

**AWARD NUMBER:** W81XH-19-1-0826

**TITLE:** Examining the Efficacy of the TEACCH School  
Transition to Employment and Post-Secondary  
Education Program

**PRINCIPAL INVESTIGATOR:** Dr. Brianne Tomaszewski

**CONTRACTING ORGANIZATION:** University of North Carolina, Chapel Hill, 104 Airport Dr  
Ste 2200 Chapel Hill, NC, 27599-5023

**REPORT DATE:** OCTOBER 2023

**TYPE OF REPORT:** Annual

**PREPARED FOR:** U.S. Army Medical Research and Development Command  
Fort Detrick, Maryland 21702-5012

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# REPORT DOCUMENTATION PAGE

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|  |                             |  |   |  |   |
|--|-----------------------------|--|---|--|---|
| <b>1. REPORT DATE</b><br>OCTOBER 2023  |                             | <b>2. REPORT TYPE</b><br>Annual Report |   | <b>3. DATES COVERED</b><br>15SEPT2022 - 14SEPT2023 |   |
| <b>4. TITLE AND SUBTITLE</b><br><br>Examining the Efficacy of the TEACCH School Transition to Employment and Post-Secondary Education Program  |                             |  |   | <b>5a. CONTRACT NUMBER</b><br>W81XWH-19-1-0826     |   |
|  |                             |  |   | <b>5b. GRANT NUMBER</b>                            |   |
|  |                             |  |   | <b>5c. PROGRAM ELEMENT NUMBER</b>                  |   |
| <b>6. AUTHOR(S)</b><br>Dr. Laura Klinger and Dr. Brianne Tomaszewski<br><br>E-Mail:laura_klinger@med.unc.edu; brianne_tomaszewski@med.unc.edu  |                             |  |   | <b>5d. PROJECT NUMBER</b>                          |   |
|  |                             |  |   | <b>5e. TASK NUMBER</b>                             |   |
|  |                             |  |   | <b>5f. WORK UNIT NUMBER</b>                        |   |
| <b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b><br><br>University of North Carolina<br>Chapel Hill, 104 Airport Dr Ste 2200<br>Chapel Hill, NC, 27599-5023   |                             |  |   | <b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>    |   |
| <b>9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b><br><br>U.S. Army Medical Research and Development Command<br>Fort Detrick, Maryland 21702-5012  |                             |  |   | <b>10. SPONSOR/MONITOR'S ACRONYM(S)</b>            |   |
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| <b>13. SUPPLEMENTARY NOTES</b>   |                             |  |   |  |   |
| <b>14. ABSTRACT</b><br>The purpose of this project is to conduct a RCT trial examining the efficacy of the TEACCH School Transition to Employment and Postsecondary Education (T-STEP) Program. 60 Community college students (18-21 years of age) with autism spectrum disorder will participate in either the T-STEP Program or manualized counseling services (career, academic, self-counseling) with both proximal (executive function, social communication, and emotion regulation) and distal (employment, postsecondary education success) outcomes measured. The long-term impact of this intervention is to promote a more positive quality of life for young adults with high functioning ASD including increased postsecondary education completion, employment, self-determination, and decreased difficulties with coping and depression. Due to the COVID-19 epidemic preventing in person interactions, we have adapted the protocol to conduct online interventions. This adapted protocol has received approval from all regulatory bodies and the adapted intervention and RCT trial will begin in the second year of funding. |                             |  |   |  |   |
| <b>15. SUBJECT TERMS</b><br>Autism, transition-aged, community college, executive function, emotion regulation, professional social skills   |                             |  |   |  |   |
| <b>16. SECURITY CLASSIFICATION OF:</b>   |                             |  | <b>17. LIMITATION OF ABSTRACT</b><br><br>UU | <b>18. NUMBER OF PAGES</b><br><br>23               | <b>19a. NAME OF RESPONSIBLE PERSON</b><br>USAMRDC |
| <b>a. REPORT</b><br><br>U  | <b>b. ABSTRACT</b><br><br>U | <b>c. THIS PAGE</b><br><br>U           |   |  | <b>19b. TELEPHONE NUMBER (include area code)</b>  |

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## 1. INTRODUCTION:

The purpose of this study is to test whether the targeted intervention provided by the comprehensive T-STEP (course, counseling, internship) is more effective at supporting the transition to adulthood than counseling services alone (i.e., academic, career, and self-advocacy counseling). Using an alternative treatment randomized-control trial design, transition-aged (16-21-year-old) individuals with ASD will be enrolled. Young adults will be randomly assigned to receive either the comprehensive T-STEP Program (T-STEP course, internship, counseling) or only counseling services at two community college sites. Across three academic years, 120 young adults will be enrolled, 60 in the Comprehensive T-STEP Group (T-STEP) and 60 in the Counseling Only group.

## 2. KEYWORDS:

Autism, transition-aged, community college, executive function, emotion regulation, professional social skills

## 3. ACCOMPLISHMENTS:

**What were the major goals of the project?**

### **Training Specific Major Tasks:**

- **Task 1: Learn clinical trial design and evaluation for individuals with Autism Spectrum Disorder**
  - Milestone: Submit grant proposal for Autism Research Program Clinical Translation Award (months 36-42; 100% complete)
- **Task 2: Train with experts in community-based behavioral interventions in ASD**
  - Milestone: Leading a professional seminar and community workshop on clinical interventions (months 30-36; 100% complete)
- **Task 3: Acquire skills in research team management**
  - Milestone: Supervise intervention & research staff (months 24-48; 100% complete)
- **Task 4: Build national collaborations in ASD field**
  - Milestone: Presentation of project outcome data at International Society for Autism Research Meeting (month 48; 75% complete)

### **Research Specific Major Tasks:**

- **Task 1: Obtain IRB approval**
  - Milestone: IRB Approval (months 6; 100% complete)
  - Milestone: Obtain regulatory approval from Department of Defense Human Research Protection Office (month 9; 100% complete)
- **Task 2: Coordinate Study Staff**
  - Milestone: Research staff trained (month 15; 100% complete)
  - Milestone: Maintained trained and available independent evaluators (month 15; 100% complete)
- **Task 3: Randomized, Controlled Trial**
  - Milestone: 5 cohorts of participant consented, screened, and enrolled in study (months 13-40; 100% complete)
  - Milestone: T-STEP and Counseling intervention begins (months 17-41; 100% complete)
  - Milestone: Report findings from overall studies (month 48; 0% complete)
- **Task 4: Data analysis**
  - Milestone: Report results from data analysis (month 48; 50% complete)

**What was accomplished under these goals?**

### **Training Specific Major Tasks:**

- **Task 1: Learn clinical trial design and evaluation for individuals with Autism Spectrum Disorder**
  - ***Milestone Achieved:*** Funding received from National Institute of Health [PAR21-359] - Early and Late-Stage Clinical Trials for the Spectrum of Alzheimers Disease/Alzheimer's Related Dementias and Age-Related Cognitive Decline (R01 Clinical Trial Optional); R01AG076678
  - Subtask 1: Attend UNC School of Medicine North Carolina Translational and Clinical Sciences Institute (NCTraCS) professional development seminars.
    - Activities Accomplished:
      - Attended School of Medicine, Frank Porter Graham Child Development Professional Development Series, UNC TEAM ADVANCE Faculty Professional Development Series, and Woman ADVANCE Leadership Sessions
  - Subtask 2: Take 1 course per year through a collaboration between NCTraCS and UNC School of Public Health in clinical trials research
    - Activities Not Accomplished: Courses were not offered during reporting period.
  - Subtask 3: Submit applications to attend national RCT workshops
    - Activities Accomplished: Selected as Scholar and participated in RCT workshop to Comprehensive Program for Adaptive Interventions Training in Education (CATIE) for training in SMART design at the University of Michigan.

- Subtask 4: Travel to UCLA
  - Activities Not Accomplished: Travel to UCLA was not feasible due to COVID-19.
  - Activities Accomplished:
    - Virtual meetings with UCLA faculty Dr. Connie Kasari occurred and per recommendations, submitted to conference panels.
    - In-person meeting conducted with Dr. Connie Kasari at the University of Michigan during CATIE workshop.
    - In-person meeting with Dr. Connie Kasari at the International Society for Autism Research Conference
- Subtask 5: Participate in statistical workshops
  - Activities Accomplished:
    - Attended NC TraCS Biostatistics Seminar Series
    - Attended CATIE SMART design virtual workshops and in-person statistical analyses seminars while at CATIE training.
- Subtask 6: Submit grant proposal to start collecting pilot data.
  - Activities Accomplished:
    - Started collecting pilot data as part of ACL and NIDILRR- funded projects regarding transition to adulthood.
    - Launched National Institutes of Health National Institute of Aging R01
- **Task 2: Train with experts in community-based behavioral interventions in ASD**
  - *Milestone Achieved:* Leading a professional Seminar and community workshop on clinical interventions for transition and employment for international (Japan) and national audiences, as well as student workshops for graduate-level students (medical students, health sciences).
  - Subtask 1: Observe clinical services at the TEACCH Autism Program by attending individual and group therapy sessions.
    - Activities Accomplished:
      - Attended Clinician Training for Suicide Risk Protocol for Youth on the Autism Spectrum
  - Subtask 2: Attend T-STEP and VR counseling sessions in the first semester.
    - Activities Accomplished:
      - Served as interventionist for T-STEP class and counseling sessions
  - Subtask 3: Observe RCT implementation during visit to Kasari Lab at UCLA
    - Activities Accomplished:
      - Discussed SMART design trials and clinical trials with Dr. Kasari at CATIE workshop and INSAR research conference
    - Activities Not Accomplished:
      - Did not travel to UCLA; Kasari Lab not implementing in-person RCT during reporting period due to COVID-19.
  - Subtask 4: Receive training on implementation of assessing fidelity
    - Activities Accomplished:
      - Worked with study team to modify fidelity coding and coding procedures
- **Task 3: Acquire skills in research team management**
  - *Milestone achieved:* Hired 3 additional team members (2 Research Assistants and 1 Project Coordinator) for own research team as PI of three federally-funded projects, took on Ph.D./MD student in Public Health and hired two graduate students, four undergraduate students, and three staff members as a supervisor in a foundation-funded summer program for students with intellectual and developmental disabilities.
  - Subtask 1: Attend the UNC Blueprint for Engaged Supervision Training , UNC Human Resources 2-day workshop
    - Activities Not Accomplished: Course not available during reporting year due to COVID-19.
  - Subtask 2: Take the NCTraCS/UNC Public Health Course:Team Leadership in Research Navigation
    - Activites Not Accomplished: Course was not offered during reporting year.

- Subtask 3: Co-Supervise graduate research assistant and research assistant on project related tasks.
  - Activities Accomplished:
    - Met with graduate research assistants for fidelity coding
    - Co-supervised post-assessment and follow-up research visits, data management, and regulatory document submission.
- **Task 4: Build national collaborations in ASD field**
  - Subtask 1: Meet with UCLA autism researchers during Kasari Lab visit
    - Activities Not Accomplished: Travel to UCLA cancelled due to COVID-19.
  - Subtask 2: Attend UNC Autism Research Quarterly Meetings
    - Activities Accomplished:
      - Attended UNC Autism Research Meetings
  - Subtask 3: Attend national conferences disseminating ASD-related research.
    - Activities Accomplished:
      - Attended and served as chair in a symposium entitled "Postsecondary Experiences of Adults with Intellectual and Developmental Disabilities" at the Gatlinburg Conference on Research and Theory in Intellectual and Developmental Disabilities in Kansas City, MO.
      - Attended and presented two posters at the International Society for Autism Research Conference in Stockholm, Sweden
      - Served as Faculty Expert in the International Society for Autism Research Conference Pre-Conference Workshop on Grant Writing in Stockholm, Sweden

### Research Specific Major Tasks:

- **Task 1: Obtain IRB approval**
  - Subtask 1: Prepare Regulatory Documents and Research Protocol.
    - Activities Accomplished:
      - Completed annual IRB reports for continuing review
- **Task 2: Coordinate Study Staff**
  - Subtask 1: Hiring and Training of Study Staff
    - Activities Accomplished:
      - Trained undergraduate students for coding
  - Subtask 2: Coordinate supervision, fidelity checks, and training of independent evaluators.
    - Activities Accomplished:
      - Conducted weekly supervision meetings with Comprehensive T-STEP class interventionists and Counseling interventionists.
      - Fidelity coding assigned to research team members.
- **Task 3: Randomized, Controlled Trial**
  - *Milestone Achieved:* All cohorts enrolled and completed intervention and all study visits.
  - Subtask 1: Conduct study, report findings
    - Activities Accomplished to date:
      - 110 participants enrolled in study, 94 completed intervention and post-assessments, 84 completed follow-up assessments.
      - Cohort 1: Spring 2021 semester.
        - Completed Intervention: 17 participants complete the intervention and post-assessments
        - Follow-Up Assessment: 15 follow-up completed the 4-month follow up assessments.
        - Completed Study: 15 participants completed the intervention and all study assessments.

- Cohort 2: Fall 2021 semester.
    - Completed Intervention: 14 participants completed the intervention and post-assessments
    - Completed Follow-Up Assessments: 13 participants completed the 4-month follow up assessments.
    - Completed Study: 13 participants completed the intervention and all study assessments.
  - Cohort 3: Spring 2022
    - Completed Intervention: 16 participants completed the intervention and post-assessments
    - Completed Follow-Up: 12 participants completed the 4-month follow up assessments.
    - Completed Study: 12 participants completed the intervention and all study assessments.
  - Cohort 4: Fall 2022
    - Completed Intervention: 36 participants completed the intervention and post-assessments
    - Completed Follow-Up: 33 participants completed the 4-month follow up assessments.
    - Completed Study: 33 participants completed intervention and all study assessments.
  - Cohort 5: Spring 2023
    - Screening: Phone screenings occurred for 25 participants
    - Baseline: 19 participants completed baseline assessments.
      - 3 were ineligible due to IQ and 1 was ineligible due to unconfirmed diagnosis.
    - Enrolled: 15 participants were enrolled and completed pre-assessments.
      - 11 began the intervention (7 comprehensive and 4 counseling only).
      - 4 participants withdrew after assignment due to scheduling difficulties
    - Completed Intervention: 11 participants completed the intervention and post-assessments.
    - Follow-Up: 11 participants completed follow-up assessments.
    - Completed Study: 11 participants completed intervention and all study assessments.
- **Task 4: Data analysis**
  - Subtask 1: Establish data management system for monitoring data collection rates and data quality.
    - Activities Accomplished to date:
      - Collected data via REDCap from 5 cohorts across pre-, post-, and follow-up assessment timepoints
        - 1100 total pre-assessment questionnaires (5 questionnaires/participant; 5 questionnaires/caregiver)
        - 1128 total post-assessment questionnaires (6 questionnaires/participant; 6 questionnaires/caregiver)
        - 924 total follow-up assessment questionnaires (7 questionnaires/participant ; 4 questionnaires/caregiver)
      - Presented data at INSAR analyzing anxiety symptoms in autistic young adults
        - From a larger sample of transition-aged autistic youth and young adults including participants in the current study. Both males and females, on average, scored above the clinical cutoff for anxiety.

- Autistic transition-aged females report higher levels of anxiety than autistic transition-aged males.
- Increased autistic symptom severity was associated with increased anxiety.
- Sex differences in anxiety were not moderated by autism symptom severity.

### **What opportunities for training and professional development has the project provided?**

In addition to the training program for the partnering PI described above, professional training opportunities were present for 2 clinical psychology doctoral students including weekly team meetings and one-on-one mentoring on clinical trials design, developmental of fidelity assessments, behavioral coding procedures, and supervision of undergraduate research assistants. Two postdoctoral fellows have been mentored on implementation of the intervention including weekly supervision meetings. Undergraduate and post-graduate research assistants have received mentoring on intervention research through opportunities to participate in the intervention as peer models, mentoring on assessment protocols, and behavioral coding. As a result, trainees were primary or co-authors on 1 presentation at the 2022 International Society for Autism Research annual conference in Stockholm, Sweden and one Master's thesis utilized data from this study.

### **How were the results disseminated to communities of interest?**

We consulted with the Autism Resource Center in Singapore regarding their implementation of the T-STEP within their high school transition curriculum and their Employment Services program.

Posters were presented at the INSAR annual conference.

Dr. Klinger presented at two invited talks about the T-STEP program.

**What do you plan to do during the next reporting period to accomplish the goals?**

Training Specific Tasks through next quarter:

1. Perform preliminary data analyses for Aim 1 of the study
2. Submit abstract to INSAR annual conference
3. Attend AUCD Conference

Research Specific Tasks through next quarter:

1. Complete fidelity and behavioral assessment coding
2. Perform initial analyses for Aim 1 and Aim 2 of the study
3. Prepare abstracts for INSAR conference

**4. IMPACT:**

**What was the impact on the development of the principal discipline(s) of the project?**

Nothing to Report

**What was the impact on other disciplines?**

Nothing to Report

**What was the impact on technology transfer?**

Nothing to Report

**What was the impact on society beyond science and technology?**

Nothing to Report

**5. CHANGES/PROBLEMS:**

Nothing to Report

**Actual or anticipated problems or delays and actions or plans to resolve them**

Nothing to Report

**Changes that had a significant impact on expenditures**

Nothing to Report

**Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**

**Significant changes in use or care of human subjects**

Nothing to Report

**Significant changes in use of biohazards and/or select agents**

Nothing to Report

**6. PRODUCTS:**

- **Publications, conference papers, and presentations**

### Journal publications.

- White, S. W., Schall, C., Santos, J. D., Maddox, B. B., Hillier, A., **Klinger, L.**, & Pugliese, C. (2023). *Promoting Quality of Life: Suggestions for Mental Health Care Providers Working with Young Autistic Adults*. *Autism in Adulthood*. Ahead of print. <http://doi.org/10.1089/aut.2022.0106>
- Nader, D. T., Dunlop, B., **Tomaszewski, B.**, Sam, A., Hume, K. A., Aljuaid, M., & Odom, S. (2023). Exploratory factor analysis of the Social Skills Improvement System (SSIS) for autistic children: Implications for use and educational placement. *Research in Autism Spectrum Disorders*, *104*, 102144. <https://doi.org/10.1016/j.rasd.2023.102144>

### Books or other non-periodical, one-time publications.

### Other publications, conference papers and presentations.

- Tomaszewski, B., Lamarche, E. M., Bowman, K., Klein, C. B., Cook, M. L., & Klinger, L. G. (2023). Examining moderators of a transition intervention for autistic adolescents and young adults. Poster presented at International Society for Autism Research Conference, Stockholm, Sweden.
- Tomaszewski, B., Kraemer, B., Steinbrenner, J. R., Smith DaWalt, L. E., Hall, L. J., McIntyre, N. S., Rentschler, L. F., Rentschler, L. F., & Odom, S. L. (2023). Self-determination trajectories in high school and post-school community participation in autistic young adults. Poster presented at International Society for Autism Research Conference, Stockholm, Sweden.
- Odom, S., & Tomaszewski, B. (2023). Development of autistic children and youth from different races and ethnicities: Cohort sequential design analysis. Poster presented at International Society for Autism Research Conference, Stockholm, Sweden.

- Marsh, T. D., Klein, C. B., Tomaszewski, B., & Klingler, L. G. (2023). Sex differences in autism symptom severity among adolescents and young adults. Poster presented at International Society for Autism Research Conference, Stockholm, Sweden.
- Kraemer, B., Steinbrenner, J., Hume, K., Odom, S., Hall, L., DaWalt, L., Tomaszewski, B., Grundon, G., & Pallisco, A. (2023). Life after high school: The experiences of young adults with autism. In Tomaszewski, B. (Chair) Postsecondary Experiences of Adults with Intellectual and Developmental Disabilities. [Symposium] Gatlinburg Conference on Research and Theory in Intellectual and Developmental Disabilities, Kansas City, MO.
- Klein, C., Tomaszewski, B., Doran, J., & Chan, D. (2023). Feasibility of the Higher Education, Employment, Living Success (HEELS) Prep program for transition-aged adults with intellectual disability. In Tomaszewski, B. (Chair) Postsecondary Experiences of Adults with Intellectual and Developmental Disabilities. [Symposium] Gatlinburg Conference on Research and Theory in Intellectual and Developmental Disabilities, Kansas City, MO.
- Klingler, L. (October, 2022). Transitioning to Adulthood: TEACCH Strategies for Supporting Autistic Students. Invited talk presented at the 41<sup>st</sup> TEACCH Annual Conference, Chapel Hill, NC.
- Klingler, L. (September, 2023). A Glimpse of Structured TEACCHing Across the Lifespan: Current Application. Invited talk presented at Team Autismus Conference, Germany.

- **Website(s) or other Internet site(s)**

<https://worktogethernc.com/> (Tomaszewski)

A resource for adolescents and young adults, their families, service professionals, and community members involved in any aspect of transition to adulthood in North Carolina.

- **Technologies or techniques**

Nothing to Report

- **Inventions, patent applications, and/or licenses**

Nothing to Report

- **Other Products**

Nothing to Report

## **7. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS**

**What individuals have worked on the project?**

Name: Laura Klinger  
Project Role: Principal Investigator  
Researcher Identifier: 0000-0002-3399-9039  
Nearest person month worked: 2.4  
Contribution to Project: No change

Name: Brianne Tomaszewski  
Project Role: Partnering Principal Investigator  
Researcher Identifier: 0000-0003-0074-1442  
Nearest person month worked: 6  
Contribution to Project: No change

Name: Kara Hume  
Project Role: Co-Investigator  
Researcher Identifier: 0000-0002-7917-792X  
Nearest person month worked: 1.8  
Contribution to Project: No change.

Name: Elena Lamarche  
Project Role: Research Coordinator  
Researcher Identifier: 0000-0003-0600-3387  
Nearest person month worked: 3  
Contribution to Project: No change

Name: Tabetha Marsh  
Project Role Research Assistant  
Researcher Identifier:  
Nearest person month worked: 10.2  
Contribution to Project: No change

Name: Michal Cook  
Project Role: Graduate Research Assistant  
Researcher Identifier:  
Nearest person month worked: 3  
Contribution to the Project: No change

Name: Glenna Osborne  
Project Role: Lead Comprehensive T-STEP Clinician  
Researcher Identifier:  
Nearest person month worked: 5.4  
Contribution to Project: No change

Name: Linda Varblow  
Project Role: Lead Counseling Clinician  
Researcher Identifier:  
Nearest person month worked: 4.8  
Contribution to Project: No change

Name: Halie Ellinger  
Project Role: Counseling Clinician  
Researcher Identifier:  
Nearest person month worked: 3  
Contribution to Project: No change

Name: Claire Klein  
Project Role: Graduate Research Assistant  
Researcher Identifier:  
Nearest person month worked: 3  
Contribution to Project: No change

Name: Kaitlyn Shaker  
Project Role: Comprehensive T-STEP Clinician  
Researcher Identifier:  
Nearest person month worked: 1.5  
Contribution to Project: Co-taught comprehensive T-STEP intervention

Name: Morganne Reid  
Project Role: Counseling Clinician  
Research Identifier:  
Nearest person month worked: 1.5  
Contribution to Project: Provided counseling curriculum to participants

Name: Shannon LaPoint  
Project Role: Counseling Clinician  
Research Identifier:  
Nearest person month worked: 1.5  
Contribution to Project: Co-taught comprehensive T-STEP intervention

Name: Bridgett Kiernan  
Project Role: Research Assistant  
Research Identifier:  
Nearest person month worked: 3  
Contribution to Project: Conducted research assessments and coded behavioral observation

Name: Jacklyn Boheler  
Project Role: Counseling Clinician  
Research Identifier:  
Nearest person month worked: 1.5  
Contribution to Project: Provided counseling curriculum to participants

**Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?**

Laura Klinger is a PI or investigator on new grants funded within the last year:

R01MH1105890 (Shea, PI; Klinger site PI) NIH 09/01/2022-08/31/2027 0.6 Cal Months  
**Advancing the System of Care for Autistic Older Adults**

26372 (Maddox, PI; Klinger Co-I) PCORI 03/2023 – 05/2026 1.2 Cal Months  
**Comparing Cognitive-Behavioral Therapy versus Mindfulness-Based Therapy for Autistic Adults**

R21MH133861-01 (Harrop, Chan, Maddox, MPIs; Klinger Co-I) NIMH 07/01/2023 – 6/30/2025  
0.2 Cal Months  
**Examining the role of social connection in suicide risk for older autistic adults: A mixed methods study**

26330 (Reaven, PI; Klinger Co-I) PCORI 04/02/2023 – 07/31/2027 .6 Cal Months  
**A Comparison of Two School-Based Interventions to Manage Anxiety in Autistic Students**

None of these newly funded grants will impact the effort amount or have any overlap with the currently funded Department of Defense grant.

Brianne Tomaszewski is PI or investigator on new grants funded within the last year: :  
R21MH133861-01 (Harrop, Chan, Maddox, MPIs; Tomaszewski Co-I) NIMH 07/01/2023 – 6/30/2025 0.6 Cal Months  
**Examining the role of social connection in suicide risk for older autistic adults: A mixed methods study**

R01AG076678-01A1 (Tomaszewski, PI) NIA 04/01/2023 – 01/31/2028  
**A Stage 1 Pilot Test for Feasibility and Efficacy of a MultiLevel Intervention To Increase Physical Activity in Adults with Intellectual Disability: Step it Up**

**What other organizations were involved as partners?**

Organization Name: Guilford Tech Community College

Location of Organization: Greensboro, North Carolina

- Intervention and assessment staff use the partner's facilities for the various activities.
- The intervention's staff uses the partner's disability services, career counseling, and academic advising resources provided on the community college campus.

Organization Name: Johnston Community College

Location of Organization: Clayton, North Carolina

- Intervention and assessment staff use the partner's facilities for the various activities.
- The intervention's staff uses the partner's disability services, career counseling, and academic advising resources provided on the community college campus.

Organization Name: Wake Tech Community College

Location of Organization: Raleigh, North Carolina

- Intervention and assessment staff use the partner's facilities for the various activities.
- The intervention's staff uses the partner's disability services, career counseling, and academic advising resources provided on the community college campus.

Organization Name: Alamance Community College

Location of Organization: Graham, North Carolina

- Intervention and assessment staff use the partner's facilities for the various activities.
- The intervention's staff uses the partner's disability services, career counseling, and academic advising resources provided on the community college campus.

## **8. SPECIAL REPORTING REQUIREMENTS**

**COLLABORATIVE AWARDS:** *N/A*

**QUAD CHARTS:** *N/A*

## **9. APPENDICES:** *N/A*

# W81XWH1910826: Examining the Efficacy of the T-STEP



**PI:** Dr. Brianne Tomaszewski, University of North Carolina, Chapel Hill, NC

**Budget:** \$352,224.00

**Topic Area:** TEACCH Autism Program

**Mechanism:** Clinical Trial Award

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**Research Area(s):** Autism, transition-aged

**Award Status:** 15 September 2019 - 14 September 2024

## **Study Goals:**

The current study seeks to test whether the targeted intervention provided by the comprehensive T-STEP (course, counseling, internship) is more effective at supporting the transition to adulthood than counseling services alone (i.e., academic, career, and self-advocacy counseling). We hypothesize that the full T-STEP program (community college course, internship, counseling) will lead to improved short-term and long-term outcomes compared to counseling services only.

## **Specific Aims:**

1. Examine the efficacy of the T-STEP compared to counseling only services in improving executive function, social communication, emotion regulation, and self-determination skills.
2. Examine moderators of T-STEP efficacy to identify characteristics of individuals who benefit most from the program.
3. Examine maintenance of intervention effects and more distal outcomes (grade point average, employment) at 6-months post-intervention.
4. An auxiliary meta-analysis aim to compare outcomes of a simultaneously running RCT examining the efficacy of the comprehensive T-STEP program to a waitlist control no services/services as usual condition. This auxiliary aim will allow us to re-examine Aims 1 & 2 across three treatment groups: T-STEP (120 students), counseling only (60 students), and no services/services as usual (60 students).

## **Key Accomplishments and Outcomes:**

**Publications:** Nader, D. T., Dunlop, B., **Tomaszewski, B.**, Sam, A., Hume, K. A., Aljuaid, M., & Odom, S. (2023). Exploratory factor analysis of the Social Skills Improvement System (SSIS) for autistic children: Implications for use and educational placement. *Research in Autism Spectrum Disorders*, 104, 102144. <https://doi.org/10.1016/j.rasd.2023.102144>

**Patents:** none to date

**Funding Obtained:** none to date

**T-STEP (COURSE- Session 3)**

|                                 | Domain                 | Features   | Scoring Key  | Scoring |   |   |   | Video Notes |
|---------------------------------|------------------------|--|--|---------|---|---|---|-------------|
| <b>Preparation &amp; Review</b> |                        |  |  |         |   |   |   |             |
| 1                               | Lesson Content         | <input type="checkbox"/> Prepare for T-STEP and Self-Monitoring Sheet<br><input type="checkbox"/> Review Agenda<br><input type="checkbox"/> Review Visual Reminders Around Home and in the Community Sheet<br><input type="checkbox"/> <i>Recording error (make a note)</i>  | 3: Addresses at least 1 topic<br>0: Does not address topic   | ③       |   |   | ① |             |
| 2                               | Facilitator Engagement | <input type="checkbox"/> Makes encouraging/positive statements<br><input type="checkbox"/> Uses open ended, non-directed prompts or questions to involve students<br><input type="checkbox"/> Acknowledges (or restates) student comments<br><input type="checkbox"/> Facilitates class participation by calling on different students or asking for a volunteer<br><input type="checkbox"/> Monitors student engagement   | 3: Demonstrates at least 2 behaviors<br>0: Demonstrates less than 2 behaviors  | ③       |   |   | ① |             |
| <b>New Activities</b>           |                        |  |  |         |   |   |   |             |
| 3                               | Lesson Content         | <input type="checkbox"/> Learn: How to Review and Update a Goal Achievement Sheet<br><input type="checkbox"/> Evaluate: What Is My Schedule?<br><input type="checkbox"/> A Typical Schedule for College Students<br><input type="checkbox"/> Learn: What is Time Management? Why is it Hard to Manage Time?<br><input type="checkbox"/> Monitor Minute<br><input type="checkbox"/> Learn: Adulthood 101: The Adulthood Difference<br><input type="checkbox"/> Learn: Paper Schedule Systems and Electronic Calendars: Which to Use?<br><input type="checkbox"/> <i>Recording error (make a note)</i> | Number of new activities introduced and explained:<br><br>___/7  |         |   |   |   |             |
| 4                               | Facilitator Engagement | <input type="checkbox"/> Makes encouraging/positive statements<br><input type="checkbox"/> Uses open ended, non-directed prompts or questions to involve students<br><input type="checkbox"/> Acknowledges (or restates) student comments<br><input type="checkbox"/> Facilitates class participation by calling on different students or asking for a volunteer<br><input type="checkbox"/> Monitors student engagement   | 3: Demonstrates at least 3 behaviors<br>2: Demonstrates 2 behaviors<br>1: Demonstrates 1 behavior<br>0: Does not demonstrate any behaviors | ③       | ② | ① | ① |             |

|         | Domain                   | Features   | Scoring Key  | Scoring |   |   |   | Video Notes |
|---------|--------------------------|--|--|---------|---|---|---|-------------|
| 5       | Instructional Strategies | <input type="checkbox"/> Uses visual supports or visual reminders<br><input type="checkbox"/> Uses modeling (e.g., live, video) to demonstrate specific skills<br><input type="checkbox"/> Includes or solicits personal stories or other student examples<br><input type="checkbox"/> Prompts students to use a tool or routine strategy from a previous lesson<br><input type="checkbox"/> Visual Reminders<br><input type="checkbox"/> Self-Monitoring<br><input type="checkbox"/> Goal Achievement Routine Strategies<br>Simplify or Make a Change (SMAC-IT)<br>Weekly action steps toward goals | 3: Demonstrates 3 or more strategies<br>2: Demonstrates 2 strategies<br>1: Demonstrates 1 strategy<br>0: Does not demonstrate any strategies | ③       | ② | ① | ① |             |
| Wrap Up |                          |  |  |         |   |   |   |             |
| 6       | Lesson Content           | <input type="checkbox"/> Session Summary<br><input type="checkbox"/> Practice: Skill Work for Home<br><input type="checkbox"/> Self-Monitoring Sheet Final Check<br><input type="checkbox"/> <i>Recording error (make a note)</i>  | 3: Addresses at least 1 topic<br>0: Does not address topic   | ③       |   |   | ① |             |

T-STEP Fidelity

Location: \_\_\_\_\_

T-STEP (Counseling)

Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_-\_\_\_:\_\_\_

Video ID(s): \_\_\_-\_\_\_-\_\_\_-\_\_\_-\_\_\_-\_\_\_-\_\_\_-\_\_\_-\_\_\_-\_\_\_

Observer Initials: \_\_\_\_\_

**DoD T-STEP Fidelity Coding Form**

**Counseling – Self Advocacy #1 – Group Activity**

|                | Domain                 | Features  | Notes  |   |   |   |   |     |
|----------------|------------------------|---|--|---|---|---|---|-----|
| New Activities |                        |   |  |   |   |   |   |     |
| 3              | Lesson Content         | <input type="checkbox"/> What is Self-Advocacy?<br><input type="checkbox"/> What is Autism Spectrum Disorder?<br><input type="checkbox"/> Autism and Me Activity  | Key:<br>3: All new activities introduced and explained<br>0: 2 or fewer new activities introduced and explained                                    | ③ |   |   | ① | N/A |
|                |                        |   | Number of new activities introduced and explained: __/3  |   |   |   |   |     |
| 4              | Facilitator Engagement | <input type="checkbox"/> Makes encouraging/positive statements<br><input type="checkbox"/> Uses prompts or questions to involve students<br><input type="checkbox"/> Acknowledges (or restates) student comments<br><input type="checkbox"/> Facilitates class participation by calling on different students or asking for a volunteer<br><input type="checkbox"/> Monitors student engagement | Key:<br>3: Demonstrates at least 3 behaviors<br>2: Demonstrates 2 behaviors<br>1: Demonstrates 1 behavior<br>0: Does not demonstrate any behaviors | ③ | ② | ① | ① | N/A |
| Wrap Up        |                        |   |  |   |   |   |   |     |
| 6              | Lesson Content         | <input type="checkbox"/> Practice: Skill Work for Home  | Key:<br>3: Addresses 1 topic<br>0: Does not address topic  | ③ |   |   | ① | N/A |