SARAH ELIZABETH STOECKL

604 2nd Street, Golden, CO 80403 | 314-337-9475 | <u>SE.Stoeckl@uci.edu</u> ResearchGate Profile | Google Scholar Profile | ORCID

University of California, Irvine
PhD, Clinical Psychology (In progress)
Advisor: Stephen Schueller, PhD
Washington University in St. Louis, St. Louis, MO
Bachelor of Science, Psychological & Brain Sciences
3.8 GPA, obtained while working full-time
Senior Thesis: "User Personality & Chatbot Acceptance"

PUBLICATIONS

Peer-Reviewed Publications (N=6)

- Boucher E.M., Ward, H., Vlisides-Henry, R., Miles, C, **Stoeckl, S.E.** (In Press). Effect of a digital well-being program on perceived stress and rumination in adolescents aged 13 to 17: a randomized controlled trial. *Journal of Medical Internet Research*.
- Cook, C. L., Demanarig, D., Metviner, S., Stoppa, T., Milius, H., Grahe, J., Kawabata, Y., Schmidt, K., Sonnentag, T., DeNigris, D., Norvilitis, J., Berry, S., Cuccolo, K., Courtney L, G., Kagalis, A., Hawkins, G., Ogba, K. T. U., Farahani, H., Azadfallah, P., Shane-Simpson, C., Rosen, L., Obeid, R., Koch, C., Fletcher, T., Volkan, E., Weaver, A, Greenup, C, Cascalheira, C, Redker, C, Girod, C, Lu, Y, Tan, D, Edlund, J, Bell, J, London, L, Stults, C., Otto, N., Moreno, E.J., Balaghi, D., Cummings, J., Kalibatseva, Z., Knapp, B., Anderson, J., Garote, J., Moore, R., Carpenter, K., Holloway, S., Schults, BA., Cooper, C., Stoeckl, S.E., Kaplan, S., Wu, C., Sinclair, J., Ferreira, N., Jia, F., Zlokovich, M.S., Irgens, M. & Moussa Rogers, M. (2023). Personal need for structure as a protective factor on beliefs and coping with COVID-19: A crowd-sourced multicultural exploration. *Social and Personality Psychology Compass*. https://doi.org/10.1111/spc3.12797
- Stoeckl, S. E., Torres-Hernandez, E., Camacho, E., & Torous, J. (2023). Assessing the Dynamics of the Mental Health Apple and Android App Marketplaces. *Journal of technology in behavioral science*, 1–8. <u>https://doi.org/10.1007/s41347-023-00300-x</u>
- Boucher, E., Honomichl, R., Ward, H., Powell, T., Stoeckl, S. E., & Parks, A. (2022). The effects of a digital well-being intervention on older adults: retrospective analysis of real-world user data. *JMIR Aging*, 5(3), e39851. <u>https://doi.org/10.2196/39851</u>
- Montgomery, R. M., Boucher, E. M., Honomichl, R. D., Powell, T. A., Guyton, S. L., Bernecker, S. L., **Stoeckl, S. E.**, & Parks, A. C. (2021). The effects of a digital mental health intervention in adults with cardiovascular disease risk factors: analysis of real-world user data. *JMIR Cardio*, 5(2), e32351. <u>https://doi.org/10.2196/32351</u>
- Boucher, E. M., Harake, N. R., Ward, H. E., Stoeckl, S. E., Vargas, J., Minkel, J., Parks, A. C., & Zilca, R. (2021). Artificially intelligent chatbots in digital mental health interventions: a review. *Expert Review of Medical Devices*, 18(sup1), 37–49. <u>https://doi.org/10.1080/17434440.2021.2013200</u>

Manuscripts in Preparation (N=1)

Bevens, W; Stoeckl, S.E., Kim, G., Sorkin, D.H.; Mukamel, D.; Eikey, E.; Schueller, S.M.; Schneider, M.; Stadnick(2024). Exploring mental health app use in a cohort of people living with disability: results from the 2019 California Health Interview Survey.

Technical Reports (N=2)

- Sorkin, D.H.; Mukamel, D.; Eikey, E.; Schueller, S.M.; Schneider, M.; Stadnick, N.; Zheng, K.; Bevens, W.; Borghouts, J.; Ceballos-Corro, E.; Cha, B.S.; Chwa, C.; De Leon, C.; Hobaica, S.; Kim, G.; Li, X.; Mathew, A.B.; Palomares, K.; Stoeckl, S.E.; Varisco, R.; Zhao. X. (2024). *Help@Hand Statewide Evaluation: Final Report*. Program of Research in Translational Technology Enabling High Quality Care, University of California, Irvine.
- Sorkin, D.H.; Mukamel, D.; Eikey, E.; Schueller, S.M.; Schneider, M.; Stadnick, N.; Zheng, K.; Bevens, W.; Borghouts, J.; Ceballos-Corro, E.; Cha, B.S.; Chwa, C.; De Leon, C.; Hobaica, S.; Kim, G.; Li, X.; Mathew, A.B.; Palomares, K.; Stoeckl, S.E.; Varisco, R.; Zhao. X. (2023). *Help@Hand Statewide Evaluation: Year 5 Mid-Year Report*. Program of Research in Translational Technology Enabling High Quality Care, University of California, Irvine. <u>https://helpathandca.org/wp-content/uploads/2023/11/Help@Hand-Evaluation_Y5.Q1-2-Report.pdf</u>

CONFERENCE PRESENTATIONS

Chaired Symposia (N=1)

Lake, J, Schleider, J, Campellone, T, Seixas, A. (2023, April). Digital Mental Health Interventions for Adolescents: Leveraging Technology to Address the Increasing Need for Mental Health Care in Youth. Boucher EM, **Stoeckl**, **S.E.**, (Chairs) *From science and technology to evidence-based practice: enhancing access through integration.* [Symposium]. Anxiety and Depression Association of America Conference, Washington D.C., United States.

Oral Presentations (N=4)

- Stoeckl, S.E. & Torous, J. (2022, March). Dynamics of mental health app landscapes: mental health services. Fifteenth Workshop on Costs and Assessment in Psychiatry, Mental Health Services, Economics, Policy Research. Venice, Italy.
- Stoeckl, S.E., Torbitzky, S., Klein, S. (2021, April). Advancing the use of digital health technologies for data capture & improved clinical trials. Clinical Research Training Center Research Training Symposium and Poster Session. Washington University in St. Louis, St. Louis, MO, United States.
- Stoeckl, S.E., Torbitzky, S. (2020, February). REDCap in clinical research, building a learning health care system from lab to laptop. Institute of Clinical & Translational Sciences 3rd Annual Symposium, St. Louis, MO, United States. <u>https://icts.wustl.edu/building-a-learning-health-care-system-from-lab-to-laptop</u>
- **Stoeckl, S.E.,** Torbitzky, S., Klein, S. (2020, September). *Creative uses of REDCap for digital health*. REDCapCon 2020. REDCap annual convention, virtual. <u>https://projectredcap.org/about/redcapcon</u>

Poster Presentations (N=7)

- Stoeckl, S.E., Vlisides-Henry, R, Boucher EM. (2023, April). Race-based differences in engagement and outcomes in a digital mental health intervention. Anxiety and Depression Association of America Conference, Washington D.C., United States.
- Boucher E.M., Ward HE, Miles, C, Honomichl, R. D., **Stoeckl, S.E.** (2022, November). *Effects of a digital program on perceived stress and rumination in adolescents aged 13-17 years*. Association for Behavioral and Cognitive Therapies 56th Annual Convention, New York, NY, United States.
- **Stoeckl, S.E.**, Hernandez, E, Camacho, E; Torous, J. (2022, August). *Assessing the dynamics of the mental health Apple and Android marketplaces*. American Psychological Association Convention, Minneapolis, MN, United States.

- Stoeckl S.E., Boucher E.M., Harake N.R., Ward HE (2022, May). Agreeable and conscientious, but not open-minded: breadth and intensity of user's impressions of an artificially intelligent chatbot. Association for Psychological Sciences Convention, Chicago, IL, United States.
- Montgomery, R. M., Boucher, E. M., Honomichl, R. D., Powell, T. A., Guyton, S. L., Bernecker, S. L., Stoeckl, S.E., & Parks, A. C. (2022, February). *The effects of a digital mental health intervention in adults with cardiovascular disease risk factors: analysis of real-world user data*. Society for Personality and Social Psychology Convention, San Francisco, CA, United States.
- Stoeckl, S.E., Torbitzky, S., Klein, S. (2021, April). Development of machine-to-machine tools for clinical research. Clinical Research Training Center Research Training Symposium and Poster Session. Washington University in St. Louis, St. Louis, MO, United States.
- Stoeckl, S.E., Klein, S. (2018, Sept) *Clinical study design best practices in REDcap*. REDCapCon 2018. Chicago, IL, United States.

University of California - Irvine, Technology and Mental Health Lab

RESEARCH EXPERIENCE

05/2023-Present

Advisor: Stephen Schueller, PhD

Help@Hand

Description: Help@Hand is a five-year 15-County/City innovation project funded by the Mental Health Services Act (MHSA) aiming to implement digital behavioral health technologies in California's behavioral health system. UCI serves as the implementation evaluation team.

Graduate Research Assistant (09/2024-Present)

Responsibilities:

- Data analysis, including qualitative coding and thematic analysis of surveys and interviews, applying the CFIR framework
- Data analysis, including quantitative and qualitative coding and analysis of the learnings and recommendations from the Help@Hand project across all counties over five years
- Dissemination of findings through a mid-year report, annual report, and three manuscripts in preparation

Digital Mental Health Specialist (05/2023-08/2024)

Responsibilities:

Cross County/City Evaluation

- Data collection of 12+ county representatives and peers implementation and project experience, including REDCap surveys and Zoom interviews
 - Edit script and make recommendations for new survey and interview questions
- Data analysis, including qualitative coding and thematic analysis of surveys and interviews, applying the CFIR framework

Implementation Learnings and Recommendations

- Data analysis, including quantitative and qualitative coding and analysis of the learnings and recommendations from the Help@Hand project across all counties over five years
 - Large language model use in qualitative analysis, including codebook generation

Implementation Team Representative for Monterey County

• Attend all project meetings for Monterey County, noting project progress, changes, and learnings for implementation evaluation

03/2023-Present I

Liquid Amber

Founder: Acacia Parks, PhD Description: Liquid Amber provides digital health research consulting services

Research Consultant

Responsibilities:

- Conducted comprehensive literature reviews, leveraging research skills to support stakeholders across medical, behavioral science, and product teams
- Contributed to research and analysis projects (selection of examples):
 - Conducted transcriptions and clinical methods analyses of psycho-educational videos, identifying opportunities to enhance evidence-based content and content accessibility
 - Authored a guide on the application of Artificial Intelligence in research settings, outlining practical integration strategies and best practices
 - Produced internal deliverables, such as reports and presentations, to articulate research findings and key insights for leadership decision-making

09/2021-04/2023 Harvard University and Beth Israel Deaconess Medical Center, Division of Digital Psychiatry Director: John Torous, MD MBI

Research Intern, MindApps App Evaluation Project

Description: The MindApps App Evaluation Project, in partnership with the American Psychiatric Association (APA), developed an App Evaluation Model and database to assist clinicians and users in selecting mental health apps. Leveraged the App Evaluation Model in the app marketplaces, examining app regulation, evaluating, and rating mental health apps. *Responsibilities:*

- Led research evaluating mental health apps, tracking marketplace changes and trends.
- Evaluation of 100+ applications using the 105 components of the APA App Evaluation Model
- Created and instituted code for data analysis, enabling ongoing analysis and lab re-use
- Mentorship of three research assistants in data analysis and use of programming tools
- Shared findings via Harvard webinar, international talk, poster, and first-author paper

06/2021-03/2023 Twill Therapeutics (formerly Happify Health)

Chief Science Officer: Acacia Parks, PhD | *Director of Research Strategy: Eliane Boucher, PhD Description:* Twill is a digital mental health company offering evidence-based digital therapeutics to support the health and well-being of people across conditions and life stages.

Research Assistant, Research Strategy (August 2021-March 2023)

Responsibilities:

- Contributed to the development and investigation of digital mental health interventions, including digital wellness and digital therapeutics apps
- Supported randomized control trials, observational studies, retrospective studies, reviews, perspective studies, and product, user research, and usability studies
- Developed a digital placebo for control condition in RCTs
- Conducted analyses, including quantitative (e.g., statistical analysis using Python, survey research with large sample sizes, experimental designs in controlled settings) and qualitative (thematic analysis and grounded theory; primarily using inductive coding to interpret interview transcripts and open-ended survey responses)
- Worked with populations spanning adolescents and adults with depression and anxiety, pregnant and postpartum people, older adults, and those with chronic health conditions
- Liaised with regulatory affairs to ensure FDA compliance
- Disseminated results through four posters, three manuscripts, and a chaired symposia

Research Intern, Full-Time, Digital Therapeutics (June 2021-August 2021)

Responsibilities:

- Contributed to the development and investigation of digital mental health interventions, including digital wellness and digital therapeutics apps
- Supported randomized control trials, observational studies, retrospective studies, reviews, perspective studies, and product, user research, and usability studies
- Employed many methodological approaches, including quantitative (e.g., statistical analysis using Python, survey research with large sample sizes, experimental designs in controlled settings), qualitative (thematic analysis and grounded theory; primarily using inductive coding to interpret interview transcripts, observational data, and open-ended survey responses), mixed methods, and multi-methods

12/2021-06/2022 **Found Health**

Chief Science Officer: Acacia Parks, PhD

Description: Found Health is an online weight care program that offers health coaching, behavioral guidance, and prescription medications. The program takes a holistic approach, addressing the biological, behavioral, and psychological factors involved in weight management.

Research Consultant

Responsibilities:

- Conducted literature reviews and wrote reports of evidence-based findings on obesity, eating, and behavior change to guide new app development
- Developed scientific content for Found app, online tools, and media
- Helped create infrastructure for the science department, building materials including templates, spreadsheets, and databases to support project planning and management

01/2021-06/2021 Washington University in St. Louis, Emotion and Mental Health Lab

Advisor: Renee J Thompson, Ph.D. | Supervisor: Natasha Bailen, Ph.D.

Independent Study Research Assistant, Social Media Use and Emotion Study

Description: Ecological Momentary Assessment study of social network use, mental health, and social and emotional well-being during the COVID pandemic. This study aimed to a) develop a social media use measure that encapsulates all of the activities in which individuals can engage on social media, b) determine which of these groups of activities are associated with the experiences of positive versus negative emotions, and c) determine how mood at the time of social media use influences individuals' use and perception of social media

Responsibilities:

- Cleaned and managed EMA and survey data
- Wrote code automated future survey scoring for future lab use
- Conducted qualitative thematic analysis and quantitative analysis of over 80 participants

Emotion dysregulation chapter, "Treatment of psychosocial risk factors in depression" *Responsibilities:*

• Conducted a comprehensive literature review and synthesized information to support Principal Investigator and Supervisor writing a chapter on emotion dysregulation as a predictor for major depressive disorder

2017-2021

Washington University School of Medicine, Division of Geriatrics and Nutritional Sciences Division Chief: Samuel Klein, MD | Supervisor: Sally Torbitsky, BSN, RN Description: The Division of Geriatrics and Nutritional Sciences conducts basic and clinical research in nutrition, metabolism, and aging research. The division is home to the Center for Human Nutrition, the Nutrition Obesity Research Center, and the Longevity Research Center. Approximately 12-15 studies are concurrently conducted.

Clinical Research Coordinator

Responsibilities:

- Coordinated and study point of contact for eight studies, including an industry study, VA collaborative study, two NIH studies, and four longitudinal studies of aging, eating behavior, metabolism, and weight loss
- Lead Coordinator and study point of contact for two multi-site studies of medication adherence
- Collected ambulatory assessment data using continuous glucose monitors, actigraph watches, and other wearables to measure activity, mobility, sleep, and vital signs
- Conducted study set up, including preparing protocols, informed consents, and SOPs; IRB submissions and management; recruitment, screening, and enrollment of participants;
- Oversaw participant visits, including participant adherence and progress monitoring; conducting semi-structured and structured interviews; administering surveys and questionnaires (BDI, BAI, RSE, and IWQOL); and administering physical testing (vitals and phlebotomy)
- Worked with populations spanning adolescents, adults, pregnant and postpartum people, older adults, and those with chronic health conditions

Clinical Research Data Coordinator

Responsibilities:

- Designed, built, and maintained study databases, interfacing with investigators, clinicians, clients, and vendors to identify and address data collection and analysis needs
- Provided clinical informatics support, including clinical research data management for every study in the division throughout the research life cycle
- Orchestrated division-wide research digitization to move paper records and processes online
- Developed technological study tools for electronic data capture and API-based automated data collection and transfer, machine-to-database integration and real-time data ingestion (machines included sleep monitoring systems, actigraph watches, fMRI machines, continuous glucose monitors, and others)
- Planned and delivered training for technological tools and systems, one-on-one and in group formats, for all division staff and faculty
- Weekly and monthly presentations and reports communicating participant progress and research study trends, including data visualizations using Plotly, Seaborn, and Matplotlib
- Redesigned and developed a research grants database for Division, helped manage grants from pre to post-award; managed data, including data queries and reporting; and trained staff
- Redesigned and maintained Division of Geriatrics & Nutritional Sciences website; https://gns.wustl.edu – using WordPress and HTML
- Communicated work developing technological tools for research through three oral presentations and two posters

TEACHING EXPERIENCE

Winter 2022	 Washington University in St. Louis, Psychological & Brain Sciences Teaching Assistant, Developmental Psychology Provided course support through lecture preparation, leading online discussions, developing exams, grading assignments, and grading exams 		
2020-2021	 Washington University in St. Louis, Center for Teaching and Learning Academic Assistant Planned and led study sessions for psychology and computer science courses 		
2017-2020	 Washington University in St. Louis, Women in Computer Science Workshop Leader Planned and led computer programming classes for girls between 10 and 16 years old 		

PROFESSIONAL EXPERIENCE

2008-2017

Computer Programmer (selection of roles) **Support Circle**

Peer-to-peer online support network and app for those with chronic illness and their families

- Maintained and optimized a backend database using NoSQL and SQL
- Developed backend APIs, set up data pipelines and integration processes

NeoMotion Inc

Wearables company using GPS for motion detection and location services

• Software QA testing, including automated and manual tests integrated into the Continuous Integration/Continuous Deployment (CI/CD) pipeline with Python and Jenkins

Pebble Technology Corporation (previously Allerta, later FitBit)

Wearables and smartwatch company

- Contributed to open software development kit and performed API troubleshooting, primarily with C, JSON and Python
- Developed cycling and running apps to measure speed, distance, and pace with GPS

Epic Systems Corporation

Software company specializing in electronic health records (EHR) systems

- Go-Live consultant for integration of Epic's software into existing healthcare environment
- Migrated existing data to new EMR system using Epic, Excel, and Python
- Provided Epic EMR Implementation training
- Acted as Epic1 Research Operational Owner Liaison between Epic1 Research team and operational owners across Washington University School of Medicine.

Washington University School of Medicine

Division of Geriatrics and Nutritional Sciences

- Redesigned and developed a research grants database for Division, helped manage grants from pre to post-award; managed data, including data queries and reporting; and trained staff
- Redesigned and maintained Division of Geriatrics & Nutritional Sciences website; <u>https://gns.wustl.edu</u> – using WordPress and HTML

HONORS & AWA	ARDS		
2024	Diversity Recruitment Fellowship, University of California, Irvine	\$1,000	
2024	Social Ecology Merit Award, University of California, Irvine	\$2,000	
2023	Student Travel Award, Dissemination and Implementation Special Interest Gro	oup,	
	Association for Behavioral and Cognitive Therapies (A	•	
2020-2021	Dean's Honor List, Washington University in St. Louis	,	
2018-2021	Dean's Scholarship, Washington University in St. Louis	\$3,000/ year	
2020	Emerging Leader Academy, American Psychological Association	· ·	
2020	Emerging Leader, Focus St. Louis	\$2,000	
2019	Gateway to Success Technology Grant, Washington University in St. Louis	\$1,293	
SERVICE			
Committees & W	orking Groups		
2023-present	Student Involvement Committee, Dissemination and Implementation SIG, ABCT		
2023-present	Cross Collaboration Workgroup, Dissemination and Implementation SIG, ABCT		
2021	Working Group, COVID-19 & Social Determinants of Health, Washington Univ	ersity 2020-2021	
	Working Group, OnCore for Clinical Research, Washington University		
2018	LGBTQIA+ Committee, Commission on Diversity and Inclusion, Washington Un	niversity	
Leadership			
2018-2021	Group Leader, Open LGBTQIA+, Washington University		
2021	Campus Ambassador, American Psychological Association		
2021	Leader, Campus Diversity Collective, Washington University		
2017-2020	Facilitator, Safe Zones, Washington University		
2020	Team Leader; Focus St. Louis, St. Andrew's Resources for Seniors: Gap Analysis and Intervention		
2017	Team Leader, Data Rescue WUSTL Data Refuge, Environmental Data & Govern	nance Initiative	
Volunteering			
2020-2022	Programmer, Donate:code		
2019-2022	Crisis Response Volunteer, TrevorChat/TrevorText Digital Program, Trevor Proje	ect	
2020-2021	Programmer, CoronaTrace		
2020-2021	Crisis Support Volunteer, WashU Cares		

Event Volunteer, Margins to Center Speaker Series, Washington University

PROFESSIONAL AFFILIATIONS

2015-2020

2019

Alpha Sigma Lambda Honor Society American Psychological Association (APA) American Psychological Society (APS) Anxiety and Depression Association of America (ADAA) Association for Behavioral and Cognitive Therapies (ABCT) International Society for Research on Internet Interventions (ISRII) Psi Chi International Honors Society Society for Digital Mental Health (SDMH) Transdiagnostic Mental Health Research Network

Support Line Volunteer, Cancer Support Line

SKILLS, SOFTWARE, TRAINING, & CERTIFICATIONS

Clinical

Adult Mental Health First Aid, Missouri Department of Mental Health Motivational Interviewing, Missouri Department of Mental Health Digital Affect Regulation Certification, Prospera Screening, Brief Interventions, and Referral for Treatment Training, Missouri Institute for Mental Health Suicide Lifeguard Training, Missouri Institute for Mental Health Suicide Prevention Training, Missouri Suicide Prevention Network

Computer Programming

API Integration: *Python* Databases and Data Structures: *NoSQL, SQL* Data Manipulation & Analysis: *lxml, Pandas* Internet of Things and wearables: *Python, C/C++* Large Language Models: *Prompt engineering* Machine Learning: *NLTK, PyTorch, scikit-learn, spaCy* Scientific Computing: *NumPy, SciPy* Ethical Web Scraping: *API Requests, PyQuery, Scrapy, Selenium*

Diversity, Equity, & Inclusion

Communication Across Cultures, Office of Diversity, Equity & Inclusion at Washington University Cultural Awareness, Office of Diversity, Equity & Inclusion at Washington University Disabilities - A Guide to Inclusion, Office of Diversity, Equity & Inclusion at Washington University Fundamentals of Diversity, Equity, & Inclusion, Office of Diversity, Equity & Inclusion at Washington University "Isms", Office of Diversity, Equity & Inclusion at Washington University Managing Unconscious Bias, Center for Diversity & Inclusion at Washington University Performative Allyship, Center for Diversity & Inclusion at Washington University Safe-Zones Facilitator Training, Washington University Test-driving methods that promote equity in the implementation process, DIS SIG preconference, ABCT 2023

Research

Data Collection & Management: Amazon Mechanical Turk, Prolific, Qualtrics, REDCap Qualitative Analysis: ATLAS.ti and NVivo Quantitative Analysis: Python, R Certified Phlebotomist, St. Louis School of Phlebotomy ChatGPT Prompt Engineering for Developers, Open AI Clinical Research Coordinator, Collaborative Institutional Training Initiative Collection & Analysis of Intensive Longitudinal Data, American Psychological Association Good Clinical Practice, Collaborative Institutional Training Initiative Writing the Study Protocol, Investigator's Brochure, Informed Consent, & Adverse Events, Cambridge Innovation Institute MRI Scanner Yellow Badge, Washington University School of Medicine Qualitative Research Training Series, American Psychological Association Statistical and Computational Tools for Reproducible Data Science, National Institute of Health Technical Foundations of Generative Artificial Intelligence, American Psychological Association