) Latino Americans	N/A	N/A	"A total of 84 participants were first-year students, 43 were second-year students, 69 were third-year students, and 77 were fourth-year students."	N/A
RQ1_010	Perceived burdensomeness (PB), thwarted belongingness (TB), childhood polyvictimization, interpersonal needs, suicidal	"Participants were 528 Hispanic emerging adults......self-identifying as Hispanic. Self-reported country of origin of the 528 consisted of 412 from Mexico (77.9%), 39 from the U.S. (7.4%), 17 (3.2%) from other countries (i.e. Argentina, Honduras, and Spain), and 73 participants did not specify."	N/A	N= 528	18 and 29 (M=20.13, SD = 2.4)	369 women (69.9%), 159 men (30.1%)	N/A	"Nearly 60% (n = 312) reported annual household income of less than $40,000 with 13% (n = 69) reporting a yearly income of less than $10,000."	N/A	N/A
RQ1_012	Prescription stimulant misuse avoidance self-efficacy: Correlates and	"...26.27% as Latino..."	N/A	Total N= 1,053 undergraduate students Latino N= Approx 277	"The study sample age range was 18 to 67, with a mean age of 22.18 years."	"The sample consisted of 58.70% female students..."	N/A	N/A	N/A	N/A

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RQ1_020	Suicide risk factors for young adults: Testing a model across ethnicities	"Three subsamples were selected (i.e.,White, Black, and Hispanic) for analyses and hypotheses testing."	N/A	N= 673 Latinx N = 101	"All participants with necessary consent were between the ages of 17 and 24." Full sample mean age = 18.7 Latinx mean age= 18.6	Full ratio (male/female) = 272/401 Latinx ratio (male/female)= 39/62	N/A	N/A	"The majority of students were freshmen or sophomores and 98.8% were single, never married."	N/A
RQ1_021	The Covid-19 pandemic and mental health of first-year college students: Examining the effect of Covid-19 stressors using	"In our longitudinal sample of students who responded to both survey waves, 61.6% were NH White, 6.7% were NH Black, 18.1% were NH Asian, 8.4% were Hispanic of any race."	N/A	N= 419 Latinx N= approx. 35	"first-year college students age 18 or older" Cross sectional sample mean= 18.926 Longitudinal sample mean= 18.909	Is not stated in the article	N/A	N/A	"first-year college students age 18 or older and enrolled in the selected public university."	N/A
RQ1_023	Worry among Latinx young adults: Relations to pain experience, pain-	"A final sample was comprised of 401 Latinx young adults (Mage = 21 years; SD = 2.02; age range, 18–25 years; 83% female)"	N/A	N = 401	"Mage = 21 years; SD = 2.02; age range, 18–25 years"	"83% female"	N/A	N/A	N/A	N/A
RQ1_024	Acculturative Stress, Depression, and Anxiety in Migrant Farm Work College Students of Mexican Heritage	"The total convenience sample size included 173 students. However, five survey sets were not included in the data analysis because the students self-identified other than Mexican/Mexican American/Chicano(a). Therefore, the data analysis was conducted on a sample of 168 participants."	N/A	N=168	"The age ranged from 17 to 24 years with a mean age of 20 years; an additional eight students, from non migrant background, ranged from 25 to 52 years of age and they will be discussed in the exploratory section below."	"There were a total of 107 (64%) females and 61 males (36%)"	"Other demographics include: 103 (61%) stated that they were first generation college students"	"101 (63%)of their families made less than $30,000 a year"	"The sample included students from first year to senior year in college, including 64 (38%) first years, 44 (26%) sophomores, 33 (20%) juniors, and 26 (16%) seniors."	N/A
RQ1_025	Ethnic Variables and Negative Life Events as Predictors of Depressive	"A total of 160 self-identified Latino American college students (38 male and 122 female) were recruited from a large, diverse Eastern public university in the United States."	N/A	N=160	"Ages ranged from 17 to 46 years, with a mean age of 19.78 (SD = 3.70)."	38 male and 122 female	N/A	N/A	"Fifty-two percent of the sample consisted of freshmen students, 20.5% sophomores, 5% juniors, and 1.5% seniors in college."	N/A
RQ1_027	Horizontal Collectivism Moderates the Relationship Between in-the-Moment Social Connections and Well-Being Among Latino/a College Students.	"Self-identified Latino/a college students (n=221) participated in the study."	N/A	N=221	"aged from 18 to 42 years old (M=19.8, SD=2.51)."	"The sample was 79.6% female"	N/A	N/A	Academic classification: First-year/freshman 85 (38.5%) Second-year/sophomore 47 (21.3%) Third-year/junior 34 (15.4%) Fourth-year/senior 48 (21.7%) Other 7 (3.2%)	N/A
RQ1_028	Mexican-Origin College Students' Stress, Sibling Relationships, Academic Motivation, and	"Participants who self-identified as either Mexican or Mexican American, were between the ages of 18 and 25 years, and had at least one sibling (age 14 years or older) were included, resulting in a final sample size of N = 171."	Mexican or Mexican American	N=243	"Participants were predominantly female (80.7%) and the mean age of participants was 21.6 years (SD = 1.58)."	"Participants were predominantly female (80.7%)"	N/A	N/A	N/A	HSI
RQ1_029	Minority status, depression and suicidality among counseling center clients.	Hispanic N= 123 (3.86%)	N/A	N = 3189	Mean age = 21.86 years (4.52SD)	Gender Male 1,207 (37.8%) Female 1,957 (61.4%) Unknown 25 (0.8%)	N/A	N/A	Education First year 582 (18.3%) Sophomore 579 (18.7%) Junior 646 (20.3%) Senior 694 (21.8%) Graduate /professional degree 617 (19.3%) Other 53 (1.6%)	N/A
RQ1_030	The Relationship between Suicidal Behavior, Ideation, and Binge Drinking among College	Ethnicity Hispanic 160 (41.2%)	N/A	N=388	Age 18–22 350 (90.4) Over 22 37 (9.3)	Gender Female 268 (69.1) Male 116 (29.9)	N/A	N/A	Year in School Freshman 236 (60.8) Sophomore 112 (28.9) Junior 28 (7.2) Senior 7 (1.8)	N/A

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RQ2_012	Psychosociocultural Structural Model of College Success Among Latina/o Students in Hispanic-Serving Institutions	"A total of 289 students who identified their ethnicity as Hispanic were included, constituting 49% of the entire sample. Participants categorized themselves as Mexican or Mexican American 45.9%, Hispanic other 51.6%, Central American 0.3%, South American 1.4%, and no response (within Hispanic) 4.3%. Vast within-group differences might make it difficult for some Latina/o students to choose a category, which is why the option of "Hispanic other" was offered."	N/A	N=289	"Ages ranged from 18 to 53 years (Mage 22.19); those aged 18 to 24 accounted for 81%."	"The sample included 205 (70.9%) female and 84 (29.1%) male students."	"Ten percent of participants identified as first generation, 28.7% as second generation and 59.9% as third or greater generation."	N/A	N/A	HSI
RQ2_013	Social Support Protects Against Symptoms of Anxiety and Depression: Key Variations in Latinx and Non-Latinx White	"The study included self-identified Latinx (n = 265) and White (n = 216) undergraduate college students from a designated Hispanic serving research university in a Southwestern city (Table 1)."	N/A	N=481, Latinx=265 and White=216	"The Latinx sample averaged approximately 20 years of age (SD = 3.8)" "The White sample averaged approximately 22 years of age (SD = 7.3)"	Latinx: "comprised of mostly women (65.3%, n = 177)." White: "comprised of mostly women (67.4%, n = 149)"	Generational status (n, %) 1st generation 21 (7.7) 12 (5.4) χ2 (1, N = 492) = 1.05 2nd generation 49 (18.1) 21 (9.5) χ2 (1, N = 492) = 7.34** 3rd generation 14 (5.2) 14 (5.9) χ2 (1, N = 492) = 0.12 4th generation 52 (19.2) 54 (24.4) χ2 (1, N = 492) = 1.98 5th generation 134 (49.4) 118 (53.4) χ2 (1, N = 492) = 0.76"	"Father education† 4.92 (1.73) 6.01 (1.56) t(479) = −7.21** Mother education† 5.14 (1.75) 5.95 (1.41) t(489) = −5.54***"	N/A	HSI
RQ2_014	Psychology of the Affirmed Learner: Spontaneous Self-Affirmation in the Face of Stress	"One hundred eighty-three Latino and White first-year and second-year college students participated in the first part of the study. Because of the study's focus, Latino students were oversampled. Latinos comprised 6% of the undergraduate population at the university but 48% of our sample" FU: "One hundred one students completed the second part of the study. Of these follow-up participants, 52% were Latino..."	N/A	Total N=183 48% of sample=Latino 52%=White FU Total N=101 52% Latino	Not provided	"Of the total participants, 62% were female and 78% were first-year students at the time of participation." FU:" Of these follow-up participants, 52% were Latino and 65% were female."	N/A	N/A	"Of the total participants, 62% were female and 78% were first-year students at the time of participation" FU: "Most participants (72%) were in their third year of college at the time."	N/A
RQ2_015	Loneliness and psychological distress in	"Participants were 220 Latinx undergraduate students (175 females, 45 males)."	N/A	Total N=220	Mage=19.8; (SD = 2.46)	175 females, 45 males	N/A	N/A	N/A	N/A
RQ2_016	Perceived discrimination and Latina college students' depressive symptoms: The	"Participants were Mexican/Mexican American/Chicana (64.6%), Puerto Rican/Puerto Rican American (14.9%), Cuban/Cuban American (11.3%), Dominican/Dominican American (9.2%), Central American (2.1%), and South American (0.5%)."	N/A	Participants (N = 195; M = 23.24 years, SD = 1.95)	M = 23.24 years, SD = 1.95	Female students-recruitment	"Furthermore, most participants reported that their fathers (69.7%) and mothers (73.8%) were born in the United States."	N/A	"Participants were also asked to report their current year in college: first (5.6%), second (11.3%), third (20.5%), fourth (43.6%), fifth (10.8%), and sixth (8.2%) year."	N/A
RQ2_017	Protective Effects of Ethnic Identity on Mexican American College Students'	"The analytic sample consisted of all respondents of Mexican or Mexican American origin or descent (N= 148)" "Most (77%) self-identified as Mexican or Mexican American...	N/A	N= 148	18 to 30 years (over-all M age = 23.05 years, SD= 3.33;	female Mage = 22.95 years, SD= 3.13; male M age = 23.24 years, SD= 3.73) 67% female	"More than four fifths of respondents (84%) had been born in the United States; nearly one quarter had either one (26%) or two (46%) non-U.S.-born parents."	N/A	N/A	N/A
RQ5_001	Minority Stress, Ethnic Identity, and Depression Among Latino/a College Students.	"Participants were 309 Latino/a undergraduate students (69% of Mexican descent) enrolled in a diverse, major research, urban, public university in the southwestern United States."	(69% of Mexican descent	N = 309	"Participants ranged in age from 18 to 29 years (mean age 21)."	53% = women	N/A	N/A	"Approximately, 24% were freshman, 21% sophomore, 33% juniors, and 22% seniors."	N/A
RQ5_002	Trajectories of Discrimination across the College Years: Associations with Academic,	"The analytic sample for the present study consisted of 2347 college students (60.1% female) who identified as being of Black or African American (n = 770; 32.8%), Asian American (n = 835; 35.6%), and Latino (n = 742; 31.6%) descent."	N/A	Total Sample: N= 2347 Latino/A N = 742; 31.6%	N/A	Latinx: Female: N=57.50% Male: N= 42.50%	Native Born N=81.00% Foreign Born N= 19.00%	N/A	"The full sample for the National Longitudinal Survey of Freshmen consisted of 3924 students across 28 selective colleges and universities in the United	N/A
RQ5_004	Hispanic students in higher education: A case for trauma informed approaches.	"The purpose of this current study was to use the data collected from the unpublished study to further investigate trauma imposed by the pandemic and its effects on Hispanic students in higher education."	N/A	(N = 309)	Age Ranges: 17–25 - N=156, 50.4% 26–40 - N=96, 31.1 % 40+ - N=57, 18.5%	Gender Identification Female - N=243, 78.6% Male - N=54, 17.4% Other/Prefer not to say - N= 12, 4.0%	First Generation College Student Yes - N=93, 30.0% No - N=168, 54.4% Unsure/Prefer not to say - N=48, 15.6%	N/A	N/A	HSI
RQ5_006	Family and Work Influences on the Transition to College Among Latina Adolescents.	"Participants included 117 undergraduate Latina women attending college in Southern California." "Participants' families primarily emigrated from Mexico (80%), with the remaining families emigrating from Latin or South American countries."	Latina	N=117	"The average age of the sample was 18.7 years (SD = .83)."	N=117 women	"All participants were from immigrant families, with 18% first generation (foreignborn) and 82% second generation (U.S.-born with at least one foreign-born parent)"	N/A	"All participants were in their first or second year of college, and 67% were first-generation college attendees."	N/A
RQ5_007	Latinx college students' anxiety, academic stress, and future aspirations: the role of sibling relationship	"...who self identifies as "Hispanic/Latino" and had at least one sibling (age 14 or older) who lived within various ranges from their sibling, resulting in a final of sample size of n = 206...Among the sample of Latinx college students (64.1 % female), 18.4% (n = 38) were born outside of the US...	Hispanic/Latino	N = 206	"18–25 (Mage = 21.03 years, SD = 1.93)"	64.1 % female	"53.4% (n = 110) of participants' mothers completed some college or more"	N/A	N/A	N/A

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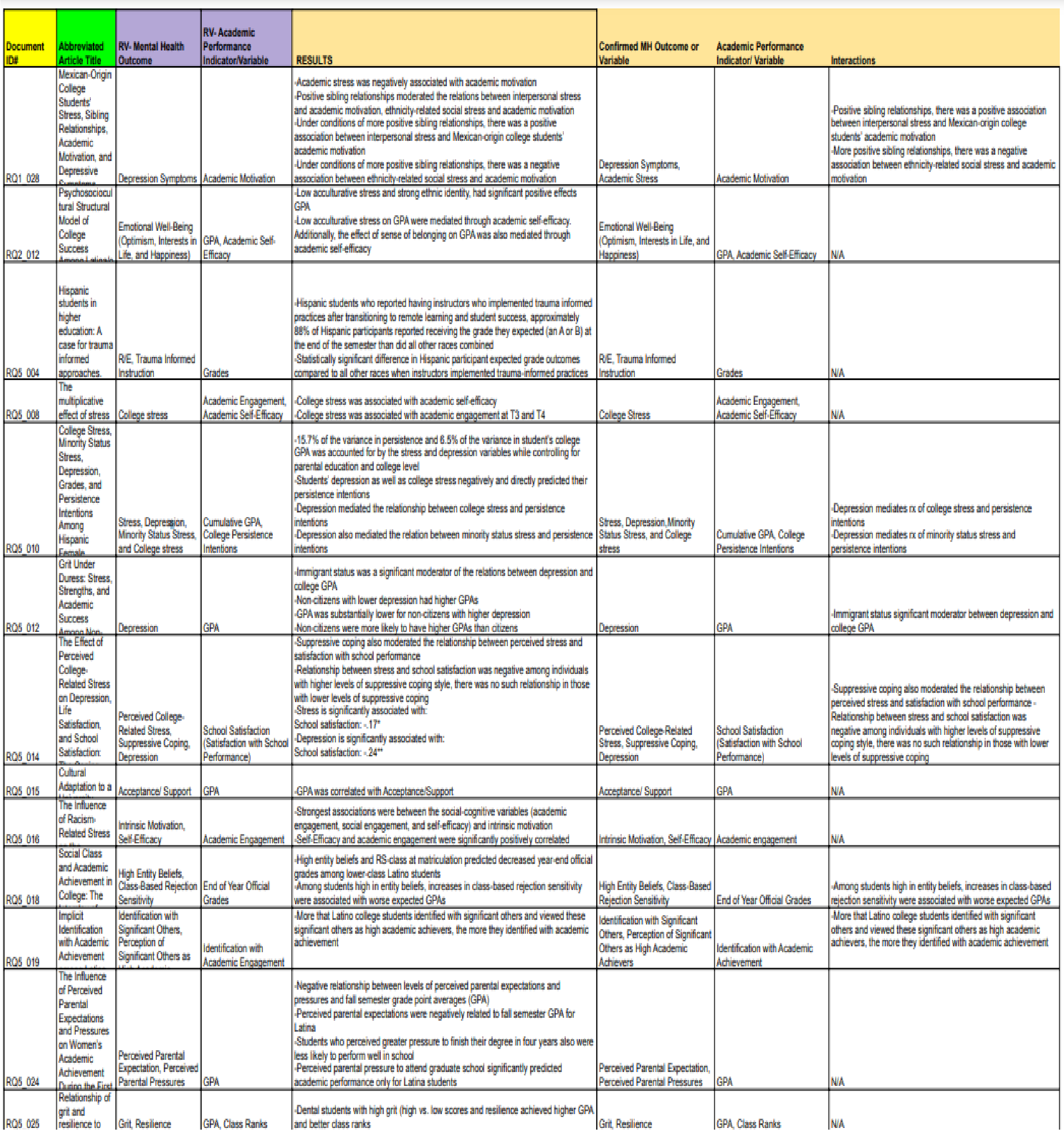
RQ5_008	The multiplicative effect of stress and sleep on academic cognitions in Latino college students.	"Participants were 209 Hispanic/Latino first-year college students..." "All participants identified broadly as Hispanic or Latino, with the majority of the participants specifically identifying as being of Mexican descent (85.1%), followed by South or Central American (10.1%), Cuban (5.3%), and Other (4.3%)."	"All participants identified broadly as Hispanic or Latino, with the majority of the participants specifically identifying as being of Mexican descent (85.1%), followed by South or Central American (10.1%), Cuban (5.3%), and Other (4.3%). "	N=209	Mage = 18.95	64.4% female	"10.6% of participants were first-generation immigrants (born outside the U.S.), 62.0% were second generation (born in U.S. with at least one parent born outside the U.S.), and 27.4% were third generation or greater (both parents born in the U.S.)."	N/A	First-year college students	N/A
RQ5_010	College Stress, Minority Status Stress, Depression, Grades, and Persistence Intentions Among Hispanic Female Students: A Mediation Model	"Participants were 426 Hispanic female undergraduate students..." "Of the 426 study participants, 67% reported that their family's country of origin was Mexico, 11% from El Arbona et al. 419 Salvador, and 22% from other Latin American countries. The majority of the participants were born in the United States (79%)."	"Of the 426 study participants, 67% reported that their family's country of origin was Mexico, 11% from El Arbona et al. 419 Salvador, and 22% from other Latin American countries. The majority of the participants were born in the United States (79%)."	N=426	"The mean age for the sample was 22.18 years old (SD = 4.01)."	N=426 female students	N/A	N/A	"In terms of college level, 16% of the participants were freshman, 23% sophomore, 36% juniors, and 25% seniors."	N/A
RQ5_012	Grit Under Duress: Stress, Strengths, and Academic Success Among Non-Citizen and Citizen Latina/o First-Generation College Students	Country of birth Non-citizen Citizen Colombia 8.3 2.8 El Salvador 31.0 8.3 Guatemala 8.3 1.1 Honduras 4.8 0.6 México 20.2 0.6 Peru 13.1 1.7 United States 0 78.9 Other Latin American countries 13.0 6.0 Missing 2.4	Country of birth Non-citizen Citizen Colombia 8.3 2.8 El Salvador 31.0 8.3 Guatemala 8.3 1.1 Honduras 4.8 0.6 México 20.2 0.6 Peru 13.1 1.7 United States 0 78.9 Other Latin American countries 13.0 6.0 Missing 2.4	Total N=264 NonCitizen N=84 Citizen N=180	Non-citizen: Mage=21.13 (SD=2.98) Citizen: Mage=21.30 (SD=2.92)	Non-citizen female= 56% Citizen Female = 68.3%	Non-citizen only Length of time in the United States Less than 1 year 3.6 1-2 years 9.6 3-6 years 12.0 7-8 years 20.5 9 years or more 54.3	N/A	N/A	N/A
RQ5_014	The Effect of Perceived College-Related Stress on Depression, Life	"The sample consisted of 170 Hispanic undergraduate students from a public Hispanic Serving Institution (HSI) in the Northeastern United States."	N/A	N=170	20.2 (SD = 1.80) years	"Respondents (80%) were largely women."	N/A	"The median annual household income was $40,000 to $49,999."	"...with 24.1% self-identifying as freshmen, 23.5% as sophomores, 35.3% as juniors, and 17.1% as seniors."	HSI
RQ5_015	Cultural Adaptation to a University Campus: The Case of Latino Students	"Surveys were mailed to 1,000 students who self-identified as Hispanic, Latino, Chicano, Cuban, Puerto Rican, or Mexican American on their university applications."	"Surveys were mailed to 1,000 students who self-identified as Hispanic, Latino, Chicano, Cuban, Puerto Rican, or Mexican American on their university applications."	N=170	"Respondents averaged 22-years of age (SD= 3.4 years; range: 17 to 41 years"	"Of the respondents, 71% were female."	N/A	N/A	"...freshmen through graduate students."	N/A
RQ5_016	The Influence of Racism-Related Stress on the Academic Motivation of Black and Latino/a Students	"The racial background of the participants were 76 (50%) Black and 75 (50%) Latino/a. "	N/A	N=151 Latinx=75	Whole Sample: "ranged in age from 18 to 27 years (2 individuals [0.6%] did not respond). The bulk of the sample (n = 100 [66%]) were between the ages of 18 and 20; 44 (29%) were between 21 and 23, and 7 (5%) were over the age of 24."	Whole Sample: "I 47 (31%) men and 102 (68%) women"	"Many of these students were first-generation college students; 61 (40%) students reported that their mother had a high school diploma or less and 70 (46%) reported that their father had a high school diploma or less."	"Participants were asked to indicate their age, gender, racial or ethnic heritage, family income, parents' educational level, student status, grade point average, chosen academic major, and future career goals"	Whole Sample: ". By educational level, 45 (30%) were first-year students, 26 (17%) were second year, 36 (24%) were third year, 25 (17%) were fourth year, and 17 (11%) were fifth year or above (2 individuals [0.6%] did not respond)"	Predominantly White universities
RQ5_017	The Psychological and Academic Costs of School-Based Racial and	"Data come from the Minority College Cohort Study, a longitudinal investigation of Black (N = 221) and Latinx (N = 312) students who began college in fall 2013."	N/A	Black N=221; Latinx N=312	"The mean age of the sample at recruitment was 18.2 years old (SD = 0.45)."	"Approximately 75% of Black and 57% of Latinx participants were women;"	"Forty-eight percent of Black students and 69% of Latinx students were first-generation college students."	N/A	N/A	5-Historically White

Document ID#	Abbreviated Article Title	Participant Characteristics: Population of Interest- Latinx Identity	Sample Characteristics: Race-Ethnicity- Specific Latinx Identity	Sample Characteristics : Sample Size	Sample Characteristics: AGE	Sample Characteristics: GENDER	Sample Characteristics: Generation Status	Sample Characteristics: Income Level	Sample Characteristics: Year in School	Setting Characteristis: HSI or White University
RQ5_018	Social Class and Academic Achievement in College: The Interplay of Rejection Sensitivity and Entity Beliefs	"Fifty-five Latino/a undergraduates (34 female) were recruited as part of a longitudinal study of incoming college students."	N/A	N=55	"The mean age of the sample was 18.24 years (SD 1.29 years)."	"Fifty-five Latino/a undergraduates (34 female)."	N/A	"Students' annual family income fell largely below the campus average for their class year (M $80,000), with the most frequently reported amounts being $10,000 –$20,000 (35.3%) and $30,000 –$60,000 (39.2%). Thus, the majority of students in this sample were represented in these two income brackets"	"All students were enrolled in the study during their first semester of college at the University of California, Berkeley."	N/A
RQ5_019	Implicit Identification with Academic Achievement among Latino College Students: The Role of Ethnic Identity and Significant Others	Study 1: "Forty-three participants were Latinos (24 women and 19 men) and 40 were Caucasians (21 women and 19 men)." Study 2: "Participants were 51 Latino undergraduate students (38 women and 13 men) at San Diego State University."	N/A	Study 1: N=83, Latino=43, White=40 Study 2: N=51	Study 1: Whole Sample: "Participants' ages ranged from 18 to 31 years old; the median age was 19." Study 2: "Participants' ages ranged from 18 to 29 years old; the median age was 19."	Study 1: 24 women and 19 men Study 2: 38 women and 13 men	N/A	Study 1: "When asked to indicate the approximate annual family income of their parents' household, 69.8%of Latino participants gave estimates lower than $40,000." Study 2: "When asked to indicate the approximate annual family income of their parents' household, 43.1%of participants gave estimates lower than $40,000. Annual incomes of more than $80,000 were reported by 15.7% of participants."	N/A	N/A
RQ5_021	The influence of race, sexual orientation and gender identity on mental health, substance use, and academic persistence during the COVID-19	"The study utilized a national sample of undergraduate students in the Healthy Minds Study to examine the effects of the COVID-19 pandemic on substance use, mental health, and academic persistence among college students, with emphasis on variations by race, sexual orientation, and gender identity."	N/A	The sample size was 146,810 undergraduate students Precovid %=9.7 March-Dec 2020 %=10.4	Precovid =20.2±1.9 March-Dec 2020 = 20.3 ±2.1	"with 67.5% identifying as female, 30.4% as male, and 2.1% as transgender or gender non-conforming (TGNC)"	N/A	N/A	N/A	N/A
RQ5_023	Perceived discrimination and academic distress among Latinx college students: A cross-lagged longitudinal investigation.	"Most participants identified as Mexican (n 136), followed by Spanish American (n 48) and other Latinx ethnicities (n 19), including Central American, Cuban, Puerto Rican, and South American."	"Most participants identified as Mexican (n 136), followed by Spanish American (n 48) and other Latinx ethnicities (n 19), including Central American, Cuban, Puerto Rican, and South American."	N=203	Mage 24.06 years, SDage 7.36	"83 men, 120 women"	"In terms of generation status, about 14% were first or one-and-a-half generation (i.e., self born outside of the United States but immigrated during adulthood or childhood), 29% second generation (i.e., self born in the United States but one parent born outside of the United States), 9% third generation (i.e., self and both parents were U.S.-born but all grandparents were foreign-born), and 48% fourth generation (i.e., self and both parents were U.S.-born but at least one grandparent was foreign-born) or above"	N/A	"At Time 1 (i.e., Year 1) of the study, approximately 15% of the participants were first year students, 19% were sophomores, 23% were juniors, 22% were seniors, 19% were graduate students, and 2% were professional students"	N/A
RQ5_024	The Influence of Perceived Parental Expectations and Pressures on	"The current study included 620 participants who identified as Latina (47%), European American (33%), or Asian American (20%). "	N/A	N=620	Whole sample: "The average age of the sample was 18 years old."	Whole sample is female	N/A	N/A	N/A	N/A

Document ID#	Abbreviated Article Title	Participant Characteristics: Population of Interest- Latinx Identity	Sample Characteristics: Race-Ethnicity- Specific Latinx Identity	Sample Characteristics : Sample Size	Sample Characteristics: AGE	Sample Characteristics: GENDER	Sample Characteristics: Generation Status	Sample Characteristics: Income Level	Sample Characteristics: Year in School	Setting Characteristis: HSI or White University
RQ5_025	Relationship of grit and resilience to dental students' academic success.	Hispanic/Latino: N=233 (7.1%)	N/A	N=3292 Latinx N=233	N/A	"58% were female"	N/A	"A variable was created combining head of household annual income being below or above the median of the distribution (<=$100,000, >$100,000, unknown) and level of education to evaluate the impact of having a head of household with higher income and education on the outcomes."	See article	N/A
RQ5_026	Family Achievement Guilt and Mental Well-being of College Students	"The sample included 102 Mexican descent students (40 %)"	N/A	"Two hundred and fifty-five undergraduate students"	"M Age = 19.96, SD = 1.77"	"195 female, 60 male"	"49 first-generation college students (19 %) and 206 non-first-generation college students (81 %)."	N/A	N/A	N/A
RQ5_028	Stigma Consciousness and Evaluative Concerns: A Pathway to Psychological	"A total of 455 Hispanic/Latinx (H/L)..."	N/A	Total N=610 Latinx N=455	"The participants' ages ranged from 17 to 52 years (M = 21.07; SD = 4.80)."	"20.3% male, 79.5% female, and 0.2% other"	Living in the US since childhood: Latinx= 388 (85.3%)	"For their family income, 35.9% reported as below $20,000, 40% as between $20,000 and $60,000, and 24.1% as above 60,000."	Class year* First and Second Years (n, %) 7, 1.5% Third Years and above (n, %) 448, 98.5%	N/A
RQ5_029	Depression, Loneliness, and Suicide Risk among Latino College Students: A Test of a	"One hundred fifty-six self-identified Latino college students were recruited from a large public East Coast college."	N/A	N=156	"Participants' ages ranged between 18 and 46 years with a mean of 19.78 (SD = 3.70)."	Majority female n=121	N/A	N/A	"The majority of the students indicated being a "freshman" (n = 101), followed by "sophomore" (n = 41), "junior" (n = 11), and "senior" (n = 3)."	N/A

APPENDIX M

Evidence Table 5: Research Question 5



Document ID#	Abbreviated Article Title	RV- Mental Health Outcome	RV- Academic Performance Indicator/Variable	RESULTS	Confirmed MH Outcome or Variable	Academic Performance Indicator/ Variable	Interactions
RQ1_028	Mexican-Origin College Students' Stress, Sibling Relationships, Academic Motivation, and Depressive	Depression Symptoms	Academic Motivation	-Academic stress was negatively associated with academic motivation -Positive sibling relationships moderated the relations between interpersonal stress and academic motivation, ethnicity-related social stress and academic motivation -Under conditions of more positive sibling relationships, there was a positive association between interpersonal stress and Mexican-origin college students' academic motivation -Under conditions of more positive sibling relationships, there was a negative association between ethnicity-related social stress and academic motivation	Depression Symptoms, Academic Stress	Academic Motivation	-Positive sibling relationships, there was a positive association between interpersonal stress and Mexican-origin college students' academic motivation -More positive sibling relationships, there was a negative association between ethnicity-related social stress and academic motivation
RQ2_012	Psychosociocultural Structural Model of College Success	Emotional Well-Being (Optimism, Interests in Life, and Happiness)	GPA, Academic Self-Efficacy	-Low acculturative stress and strong ethnic identity, had significant positive effects GPA -Low acculturative stress on GPA were mediated through academic self-efficacy. Additionally, the effect of sense of belonging on GPA was also mediated through academic self-efficacy	Emotional Well-Being (Optimism, Interests in Life, and Happiness)	GPA, Academic Self-Efficacy	N/A
RQ5_004	Hispanic students in higher education: A case for trauma informed approaches.	R/E, Trauma Informed Instruction	Grades	-Hispanic students who reported having instructors who implemented trauma informed practices after transitioning to remote learning and student success, approximately 88% of Hispanic participants reported receiving the grade they expected (an A or B) at the end of the semester than did all other races combined -Statistically significant difference in Hispanic participant expected grade outcomes compared to all other races when instructors implemented trauma-informed practices	R/E, Trauma Informed Instruction	Grades	N/A
RQ5_008	The multiplicative effect of stress	College stress	Academic Engagement, Academic Self-Efficacy	-College stress was associated with academic self-efficacy -College stress was associated with academic engagement at T3 and T4	College Stress	Academic Engagement, Academic Self-Efficacy	N/A
RQ5_010	College Stress, Minority Status Stress, Depression, Grades, and Persistence Intentions Among Hispanic	Stress, Depression, Minority Status Stress, and College stress	Cumulative GPA, College Persistence Intentions	-15.7% of the variance in persistence and 6.5% of the variance in student's college GPA was accounted for by the stress and depression variables while controlling for parental education and college level -Students' depression as well as college stress negatively and directly predicted their persistence intentions -Depression mediated the relationship between college stress and persistence intentions -Depression also mediated the relation between minority status stress and persistence intentions	Stress, Depression,Minority Status Stress, and College stress	Cumulative GPA, College Persistence Intentions	-Depression mediates rx of college stress and persistence intentions -Depression mediates rx of minority status stress and persistence intentions
RQ5_012	Grit Under Duress: Stress, Strengths, and Academic Success	Depression	GPA	-Immigrant status was a significant moderator of the relations between depression and college GPA -Non-citizens with lower depression had higher GPAs -GPA was substantially lower for non-citizens with higher depression -Non-citizens were more likely to have higher GPAs than citizens	Depression	GPA	-Immigrant status significant moderator between depression and college GPA
RQ5_014	The Effect of Perceived College-Related Stress on Depression, Life Satisfaction, and School Satisfaction:	Perceived College-Related Stress, Suppressive Coping, Depression	School Satisfaction (Satisfaction with School Performance)	-Suppressive coping also moderated the relationship between perceived stress and satisfaction with school performance -Relationship between stress and school satisfaction was negative among individuals with higher levels of suppressive coping style, there was no such relationship in those with lower levels of suppressive coping -Stress is significantly associated with: School satisfaction: -.17* -Depression is significantly associated with: School satisfaction: -.24**	Perceived College-Related Stress, Suppressive Coping, Depression	School Satisfaction (Satisfaction with School Performance)	-Suppressive coping also moderated the relationship between perceived stress and satisfaction with school performance -Relationship between stress and school satisfaction was negative among individuals with higher levels of suppressive coping style, there was no such relationship in those with lower levels of suppressive coping
RQ5_015	Cultural Adaptation to a	Acceptance/ Support	GPA	-GPA was correlated with Acceptance/Support	Acceptance/ Support	GPA	N/A
RQ5_016	The Influence of Racism-Related Stress	Intrinsic Motivation, Self-Efficacy	Academic Engagement	-Strongest associations were between the social-cognitive variables (academic engagement, social engagement, and self-efficacy) and intrinsic motivation -Self-Efficacy and academic engagement were significantly positively correlated	Intrinsic Motivation, Self-Efficacy	Academic engagement	N/A
RQ5_018	Social Class and Academic Achievement in College: The	High Entity Beliefs, Class-Based Rejection Sensitivity	End of Year Official Grades	-High entity beliefs and RS-class at matriculation predicted decreased year-end official grades among lower-class Latino students -Among students high in entity beliefs, increases in class-based rejection sensitivity were associated with worse expected GPAs	High Entity Beliefs, Class-Based Rejection Sensitivity	End of Year Official Grades	-Among students high in entity beliefs, increases in class-based rejection sensitivity were associated with worse expected GPAs
RQ5_019	Implicit Identification with Academic Achievement	Identification with Significant Others, Perception of Significant Others as	Identification with Academic Engagement	-More that Latino college students identified with significant others and viewed these significant others as high academic achievers, the more they identified with academic achievement	Identification with Significant Others, Perception of Significant Others as High Academic Achievers	Identification with Academic Achievement	-More that Latino college students identified with significant others and viewed these significant others as high academic achievers, the more they identified with academic achievement
RQ5_024	The Influence of Perceived Parental Expectations and Pressures on Women's Academic Achievement	Perceived Parental Expectation, Perceived Parental Pressures	GPA	-Negative relationship between levels of perceived parental expectations and pressures and fall semester grade point averages (GPA) -Perceived parental expectations were negatively related to fall semester GPA for Latina -Students who perceived greater pressure to finish their degree in four years also were less likely to perform well in school -Perceived parental pressure to attend graduate school significantly predicted academic performance only for Latina students	Perceived Parental Expectation, Perceived Parental Pressures	GPA	N/A
RQ5_025	Relationship of grit and resilience to	Grit, Resilience	GPA, Class Ranks	-Dental students with high grit (high vs. low scores and resilience achieved higher GPA and better class ranks	Grit, Resilience	GPA, Class Ranks	N/A