

Multidisciplinary Clinical Psychological Science: Progress, Challenges, and Opportunities

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Abstract

The central goal of clinical psychology is to alleviate the suffering caused by mental illness. Anxiety, mood, psychosis, substance use, and other mental disorders impose an immense burden on public health and the economy. Alleviating this burden demands a better understanding of the underlying mechanisms and the development and dissemination of interventions that are effective, sustainable, acceptable, and equitable. Clinical psychology, a field anchored since its inception on the close integration of basic science and clinical practice, is uniquely poised to serve as a hub for this intrinsically multidisciplinary endeavor. Nevertheless, multidisciplinary research is notoriously challenging, and many clinical psychological scientists remain isolated from other areas of psychology and other scientific disciplines. In this special issue, we hope to provide illustrative examples of cutting-edge multidisciplinary clinical psychological research, outline key barriers to multidisciplinary training and collaboration, and provide specific recommendations for a range of stakeholders.

Keywords

clinical psychology, psychiatry, psychopathology, transdisciplinary/interdisciplinary research

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When I (J. L. Tackett) was considering the role of *Clinical Psychological Science (CPS)* editor-in-chief in February 2020, no one knew, least of all me, how much the world was about to change. Nevertheless, in reviewing my 2020 vision statement, it is clear that some things remain unchanged. At the time, I wrote that “if psychological science is a ‘hub science,’ clinical psychological science is and should be the hub of the hub” (Tackett, 2020). Indeed, the journal’s strong and enduring emphasis on cross-cutting research and diversity of scientific approaches was a major appeal for seeking the *CPS* editorship (Kazdin, 2013, 2014). Nevertheless, in the years since assuming the editorship, I have come to realize that truly multidisciplinary manuscript submissions are rare. Although the size of authorship teams has continued to grow over the past half-decade, most submissions still reflect the work of monodisciplinary or

narrowly multidisciplinary teams largely populated by clinical psychologists (or immediately adjacent allies, e.g., psychiatrists).

With the desire to elevate multidisciplinary research in the field as central to my editorial vision, the three of us launched a special issue of *CPS* focused on “Multidisciplinary Clinical Psychological Science: Progress, Challenges, and Opportunities.” The present issue represents the fruits of that multiyear endeavor. Our goal for the special issue was twofold. First, we wanted to showcase the unique value of genuinely multidisciplinary research for tackling some of the major questions facing our field. Second, we wanted to give scientists with

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expertise navigating the sometimes choppy waters of multidisciplinary clinical research the opportunity to take stock of their experiences and outline their recommendations for successful passage, including guidance for trainees, faculty, program leaders, and other stakeholders. Ultimately, we hope that the special issue inspires more clinical psychological scientists to collaborate with experts in other areas of psychology and other disciplines and to do so more effectively.

The Added Value of Multidisciplinary Science

Data are data, but how we collect and analyze them is shaped by our theoretical approach, which is . . . influenced by the context within which we think and design scientific studies. In [sum], the studies we design are very much influenced by the company we keep. (Monfils et al., 2024, p. 159)

Some of the most revolutionary scientific innovations have their origins in multidisciplinary research. Consider evolution. Darwin's (1859/2008, 1872/2009) theories of evolution and emotion brought together advances in anthropology, geology, genetics, paleontology, psychology, and multiple branches of biology. Or consider the discovery of the double-helix structure of deoxyribonucleic acid (DNA) some hundred years later. This breakthrough—which laid the groundwork for modern biology, genetics, and neuroscience—critically hinged on a collaborative team that spanned biophysics, chemistry, and molecular biology (Attar, 2013).

The value of multidisciplinary approaches is not limited to fundamental science. As Davidson (2026) noted in his lively contribution to the special issue, it is equally relevant to the full spectrum of clinical-psychological science, from “blue-sky” bench science to treatment development, dissemination, and implementation. Eighty years ago, this was already clear to the founders of modern American clinical psychology, who admonished us to

work closely and in cooperative fashion with those whose methods may be different but whose goals are quite similar. In these settings [the clinical psychological scientist] learns to . . . value the “team” approach to . . . problems . . . which, because of their difficulty and complexity, require a concentrated group attack. (American Psychological Association, 1947, p. 545)

This multidisciplinary approach to clinical psychological science is wonderfully illustrated by many contributions to the special issue:

- Bower and Segerstrom (2026) focused on recent developments in psychoneuroimmunology, a field

that first emerged from pioneering collaborations between psychologists and immunologists (e.g., Ader & Cohen, 1975).

- Collison et al. (2026) showcased a novel collaboration between psychologists, public-health experts, probation officers, and victim-advocacy organizations aimed at optimizing interventions for intimate-partner violence.
- Fairbairn and Bosch (2026) leveraged expertise in clinical assessment, computer science, and psychometrics to provide a critical overview of new and emerging artificial-intelligence techniques and how they can be used to enhance the scope, scale, and rigor of clinical science.
- Liu and Chen (2026) synthesized data gleaned from in-depth interviews of clinical scientists and nonclinical scholars—including experts in ethnic and film studies, history, literature, political science, and sociology—into a framework for optimizing psychotherapy for Asian American/Pacific Islander communities.
- Manczak et al. (2026) weaved insights from atmospheric studies, clinical psychology, epidemiology, kinesiology, and systems engineering into a framework for understanding the impact of air pollution on psychopathology.
- Robinaugh et al. (2026) used concepts and approaches from biomedical engineering, data and environmental sciences, kinesiology, physics, and quantitative clinical psychology to develop an updated biopsychosocial model of psychopathology.
- Williams et al. (2026) drew on clinical, cultural, health-disparities, and linguistics research to understand the language- and culture-dependent expression of internalizing symptoms in bilingual speakers.

Navigating Multidisciplinary Collaborations: Challenges and Solutions

Multidisciplinary research is challenging, a point emphasized by many contributors (Barch, 2026; Collison et al., 2026; Manczak et al., 2026; Pokorny et al., 2026; Robinaugh et al., 2026). In this section, we highlight four of the main challenges and some recommendations for addressing them.

Preparing trainees to flourish in an increasingly multidisciplinary field

Clinical psychological science has undergone a steady transformation over several decades. Spurred by funders, inspired by new technologies, and motivated to better

understand, predict, prevent, and treat mental disorders, researchers have increasingly come to rely on multidisciplinary collaborations, concepts, and tools, from brain imaging and molecular genetics to smartphone applications and artificial intelligence (Davidson, 2026; Fairbairn & Bosch, 2026; Gee et al., 2022). How should the field prepare its trainees to flourish in this complex ecosystem?

Achieving mastery of clinical psychology and one or more “other” disciplines is challenging and can create unrealistic training expectations, with adverse consequences for student health and well-being. As Barch (2026) noted in her article, “It can be overwhelming . . . to feel . . . [like clinical students] need to have as much expertise as someone trained only in another discipline” (p. 540). Although there are a number of potential solutions to this dilemma (Gee et al., 2022; Pokorny et al., 2026; Robinaugh et al., 2026), Barch (2026), Bower and Segerstrom (2026), and Pokorny and colleagues (2026) all made it clear that mastering multiple disciplines is not necessary for successful multidisciplinary collaboration; instead, the key to success is cultivating sufficient foundational knowledge to enable critical scientific thinking, clear communication (what Pokorny and colleagues termed “multidisciplinary fluency”), and productive collaboration with experts in other areas.

Barch (2026) also highlighted the value of training programs that facilitate the development of student cohorts that encompass multiple laboratories and disciplines. This includes cross-cutting training fellowships, such as Wisconsin’s long-running Training Program in Emotion Research (T32-MH018931; 1989–present) and the now defunct National Institutes of Health/Kavli Summer Institute in Cognitive Neuroscience, widely known as “Brain Camp” (R25-MH057541; 1997–2022). Formal curricular structures can play a similar role by providing trainees with support and concrete pathways to develop meaningful competence beyond their “home” discipline. For example, I (S. B. Wang) benefited from Harvard’s secondary field structure, which made it possible to pursue formal training in computational science and engineering alongside doctoral training in clinical psychology.

Physical infrastructure also plays a key role in encouraging—or discouraging, as the case may be—disciplinary mixing and scientific cross-pollination. Housing students and faculty from multiple areas in adjacent offices or intermixed coworking spaces provides one way to encourage serendipitous interaction and create community. Of course, although physical infrastructure is important, it is not sufficient to create a culture of camaraderie and scientific curiosity. Cross-cutting colloquia, luncheons, happy hours,

group events, retreats, and targeted intramural grants are all useful accelerants (for further suggestions, see Davidson, 2026). Clinically relevant multidisciplinary conferences (e.g., Society of Biological Psychiatry, Computational Psychiatry) can play a similar role and provide a more immersive opportunity to cultivate multidisciplinary fluency. Still, a simple lack of bandwidth can undermine curiosity. Clinical students and faculty are under tremendous pressure to produce: in the laboratory, the classroom, and the clinic. They need sufficient time and energy to linger, socialize, and capitalize on everyday opportunities for insight, collaboration, and delight (Gee et al., 2022).

Cultural differences can create friction

Diversity enables surprising insights and can foster innovation. But as with other kinds of cultural exchange, multidisciplinary research is not without its challenges (Berkes et al., 2024). After all, every discipline has its own culture: norms, values, attitudes, heuristics, and mental shortcuts—often implicit—that shape and influence scientific understanding, judgement, and action. As noted by Barch (2026), Pokorny et al. (2026), Robinaugh et al. (2026), and other commentators, differences in academic norms (e.g., authorship order, scholarly products), methodological norms (e.g., small vs. large samples, replication, cross-validation), and scientific values (e.g., qualitative vs. quantitative, observation vs. experimentation, biological vs. social, computational vs. clinical) can spark misunderstandings, distress, and conflict—particularly when applied in a dogmatic or judgmental way (Cole, 1983; Rose, 2016). These cultural differences can also interact with competence stereotypes, creating structures in which both researchers of color and their work are treated as less legitimate or excluded (Settles et al., 2021). Sidestepping these dangers, the commentators explained, requires a mix of frank dialogue and the intentional cultivation of scientific humility and openness.

Language differences can sow confusion

Understanding the nature and origins of psychopathology demands clear and unambiguous communication. Yet as Pokorny and colleagues (2026) noted, each discipline has its own idiosyncratic nomenclature and seemingly harmless differences in usage and meaning, which can sow confusion and frustration—a point echoed by Germine (2026), Manczak et al. (2026), and many other commentators (Berkes et al., 2024; Sebastian et al., 2021;

Sharot, 2024). The problem reflects the use of different terms to refer to the same idea (jangle fallacy) and singular terms to refer to different ideas (jingle fallacy; Kelly, 1927; Thorndike, 1904). This general problem is compounded by the fact that many of the topics that the field studies—anxiety, depression, stress, and trauma, to name a few—are also words used to describe everyday experiences. This familiarity can reinforce the illusion of shared understanding and obscure the fact that these are scientific constructs with specific and sometimes contentious definitions and boundaries (Fox et al., 2018; Grogans et al., 2023; Kagan, 2016). So what is to be done? As Pokorny and colleagues (2026) wrote, there will always be a place for verbal shorthand, so some of these problems are inevitable, but multidisciplinary fluency and scientific openness are essential for safely navigating this risk. As noted earlier, to thrive in a multidisciplinary ecosystem, trainees must be given opportunities to develop foundational-level expertise in the language, concepts, techniques, and culture of the “other” discipline and to practice working with expert teammates from that discipline (Gee et al., 2022).

Dysfunctional incentives and gatekeeping can undermine multidisciplinary clinical science

Many universities now claim . . . they value interdisciplinary work and team science. However, few have grappled with how to explicitly value that in the [tenure and] promotion process. . . . This can be disincentivizing for [early career investigators] . . . as they may be concerned or even explicitly warned that it will hurt them in the tenure process. (Barch, 2026, p. 541)

Multidisciplinary research is, to be perfectly frank, a risky prospect for early career investigators—a discouraging conclusion loudly emphasized by Barch (2026), Pokorny et al. (2026), Robinaugh et al. (2026), and other recent commentators (Baty, 2023; Berkes et al., 2024). On the one hand, fellow scientists, funders, and policymakers all say that multidisciplinary research is the key to solving the field’s greatest challenges. Yet multidisciplinary scientists “face greater risks in obtaining jobs, publication[s], grants, and public recognition,” particularly during the fragile transition to academic independence (Berkes et al., 2024). Why? Because, as Pokorny and colleagues (2026) reminded, hiring, promotion, and tenure committees; grant-review panels; and journal gatekeepers are often equipped to “judge multidisciplinary work by [only] the standards of a single discipline.”

Addressing this challenge will require several long overdue changes. Some will be difficult to implement,

and some are comparatively easy. As Pokorny et al. (2026) noted, the most pragmatic, albeit most depressing approach is to encourage trainees and early career investigators to “closet” their multidisciplinary passions. Instruct them to establish a clear identity as a clinical psychological scientist first and foremost while accumulating the disciplinary capital (e.g., faculty appointment) and professional resources necessary to successfully pursue boundary-crossing work. A more satisfying yet still tractable approach is to work with campus colleagues to revise local policies. As it stands, the academic system is dominated by discipline-centered academic departments, which play a central role in devising the written policies that guide hiring, promotion, and tenure (Berkes et al., 2024). Naturally every department is different, but in many cases, revisions aimed at supporting multidisciplinary team science and eliminating dysfunctional incentives can be implemented by a small cadre of committed faculty (Dougherty et al., 2026; HELIOS Open, 2026; National Academies of Sciences, Engineering, and Medicine [NASEM], 2025). Likewise, editors and editorial-board members are ideally positioned to revise journal policies and procedures to minimize systemic barriers and disincentives (NASEM, 2025; Tackett, 2020).

Conclusions

Alleviating the burden of suffering caused by mental illness demands a deeper understanding of the nature of psychopathology and the development and dissemination of assessment and intervention strategies that are effective, sustainable, acceptable, and equitable. Returning to the February 2020 vision statement for the editorship of *CPS*, I wrote that “innovation happens at the intersections of otherwise disconnected spaces. *CPS* should be the outlet where that innovation is happening” (Tackett, 2020). Clinical psychological science is uniquely positioned to serve as a hub (“the hub of the hub”; Tackett, 2020) for this necessarily multidisciplinary endeavor (Gee et al., 2022). As clinical psychologists, we have a responsibility to “leave [our] silos, drain [our] moats, and build bridges” to colleagues in other academic disciplines and outside of academia, including industry, government, and nonprofits (McFall et al., 2015, p. 5). We urge clinical psychologists to take the hard but meaningful steps toward building such collaborations. As clinical psychologists, we have so much to offer the world, and the world needs us now more than ever.

Transparency

Author Contributions

Jennifer L. Tackett: Conceptualization; Project administration; Writing – original draft; Writing – review & editing.

Shirley B. Wang: Conceptualization; Project administration; Writing - original draft; Writing - review & editing.

Alexander J. Shackman: Conceptualization; Project administration; Writing - original draft; Writing - review & editing.

Declaration of Conflicting Interests

The authors declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

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Unpublished Supplementary Material

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Navigating Multidisciplinary Collaborations: Challenges and Solutions

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Preparing Trainees to Flourish in an Increasingly Multidisciplinary Field

Clinical psychological science has undergone a steady transformation over several decades. Spurred by funders, inspired by new technologies, and motivated to better understand, predict, prevent, and treat mental disorders, the field has increasingly come to rely on multidisciplinary collaborations, concepts, and tools, from brain imaging and molecular genetics to smartphone applications and artificial intelligence ([Davidson, in press](#); [Fairbairn & Bosch, in press](#); [Gee et al., 2022](#)). How should we prepare our trainees to flourish in this complex ecosystem?

Achieving mastery of clinical psychology *and* one or more ‘other’ disciplines is challenging and can create unrealistic training expectations, with adverse consequences for student health and wellbeing. As Barch notes in her essay, “*It can be overwhelming...to feel...[like clinical students] need to have as much expertise as someone trained only in another discipline*” ([Barch, in press](#)). While there are a number of potential solutions to this dilemma ([Gee et al., 2022](#); [Pokorny et al., in press](#); [Robinaugh et al., in press](#)), Barch, Bower and Segerstrom, and Pokorny and colleagues all make it clear that mastering multiple disciplines is *not* necessary for successful multidisciplinary collaboration; instead, the key to success is cultivating sufficient foundational knowledge to enable critical scientific thinking, clear communication (what Pokorny and colleagues term ‘multidisciplinary fluency’), and productive collaboration with experts in other areas.

[Due to space constraints, the following section was cut from the published paper]

Barch also highlights the value of training programs that facilitate the development of student cohorts that encompass multiple laboratories and disciplines. This includes cross-cutting training fellowships, such as Wisconsin’s long-running Training Program in Emotion Research (T32-MH018931; 1989-present) and the now defunct NIH/Kavli Summer Institute in Cognitive Neuroscience, widely known as ‘Brain Camp’ (R25-MH057541; 1997-2022). Formal curricular structures can play a similar role by providing trainees with support and concrete pathways to develop meaningful competence beyond their ‘home’ discipline. For example, I (SBW) benefited from Harvard’s secondary field structure, which made it possible to pursue formal training in computational science and engineering alongside doctoral training in clinical psychology. In our experience (AJS)¹, physical infrastructure also plays a key role in encouraging—or discouraging, as the case may be—disciplinary mixing and scientific cross-pollination. Oftentimes, Psychology Departments are organized into siloes, with clinical psychologists segregated in one area of the building, and students and faculty from other areas housed in separate locations. Housing students and faculty from multiple areas in adjacent offices or intermixed co-working spaces provides one way to encourage serendipitous interaction and create community. Hubs anchored on espresso machines and other popular amenities create another. By their nature, amenity hubs are social ‘collision’ points that encourage faculty, staff, and trainees from different laboratories, area groups, and departments to linger and spontaneously socialize. Brainstorming hubs take this a step further, adding whiteboards, comfortable seating, and other ‘props’ specifically aimed at promoting information exchange and organic collaboration. Of course, while physical infrastructure is important, it is not

¹ As a doctoral student and postdoctoral fellow at the University of Wisconsin, I (AJS) witnessed the benefits of psycho-architectural social engineering first-hand. Thoughtful additions to the Waisman Center and the Wisconsin Psychiatric Institute and Clinics in the early 2000s created numerous opportunities for faculty, staff, and trainees from multiple disciplines to spontaneously interact in a sustained fashion. This naturally evolved into a wide variety of multidisciplinary adventures, from grants and papers to beer brewing and cycling trips. In the long run, these seemingly trivial architectural features facilitated the development of dozens of lifelong friendships and several multidisciplinary marriages.

sufficient to create a culture of camaraderie and scientific curiosity. Cross-cutting colloquia, luncheons, happy hours, group events, retreats, and targeted intramural grants are all useful accelerants ([see Davidson, *in press* for further suggestions](#)). Clinically relevant multidisciplinary conferences (e.g., Society of Biological Psychiatry, Computational Psychiatry) can play a similar role and provide a more immersive opportunity to cultivate multidisciplinary fluency. Still, a simple lack of bandwidth can undermine curiosity. Clinical students and faculty are under tremendous pressure to produce: in the laboratory, the classroom, and the clinic. They need sufficient time and energy to linger, socialize, and capitalize on everyday opportunities for insight, collaboration, and delight ([Gee et al., 2022](#)).

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