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Occupational Therapy Group Programming for Adolescents with Developmental and Learning Disabilities: A Retrospective Documentation Review

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Occupational Therapy Group Programming for Adolescents with Developmental and Learning Disabilities: A Retrospective Documentation Review

Abstract

Background: Individuals with learning disabilities have higher rates of unemployment, are less likely to live independently, and have lower rates of college graduation. Occupational therapists who serve this population need to capture outcomes for programming effectively to determine best practice to address these needs. A retrospective documentation review of occupational therapy transition group programming was completed to identify themes and to assess fieldwork student documentation clarity.

Method: Analysis of 162 de-identified treatment notes from the years 2014–2018 was completed for six high school students (HSS) (13 to 20 years of age) who previously participated in a high school transition program for adolescents with disabilities. A five-phase analysis process consisted of: (a) review of all treatment notes to determine common areas of intervention; (b) provision of an initial peer debriefing session with one transition program licensed occupational therapist to confirm identified themes; (c) synthesis of HSS strengths/weaknesses; (d) analysis of the fieldwork students' (FWS) documentation to determine clinical reasoning and clarity; and (e) follow-up peer debriefing with two transition program licensed occupational therapists to re-confirm all findings.

Results: Analysis suggested group transition programming was used to facilitate HSS development in the following areas: attention and group participation, social behaviors, abilities to serve as a leader, participation in group discussion, adherence to group rules, fine motor skills, bilateral coordination skills, and hand strength.

Conclusion: This retrospective analysis provides evidence that occupational therapy transition group programming is designed to facilitate smoother transitions for adolescents with disabilities in areas unique to occupational therapy practice. Analysis highlighted the need for more standardized methods of documentation for FWS and transition program occupational therapists.

Comments

The authors report no potential conflicts of interest.

Keywords

group programming, developmental disabilities, learning disabilities, transition, high school

Credentials Display

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Leaving the comfort of high school poses unique challenges for adolescents with developmental and learning disabilities (Chen et al., 2018; Roux et al., 2013; Theobald et al., 2018; Young et al., 2017). Many young adults living with a developmental disability also struggle to live independently, with only 15.7% of individuals reportedly living in independent housing arrangements (Lulinski et al., n.d.). Individuals with learning disabilities are less likely than their peers to finish high school successfully, with 18.3% of individuals with disabilities versus 8.5% of people without disabilities in the age group of 25 to 34 years having not obtained a high school diploma. Furthermore, the rate of employment for those in the working age bracket is 35.5% compared to the national rate of employment for people without disabilities of 76.5% (National Center of Learning Disabilities, 2017). In particular, young adults with autism spectrum disorder who decide to pursue a college education have reported that their experience of navigating an unfamiliar university campus independently is daunting; they frequently struggle with socializing, managing schedules, adjusting to living away from home, and dealing with unexpected events (White et al., 2019).

Supporting the unique needs of individuals with disabilities is critical to ensure successful preparation for life after high school (Chen et al., 2018; Roux et al., 2013; Theobald et al., 2018; Young et al., 2017). Although transition planning is mandated through the Individuals with Disabilities Education Act (IDEA) (Kauffman et al., 2018), students with learning disabilities are not adequately prepared for the transition to work or for postsecondary education (Ellenkamp et al., 2016; White et al., 2019). Therefore, it is necessary to determine the best methods to support and deliver information to this population to help them reach independence. Current literature suggests positive results for students with learning disabilities that participated in career and technical education courses, indicating that students who were provided additional learning opportunities were more likely employed full time 2 years after graduation from high school (Wagner et al., 2016). Findings from the National Longitudinal Transition Study-2 (NLTS2) determined that predictors of success following high school for students with disabilities included regular parent involvement, development of self-care and independent living skills, awareness of potential career options, increased vocational education experiences, work experiences, attainment of a high school diploma, and well-developed social skills (Mazzotti et al., 2016). NLTS2's findings are compatible with the areas of practice identified in *The Occupational Therapy Practice Framework* (OTPF), and thus, the profession has the potential to play a key role in facilitating the success of transitioning adolescents (American Occupational Therapy Association [AOTA], 2014). Knowing this, it is crucial for occupational therapists that are currently serving this population to document accordingly in order to capture program outcomes to best support the professions' expertise for transitioning adolescents to independent living. For this project, a retrospective documentation review of occupational therapy transition group programming was completed to identify themes and to assess fieldwork student documentation clarity.

Description of the Group Transition Program

In an effort to promote smoother transitions for individuals with developmental and learning disabilities, a for-profit private practice pediatric clinic in an urban area created a transition program at a public high school. Programming began in 2014 and continues to be led by licensed occupational therapists, occupational therapy doctoral students, and fieldwork students. High school students that take part in this group programming are selected by school occupational therapists, teachers, or other school staff and are required to have an Individualized Education Plan (IEP). Transition programming aims to provide meaningful, occupation-based interventions to work toward target areas related to successful

transition, such as prevocational skills, social skills, self-determination and mindfulness, physical fitness, and sensory processing. To date, standardized outcome measures have not been used to track outcomes because of challenges with adequate time in the group sessions (45 to 60 min long) and limited reimbursable funding from the public school system. In lieu of this, occupational therapy fieldwork students (FWS) complete individual weekly session progress notes for all individual high school students (HSS) participating to document the HSSs' challenges and strengths and to provide suggestions and strategies to incorporate into the following group sessions. In addition, the FWS use their clinical reasoning to attribute hypotheses to the challenges experienced by the HSS in the documentation. Review and analysis of individual outcomes in relation to the transition programming was determined as necessary to track the progress of the program participants, inform future programming, and better communicate with the interdisciplinary team regarding transition planning for the HSS.

Individual weekly session notes contained the following elements: challenge areas, hypotheses (for challenge areas), strengths, and suggestions and strategies for school staff. The FWS completed these notes on the HSS and sent their drafts to the licensed occupational therapists that facilitated the transition program, who provided feedback and suggestions for edits back to the FWS before finalizing documentation. After finalization, all individual weekly session notes were shared with the occupational therapist serving as the liaison at the high school.

Method

This project was reviewed by the Thomas Jefferson University's Institutional Review Board (IRB) and was determined not to need oversight on the basis that a de-identified retrospective analysis of qualitative treatment notes was considered nonhuman subjects research. Documentation from six of the students who participated in the group programming for 2 or more years were selected for the sample. All of the students selected were required to have an IEP and be enrolled in grades 9–12. The registered occupational therapist that led the programming compiled documents covering the students' participation in the programming into one running Microsoft Word file. Each student in the sample was de-identified and provided a code by the registered occupational therapist and any identifying information was removed from the treatment notes prior to review. One reviewer, an occupational therapy doctorate student, completed priori coding manually; no data extraction software was used for coding because of the complexity of the individual weekly notes. Keywords and themes were identified and member checking was used with licensed occupational therapists leading the programming on two separate occasions to gain insight into the documentation.

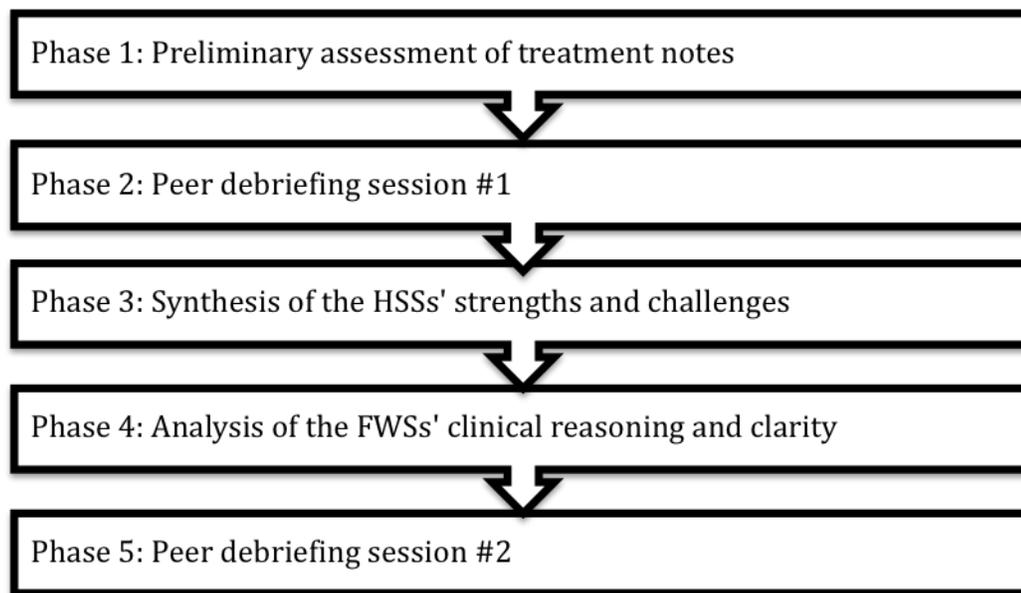
Data Analysis

Theme identification was completed in five phases (see Table 1). Phase 1 was comprised of the preliminary assessment of the treatment notes. This preliminary assessment included an initial read through of all treatment notes included in the sample. Summarized data was compiled for each participant in regard to strengths and challenges, as well as hypotheses and suggestions as documented by the FWS. Phase 2 was comprised of the first peer debriefing session, which took place with one licensed occupational therapist that facilitates the transition program. Phase 3 involved the synthesis of the HSSs' strengths and weaknesses and tracking changes over the course of group involvement for the HSS. Split into two subphases, first themes were identified as they related to the challenge areas experienced by the HSS and then into themes related to the growth and development of the HSS with continued participation in the transition program. Phase 4 involved the analysis of the clarity and clinical

reasoning of the FWS, which was then split into three separate subphases. Subphase 1 involved the thematic coding of the suggestions and strategies intended to facilitate the success of the HSS, documented by the FWS. Subphase 2 involved the use of the OTPF (AOTA, 2014) to synthesize and code the HSS strengths and problem areas in relation to functional skills to determine which areas were most frequently documented by the FWS. Subphase 3 involved the analysis of the FWSs' hypotheses attributed to the challenge areas of the HSS. Finally, Phase 5 involved the final peer debriefing session in collaboration with two licensed registered occupational therapists that led the transition program.

Table 1

Analysis Process



Sample

The sample of HSS ($n = 6$) consisted of three males and three females, 13 to 20 years of age, with 162 de-identified treatment notes (see Table 2) for group sessions that occurred between the years of 2014 and 2018. The HSS who met the criteria for either having a learning or developmental disability were included in the data set; all data was aggregated to maintain IRB compliance. Diagnoses included autism, intellectual disabilities, and speech and language impairments. Individuals without a diagnosis of a developmental or learning disability were excluded.

Table 2

Demographics and Group Programming Attendance

High School Student (HSS) #	Gender	Age Range	Treatment Period	Total # of Sessions Attended
HSS1	Male	15-16 years	2016- 2018	24
HSS2	Male	13-15 years	2015-2018	23
HSS3	Male	18-20 years	2015-2017	28
HSS4	Female	17-19 years	2015-2018	31
HSS5	Female	15-17 years	2016- 2018	20
HSS6	Female	18-20 years	2014-2016	36
Total Notes: 162				

Qualitative Analysis

The group treatment plans revealed the following general areas of focus (see Table 3). Analysis indicated that activities generally did not build on the content from the previous session and that different focus areas were planned for sequential weeks.

Table 3

Group Treatment Plan Areas of Focus

Group Treatment Plan Areas of Focus: 2014-2018	
Prevocational skills	<ul style="list-style-type: none"> • Money management • Meal preparation • Teamwork • Fine motor, dexterity, bilateral coordination
Social skills	<ul style="list-style-type: none"> • Interactive gross motor activities • Group games (e.g., board games, charades)
Self-determination	<ul style="list-style-type: none"> • Setting goals and exploring dreams for future jobs
Physical fitness and sensory processing	<ul style="list-style-type: none"> • Stress reduction and management • Aerobic exercise • Yoga

Theoretical Basis

This review was conceptualized with the Model of Human Occupation (MOHO) (Kielhofner, 2008) as the main theoretical basis. Based on the population and scope of the project, other theories were considered and used, including the Person-Environment-Occupation Model (Law et al., 1996) and the Ecology of Human Performance framework (Dunn et al., 1994); however, the MOHO was selected as the main theoretical basis for this study. The MOHO theory helped to provide a holistic view of the HSS, taking into account all factors that may be impacting their current levels of participation and well-being (Cole & Tufano, 2008). The MOHO is aligned with this study as holistic factors need to be identified and explored, as they relate to the needs of individuals with developmental and learning disabilities preparing for high school graduation (Stewart, 2009). Attention was paid to all three tenants of the MOHO: volition, performance capacity, and habituation (Kielhofner, 2008).

Results

Analysis of Group Programming

Preliminary assessment of individual treatment notes revealed inconsistencies in the quality and style of documentation in Phase 1. Specifically, it became apparent that there were a variety of performance areas being documented by the FWS and that the inconsistencies in activities completed in sessions from week to week led to challenges in following the development of the HSSs' performance skills. While member checking the preliminary data in Phase 2, the licensed occupational therapist reported that the treatment notes were originally put in place as an educational tool for the FWS in order to work on clinical reasoning and documentation skills. The variation of documentation styles, treatment note length, and clarity of the treatment notes was, therefore, related to the FWSs' clinical experiences and comfort in completing documentation. Moving forward, the reviewers determined a need to incorporate the analysis of the FWSs' clarity and clinical reasoning into the analysis as a way to provide insight into potential methods of improving the transition program in regard to documentation. All of the quotes have been taken directly from the treatment notes documented by the FWS.

Theme 1: Challenge Areas of the HSS

When the treatment notes were analyzed in Phase 3, themes emerged regarding challenges the HSS faced that affected their ability to participate in the transition program. Themes identified included social behaviors, communicating with peers (specifically that the HSS communicated more with adults rather than peers), fine motor skills, bilateral coordination skills and hand strength, sustained attention, sequencing in activities, challenges experienced following group rules, and appropriate handling of group materials (see Table 4).

Table 4*Challenge Areas of the HSS*

Challenge Areas Themes	HSS (#)
1a. Social behaviors	HSS1, HSS2, HSS3, HSS4, HSS5
1b. Communicates more with adults vs. peers	HSS1, HSS4, HSS5*, HSS6
1c. Fine motor skills, bilateral coordination skills, hand strength	HSS3, HSS4, HSS5, HSS6
1d. Sustained attention	HSS1*, HSS2, HSS3, HSS4
1e. Sequencing activities	HSS1, HSS2, HSS6
1f. Adherence to group rules	HSS2, HSS3
1g. Handling of group materials	HSS1, HSS4

*Note.** Indicates that this outcome was determined in peer debriefing.

Theme 1a: Social Behaviors. Documented observations in regard to challenges with socially appropriate behaviors were synthesized. Themes arose indicating that connecting socially with peers was challenging for the HSS and that the HSS commonly struggled with appropriate social interaction. The HSS were documented writing or verbally expressing inappropriate or hurtful comments to peers, using foul or inappropriate language directed at their peers, interrupting group facilitators when they were providing instructions, and demonstrating physical affection to group facilitators at inappropriate times.

HSS1, HSS2, and HSS3 were documented to display behaviors of mocking or making fun of their peers. HSS1 was observed to write “mean” comments directed toward other students in the group and reportedly “was accused by multiple students of writing inappropriate comments on classmate’s paper after activity had ended.” Both HSS2 and HSS3 were documented verbally insulting or making fun of their peers while participating in group activities. During an activity in which a peer expressed signs of being afraid when a balloon popped, it was reported that HSS2 called his peer a “scaredy cat.” In addition, it was reported that HSS2 demonstrated challenges with appropriate verbalizations while participating in a game “[HSS2] would sometimes say words that were not appropriate. Even when given verbal reminders to quiet or lower his voice, he would not follow directions.” Additional observations reported by the FWS included, “HSS2 continue[s] to verbally insult other classmates and use swear words under his breath.” HSS3 was also reported to verbally insult his peers with a FWS reporting that, “He was also making jokes and mocking one of his peers.”

HSS4 and HSS5 were not documented to insult or mock their peers in group but were observed to demonstrate behaviors that could be seen as inappropriate socially. Specifically, HSS4 was noted to

“[give] hugs to all OT students after only [meeting] them one time.” HSS5 was reported to have challenges with inhibiting verbal comments at inappropriate times and displayed behavior indicative of echolalia. “[HSS5] demonstrated slight preservation on other student’s words [and] continued to repeat comments out loud and interrupted therapist to inform her of classmate’s actions.”

Theme 1b: Communicates More with Adults versus Peers. Documented observations in regard to the HSSs’ behaviors of communicating with peers was synthesized. It became evident that there was a theme for the HSS feeling more confident in communicating with the group facilitators rather than their same-aged peers in the group. For HSS1, HSS4, and HSS6 it was documented that these students felt more comfortable in communicating with adults rather than their same-aged peers in the group. All three HSS had similar reported observations. Specifically, “[HSS1 could] communicate with his teacher, but [is] unable to socialize with peers;” “Upon arriving to class, HSS4 gave all adult interns a hug. She is observed to feel comfortable with the interns;” “[HSS6] was observed demonstrating more interest in meeting the interns, rather than her peers interested in meeting the interns, not her peers.”

Theme 1c: Fine Motor Skills, Bilateral Coordination Skills, and Hand Strength. Documented observations in regards to the HSSs’ abilities related to fine motor skills, bilateral coordination skills, and hand strength as it related to group activities were taken into consideration. The HSS demonstrated challenges with bilateral coordination as it related to gross motor activities, using scissors to complete a group activity and completing tasks such as tying a bow or braiding. Specifically, HSS3 was reported to “drop one of the objects multiple times from one of his hands while attempting to pass another object to his peer on the opposite side due to difficulties with bilateral coordination.” Both HSS5 and HSS6 demonstrated challenges with using scissors. HSS5 was repeatedly documented to have challenges with using scissors to complete tasks, and when handed scissors HSS6 was reported stating, “Miss I need your help cutting, I can’t do it.” When prompted with cues on how to cut out the item, HSS6 reported “I don’t know how to cut around it!” HSS4 was reported to demonstrate challenges with tying a bow, and HSS6 required moderate assistance for braiding.

Theme 1d: Sustained Attention. Documented observations in regard to sustaining attention on group tasks were taken into consideration. The HSS were reported to demonstrate challenges with maintaining attention in busy environments. Specifically, for HSS2, “Staff had to physically block student’s view of the environment to prevent him from getting distracted.” HSS4 demonstrated challenges with completing the steps of an activity and was reported to “[need] frequent cuing to stay focused, possibly due to busyness of environment.” HSS3 was reported to “demonstrate short attention span because he required maximal verbal cues to play Jenga and stay with the game.”

Theme 1e: Sequencing in Activities. Documented observations in regard to the HSSs’ ability to sequence steps required during an activity were taken into consideration. Specific attention was paid to noted cues required and the HSSs’ ability to independently initiate the next step in a task. The HSS were noted to sit and wait for an adult to prompt them to continue task participation or to inquire what the next step may be, even though verbal instructions had just been provided. HSS1 was noted to “sit passively if he didn’t know the next steps, or if he needed an item, he didn’t have, such as glue or scissors, he wouldn’t ask for the item, but would wait to be asked if he needed anything.” HSS2 demonstrated challenges in sequencing during a teamwork activity that he was completing alongside his peer with the reported observation. “Student required max verbal cues of ‘what block is first/ what’s the next step/ etc.’ in order to verbalize instructions for other student.” HSS6 was observed to have challenges with following a sequence of steps, immediately following the instruction. “[HSS6] had a

tendency to repeatedly ask questions about the activity. For instance, in the beginning of group she asked, ‘what are we going to do with these bags?’ even though the OT staff have repeatedly informed the group of the activity’s purpose.” Challenges in abilities to sequence within tasks or remember the purpose of a task suggested the potential to functionally limit the HSS in a variety of transition vocational skills or the transition to higher education.

Theme 1f: Adherence to Group Rules. Group norms and expectations were in place requiring students to remove hoods or hats prior to entering and prohibiting any use of personal cell phones. Two HSS were reported to demonstrate challenges with complying with these group rules. It was reported that “[HSS2] would put his hood on, he would use his headphones during class, and he would text during class.” Similarly, it was reported that HSS3 would “[keep] his hoody on covering his eyes and ears during the session.”

Theme 1g: Handling of Group Materials. A variety of materials were used each week during group. Observations regarding the HSSs’ treatment of these materials were taken into consideration. Two HSS were reported to demonstrate challenges with handling group materials in a respectful manner. It was reported that HSS1 “ripped multiple cards in half on at least 3 separate occasions.” HSS4 was reported to “become increasingly agitated during the time the group as a whole was playing their maracas to music” and was observed to “[throw her] maraca on the ground.”

Theme 2: Improved Social and Fine Motor Skills

The following themes were determined during Phase 3 of the analysis and were related to the development of skills as the HSS progressed through participation in the transition programming: increased attention and active group participation; social behaviors; leadership and abilities to serve as a mentor; participation in group discussion; adherence to group rules; and fine motor, bilateral coordination, and hand strength (see Table 5). Again, the quotes were taken directly from the treatment notes documented by the FWS.

Table 5

Improved Social and Fine Motor Skills of the HSS

Development of Strengths Themes	HSS (#)
2a. Increased attention / active group participation	HSS1, HSS2, HSS3, HSS4, HSS5, HSS6
2b. Social behaviors	HSS1, HSS2, HSS3, HSS4, HSS6
2c. Leadership / mentorship skills	HSS2, HSS4
2d. Participation in group discussion	HSS1, HSS5
2e. Adherence to group rules	<i>HSS2*</i> , HSS3
2f. Fine motor skills, bilateral coordination skills, hand strength	<i>HSS4*</i> , HSS6

*Note.** Indicates that this outcome was determined in peer debriefing.

Theme 2a: Increased Attention and Active Group Participation. Documented observations related to the HSSs’ abilities to demonstrate sustained attention on group tasks and active group participation was taken into consideration. All of the students in the sample were reported to increase their abilities in this skill area. HSS2, HSS3, and HSS6 demonstrated an increase in their abilities to put

forth effort and sustain attention on tasks that were challenging for them. HSS1 and HSS5 demonstrated an increase in volunteering to participate in tasks and serving as a “group helper” by passing out materials and helping with group set up. HSS4 demonstrated an overall increase in enthusiasm and participation in group tasks.

Initially, HSS2 was reported to have challenges with sustaining attention, and the group facilitators had to physically block his view of the other students as a method of increasing his task participation. It was reported that “[HSS2] was able to remain attentive to task and follow specific directions.” During another session, it was reported that HSS2 was “noticeably less resistive to activities presented today” and that he “initially acted as though he did not want to participate; however, with encouragement [he] did engage well and participate appropriately with [his] partner.”

HSS3 initially demonstrated challenges with sustaining attention on group tasks. With continued participation in the transition group, HSS3 “demonstrated positive behavior . . . by completing activities with no complaining and little need for direction” and “showed pride in finished [product].” During a separate session, it was reported that HSS3 “remained engaged with [the] activity throughout session.” Similarly, HSS6 demonstrated enthusiasm and excitement to participate in group activities and was reported to “[demonstrate] good effort in task [even] though she thought it was challenging.” Both HSS3 and HSS6 demonstrated an increase in their abilities to sustain attention and put forth effort in the transition group. In addition, both HSS1 and HSS4 demonstrated an increase in their abilities to sustain attention on group tasks with HSS1 reported to “[participate] and [stay] on task in all parts of activity,” and HSS4 described as having “great attention and effort to task,” and as an “enthusiastic participant.”

Both HSS1 and HSS5 demonstrated increases in their active group participation skills, as evidenced by their active volunteering to assist with group set up, as well as volunteering to serve as an example during group demonstrations. Specifically, it was noted that HSS1 “raised his hand and was excited to demonstrate [serving as an example for the ‘Simon Says’ activity].” HSS5 was documented to “[ask] the [FWS] if she could help set up the classroom before the group session. She also independently initiated collecting classmates’ nametags and project materials.”

Theme 2b: Social Behaviors. Documented observations related to the HSSs’ abilities to communicate with peers was taken into consideration. For HSS1, HSS4, HSS5, and HSS6 observations documented by the FWS throughout their participation in group programming suggested improvements in their abilities to communicate appropriately with their peers after initially demonstrating behaviors of communicating more frequently with the group facilitators. In addition, for HSS1, HSS2, and HSS3, after initially demonstrating inappropriate behaviors toward their peers (i.e., mocking or making fun of other HSS), these students demonstrated a ceasing of inappropriate behaviors directed at their peers. Developing skills related to social behaviors was suggested to have the potential to serve a variety of positive implications for the HSS in regard to their success following high school graduation.

Initially during transition group participation, HSS1 was reported to engage in behaviors of mocking or making fun of his peers, and he additionally was observed to be more comfortable in communicating with the adult group facilitators rather than his peers. With continued participation in the transition group, HSS1 was documented to “[demonstrate] improved socialization skills, ignoring [a] peer who attempted to prompt negative behaviors throughout session.” In addition, it was reported that “[HSS1] was respectful to all members of the group, including himself (i.e., no tantrums, anger, or self-harm behaviors noted),” indicating that HSS1 increased in his abilities to inhibit inappropriate commentary directed at his peers. In addition, reported observations indicated that he demonstrated an

increase in his abilities to spontaneously communicate with his peers: “[HSS1] appropriately communicated 2–3 word phrases with [a] peer,” and was noted to “[help] peers during Jenga game by saying, ‘I’ll help hold it.’”

After showing limited initiation to communicate socially with her peers during her initial participation in group, HSS4 was noted to initiate spontaneous conversations with her peers. “[HSS4] and [HSSA] finished with extra time and were able to engage in a conversation about what foods they like to cook.” HSS4 was also noted to demonstrate other socially appropriate behaviors, such as “[asking] for help when needed and [waiting] for her turn patiently.” Similarly, HSS6 was initially reported to communicate more frequently with adults rather than with peers; however, with continued group participation she was reported to “[greet] her classmates with excitement,” indicating an increase in awareness of her peers and spontaneous verbal communication.

Both HSS2 and HSS3 were initially reported to verbally insult or make fun of their peers; however, both of these HSS were reported to cease inappropriate peer interactions and increase their ability to interact spontaneously with peers in an appropriate manner. For HSS2, when describing his task performance at a carnival activity, it was reported that “[HSS2] demonstrated appropriate turn taking behaviors when waiting for peers to finish their turn at a particular booth.” HSS3 was reported to handle a challenging social situation in a respectful manner. “[HSS3] did not want to sit next to [a] certain peer, but handled the situation by asking [the] teacher if he could move, rather than by any other negative means.” During a separate session HSS3 was assigned to sit next to a non-preferred classmate, but it was documented that “despite his frustration he was able to stick to the task and participate.” These instances demonstrate how HSS2 and HSS3 increased in their abilities to interact appropriately with their peers, in situations in which they may have otherwise and formerly resorted to using insults or inappropriate language prior.

Theme 2c: Leadership and Mentorship Skills. Documented observations related to the HSSs’ abilities to demonstrate leadership skills as well as serve as a mentor to their peers were synthesized. Themes arose indicating that the transition program provided the opportunity for students to practice their skills as leaders and mentors, such as assisting their peers or serving as a leader of a group of peers. For HSS2 and HSS4, observations documented by the FWS throughout their participation in group programming suggested that they demonstrated improvements in their abilities to serve as a leader and a mentor.

After initially demonstrating challenges with active group participation and connections with peers, HSS2 was observed to develop in his abilities to serve as a leader throughout his participation in group. HSS2 was described in documentation to “enjoy being in the role of big brother” and that he “has a genuinely helpful and compassionate nature that is often not obvious or covered up by a tough-guy demeanor.” In addition, he was noted to be “enthusiastic about [the] opportunity to help [a] peer with [a] sorting activity.” When he noticed that a peer seemed to be disengaged in the group activity, he was noted to “redirect [the] peer when [the] peer looked uninterested in task with statements like ‘look here/listen.’” In addition, it was noted that HSS2 “independently volunteered to retrieve and pass out booklets to group members.” These documented observations suggested HSS2’s ability to serve as a mentor for others as well as a leader of the group when he initially was distracted and disengaged in the transition program.

Similarly, HSS4 was noted to take on a leadership role in a small group setting and to serve as a mentor in facilitating the engagement of her peers. In a money management related task it was noted that

HSS4 “took on a leadership role within the small group to help her classmates count the money.” In addition, HSS4 was noted to demonstrate awareness of other students’ needs and to provide encouragement to her peers. “[HSS4] instinctively moved [her] body to assist classmates during hula hoop activity and was observed cheering loudly for everyone.”

Theme 2d: Participation in Group Discussion. Both HSS1 and HSS5 demonstrated an increase in their abilities to share with the group during the end of group discussion. Specifically, it was noted that HSS1 “was able to share things he was thankful for with his classmates.” HSS5 also appeared to demonstrate increased comfort in her public speaking abilities after demonstrating refusal to participate in the group discussion with her classmates during the previous week. “She was able to share which activity she enjoyed doing more with the whole group and explain why, which she was hesitant to do last week.” Development of the HSSs’ abilities to participate in a group discussion suggests a potential to relate to the HSSs’ success in a future job or educational opportunities, as it relates to their abilities to verbally communicate and share their opinions with others.

Theme 2e: Adherence to Group Rules. During the initial group sessions, HSS3 demonstrated challenges with following the group rule of refraining from wearing his sweatshirt hood. However, following continued engagement in the transition program, HSS3 was noted to remove his hood independently prior to participating in group activities. It was documented that he “followed class rules and refrained from wearing [his] hood throughout session” and that during a separate session he “removed his sweatshirt hood, [and] moved to stand up for yoga exercise.” There is a suggestion that this may have been a sensory response; however, as written, the documentation does not indicate a root cause of this behavior. In addition, during the peer debriefing process, it was determined that HSS2 demonstrated development in this area. (See Phase 5 for a description of HSS2’s development of this strength as this was uncovered in the peer debriefing process.) Development of the HSSs’ adherence to organizational guidelines suggests the potential to impact the HSSs’ ability to successfully integrate into the workplace.

Theme 2f: Fine Motor Skills, Bilateral Coordination Skills, Hand Strength. During the initial transition group sessions, it was documented that HSS6 demonstrated challenges with using scissors to cut out items as it pertained to task activities. However, with continued participation in the transition program it was documented that HSS6 “[used scissors] to cut the shapes out effectively.” In addition, during the peer debriefing process, it was determined that HSS4 demonstrated development in this area. (See Phase 5 for description of HSS4’s development of this strength as it was uncovered in the peer debriefing process.) It is suggested that fine motor, bilateral coordination, and hand strength abilities all have the potential to relate to the required skills necessary for the HSS to inform a smooth transition from high school to successfully perform a variety of vocational skills.

Analysis of the FWS Documentation

Suggestions and Strategies

During Phase 4, the FWS included suggestions and strategies to use in the subsequent session in order to work toward the development of skills that were noted in the “challenge areas” of each note. Thematic analysis revealed that the FWS were most frequently recommending suggestions and strategies that were dependent on facilitation by an adult or group facilitator (see Table 6). Therefore, the FWS were documenting suggestions to increase the independence and task participation of the HSS; however, at the time, the HSS would be unable to enact these methods independently. This demonstrates a challenge for the FWS in regard to their clinical reasoning skills secondary to the overall goal of the

transition program aiming to increase the independence of the HSS after high school graduation. The implementation of suggestions and strategies in the subsequent group session was not tracked in the data, which prevents further analysis.

Table 6

Thematic Analysis of Occupational Therapy FWSs' Suggestions and Strategies

Themes	Frequency
Provide cues as needed (tactile, verbal, HOH, visual)	44
Incorporate activities in future sessions to address areas of weakness	34
Encourage leadership skills	33
Encourage appropriate social participation	27
Downgrade task as needed to facilitate participation	27
Review rules for group	22
Provide visual instructions / visual schedule / visual guide	20
Encourage student to serve as a mentor to others	12
Provide student with choices	10
Pair student with another student who demonstrates appropriate behavior or skill	9
Encourage problem-solving	8
Encourage teamwork	7
Provide a method to increase focus or decrease anxiety (i.e., a “fidget” or method of providing proprioceptive input)	7
Upgrade tasks to increase challenge	7
Provide positive reinforcement when student acts appropriately	7
Encourage social participation with unfamiliar students	6
Place student in smaller groups to facilitate participation	6
Separate student from particular students as a method to decrease negative behaviors	6
Pull student from group if negative behaviors are observed; remove preferred item	5
Encourage sharing with group	5

Note. The following themes were also captured but had frequencies < 5: Suggestions for participation in social skills, conversation training group or theatre group, using a behavioral approach (i.e., requiring student to clean up immediately after making a mess, behavior charts), decreasing distractions to facilitate student engagement, suggested activities related to planning for the future, activities to address IADL skills, requiring students to apologize for negative behaviors, encouraging students to express their feelings/engage in self-reflection, providing students with increased time to process, and providing close adult supervision to ensure appropriate behavior.

The OTPF

The OTPF (AOTA, 2014) was used as a tool to synthesize and code the summary statements in each treatment note (see Table 7) in order to assess which performance skill areas were most frequently documented by the FWS as they were assessing the performance of the HSS. Unable to categorize was used to describe documented strengths or challenges in which it was unclear what aspect of the task was specifically a strength or a challenge for that HSS. There were 29 reported instances of unable to categorize for strengths and 25 reported instances for challenges. The results revealed that motor skills were the least documented area by the FWS, indicating that this skill area was generally underreported in the treatment notes. Performance skill areas that were reported less than five times were not included in this reported data set.

Table 7
Coding with the OTPF

(OTPF) Reported Observation	Frequency	
	Strengths	Challenges
Motor Skills		
Manipulation of objects	13	19
Coordinate full body movements	0	8
Demonstrate fluid and smooth movements	0	5
Stabilize	0	5
Process Skills		
Attends	33	15
Heeds	43	18
Initiation	11	14
Volunteers	7	0
Questions	11	0
Sequences	29	35
Tool use	0	7
Social Interaction Skills		
Accommodates	0	14
Acknowledges	26	0
Approaches	22	14
Expresses emotion	25	0
Looks	5	0
Produces speech	22	15
Questions	0	5
Replies	13	11
Takes turns	6	0
Turn toward	9	0

In regard to motor skills, the FWS reported observations describing the manipulation of objects in the strengths section 13 times and in the challenges section 19 times. In the challenges section, the FWS reported observations regarding the HSSs' abilities to coordinate full body movements eight times, demonstrate fluid and smooth movements (flow) five times, and to stabilize or demonstrate balance during a gross motor task five times.

In regard to process skills, the FWS reported observations regarding the HSSs' abilities to attend to group tasks 33 times in the strengths section and 15 times in the challenges section. Findings related to the HSSs' abilities to follow through with task demands (heeds) were reported 43 times in the strengths section and 18 times as a challenge. Findings related to general task initiation were reported 11 times in the strengths section and 14 times as a challenge. In addition, findings related to the HSSs' ability to volunteer to assist the group facilitators with a task or to volunteer to demonstrate for the group were reported seven times in the strengths section. Inquiring was described as the HSSs' ability to ask questions to group facilitators or peers when they needed an item or were not sure what to do next and was captured 11 times by the FWS in the strengths section. The HSSs' abilities to sequence tasks were reported 29 times in the strengths section and 35 times as a challenge. Lastly, proper use of tools and items were described seven times as a challenge.

In regard to social interaction skills, a separate category was included to categorize statements made by the FWS that did not describe a clear performance skill in the social interaction section (social interaction skills non-specific). Non-specific strengths in regard to social interaction were reported 21 times. Abilities to prevent inappropriate social interaction (accommodates) were reported as a challenge area 14 times. The FWS reported the HSSs' abilities to acknowledge and encourage others in the strengths section 26 times. The FWS reported the HSSs' abilities to approach or start a social interaction with others 22 times in the strengths section and 14 times as a challenge. The HSSs' abilities to express emotion were reported by the FWS 25 times. Abilities to make eye contact (looks) with peers or group facilitators were reported five times in the strengths section. The HSSs' abilities to produce speech were reported 22 times in the strengths section and 15 times as a challenge. The HSSs' abilities to generate questions were reported five times as a challenge. Their abilities to reply to questions or statements made by others were reported 13 times in the strengths section and 11 times as a challenge. The HSSs' abilities to take turns in verbal communication with others were reported in the strengths section six times. And the HSSs' abilities to turn toward others while participating in social interactions were reported nine times as a strength.

FWS Hypotheses

The purpose of the consultation (treatment) notes were to allow the FWS to use their clinical reasoning skills to determine potential hypotheses to serve as an explanation for the documented challenges experienced by the HSS and to offer suggestions to the school staff on how to further facilitate learning or development. Analysis indicated that it was not feasible to determine the validity of some of the hypotheses because, in part, of the large variations as to how the FWS described the performance of the HSS. For example, the FWS frequently attributed qualifying statements that were too general in describing the performance of the HSS, which created uncertainty for the purposes of a research project in analyzing the HSSs' abilities to participate in functional tasks. For example, statements such as "good fine motor skills" were documented, identified as an area of strength, and often then not an area that required additional focus but was not specific in terms of identifying what the student was supposed to achieve with this identified strength. In an effort to understand the performance of the HSS, reporting conclusions outside the occupational therapy scope of practice by the FWS was also present. Specifically, observations such as "poor math skills" were noted, which provided limited information in regard to what the student was able to achieve. Unrelated assumptions or evaluative statements were also found in a few treatment notes; for example, "[The student is] not receiving enough adult attention at home." These types of statements provided limited foundation in regard to what behaviors were observed to arrive at these conclusions and may fit more in a social work or psychology frame of reference. The FWS also documented several hypotheses (frequently between four to five per note) to describe their clinical reasoning for the challenge area of the HSS. This strategy appeared to be a compensatory method of the FWS, assuming that one of the documented areas would be correct. This allowed for the FWS to further investigate and "test" the hypotheses in subsequent interactions and group sessions, rather than using clinical reasoning to determine the most likely options. The analysis of the documented hypotheses revealed a need to require a means to ensure more consistency in FWSs' documentation so that there is a clearer, succinct description of the observations in regard to the performance of the HSS. Between the summer of 2014 and the fall of 2018, it is likely there were as many as 14 different FWSs' writing consultations on each of the HSS.

Member Checking for Final Confirmation

During Phase 5, additional member checking occurred with two licensed occupational therapists that facilitated the transition program. The licensed occupational therapists had the opportunity to review all of the reported findings from Phase 3 and Phase 4, to confirm or deny the reported findings, and to add additional findings to the reported outcomes, if needed. In the review of the Phase 3 data, two reported findings were subsequently refuted; specifically, in analysis of the qualitative treatment notes, it was reported that HSS5 and HSS6 had served as mentors to their peers. However, this information was found not to be the case, and, therefore, was removed from the reported findings in Phase 3. All other reported data from Phase 3 was confirmed. Additional findings in regard to challenge areas for HSS1 and HSS5 were reported, as well as areas of growth and development for HSS2 and HSS4; these additional findings are reported in Table 4 and Table 5. Reported findings from Phase 4 were confirmed by both licensed occupational therapists, with clarification provided for areas of uncertainty in regard to the suggestions and strategies provided by the FWS. Specifically, the licensed occupational therapists revealed that the suggestions and strategies were additionally intended to serve as a tool to provide support to the school personnel, but that the notes were seldom read or reviewed by the school staff, indicating limited carryover of programming with school personnel at this time, at least in terms of the written consultations. The licensed occupational therapists often spent time with school personnel while the HSS were participating in the group to better explain the purpose, answer questions, and provide suggested strategies and suggestions verbally. For this school district, their school personnel clearly preferred an oral explanation over a written one, and feedback were limited to personnel who were present.

Challenges with frequent absences from the transition program were confirmed during the final peer debriefing session. HSS3 and HSS4 appeared to demonstrate difficulties with large gaps in program participation. For both of these HSS, inconsistent attendance appeared to impede the progress that was made in group sessions. HSS3 appeared to make improvements in regard to social skills but then was observed to regress in this area with several months of absences from group programming. HSS4 appeared to require multiple sessions to regain her comfort in group. Peer debriefing revealed that both of these students were involved in an alternative prevocational program, which led to frequent absences from the group programming.

Discussion

This retrospective documentation review of occupational therapy transition group programming was completed to identify themes and to assess fieldwork student documentation clarity. It reviewed qualitative data from a transition program run by licensed occupational therapists, occupational therapy doctoral students, and FWS at a public high school in an urban area for HSS with developmental and learning disabilities. The impact of occupational therapy group programming on the HSS was investigated to explore the development of skills experienced by the HSS throughout their participation in the transition program over 4 years. The use of group treatment documentation as a tool to develop clinical reasoning skills for FWS was also taken into consideration as part of this analysis. Findings from this process have the potential to inform future program development for the transition program and can help to assist in refining the process of documenting and capturing outcomes for HSS with developmental and learning disabilities to promote their independence in young adulthood.

Based on the review of the current literature, available research demonstrates the challenges that individuals with developmental and learning disabilities experience as they transition from high school

(Young et al., 2017). However, the majority of available studies addressing the needs of this population as they prepare for high school graduation are preliminary in nature (Chen et al., 2018; Theobald et al., 2018). Results from the National Longitudinal Transition Study-2 (NLTS-2) indicated the following areas as predictors of a successful transition to life after high school for students with disabilities: parent involvement, self-care and independent living skills, awareness of career options, vocational education, work experience, high school diploma status, and social skills (Mazzotti et al., 2016). These findings indicated that the HSS in the transition program initially experienced challenges, which emerged from the predetermined areas of focus of the transition group: self-determination, physical fitness (motor skills), social skills, and prevocational skills. The findings include social behaviors, communicating with their peers, fine motor/bilateral coordination skills/hand strength, sustained attention, sequencing abilities, adherence to rules and guidelines, and handling of group materials. These skill areas are pertinent to HSSs' development and may predict outcomes for their lives following high school graduation. Social skills are pertinent for HSS, as they determine their abilities to create friendships and may someday translate to their abilities to interface with co-workers in a professional setting. When HSS demonstrated more comfort with communicating with adults rather than peers, this could indicate a dependence on cuing from external forces to engage in social situations, which may lead to challenges with navigating adulthood independently. Fine motor, bilateral coordination, and hand strength abilities all have implications for future vocational skills, choices, and opportunities. Challenges in sustaining attention and task sequencing has the potential to limit the HSS in a variety of areas related to the transition following graduation, such as vocational skills or the transition to higher education. If the HSS demonstrate difficulty with following guidelines or rules and the safe and respectful management of materials, they may be inhibited in their abilities to integrate into the workplace. However, an inability to adhere to guidelines could be the result of many causes, such as sensory needs or differences, which need to be taken into consideration during treatment.

The documentation suggests that with continued participation in the transition group the HSS experienced improvements in social skills and in their abilities to actively participate in a group and to serve as a leader and a mentor to their peers. It also suggests that they improved in their abilities to participate in group discussions, adhere to rules and guidelines, and address fine motor/bilateral coordination and skills/hand strength concerns. These findings indicate that this group may have influenced the HSSs' abilities to participate socially with peers and to act as a member in a group, which may positively impact their abilities to further their education or integrate themselves in the culture of a workplace. However, while these suggestions show limited support for the other need areas as recommended by the NLTS-2 as key to supporting the transition, such as self-care and independent living skills, awareness of career options, and vocational education, analysis suggests that it is necessary for occupational therapists to find a way for the group transition program to include these areas in the barriers and limitations of operating in a school system. Furthermore, it will ultimately be necessary to improve occupational therapy data collection methods and documentation procedures to ensure that improvements in these target areas are captured in a systematic and more objective manner.

Occupational therapists have a unique perspective to provide regarding successful transitions from high school for students with disabilities, with surveyed therapists reporting that they believe they have the expertise to play an active role in the process (Glennon, 2016). Although this unique role of occupational therapists is acknowledged, the majority of occupational therapists currently serve students in kindergarten through third grade, with less emphasis on transitioning HSS (Spencer et al., 2006). This

retrospective analysis of documentation from this one group transition program was conducted in order to increase available evidence to support this much needed gap in service delivery and provide evidence to support the role of occupational therapists with transitioning adolescents with developmental or learning disabilities. Based on the findings related to the activities and lesson plans created by this group transition program, the areas addressed were directly related to aiming to provide a successful transition for HSS with disabilities in the areas of prevocational skills, social skills development, self-determination, and physical fitness.

Study Limitations

By nature of this being a documentation review, it is impossible to generalize this data; this project was limited to HSS in one transition program at one public high school. The selection of de-identified participants for this analysis was completed by a licensed occupational therapist in charge of programming, which could have led to selection biases in regard to who was chosen for the analysis secondary to the duration of time in group programming and/or noted improvements in the HSSs' performance. This program only occurred 1 time a week for less than 1 hr, which made it difficult to determine whether the noted improvements were because of the occupational therapy programming itself or the result of other services being provided to the HSS. In addition, given that this programming took place over 4 years, it is possible that some of the growth demonstrated by the students could be attributed to the natural maturation of the HSS, rather than the transition group programming intervention itself. The variety of quality and clarity of the provided treatment notes completed by the FWS served as a limitation, in part because of the sheer number of FWS that were completing documentation for each student. The variety in group activities completed from week to week also provided challenges in capturing the HSSs' performances, as it led to the FWS documenting strengths and weaknesses inconsistently, making it challenging to track progress effectively in all functional areas noted. In addition, the perspective of the HSS could not be taken into consideration for this analysis secondary to the nature of the de-identification process. Only one reviewer completed the analysis of the qualitative treatment notes, and, although peer debriefing occurred to confirm the findings, it is possible that variations in those findings may have been clarified with the use of multiple reviewers. Also, given that there was only one reviewer, it is possible that implicit biases impacted the identified outcomes of this analysis, given that this review occurred via a nonstandardized process. Finally, although the peer debriefing process did provide rich insights in regard to the program, the additional evidence provided in these sessions was anecdotal in nature and was not based on any standardized assessments or outcome measures, limiting the validity of the outcomes for this analysis.

Future Directions

These findings indicate more systematic treatment notes would potentially improve the quality and consistency of research conducted on adolescents with developmental and learning disabilities. For instance, providing an updated template that involves fill in the blank areas to address selected functional areas of group participation would increase the consistency of the areas that FWS document from week to week. Based on these findings, adding check boxes to indicate the level of assistance required and an area to indicate what upgrades or downgrades were provided to facilitate the HSSs' success would allow for another method of tracking the progress of the HSS over the course of their participation in the group transition programming. With the addition of a section that documents the analysis of the supports provided to the HSS, the treatment note could now include five sections: challenge areas, FWS hypotheses, strengths, upgrades and downgrades, and suggestions and strategies.

It is also imperative that the use of a standardized assessment tool be implemented into this transition program to help to capture changes in functional skills in the form of a pre and postmeasure. Finding solutions to the challenge of using quantitative assessment tools in contexts that greatly limit the use of standardized testing (such as a school district) would strengthen the ability to explore the impact of this group programming and decrease any potential bias by the researchers. Future research suggestions include that Goal Attainment Scaling (GAS) could be useful for this transition program as a method of providing an individualized outcome measure for each individual student, thus providing a more standardized process to determine the extent to which the HSSs' goals are being met. While the overall goal of this analysis was to explore the impact of occupational therapy group programming on facilitation of prevocational skills, social skills, self-determination, physical fitness, and sensory processing for public HSS with developmental and learning disabilities preparing for graduation, it served as a valuable method of determining future research suggestions as a method to create more systematic programming and evaluation methods for occupational therapy practice.

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