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Traumatic Brain Injury and the Transition to College

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JAMES MADISON UNIVERSITY

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Abstract

Eight college students who experienced a traumatic brain injury were interviewed regarding their college transition experience. Students identified either parents, teachers, or school counselors as beneficial with helping them transition to college. The interest of the study was to obtain information to help school psychologists help students who have experienced a traumatic brain injury transition to college. Participants acknowledged that college level course work required them to be significantly more independent and the content of the material was more demanding than high school. Concerning neurological symptoms, it was indicated that participants experienced difficulty sustaining attention, utilizing their short-term memory, and possessing adequate time-management skills.

In the area of executive functioning challenges, students stated that after their injury they experienced a shortened attention span, especially while in a classroom setting. Additionally, the majority of students withdrew from socially stimulating situations and experienced challenges regulating their emotions. With regards to fatigue, the majority of participants reported that they experienced difficulty with sleeping and overall felt fatigued while recovering from their injury. Concerning accommodations, only two participants receive formal accommodations from the Office of Disability services at JMU.

Keywords: traumatic brain injury, college transition, accommodations, and educational services

Traumatic Brain Injury and the Transition to College

A traumatic brain injury is a disruption to the normal function of the brain caused by a blow, jolt, or penetration injury to the head. In the United States, there were 2.8 million traumatic brain injuries (TBI) documented by hospital visits in 2013 (Center for Disease Control and Prevention, 2017). In the previous year, it was reported that 329,290 children, 19 and younger, had a diagnosis of a TBI. Traumatic Brain Injuries are most common for children from birth to four years of age, adolescents aged 15–19 years, and adults aged 65 years or older. Traumatic brain injuries most commonly occur from falls, automobile accidents, or abuse. (CDC, 2017). There are some populations such as athletes or military personnel that have a greater susceptibility to sustaining a TBI (Alosco, Supelana, & Vasterling, 2017). Due to the prevalence of traumatic brain injuries, traumatic brain injury has been called a 21st century epidemic (Chua, Ng, Yap, & Bok, 2007).

Most children and adolescents return to school following a TBI. Therefore, school personnel need to be well-informed on the educational impact following a TBI. Following graduation, many of these children attend higher education. These adolescents are likely to face difficulty transitioning to college due to the continuing impact of their TBI. The goal of this study was to obtain information for school psychologists to help high school students who have experienced a traumatic brain injury transition to college. School psychologists work in public education and are specialists in the areas of learning, behavior, and mental health. Additionally, school psychologists are committed to ensuring that student's educational, behavioral, emotional and social needs are met.

To classify the severity of a TBI, medical personnel conduct examinations to

assess the severity of a client's injuries. These assessments include a Glasgow Coma Scale (measures eye opening, motor movement, and verbal communication), duration of loss of consciousness, and duration of posttraumatic amnesia (inability to store and recall new memories). Patients classified as having severe, moderate, or mild TBI (Sherer, 2016). The prognosis of the TBI is related to the severity of the TBI sustained. Symptomology may vary greatly between clients dependent of the cause and severity of the TBI, and it should be noted that the majority of those who sustained a TBI and attend college experienced a mild to moderate TBI. Those who experienced a severe TBI will likely not have the cognitive ability to pursue higher education.

Traumatic Brain Injury in terms of Development and Childhood Education

Anderson et al., (2011) concluded that age at which a child or adolescent sustains a TBI will effect both their development and neurobehavioral skills. Additionally, a child's deficit in cognitive functioning may not become apparent until later in life. A child may experience a traumatic brain injury at a young age and receive a neuropsychological evaluation to determine the impact of their injury. At the time of testing, due to the child's young age, the cognition level expected will be concrete and simplistic. However, as the child grows older, advanced and abstract cognitive skills are required. For example, language skills become more complex with development (Anderson, 2011). Therefore, when a child is asked simplistic vocabulary at a young age, there may not be any apparent deficit in skills. However, once this child matures into a teenager and is given another neuropsychological evaluation that requires complex skills to comprehend and define vocabulary, deficits may emerge. Anderson (2011) additionally found that there is a possible interaction between the age of injury and

severity: the more severe the insult is when occurring earlier in development, the more damaging the effect seems to be. Children have periods of “critical development”; during these time periods, it is imperative that children attain the knowledge and skills necessary to meet developmental standards. Critical periods include the ability to walk, talk, etc. If a child sustains a traumatic brain injury early in development, while a child is attempting to attain skills, the impacts may be more severe due to the developing brain of this child.

In public school institutions, there are guidelines set for the implementation of services following a TBI. Under federal law for students with disabilities (IDEA 2004, Section 504 of the Rehabilitation Act, Americans with Disabilities Act) schools are required to provide special services for students with disabilities. School systems are required to have special education personnel; however, these staff members may not be acquainted to the needs of a student who sustained a TBI. Therefore, in some states a brain injury educational consultant is accessible for consultation services through the state’s office of special education; the consultant helps assess the needs of the student and facilitates services.

If the student is eligible for services, the student may receive an Individualized Education Plan for Special Education Services under the Other Health Impaired classification (IDEA, 2004). Students who are not eligible for Special Education Services under IDEA, are eligible under Section 504 of the Rehabilitation Act for support services. Some states provide additional information in regards to eligibility criteria and assessment for children who sustained a TBI (Vaughn, 2014). A school psychologist is one of the members of the special education team and the Section 504 accommodations team. The school psychologist either provides a psychological evaluation that evaluates a

student's cognitive ability or reviews the most updated psychological evaluation completed. Additionally, based on the referral, the school psychologist may evaluate a student's emotional, behavioral, and social functioning. For students who have experienced a traumatic brain injury and show symptomology after the recovery period, a neuropsychological evaluation is necessary to determine if there are deficits from experiencing the traumatic brain injury. The neuropsychological evaluation will provide information on the student's skills and abilities linked to their current brain functioning; this evaluation will measure cognitive ability, attention, problem solving, memory, language skills, visual-spatial skills, and social-emotional functioning. In the school system, the school psychologist is the professional to review this report. Based on the results of the report, this will guide the school teams to determine if a student is in need of services and what services may be beneficial.

It is also important to note that some students may not need services after sustaining a TBI dependent on the symptoms following the injury. Therefore, students who have experienced a traumatic brain injury and are enrolled in a public institution are given resources and services for monitoring their progress in recovering from a TBI. If a child sustains a mild head injury, the guidelines for best practice often include a flowchart for which the school nurse can monitor student's symptoms. (Virginia Department of Education, 2017). The nurse completes relevant checklists and follows school protocol, collaborating with athletic staff (if the student is an athlete) doctors, and the student's parents when necessary. The student's progress is continually monitored for academic, emotional, and physical needs. If symptoms persist, the student may be referred to a complete psychoeducational evaluation.

When creating a rehabilitation plan for the student's return to school, acquire data from the child's pre-injury cognitive ability. A neuropsychological evaluation completed by a neuropsychologist can provide helpful information on the student's current functioning. This information may include cognitive ability (strengths and weaknesses), social skills, physical abilities, potential lifestyle challenges, and recommendations to help the student learn and function to the best of their ability. In regards to an educational impact, a TBI may negatively impact a student's cognition, academic performance, behavior, and emotional regulation (Davies, 2016). Cognitive problems may include deficits in attention, concentration, psychomotor speed, and memory. (Alosco, Supelana, & Vasterling, 2017).

Those who have sustained a TBI face unique challenges during the rehabilitation process; however, it is important to consider that the school environment is exceptional. When returning to the classroom, students may become over-stimulated due to the noise of hallways, crowded classes, and being presented with more information than they can process in a given time. If a student experiences over stimulation, this may lead to difficulty with thinking and emotional distress (Keyser-Marcus et al., 2002); this could further exacerbate symptoms. To investigate the transition back to school, parents and teachers of children who had sustained a mild to severe TBI who were interviewed on the child returning to the academic environment. Two thirds of parents and teachers reported that the student had difficulty with schoolwork, and displayed attention or concentration deficits. Over one third of parents and teachers reported that the student had impairments in regards to memory skills and learning new information (Hawley, Ward, Magnay, & Mychalkiw, 2004).

Long Term Effects of a Traumatic Brain Injury

Based upon the injury sustained, the effects of sustaining the brain injury are highly variable. If a mild to moderate injury is sustained, a full recovery is likely and an impact exist. However, for some, there may be permanent effects. Although early intervention and progress monitoring after sustaining the injury are highly beneficial for making a recovery, some changes to the brain may be perpetual. Magnetic Resonance Imaging following a moderate TBI injury, can show white matter changes in the brain (Kinnunen et al., 2010). Memory, executive function, and information processing can be affected by a TBI (Kinnunen et. al 2010).

The rate at which one is able to process information in a given amount of time (processing speed) may also be affected. Jantz et. al 2014 concluded that with regards to academic difficulties following a TBI, students may experience difficulty learning and processing new information, long term storage retrieval, short term memory and integrating new and previously learned material (Kramer and Davies, 2014).

Additionally, Jantz et. al 2014 found that a student's attention, psychomotor skills, and executive functioning skills may impact every part of academics (Kramer and Davies, 2014). If deficits are present, they are highly influenced on when the injury is experienced and the severity of the injury.

Even after a mild TBI, there may be minimal white matter abnormality (Kinnunen et. al 2011). There is an established relationship with memory and executive functioning (Kinnunen et. al 2011). Executive functioning encompasses the skill of memory as attention is necessary for taking in, storing, and recalling information. To receive information, it is necessary to be attentive to store the information. These two factors of

memory and executive functioning in brain matter alteration relate directly to academic functioning and daily living abilities, two components essential to a successful life as a college student (Kinnunen et. al 2011). In order to know if there was a definite impact with regards to memory and executive functioning, a neuropsychological evaluation would need to be completed to assess these skills.

Traumatic Brain Injury and the Transition to College

As adolescents graduate from high school, they may seek further education enroll as a college student at a university. Brown, Hux, Hey, and Murphy (2017) reported that due to medical advancements and extensive rehabilitation services as well as increased accessibility to accommodations, there are increasingly more individuals who have sustained a TBI pursuing a college education or some sort of education following their injury (Ackerman, DiRamio, & Mitchell, 2009; Kennedy, Krause, & Turkstra, 2008; Sohlberg, Griffiths, & Fickas, 2014). Brown et al., 2017 furthermore reported that 85% of adolescents with a sustained TBI enroll in some form of postsecondary education (Catroppa et al., 2009).

The transition to college is a challenging endeavor for the average student. Hicks & Heastie (2008), mention that when high school students transition to college, students reported personal and emotional distress as well as overall psychological distress, somatic symptoms, anxiety, depression, and low self-esteem (as cited in Gerdes & Mallinckrodt, 1994). Regulating stress and academic performance were also reported to be challenging for students (Hicks & Heastie, 2008).

In general, students may leaving home for the first time and attempting to navigate the academic as well as social and emotional demands that college requires. A student who has sustained a TBI and who may have cognitive, behavioral, and physical challenges may face additional challenges in the college setting. These difficulties may manifest in failing to have efficient organizational skills, live with peers, plan long-term projects, and make friends (Davies, 2014). Research noted these difficulties for students who have experienced a TBI, however it is important to note that general college students could also experience these difficulties.

Permanent deficits from a sustained TBI do create challenges for students due to one's neurological impairment (Brown, Hux, & Schmidt, 2015). College students who have experienced a TBI may show marked challenges with regard to short-term memory, attention and focus, social situations, and fatigue (Kramer & Davies, 2016). Therefore, services such as accommodations or modifications may need to be set in place for these students as they may have cognitive deficits as well as challenges in completing everyday living tasks while transitioning to college. However, it is important to note that not all students who have experienced a TBI have permanent deficits. To determine if a student does have permanent deficits, a neuropsychological evaluation is necessary to assess their cognitive ability, social-emotional functioning, attention, problem-solving ability, memory and visual-spatial skills. Therefore, if permanent deficits are not present, students will most likely not experience these challenges and need accommodations or services.

The Social Components of College Life

A prominent aspect of college life is being social. Students who have experienced a TBI report experiencing being socially involved and making friends on their respective campus (Kennedy, et al., 2008). Stewart-Scott & Douglas, 1998 found that students who have experienced a TBI may have difficulty communicating and relating well to others (Cahill, Rotter, Lyons, & Marrone, 2014). In addition, due to the slower ability to process information, a student that has a TBI may need to dedicate significant more time to studying than their peers. As academics may be incredibly demanding, these students will have to prioritize and manage their time accordingly. Due to the time spent on academics, students may not have to engage in social opportunities. Therefore, students may not be able to connect with peers and establish and maintain social relationships (Cahill, et al., 2014).

The Impact of Fatigue on College Functioning

In addition to neurological deficits, students may experience significant fatigue (Kramer & Davies, 2016). It is imperative to note that TBIs are originally classified as mild, moderate, or severe at the time of injury. Therefore, there is marked variability in the injury that a student may have experienced. If a student experiences a mild or moderate injury, students may experience effects of fatigue while recovering from the injury, but may not have lasting impacts of fatigue.

For the students that do experience lasting effects, they may experience exhaustion regularly and require many hours of sleep. Cognitive stamina such as taking a test was reported to be difficult for students. The effort that is required for a student to be able to focus cognitively and dismiss distractions in the classroom may also lead to exhaustion. In order to avoid complete exhaustion, implementing frequent breaks may be

beneficial (Kramer & Davies, 2016). If a student is not attaining an adequate amount of sleep or taking appropriate breaks, their daily life could be greatly impacted and other cognitive deficits could be exacerbated due to exhaustion and/or lack of sleep.

It is of great importance for students who experience lasting impacts of fatigue to receive services to facilitate their academic needs and overall well-being while transitioning to a university setting. Students who are experiencing these symptoms while recovering from their injury, may require these accommodations for a few weeks while they are in a period of recovery.

Although accommodations are a vital need to this student population, only approximately 30% of students actually receive academic accommodations who reported as needing them (Hawley et al., 2004). Some students may be self-aware of their challenges due to the TBI sustained and choose not to seek services; however, others may not be informed of the implications it has on their daily life functioning. Others may choose not to seek services due to the stigma of services for a disability.

Independent Living as a College Student

Being a college student requires a high cognitive ability to perform well academically; however there is also a great emphasis on independent living. Executive functioning skills are required to be successful both academically and personally. Due to the sustained TBI, students may have a deficit in regards to executive functioning skills among other neurological deficits. Executive functioning skills are defined as the ability to pay attention, organize, plan, initiating and completing tasks, and regulating one's emotions. College students who have sustained a mild brain injury compared to non-disabled peers experience more chronic health symptoms and academic deficits (Brown

et al., 2015). Executive functioning skills that are necessary for being a successful college student and may be impaired by those who have sustained a TBI include possible deficits in working memory, task initiation, and sustained concentration (Davies et. al, 2014). However, it is critical to mention that not all students will be impacted by a deficit of executive functioning skills. Dependent on the injury experienced, there is a great variability of deficits experienced. Furthermore, for some students, a full recovery may be attained and executive functioning deficits may not be present at all.

Accommodations for College Students that have experienced a TBI

In public elementary, middle, and high schools there are federal and state regulations specified for special education and accommodations (IDEA, 2004). Postsecondary students, however, are not covered by IDEA; rather, most qualify for services under the American Disabilities Act (ADA, 1990). While the services provided can be very similar, there are some distinct differences. First and foremost, IDEA provide accommodations for all students who have a disability; ADA provides accommodations for those with disabilities who 1) can succeed in a program of study with them and cannot without them; 2) under IDEA, the schools have responsibility of identifying the students who need accommodations, while under ADA they must be sought by the person with disability; and 3) under IDEA, the accommodations are all academic focused, while under ADA accommodations may extend to areas such as housing and financial services.

While some students who experienced less severe TBIs are successful in college without the implementation of specialized instruction or accommodations, these students may have been successful in high school due to educational and parental support (Davies, Trunk, & Kramer, 2014). However, other students who did not receive supports in high

school may need supports once they become a college student. Students are required to self-advocate to receive services by communicating with and providing documentation of their disability to the Office of Disabilities at their respective university. If a student is not adequately informed about their disability and the implications that it has on his or her functioning, they may not be able to explain their individual needs to administrators and professors (Davies, 2014).

As well as academic concerns, students may have difficulty with transitioning to other demands of college life. Cleary et. al (2016) found that the academic tasks required of a student in college are generally more demanding than that of high school for any typical student and autonomy increases as well (Kramer & Davies, 2016). Executive functioning control concerns could be present as adolescents may also have challenges concerning impulse control, keeping focus, and paying attention. If a student experiences challenges with executive functioning, this may impact a student's cognition, academics, behavior, emotional regulation, and social relationships (Kramer & Davies, 2016). Challenges with executive functioning are determined by a neuropsychological or psychoeducational evaluation. If a student experiences difficulty with paying attention as well as initiating and completing tasks, this could have a negative impact on their ability to achieve academically. Furthermore, if a student has difficulty regulating their emotions, this could have an adverse effect on peer relationships. Additionally, a student's memory and ability of information processing may also be impacted. (Brown, et al., 2017).

Cheshire et al. (2011) concluded that having a shortened work load, class changes, assistive technology, frequent breaks, note takers, and advanced organizers could be

beneficial accommodations for students (Kramer & Davies, 2016). Accommodations that were also found helpful for students who were recovering from a traumatic brain injury or experience chronic affects as determined by a neuropsychological evaluation were limiting the amount of time to exposure to computer screens to reduce headaches, utilizing flash cards to facilitate memorization and focus on a single concept, journaling to facilitate focus thoughts, using a calendar or hour by hour planner, access to peer notes or recording devices for lectures, an alternative environment with minimal distractions for tests and/or extended time on tests, and the ability to take frequent breaks (Kramer and Davies, 2016).

Additional accommodations that may be helpful to students are preferential seating, oral instead of written tests, and extended due dates (Davies, 2014) Brown et al., 2015 spoke of research showing that materials for modifications and accommodations coupled with external cues are highly beneficial for students (DePompei et al. 2008; Dowds, Lee, & Sheer 2011). For students to be successful as a college student, accommodations may need to be set in place as well as utilizing external cues in the environment to aid the success of students.

Research Questions

The research questions of this study are due to the interest in how students transition from IDEA services to ADA services in college and their overall college transition process. As college is an academic endeavor, it is of interest to ask students what academic experiences (if any) they have experienced in affects to sustaining a traumatic brain injury. As executive functioning skills are mandatory for independent living in college, it is of interest to research if students experienced challenges with

executive functions skills and how this may impact their college experience. As it was found from the literature review that if one is recovering from a traumatic brain injury or has chronic deficits from experiencing an injury, one may experience fatigue. Lastly, it is of curiosity if students receive accommodations at the collegiate level. The research questions include:

- 1) How is the college adjustment is for college students that have experienced a TBI
- 2) The academic and neurological impact in college from sustaining a TBI
- 3) What executive functioning skills are challenges for college students during the college transition process?
- 4) Do students have emotional regulation concerns?
- 5) Do students experience fatigue?
- 6) What accommodations can facilitate success with regards to the college transition process?

Method

Participants

The eight participants in this study were recruited from the Undergraduate Psychology Participant Pool at a large state university. All participant pool students are enrolled in 100-level psychology courses and received course credit for participation.

The following ‘blurb’ was posted on the Participant Pool website to recruit participants:

For those who experienced a brain injury prior to or while attending college: I am researching the college process for students who have experienced a brain injury as my thesis. Acting as a participant would involve an on-campus face-to-face

interview or a computer/phone interview with me, lasting approximately 30-45 minutes. The interview would be scheduled to suit your availability. Questions would involve asking about your college experience and how your brain injury may have an impact on your college experience. PLEASE EMAIL AT (email address deleted) IF INTERESTED AND A TIME WILL BE SCHEDULED AS SOON AS POSSIBLE AT YOUR CONVENIENCE. The time slots are posted for you to be able to view the study, however, the time of the interview can be scheduled to fit your availability whenever it is most convenient for you. The information from interviews will be summarized collectively in my thesis study and emailed to you once completed if you wish.

To have participated in the study, a student must have experienced a traumatic brain injury. This was determined by participants self-reporting that they had sustained a TBI. Eight participants were obtained in total. Four of the participants were men and four participants were women. Six of the participants were freshman and two participants were sophomores. Six of the participants had obtained one or more brain injuries prior to enrolling in college, while two of the participants experienced their brain injuries after beginning their college experience.

Procedures

The participants were interviewed by telephone. The interview was semi-structured and lasted 30 to 45 minutes in duration. The 19 questions that the participants were asked were free response and are listed in Appendix A. The questions were derived from the literature review:

First, three questions were asked about the general nature of their transition to college, followed by three questions on academic challenges. These were followed by five questions about executive function. These were followed by single questions on emotional regulation and social life on campus. These were followed by three questions on fatigue and three about accommodations.

Participants were told at the beginning of the interview that if the process triggered negative emotions for them, they could cease participation during the interview at any time. Additionally, if participants desired to, they were welcome take a break during the interview process. No participants wished to take a break or cease the interview process. The researcher read aloud all questions to the participants and hand wrote all responses in the form of field notes. At the conclusion of the interview, all participants were thanked for their participation. Due to the content of the study, a debriefing was offered to participants. The debriefing process is listed in Appendix B. The debriefing process was offered to students as an option if they would like to engage in a conversation based upon their experience during the interview. The description of the debriefing process was read aloud to participants. None of the participants reported being triggered during the interview process. The debriefing process was read aloud to students, however participants chose not to discuss any of the prompts given to them.

Data Analysis

For analysis of data, the responses from interviews were recorded in the form of field notes. Field notes were recorded to obtain the qualitative data given by participants. The qualitative data obtained was from participants free response of the interview questions (Appendix B). The field notes regarding participants' responses were coded for

potential themes. An inductive analysis process was utilized. Inductive analysis is a qualitative method of content analysis is utilized to interpret data to develop potential patterns and themes. The researcher read each line of the field notes and analyzed the data for patterns and themes. If multiple participants reported the same experience, patterns and themes were noted.

Results

Demographic Information

Participant	College Year	Gender	Type of Injury	Classification of Injury	Time of TBI	Current Symptoms
1	Freshman	Male	Sports	Mild	6 months	No
2	Sophomore	Male	Military	Moderate	7 years	No
3	Freshman	Male	Fall	Unknown	5 months	Yes
4	Sophomore	Female	Sports and Fall	Mild (2) Moderate (2)	3-6 years	Chronic
5	Freshman	Male	Sports	Mild	4 years	No
6	Freshman	Female	Sports	Mild (1) Severe (1)	2 years, 4 years	No
7	Freshman	Female	Sports and Fall	Mild (2) Moderate (2)	3 months, 3 years	No
8	Sophomore	Male	Sports and Fall	Mild (1) Moderate (1)	1 year, 4 years	No

Have you experienced any unexpected issues with the transition to college? Can you give me an example?

The students who reported that they experienced their TBI years ago and received adequate support or those who experienced a traumatic brain injury after their initial transition to college, did not report experiencing significant transitional concerns (two

participants). For the two students that experienced their brain injury many years before college, they reported less difficulty with the initial college transition process. For students who did report having difficulty with transitioning to college, they stated that they had received advice from either their parents, school counselors, or teachers that helped them with preparing for college. Two students reported having success with their recovery process; these students stated that they felt as though they received proper care for their recovery and received appropriate accommodations in high school. However, even with these supports, students reported some difficulty transitioning to college. Students did not report that their transition to college was due primarily because of their traumatic brain injury. Students reported that they experienced challenges with transition in general in becoming a college student.

The support that participants received from parents, school staff, and personal relations with others was viewed as helpful. Due to the help that they received, students perceived themselves as more prepared for college. Students additionally reported that attending one class at a time was a positive transition to the full day of class time in high school. Those who did report having difficulties with reported that they had struggles with completing the tasks of daily life such as waking up on time and going to class as well as difficulties with regards to academics.

Participants reported that retaining information proved to be challenging in college when compared to their high school experiences. Additionally, participants reported that they lacked the motivation to complete school work. Some students specifically referenced subject areas that have been particularly difficult for them to complete their school work for on a collegiate level due to their experienced injuries.

Participant 4 commented: “Mathematically, I don’t think that I have been able to do things the same since my injuries. Math in general has always been harder for me for me to learn. But it was especially harder from the time period of my injuries. It just doesn’t stay in my mind. I was learning trig and stats around the time of my injury. I am in stats now and it’s extremely difficult for me. Everything that I study is erased from my mind.”

How are the everyday demands different for you in college than they were in high school?

Academically, participants reported that when compared to high school, the school work is done more independently and that they did not have prompts about what was due and when. For example, Participant 4 stated:

Umm, I’m kind of in charge of my own time. I like to plan my time out. I like to be in class from the morning to the afternoon and that’s it. I have a huge chunk of time during my day to get my work done. I was in the IB program in high school and didn’t want to do honors or anything that was pressured. Now I get to have fun and it’s such a relief. I also get to go to classes that interest me. You can also go to any professors for help and since I’ve had professors that have been helpful, now I want to do an independent study.

It was also reported that students viewed themselves as having to be much more responsible in college than was required in high school. Participants indicated that the content that they are expected to learn in college is more challenging than high school and a higher level of critical thinking is required. Participants indicated that time management skills were highly necessary to be able to meet the demands of everyday life

in college. Conversely, participants stated that they felt as though they have more time to complete school work in college than they did in high school; this was viewed as helpful for them to be able to complete assignments. Two students reported their professors to be highly engaging and helpful; these students indicated that this was a positive factor in engaging them in their academic career.

Participant 2 commented: “Oh man. Umm, I have far greater responsibilities in college. When I was in high school I had two to three careers that I wanted to do. I certainly didn’t have as much maturity then as I do now. The curriculum is much more difficult than high school. There are many more resources (here), professors are very helpful and the content is much more rewarding.”

Participant 6: “I would say the amount of hours that I have to study a week has increased. I am on my own schedule. I get to choose when I have classes, go to the gym, and eat my meals. I would say I prefer when I get to do things on my own and can be more flexible with my own time.”

In getting ready to come to college, who at your high school helped you? What did they do?

One participant indicated that her parent helped her; one participant indicated a girl friend; three participants viewed their teachers as helpful; and two participants reported their school counselors as helpful. One participant viewed their parents as helpful as their parent explained to them what the college experience would be like and what the process would entail. Students identified teachers as helpful stating that teachers in high school expected their classwork to be independent and college level work was expected in advanced classes. Other participants indicated that their school counselor was

helpful in aiding in the college application process. Aside from solely academics, students indicated that they received help to make lifestyle changes that were necessary before entering college. For example:

Participant 1: “My father graduated from college. He walked me through the process and what it would look like for my life.”

Participant 3: “Umm. My girlfriend at the time helped me make a bunch of lifestyle changes that I needed to make before coming to college. Mostly just like maturity and confidence I guess.”

Participant 8: “Umm my English teacher really helped me my senior year because she made it more college-esque and made it more up to us to get our stuff done. You know how some teachers give you steps for getting a paper done? To do this and do that. She would just tell us when it was due and then it would have to be turned in.”

What academic challenges have you experienced since transitioning to college?

In regards to academic challenges that they have faced since transitioning to college, five students reported that they experience distraction from sitting in a classroom and challenges with “mental focus.” These students reported having difficulty with sustaining their attention and the need to shorten or chunk assignments. It was indicated that students also had difficulty with their memory. The transition to college level work was reported to be more challenging for students as they indicated that they had to learn how to take notes and how to prepare for quizzes and exams. Time management was also indicated to be challenging for students as they needed to monitor the time needed for studying.

Participant 4 commented: “Primarily I just needed to know how to take notes for me. No one is going to check your notes. I try to understand how I best think and process information so I can recall the information for later when I’m trying to study. I also think the difference between the classes and exams is crazy. When we get to the exam, it’s the most bazaar questions. It’s like the questions trip you up. They phrase it so that you have to think and then you think that you’re wrong. It’s like a mind game and it’s not fun after you’ve been studying for so long.”

Participant 6 suggested: “I would say the first couple of exams I took in college was the most challenging thing I’ve experienced. In high school, there is a study guide, but in college you are just expected to know everything. But in a positive way, it has helped me learn how to study.”

Can you explain the types of memory challenges that you have experienced in college?

Only one participant reported that she only experienced memory loss at the time of the incident. Therefore, with the participants obtained, it was clear that due to their experienced injuries memory loss appeared to be highly prevalent. Seven participants indicated that they experienced memory challenges for months or years, and two participants are currently still experiencing memory deficits. Participants also commented that during the time following their injury that they had trouble thinking clearly and remembering to complete tasks. It was noted that academic tasks were particularly difficult for participants as new information was impossible to retain. Participants who had sustained multiple, severe injuries indicated that they experience permanent memory deficits. The following are typical comments about memory:

“I mean I don’t know if it was during the hit, but when I got injured, I couldn’t remember. For the short-term, I couldn’t remember what I was thinking about or doing. But then it would come back to me later on.” (Participant 1)

“I will say that my memory is not as good as it was. In theater, I used to memorize things quickly. Now I have a lot going on. I used to go out all the time and the influence of alcohol makes things worse. I am still struggling because I think that alcohol influenced me.” (Participant 4)

“I feel like honestly I’ve always had trouble remembering things. Really, something must be wrong with it. With my last concussion, it took me two weeks to not feel fuzzy in the head anymore..” (Participant 7)

What does your ability to focus in courses look like?

For the ability to focus, seven participants indicated that they experienced difficulty with the ability to focus after recovering from their injury. Participants indicated that they could only hold an attention span for a few minutes at a time when in an academic setting. Three participants also indicated that they experienced migraines, headaches, or sensitivity to light after experiencing an injury that made it difficult to focus in class. It was indicated that the class the participant was taking and the student’s opinion of the professor greatly impacted a participant’s ability to pay attention and focus. In order to maintain focus, it was noted that frequent breaks proved to be helpful.

Participant 1 recalled: “It was like every couple of minutes would pass by, I was just be thinking about anything else. In math class, which was a more intense class, I would just be awkwardly sitting there and looking at the wall. I would just be hazy.”

Participant 7 suggested: “Umm it was really just zoning in and out and remembering to try to make myself pay attention and then ten seconds later forgetting to pay attention and then saying oh shoot, I have to remember that again.”

How do you organize your day?

For this question, six participants indicated that they enjoyed the freedom of being able to create their own schedule. Four participants indicated that while recovering injury that they would find themselves unorganized, prone to wander, unable to find their belongings. Participants reported that when they were unable to follow their usual schedule or find their belongings, they would often become irritated and/or anxious. One participant indicated that when she was recovering from her injury, she required incredible amounts of sleep, so she was unable to maintain any sort of schedule for her day. To help keep track of daily life tasks and coursework, two participants utilized planners and checklists which they reported to be integral to completing tasks.

Describe your ability to pay attention in class:

Four students reported that they were only able to pay attention for a few minutes at a time in the classroom while recovering from their injury. It was indicated that participants would be distracted by their own thoughts instead of being able to attend to the topic being covered in class. After students recovered from their injury, they reported still having difficulty paying attention in class.

Even if participants were not granted a break during class times, they reported that they would have to take a break on their own or at least take a “mental break” in class. Participants also noted that the amount and quality of sleep that they were able to attain highly impacted their ability to pay attention in class. Two students indicated that due to

the headaches that they experienced and light sensitivity, it was highly difficult to pay attention in class.

Describe your ability to pay attention while studying:

The act of studying proved to be highly difficult for four participants to engage in while recovering from their injury. The initiation required for studying as well as completing the act itself was reported to be challenging for students. Three students reported being highly distracted by their phones while trying to study. To combat this, students would have to put their phone out of sight and reach. This strategy of keeping cellular devices out of reach could be beneficial for all students, not just for students who have experienced a TBI.

Participant 1: “Any amount of work would be really hard for me, especially with projects. I had to ask a professor for extra time and even with that, it was extremely hard for me to focus and sit there and finish my project.”

Describe your ability to pay attention while in social situations:

Three participants reported that they were significantly less social during the time that they were recovering from their injury. During this time, it was common for participants to withdraw from social stimulation and avoid contact with friends. For example, Participant 1 described this adaptation:

“Usually I am a very social person, I just like to be around someone. Chilling with friends and suite mates. Always talking with someone. But after my injury, I didn’t even try. I was irritated. Especially with the social scene (here). I would rather be in my room and not talking to anyone with my lights turned off.”

Prior to and after recovering from the injury, participants perceived themselves as social and wanting to engage with others. A few participants mentioned that they experienced difficulty relating to others after experiencing their injury, for these individuals they reported that it was difficult for others to understand what they were experiencing. For example, Participant 2 said, “I was withdrawn. I didn’t know how to speak of my anxiety and what I was going through. It was understood that I took a blow to the head and needed time.”

Do you experience any difficulty getting started on a task? If so, can you give me an example?

For task initiation, six participants indicated that they experienced difficulty with this after sustaining their brain injury, two participants indicated that they did not have difficulty with this. It was reported that participants had difficulty finding the motivation to begin academic tasks such as projects or assignments. One subject in particular stated that he could not bring himself to log in to view an assignment to begin the task. Another participant stated that they were able to look at the rubric for an assignment, but still experienced great difficulty starting the task. Other participants indicated that they would become highly distracted and due to their high level of distraction, they were unable to begin a single task. It was mentioned that due to the school days the students had missed, there was a great amount of work to make up. Due to the amount of work that was expected of participants to make up, some participants stated that this triggered headaches. Two participants indicated that it was highly difficult to begin a task, but once they started a task, they were able to complete it.

Participant 2: “I got distracted more easily than anything. I couldn’t multi-task. I was doing that when I shouldn’t have. It would cause me to get distracted and be forgetful.”

Participant 4: “Yeah, that’s the hardest part. Figuring out how to start things. Papers are the worst. I have a paper due on Friday and it took me 35 minutes to start it and I just kept looking at the rubric. It takes me awhile to get back into the mindset of things when I leave class.”

Participant 7: “Yeah, just the motivation to initially start it. I don’t think once I started I had trouble doing the activity, it’s just like getting myself to do the activity was the hardest part.”

Do you experience any difficulty completing academic assignments? Can you give me an example?

For completing academic assignments, overall participants indicated challenges with this after experiencing their brain injury (five participants out of eight participants). Generally, participants indicated that it took them a longer amount of time to complete an assignment after experiencing their brain injury. Additionally, participants indicated that they felt as though they did not possess the ability to complete an assignment. Due to this, participants stated that they would quickly lose the motivation to complete an assignment. One participant in particular stated that reading assignments were extremely difficult for him while he was recovering from his injury because he was unable to retain the information. The two participants that stated that they did not experience difficulty with completing assignments indicated that they were able to successfully finish assignments by using a planner and staying cognizant on due dates.

Participant 2 remembered: “Yes, I would have four to eight tasks to be working on in a day and it was difficult for me to follow up and see if they got done or not. I felt like I was struggling to keep things in my planner and I felt pulled in a million different directions. It wasn’t impossible, but it felt impossible.”

Participant 3 stated: “Yeah, it was a lot harder to complete things. I would usually just stop. Umm, there was an art history assignment where I had to analyze a drawing; I started it but I couldn’t think of anything. I wrote down a few things and then I just stopped.

What does your ability to take in or process information look like in coursework?

Can you give me an example?

Six students reported that this was an area of difficulty for them as they were recovering from their brain injury, two did not. Students indicated that they had to spend a great deal of time learning information in order to be able to retain it. Additionally, the information would need to be repeated numerous times for student to be able to grasp the concept or remember information. After class, it was indicated that students would have to re-learn the concept on their on multiple times to be able to process the information. Due to this, students indicated that they experienced frustration.

Participant 1 recalled: “During government, I was trying to learn about history. I had to remember the date over and over in my textbook to remember it. I had to do it so many times that I wasted a lot of time trying to study.”

What sorts of difficulty do you experience with regulating your emotions?

With regards to emotional regulation while recovering from experiencing an injury, six participants indicated that they experienced difficulty with regulating their emotions. Only one participant indicated that they did not have any difficulty regulating their emotions. It was reported that while recovering and for some time afterwards, participants did not feel like themselves. Three participants reported feelings of irritation, one participant indicated experiencing sadness, and one participant experienced feelings of anxiousness. Two participants indicated that they felt as though they did not have the capacity to process their emotions at the time after their injury.

Participant 1's response was typical: "I was trying to be positive, but little things irritated me a lot. It was the irritation basically. I was irritated quickly and I don't like being irritated normally."

Tell me a little bit about your social life on campus.

Seven participants indicated that they were involved in organizations on campus and enjoyed the aspect of socializing as a part of their college experience. Participants stated that they enjoy hanging out with friends and engaging with others. The organizations that participants were apart of included service organizations (one participant), Greek life (two participants), athletics (two participants), and intramural teams (two participants).

Only one participant preferred to spend time alone instead of socially engaging with others. Those who experienced their brain injury in college indicated a significant difference of social behavior while recovering from their injury. During the time of recovery, students reported that they were withdrawn and preferred to spend the majority

of time alone in their room. One participant indicated that since they were unable to be on their phone (due to the screen) during their recovery, they felt socially isolated.

Can you tell me about your sleep?

Five participants indicated having difficulty with sleeping while recovering from their injury, but since have recovered and now are able to sleep regularly and well. During their time of recovery, it was stated that participants would wake up every few hours and were unable to fall asleep within an expected period of time. It was also indicated by two participants that they slept significantly more while recovering from their injury. One participant indicated that headaches significantly impacted her ability to fall asleep:

I couldn't fall asleep to save my life because of my headaches. I fell asleep out of exhaustion really. I had a lot of trouble sleeping. That was the worst part of it.

You smile and grind through your day, but you don't really mean it. (Participant 2)

For participants who did not report experiencing difficulty with sleep, one participant stated that he did not remember if he experienced difficulty with sleep after their injury, but now gets seven hours of sleep each night. The other participant who did not report difficulty said that she did not experience difficulty while recovering from their injury because she was not distracted by technology at the time. One participant stated that he continues to have difficulty with getting enough sleep.

What level of fatigue do you experience in an average day?

Seven participants reported that they experienced an increase in fatigue while recovering from their injury. Two of the participants revealed that they still experience

fatigue. Participants indicated that they felt groggy, somewhat confused, and lethargic. It was also indicated that their level of activation was significantly lower during this time. Participants indicated that they wanted to sleep as much as possible.

Participant 8 said: “Umm yeah after my injury I was tired a lot and more than I used to be. Even now, I would say that I’m drowsy a lot. Even more than I used to be.”

Do you have any difficulty completing activities due to fatigue?

Seven participants indicated that they experienced difficulty completing activities due to fatigue while recovering from their injury. One participant stated that she did not remember if she experienced difficulty completing activities due to fatigue after sustaining their injury. The participants that did experience difficulty stated that they felt too tired to complete schoolwork. Two participants indicated that they still experience fatigue that is significant enough to affect their ability to complete activities:

Participant 7 commented: “Uhh, yeah, because I would just want to nap all the time. I would try to get my study books out and my mind would just be too tired. I felt like my mind was lazy.”

Participant 8 stated: “Yeah, after my injury I was tired a lot and more that I used to be. Even now, I would say that I’m drowsy a lot. Even more than I used to be.”

Do you currently receive accommodations?

Three participants received informal accommodations from professors and three participants received no accommodations. One participant had a Section 504 Accommodation Plan in high school specific to the traumatic brain injury. One participant had an Individualized Education Plan in high school for a Specific Learning Disability in reading and for challenges regarding a sustained brain injury. The students

who had accommodations in high school, had accommodations from the Office of Disability Services at the university. The accommodations that participants received included extended time, frequent breaks, attendance flexibility, if still experiencing symptoms from the injury, note-takers, and oral administration of tests.

If you do receive accommodations, do these accommodations help? How?

The two participants reported receiving accommodations generally reported accommodations to be helpful. The three participants who received additional time on assignments and tests indicated that it was beneficial. The flexibility for class attendance was also seen as helpful for one student who had the option to leave class early. Additionally, the ability to take breaks was identified as helpful.

Can you think of anything else that might help you academically or socially?

Two participants stated that eating regularly helped them to sustain routine. One participant said that focusing on his health in general such as nutrition, exercise, and spending time outdoors helped him recover from his brain injury. Participants that did not have accommodations stated that they wish they would have had an opportunity to take breaks in class. One participant stated that they wished they could have had one on one time with professors:

I think, umm, the teachers need to understand the capacity of what it was. I feel like the teachers just thought that I was stupid. I would go through mind fogs and had a difficult time retrieving information. A support system would have been nice to make you feel sane again. More time was needed and I did not need to be on a laptop to recover properly. I had a pounding headache and still had to do all

of my school assignments. I feel like people don't take it seriously because it's just a concussion

Another participant that did not receive accommodations indicated that they wished that they would have had time to recover and rest and that she wished professors would know the significance of a brain injury. Two participants felt socially isolated when recovering from their injury and wished that they would have had social support.

Participant 2 added: "I would say a lot of times when you have a brain injury you feel like there are three to four TV channels going on inside your head and they are all playing something different. My advice would be to focus on your body from top to bottom. If I hadn't had the ability to exercise and eat healthy, I would have recovered mentally from the brain injury."

Participant 7 commented: "The only thing that I wish I had was time to recover and rest. I was required to come to class and do all my work. One of my professors would give me zeros for not coming to class. So, I guess time to rest and recover from work and school would have been helpful."

Discussion

In this study of university students who had sustained a traumatic brain injury, most reported difficulty making the transition to college. They found the work difficult and the amount of time required for academics daunting. They were hampered by poor planning skills and fatigue. They found social life, social media, and alcohol added stress to an already difficult situation.

All of these issues, however, are common to most students making the transition to college (Gall, Evans, & Bellarose, 2000). But it is the case that they are more intense

for students following a TBI and the same solutions may not work to alleviate the problems. For example, the fatigue experienced following a TBI and the fatigue many college students complain of are not caused by the same conditions. For the student following a TBI, fatigue is an organic symptom of the injury and recovery process. Mostly time will heal it. For the typical college students, establishing better sleep hygiene is often the resolution. Likewise, it is not unexpected for college students to experiment with alcohol and those experimentations may result in short-term impairment, but alcohol use may pose much graver, long-term consequences for students recovering from a TBI (Aikins, Golub, & Bennet, 2015).

The Role of the School Psychologist in Transition Planning

School psychologists are in a unique position to help students with TBIs make the transition to postsecondary education: they are educational experts with a knowledge of brain function and have skills in consultation and intervention. Among other things, they can be helpful in:

- Preparing student for the general transition issues in going to college, including increased workload, the need to be responsible for their own schedule, the diminished role of teachers in reminding students of assignment due dates, test schedule, etc. For example, many college students are unfamiliar with a syllabus and do not understand that the syllabus in some courses may be the only guide to schedule and project requirements. The amount of general orientation to college has greatly diminished over the past few decades (Pritchard, Wilson, & Yamnitz, 2007), even though the number of first generation college students is increasing. It is an interesting finding of

this research is that teachers, both in high school and in college, were the most frequently mentioned sources of assistance.

- Helping students understand the differences in procedures in college, which fall under the American with Disabilities Act (ADA) rather than IDEA, with which most of them are familiar. Among other differences, students must seek our services under ADA, while school were required to seek them out under IDEA. Students are responsible for providing documentation of their disability and new testing may be necessary, as the standards for providing services have changed. Recent neuropsychological tests may be required, for example.
- Understanding that ADA and universities offer more kinds of accommodation than high schools. Students with disabilities may have modification of housing requirements, for example; or have note-takers provided in classes; or access to assistive technologies that may not have been available at home. Most students with disability are allowed to register early for classes, so that they can choose classes that allow them to maximize their educational experience. A student in the early stages of TBI, for example, may need shorter classes and periods between classes to recover focus. Getting into popular Monday, Wednesday, Friday classes may be difficult for a freshman, but not with early registration.
- Help students understand the implication of attaining their majority, particularly if parents played a major advocacy role during high school. Under the Family Education Rights and Privacy Act (FERPA), adults only can request services or have access to records, including requesting high school

documentation of their disability status for the university. Students who have had highly involved parents are often at a loss of how to negotiate the world of ADA on their own.

- Help students differentiate the normal strains of transition to college from the special issues resulting from their TBI. It is an easy trap for students to attribute all of their transition issues to their injury. But external attributions—to forces outside the student’s control-- often result in low levels of effort (Wiener, 1972). If students were clearly aware of the effects of their injury (you will not have the same levels of stamina of others) in contrast to similar normal transition issues (it’s fun to stay up all night, but you will pay for it the next day) they might take more responsibility for their educational outcomes. In several places, students talked about the pleasure they felt in having freedom of choices, but students make better choices when given the right information.

Limitations of the Study and Further Directions

The major limitation of this study was that all the participants attended the same institution and that the university had highly competitive admissions standards. Therefore, the students in this study were functioning competitively academically. Also, the participants were in their beginning years of college, because the participant pool attracts mostly freshmen and sophomores, and so the interviewees did not discuss issues associated with advanced/major courses (e.g., practica and research). Freshmen at this university also are required to live in dormitories and eat at dining services, so their “independent” living is only partial. Including participants from different institutions that

have different admissions standards (e.g., open admissions community colleges) would likely include students with more serious and recent injuries. It would also bring into relief the variability in services available at different schools. And we would be able to observe what happens when students are living on their own. Including upperclassmen and graduate students would help understand the problems associated with more specialized coursework.

The study could be improved by more demographic information, including standardized test scores and GPA, as well as more information about the injury and recovery. Particularly if the study were to go beyond one institution, knowing more about the students would be necessary to make sense out of the data.

Finally, as one of the purposes of this study was to gather information for school psychologists, it would have been useful to ask questions directly about whether students were assisted by school psychologists in their everyday high school functioning or in transition planning. That no participant mentioned a school psychologist is cautionary, but failure to be mentioned in an interview with no prompts cannot be seen as definitive evidence that school psychologists did not assist these students.

Conclusion

The college transition process presents many challenges to all students, as adolescents are living on their own for the first time, are exposed to advanced course work and course load, and are responsible for their own success. Students who have sustained a TBI before enrolling in college or who sustain a TBI while in college face additional obstacles regarding their emotional regulation, planning, keeping to schedules,

and attention. School psychologists are familiar with the supports and services that may be beneficial to students in K-12 educational setting.

However, as these students transition toward postsecondary education, they need guidance on what supports and services are available. This study revealed that school psychologists are not engaging in this role currently. For school psychologists to receive information on how to engage in in this role, they can read research articles on the college transition process, consult with universities on what accommodations and services they offer, and collaborate with school counselors, teachers, and parents. Additionally, school psychologists should review a student's file to evaluate a student's most recent testing as well as their current educational services.

School psychologists also need to approach a student's educational needs with a holistic view. Students who experience a traumatic brain injury may have lasting impacts that affect their ability to achieve academically and make the transition to college even more difficult. However, it is imperative to consider that a student could face difficulty in transitioning to college from a variety of factors. For instance students may engage in substance use, get an inadequate amount of sleep, or experience mental health issues. School psychologists must consider all of these factors as they engage in helping students with their college transition process.

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Appendix A: Consent Form

Consent to Participate in Research

Identification of Investigators & Purpose of Study

You are being asked to participate in a research study conducted by Kaylor Duncan from James Madison University. The purpose of this study is to help facilitate a successful college transition process for students that have sustained a Traumatic Brain Injury. This study will contribute to the researcher's completion of her educational specialist research project.

Research Procedures

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. This study consists of an interview that will be administered to individual participants in a small, quiet, private room in the graduate psychology building at James Madison University (or a computer/phone interview). You will be asked to provide answers to a series of questions related to the college transition process.

Time Required

Participation in this study will require 30-45 minutes of your time.

Risks

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).

There are no identified risks for participants outside the risks of everyday life. To protect subjects, the interview will take place in a private and quiet room. Students will have access to take breaks during the interview (both in person and phone) at any point they wish.

Benefits

Potential benefits from participation in this study include receiving research credits for fulfilling undergraduate course requirements and access to the research project after completed. Additionally, benefits to participation include the opportunity to reflect on the college transition process. Further, this research could benefit school psychologists who work with high school students in preparing them with a transition plan before attending college.

As a whole, the research could provide information to universities, students, and parents who are navigating the college transition process for themselves or aiding in the help of others.

Confidentiality

The results of this research will be presented at the psychology graduate school symposium. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the

right to use and publish non-identifiable data. While individual responses are confidential, aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers will be destroyed.

Participation & Withdrawal

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

Questions about the Study

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

Kaylor Duncan
Graduate Psychology Department
James Madison University
duncankm@dukes.jmu.edu

Ashton Trice
Graduate Psychology Department
James Madison University
Telephone: (540) 568-8189
tricead@jmu.edu

Questions about Your Rights as a Research Subject

Dr. Taimi Castle
Chair, Institutional Review Board
James Madison University
(540) 568-5929
castletl@jmu.edu

Giving of Consent

I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form. I certify that I am at least 18 years of age.

Name of Participant (Printed)

Name of Participant (Signed)

Date

Name of Researcher (Signed)

Date

Appendix B: Interview Questions

Hi, I'm Kaylor, I am currently a school psychology graduate student at ----.

Thank you for agreeing to be a participant in my research study. I am also interviewing a few other students and I am hoping to gather information on the college transition process for students who have sustained a traumatic brain injury. I have some questions that I would like to ask you today and I will be writing down your response. I am hoping that the information that I gather will be helpful for students in the future.

What is your gender:

How and when did you sustain your TBI or TBIs?

What is your college year?

The Transition

1. Have you experienced any unexpected issues with the transition to college?
Can you give me an example?
2. How are the everyday demands different for you in college than they were in high school?
3. In getting ready to come to college, who at your high school helped you?
What did they do?

Academic Challenges

4. What academic challenges have you experienced since transitioning to college?
5. Can you explain the types of memory challenges that you have experienced in college?
6. What does your ability to focus in class look like?

Executive Function

7. How do you organize your day?
8. How would you describe your ability to pay attention in class? While studying? In social situations?
9. Do you experience any difficulty getting started on a task? If so, can you give me an example?
10. Do you experience any difficulty completing academic assignments? Can you give me an example?
11. What does your ability to take in or process information look like in course work? Can you give me an example?

Emotional Regulation/Social Life

12. What sorts of difficulty do you experience with regulating your emotions?
13. Tell me a little about your social life on campus.

Fatigue

14. Can you tell me about your sleep?
15. What level of fatigue do you experience in an average day?
16. Do you have any difficulty completing activities due to fatigue?

Accommodations

17. Do you currently receive any accommodations?
18. If you do receive accommodations, do these accommodations help? How?
19. Can you think of anything else that might help you academically or socially?

Appendix C: Debriefing

“Thank you very much for sharing your experiences with me during the interview. I would like to acknowledge that this interview may have been triggering for you based upon the content of this interview. So, I would like to take some time to debrief with you as part of your participation in this study.

Experiencing a Traumatic Brain Injury

Firstly, I would like to recognize that experiencing a brain injury itself may have been a traumatic event for you. Therefore, speaking of this event may have created unpleasant feelings for you. If you would like to process through any feelings regarding this, I can process through any feelings that you may have with you at this time.

Recovery Process

Due to the injury that you experienced, the recovery process that was necessary to engage in to obtaining wellness, after the injury may have been a difficult and trying process for you. Speaking of the difficulties that you faced in response to experiencing your injury. If you have a need to process any emotions from speaking of your recovery process, we can have a conversation about this.

Lasting Impact

I realize that if you experience a lasting impact from experiencing your injury that impacts your life and functioning, this is triggering could be triggering for you. I am happy to discuss any feelings that you may have with you at this time.

Conclusion

If I have not any of the needs you may have as a part of this debriefing component, please let me know. If there is anything that you would like to discuss before we end our conversation, please let me know at this point.