OMB No. 0925-0001 and 0925-0002 (Rev. 10/2021 Approved Through 09/30/2024)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Karen W. Tao

eRA COMMONS USER NAME (credential, e.g., agency login): karenwtao

POSITION TITLE: Associate Professor

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

| INSTITUTION AND LOCATION | DEGREE(if applicable) | Completion DateMM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
| University of California, San Diego | BA | 06/1996 | Psychology |
| Teachers College, Columbia, New York, NY | EdM | 05/2000 | Psychological Counseling |
| Teachers College, Columbia, New York, NY | MA | 05/2000 | Organizational Psychology |
| University of Wisconsin-Madison | PhD | 12/2006 | Counseling Psychology |
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**A. Personal Statement**

Historically, individuals with marginalized identities, such as race, social class, gender, and sexual orientation, are less likely to receive or have access to quality, health, mental health, and educational services. My research on multicultural competence is focused on identifying factors related to these inequities. Within this broad research area, one of my specific interests is in the processes through which counselors and clients who come from differing backgrounds manage conversations about culture. In addition, I examine how these interactions are associated with treatment outcomes or processes.

***Cultural processes in psychotherapy***. The development of cultural competence in counselors has been a primary professional focus of Counseling Psychology for over 40 years. However, surprisingly little empirical consensus has emerged regarding whether therapists who are more multiculturally competent achieve better outcomes with their clients. I was the primary author of the first meta-analysis to address this question, which was published in counseling psychology’s flagship journal, Journal of Counseling Psychology. This study supported the conclusion that multicultural competence should be “considered an important empirically supported therapeutic relational factor” (p. 344) similar to other widely accepted factors such as the working alliance and client satisfaction. In line with this conceptualization, my colleagues and I have been conducting research for nearly a decade on the multicultural orientation (MCO) framework – a relationally-focused approach to thinking about therapeutic interactions. The concept of multicultural orientation is a term I coined to capture therapists’ “way of being” with clients. I argue this is distinct from the concept of multicultural competence, which prioritizes the implementation of multicultural knowledge and awareness or a “way of doing.” MCO is comprised of three interrelated dimensions: (a) cultural humility, defined as a counselor’s tendency to be other-oriented, curious, and open to diverse perspectives; (b) cultural opportunity, or the degree to which a counselor picks up on and addresses cultural themes in therapy when they arise; and (c) cultural comfort, or the counselor’s level of calm and courage in engaging in discussions of culture and identity that are often anxiety provoking. My colleagues and I have also begun examining how this framework can be applied to group contexts. In a study with individuals participating in therapy groups, we found that a client’s perceptions of their group’s level of cultural humility was positively associated with the client’s reported improvement (e.g., less distress; improved social relationships). Missed cultural opportunities (e.g., moments when cultural issues could have been discussed, but were not) were linked to negative clinical outcomes (e.g., higher distress). This is the first study to show a group’s multicultural orientation predicts individual group members’ therapeutic outcomes. Essentially, groups that do not shy away from multicultural discussions and who are open to delving into these often charged culturally focused topics tend to do better. However, we also found in a subsequent study the way these types of conversations unfold may be especially important for racial-ethnic minority (REM) group members. For REM group members (not for White members), the degree to which a group is perceived as comfortable talking about race is associated with mental health improvement. Racial-ethnic minority members in these groups were also less likely to hide aspects of their identity compared to groups in which there was a perceived discomfort in engaging in culturally focused conversations. Findings from my past and more recent multicultural orientation focused studies indicate the importance of considering *how* conversations between diverse individuals occur in addition to the *what* people are actually saying.

***Microaggressions***. Within the broad domain of cultural competence research, I investigate a specific type of cultural exchange, racial microaggressions. Racial microaggressions are described as subtle everyday exchanges that convey condescending messages to individuals based on their racial or ethnic minority status (e.g., a counselor telling an Asian American client who was born and raised in Nebraska she speaks English very well). A primary aim of this research is to understand how the interpersonal relationship between clients and therapists influence the perception and effect of these cultural interactions during counseling sessions. My colleagues and I published the first study to examine the relationship of client perceived microaggressions and treatment response. As expected, a higher number of racial microaggressions experienced in therapy was correlated with worsened treatment outcome. However, the link between perceived microaggressions and treatment outcome was explained by how clients felt about their relationship with their therapists. In other words, a positive therapeutic working alliance buffered the negative effects of racial microaggressions.

The results of this studied indicated that clinical outcomes could also be associated with the frequency and impact of other types of cultural microaggressions that might occur during the process of psychotherapy. Our questions included: Can other types of identity-based microaggressions (e.g., gender) have similar effects on therapy outcomes? Do other types of clinical processes buffer the negative effects of microaggressions? To begin answering these questions, we developed a scale, the Microaggressions Against Women Scale, to assess women’s experiences of gender-based microaggressions in therapy (e.g., comments about physical appearance; stereotypes about career interests) and their impact on treatment outcome. A separate microaggression video-based study involved counselor participants randomly assigned to watch a video clip of one of two video counseling sessions in which a counselor (actor) (a) does not commit any microaggressions or (b) commits three microaggressions. Of the counselors assigned to the microaggression condition, only half accurately identified at least one of the three microaggressions and less than a quarter were able to identify all three. An example of an insensitive comment is a therapist’s response to a client who is depressed and has just stated “I think part of [my depression] has to do with being the only Mexican man in my office. I feel so on edge without a sense of community or connection. It’s exhausting.” The therapist replies, “I am not really sure if being Mexican has anything to do with it. A lot of people experiencing depression, like you, also feel lonely. Don’t be so hard on yourself.” Although the therapist may have intended to normalize the client’s complaint, he also dismisses a salient part of what the client has just shared about his Mexican identity. This study led to further questions on whether individuals’ racial-ethnic background influenced their evaluation of offensiveness and emotional reactions to specific types of microaggressive statements.

My current research related to cultural processes in psychotherapy is focused on the well-being of providers. Specifically, how do providers who experience prejudice from their patients continue cultivating a therapeutic relationship. What do they do in the moment? What do they do the next time they meet? How does this influence the working alliance and patient outcomes? We currently have a manuscript being revised for a resubmission, which addresses these questions. The overarching aims for this work is how healthcare systems recognize the humanity of the helpers, who like their patients, also require nurturing, respect, and care.

**Current projects I would like to highlight:**

* *Josiah Macy Jr. Foundation -* Project ARIISE (Addressing Racial Inequities through Interprofessional Simulation and Experiential Learning); Role: Co-Investigator; **07/01/20-06/30/23**
* *Templeton Foundation - Mental* Healthcare, Virtue, and Human Flourishing

Collaborators: Boston University, University of Denver, University of Utah, McLean Hospital Role: Co-I; 7/1/2020 – 2/28/2023

* *National Science Foundation – Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)* Factors for STEM Student Success: Relative influence of Self-Efficacy, Mentorship, Leadership & Belonging. Role: Co-I; 08/1/18 – 07/31/23
* *National Science Foundation -* Innovations in Graduate Education: The Lean Canvas for Invention: A Team-Based Framework for Mentoring and Research Development; Role: Co-I**;** 7/15/2021 – 6/30/2024

**Citations:**

Paquin JD, **Tao KW**, Budge SL. Toward a psychotherapy science for all: Conducting ethical and socially just research. Psychotherapy (Chic). 2019 Dec;56(4):491-502. doi: 10.1037/pst0000271. PMID: 31815508.

**Tao KW**, Owen J, Pace BT, Imel ZE. A meta-analysis of multicultural competencies and psychotherapy process and outcome. J Couns Psychol. 2015 Jul;62(3):337-50. doi: 10.1037/cou0000086. PMID: 26167650.

Owen JJ, **Tao K**, Leach MM, Rodolfa E. Clients' perceptions of their psychotherapists' multicultural orientation. Psychotherapy (Chic). 2011 Sep;48(3):274-82. doi: 10.1037/a0022065. PMID: 21639652.

Kivlighan DM, Adams MC, Drinane JM, **Tao KW**, Owen J. Construction and validation of the Multicultural Orientation Inventory-Group Version. J Couns Psychol. 2019 Jan;66(1):45-55. doi: 10.1037/cou0000294. Epub 2018 Jul 12. PMID: 29999332.

 **B. Positions, Scientific Appointments, and Honors**

2022-Present *Director of Clinical Training,* University of Utah, Department of Educational Psychology, Counseling Psychology Program (Ph.D.)

2021-Present *Associate Professor,* University of Utah, Department of Educational Psychology, Counseling & Counseling Psychology Program

2018-2021 *Program Director*, University of Utah, Department of Educational Psychology

 Clinical Mental Health Counseling Program, Salt Lake City, UT

2014-2021 *Assistant Professor*, Univ of Utah, Department of Educational Psychology, Counseling and Counseling Psychology Program, Salt Lake City, UT

2011-2014 *Assistant Professor (Clinical)*, University of Utah, Department of Educational Psychology, Counseling and Counseling Psychology Program, Salt Lake City, UT

2011 *Adjunct Professor*, Antioch University, School of Applied Psychology Therapy, Seattle, WA

2008-2011 *Research Analyst*, Casey Family Programs, Research Services, Seattle, WA

2007-2008 *University Counseling Center Therapist,* Univ of Wisconsin- Madison

**Licensure**

2013-Present Utah State Licensed Psychologist (#8573809-2501)
2010-2013 Washington State Licensed Psychologist (#PY6017883)

**Recent Awards**2019-2020 University of Utah Foundation Fellow

#### 2018 -2019 University of Utah Faculty Fellowship

**C. Contributions to Science**

**Equity in Mental Health Care**

For over two decades, multicultural counseling training has appropriately emphasized the importance of race and ethnicity. However, this focus has raised the possibility that other important individual cultural factors within a therapeutic dyad may be unintentionally missed. Recent research has focused on the content (e.g., type of cultural factors that are missed in therapy) and outcome (e.g., how does this affect clients) of these missed cultural opportunities. A recent publication with my PhD advisee utilized therapy transcripts and outcome data from the University Counseling Center to (a) develop a more comprehensive coding system based on the multicultural orientation framework and (b) identify discourse patterns (e.g., word-choice; talk-turn length; statement types) based on the demographic matching /non-matching of clients and therapists (e.g., race; gender). The results of these studies will hopefully, further the theoretical rationale for incorporating a multicultural orientation framework therapist training.

Starting in July of 2020, I was also excited to begin translating my research in cultural processes within psychotherapy to maternal health contexts. Recognizing there are multiple factors underlying racial inequities in maternal healthcare that negatively impact Women of Color and their babies, my colleagues and I at the College of Nursing are focusing on one vital yet sometimes overlooked determinant – implicit bias training for health care providers. We were awarded a 3-year grant from the Macy Foundation to implement Project ARIISE (**A**ddressing **R**acial **I**nequity through **I**nterprofessional **S**imulation and **E**xperiential Learning), which will involve an educational intervention for interprofessional teams (e.g., nurse midwives, OBGYNs, emergency response providers, and mental health professionals). Our intervention is heavily based on the multicultural orientation framework and aims to provide the necessary tools for participants to be able to recognize and repair the consequences of implicit biases. The research component will involve a community-based participatory action research project to (a) identify indicators for multiculturally oriented maternal health care, (b) develop guidelines for enhancing culturally relevant care practices, and (c) create a model for community-healthcare collaboration.

1. Trevino AY, **Tao KW**, Van Epps JJ. Windows of cultural opportunity: A thematic analysis of how cultural conversations occur in psychotherapy. Psychotherapy (Chic). 2021 Jun;58(2):263-274. doi: 10.1037/pst0000360. Epub 2021 Mar 18. PMID: 33734742; **PMC8376752**.
2. Pace, B. T., Kuo, P. B., **Tao, K. W.,** Owen, J., Van Epps, J., Davies, D. R., & Imel, Z. E. (2020). Determining the therapist’s contribution in therapist multicultural competence process and outcome. *Journal of Counseling Psychology.* Advance online publication.  [https://doi.org/10.1037/cou0000491](https://psycnet.apa.org/doi/10.1037/cou0000491)
3. Owen, J., Drinane, J.M., **Tao, K.W.** (2018). An experimental test of microaggression detection in

psychotherapy: therapist multicultural orientation professional psychology: research and practice. Professional Psychology: Research and Practice, 49, 9-21

 **Reducing Educational Disparities: Centering Student Voices**My dedication to reducing educational disparities for marginalized groups has led to several associated research endeavors. Broadly, I am interested in examining the academic trajectory for racial-ethnic minorities in elementary school through college and for minoritized individuals (e.g., girls, women, Students of Color) who pursue science, technology, engineering, and math (STEM) education. Each of the following projects described below are designed to identify as well as confront psychological and contextual barriers to students’ educational experiences and improve their academic opportunities. Ultimately, my work is influenced by a belief that educational disparities stem from systemic inequity, which affect the way individuals understand who they can become, and, in turn, what is expected of them.

**Pathways in STEM**. The low rate of women who enter science, technology, engineering, and mathematics (STEM) fields has been well-documented in national data. My interest in educational disparities for women and racial-ethnic minorities has led to several foci in this area, including examining the factors that promote or prevent girls’ and women’s engagement in the STEM fields. I have looked specifically at the effects of psychological (e.g., impostor phenomenon; graduate student self-efficacy) and contextual (e.g., department climate) factors on persistence attitudes for female doctoral students in STEM (Tao & Gloria, 2019, Psychology of Women Quarterly). The results of this study indicated that impostorism, or the degree to which a woman believes she is an “academic fraud” or “inferior” to her peers within her STEM program, was associated with lowered persistence attitudes and commitment to finishing her PhD. The number of women in a program was positively linked to persistence attitudes. In addition, participants’ perceptions of their departmental climate (e.g., collegiality; opportunities to work with faculty and other students) and graduate student self-efficacy (e.g., confidence in ability to complete doctoral-level tasks) buffered the effects of impostorism on academic persistence beliefs.

For the past 2+ years, I have collaborated on a S-STEM National Science Foundation grant. This longitudinal study follows under-represented computer science majors through 1 to 3 years of their education at the University of Utah. Our primary aim is to identify key sociocultural, environmental, and social cognitive factors, which predict the persistence of underrepresented students in computer science. In addition to providing S-STEM scholars with financial support, the project employs several persistence mechanisms, including informal and formal mentorship, academic skill building, and peer support. During the course of this grant, our team will be applying for other sources of funding to expand the number of students we are able to select in Years 3 and 4 of our study. I am also a co-investigator on an Innovations in Graduation Education NSF grant, which has involved an examination of the effects of Lean Canvas technology and processes to facilitate the career and skill development of underrepresented engineering graduate students.

1. **Tao, K.W.** & Gloria, A.M. (2019). Should I stay or should I go? Persistence factors for STEM women. Psychology of Women Quarterly, 43(2), 151-164.

**School Based Intervention***.* There is a body of research showing links between educational disparities among Students of Color and racial-ethnic identity development. Broadly defined, racial-ethnic identity development pertains to the processes through which individuals affiliate with and understand their racial or ethnic group(s) as well as their perceived sense of acceptance by their own and other racial-ethnic groups. Some major influences on how kids develop healthy racial-ethnic identities include positive relationships with teachers, sense of belongingness in their schools, and support in by adults in the home. My first community-engaged project took place at Rose Park Elementary School in Salt Lake City. I conducted a culturally relevant school-based intervention geared toward influencing students’ positive identity development and consequently positive experiences in school; we conducted pre- and post- interviews with 4th & 5th graders regarding their ideas about their racial-ethnic group membership. Results from this work has established that children as early as age 9 begin thinking about their value in the world based on what they look like, messages they receive from home and school, and others’ expectations of them. We also discovered how much the political climate affected their everyday well-being and created shifts in their safety. Products of this specific project include a publication on the ways Latinx youth experience their ethnic-identities prior to the election of the current President of the United States and how educators can incorporate identity-focused pedagogy in the classrooms (\*Hashtpari & Tao, 2021; Winner of the Graduate Student Paper Award for The Counseling Psychologist in 2022) and numerous community-engaged presentations. Analysis of the data have led to identification of several themes related to students’ complex understanding of their sense of ‘place’ within the school and community. The difficulty for adults when discussing these charged topics was palpable; some parents dismissed its salience (e.g., “she’s too young to think about race”) while some parents became visibly emotional and overwhelmed. In 2020, I started a collaboration with KUED, our local Public Broadcasting Service (PBS) to develop an educational digital media series called Let’s Talk. We identified the discomfort many adults have about bringing up or responding to children’s questions about race-related issues. Thus, Let’s Talk was created to inform Utah PBS viewers that even though these interactions can be uncomfortable, it is still important to engage in these critical conversations. The PBS production team digitally broadcast my discussions with seven couples from diverse racial and cultural backgrounds; our conversations focused on unique challenges and practical tips for talking about race and racism with younger children. Beyond providing a helpful resource for parents and educators, a broader aim of this series is to translate research into something practical for communities as well as highlight the value of mutually beneficial partnerships between universities and organizations in the public and private sectors. Metrics from social media suggest many of the conversations have been viewed by almost 15,000 people.

1. Owen, J., Coleman, J., Drinane, J. M., **Tao, K.W.,** Imel, Z., Wampold, B., & Kopta, M. (2021). Psychotherapy racial/ethnic disparities in treatment outcomes: The role of university racial/ethnic composition. *Journal of Counseling Psychology.*
2. **Tao, K.W.** (2014). Too close and too far: Counseling emerging adults in a technological age.

Psychotherapy, 51, 123 – 127

1. Owen, J., **Tao, K.W**., & Rodolfa, E. (2005). Supervising counseling center trainees in the era of evidence based practices. Journal of College Student Psychotherapy, 20, 67-77. Co-published in Evidence-Based Psychotherapy Practice in College Mental Health (Ed. S. E. Cooper)