Experiences of Formal and Informal Peer Supporters at a Japanese University

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Abstract

Higher education institutions in Japan are increasingly focused on supporting students with developmental disorders, but these individuals still face daunting challenges. Although research has demonstrated the positive effects of peer support on student socialization and academic performance, few studies have examined the perspectives or experiences of peer supporters. In this qualitative study at a medium-sized Japanese national public university, we conducted semi-structured interviews with five students employed by the school to provide formal, structured support, and seven students who provided informal, "natural" support to peers with autism spectrum disorder or attention-deficit/hyperactivity disorder. Results indicate that both groups of supporters perceived difficulties and benefits associated with their respective forms of support, and that higher education institutions need to provide more training and education to enhance supporters' understanding of developmental disorders, as well as supervision for students acting as supporters.

Keywords: university student, developmental disorders, student support, peer support, natural support

The transition to higher education can be a precarious life stage for students with developmental disorders. Postsecondary students with developmental disorders often experience challenges related to core concerns such as social communication, loss of structure and routine, sensory sensitivities, anxiety in social situations, difficulty managing emotions, self-determination, and difficulties in the areas of executive functioning and motor skills (Accardo, 2017; Cai & Richdale, 2015; Dijkhuis et al., 2020; Van Hees et al., 2015). In Japan, as in many other countries, the structure of the college learning environment differs greatly from that of high school: students must organize their own class schedules based on their choice of major, and manage credits needed for graduation; they generally must also write reports, participate in group work, and undertake non-lecture classes, such as lab classes, internships, and practicums. Unlike primary and secondary education, instructors in higher education are typically not closely involved with students. Dealing with these myriad academic concerns—as well as the social expectations of the college environment—can be a challenge for any student, but students with developmental disorders, such as autism, tend to be at higher risk of experiencing isolation and low self-esteem, depression, anxiety, and feelings of failure, which can lead to poor grades, or, in some cases, withdrawal from school (Drake, 2014; Gelbar et al., 2014; Volkmar et al., 2017).

Although many postsecondary institutions have become more adept at providing accommodations for students with physical disabilities, they struggle with supporting the growing group of students with developmental disorders such as attention-deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD; Barnhill, 2014; Pugliese & White, 2014; White

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et al., 2011). The heterogeneity of such students makes it challenging to determine appropriate accommodations and support, and current interventions remain limited and unproven. Moreover, the impersonal, obtrusive, and hierarchical nature of many types of support can increase rather than reduce stigma, resulting in students feeling reluctant to utilize supports, even when they are available (Couzens et al., 2015).

Over the past decade, the introduction of disability-related antidiscrimination legislation in Japan has resulted in universities devoting substantial effort to making higher education more accessible to and supportive for students with disabilities (Kawasumi et al., 2010; Mori et al., 2015). However, there have been reports of challenges related to implementing such support, including difficulties related to appropriate assessment of support needs, actual delivery of support, and social issues involving stigma (Kawasumi et al., 2010; Someki et al., 2018). Tanji and Noro (2014) found that postsecondary students with ASD in Japan often relied on counselors, faculty, and administrative staff for support, but many of these individuals are not trained to provide specialized educational and social support. A study comparing autism stigma and knowledge in Japan and the U.S. found that Japanese students displayed greater autism-related stigma independent of differences in autism knowledge or prior experience with autism; they also continued to demonstrate substantial degrees of social distance toward people with autism even after receiving training (Someki et al., 2018). This is an important consideration, as experiences with actual or perceived stigma can decrease help-seeking behaviors, negatively impacting an individual's access to needed support and increasing social isolation (Divan et al., 2012; Grinker et al., 2011).

Studies have shown that many students with developmental disabilities feel under-supported, and in addition to coaching, researchers have increasingly affirmed the importance of peer support (Gardiner & Iarocci, 2014; Tanji & Noro, 2014; Van Hees et al., 2015). Peer support entails the provision of knowledge, experience, and emotional, social, or practical help from someone within one's own social network (Mead et al., 2001). Advocates of peer support highlight its potential for providing students with developmental disabilities with opportunities to improve their academic learning and social skills (Van Bergeijk et al., 2008; McCurdy & Cole, 2014; Watkins et al., 2015). Watkins et al. (2015) conducted a review of peer-mediated interventions among children and adolescents with ASD and concluded that such programs help students acquire social interaction skills by imitating the behaviors of more neurotypical peers. Sreckovic et al. (2017) found that a peer network intervention implemented with high school students had the dual benefit of increasing social skills and reducing stigma and bullying victimization.

At the same time, few studies have evaluated the effectiveness of peer support among postsecondary students. A systematic review of studies on support for college students with ASD identified only four studies that evaluated peer support programs, and those authors noted the inconclusive nature of the studies based on their small sample sizes and limited measurement of objective results (Paskins et al., 2018). Ness (2013) found that a university peer mentor support program to improve academic achievement among students with Asperger's syndrome resulted in improved grades for only one of the study's three participants, although all participants reported finding the intervention helpful. Longtin and College (2014) implemented a peer mentor program with a small group of participants with ASD to enhance social functioning, executive functioning, relationships, job search skills, and self-advocacy. While the intervention was reported to have had a positive impact on student satisfaction, no objective measures of effectiveness were conducted.

Studies on peer support for students with developmental disorders in higher education have tended to focus more on formal, structured, short-term interventions, and less on the role of ongoing peer support in improving academic skills and quality of life among this population. In addition, although more studies on support for students with ASD are being conducted, few have focused on support provided to students with ADHD. Zwart and Kallemeyn (2001) reported that a peer coaching program for university students with ADHD and learning disabilities resulted in decreased anxiety, in addition to enhanced motivation, time management, test preparation, and self-efficacy, but the study did not distinguish between diagnoses in identifying effective strategies.

The present qualitative study addresses the abovementioned research gap by investigating (1) services provided by student supporters hired by the university disability services office, and (2) informal support provided by peers of students with developmental disabilities at the university. The study examined supporters' respective roles, experiences, and perceptions to better understand the dynamics of relationships between supporters and supported students, and to identify potentially unmet needs that higher education institutions may be able to address.

Student Support Systems in Japanese Universities

Over the past 25 years, Japanese higher education has seen steady growth in the number of students with disabilities (SWDs) overall, and those with developmental disorders in particular. According to national surveys of postsecondary institutions conducted by the Japan Student Services Organization (JASSO), in the 2006-2007 academic year a total of 4,937 SWDs were identified, of which 127 (2.6%) were categorized as having developmental disorders (ASD, ADHD, specific learning disability, or some combination thereof). By the 2022-2023 academic year, however, the total number of SWDs had increased to 49, 672, with 10, 288 (20.7%) included in the developmental disorders category (JASSO 2007; 2023).

Additionally, since 2016, when the Act for Eliminating Discrimination against Persons with Disabilities (Act No. 65 of 2013) took effect, all national and public institutions of higher education in Japan have been required to provide "reasonable accommodations" to students with disabilities (per an amendment to the law, private institutions will also be required to provide reasonable accommodations as of April 1, 2024). Formal support for these students is delivered via various departments, such as university health centers, which often provide psychological counseling; career centers, which offer advice and planning in relation to life after college (employment, further education, etc.); and disability services offices. In this context, support for SWDs in higher education in Japan has dramatically expanded. In the 2006-2007 academic year, 2,256 (45.7%) of SWDs identified received some type of supports or accommodations, while in the 2022-2023 academic year, this had increased to 27,121 (54.6%) (JASSO, 2007; 2023). Students with developmental disorders tend to receive supports or accommodations at rates higher than those of students with other disabilities: 69.6% versus 50.7% (JASSO, 2023).

The increasing number of SWDs receiving academic accommodations and other supports at higher education institutions in Japan has led to expanded workloads for existing staff, which has in turn generated interest in the potential for providing support via peers, but such programs are not yet widespread. Current efforts focus on recruiting prospective peer supporters through college websites, posters, or leaflets. Services performed by these student supporters include using open class periods to provide guidance to students who need support with handwritten or computer notetaking in classes; helping with the use of assistive technology; assisting students with mobility issues in moving around campus; helping with schedule/assignment management; and digitizing text or captioning videos.

In addition to the scenario in which prospective student supporters go through a formal registration process before actually providing support, there are also situations in which support is provided informally or spontaneously. In the field of vocational rehabilitation, Wakabayashi (2008) referred to spontaneous support provided by managers and coworkers of employees with disabilities as "natural support," and noted that this support played a critical role in enhancing the social integration of workers with developmental disorders. While there have been studies involving students providing academic support to peers in higher education, and while some research focusing on peer supporters in Japanese higher education institutions has been conducted (e.g., Nagase, 2017; Takiyoshi & Tanaka, 2011), to our knowledge there has been no exploration of the respective circumstances of formal versus informal, or "natural," supporters in the context of students with developmental disorders in higher education.

Methods

Overview and Study Design

This study expands on previous research that examined support for university students with disabilities (Yoshida et al., 2017). In the case of formal peer support, a supporter is identified, a meeting between the SWD and the candidate supporter is held, and a support arrangement is finalized through discussion and mutual agreement. Support typically begins at one hour per week, but duration and frequency may be adjusted according to the particular needs of the SWD. Informal support, on the other hand, is by nature unstructured, and therefore duration, frequency, and content of support can be difficult to ascertain.

One of the objectives of this study was to better understand the dynamics of relationships between SWDs and their formal and informal supporters, and therefore the KJ method was employed as a tool during analysis. The KJ approach organizes complex, qualitative behavioral data and uses it to "abduct" ideas (Kawakita, 1967, p. 4). Often described as a modified grounded theory approach (Kinoshita, 2003; Shimura, 2005), the KJ method aims to examine human behavior to understand (a) the type of behavior, (b) the circumstances or background of the behavior, (c) who is performing the behavior, (d) the object of the behavior, (e) the process (how) of the behavior, (f) the purpose of the behavior, and (g) the result of the behavior. The KJ method has also been described as a brainstorming and consensus approach. Each researcher is expected to apply the abovementioned concepts to the same set of data, independently

derive ideas, and then reach a consensus on the validity of their interpretations (Scupin, 1997).

Study Participants

This study was conducted at a medium-sized national public university (total student enrollment of approximately 9,000) located in a city with a population of some 400,000 in western Japan. Participants were a convenience sample of 12 students at the university who were providing some form of support to students with developmental disorders; these were divided into two groups. Group 1 consisted of five undergraduate and graduate students who were formally employed as supporters by the university's disability services office, and who were recruited for this study via that office. Group 2, on the other hand, consisted of seven informal, "natural" supporters who were recruited by one of the present study authors after being observed providing support in classes. In addition to being paid, supporters in Group 1 received some training, and were generally not acquainted with the student receiving support prior to commencing support. Conversely, Group 2 supporters were unpaid, typically already knew the student to be supported, and did not receive any formal training.

Written, informed consent was obtained from all supporters in connection with their participation. Verbal consent to interview their supporters was also obtained from the students receiving support.

Table 1 lists characteristics of Group 1. These five individuals supported peers across multiple classes, and each reported having a relevant career goal, such as becoming a teacher at a school for students with disabilities, or working as a classroom aide for children with developmental disabilities in elementary school.

Table 2 summarizes characteristics of the seven supporters in Group 2, all of whom were undergraduate students. Students supported by this group included one student diagnosed with a developmental disorder but who had not applied for accommodations, and six students with developmental disorders deemed eligible for disability-related accommodations, but whose accommodations did not include a formal student supporter. With the exception of Participant ("P") 10 and P11, who only provided support in science classes, all Group 2 participants supported their peers in multiple classes.

In Tables 1 and 2, "relevant major" indicates whether a supporter is enrolled in a faculty, department, or major—such as psychology, education, medicine, or social work—that incorporates content related to people with disabilities or developmental disorders. "Relevant career goal" denotes whether the supporter has obtained certification or licensure in a field that involves support for developmental disorders (special education, occupational therapy, clinical psychology, etc.), or is enrolled in a major that entails working toward such certification or licensing. "Relevant courses" refers to the number of classes taken that involve learning about developmental disorders. "Training" denotes whether the supporter received formal training in support techniques, etc., outside of any training they received via the disability services office.

Data Collection

This study covers support provided at some point during the 2018-2019 and 2019-2020 academic years (the academic year in Japan runs from April through March). Semi-structured interviews were conducted with student supporters active during at least part of that period, after which a thematic analysis of collected data was performed. Data were collected in March 2019 and 2020, at the end of each school year during which participants had provided support.

Table 3 lists the interview guide questions developed by the authors and used in data collection. One author interviewed supporters about their experiences during the school year. Each interview was conducted in the on-campus office of a faculty member and lasted from 40 to 90 minutes. Some supporters had written notes on the support they had provided and referenced these when answering interview questions. Supported students were not interviewed for this study.

Analysis

Interview data were analyzed using a deductive coding approach. Interview content was transcribed verbatim for classification and analysis according to the KJ method. The KJ method enables investigator triangulation in that it functions as an idea-generating mechanism that begins with each researcher separately identifying themes gleaned from the data (Kawakita, 1991; Scupin, 1997). In the context of this study, content pertaining to how participants came to be supporters, the framework within which they delivered support, and specifics of the support they provided were summarized separately by two of the present authors. These findings were subsequently compared to identify and come to consensus on overlapping themes, and clusters of similar concepts were then devised based on the initial summaries. The KJ method entails naming each group with a single word or short phrase that best captures the core concept underlying the constituent ideas. Accordingly, each quote from the transcript was taken as a fragment and assigned to sub-themes after repeated discussion and classification, after which sub-themes were grouped into three categories. The statements from all study participants were ultimately transcribed, broken into fragments, and analyzed, yielding three major themes: "factors

Table 1

Group 1 Participant Characteristics and Relationship to Supported Students

Participant no.	**P1**	**P2**	**P3**	**P4**	**P5**
Academic level	graduate	graduate	graduate	undergraduate	undergraduate
Academic year	1	3	1	1	2
Years providing support	1	1	1	1	2
Relevant major	yes	no	no	yes	yes
Relevant career goal (license, etc.)	yes	planned	yes	planned	planned
Training	no	no	no	no	no
Relevant courses	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3
Years in school (supported student)	2	7	2	3	2
Diagnosis of supported student	ADHD	ADHD	ADHD	ASD	ASD
Relationship to supported student	same major	none	same licensing course	same major, same seminar	same major

Note. ASD = autism spectrum disorder; ADHD = attention-deficit/hyperactivity disorder.

Table 2

Group 2 Participant Characteristics and Relationship to Supported Students

Participant no.[1]	**P6**	**P7**	**P8**	**P9**	**P10**	**P11**	**P12**
Academic year	1	4	4	3	4	1	3
Years providing support	0.5	4	2	2	1.5	1	2
Relevant major	no	yes	yes	yes	no	no	no
Relevant career goal (license, etc.)	no	planned	planned	planned	no	no	planned
Training	no	no	no	no	no	no	no
Relevant courses	< 1	≥ 3	≥ 3	≥ 3	< 1	none	≥ 3
Own major[2]	science	multi	multi	multi	multi	social	science
Years in school (supported student)	1	4	4	2	4	1	3
Diagnosis of supported student	ADHD	ADHD	ADHD	ADHD	ASD	ASD	ASD
Relationship to supported student	high school friend	same major, same year	same major, same year	same dept., same year	same dept., same year	same dept., same year	same seminar

Note. [1]All participants were undergraduates. [2]Multi = Multidisciplinary.

Table 3

Interview Guide Questions

1. How did you come to be in the position of providing support?
2. Was there a system for obtaining advice or help while you were providing support?
3. Overall, how do you feel about your support activities this year?
   - Please describe specific ways you provided support.
   - What went well? What went poorly? What gave you trouble?
   - Did your relationship with the supported student change as a result of your support?
4. How was the experience of providing support, from your perspective?
   - Did you learn anything as a result of your support experience? If so, please elaborate.
   - Did you have any specific feelings or come up with any ideas as a result of providing support?
5. Please describe any other thoughts you might have related to support for students with developmental disorders.

affecting support," "what the supporter learned and felt," and "the support environment."

Results

How Support Began

All five participants in Group 1 registered as supporters with the university disability services office at the recommendation of one of the present authors, and were able to consult with the office or faculty members as needed during their support activities. Group 2 supporters, on the other hand, described a variety of reasons for becoming involved with providing support. Two were asked to provide support by a parent or faculty member of the student in question, but this was after they had spent time with the supported student in classes, resulting in their sharing the concerns of the parent/faculty member. As P6 related:

"I heard about her condition from her parents and was asked to provide support. They said, 'Whatever you can do is fine.' I had been worried [about the student] too, so I voluntarily got involved."

Similarly, P12 recounted:

> We had many classes together in our junior year, so we became good friends. She was taking the same course again, so I figured there must be a reason, but I'm generally cautious about making assumptions. My professor talked to me about support, and what they said made sense. We really are good friends, and calling it support seems absurd.

Other Group 2 participants made conscious choices to become involved after sharing classes or bonding with their peers and observing their difficulties firsthand:

> As we progressed in our course, we talked more, and she had many problems. I felt I needed to take care of her, so I've been casually trying to help her. I think she knows it, too, but we've never formally said anything, I think she feels like I'm helping her as a friend. (P9)

> I wasn't told anything in particular, but he often has an interesting way of thinking about things, so he's fun to have as a friend. During our class on teaching, there was one about developmental disorders, and one day after class, he spontaneously talked to me about [his condition]. After that, I started to pay attention to my actions, and become aware of my support. (P10)

In a few cases, the SWD proactively disclosed their condition to the supporter. For example, one peer explained how the SWD opened up right away:

> He told me about it immediately after we enrolled. His grades were good and he was able to study, so I didn't think there was anything for me to do, but I found out that he had a lot of trouble with interpersonal relationships and needed support at those times, so I started to help. (P11)

Another peer talked about connecting with the SWD quickly:

> After enrollment, we were the only male students, so we got along well. In our first semester of freshman year, I noticed he really needed support and started to help. He also told me about the unique features of his disorder, so I asked how he wanted me to help, and we discussed what I could do. (P7)

A third peer discusses making a connection after noticing particular behaviors:

> I started to support him because he was often absent or late, and his approach to the work was slow and he forgot things a lot. During labs, he didn't check information sufficiently and had a lot of trouble, so we tried to take turns contacting him, but I was the one with him the most, so the role naturally fell to me. I also talked with him about when he was in elementary school and such, and started to casually support him as a friend. (P8)

Unlike participants in Group 1, members of Group 2 did not receive any formal training or support, although in some cases they were able to consult professors or parents for advice. Two participants (P10 and P11) occasionally consulted one of the present authors. In some cases, other students served as secondary supports, as well. Overall, however, Group 2 supporters tended to devise solutions on their own and only consulted with others when confronted with a particularly challenging situation. As P6 stated, "I sometimes talked to her parent when I was at a loss, but there was no specific, fixed set of support." P10 suggested that the availability of professors for consultations obviated the need for formal support from the university: "I felt I could consult with my professor if I was really at a loss, so there was never really a need [for formal training/support]."

Support Services Provided

Services were classified into four categories: "obtaining information," "planning," "class skills," and "other." Supported students not only required support to strengthen their writing skills, but also needed help getting started on assignments, setting a time and place for writing, and continuing to work until they were finished. Checking that completed assignments had actually been submitted was also an essential component of support.

Support did not necessarily include a predetermined set of services, although in the case of Group 1, the supporters, supported students, and disability services office staff met to discuss and generally define assistance to be provided. Support provided by supporters in Group 1 typically comprised regular (e.g., once- or twice-weekly) meetings with the supported student to check on assignment deadlines and progress. While some members of this group (P2 and P3) did not provide support beyond what had been initially discussed, others took the initiative to provide additional services, such as helping students write reports or fill in lab logs (P1, P4, P5); coaching students on how to write emails to faculty (P1); advising students on how to find a part-time job (P5) or how to maintain a job schedule (P4); and making suggestions on the handling of interpersonal relationships or conflicts (P4, P5). Supporters reported difficulty in ascertaining the progress of supported students, as these students often claimed to have submitted assignments when they actually had not. Several supporters regularly provided writing support after the supported student complained that they were unable to submit reports or other assignments because they "could not write."

Supporters in Group 2 provided a more diverse array of support than those in Group 1. While supporters in Group 1 tended to act more like job coaches, those in Group 2 tended to provide support in a more collaborative manner. Except in the case of P6, where the parent of the supported student requested certain support, supporters in Group 2 were not asked to provide any specific services, but rather recognized and responded to needs as they observed the supported student's challenges and distress. Participants reported noting that supported students frequently missed vital information because they were often late or absent, and as a result, they did not know what assignments were due, or their deadlines, which significantly impacted their planning and often made supported students feel frustrated or distressed. For example, P12 reported that "she repeatedly said she could do it on her own, but then wouldn't be able to once she got home, so I tried doing it with her all the way to the end." Others noted: "He just doesn't work on assignments, so it's best to set a place and time" (P7), and "She tries to avoid assignments, so we started to work on them together" (P12).

Group 2 supporters and their supported students were able to easily share information about assignments and notes because they were taking the same classes. Group 2 participants also seemed better able to work together with supported students to complete reports, and noted that providing support was less onerous when the supporter and supported student had similar coursework. As P7 explained, "We sometimes stayed up all night writing reports. It was for

my own sake too; it wasn't really support. It was just hanging out as friends."

Group 2 supporters also provided a wide range of support related to interpersonal relationships and life skills. Several participants reported that their supported students missed classes because they could not regulate their sleep schedule, so the supporter called them almost every day to help them to wake up. Furthermore, these supporters discussed many types of natural, everyday peer support such as morning wake-up calls or messages (P6, P7, P8), meeting before class or saving a seat in class (P6, P7, P8, P9, P12), checking in if they were sick (P9), helping them gather their belongings and explaining how to find lost items (P7), providing emotional support during times of distress (P11, P12), and intervening in the case of interpersonal conflicts (P11).

Factors Affecting Support

Factors affecting support tended to cut across groups and consisted of four sub-categories: "whether it was a job," "support for supporters," "supporter expertise, etc.," and "similar characteristics."

Supporters reported feeling a sense of responsibility for the student they were supporting regardless of whether or not they were formally employed, and both groups of participants reported experiencing confusion and feeling overwhelmed at the level of needs they encountered. Although supporters in Group 1 tended to have a clearer sense of their responsibilities, some expressed concern that simply fulfilling their stipulated duties was not sufficient to help the supported student navigate the college environment. As P1 noted, "I think it's fine to just do what I'm asked, but there are a lot of other areas where they're having trouble and I sometimes doubt whether this is enough."

Supporters in Group 1 also seemed more likely than their natural supporter counterparts to perceive their role as one entailing responsibility. P3 said, "Thinking of this as a job, since I'm getting paid, has been a burden," while P1 noted, "I would have been fine with volunteering, but since I get paid, there is a sense of responsibility." Conversely, P7 in Group 2 was able to shrug off perceived failures, stating, "When I couldn't help successfully, I often ended up thinking 'Oh well, it's not like anyone asked me to do this.'"

In some cases, supporters in Group 2 hesitated to share information with other parties, due to both the lack of an employee–employer relationship and a desire to protect their peer and not appear to be complaining. For example, P6 explained, "I often couldn't say things to her parent because it would seem like bad-mouthing her."

All supporters commented on the need for a supervisor or other person with whom they could consult, and they sought out opportunities to do so. Supporters also expressed the need for workshops to network with fellow supporters, places where they could seek advice, and training opportunities. At the same time, when supporters did have some knowledge or background related to developmental disorders, they reported that this knowledge proved useful, and gave them a greater tolerance for atypical behaviors. "Sometimes I get betrayed [laughs], but it doesn't get to me if I think, 'That's just an example of such-and-such behavior'" (P1). And "I'm glad to have studied developmental disorders, because it helps me not to believe—in a good sense—the student when they say, 'I'm fine'" (P2).

What Supporters Learned and Felt

What supporters learned and felt was organized into four categories: "learning as a supporter," "sense of purpose as a supporter," "realizations as a supporter," and "support skills." These categories were often evident across supporter groups.

Learning as a supporter entailed learning to give meaning to participants' own past experiences as a sibling of, or friend to, a child with a disability, or learning that would yield experiences that could prove useful in their future careers. Supporters enrolled in related majors also noted that their experiences taught them the limitations of academic learning about disabilities. P9 remarked, "It's my major, so I thought I understood disabilities, but I learned that it doesn't go just like that in practice." Similarly, other supporters observed that their experiences had improved their understanding of developmental disabilities. Supporters in both groups noted that their actions as supporters were greatly influenced by their degree of understanding of developmental disorders, and those who had taken related classes reported that what they learned in class had been very helpful. At the same time, supporters in both groups expressed feeling a need to learn more about developmental disorders.

Supporters reported gaining a sense of purpose and feeling encouraged by the words and behaviors of supported students and parents, and that they had grown through their experiences. Moreover, supporters reported learning about the attitudes necessary for providing effective and compassionate support through their experiences, which often caused them to modify their perception of developmental disorders. On the other hand, behaviors related to participants' disorders also aroused negative emotions, including feelings of being burdened, or frustration with supported students' limitations. Participants also noted

feelings of confusion or anger when they encountered behaviors that they had difficulty accepting.

Perceptions of the Support Environment

Unlike the previous two categories, comments related to the support environment came mainly from Group 2. Several of these participants expressed the sense that they were just providing the natural type of support typical of friends. For example, P7 stated, "You can call it support, but it's the same as what you do as a friend. It's just a difference in how you see it. Colleges have an atmosphere of helping one another. This is just an extension of that." P7 also expressed the view that maintaining natural peer rapport requires establishing an environment that conveys that relationship: "I think it's best to set it up so that you can provide support naturally, rather than providing a specific kind of support." Perceiving peer support as a natural extension of friendship sometimes created a sense of partnership that deepened the relationship between P7 and their supported student, as the former became more understanding of the latter's challenges:

> I am more of a friend, a close friend, than a supporter. We help each other out. I've also been helped by a few other men around. I feel that we really were always together during our college lives. Since we are college students, we often help each other with reports or labs and reach out to each other. So, what I was doing was just what friends do, although I contacted him a little more insistently. I think it might have been a little too insistent, but I was trying to keep him focused. If I didn't he would do things like not show up. It was also important not to think, "Why?" when he said he would do something but didn't. It is vital to think, "I need to change the way I phrase things," or "I should have reached out one more time," and not blame him. I came to think that special education at its core was really just a matter of using a few simple techniques.

One issue on which participants in both groups commented was the importance of the supported student having a help-seeking attitude. As P1 noted,

> What I felt was important was how my partner saw our time. It's effective if he feels that he needs to be helped, and that schedule management is important to him. If he's just doing it because someone told him to, it doesn't mean much. It really motivated me when he said he really looked forward to our time together and felt that he "wanted to write a good report!"

However, Group 2 participants also expressed concerns that their friendship with the supported student could deteriorate into a dependent relationship. P11 declared, "I tried not to do too much, but he sometimes acted very dependent on me, so I let myself try [to address] things that I noticed." Similarly, P9 highlighted the importance of peer supporters not becoming caretakers or enablers. As she explained,

> I was careful that I didn't become a "caretaker." I couldn't have teachers thinking I would take care of her, and I wanted her to do what she could on her own. But there were things she couldn't do and things that it would have been best if I'd anticipated and done for her. I think that was the hardest. Still, when she told me, "I can go to class without worrying because you'll be there!" I felt I hadn't become a caretaker, but a pillar of safety.

In several cases, the strains of perceived failure led to the end of the peer support relationship. The supporters involved expressed feelings of regret and guilt, particularly when the supported student stopped coming to campus after support ended.

Discussion

This study examined the dynamics of peer support for university students with developmental disorders based on the perspectives of two sets of supporters: (a) students who were employed by the university and provided more structured support, and (b) natural peer supporters who provided support on an informal basis. We identified several points that may help inform efforts to develop more comprehensive and effective student support.

The support needs of students with developmental disorders involved in this study ranged from obtaining information (notetaking, text digitization, captioning videos, etc.) to planning (submission of lab logs, assignments, reports), academic skills (assignment and report writing, lab and production skills), and life skills and interpersonal relationships. The executive function challenges faced by students with developmental disorders negatively impact planning activities such as tracking deadlines, time management, maintaining organized class materials, and coping with changing schedules and long-term assignments (Dijkhuis et al., 2020). Executive function issues can be particularly evident in the context of planning and academic skills, particularly in the domain of written assignments. Of course, the need to develop writing skills in college is shared by all students, regardless of ability status. However, the supported students in-

volved in this study all had ADHD or ASD, both of which are associated with greater challenges in this skill area in comparison to more typically developing peers (Adi-Japha et al., 2007; Weyandt & DuPaul, 2008; Zajic et al., 2021). Several supporters interviewed for this study noted the existence of a need for support in the context of writing reports and lab logs, and they often provided this type of support. Additionally, it is still unusual for higher education institutions in Japan to have the kind of academic or writing support centers that are often found on many college campuses in the U.S. Together, this suggests the need for a more structured, university-wide approach that would provide writing support to all students, not just those with developmental disabilities. This would help to reduce the variations in quality—as well as the potential inequity—inherent in a system where support is selectively provided to some students while others lack the opportunity to access such support, regardless of the presence or absence of a disability-related barrier.

Although this study did not specifically address the relative effectiveness of formal versus informal support, from the supporter interviews conducted it became apparent that, through their interactions with students with developmental disorders, both sets of supporters gained a sense of purpose and learned relational skills that may be of use in their future careers. Indeed, other studies have found that peer supporters gain personal benefits through their experiences, including a deeper understanding of disabilities (Althamanah et al., 2020).

Professional goals have been reported to be a strong motivator for peer mentoring students with disabilities (Carter et al., 2019; Wilt & Morningstar, 2020). However, Group 1 participants, who all had relevant goals, tended to view their activities as an obligation and something that had to be done, despite occasionally feeling burdened or resentful. On the other hand, Group 2 participants did not perceive what they were doing as a formal service, but more as something done as a friend. Notably, the natural supporters also emphasized the desire to avoid developing vertical relationships that reduced their role to that of caretakers.

As noted earlier, supporters in both groups reported feeling that the ability to support students with developmental disorders would be greatly influenced by whether or not supporters had relevant knowledge; they also noted feeling that it was important to learn more about developmental disorders. However, while several supporters in Group 2 were not majoring in a subject that involved developmental disorders and had taken few or no related courses—and therefore likely lacked a basic understanding of developmental disorders—they still reported being able to assist supported students with learning and life challenges.

Supporter reports regarding the range of activities provided raise the issue of supporter roles and boundaries. Supporters in Group 1 had the benefit of an officially facilitated pre-support meeting with the supported student, which allowed for some clarification of the type and degree of support to be provided. Staff in the disability services office also emphasized to both supporters and supported students that they were free to contact the office at any time with questions or concerns related to the support process and relationship. While the overall number of participants was small, no supporters in Group 1 reported being worried about boundary issues. Conversely, several supporters in Group 2 expressed concern that supported students might become dependent on them or the support provided, indicating that it may be beneficial to offer structured supervision or advising for students providing "natural" support—if these students can be identified, of course.

Gardiner and Iarocci (2014) identified both the quantity and quality of previous experiences with ASD as being significantly associated with acceptance of individuals with the disorder, and they also found that greater acceptance played a significant role in the likelihood of participating in peer support activities with individuals with ASD. Although the present study did not specifically measure acceptance or related characteristics, it is interesting that the "natural" supporters in Group 2 reported providing a good deal of non-academic support, such as that related to interpersonal relationships and life skills. It is possible that the contact inherent in the support relationship contributed to feelings of greater acceptance, and hence, greater willingness to help, on the part of supporters. Future research should attempt to determine whether that is indeed the case, as this could lead to the development of strategies for increasing overall acceptance of students with developmental disorders in higher education settings.

The desire for greater information and understanding of developmental disorders reported by supporters indicates a need for improved student supporter training and support systems in departments such as disability services offices. At a minimum, supporters should receive training focused on the type of disorder experienced by the student they will be supporting, and they should also be given opportunities to network with other supporters. The opportunity to consult with faculty members worked well for natural supporters, and providing additional supervision opportunities might also have a positive impact on the support provided by employed supporters. Natu-

ral supporters remarked on the importance of support from others in their environment and understanding on the part of faculty members, which suggests that it is also essential to continue to build disability awareness throughout the institution as a whole via faculty development and other activities.

This study has several limitations. There are few students with disabilities receiving one-on-one support to begin with, and this study did not have enough participants to allow for drawing generalizable conclusions. Additionally, although students receiving support gave permission for their supporters to share personal details pertaining to them, our findings are based solely on the perceptions and experiences of peer supporters. Furthermore, this study did not examine objective outcomes such as student retention and academic or social progress. In the future, the findings presented here should be tested by comparing outcomes between groups and incorporating the input of supported students. It will also be important to identify concrete outcome measures related to support provided.

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