WRITING CENTER UTILIZATION BY STUDENTS WITH DISABILITIES

Presented to

The Faculty of the Department of Education

Colorado College

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Arts

By

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May/2019

Abstract

 This study determines rates of Colorado College Writing Center utilization by students registered with the Colorado Office of Accessibility Resources, their motivations for using the center, and identifies potential actionable improvements to how the Writing Center serves students with disabilities. Participants were purposefully sampled Colorado College students registered with the Office Accessibility Resources (OAR). Data was drawn from multiple sources: two quantitative utilization datasets; a mixed methods questionnaire; and qualitative interviews. Quantitative data was analyzed in SPSS. Interviews and open-ended questions from the questionnaire were analyzed using NVivo software. Students registered with OAR used the Writing Center at slightly higher rates than non-registered students. The participants in the survey generally indicated high perceived competency of the Writing Center and those who used the center more often reported greater levels of comfort and less anxiety when working with a tutor. Recommendations for improving Writing Center services for students with disabilities were generated including greater training on working with tutees with disabilities and workshops for students registered with OAR.

Key Words: *Writing Center, Higher-Education, Disability*

Writing Center Utilization by Students with Disabilities

Colorado College is a small, exclusive, private liberal arts college in Colorado Springs, Colorado. In 2019, the average admitted student had a GPA of 3.92 in highschool and scored a 1430 on their SAT or 32 on their ACT. The college uses a 'Block System' where students take one class at a time for three and a half weeks. Students learn a semester's worth of content in each block, often requiring them to produce a higher volume of writing in a shorter period of time than would be typical in a conventional semester system. The Colorado College Writing Center supports students by providing them with free 45-minute tutoring sessions with either peer tutors or professional staff, which students schedule with at their discretion. Tutors work with students on individual papers, focusing on building global writing skills like paper organization, and discipline specific writing while working to develop their overall writing confidence.

All students must develop these skills, however, they are particularly important to students with disabilities who may struggle with the process of writing and/or independently identifying their specific writing challenges. While learning disabilities may most directly influence a student's ability to write effectively, mental illness, brain injury, motor disabilities, and chronic illness can negatively impact focus, higher order processing, and confidence in writing. The literature demonstrates that generally students with disabilities of all kinds have lower rates of college attendance, higher rates of degree non-completion, and lower GPAs than their non-disabled peers (DaDeppo, 2009). The Colorado College Writing Center has the

capacity to help students with disabilities address challenges often associated with these diagnoses.

This study focuses on students who are registered with the Colorado College Office of Accessibility Resources (OAR), a population who may be at higher risk for academic challenges. These students demonstrate a predisposition for help-seeking behavior by connecting and registering with the OAR. It would be logical to assume that OAR students would utilize the Colorado College Writing Center, another on-campus resource, at equal, if not elevated rates, compared to their non-registered peers. However, there was previously no data on the utilization patterns of this group as a whole or of specific disability subgroups to confirm or refute this assumption. The following questions guided this research:

1. At what rate does each disability group (i.e. psychological disorder, learning disability, chronic illness, physical/motor disability) use the Writing Center?

2. What specific reasons do students with disabilities give for deciding whether they will or will not use Writing Center?

3. Are there specific actionable recommendations that could help the Writing Center support students with disabilities more effectively?

Literature Review

Disability is a complex and much debated topic. Disabilities have historically been constructed in the medical model wherein the individual's disability is viewed as an negative and inherent condition (Brisenden, 1986). However, modern scholars are recasting disability as a social condition (Babcock, Daniels, Smith, & Smith, 2017). Disability, in this model, is the result of environments and structures that do not accommodate individuals with impairments. A disability is not a characteristic of the individual but rather a phenomena caused by outside

disabling forces (Stevenson, Babcock, Daniels, Smith, & Smith, 2017). Because of this, the challenges that impairments create can be mitigated and minimized in accessible and/or accommodating environments.

All colleges and universities that receive federal funding are legally mandated to make 'reasonable accommodations' for students with disabilities under the Americans with Disabilities Act (1990) and Section 504 of the Rehabilitation Act (1973). The definition of 'reasonable accommodation,' however, varies by institution and, in some cases, by professor. There are no legally mandated academic support services or accommodations for students with disabilities (Gobbo & Shmulsky, 2007). The burden to make outreach for academic accommodations and disclose disability status rests entirely on the student. Even when students do disclose their disability status, professors or other academic support faculty/staff may not be familiar with their disability or appropriate accommodations (Gobbo & Shmulsky, 2007). Many colleges and universities provide academic support through offices like quantitative (STEM) resource centers or writing centers, but generally do not have programing specifically for students with disabilities.

The way individuals experience disability vary widely depending on both disability type and the individual themselves. No matter where an individual is on the spectrum of ability, with appropriate accommodations and services all students with disabilities can thrive. Students with disabilities, independent of the type or severity, perform better academically when they take advantage of academic supports (Trammel & Hathaway, 2007). Academic supports can range from formal tutorials to private meetings with professors. While it is not clear which of these supports is the most effective permutation of support, students with disabilities all tend to benefit overall academic achievement (Trammel & Hathaway, 2007).

Unfortunately, even though there are clear advantages to accessing these resources, students with disabilities do not utilize them at the same rate as their non-disabled peers (Hartman-Hall & Haaga, 2002). Harman-Hall and Hagga (2002) attributed this to negative self-perception. Students with more negative perception of their academic ability in relation to their disability and who view their performance as 'fixed' are less likely to seek out academic supports. Harman-Hall and Hagga (2002) studied 86 college students with learning disabilities were interviewed about their general self-esteem and how they perceive their learning disability. They found that students who have positive experiences asking for accommodations for their disability are more likely to seek out academic support than those who have negative experiences. Students who receive affirmation about their ability, rather than those who are harshly criticized or threatened with failure, are more likely to seek out help. However, students with disabilities may be more likely to receive criticism than their non-disabled peers due to academic manifestations of their disability. That criticism may in turn contribute to the development a negative self-image that inhibits their likelihood to seek academic support from places such as writing centers.

The relationship between academic support seeking and the social dynamics of disability cannot be overlooked. Appropriate supports are not limited to in-class accommodations (i.e. taking notes on a laptop, alternate non-verbal modes of class participation). Effective accommodations/support must balance both the academic and social impact of disability.

Negative self-image development is highly contextual (Hergenrather & Rhodes, 2007). The attitudes of others that individuals with disabilities face when engaging in help-seeking behaviors (i.e. meeting with professors/advisors to discuss accommodations, seeking tutoring, working with disability services) is directly correlated with self-perception. When individuals

face greater levels of negative attitudes, their likelihood of effectively using their compensatory skills and self-advocacy decreases (Hergenrather & Rhodes, 2007).

DaDeppo (2009) analyzed how the academic performance and persistence of students with disabilities was impacted by their academic and social integration. Academic and social integration were defined as a combination of how faculty and peer relationships fostered intellectual development and students' experiences with their university's systems (i.e. departments, administration, academic supports). DaDeppo (2009) found that there was a direct correlation between perceived academic and social integration and academic persistence. In particular, when students felt that their intellectual development was supported by their institution and that they were socially supported by both professors and peers, they were more likely to stay enrolled in college. Academic supports only provide one element of necessary accommodations and fail to address the spectrum of needs students with disabilities have. Support systems that include peer tutors, for students both with and without disabilities, help fulfill this need by fostering student intellectual development while providing a positive social network (Kowalsky & Fresko, 2002).

Writing Centers

The modern constructivist writing center was developed in the 1980's by Stephen North. North (1984) challenged the classic conception of the writing centers as a 'fix-it' shop for failed writers and popularized a collaborative, student-centric model that encourages individualized academic development. Instead of the traditional drill-based remediation model, North (1984) shifted to a process-oriented tutorial that emphasized mutual discovery on the student's terms.

This model focuses on peer-to-peer non-directive tutoring pioneered by Jeff Brooks (1991). He argues that the role of a Writing Center is not to improve the quality of student's papers and "cannot and should not expect to make the student papers "better; ...that is neither our obligation, nor is it a realistic goal" (Brooks, 1991). The tutor should, instead, take on a secondary, outsider role "serving mainly to keep the student focused" (Brooks, 1991). In this now dominate model the primary challenge of writers is perceived as an inability to fully focus on their writing. All the tutor needs to do is focus the *writer* and the tutee will be able to independently identify their own 'errors.'

The majority of Writing Center literature focused on philosophical and pedagogical questions similar to North's (1984) and Brook's (1991) pieces (Bell, 2019). There is limited empirical research on writing centers as a whole. Most writing center publications focus on pedagogical theory, not empirical research. Very little research has focused on utilization rates. What empirical research is conducted is typically done in small studies of individual centers evaluating themselves. This is in part because Writing Centers are thought to be highly contextual and, according to some researchers, can only be qualitatively considered as individual case studies (Kinkead & Harris, 1993). Despite the lack of generalizable findings, there is a broadly accepted consensus regarding utilization trends by gender and race.

There is general agreement that women utilize writing centers at higher rates than men (Tipper, 1999). Authors have attributed this phenomenon to a range of causes, from a 'feminine culture' within the writing center (Tipper, 1999) to the tendency for writing center staff to be dominantly female (National Census of Writing, 2017), to the role of masculinity and gender stereotypes in seeking help (Hunzer, 1997). At this point there is limited research on trans and non-binary students.

There is less agreement about the role that race plays in writing center utilization. Some studies have found that writing centers tend to primarily be staffed by white students, which some researchers have concluded has depressed utilization rates by students of color (Valentine & Torres, 2011). When writing center publications have acknowledged race, historically they have primarily focused on Black/African American and white students and ignored other racial and ethnic groups (García, 2017) unless those other racial ethnic groups are international students. There is little data, qualitative or quantitative, available on the utilization rates by Hispanic, Latinix, Asian, Pacific Islander, or Indigenous students of color. The general assumption in the literature is that rates are proportionally low (Greenfield & Rowan, 2011) but no large-scale studies have been conducted.

The current Colorado College Writing Center Director, Kat Bell, has discussed the lack of published research currently available on the utilization of Writing Centers by students with disabilities. Writing centers may seem like a logical place to provide students with disabilities academic support to develop their skills, however there is limited literature that explores this natural partnership. The most prominent piece is a chapter by Julie Neff (1994) in a book of broad Writing Center theory published almost 25 years ago. She has a heavily deficit-oriented perspective of students with disabilities and argues that students with learning disabilities are unable to invent, organize, draft, and edit based on feedback from a tutor (Neff, 1994). Writing center pedagogical discourse has remained largely unchanged even as public perception of disability has evolved and the number of students with disabilities enrolling in and attending college has increased.

Despite the lack of literature exploring the role of disability in the writing center, much of the existing pedagogical framework is compatible with serving students with disabilities. A basic

tenet of modern writing center philosophy is that all tutorials are contextual and should be a collaborative endeavor individualized to the tutee's needs (Murphy & Sheridan, 1991). This requires tutors to consider each tutorial separately and respond to the individual strengths and challenges of each student, including learning preferences and needs. For students with disabilities, this level of individualization and attention can be extremely helpful. In fact, individualization is a key component of students with moderate to severe disabilities in their K-12 education via Individualized Education Programs (IEPs) to improve their outcomes and integration with their general education peers.

Writing centers have the capacity to improve students' subjective feeling of academic inclusion. Some challenges students with disabilities, particularly mental illness, face such as impaired organization skills and difficulty engaging in the writing process (Shor 2016) are directly addressed in writing center tutorials. Despite the lack of scholarship, writing centers automatically provide some of the services students with disabilities require. Research has shown that modeling realistic goal setting, building learning and studying strategies, breaking down assignments into component parts, and connecting students with additional services leads to improved student outcomes such as GPA, attendance, and support seeking behaviors (Gobbo and Shmulsky 2007). These are common practices in writing center tutorials for all students, independent of disability status.

That is not to say that writing center pedagogy is free of disabling practices. Non-disabled peer tutors often do not have the appropriate background to respond effectively to a disclosure of disability or the contextual knowledge to determine how to respond to specific learning needs (Kowalsky & Fresko, 2002). Even popular tutoring techniques and pedagogies in the writing center have the potential to be disabling. Traditionally papers are read out loud by the

tutee, which may tax cognitive resources and inhibit a student's comprehension of the text

(Ryan, Miller, Steinhart, Babcock & Daniels, 2017). Tutors are often encouraged to not take

notes for tutees and, instead, prompt the tutee write on their paper which can be distracting and

prevent the tutee from internalizing important feedback (Ryan, et al., 2017). Additionally, in

some centers tutors discouraged from building long term tutor-tutee relationships so that the

tutee can benefit from multiple tutors' methods and perspectives. While that can be valuable, it

can also increase the stress levels and depress attendance by students with mental illnesses and/or

disabilities that impact social skills (Garbus, Babcock & Daniels, 2017). These techniques are

useful in many contexts but can become disabling when applied to students with certain

impairments.

Disability Subtypes

While some challenges are common amongst most students with disabilities, various

disabilities impact students uniquely. Brisenden (1986) noted,

> "The word 'disabled' is used as a blanket term to cover a large number of people
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> who have nothing in common with each other, except that they do not function in
>
> exactly the same way as those people who are called 'normal'. Consequently, this
>
> large number of people are considered 'abnormal'" (p. 175).

For the purpose of this study, three broad categories of disabilities were considered:

1) Mental Illness/Psychological Disorder;

2) Learning and Language Based Disabilities; and,

3) Chronic Health, Sensory Impairment, and Motor Disabilities.

These categories were intentionally broad with more than a few participants falling into multiple

categories.

Mental Illness/Psychological Disorder. Students with mental illness may have difficulty managing academic stress and be less resilient than their nondisabled peers (Gobbo & Shmulsky, 2007). They may be prone to decreased focus, energy, confidence and memory impairment (Gobbo & Shmulsky, 2007). This population is unlikely to disclose their diagnosis and seek out academic support due to social stigma associated with mental illness and a subjective perception of low academic inclusion (Shor, 2016). While the academic implications of systemic bias against people with mental illness are beyond the scope of this paper, its' negative impact cannot be ignored.

Shor (2016) studied 80 university students with mental illness, primarily mood and anxiety disorders, who were engaged with on-campus educational supports (i.e. biweekly mentorship program) were surveyed on their perceived barriers to academic success. The majority of respondents reported that they struggled to request academic accommodations, disclose their disability status and that participants struggled moderately to significantly with time management, organization, and writing.

Learning and Language Disabilities. Students with learning disabilities are particularly vulnerable to poor academic outcomes. While a range of executive functioning skills can be impaired depending on the specific learning or language disability, common areas of impairment include organizational and time management skills', and expressive and receptive linguistic abilities (DaDeppo 2009). Bashir and Scavuzzo (1992) found that students with speech and language disorders struggled to express their understanding of content in a clear and organized fashion, particularly when working in an unfamiliar discipline. These students also struggled to express their learning needs and recall key terms in tutorials. Lightner, Kipps-Vaughan, Schulte

and Trice (2012) found that students with learning disabilities had a national college attrition rate of almost 70% as compared to their peers.

Chronic Health, Sensory Impairment, and Motor Disabilities. Students with chronic illness and brain injury may struggle with side effects from medications, impaired focus, and elevated stress levels. Students with motor disabilities and some chronic health conditions may physically struggle access classroom activities such as note taking and typing. Students with sensory impairments face serious challenges in the writing center where tutorials are often based on reading and discussing text. There is little research done on the impact of chronic illness and motor disabilities global effect on college performance and attendance.

While there may not be substantive existing literature on disability in the writing center, many of its functions overlap with the needs of students with disabilities. However, there are real barriers that potentially discourage students from engaging with writing centers as an academic resource. Negative self-perception, fixed mindset, negative academic experience, frequent criticism, and stigma are very real barriers that could potentially contribute to underutilization of writing centers by students with disabilities.

Methods

This single-case study was comprised of three parts: 1) identification and comparison of writing center utilization by the total population of Colorado College students and students registered with the Office of Accessibility Resourced (OAR); 2) analysis of the experience of students registered with the OAR within the Writing Center; and, 3) analysis of recommendations made by students registered with the OAR. The case study took place at Colorado College during the 2018-19 academic year.

Participants

There were two groups of participants for this study. The first group was a general sample of all Colorado College students who had at least one Writing Center appointment between August 28, 2017 (beginning of Block 1 of 2017) and December 18, 2018 (end of Block 4 of 2018). Data was drawn from a preexisting utilization report. The second group of participants were purposefully sampled Colorado College students registered with the OAR. The OAR at Colorado College offers support to students who carry a diagnosis of: allergy, Autism Spectrum Disorder, learning disability, Attention Deficit Hyperactivity Disorder, mental illness, chronic illness, brain injury, physical or motor disability, deaf/hard of hearing, speech/language disorder, vision impairment, and/or temporary disability (i.e., concussion or hospitalization). Students enrolled with the OAR with the diagnosis of temporary disability were excluded from the study unless they were simultaneously registered under an additional disability label.

Because disability status is a sensitive and potentially socially undesirable label, confidentiality was extremely important. To maintain confidentiality, the instrument requiring unsolicited contact with students with disabilities was distributed digitally by the OAR. The survey data was initially managed by the OAR and all identifying information (IP address) were deleted before being shared with the researcher. Names and contact information of potential participants for interviews were only shared with the researcher with the potential participant's express consent and were separated from their responses to the survey.

Instruments

Pre-Existing Writing Center Utilization Data. Pre-Existing data regarding student utilization of the Colorado College (CC) Writing Center was accessed for the current study. At the end of every Writing Center appointment, information about the tutee is entered into a digital record (topics discussed in the tutorial, methods of instruction) along with demographic

information associated with their student ID number. A report containing the total number

appointments made by various groups (students enrolled in their First Year Experience,

race/ethnicity, gender) for each block from August 28, 2017 (beginning of Block 1 of 2017) to

December 18, 2018 (end of Block 4 of 2018) was shared with the Director of the Colorado

College Writing Center.

An additional database was generated from preexisting data through a BlueForms

request. The database of students registered with the OAR was cross-referenced with Writing

Center data to identify the number of appointments they made. The final data set included the

number of times a student, registered with the OAR and identified by a unique ID number,

visited the Writing Center along with several variables: sex, disability type(s), race/ethnicity,

first generation status, PEL status, and year of entry.

Questionnaire. A digital questionnaire (Appendix A) was distributed to CC students

registered with the OAR to explore their interactions with and perceptions of the Writing Center.

The questionnaire included questions regarding their utilization of the Writing Center, how safe

they feel in the Writing Center, if they ever disclosed their disability status to their tutor, and

how equipped they feel the Writing Center is to address their learning needs. The questionnaire

contained closed, rating questions, and open-ended questions.

Interview. Interviews (Appendix B) were conducted to further enrich the understanding

of how students with disabilities perceive and interact with the Writing Center. Questions

explored their decision process for making Writing Center appointments, how students think

their usage of the Writing Center differs from their non-disabled peers, and potential areas for

growth in the Writing Center.

Procedures

Data Collection. Digital data relating to Writing Center utilization was transferred from the database to Excel then to SPSS. To protect confidentiality, the link to the survey was distributed via email by the Accessibility Resource Office to all CC students registered with them. Data from the questionnaire was collected through Qualtrics. The Qualtrics account was initially created by the researcher but the password was changed by the OAR to eliminate the possibility of third party access. The dataset was anonymous but initially contained the IP address of the respondent. Sara Rotunno, Assistant Director of Accessibility in the OAR, downloaded the dataset and removed the IP addresses before sharing it with the researcher.

Because there was no data available on the standing of students in the general population or students registered with the OAR, standing was indicated in two ways. The general population Writing Center data does not include year of entry for students. However, the number of FYE vs. non-FYE appointments are noted. In the first two blocks of the first semester, all first years must take an FYE. The portion of appointments made by first year uses just data from the first two blocks of 2017 and 2018. This proxy was incomplete but it was the most effective option available. Data was available on the year students registered with the Office of Accessibility entered Colorado College (CC) and was used as a proxy for identifying first years. While some portion of the students in this dataset who entered CC from 2017 to 2019 were transfer students, not first years, it was the best proxy available.

The final question in the questionnaire asked participants if they were be interested in doing an in-person interview. If they selected yes, they were given a text box to input their name. The participant was then contacted by the study lead and given further information about the interview and consent. A time for an in-person interview was scheduled. Interviews were conducted in a private study room in Tutt library. Consent was obtained at the time of the

interview. Data was collected by digitally transcribing audio recordings of the interviews. All willing participants were interviewed.

Data Analysis. Historic data from the Writing Center dataset was analyzed in SPSS to compare utilization rates of different groups of students. The data was managed in Excel. An additional column including the percentage of CC students belonging to each demographic group (i.e. women, Hispanic students, international students) was added. Potentially mediating variables (i.e. sex, race, standing) were controlled by grouping students registered with the OAR by these variables and comparing their utilization rates with corresponding group of total-population Writing Center appointments.

The percent of appointments made by each demographic group was calculated and added to the table. The portion of appointments made by each demographic group was compared to the portion of the student body that group comprised. The same process was applied to the dataset of appointments made by students enrolled with the OAR. The results were descriptively compared to determine if the utilization behaviors of these demographic groups were impacted by their registration status.

The BlueForms data set was further analysed in SPSS. The number of appointments each subcategory of disability type was analyzed for statistical significance against the entire population of students registered with the OAR. Because individual disability groups (i.e. learning disability, ADHD, chronic illness) sampling pools were not large enough to create statistically significant subcategories, participants were not be grouped by disability type for analysis by mediating variables.

Quantitative data from the questionnaire was be uploaded to SPSS. Data was separated into different reported disability categories and compared by yearly utilization rates. Perception

of Writing Center competency and emotional experience of the Writing Center were compared based on the number of Writing Center appointment individuals reported making.

Responses to open ended questions from the questionnaire and interviews were uploaded and coded separately in NVivo. Interview data was first recorded, digitally transcribed, and uploaded for analysis using various online programs. Initial coding was guided by the grounded theory approach using three stage axial coding. Example of nodes include like 'extrinsic motivation,' 'support seeking,' 'and 'perceived utilization.'

Results

Utilization Rates

The utilization rate of students registered with the OAR was compared to the total population of Colorado College students. Students at Colorado College registered with the OAR between 2017-2019 (n = 529) comprise a total of 26.1% of the Colorado College student body (N = 2026). In the same time frame, 3,022 appointments were made in the Writing Center, 926 of which were made by students registered with the OAR comprising a total of 30.6% of appointments made. This indicates a small, + 4.5%, disproportionately high percent of appointments made by this population. The average student registered with the OAR made 1.74 appointments in this time frame. Comparative individual level data is not available for the total Colorado College population.

In order to determine how different subgroups within the population of students registered with the OAR utilize the Writing Center, several analyses were conducted grouped by potentially mediating variables. The following groups were created and compared to the utilization behaviors of all students registered with the OAR: disability type, sex, race/ethnicity, and standing.

Disability Type. The number of Writing Center appointments made by students with each disability type were compared with the rest of the students registered with the OAR (*Figure 1*). Note that total percentages exceed 100% because individuals often have more than one disability.

Independent-samples t-tests were conducted on all disability subtypes. The following groups did not use the Writing Center at statistically significant different rates than other students registered with OAR: ADHD; allergy; Autism Spectrum Disorder; brain injury; chronic health condition; deaf/hard of hearing; neurological disorder; physical/motor disability; vision impairment; and other disability. The following disability subtypes used the Writing Center at statistically significant different rates than other students registered with OAR.

Learning Disability. The number of Writing Center appointments made by students with the OAR registered with and without learning disabilities were compared. An independent-samples t-test was conducted to compare the number of appointments made by students with and without learning disabilities. There was no significant difference in the number of appointments made by students with learning disabilities (M = 1.91, SD = 3.277) and students who do not (M = 1.4, SD = 2.776; t (538) = 1.912, p = 0.056, two-tailed). The magnitude of the differences in the means (mean difference = 0.506, 90% CI: 0.07 to 0.942) effect size was very small (eta squared = 0.006).

Psychological Disorder. The number of Writing Center appointments made by students with the OAR registered with and without psychological disorders were compared. An independent-samples t-test was conducted to compare the number of appointments made by students with and without psychological disorders. There was a significant difference in the number of appointments made by students with psychological disorders (M = 1.95, SD = 3.540)

and students who do not have psychological disorders (M = 1.33, SD = 2.469; t (538) = 2.382, p = 0.018, two-tailed). The magnitude of the differences in the means (mean difference = 0.617, 95% CI: 0.108 to 1.126) was effect size was small (eta squared = 0.01).

    Speech/Language Disorder. The number of Writing Center appointments made by students with the OAR registered with and without a speech or language disorder were compared. An independent-samples t-test was conducted to compare the number of appointments made by students with and without a speech or language disorder. There was a significant difference in the number of appointments made by students with a speech or language disorder (M = 6.33, SD = 5.508) and students who do not (M = 1.57, SD = 2.949; t (538) = 2.778, p = 0.006, two-tailed). The magnitude of the differences in the means (mean difference = 4.765, 95% CI: 1.396 to 8.134) was effect size was small (eta squared = 0.014).

    Gender. The number of Writing Center appointments made by males and females were compared within students registered with the OAR. An independent-samples t-test was conducted to compare the number of appointments made by males and females. There was a significant difference in the number of appointments made by males (M = 1.22, SD = 2.556) and females (M = 1.87, SD = 3.237; t (538) = 2.205, p = .013, two-tailed). The magnitude of the differences in the means (mean difference = .648, 95% CI: 0.140 to 1.156) was effect size was small (eta squared = .01).

    These utilization rates were compared to the general utilization rates of the male and female students at Colorado College (*Figure 2*). Female students who, since 2017, have comprised an average of 55% of the student body received an average of 68.3% of total Writing Center appointments in the same time frame (+ 13.3%). Female students comprise 57.3% of

individuals registered with the OAR and made an average of 69.8% of Writing Center

appointments scheduled students by students registered with the office since 2017 (+ 12.5%).

Male students who comprise an average portion of 45% of the student body received an

average of 29.6% of Writing Center appointments annually since 2017 (- 15.4%). Male students

comprise 42.6% of individuals registered with the OAR and, of appointments made by students

registered with the office, received an average of 30.2% of Writing Center appointments since

2017 (- 12.4%).

Female students, independent of their registration, use the Writing Center at

disproportionately higher rates (unregistered = + 13.3%; registered = +12.5%) than male students

(unregistered = - 15.4 %; registered = - 12.4%). Note these numbers do not add up to 100% due

to the data being averaged.

Race/Ethnicity. The number of Writing Center appointments made by students

registered with the OAR of each racial/ethnic group for which data was available with each other

category of racial/ethnic group were compared. Colorado College includes international students

as a racial/ethnic category, while their rationale for doing so is unclear, this study elected to use

the same structure. It should be noted that international students include students from all over

the world and are not a single race or ethnicity. It cannot be assumed that these students are

English language learners. It should also be noted that Colorado College does not provide a

multiracial or multiethnic option for students to select, instead students are instructed to select

multiple boxes. This potentially limits the accuracy of the data if a significant number of students

select multiple options.

Due to the small group size and number of appointments, Native Hawaiian or Other

Pacific Islander (N = 1, M = 11) and Native American/American Indian/Native Alaskan (N = 2,

M = 0) were removed from statistical analysis. There was no statistically significant difference between the utilization rates of students registered with OAR of any remaining race or ethnicity (Hispanic, white, Asian, Black/African American, and international students).

Each of these racial and ethnic groups of students registered with the OAR were compared to the general population of Writing Center appointments. Groups included were: Hispanic, white, Asian, Black/African American, Native American/American Indian/Native Alaskan, Native Hawaiian/Pacific Islander, and international students. The percent of each demographic group at Colorado College was compared to the percent of Writing Center appointments made by that group (Table 1).

Hispanic. Hispanic students registered with the OAR make 2.21% more appointments than the general population of Hispanic students. Hispanic students registered with the OAR make Writing Center appointments at slightly disproportionately high rates compared to their population size (+1.9%) while unregistered students use it at a nearly proportional rate (- 0.14%).

White. White students registered with the OAR make 16.72% more appointments than the general population of white students. Both groups of white students make Writing Center appointments at lower rates compared to their population size (registered = -3.76%; unregistered = -13.02%).

Asian. Asian students registered with the OAR make 2.75% fewer appointments than the general population of Asian students. Asian students registered with the OAR make an almost proportionate number of Writing Center appointments (-0.34%) while unregistered Asian student make appointments at lower rates compared to their population size (-13.02%).

Black/African American. Black/African American students registered with the OAR make a similar percent of appointments as the general population of Black/African American

students (+ 0.98%). Black/African American students registered with the OAR make an almost

proportionate number of Writing Center appointments (+ 0.62%) while unregistered

Black/African American student make appointments at slightly lower rates compared to their

population size (-2.9%).

 Native American/American Indian/Native Alaskan. Native American/American

Indian/Native Alaskan students registered with the OAR make 0.58% fewer appointments than

the general population of Native American/American Indian/Native Alaskan students. Both

groups of Native American/American Indian/Native Alaskan students make Writing Center at

lower rates compared to their population size (registered = - 0.37%; unregistered = -1.99 %). It

should be noted that the data for this racial/ethnic group is limited due to the small population

size at Colorado College (2.57%) and registered with the OAR (0.37%).

 Native Hawaiian/Pacific Islander. Native Hawaiian/Pacific Islander students registered

with the OAR make 1.13% more appointments than the general population of Native

Hawaiian/Pacific Islander students. Native Hawaiian/Pacific Islander students, registered with

the OAR Writing Center at slightly higher rates compared to their population size (+1.02%)

while unregistered students use it at nearly proportional rates (- 0.447 %). It should be noted that

the data for this racial/ethnic group is limited due to the small population size at Colorado

College (0.52%) and registered with the OAR (0.18%).

 International Students. International students registered with the OAR make 14.4%

fewer appointments than the general population of international students. Both groups of

international students make Writing Center appointments at higher rates compared to their

population size (registered = +2.25%; unregistered = + 9.21%).

Two or More Races. There is no data available on the utilization rates by multiracial students in the general population. However, multiracial students registered with the OAR make a nearly proportional number of Writing Center appointments (-0.47%).

Standing. A one-way between-groups analysis of variance was conducted to explore the impact of standing on the number of writing center appointments among students registered with the OAR. Participants were divided into six groups according to their year of entry (Group 1: 2013; Group 2: 2014; Group 3: 2015; Group 4: 2016; Group 5: 2017; Group 6: 2018). There was a statistically significant difference at the $p < .05$ level in the number of writing center appointments for the first five groups: $F (5, 530) = 7.424$, $p = 0.000$. The effect size was moderate (eta squared = 0.065). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 5 ($M = 2.75$, $SD = 3.812$) was significantly different from Group 1 ($M = 0.15$, $SD = 0.376$), Group 2 ($M = 1.01$, $SD = 2.564$), Group 3 ($M = 1.00$, $SD = 1.902$), and Group 4 ($M = 1.11$, $SD = 2.353$). Group 6 ($M = 2.14$, $SD = 3.467$) did not differ significantly from any group.

First year students registered with the OAR make 5.13% fewer appointments than the general population of first year students. Both groups of first year students make Writing Center appointments at higher rates compared to their population size (registered = +8.9%; unregistered = + 10.7%).

Survey Results

After four weeks and three reminder emails were sent to students registered with the OAR (n=420), twenty-one completed or near completed surveys were submitted for review (response rate = 5%). There were seven first years, six sophomores, three juniors, and five seniors representing a variety of disabilities. Disabilities included were: ADHD (n=8), Allergy

(n=3), Brain Injury (n=1), Chronic Health Condition (n=4), Learning Disability (n=12),

Neurological Disorder (n=2), Physical/Mobility Impairment (n=2), Psychological

Disorder/Mental Illness (n=13), and Vision Impairment (n=1). The number of disabilities

represented in the sample exceeds the number of respondents because 80% of respondents had

multiple disabilities. There were no statistically significant differences in reported utilization

rates between disability types.

Physical mobility disability (M = 2.5) was the most frequent disability type utilizing the

Writing Center (*Figure 1*). All disability types averaged more than one visit to the Writing

Center. The number of participants in five appointment range brackets were calculated for each

disability type (*Figure 3*).

Relationship between severity of academic impact of disability and Writing Center

usage. The respondents reported the academic impact of their disability on a scale of 1-5 where

one was no negative academic impact and five was negative academic impact. The mean score

negative academic impact was 3.9 (SD=1.091). Respondents were categorized by how severe of

a negative impact their disability had on their academic performance. These groups were then

compared by how many Writing Center appointment they reported making (*Figure 4*). There was

no statistically significant difference in the number of appointments made by participants in

different impact severity categories.

A one-way between-groups analysis of variance was conducted to explore the impact of

reported severity of academic impact of disability on number of writing center appointments

made. There was no statistically significant difference between groups.

Specific disability impact. Participants were prompted to indicate which of the following

ways in which their disability negatively impacted them: ability to focus (n=17), ability to

interpret assignments (n=8) , ability to organize thoughts (n=13), ability to use grammatical mechanics and spell correctly (n=7), ability to have confidence in their writing (n=8), ability to complete assignments on time (n=9), and ability to manage stress/anxiety (n=13). These groups were then compared by how many Writing Center appointment they reported making (*Figure 5*).

A series of one-way ANOVAs were conducted to explore the specific academic impacts of participants disabilities on number of writing center appointments they made. There was no significant difference in the number of appointments made by any category of disability impact.

Relationship between prior experiences in the Writing Center and Writing Center usage. The perception of emotional experiences in the Writing Center was explored by asking respondents to rate how anxious, safe, and judged they felt in the writing center on a scale of 1-5 where one was never and five was always (*Figure 6*). A series of one way ANOVAs were conducted to determine if there was a statistically significant difference the number of Writing Center appointments made depending on the degree of reported feelings of anxiety, safety, and judgment. There were no statistically significant differences.

Perception of Writing Center competency. The perception of Writing Center competency was explored by asking respondents to rate if the Writing Center was helpful, knowledgeable of disability, adaptable, and if they felt peer and professional tutors were helpful (*Figure 7*). These perceptions were rated on a scale of 1-5 where one was strongly disagree and five was strongly agree. A series of one way ANOVAs were conducted to determine if there was a statistically significant difference the number of Writing Center appointments made depending on how respondents rated different metrics of competency. No statistically significant differences were found.

Reasons students provided for going to the Writing Center. Written responses from open-ended questions on the survey were uploaded to NVivo and thematically coded. Responses were initially coded into three categories, 'extrinsic,' 'intrinsic,' and 'intrinsic and extrinsic' (Figure 8). Extrinsic responses (29.66%) were those that contained themes like "professor told me to" or "I got extra credit." Intrinsic responses (36.46%) were those that contained themes like, "to help me get my ideas on the paper," or "force myself to work on it." Intrinsic and extrinsic responses (31.56%) contained references to both external forces encouraging or forcing the respondent to use the Writing Center as well as internal motivation to seek writing support.

'Extrinsic' responses were separated into 'requirement,' and 'encouraged.' The requirement subnode included individuals who reported that they only used the Writing Center when it was a course requirement and made up 18.64% of total responses. The encouraged subnode included individuals who were encouraged, with or without incentives, but not required to use the Writing Center. 11.2% of total respondents fell into this category.

The 'intrinsic' node was broken down into two subcategories, 'improve writing' and 'support seeking.' Responses included in 'improve writing' either directly stated that they were hoping to improve their writing or mentioned specific writing concerns they wanted to address. 25.31% of responses included 'improve writing' themes. Responses included in the 'support seeking' subcategory directly stated that they needed help. These themes were apparent in 16.6% of responses.

There were no subnodes generated for the 'intrinsic and extrinsic' parent node due to lack of consistent patterns between responses.

Reasons why students did not use the Writing Center. Two respondents responded to the open ended question regarding why they chose not to use the Writing Center. One indicated that their learning disability positively impacted their writing without further explanation. The other respondent indicated that they did not struggle with writing and had not felt the need to use it.

Areas of growth in the Writing Center. Written responses to the open-ended question regarding ways to improve the Writing Center were uploaded to NVivo and thematically coded. Responses were initially coded into five parent nodes, 'individualization,' 'outreach,' 'prompted disclosure,' 'tutor training,' and 'tutorial structure' (Figure 9).

The two smallest categories were 'individualization,' and 'outreach.' Responses coded into 'individualization' (6.67%) contained themes focusing on developing a flexible pedagogy based on the individual needs of tutees. Responses coded into 'outreach' (6.67%) contained themes focusing on building communication between the Writing Center and students.

Responses coded into 'prompted disclosure' (13.2%) recommended creating a standard question encouraging students to disclose their disability. All respondents in this node recommended adding a place on Writing Center appointment registration forms for tutees to write if they had a disability, and if so what kind.

Responses coded into 'tutor training' (40%) had themes that broadly focused on improving how Writing Center tutors are prepared to work with students with disabilities. A subnode was created called 'specialized tutors' (13.2% of total respondents). Responses included in this subnode recommended that certain tutors receive specialized training on working with

students with disabilities. These tutors could then either be paired with or be requested by students with disabilities.

Responses coded into the final node, 'tutorial structure' (13.2%) included themes around how the pedagogy and methodology of tutorial could be improved. Specific recommendations made by respondents included in this section were: increased organization of tutorial, more repetition, slower explanations, and more process oriented explanations.

Interview Results

Six in-person interviews were conducted with respondents from the survey. The respondents were not asked to disclose their disability type to prevent their interview answers from being connected to their survey responses. However, several mentioned without prompting that they had ADHD, dyslexia, and/or a motor disability.

Interviewees were asked about how frequently they perceived they used the Writing Center compared to their non-disabled peers. One respondent indicated they believed they used the Writing Center less than their non-disabled peers, four initially stated they believed they used it at the same rate but one later changed their answer to higher rate, and one respondent consistently maintained that they used it more than their non-disabled peers. Ultimately, the respondents were broken into 'lower' (n=1), 'same' (n=3) and 'higher' (n=2).

Process of Deciding Whether to use the Writing Center. Interviewees were asked under what circumstances they have or would use the Writing Center. The decision-making process did not always connect to their disability. There was a distinct difference between the 'higher' population and the 'lower' and 'same' populations.

The interviewees in the 'higher' category were more likely to discuss their disability and its direct negative impact on their writing than the rest of interviewees. Both individuals in this category stated that their writing was directly negatively impacted by their disability more than once. One respondent in this category and one respondent in the 'equal' category stated that they chose to use the Writing Center to get validation and/or affirmation of their writing. This population also emphasized needing structure (i.e. completing a draft before a tutorial), support with mechanics, and someone to help organize their thought as a driving factor for deciding to make a Writing Center appointment.

Interviewees in the 'lower' and 'equal' categories did not mention their disability as a reason to use the Writing Center. These interviewees emphasized that they would use the Writing Center for high stakes assignments. Half stated that they planned to use it for their eventual thesis or capstone.

When discussing why participants would choose not to use the Writing Center several themes emerged. Half of interviewees mentioned fear that their tutor would think that they were 'stupid' or judge them for making mistakes related to their disability. Among the 'lower' and 'same' utilization populations, individuals stated that time constraints on the block plan (33%) and selecting less writing intensive courses (33%) contributed to their depressed rate of usage. Some stated that they didn't feel they needed the Writing Center (50%) either because they were non-writing intensive STEM majors or they didn't feel they needed assistance. This population also repeatedly referenced alternative writing support resources (50%) including online editing programs, classmates, and parents.

Recommended improvements. All interviewees were asked how effectively they thought the Writing Center served students with disabilities and how they thought the Writing Center could improve. Nine suggestions were generated: modeling help seeking behaviors; increasing direct outreach to students registered with OAR; prompting tutees to disclose their disability; increasing tutor education about disability; playing music in the Writing Center; having tutors take notes and/or type for tutees; building pre-textual relationships; leading workshops for students registered with OAR; and providing quiet working spaces (Figure 10).

Low incidence recommendations included: providing quiet areas for tutors and tutees to work, creating workshops specifically for students with disabilities, playing music in the Writing Center, and modeling help seeking behaviors (i.e. showing how to make appointments, asking another tutor for help, connecting the tutee with extra resources). While only one person mentioned wanting to build pre-textual relationships with their tutor before beginning the tutorial, three interviewees mentioned fear around being judged as 'stupid' by a tutor who didn't know them.

Two individuals recommended that the Writing Center increase its outreach to students with disabilities. One interviewee recommended that the Writing Center make email outreach to students registered with OAR multiple times a year. The other interviewee thought special services should be developed for students with disabilities (i.e. open hours or workshops in the Writing Center) in collaboration with OAR. This interviewee hoped that group workshops for students with disabilities would lower stress on students with certain disabilities to pass as neurotypical and potentially build community.

Two individuals recommended that the Writing Center prompt students to disclose their disability. These individuals discussed the 'awkwardness' of disclosing disability and the stress

of seeming 'stupid.' They both wished tutors asked them if they had a disability or that there was a place to write down their disability in the Writing Center intake forms.

Two individuals recommended that Writing Center tutors take notes or type for tutees. The motivations and logic for the individuals were distinct. One person had a disability that impacted their processing and found taking notes distracting. They also reported that having a tutor take notes for them, particularly when they were worried they didn't have enough ideas for a paper, that being given a summary of what they had discussed during their tutorial was both helpful and affirming. The other individual had a motor disability that physically made typing and writing difficult.

Half of interviewees (n=3) focused on developing Writing Center tutor training. These respondents expressed concern that tutors did not receive sufficient training on working with individuals with disabilities. One focused on how most tutors prompt tutees to read aloud which, due to their dyslexia and anxiety, was challenging. This person felt that tutors would modify or avoid these practices if they had more disability training. Other respondents expressed concern that tutors did not seem aware of the broad the range of ways people process information and think.

Discussion

This study used multiple data sets and drew from the words of students registered with the OAR to learn about their experiences using the Writing Center. The research attempted to answer questions related to utilization rates, motivations for using the Writing Center, and potential improvements in serving students registered with the OAR. While the utilization rates varied by specific disability type, students registered with the Office of Accessibility Resources

use the Writing Center at slightly higher rates than their unregistered peers. Participants were motivated to use the Writing Center for a combination of extrinsic and intrinsic reasons but were generally seeking non-disability specific support for their writing. Participants generally viewed the Writing Center as a competent and an emotionally safe environment. Their recommendations largely focused on improving tutor training, increasing outreach, and normalizing discussion of disability.

Utilization Rates

This study found that, in general, students registered with OAR made 4.5% more appointments than the total CC population. While most disability subtypes use the Writing Center at similar rates as the rest of their peers registered with the OAR, students with mental illnesses and speech and language disorders used the Writing Center at a higher rate. Despite the variation in utilization by students with different disabilities, students registered with OAR had similar utilization patterns to the general population of their racial/ethnic group and gender.

Disability Type. The independent-samples t-tests found that most disability subgroups did not use the writing center at statistically significantly different rates from their registered peers. These groups included students with: ADHD; allergies; Autism Spectrum Disorder; brain injury; chronic health conditions; hearing loss; learning disabilities; neurological disorders; 'other' disability; and/or physical or mobility impairments. However, students with mental illnesses and speech or language disorders used the writing center at statistically significantly higher rates while students with vision impairment use the writing center at statistically significantly lower rates.

Mental Illness. Students with mental illnesses used the Colorado College Writing Center at statistically significant higher rate than their registered peers. In fact, 96.1% of students

registered with the OAR seen by the Writing Center have mental illness listed as one of their disabilities. This finding is surprising because individuals with mental illness tend to engage in lower rates of help-seeking behaviors (Shor, 2016). However, this surprising result is promising. It indicates that the culture of the Writing Center may be welcoming to students with mental illnesses and mitigates their tendency to not seek out academic support (Shor, 2016). This result also indicates that tutors are already using effective strategies to address common challenges students with mental illnesses face such as impaired time management (Shor, 2016), stress management, focus, energy, confidence and memory (Gobbo & Shmulsky, 2007). Despite tutors not receiving direct training on working with tutees with mental illnesses they appear to have developed effective strategies for working with this population.

Speech or Language Disorders. Students with speech or language disorders used the Colorado College Writing Center at statistically significant higher rate with a small effect size than their registered peers. There is no research to indicate if this result is consistent with behavior of students with speech and/or language disorders at other universities. The elevated utilization rate of this population may be attributed to the direct and significant impact speech and language disorders can have on the writing process. Specific areas of challenge may include word recall, usage and comprehension of figurative language, writing in a clear and organized way in specific disciplines (Bashir & Scavuzzo, 1992). These challenges are directly addressed in Writing Center appointments which may lead to higher numbers of scheduled appointments.

Learning Disabilities. Students with learning disabilities did not use the Writing Center at a statistically significant higher rate than their OAR registered peers. This was surprising because, at face value, learning disabilities have the greatest potential impact on academic

performance. Among college students, learning disabilities can have a significant negative impact in every discipline and put individuals at a higher risk of attrition (Trainin & Swanson, 2005). With appropriate academic support the performance gap between students with and without learning disabilities is dramatically reduced (Trainin & Swanson, 2005). Additionally, this population likely had academic supports in their K-12 education through IEP's or 504 plans. It is surprising that this population did not go on to seek further support after being accustomed to receiving support throughout their pre-college education.

It is possible that students with learning disabilities have other support systems, have chosen majors that do not require intensive writing, or are 'high functioning' enough not to require additional support from the Writing Center. Multiple interviewees and survey respondents indicated that they had support systems such as parents, peers, and online software. The utilization rates of this population are not necessarily concerning assuming they have sufficient alternative support systems. However, this assumption cannot be made without further research.

Comparing the General Population and Students Registered with OAR: More Alike than Different

Students registered with OAR were compared to the general population of CC students to determine if their utilization patterns were different. Most racial/ethnic groups and genders behaved very similarly independent of registration status. However, the similarity between these groups go beyond simple utilization patterns. The challenges students with disabilities experience are not unique to individuals registered with OAR. While students with disabilities have specific needs and concerns, their needs are not alien to tutors.

Gender. The number of Writing Center appointments made by males and females were compared within students registered with the OAR. Among students registered with the OAR, female students use the Writing Center at a significantly higher rate than male students. The reasons for this discrepancy are beyond the scope of this paper but have largely been attributed to cultural norms regarding gender roles and help seeking behavior (Hunzer, 1997). This may be amplified by the imbalance of female (82.9%) to male (17.1%) employees in the CC Writing Center. Descriptive analysis of Writing Center appointments of the total population of CC students showed a similar pattern. While the utilization gap between male and female students is somewhat smaller among OAR registered students than the general population, the pattern is consistent across both groups.

Race/Ethnicity. There was no statistical difference between racial/ethnic group utilization amongst students registered with the OAR. Comparisons of descriptive analysis of the general population registered and unregistered showed that Hispanic, Black/African American, Native Hawaiian/other Pacific Islander, Native American/American Indian/Native Alaskan students use the Writing Center at relatively proportional rates independent of their OAR registration status. These students' utilization behavior does not seem to be impacted by the added variable of OAR registration.

However, Asian, white, and international students registered with OAR appear to use the Writing Center differently than the general population of their racial/ethnic group. White and Asian students, registered and unregistered, use the Writing Center at proportionally low levels. It is difficult to determine if these results are typical across institutions due to limited amounts of quantitative Writing Center utilization data. This study determined that the OAR registered Asian students use the Writing Center almost 13% more than unregistered Asian students and

OAR registered white students made almost 10% more Writing Center appointments than unregistered white students. This indicates that while white and Asian students are less likely to use the Writing Center in general, those who have registered with OAR are more likely to make appointments. It is unclear why OAR registered members of these two groups use the Writing Center at comparatively high rates

International students registered with the OAR are the only group that utilizes the Writing Center at lower rates than their unregistered peers. Both groups use the Writing Center at disproportionately high rates, but international students registered with the OAR engage in less help seeking behavior in terms of number of Writing Center appointments. The elevated rate at which international students seek Writing Center appointments may be attributed to the challenges of writing in a potentially foreign academic culture and, for some international students, in a non-native language. It is unclear why the added variable of registration with the OAR would depresses the relative number of appointments made, but there appears to be a correlation.

Standing. The method of determining standing was inexact but the most effective proxy available. It was determined that students registered with the OAR in the class of 2021 (entry year, 2017) use the Writing Center at statistically significantly higher rates than all of their peers except the class of 2022 (entry year, 2018). This could in part be attributed to a full year and a half of utilization data on the class of 2021 while there is currently only one semester of data available for the class of 2022. This is a serious limitation and more exact methods of standing data collection should be developed for future studies.

Despite the limitations, it appears that first year students utilize the Writing Center at disproportionately high rates compared to upperclassmen independent of registration status.

When comparing the behavior of first year students with and without disabilities, it was found that students who registered with the OAR in 2018 made 5.1% fewer appointments than the general population of first year students. It is unclear why first year students with disabilities would engage in fewer help-seeking behaviors than their unregistered peers. Further study should be conducted specifically on first year students registered with OAR and the kinds of academic support systems they use/have created, what kinds of outreach is most effective, and what kind of support systems they would benefit from.

Experience of the Writing Center by Students Registered with OAR

One goal of this study was to understand why and when students registered with the OAR chose to use the Writing Center and what their experiences were once they got there. Questions included in the survey and interviews addressed these concepts. While there were a range of responses and experiences, several key themes emerged.

Deciding to Using the Writing Center. While students with certain disabilities may need greater degrees of individualization or require more support from their tutors, their reasons for using the Writing Center and goals for tutorials are generally not disability specific. Most interviewees discussed wanting a 'second set of eyes,' help with organization, or support with mechanics/grammar when they used the Writing Center. These needs and desires may be influenced by individual's disability, but they are not unique to it. Non-disabled students seek help in all of these arenas, not just students with disabilities or students registered with OAR. It cannot and should not be assumed that students registered with OAR who use the Writing Center are severely negatively impacted by their disability and require unique, highly specialized tutorials. Survey results indicate the degree of reported negative academic impact from disability was not predictive of higher rates of Writing Center usage. In fact, the highest utilization group

were respondents who indicated a 'neutral' negative academic impact followed by those who reported having 'little negative impact.'

The challenges that were most closely linked with higher levels of Writing Center usage were specific manifestations of disability, not general severity. People who reported difficulty organizing their thoughts, managing stress and anxiety, focusing, turning in assignments on time, and having confidence in their readings tended to make more appointments.

The Experience of the Writing Center. Respondents' views of the Writing Center varied depending on how frequently they used the Writing Center. There is a clear, positive trend that as tutees attend more appointments, they feel safer, less judged, and less anxious. This is consistent with Hartman-Hall and Hagga's (2002) finding that individuals with positive experiences asking for help later have higher rates of help-seeking behaviors. It would appear that as individuals attend more appointments and become more familiar with the Center and individual tutors they feel more comfortable. A similar theme emerged in interviews were multiple individuals expressed fear of being judged by an unfamiliar tutor and greater degrees of comfort with a tutor who they knew personally. These individuals specifically mentioned that they feared an unfamiliar tutor would interpret manifestations of their disability as 'stupidity' or that the tutor wouldn't understand their needs.

Greater exposure to the Writing Center doesn't just improve emotional experience, it also improves perceived competency of tutors. As individuals have more appointments at the Center, their perception of the Writing Center's ability to help and knowledge of disability improves. The perceived helpfulness of tutors is not impacted by the tutors being peers or professional staff. This encouraging finding indicates that the current training for tutors prepares them to meet the needs of the average client as effectively as professional staff.

However, as the number of appointments made increases, the perceived ability of tutors to adapt to specialized learning needs decreases. This may be because as individuals make more appointments, they meet a wider range of tutors. Some tutors may be more effective at modifying their typical session for students with specialized learning needs or preferences than others. This range of adaptability among tutors may lead to students perceiving the Center less competent as a whole. While these results are largely encouraging, there is clear room for improvement, particularly in regard to helping tutors to consistently have the tools needed to adapt lessons for tutees with specialized learning needs.

Recommendations

The final goal of this study was to determine how the Writing Center can better serve students with disabilities. Recommendations were grouped into three categories: 1) Writing Center; 2) Writing Center OAR integration; and 3) institutional data collection.

Writing Center. Several broad themes emerged from interviews and survey responses. Recommendations were considered in the context of best practices from the literature.

Increased Tutor Training on Disability. Interviewees and survey respondents did not explicitly state what improvements they hoped to see in tutor training beyond general education about disabilities to build awareness. This view has also been expressed by some non-disabled peer tutors who often feel they do not have the appropriate background to respond to specific learning needs appropriately (Kowalsky & Fresko, 2002). A more inclusive and research guided tutor education program may include providing tutors with a wider range of directive methodologies (Ryan, Miller, Steinhart, Babcock & Daniels, 2017) and encouraging hands-on approaches like note taking and modeling how to break down assignments into component parts (Gobbo & Shmulsky, 2007). Tutors appear to already have some effective strategies, but more

consistent adaptive strategies should be encouraged across the Writing Center through a more robust tutor education program and professional development.

While some respondents wanted a specialized group of 'disability tutors,' it would benefit the Writing Center as a whole if all tutors were prepared to work with all students. Directive tutoring strategies may benefit students with disabilities in particular but are also useful for non-disabled students. There may be opportunity for additional professional development to 'certify' some tutors in their online profile as having particular expertise in working with students with disabilities. This 'certification' could be earned by interested tutors by completing classes or extra readings, such as Babcock and Smith's (2017) *Writing Centers and Disability*. However, this 'certification' cannot and should not replace center-wide training. It should be noted that the new Writing Center Director Kat Bell has introduced a new tutor training curriculum that, for the first time, includes education on working with students with disabilities and alternatives to non-directive minimalist tutoring.

Prompted Disclosure of Learning Preference/Needs. Multiple interviewees mentioned that they wished that tutors would ask them if they had a disability. These individuals expressed fear of their disability being perceived as 'stupidity' and felt disclosing their disability status would be awkward. It would appear that these participants hoped that by being asked if they have a disability it would eliminate social discomfort and reduce fear of judgment. While these goals are valuable, asking people to disclose their disability status has several concerning implications: 1) confidentiality; 2) making tutees feel uncomfortable; and 3) creating a culture of disability specific tutoring strategy which could undermine viewing the tutee as an individual.

A possible alternative would be creating a form for clients to fill out where they could indicate any learning needs or preferences. The form could provide multiple choices as well as

spaces for the tutee to write in their own answers. Possible options could be: I learn best by reading out loud, I learn best by taking notes, talking through problems helps me find solutions, visual aids help me learn. Additionally, the form could include a space for individuals to list specific writing challenges they are experiencing. Examples of challenges could be: organization, mechanics and grammar, citations, focus, and stress.

This form would be referenced and discussed whenever a tutee works with a new tutor for the first time. The conversation would also be a space for a tutee with a disability, if they wish to disclose it, to mention how their disability impacts their writing. If the tutee does not wish to disclose their disability status, their learning needs have been established and the tutor can tailor the tutorial to them more effectively while maintaining the tutee's privacy. This form system would also benefit non-disabled students. All individuals have learning needs and preferences, regardless of disability status, and would benefit from explicit conversations in tutorials about their learning style.

Creating Long-Term Tutor-Tutee Relationships. One theme that emerged in interviews was fear of being judged by unfamiliar tutors. One individual expressly indicated they would only work with with someone they knew personally so that if they made any "really terrible errors" the tutor would not assume they were stupid and would be able to understand them. This individual recommended creating a meet-and-greet where students could go into the Writing Center and meet various tutors.

While the idea of an open house or low-stakes meeting venue is appealing, it is unclear how effective it would be at building relationships between tutors and tutees. A potential alternative is reversing a policy in the CC Writing Center that discourages tutors from creating long term relationships with tutees. Historically, tutees have been encouraged to work with a

range of tutors so that they get the benefit of multiple teaching styles and perspectives. Since Kat Bell assumed the director role in the CC Writing Center, this policy has been relaxed and is being modified.

Altering this policy will hopefully lead to greater levels or perceived stability and safety which may help decrease stress levels and increase attendance by students with certain disabilities (Garbus, Babcock & Daniels, 2017). Peer tutors then have the potential to become a socioemotional support in their tutee's academic life. Support systems that include peer tutors foster student intellectual development while providing a positive social network (Kowalsky & Fresko, 2002). For students with disabilities, the addition of academic socioemotional support can help reduce their risk of attrition (DaDeppo, 2009).

In addition to socioemotional benefits, long-term tutee-tutor relationships may allow for greater degrees of individualization and more effective tutorials. In a typical 40-minute tutorial, tutors have a limited period of time to understand the assignment they are assisting with, the learning needs and preferences of the tutee, the tutee's state of mind and confidence level, and to create an effective tutoring strategy for the individual. In long term tutoring relationships, the tutor would have the luxury of developing a nuanced understanding of the tutee's strengths and areas for growth, their learning style, and how they can be most effective academic support. The tutee in turn would have greater opportunity to express their concerns, needs, and ideas. Over the course of a block or semester the pair might be able to generate longer-term goals (i.e. utilizing pre-writing organizational strategies, reducing passive voice, thesis development) and track improvement rather than having various tutors spot-treat challenges as they appear in individual tutorials.

Writing Center OAR Integration. The Writing Center and the OAR both serve key functions for students with disabilities on the CC campus. While the OAR often recommends that students use the Writing Center, there is limited integration between the offices. One potential avenue for collaboration that could also help build social networks and academic integration in a low stakes environment could be workshops for students registered with OAR. The Writing Center already runs workshops for classes and groups of student athletes upon request. These workshops are effectively study halls with Writing Center tutors who are available for consultation. Outreach could be conducted through the OAR and a representative from the OAR could attend the first workshop of each semester to answer any accessibility related student questions. These workshops would be an opportunity for individuals to meet tutors and build relationships before making appointments. It could also be an opportunity for students with disabilities to interact and get to know each other, building social networks.

Institutional Data Collection. During the process of conducting research for this paper, several systemic challenges were noted in OAR, the Writing Center, and institutional labeling.

Institutional Labels. CC collects significant amounts data on the student body. This data was vital for this project but could be improved for future researchers. Currently, there is limited data on gender non-binary students. This excludes a small but important group of the CC student body from further research.

There are also several challenges in how the institution collects racial/ethnic data. Multiracial/multiethnic students are treated as multiple individuals, artificially inflating the total number of students in demographic reporting and erasing their identities. Additionally, one racial/ethnic category is 'foreign.' This group includes all international students, independent of

their country of origin or racial/ethnic identity. It should be noted that not only is 'foreign' not a race or ethnicity, it inaccurately conflates a large group of students with diverse backgrounds.

Office of Accessibility Resources Research. Recruiting participants for research has been an ongoing challenge for OAR. No research project run through or by OAR has reached a statistically significant response rate as of the writing of this paper. While this is a challenging issue to address, the office may consider discussing the function of research with individuals when they register with the office. In these conversations, the OAR case manager could explain current and upcoming research projects and their potential benefits. Making a personal connection in addition to email recruitment may help humanize research and build a culture of research participation.

The Writing Center Data Collection. Replication studies should be conducted to monitor changes in utilization patterns as new programs are implemented. In order to increase the nuance of future studies, individual data should be collected on all students rather than calculating totals or averages for the whole group. Individual level data allows for significantly more statistical analysis that will aid future researchers in understanding the utilization behaviors of various groups- not just students registered with the OAR.The Writing Center is changing its outreach, services, hiring practices, and tutor training since the introduction of a new Writing Center Director, Kat Bell, which may influence utilization trends.

Limitations

Utilization data for students registered with OAR was only available starting in 2017. This paper was completed in 2019, limiting the volume of data. While that does not discount the validity of utilization data, particularly since data was collected on every student registered with

OAR, it should be noted that trends that were apparent in the timeframe of this study may differ from years past.

Due to low survey response rate, results can only be interpreted as a small case study and cannot be assumed to be representative of the CC student body registered with OAR. No statistical significance between groups was expected to be found and none was. The low response rate to the survey also impacts the generalizability of interview responses because interviewees were recruited from survey participants. While a relatively high percent of survey respondents were interviewed (28.6%), the number of overall participants was very low (N=6). Because of this, the views expressed in interviews cannot be generalized to the whole population of CC students registered with OAR.

Conclusion

This study generated important and useful data on the utilization and experiences of students with disabilities within the Colorado College Writing Center. While there are limitations to the survey and interview findings, as outlined above, results provide a foundation for future research. Additionally, this study informs potential modifications to current Writing Center practices.

This study found that students registered with the Office of Accessibility Resources used the Writing Center at 4% higher rates than their non-registered peers, indicating a slightly higher tendency to seek academic support. These trends were not consistent across all disability types; individuals with mental illness and speech and language disorders used the Writing Center at statistically significant higher rates than their peers registered with the OAR. The survey and interview results, although limited by the low response rate, indicate that students registered with

the OAR tend to feel increasingly safe in the Writing Center as they make more appointments. They also feel that peer and professional tutors are equally equipped to work with them.

Recommendations generated by this study largely revolve around increasing tutor training on disability, normalizing discussion of learning needs, and improving collaboration between the OAR and Writing Center. Some of these recommendations are already being implemented by the new Writing Center Director, Kat Bell, who has dramatically changed new-tutor training. Future studies should monitor how these changes influence the experience and utilization of the Writing Center by students registered with the OAR. Future studies must also consider alternate methods of recruiting participants for surveys and interviews to reach a statistically significant response rate.

Students registered with the OAR have many needs and challenges related to their disabilities but their concerns and the reasons they seek out support are not unique. People with and without disabilities benefit from being asked how they learn best and from receiving individualized tutorial support. Improving services for students registered with OAR may help improve services for all students in the Writing Center, thus there are global benefits to implementing the recommendations generated by this study. Most significantly, there is an important opportunity to potentially improve the socioemotional experiences and academic performance of students with disabilities.

List of References

Babcock, R. D., Daniels, S., & Smith, T. G. (2017). Introduction. In A. D. Smith (Ed.), *Writing Centers and Disability* (pp. 1-16). Southlake, TX: Fountainhead.

Bashir, A. S., & Scavuzzo, A. (1992). Children with Language Disorders. *Journal of Learning Disabilities,25*(1), 53-65. doi:10.1177/002221949202500109

Bell, K. (2019, February). Personal communication.

Birnbaum, Lisa C. "Toward a Gender Balanced Staff in the Writing Center." Writing Lab Newsletter 19.8 (1995): 6-7.

Brisenden, Simon (1986) Independent Living and the Medical Model of Disability, *Disability, Handicap & Society*, 1(2), 173-178. doi: 10.1080/02674648666780171

Brooks, J. (1991). Minimalist Tutoring: Making the Student Do All the Work, *Writing Lab Newsletter,* 15(6), 1-4.

Colorado College. (n.d.). Enrollment Institutional Planning and Effectiveness Colorado College. Retrieved from https://www.coloradocollege.edu/offices/ipe/enrollment.html

Dadeppo, L. M. (2009). Integration Factors Related to the Academic Success and Intent to Persist of College Students with Learning Disabilities. *Learning Disabilities Research & Practice,24*(3), 122-131. doi:10.1111/j.1540-5826.2009.00286.x

Garbus, M., Daniels, S., & Smith, T. G. (2017). Tutoring Mentally Disabled Students: Challenges and Opportunities. In R. D. Babcock (Author) & A. D. Smith (Ed.), *Writing Center and Disability* (pp. 257-276). Southlake, TX: Fountainhead.

Greenfield, L., & Rowan, K. (2011). *Writing centers and the new racism: A call for sustainable dialogue and change*. Logan, UT: Utah State University Press.

Gobbo, K., & Shmulsky, S. (2007). Meeting the Needs of Students with Complex Psychological and Educational Profiles. *College Teaching,55*(3), 134-136. doi:10.3200/ctch.55.3.134-136

Hartman-Hall, H. M., & Haaga, D. A. (2002). College Students' Willingness to Seek Help for their Learning Disabilities. *Learning Disability Quarterly, 25*, 263-274.

Hergenrather, K., & Rhodes, S. (2007). Exploring Undergraduate Student Attitudes Toward Persons With Disabilities. *Rehabilitation Counseling Bulletin,* 50(2), 66-75. doi:10.1177/00343552070500020501

Hunzer, Kathleen M. "Misperceptions of Gender in the Writing Center: Stereotyping the Facilitative Tutor." *The Writing Lab Newsletter* 22.2 (1997): 6-10.

Kinkead, J. A., & Harris, J. G. (1993). *Writing centers in context: Twelve case studies*. Urbana, Ill: National Council of Teachers of English. Doi:0-8141-5868-4

Lightner, K. L., Kipps-Vaughan, D., Schulte, T., & Trice, A. D. (2012). Reasons University Students with a Learning Disability Wait to Seek Disability Services. *Journal of Postsecondary Education and Disability,25*(2), 145-159.

Murphy, C., & Sheridan, S. (1995). The Tutoring Process: Exploring Paradigms and Practices. *The St. Martin's Sourcebook for Writing Tutors*, (pp. 1-25). Boston, MA: St. Martin.

National Census of Writing. Gladstein, J., & Fralix, B. (2017). Four-Year Institution Survey. Retrieved April 9, 2019, from http://writingcensus.swarthmore.edu/survey/4?question_name=s4demo27&op=Submit#results

Neff, J. (1994). Learning Disabilities and the Writing Center. In J. A. Mullin & R. Wallace (Eds.), *Intersections: Theory-Practice in the Writing Center*(pp. 81-95). Urbana, IL: National Council of Teachers of English. doi:0-8141-2331-7

North, S. (1984). The Idea of a Writing Center. *College English,46*(5), 433-446. doi:10.2307/377047

Ronen Kowalsky & Barbara Fresko (2002) Peer Tutoring for College Students with Disabilities, Higher Education Research & Development, 21:3, 259-271, DOI: 10.1080/0729436022000020760

Ryan, .H, Miller, M.O., Steinhart, S.E., Daniels, S., & Smith, T. G. (2017). Informed Practices: Destabilizing Institutional Barriers in the Writing Center. In R. D. Babcock (Author) & A. D. Smith (Ed.), *Writing Center and Disability* (pp. 257-276). Southlake, TX: Fountainhead.

Shor, R. (2016). Difficulties Experienced by University Students with Severe Mental Illness Who Participate in Supported Education Programs. *Community Mental Health*

Journal,53(3), 281-287. doi:10.1007/s10597-016-0026-2

Stevenson, M., Daniels, S., & Smith, T. G. (2017). Clearing the Traffic Jam: Enabling Higher
    Education Students with Depression and Anxiety Disorders to Complete Written
    Assignments. In R. D. Babcock (Author) & A. D. Smith (Ed.), *Writing Center and
    Disability* (pp. 257-276). Southlake, TX: Fountainhead.

Tipper, M. (1999). Real Men Don't Do Writing Centers. *The Writing Center Journal, 19*(2),
    33-40.

 Trammell, J., & Hathaway, M. (n.d.). Help-Seeking Patterns in College Students with
    Disabilities. *Journal of Postsecondary Education & Disability,20*(1), 1st ser., 1-13.

Valentine, K., & Torres, M. F. (2011). Diversity as topography the Benefits and Challenges of
    Cross Racial interaction in the Writing Center. In *Writing Centers and the New Racism
    Writing Centers and the New Racism A Call for Sustainable Dialogue*(pp. 192-210).
    Logan, UT: Utah State University. doi:978-0-87421-861-
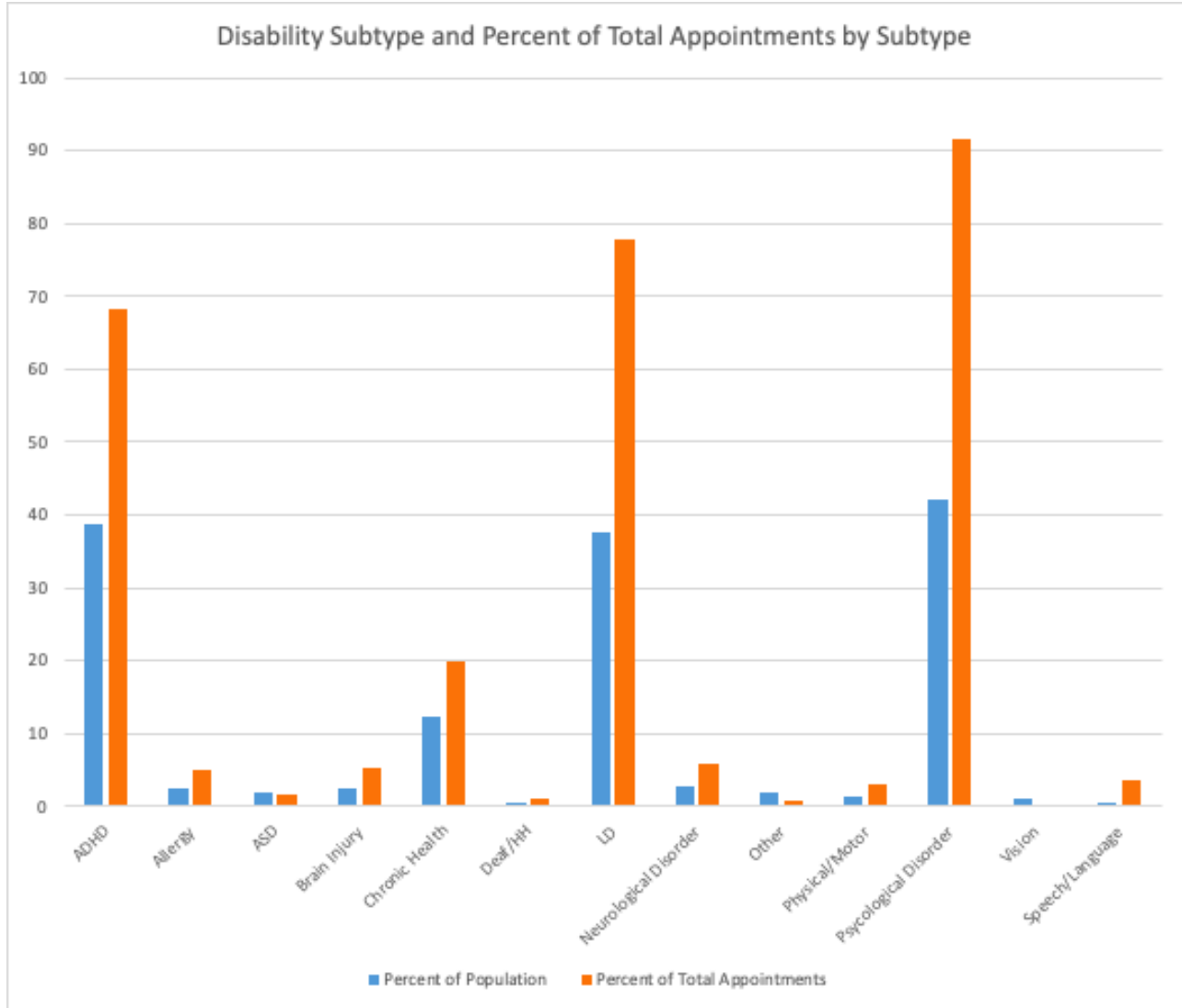
List of Figures and Tables

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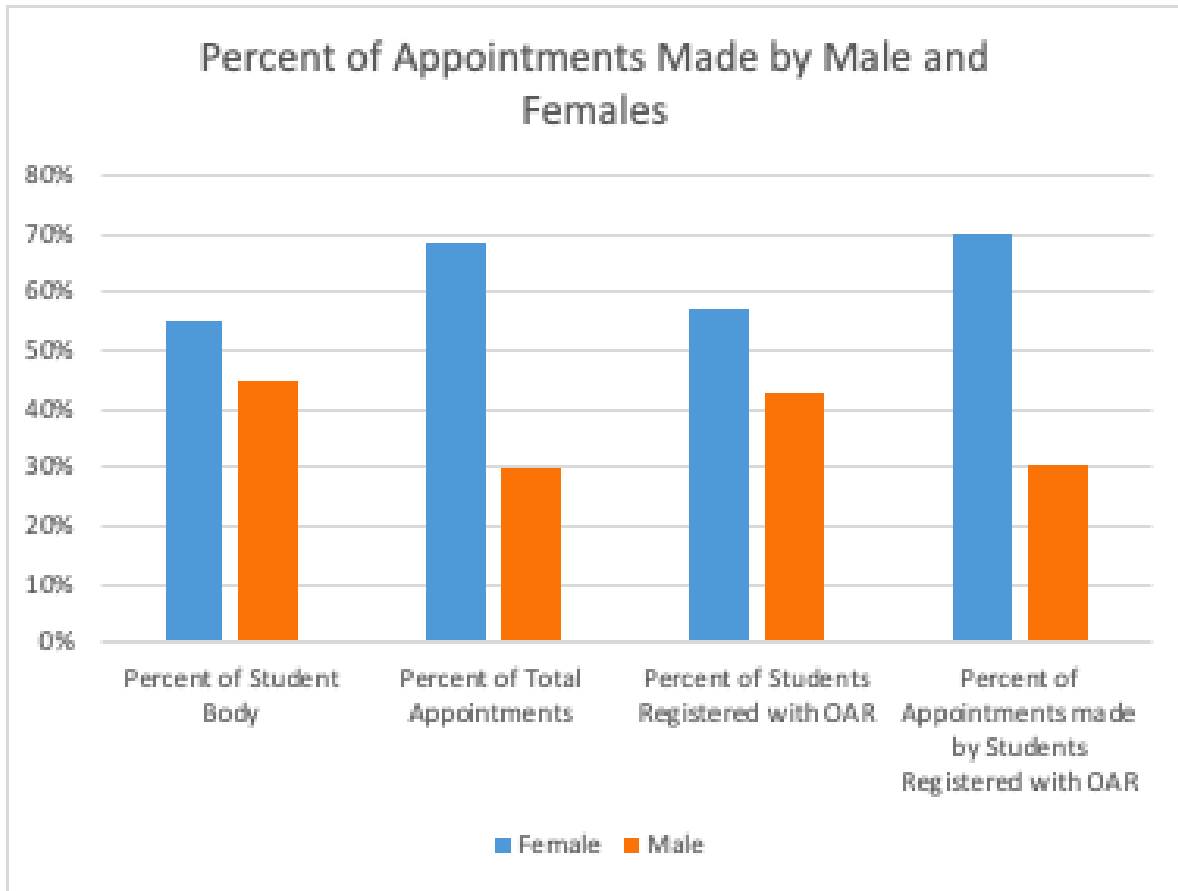
Figure 2. Percent of appointments made by male and female students registered and not registered with the OAR.

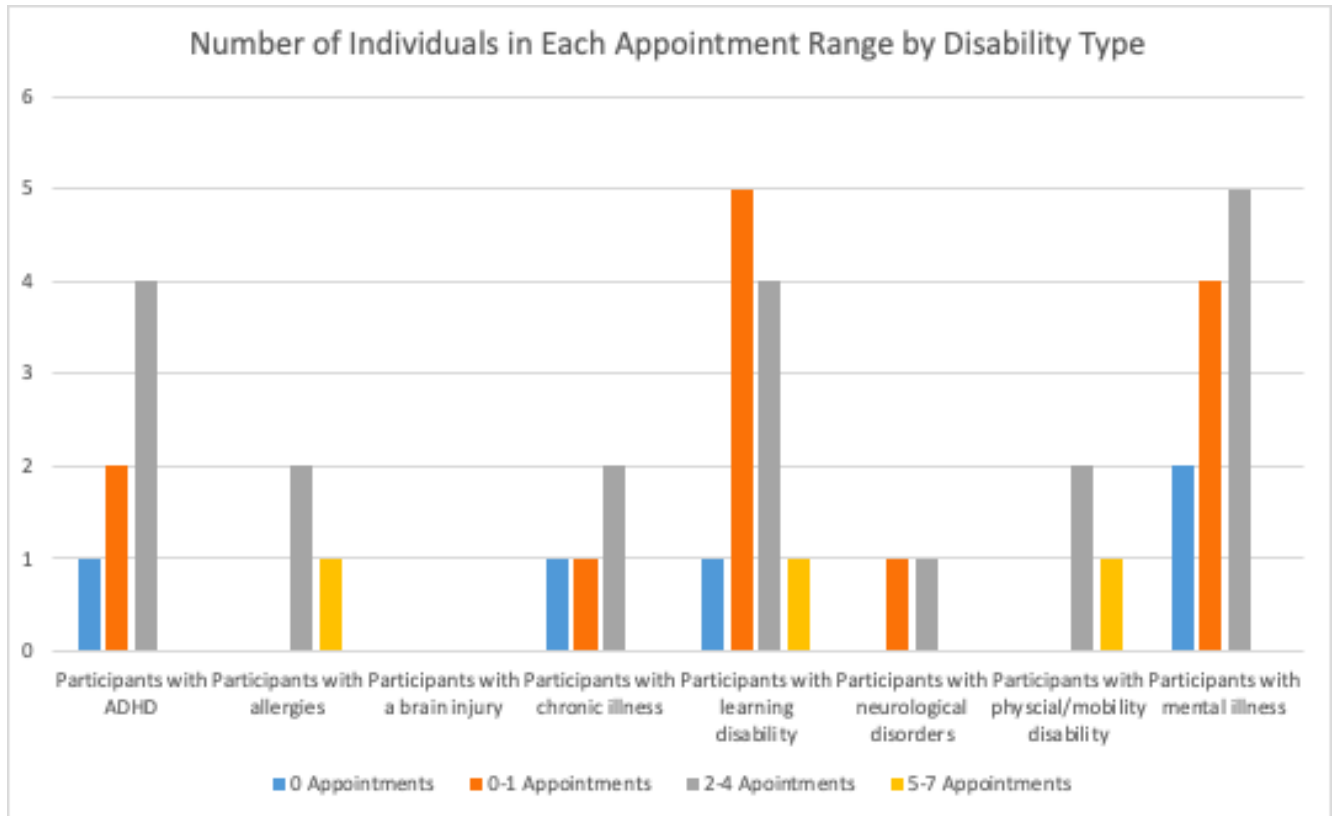*Figure 3*. Number of individuals in each appointment range by each disability subgroup.
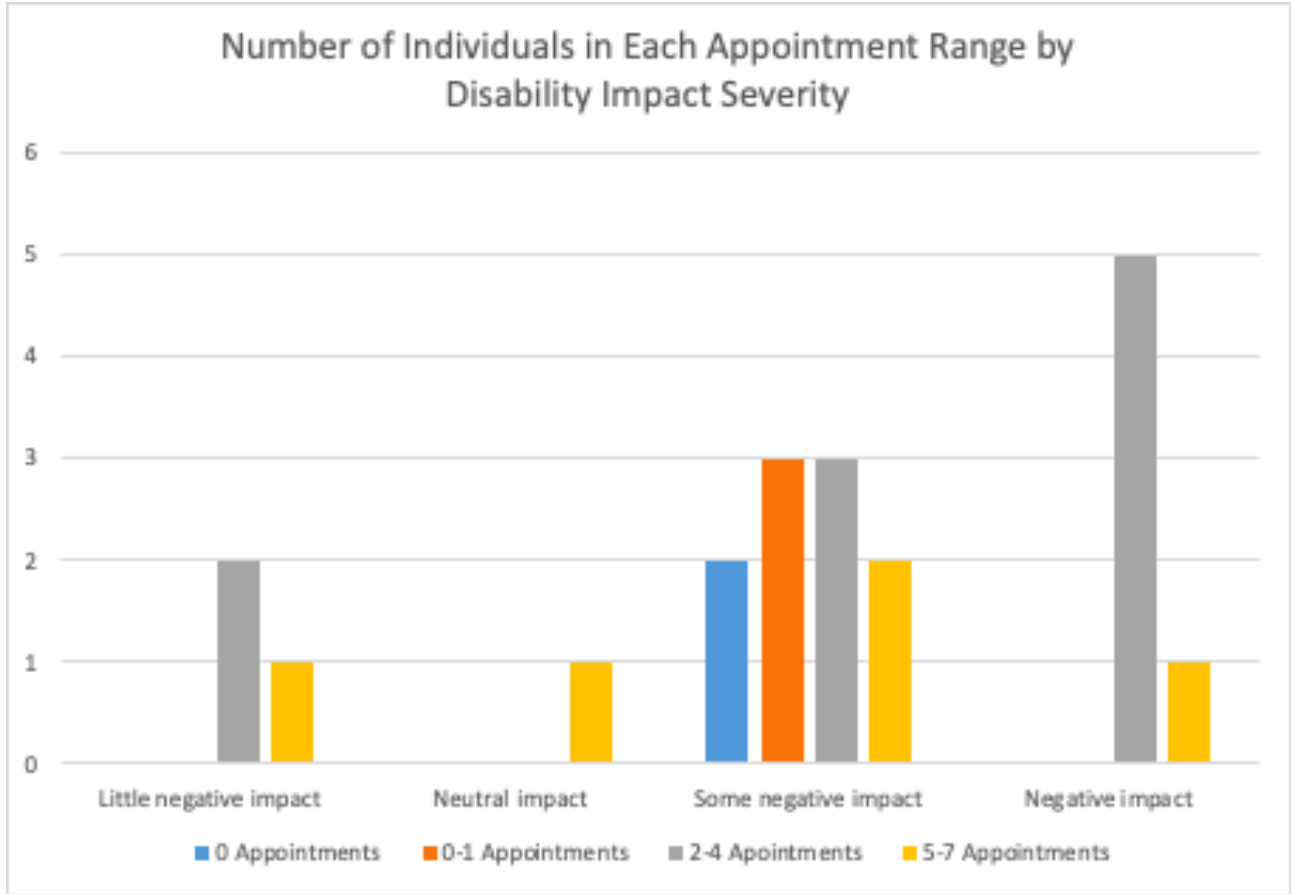
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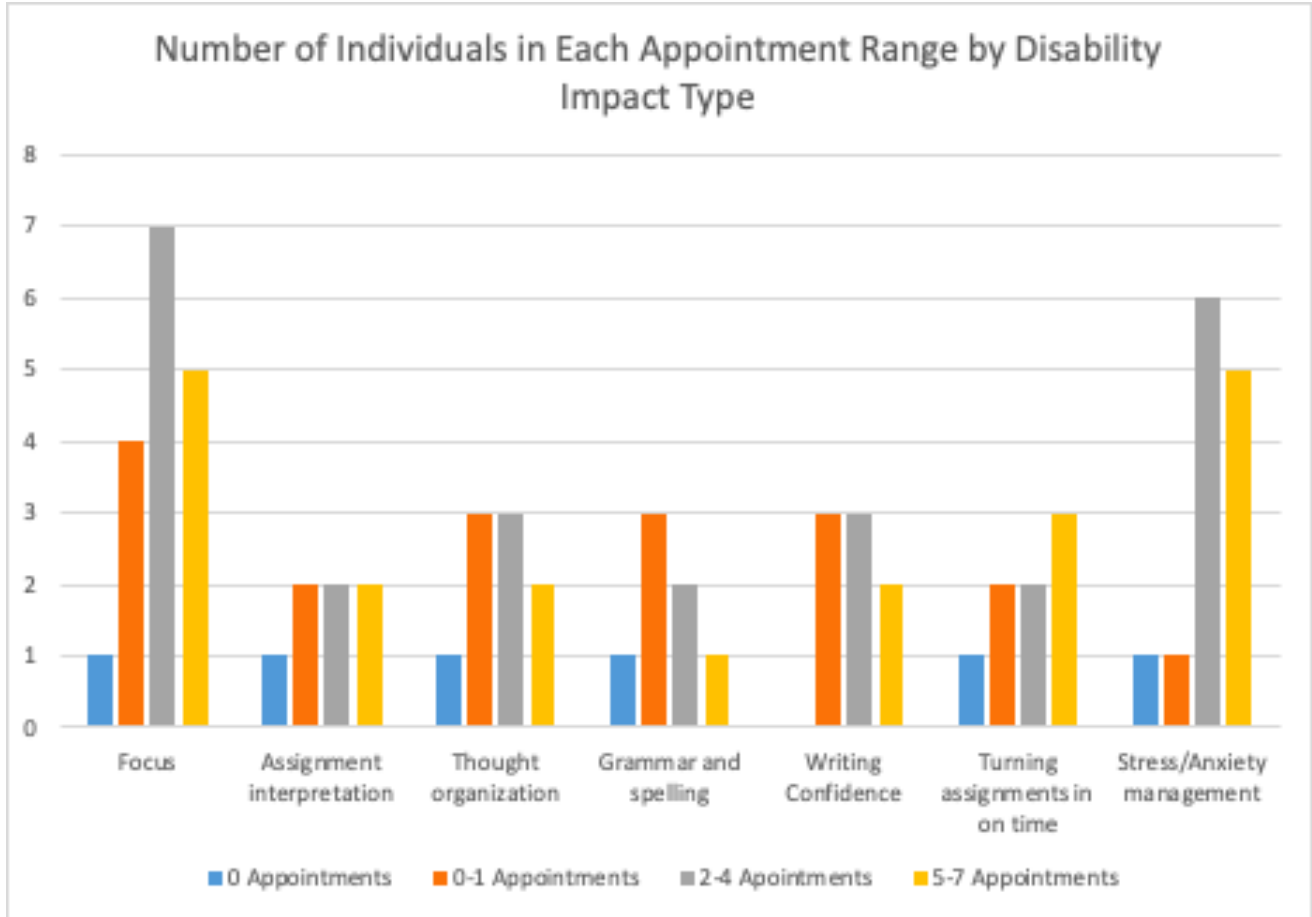
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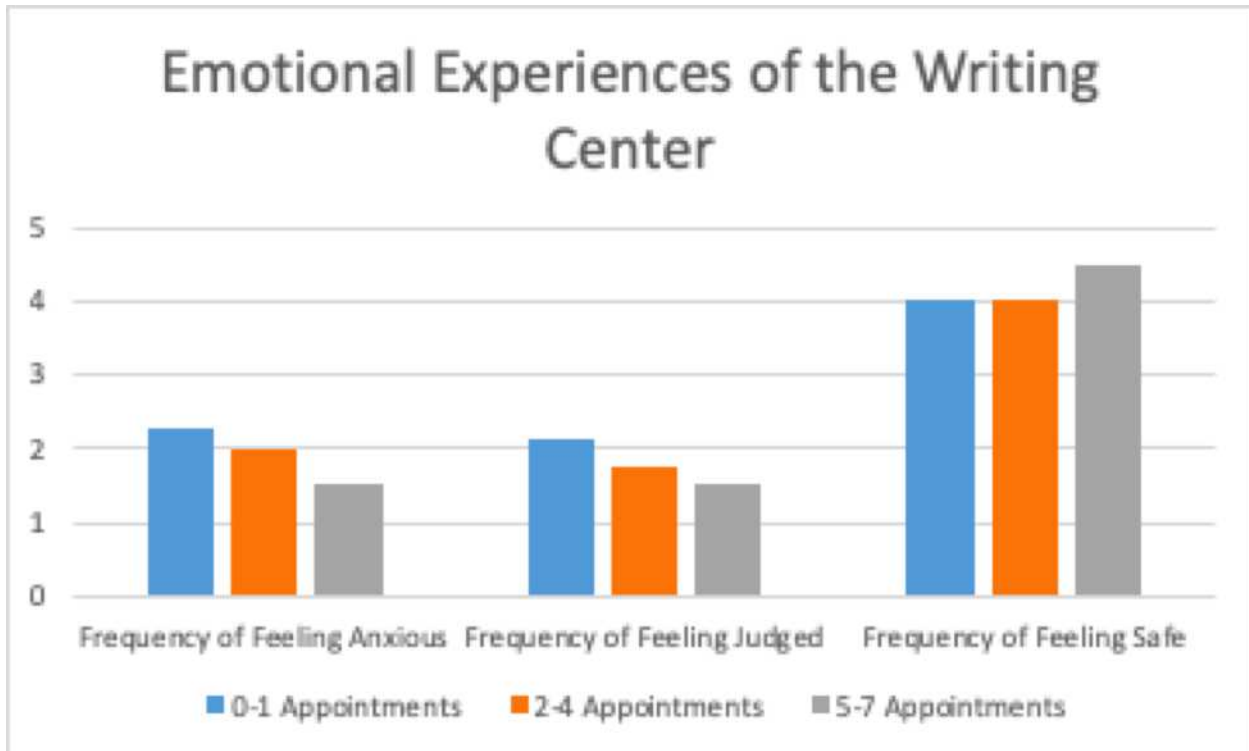
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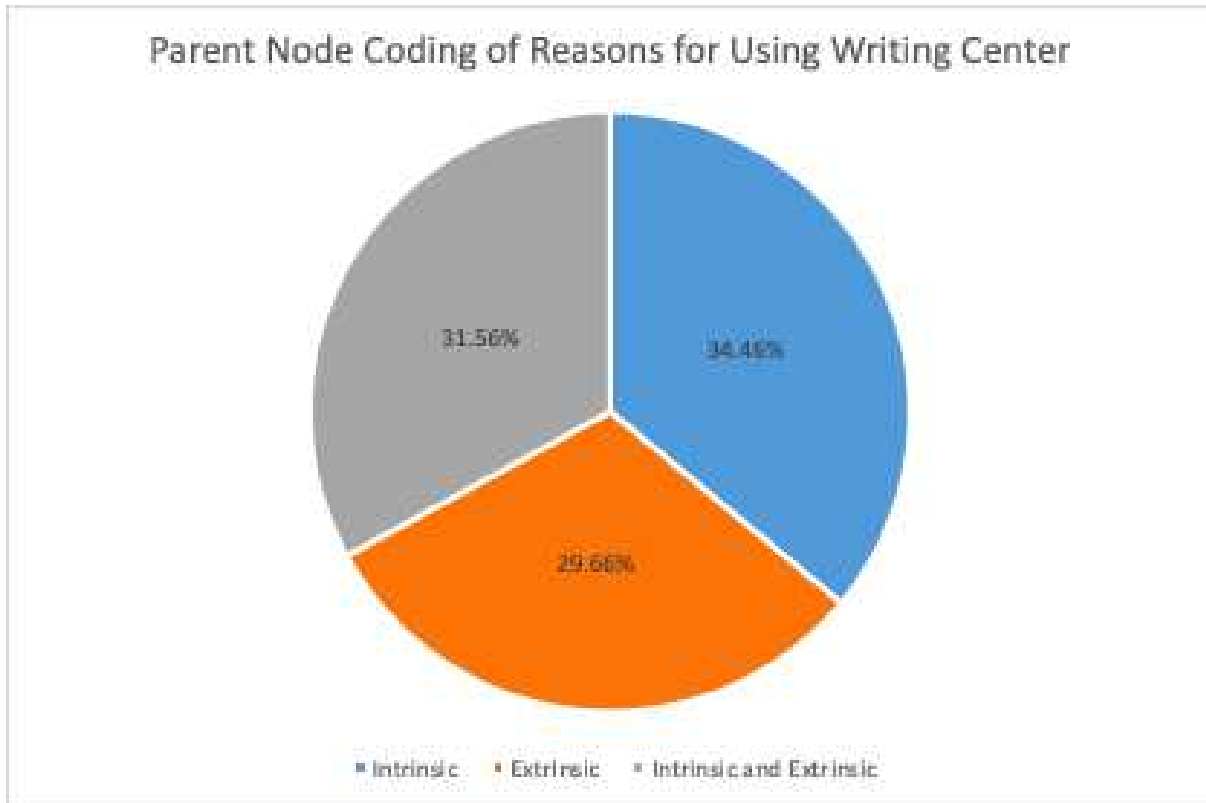
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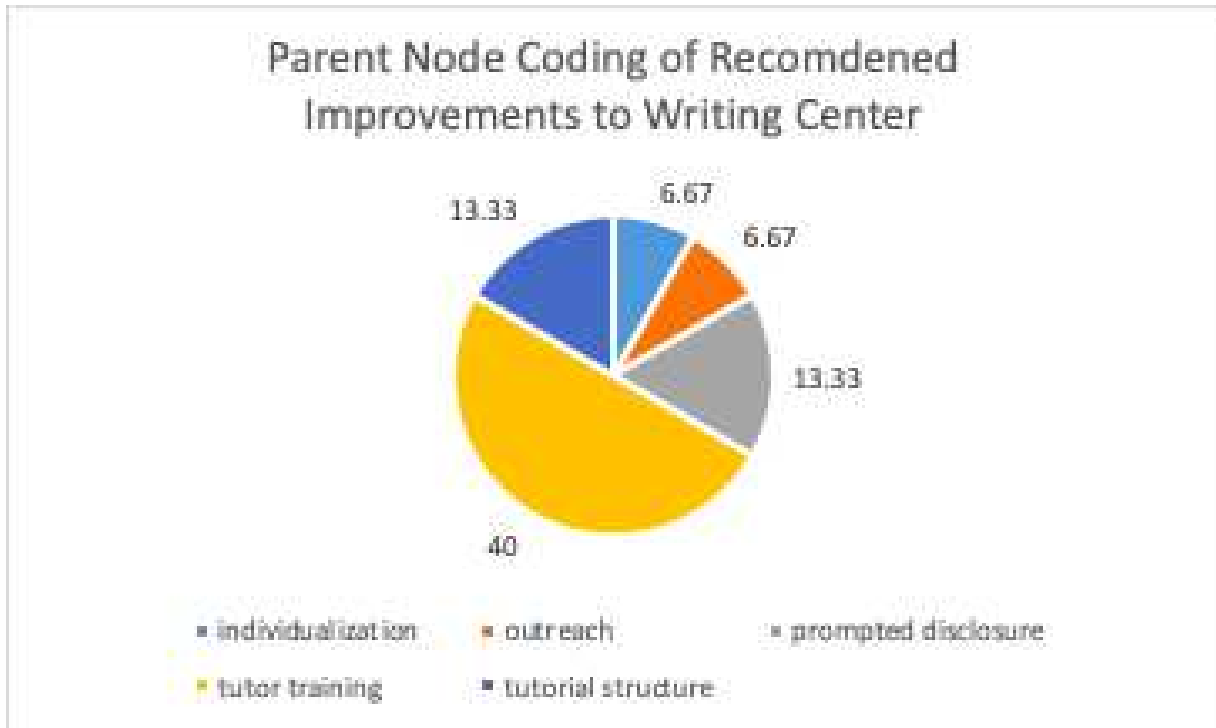
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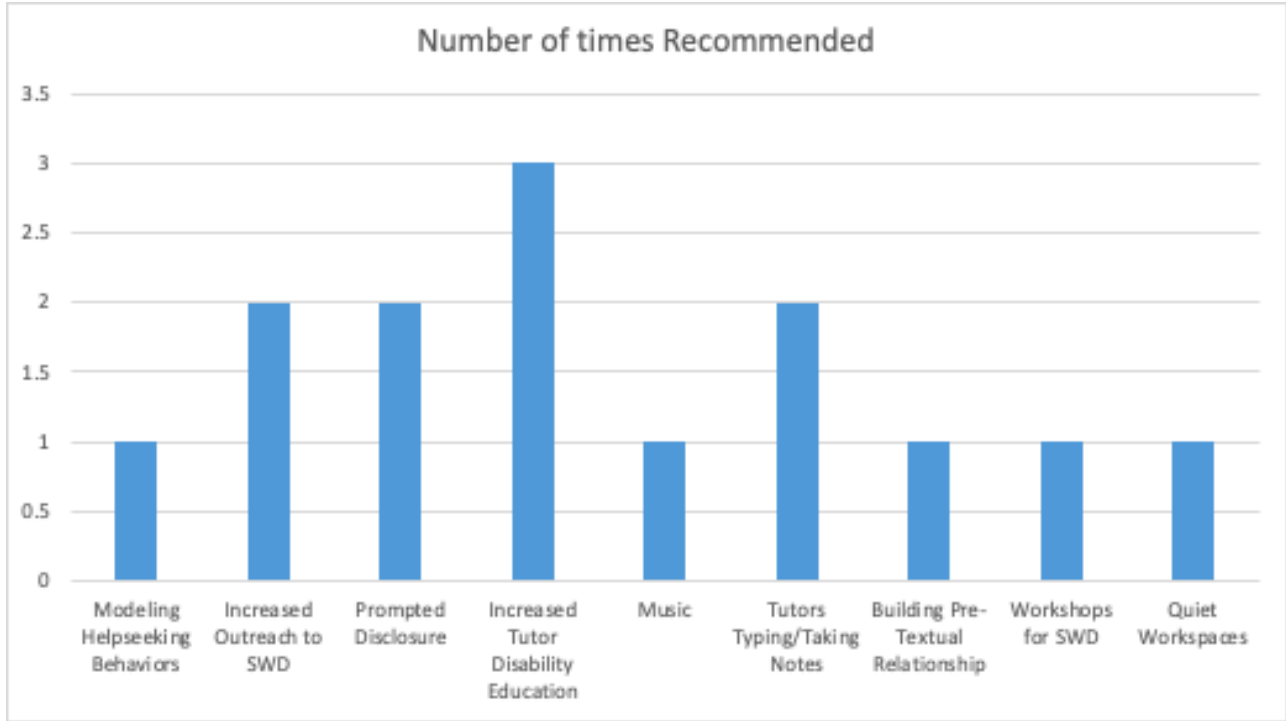
Figure 10. Number of individuals who recommended each improvement to the Writing Center

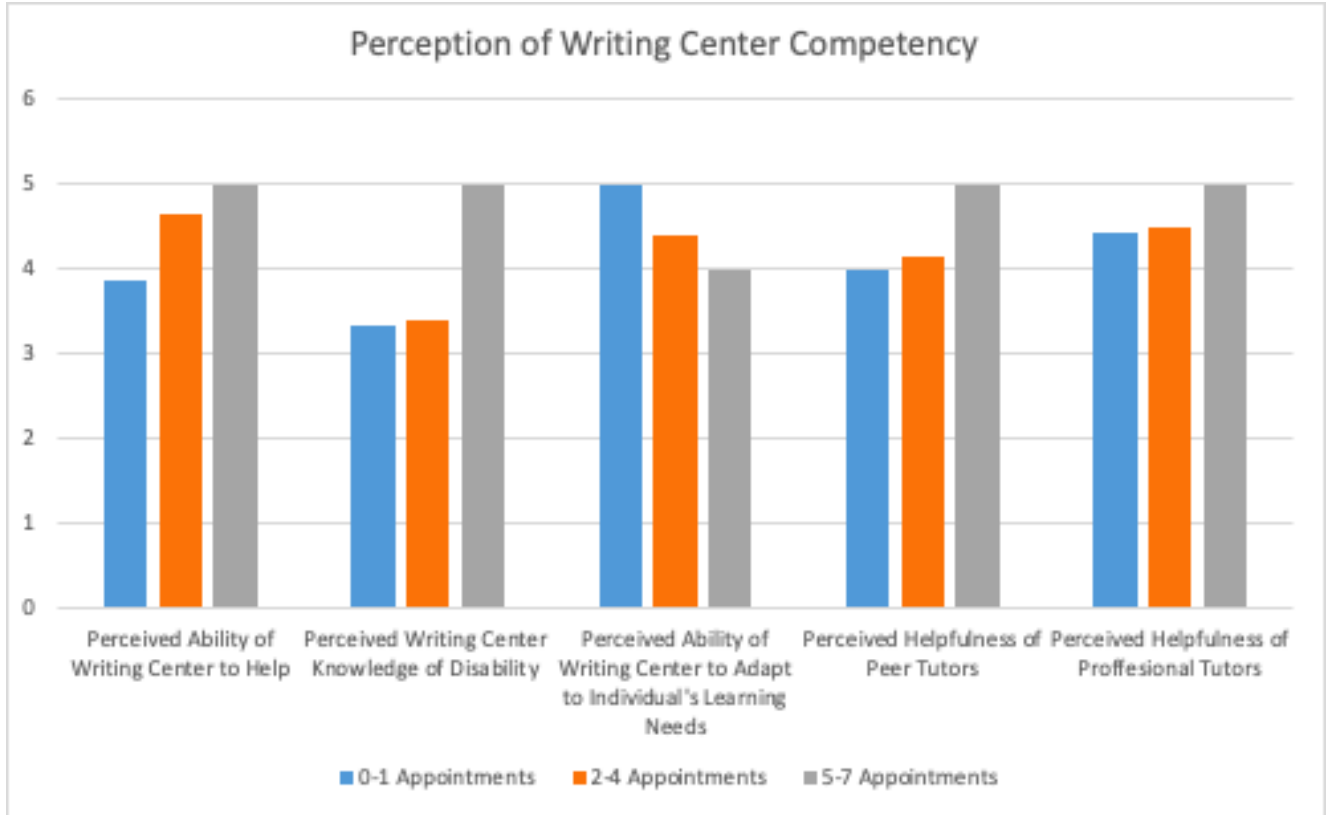|	Average Percent of Colorado College Students 2017-2019	Average Percent of Writing Center Appointments 2017-2019	Average Percent of Colorado College Students Registered with the OAR 2017-2019	Average Percent of Writing Center Appointments Made by Students Registered with the OAR 2017-2019
Hispanic	8.53%	8.39%	8.7%	10.6%
White	65.4%	52.38%	72.86%	69.1%
Asian	14.91%	5.01%	2.6%	2.26%
Black/African American	5.27%	2.8%	3.16%	3.78%
Native American/American Indian/Native Alaskan	2.57%	0.58%	0.37%	0%
Native Hawaiian/Pacific Islander	0.517%	0.07%	0.18%	1.2%
International	9.3%	18.51%	1.85%	4.1%
Two or more Races	No Data	No Data	9.1%	8.63%

Table 1. Average Demographic Portions of Students and Writing Center Clients 2017-2019

Appendix A

Online Survey

1.   What is your major?

2. What is your current standing?

❏ First Year

❏ Sophomore

❏ Junior

❏ Senior

❏ Other (Please specify): _____

3.   Please select which of the following disability/disabilities you identify as having. Check

all that apply. This question is not mandatory.

❏ Allergy

❏ Attention Deficit Hyperactivity Disorder

❏ Autism Spectrum Disorder

❏ Brain Injury

❏ Chronic Health Condition

❏ Deaf/Hard of Hearing

❏ Learning Disability

❏ Neurological Disorder

❏ Physical/Mobility Disorder

❏ Psychological Disorder/Mental Illness

❏ Speech/Language Disorder

❏ Vision Impairment

❏ Other Disability (Please Specify):_____

4.   My disability affects my ability to (select all the apply):

❏ Focus

❏ Interpret assignments

❏ Organize my thoughts

❏ Use mechanics and spell accurately

❏ Have confidence in my writing

❏ Complete assignments on time

❏ Manage stress and/or anxiety

❏ None of the above

5.   This question asks about your experiences with academic support on campus (i.e. Writing

Center and Quantitative Reasoning Center). On a scale of 1-5, please rate how much you agree

with the following statements.

	Strongly disagree	**Somewhat disagree**	**Neither agree nor disagree**	**Somewhat agree**	**Strongly agree**	**NA**
My disability negatively impacts my academic performance	•	•	•	•	•	•
I feel comfortable asking for academic support when I need it	•	•	•	•	•	•
I know how to access academic support on	•	•	•	•	•	•

campus if I need it	

6.   Have you used the Writing Center before?

❏ Yes (*If selected, respondent skips to question 7*)

❏ No (*If selected, respondent is prompted with question 6B*)

6B. *Why haven't you used the Writing Center before? (Once answer is given, the survey skips to question 14)*

7.   On average, how many Writing Center appointments do you attend each semester (4 blocks)? If this is your first year at CC, please select the number of appointments you have made thus far this year (5 blocks).

❏   0-1

❏   2-4

❏   5-7

❏   8-10

❏   More than 10

8.   On a scale of 1-5, where 1 is not at all helpful to 5 where 5 is very helpful, is the Writing

Center a helpful resource for you?

❑ 1

❑ 2

❑ 3

❑ 4

❑ 5

9.   Have you ever disclosed your disability status to a Writing Center tutor?

❑ Yes

❑ No

10.   The following questions ask about how you perceive the Writing Center. On a scale of 1-

5, please answer how much you agree with the following statements.

	Strongly disagree	**Somewhat disagree**	**Neither agree nor disagree**	**Somewhat agree**	**Strongly agree**	**NA**
The Writing Center can help me.	•	•	•	•	•	•

Writing Center tutors and staff know how to work with my unique learning needs.	•	•	•	•	•	•
When I explain my learning preferences, Writing Center tutors and staff are able to adapt to them.	•	•	•	•	•	•

Even if I disclose my disability, peer Writing Center tutors would not be able to provide the kind of support I need.	•	•	•	•	•	•
Even if I disclose my disability, professional Writing Center tutors would not be able to	•	•	•	•	•	•

provide the kind of support I need.	

11. The following questions ask about how you feel when you are in the Writing Center. On a scale of 1-5, please answer how often you feel the way described in the following statements.

	Never	Very Rarely	About Half the Time	Usually	Always	NA
I feel anxious when I go to the Writing Center	•	•	•	•	•	•

I feel safe explaining my learning needs and preferences to my Writing Center tutor.	•	•	•	•	•	•
I feel judged by my Writing Center tutor.	•	•	•	•	•	•
I feel anxious when I think about using academic supports.	•	•	•	•	•	•

12. When you have used the Writing Center in the past, why did you choose to make an appointment?

13. How could the Writing Center improve how it works with students with disabilities?

14. Would you be willing to be interviewed on your utilization of the Writing Center?

❏ Yes (*If selected, respondent is linked to question 13B*)

❏ No *(If selected, survey skips to end)*

14B. Please write your name and email in the text box below. Your answers given in this survey

will anonymized and will not be linked to your identity.

Appendix B

Interview Questions

1. Have you ever used the Writing Center?

   (If yes, How frequently do you use the Writing Center?) (If no, Why not?)

2. Under what circumstances do you use the Writing Center?

   (If respondent answered no to Qu. 1, ask "Under what circumstances would you use the Writing Center?)

3. Do you think the Writing Center effectively works with students with disabilities?

4. Do you think that you use the Writing Center at a greater, lower, or equal rate than your non-disabled peers? Why?

5. How do you use the Writing Center? (i.e. assignment interpretation, brainstorming, revising)

6. Do you think you use the Writing Center differently than other students on campus?

   (If yes, how so?)

7. How could the Writing Center improve the way it serves students with disabilities?