Future Review

International Journal of Transition, College, and Career Success

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TABLE OF CONTENTS

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FOREWORD

The Future Institute Research Center is proud to publish our third issue of *Future Review: International Journal of Transition, College, and Career Success.* We want to thank the authors for submitting their excellent work to our journal and the reviewers for providing their time and effort in evaluating submissions.

We have five articles in this issue. We start with three contributions to our *Peer Reviewed Research* section. Stephanie Cawthon and colleagues present an empirically based framework for measuring accessibility for Deaf students. We think this article will be generative for researchers interested in accessibility. In the second article, An-Pyng Sun and colleagues make an important contribution to the literature on internet addiction with a qualitative study. This article has implications for student success during important educational and career transitions. This article might be particularly useful to counselors working in a higher education setting. Finally, Michele Mahr and colleagues study factors that are associated with exercise behavior among college students with disabilities. This study will help universities identify ways to support students with disabilities beyond the classroom.

After the empirical pieces, we have two articles in our *From the Field* section. Frank Lloyd provides a first-person account of his liberal arts education and career trajectory. Career services professionals will benefit from the way Dr. Lloyd articulates both the specifics of how career resources were used and the lessons learned during his career journey. In the final article, Robin Burgamy advocates for increased attention to students with Fetal Alcohol Syndrome Disorder (FASD). This article opens an important discussion that could help high school counselors advise students with FASD about post-secondary opportunities and help higher education institutions better serve students with FASD.

As editor of this journal, the experience of working with the authors and the reviewers has been thrilling, humbling, and satisfying. I hope readers of the journal think deeply about the contributions these articles make to the field.

John Klatt, *Future Review* Editor

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PEER REVIEWED RESEARCH ARTICLES

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Measuring Accessibility of Postsecondary Education and Training for Deaf Individuals: A Proposed Conceptual Framework

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Postsecondary institutions serve as a vehicle for equal access to education and training for a diverse and wide-ranging student population. Deaf individuals, the focus of this paper, are enrolling in postsecondary education and training programs at increasing rates across the nation. These individuals face daily challenges in gaining access to institutional and program resources, requiring constant self-advocacy and the use of a multitude of strategies to navigate these complex systems. This paper first reviews the context of accessibility for deaf individuals in postsecondary settings under current research frameworks. We then offer a new framework for understanding accessibility that incorporates factors that are known to predict postsecondary success. We present a confirmatory factor analysis of a new measure aligned with this framework. The use of this measure is discussed within the context of possible considerations for institutional design to improve equity and success.

Keywords: Accessibility, deaf, postsecondary settings

If you look closely at many college degree diplomas, or listen carefully at a commencement ceremony, you may notice the following phrase: that this degree has been granted *with all the rights, privileges, and responsibilities appertaining thereto*. What rights, privileges, and responsibilities does this phrase refer to? Degree holders are eligible to apply for positions, access associated privileges such as higher pay or professional networks, and bear professional responsibilities such as commitment to sound and ethical practices. The majority of postsecondary training and education occurs at institutions or within programs that include formal learning opportunities, either through direct instruction or through hands-on experience (or both). These programs and institutions are wide ranging in where they are housed and how they are funded. But for each, students and participants enroll with a specific knowledge and skill goal in mind and upon completion, receive certification and the "rights, privileges and responsibilities" associated with it.

Yet not all individuals have an equal opportunity to access those rights, privileges, and responsibilities. Codified into civil rights legislation across public entities are strategies to reduce the denial of access to responsibilities and benefits on the basis of one's gender, race, sexuality, social class, language, religion, or disability. These policies support the notion that lack of access to the benefits of a democratic society for a small group, if done in a discriminatory manner, compromises access for the whole. For students with disabilities, the majority of institutions and programs were not originally built and designed with the diversity of disability in mind. What does it mean for education and training to be accessible and how do we achieve this goal? Once in place, how do identify needed changes, improvements, or areas for further work?

Purpose of Paper

When situated within a larger context of equity, how do we define and conceptualize accessibility so as to improve equality in opportunity to reach education and career goals? Measuring access for diverse populations poses unique challenges. Because access both lies on a continuum and is embedded within an ecosystem, the degree of access can vary by individual, within a specific learning environment, at a specific period of time. For the remainder of this paper, discussion will center on access for deaf[1] individuals to postsecondary education and training opportunities. Although deaf individuals share many characteristics with other historically and/or systematically excluded populations, there

[1] In this report, we use the term 'deaf' in an all-encompassing manner, including individuals who may identify as Deaf; hard of hearing; hearing impaired; late deafened; or deafdisabled. Terminology from specific research studies is maintained where known. We also use "deaf" preceding adjacent nouns (e.g., individual, student) to reflect an identity first orientation to language use.

are some unique ways in which access is conceptualized and applied to this group, including experiences with early language deprivation, negative perceptions on the capacities of deaf individuals to succeed in school and at work, and multiple language and communication modalities. While experiences of other marginalized groups have been applied to deaf education (e.g., Antia, Reed, & Kreimeyer, 2005), the experiences of deaf individuals are less commonly used to generate models of access. These experiences can also inform and strengthen models of access that apply more generally and thus warrant specific analysis and exploration. In this paper we propose a model of accessibility that addresses this construct across six domains: technology, attitudes, information and communication, physical environment, services, and social capital. This paper then presents psychometric qualities a measure designed to capture these domains via a confirmatory factor analysis (CFA), concluding with examples to support accessibility across each domain in postsecondary settings.

Postsecondary Education and Training Outcomes for Deaf Individuals

Data on postsecondary enrollment for deaf individuals can be challenging to locate and analyze. There are several reasons for this. First, deaf individuals make up a relatively low incidence disability group -- with fewer than one percent of the K-12 student population receiving direct services under this category -- finding needles in the proverbial haystack is much harder than it is for measurement of outcomes for high incidence groups with more visible presence on campus and in data systems (Mitchell, 2017). A second reason that there are not always reliable statistics on postsecondary education and training experiences for deaf individuals is that students are not required to disclose their status upon application or enrollment. Deaf students become known to campuses and programs only if they seek accommodations or visibly demonstrate their deaf identity. Rarely is such information connected to larger institutional level tracking of student retention and completion outcomes.

Beyond institutional level analyses, US Census data, via the American Community Survey, allows for a national snapshot of postsecondary attainment among people between the ages of 25 and 64 (Garberoglio, Cawthon, & Sales, 2017). The sample in this analysis included more than 38,000 deaf individuals, defined by the US Census as those who “experienced hearing difficulties.” Nationally, the bachelor’s degree completion rate for hearing individuals has hovered at around 30-33%, whereas the same rate for deaf individuals has been around 16 -18%, a significant gap. In 2015, 27% of deaf individuals between the ages of 18 and 25 were enrolled in some kind of postsecondary education or training program, compared with 39% of hearing individuals. There was significant variation in the data by race, gender, and ethnicity. For example, deaf women aged 18-25 had a higher enrollment rate in postsecondary institutions (45%) than deaf men (32%), nearly twice as large (13%) as the difference between hearing women and men (7%).

Currently, there are few large scale datasets that allow aggregation of a sufficient sample of deaf students to note what factors lead to trends in higher education and training. Understanding the context and predictors of postsecondary attainment is an important first step in conceptualizing what accessibility needs to look like for a diverse student population. One robust resource is the National Longitudinal Transition Study 2 (NLTS2), a study that followed students with disabilities from secondary grades to their school, work, and home lives through a ten-year period (Newman et al., 2011). The initial sample of deaf students within this study was approximately 1,000 students, providing a sufficient basis for identifying significant trends. A few key findings stand out from these analyses as relevant to how postsecondary institutions think about their approaches to accessible and inclusive education. First, the majority of deaf individuals attend two-year technical training and community college programs vs. four-year college degree programs, and that this proportion is higher than hearing students (Newman, et al., 2011). Second, deaf individuals use very different types of accommodations in high school than in postsecondary settings (Cawthon, Leppo, Ge, & Bond, 2015). Student experiences related to gaining access to information in postsecondary settings can vary radically from their experiences in high school. Third, self beliefs and parental expectations are significant predictors of postsecondary success, suggesting the power of supportive psychological environments in postsecondary educational attainment (Cawthon, Garberoglio, Caemmerer, Bond, and Wendel, 2015; Garberoglio, Schoffstall, Cawthon, Bond, & Ge, 2014). While findings from the NLTS2 are far from all encompassing, they suggest the need for a multidimensional approach to understanding accessibility at the postsecondary level.

Current Accessibility Frameworks

Accessibility through Accommodations

In the United States, equal access to postsecondary education is a basic legal right protected by the Americans with Disabilities Act (1990) and the ADA Amendments Act of 2008. ADA provides legal safeguards against unequal access to the information that students receive, either through the instructional materials in the classroom or the overall

curriculum of an educational program. At a basic level, ADA focuses on equal access to the delivery of information. Deaf individuals often have reduced access to auditory information; ADA posits that delivery of information through auditory means should be available in some visual format in order to be accessible to deaf individuals (e.g., interpreted into sign language and/or transliterated into written English captions). ADA sets the legal expectation that a disability should not reduce a student's access to the resources that they need to pursue educational and employment goals.

Data on postsecondary enrollment for deaf individuals can be challenging to locate and analyze. There are several reasons for this. First, deaf individuals make up a relatively low incidence disability group -- with fewer than one percent of the K-12 student population receiving direct services under this category -- finding needles in the proverbial haystack is much harder than it is for measurement of outcomes for high incidence groups with more visible presence on campus and in data systems (Mitchell, 2017). A second reason that there are not always reliable statistics on postsecondary education and training experiences for deaf individuals is that students are not required to disclose their status upon application or enrollment. Deaf students become known to campuses and programs only if they seek accommodations or visibly demonstrate their deaf identity. Rarely is such information connected to larger institutional level tracking of student retention and completion outcomes.

This legal framework has been important for deaf individuals as they navigate how to gain access to educational opportunities, and for institutions as they seek to both comply with ADA and to support the success of a diverse student body. The fruits of ADA are seen most visibly in the degree to which accommodations are available across different learning environments. Accommodations refer to a range of tools, technologies, adaptations, and other resources that make it possible to deaf individuals and all those who qualify under ADA to access information that is key to education and training. Under ADA, the cost of these accommodations must be borne by the institution; while this is not a blank check for receiving supports and services, students and trainees have many rights that are exercised through this legal framework.

Effectively meeting the accessibility needs of deaf individuals in postsecondary settings is complicated and depends on a number of factors. Deaf individuals' personal characteristics and accommodation preferences can change over time and vary depending on content area and instruction delivery format. For example, a deaf student might request real time captioning in a physics class where complex content, and associated terminology, is delivered in lecture format. This same student might then request an interpreter in a small group format writing class. Many contemporary learning environments value student interactions and incorporate these at a high degree while also delivering content in a lecture format, which can necessitate dual accommodations (e.g., interpreter and captioning) in order to facilitate equitable access both to peer interactions and course terminology (Cawthon, 2017).

Currently, there are few large scale datasets that allow aggregation of a sufficient sample of deaf students to note what factors lead to trends in higher education and training. Understanding the context and predictors of postsecondary attainment is an important first step in conceptualizing what accessibility needs to look like for a diverse student population. One robust resource is the National Longitudinal Transition Study 2 (NLTS2), a study that followed students with disabilities from secondary grades to their school, work, and home lives through a ten-year period (Newman et al., 2011). The initial sample of deaf students within this study was approximately 1,000 students, providing a sufficient basis for identifying significant trends. A few key findings stand out from these analyses as relevant to how postsecondary institutions think about their approaches to accessible and inclusive education. First, the majority of deaf individuals attend two-year technical training and community college programs vs. four-year college degree programs, and that this proportion is higher than hearing students (Newman, et al., 2011). Second, deaf individuals use very different types of accommodations in high school than in postsecondary settings (Cawthon, Leppo, Ge, & Bond, 2015). Student experiences related to gaining access to information in postsecondary settings can vary radically from their experiences in high school. Third, self beliefs and parental expectations are significant predictors of postsecondary success, suggesting the power of supportive psychological environments in postsecondary educational attainment (Cawthon, Garberoglio, Caemmerer, Bond, and Wendel, 2015; Garberoglio, Schoffstall, Cawthon, Bond, & Ge, 2014). While findings from the NLTS2 are far from all encompassing, they suggest the need for a multidimensional approach to understanding accessibility at the postsecondary level.

Accommodations are necessary for accessibility but do not always enable full access or ensure positive learning outcomes or active involvement in learning (Foster et al., 2004; Long & Beil, 2005; Marschark et al., 2005). Delivery of information is only a starting point. One misconception is that deaf students have the same access to instruction as hearing students when an interpreter is present. Even if they have top-quality interpreters, which quite often they do not (Schick,

Williams, & Kupermintz, 2006), deaf students do not always comprehend 100% of the information interpreted in educational settings (Marschark et al., 2005; Napier & Barker, 2004). The quality of accommodations may also impact student engagement. In studies comparing accommodated vs. direct communication, deaf students were less likely to interact with their teachers (Saur et al., 1987), asked fewer questions, felt less confident about their understanding, and felt less included in class (Long & Beil, 2005). Delivery of information alone is not sufficient for equitable access to the benefits of instruction, engagement with peers, and developing the critical thinking skills that come with wrestling through multiple perspectives on a topic or problem. Accessibility in postsecondary learning environment for deaf students depends upon more than simply the presence of auditory information in a visual form.

Accessibility as Learning Design

One of the great challenges of an accommodations approach to accessibility described above is the need to "retrofit" access onto an inaccessible system. Universal Design for Learning (UDL) is a pedagogical framework that responds to the challenge of accessible learning environments not through accommodations for individual students in their individual educational journeys, but through changes to the learning context as a whole. UDL framework differs from an accommodations-based approach in several ways. First, it comes from a mission of accessibility for a diverse population, not rooted in a legal requirement. Second, proactive rather than reactive learning environments integrate accessible tools and approaches in initial development curricula, instructional activities and context, and assessment and evaluation of student progress. Within a UDL framework, individual requests for accommodations would only be needed if there were additional access needs that were not already met within the initial design of the learning experience.

UDL is similar to ADA in that it prioritizes the different ways in which students might access information delivery in educational learning settings. Expanding on the ADA approach by emphasizing variability and choice in how students engage with material, UDL requires instructors and curriculum designers to think about providing multiple modes by which students can access the material, both in terms of information delivery and student response (Perez, 2015). Ideally, all students have the option to use different features of a learning environment. For example, videos would be captioned at all times, with or without a specific request for accommodations. Instructors using UDL consider multimodal representation of information during the construction of the course as well as its implementation. UDL is designed to benefit not only students with disabilities, but students with or without disabilities. Offering options, both in the delivery and in the ways that students demonstrate their learning, is integrated into the design of the course. Despite factors pointing to UDL as a promising new field of research in a larger context, the effectiveness of UDL for deaf students has yet to be fully explored.

UDL challenges instructors to think about the ways in which their content delivery assume all students are hearing. There are nuances that are often uncovered when thinking about ways to equalize the language modality of learning and engagement. For example, instructors might think about providing ways for students to visually represent their contributions through written post it notes, online chat features, and images instead of relying solely upon oral large group discussions. UDL changes the paradigm of access from one of accommodation after the fact to inclusion from the start. While UDL is not a replacement for ADA, nor does it hold institutions legally or financially responsible for its utilization, UDL as an instructional framework does broaden the concept of access.

Accessibility as Engagement

ADA has resulted in sea changes in providing equal access for deaf individuals in learning setting. UDL frameworks have encouraged institutions to consider how providing access to post-high school training opportunities extends far beyond and more deeply than simply enrolling in a program, learning the information, and obtaining a degree or credential and encourages proactive approaches to instructional design that can minimize the need to kludge accommodations together after-the-fact. Yet neither of these two approaches examine accessibility of the learning experience as a psychological construct. In terms of impact on an individual's successful acquisition of information and skills afforded in postsecondary education, accessibility has physical, cognitive, and psychological dimensions. Learning is a social act, an exchange of ideas, not just a one-way transaction. Although the training method can vary widely -- from an internship in a mechanic shop, to a lecture hall with 300 students, to an online training video -- the opportunity to *meaningfully engage with and respond* to information provided at a level that is equitable to one's peers is a foundational concept in learning that is needed to fully understand accessibility in learning environments. This expansion of our understanding of equitable access requires consideration not just of how deaf individuals receive information, but also how they exchange information with their peers. The next section of this paper explores the ways in which accessibility is also a pedagogical approach.

Discussions about access for deaf learners often neglect a rigorous analysis of the role of engagement in the learning environment. The *psychological* component of access is less apparent but significantly impacts whether a deaf individual persists through access challenges and receives the same level of training as their hearing peers. Accessible learning for deaf students goes beyond simply making auditory information visible. Effective learning environments include other important aspects of access, including how students use and relate to instructional content. The classroom is a complex, dynamic, and interactive space. Dialog about concepts, conversations with peers, hands-on examples, and student projects are a few examples of how students engage with information. Effective learning for students includes having the opportunity to share their ideas and experiences and connect to course material. The role of engagement in learning ecologies is a growing area of inquiry in educational psychology research, which in the last decade has moved toward understanding learning as a process, rather than a product. Classroom engagement is a challenging but important component of an accessible learning environment, above and beyond access to the literal access to information itself (Finnis, Howell, & Gorrie, 2014).

Dialogue between members of a learning environment requires open communication, both literally through accommodations that allow for two-way exchanges of information, but also in the attitudes and feelings of acceptance within the learning environment. The feeling of exclusion and frustration can be a powerful demotivator. For deaf individuals, opting out is often an understandable response to repeated experiences of negative attitudes from faculty and staff, low expectations for performance, stigma from one's peers when using accommodations, and generally the high burden of needing to self-advocate to obtain access. These frustrations all occur on top of the energy required for the learning experience itself. To be an accessible learning environment is thus more than a physical state and extends to the mindset and attitudes of the institution and its members.

A Proposed Expanded Conceptual Framework of Accessibility

These three foundational conceptualizations of access—through accommodations, through learning design, and through engagement-- have been instrumental in raising important questions about how we build equitable learning environments for diverse populations, yet they are not sufficient to ensure that deaf individuals, or individuals with disabilities more generally, have access to the networks, resources, and opportunities that are integral to how postsecondary education and training prepares students for future success. The following proposed model of accessibility expands the access construct to include six domains: (a) access services; (b) physical environment; (c) technology; (d) attitudes and biases; (e) information and communication, and (f) social capital. Further description of these domains and rationale for inclusion in this proposed framework is provided, below.

Domain 1. Access Services

Access services, or the system that provides accommodations, are one of the more visible indicators of access at an institution. For deaf students, visible indicators of access services may include interpreters or CART in the classroom, tutors, and dedicated advising hours. Beyond availability of resources, effective use of accommodations can depend on a variety of personal and institutional factors. For example, accommodations quality is often defined within the lens of the certification, skills, and experience of the access provider (e.g., interpreter or captionist) or the availability of technology (e.g., an FM system). Yet there are many elements to successful and high-quality services that are not as visible, such as departmental budgets for access, user-friendly request systems, service provider fit with learning environment, student feedback loops, and ways of evaluating the quality of service providers. The degree to which an institution considers these additional elements and establishes effective policies determines how successfully access services are implemented.

Domain 2. Physical Environment

ADA has been instrumental in providing access to the physical environment in ways that that can be seen in our everyday lives. Anyone with a bicycle, baby stroller, or shopping cart uses accessibility features such as ramps, automatic doors, and curb cuts to easily maneuver streets and building entrances. Yet the characteristics of the physical environment that affect deaf learners are not always as obvious to the untrained eye. These elements include sight lines in public venues, dorm rooms with accessible doorbells, and visual alarms and notification systems. Facilities with barriers can prevent the attendance of individuals with diverse and changing abilities (Afacan & Erbug, 2009; Hope, 2017). ADA, and certainly UDL, are still relatively recent in relation to construction of many postsecondary facilities.

For deaf individuals, creating a campus that is conducive to visual learning and living, utilizing elements of "deaf space," can be considered part of institutional accessibility. The DeafSpace project was created in 2005 and has developed guidelines over time for creating environments that allow for maximal use of visual information and, in some cases, include architectural elements that are rooted in Deaf cultural identity

(Edwards & Harold, 2014). The elements of DeafSpace consider how people move through space, the proximity of people and architectural features to each other, light, saturation of color, and acoustics. For example, a design using this approach would be mindful of the space needed for sign language users to communicate efficiently (Edwards & Harold, 2014). DeafSpace has the ability to potentially build upon UDL because it offers a wholistic approach to learning design, pushing it further into thinking about physical spaces that reflect how information is utilized by users of different language modalities.

Domain 3. Technology

Technology is an evolving and important mechanism for accessibility for deaf individuals in many learning environments, above and beyond the use of technology as assistive listening devices (e.g., hearing aids, cochlear implants, FM systems, and the like) (Buisson, 2007; Luetke, 2009; Slike et al., 2008). For example, technology allows for video remote interpreting and real-time captioning to be used in more settings, regardless of geographical location. Access to appropriate services and accommodations has historically been limited by proximity, such as in the case of reduced access to qualified interpreters in rural settings (Belcastro, 2004). Speech-to-text services will also be important as the number of students with cochlear implants, who may not be primary users of sign language, continues to increase (National Institute on Deafness and Other Communication Disorders, 2017). The advent of video remote services, as well as remote speech-to-text services, extend the current landscape of access services beyond those traditionally provided only face-to face. The degree to which technology is available and used to support learning may have an impact on the overall accessibility of an institution or campus.

Domain 4. Attitudes

Each campus or institution has its own culture which includes who is valued, where resources are allocated, and what kinds of expectations people have about each other and their potential for success. This ways in which attitudes relate to accessibility can be subtle--far less transparent than the availability of access services—but attitudes have a strong impact on the degree to which students have equal opportunities to capitalize on the resources of their certificate or degree program. For deaf individuals, negative attitudes from deaf and hearing individuals can serve as a barrier to academic and career success (Noonan, et al. 2004). Deaf individuals' beliefs about their capacity to succeed are shaped by parents, teachers and professionals (Cawthon et al., 2015; Crowe, McLeod, McKinnon, & Ching, 2015; Smith, 2013). Under an accommodations framework, deaf students may be very aware of when requests for accommodations are seen as a burden. In fact, "undue burden" is a critical aspect of ADA legislation. However, when accessibility is viewed through the lens of engagement, institutions instead place value on every student's full participation in the learning environment. On a more global level, positive attitudes about the equal rights of deaf students on campus and their contribution to the diversity and life of the community can be seen in the ways that students are accepted by their peers, encouraged by their faculty, and supported by institutional policies.

Domain 5. Information and Communication

Constructivist learning theories recognize that sharing information is at the core of how a learning environment supports and interacts with its students (originally forwarded by Vygotsky, 1962). In the hearing world, information and guidance is provided across many different domains, including direct instruction in the classroom, support in office hours or smaller settings, discussions with peers, "water cooler" conversations, study groups, and tutoring programs. While there is great value in the face-to-face direct instruction found in postsecondary education and training, information and insight gained from *incidental learning opportunities* is critical for academic success. Incidental learning opportunities describes knowledge drawn from natural occurrence –i.e., the give-and-take between members of the learning environment. For example, students may be chatting in the hallway about strategies for completing a difficult assignment, or faculty may have knowledge about internship placements that are publicly posted but shared during an office hour visit. Because accommodations are typically provided for the formal, but not informal learning opportunities, deaf individuals often lose out on those incidental learning opportunities, resulting in a reduced knowledge base compared with their hearing peers (Brackenbury et al., 2005; Lederberg et al., 2000; Hopper, 2011). This category therefore focuses on how information is shared with the student body, the extent to which communications outside of formal instructional contexts are accessible to all students, and the norms for communication across different institutional contexts.

Domain 6. Social Capital

Throughout this paper we discuss the accessibility of information as a critical component of an equitable learning environment for deaf individuals. Yet sharing information does not stand alone; it is critically embedded in relationships between people. Social capital is the sharing of values and norms, creating alliances, and making connections or places where resources can be exchanged (Bimper, 2016; Portes,

1988). Social capital can be shared between individuals at different levels of the educational system, such as a faculty member and a student in an advising meeting, or among colleagues, such as at a career networking event. Social capital building may occur at formal events, but more often this information is shared informally, in conjunction with but outside of structured settings. Social capital can help individuals solve problems, find hidden resources, build networks for postsecondary opportunities, and generally build a community of resilience and support.

For individuals from a minority group, being a part of a networked community can not only build towards opportunities, but also help cushion discrimination and provide strategies for navigating inaccessible settings (Campbell & Lavallee, 1993; Covell, 2006; Crocker & Major, 1989; Hintermair, 2008, Yosso, 2005). Scholarship on examining social capital development has also been paired with an exploration of critical race theory and the need to center our understanding of social capital networks on the experiences of marginalized populations with a specific examination of the role of race (Yosso, 2005). For deaf individuals, strengthening community connections contributes significantly to psychosocial well-being (Bat-Chava, 1993; Hintermair, 2008; Jambor & Elliot, 2005; Listman, Rogers, & Hauser, 2011) and persistence toward degree completion (Danermark, 1995; Stinson et al., 1987). Deaf role models and mentors of the same cultural or ethnic background can build upon this by providing guidance and support for language, communication, social, and career development skills within work and academic environments (Cawthon, Johnson, Garberoglio, & Schoffstall, 2016; Hauser, 2017; Koberg, Boss, & Goodman, 1998; Ragins, 2010). Making social capital building opportunities accessible to deaf individuals, from both hearing and deaf mentors, are a crucial part of how we conceptualize campus accessibility as a whole.

Methods

Measure Development

The accessibility survey (Project Open Doors) was developed through a continual process, which included various stages of refinement and ongoing pilot data collection. Our first step in pursuit of equitable postsecondary attainment for deaf individuals consisted of a targeted literature review to identify the root causes of education, employment, and quality of life outcome disparities. Utilizing an upstream approach allowed us to devise strategies that are not limited to the symptoms, but instead target underlying mechanisms and systemic structures. The root cause analysis identified five key impact areas that address the root causes of challenges to deaf individuals' postsecondary attainment. These areas include: designing accessible environments, promoting high expectations for success, collecting and using data for decision making, leveraging community resources, and developing collaborative and integrated systems. A general review of the literature was conducted in order to analyze and borrow content from other validated measures of access currently being used in the field, categorize various themes, and identify areas that could be pertinent but missing. Along with the three foundational conceptualizations of access—accommodations, learning design, and engagement, one important finding from the literature indicated a shift in focus to include other essential factors of accessibility, such as relationships between individuals and the impact of deaf role models. The proposed questions in the current survey attempt to expand the construct of access by integrating new areas discussed in studies (i.e., social capital).

Cognitive labs with students who are currently at a university and have previous experience asking for accommodations were conducted. The goal was to walk through the draft survey items and determine whether these specifically targeted post secondary deaf individuals experiences and if respondents explicitly understood the content. Cognitive lab participants were shown the items and asked (1) What do you think this item is asking? (2) How would you answer this item? (3) Are the items clear? (4) Are we missing anything? Open discussion was encouraged and items were revised based on feedback. All cognitive lab interviews were video recorded with participants consent. Additionally, staff from the National Deaf Center on Postsecondary Outcomes at the University of Texas at Austin, and other experts in the field were asked for feedback as well. This allowed us to identify problems with item wording before survey distribution. After incorporating various feedback, the revised survey includes 38 items focused on one of the six categories discussed above. Another area of discussion included the description of scale options. Initially, respondents were asked to answer the questions based on a scale that ranged from completely agree to completely disagree. However, during the measure translation process to American Sign Language, it was brought to our attention using language that included how likely instead of a binary choice (i.e., agree/disagree) would be a more valuable representation. Therefore, the questions are based off a four-level Likert Scale ("Not Likely," "Somewhat Likely," "Likely," "Extremely Likely"). One example is, "How likely are you to see deaf faculty on your campus?".

Participants

This study consisted of a self-report online survey from deaf

students about the accessibility of their postsecondary education environments. Participants were undergraduate students from multiple institutions across the United States large, federally funded center focused on providing technical assistance to both deaf individuals and institutions across the country. Data for the measure validation was collected from 234 deaf students currently attending small, medium, and large institutions across thirty-nine states. Eligibility requirements included: 18 years of age or older (b) currently enrolled in a postsecondary education or training program (c) identified as deaf (inclusively defined). Majority of the sample identified as female (74%) and were between the ages of 19-29 (61%). Additionally, 60% of participants were White, and 54% reported their preferred language as ASL for classroom lectures.

Data in this paper were collected for CFA purposes and measure validation; the data collection for the overall project is ongoing. Initial drafts of the survey were piloted both online and in focus groups with deaf youth. A final version of the survey was sent out via social media channels with ongoing recruitment starting in fall 2018. Students were able to take the survey via Qualtrics either in English or in American Sign Language. The survey is included in appendix A.

Statistical Analysis

We used second-order confirmatory factor analysis (Rindskopf & Rose 1988) for binary indicators to model the data. CFA is appropriate because it offers specific hypothesis testing for a theory that includes a strong rationale concerning which factors should be in the data and which variables explain each factor (Henson & Roberts, 2006). Multiple researchers encourage that the determination of model-data fit should be based on multiple fit indices (Fan, Thompson, & Wang, 1999; Schumacker & Lomax, 1996). Each survey item loaded onto a latent factor corresponding to the appropriate the accessibility aspect (as listed above), and those six latent factors loaded onto a general factor. Residual correlations between survey items and between latent factors were all assumed to be zero. The model was fit using Mplus version 7.4 (Muthen & Muthen, 2015), using the "Weighted Least Square Mean and VarianceAdjusted Estimator" (WLSMV) and results were analyzed in R, via the MplusAutomation package (R Core Team, 2018; Hallquist & Wiley, 2018).

The factor analysis model was fit to survey responses to 38 questions about six different aspects of campus accessibility described above. For the purpose of the CFA, we excluded data from 24 students who reported attending one of the "big 3" universities, i.e., Gallaudet University, Rochester Institute of Technology, and California State University, Northridge, leaving a total sample size of 234. Survey questions were on a four-level Likert scale ("Not Likely," "Somewhat Likely," "Likely," "Extremely Likely"). For the CFA analysis, we dichotomized responses, so that a zero corresponds to a response of "Not Likely" or "Somewhat Likely" and a 1 corresponds to "Likely" or "Extremely Likely".

Results

Model fit measures indicated good, if not perfect, fit: $\chi^2_{659} = 804$ ($p<0.001$); RMSEA=0.031 (90% CI: 0.022-0.038); CFI = 0.974. Every survey item loaded substantially and significantly onto its appropriate accessibility construct, suggesting that the items all relate appropriately to the underlying constructs of interest. Loadings for survey items on the factors representing aspects of accessibility ranged from 0.53 to 1.41, and the corresponding p-values were all less than 0.001.

The latent factors representing the six aspects of accessibility measured by the survey all loaded significantly onto the general factor, suggesting that each modeled aspect identifies an independent dimension of overall accessibility. These loadings are displayed in Table 1. Differences among the six loadings in Table 1 are not statistically significant; that is, there is no evidence at the $\alpha = 0.05$ level that any of the six factors contributes more or less than the others to overall accessibility.

Table 1. *Latent Factor Loading*

Factor	Loading	SE	*p*-value
Technology	1.000		
Attitudes	1.358	0.177	0
Communication	1.298	0.187	0
Physical	1.337	0.190	0
Access Service	0.988	0.174	0
Social Capital	1.517	0.199	0

Discussion

Just as siloed services are inefficient and often ineffective in achieving equitable learning experiences for deaf students, and students with disabilities as a whole, so are siloed frameworks for what accessibility means and how to improve it at the postsecondary level. The ADA and UDL approaches to accessibility help establish a research framework for

defining access and shared responsibility. The proposed conceptual framework for accessibility in this paper has six domains that cut across both formal and informal interactions within a campus or institutional setting. Below we provide an acronym to represent the six dimensions of ACCESS in an easy-to-remember fashion, definitions of each construct, and offer some example strategies for implementation. While actions and behaviors of these domains of accessibility may not always be directly observable, the developed measure provides possible indicators that align with this overall framework. [Much of the following content is adapted from Palmer, Cawthon, Garberoglio, and Ivanko (2019) report at the National Deaf Center on Postsecondary Outcomes on how to apply these concepts in the field.]

Attitudes: A campus climate that welcomes and integrates deaf students in all aspects of campus life.

- Provide faculty members, staff members, and students with ongoing training and information about engaging, interacting, and partnering with deaf students.
- Establish inclusive classroom communication protocols with students to facilitate meaningful interactions and learning opportunities.
- Seek opportunities to include deaf role models on campus; consider partnering with campus clubs and organizations to bring deaf presenters to campus.

Campus Technology: Flexible technologies that are readily available in all campus settings—from classrooms to locker rooms—for deaf students to fully access and experience the college environment.

- Provide faculty members, staff members, and students with ongoing training and information about engaging, interacting, and partnering with deaf students.
- Establish inclusive classroom communication protocols with students to facilitate meaningful interactions and learning opportunities.
- Seek opportunities to include deaf role models on campus; consider partnering with campus clubs and organizations to bring deaf presenters to campus.

Communications: Efficient and effective communication and information delivery that allows deaf students to maximize formal and informal learning opportunities.

- Ensure that important campus announcements are accessible. Consider using multiple systems for communicating campus announcements.
- Include with all communications standard language on how to request accommodations for campus activities and related programming.
- Proactively plan for and grant requests for accommodations for academic and social activities occurring outside the classroom setting.

Environment: Accessible physical and online spaces that accommodate and adapt to a wide variety of deaf student experiences.

- Consider integrating both visual and auditory systems within the architectural and physical surroundings of buildings and classrooms (e.g., visual fire alarms, loop systems in auditoriums, televisions with captions).
- Establish working groups to address the accessibility of information across campus platforms, including emergency communications and audio-visual displays.
- Encourage flexible classroom setups that allow students to maximize visual and auditory access to content, peers, and auxiliary aids.

Services: Comprehensive accommodations for deaf students that are readily available, reliably provided, individually customized, and monitored for quality and success.

- Outline expectations and responsibilities for students, faculty members, and access providers related to effective implementation of accommodations.
- Establish protocols for collecting regular feedback from students regarding accommodations and auxiliary services; conduct periodic evaluations of services for quality and effectiveness.
- Create and implement institution-wide accessibility policies and practices.
- Collaborate across departments to arrange and pay for services; foster a community responsibility for inclusion.
- Offer, introduce, and train students to use a range of accommodations to maximize experiences and learning across campus.

Social Engagement: The complete immersion in a campus experience that seamlessly includes deaf students in all events and opportunities to socialize, network, and connect.

- Encourage deaf student participation in campus-wide leadership, clubs, and related activities to infuse the values, experiences, and perspectives of deaf students on campus.
- In student life and residence life offices, increase knowledge about how to request accommodations; shift responsibility for accessibility from deaf students to event planners.
- Encourage networking opportunities, like internships, teaching assistant positions, job shadowing, or mentoring, that will strengthen relationships among faculty members, students, and the larger college community.

Successful implementation in each of these six domains requires that all members of the system become accountable for facilitating an accessible and equitable educational environment by increasing knowledge and committing to

shared goals. While systems change requires the investment and participation of all its members, the call here is for institutions to consider the domains in this framework in examining their own systems and the extent to which accessibility can be improved in their programs and campuses. Most people on a college campus do not realize how they contribute to access barriers and do not know how that can be changed. We recommend that campus leaders seek opportunities to communicate with students, faculty members, and administrators about what the institution is doing well and where improvements are needed.

The data from measures such as this one can be used to consider how to make policies and services more inclusive to all deaf students. It is critical for institutions to understand the demographics of the deaf population that they serve when considering the accessibility domains measured here. Improving support for a broad range of deaf students is an important first step toward ensuring educational equity. For example, in data collected using this measure (Palmer et al, 2019), many students preferred to use sign language over spoken language in all contexts, especially for receiving information. Among students who used spoken language, more of them preferred using spoken languages for sharing information, or speaking for themselves, than for receiving information. Deaf students who prefer to speak for themselves may distrust service providers to relay their ideas accurately. Furthermore, students reported that they were more comfortable receiving information through spoken language in one-on-one settings than in classes. These findings reinforce the notion that accommodations need to be dynamic instead of fixed and unchanging. Just as deaf students adjust their communication strategies across settings, they also adjust their requests for accommodations.

This work is only a starting point for what are more complex and broader conversations regarding educational equity for deaf students. The results of years of oppression due to audism and ableism have led to this need for attention to accessibility for deaf students (Listman, et al., 2011); yet for many deaf students who are also people of color, racism has also had a significant impact on their support and belonging at postsecondary institutions (Stapleton, 2017). The majority of deaf students in the sample for this measure identified as white, and at a higher rate than is found in the overall deaf college student population. Issues of intersectionality (Crenshaw, 1989), as well as overlapping and compounding impacts of both audism and racism for deaf students, is a factor that this measure does not explicitly address. While this measure centers accessibility on the experiences of deaf students, there is further work to be done to amplify the experiences of deaf students of color. This is an area for further conceptualization of the construct of accessibility, research on student perspectives, measure development, and policy implementation.

Conclusion

Deaf students pursue a college education at a comparable rate to their hearing peers (Newman et al., 2011). Yet they are unable to maximize the collegiate experience because institutions are not prepared to provide equitable access to the full range of programs and services available. The extent to which students are able to start off on the right foot, stay on track, and successfully complete college can be attributed to a combination of institutional and individual readiness (Cawthon et al., 2014). Many institutions uphold their legal responsibilities for providing accommodations, yet they often only satisfy minimum requirements without thinking about students' overall learning experience.

Deaf students pursue a college education at a comparable rate to their hearing peers (Newman et al., 2011). Yet they are unable to maximize the collegiate experience because institutions are not prepared to provide equitable access to the full range of programs and services available. The extent to which students are able to start off on the right foot, stay on track, and successfully complete college can be attributed to a combination of institutional and individual readiness (Cawthon et al., 2014). Many institutions uphold their legal responsibilities for providing accommodations, yet they often only satisfy minimum requirements without thinking about students' overall learning experience.

Disability service offices and personnel are often the gatekeepers of engagement for deaf students. Decisions made in this office can create barriers or open doors on campus. Many decisions about accommodations are made uniformly without a consideration of the individual needs of deaf students across contexts. This is problematic because what works for one deaf student does not necessarily work for all deaf students. Flexibility in both policy and practice is essential. The diverse experiences of deaf students require disability service professionals to have sufficient knowledge and training to efficiently implement access services that are adaptive and flexible.

Institutions can use the factors identified in the current study and measure to design accessible and equitable opportunities for deaf students and to foster an inclusive setting for all students to thrive. Access is more than an accommodation or an afterthought; it's a multidimensional framework that is woven throughout an institution. Access manifests in the actions, attitudes, and behaviors of leadership, faculty members, staff members, and students on campus. The domains described above are instrumental in designing

accessible opportunities and inviting deaf students into the college community. In the end, many of the challenges and promises of accessibility are navigated and capitalized upon in communications between individuals and small groups of people. Strategies for students (e.g., how to approach the disclosure process) may look very different than strategies for faculty and staff (e.g., captioning media materials on campus). The goal of universal equitable access for all students, and the foundational belief that all students need to be granted credentials and degrees with all the rights, privileges and responsibilities appertaining thereto requires a coordinated effort and participation from members across the system.

References

Afacan, Y., & Erbug, C. (2009). An interdisciplinary heuristic evaluation method for universal building design. *Applied Ergonomics, 40*(4), 731-744.

Antia, S. D., Stinson, M. S., & Gaustad, M. G. (2002). Developing membership in the education of deaf and hard-of-hearing students in inclusive settings. *Journal of Deaf Studies and Deaf Education, 7*(3), 214-229. doi:10.1093/deafed/7.3.214

Bat-Chava, Y. (1993). Antecedents of self-esteem in deaf people: A meta-analytic review. *Rehabilitation Psychology, 38*(4), 221

Buisson, G. (2007). Using online glossing lessons for accelerated instruction in ASL for preservice deaf education majors. *American Annals of the Deaf, 152*(3), 331–343.

Campbell, J. D., & Lavallee, L. F. (1993). Who am I? The role of self-concept confusion in understanding the behavior of people with low self-esteem. In R. Baumeister (Ed.), *Self esteem: The puzzle of low self-regard* (pp. 3–20). New York, NY: Plenum Press.

Cawthon, S. (2017, March). Online learning and deaf students: Accessible by design. Presentation to the 2nd International Conference on Teaching Deaf Learners, Amsterdam, NL.

Cawthon, S. W., Caemmerer, J. M., Dickson, D. M., Ocuto, O. L., Ge, J., & Bond, M. P. (2015). Social skills as a predictor of postsecondary outcomes for individuals who are deaf. *Applied Developmental Science, 19*(1), 19–30. doi:10.1080/10888691.2014.948157

Cawthon, S. W., Johnson, P. M., Garberoglio, C. L., & Schoffstall, S. J. (2016). Role models as facilitators of social capital for deaf individuals: A research synthesis. *American Annals of the Deaf, 161*(2), 115–127.

Cawthon, S. W., & Leppo, R. (2013). Accommodations quality for students who are d/Deaf or hard of hearing. *American Annals of the Deaf, 158*(4), 438-452.

Cawthon, S., Schoffstall, S., & Garberoglio, C. L. (2014). How ready are postsecondary institutions for students who are d/Deaf or hard-of-hearing? *Educational Policy Analysis Archives, 22*(13), 1–25. doi:10.14507/epaa.v22n13.2014

Chupina, K. (2011). Constraints in access to assistive technologies-and communication-for hard-of-hearing people in the Russian Federation and in Germany. *Disability Studies Quarterly, 31*(4).

Covell, J. A. (2007). The learning styles of deaf and non-deaf pre-service teachers in deaf education. *Dissertation Abstracts International Section A, 68,* 1414.

Crocker, J., & Major, B. (1989). Social stigma and self-esteem: *The self-protective properties of stigma. Psychological Review, 96*(4), 608–630.

Crowe, K., McLeod, S., McKinnon, D., & Ching, T. (2015). Attitudes toward the capabilities of deaf and hard of hearing adults: Insights from the parents of deaf and hard of hearing children. *American Annals of the Deaf, 160*(1), 24–35. doi:10.1353/aad.2012.1602

Crenshaw, K. (1989) "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics," University of Chicago Legal Forum: Vol. 1989: Iss. 1, Article 8. Available at: http://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8

Deluca, D., Leigh, I. W., Lindgren, K. A., & Napoli, D. J. (Eds.). (2008). *Access: Multiple avenues for deaf people.* Washington, DC: Gallaudet University Press.

Dutta, A., Kundu, M. M., Johnson, E., Chan, F., Trainor, A., Blake, R., & Christy, R. (2016). Community conversations: Engaging stakeholders to improve employment-related transition services for youth with emotional and behavioral disabilities. *Journal of Vocational Rehabilitation, 45*(1), 43–51.

Edwards, C., & Harold, G. (2014). DeafSpace and the principles of universal design. *Disability And Rehabilitation: An International, Multidisciplinary Journal, 36*(16), 1350-1359. doi:10.3109/09638288.2014.913710

Fan, X., Thompson, B., & Wang, L. (1999). Effects of sample size, estimation methods, and model specification on structural equation modeling fit indexes. *Structural Equation Modeling, 6*(1), 56-83.

Foster, S., & MacLeod, J. (2004). The role of mentoring relationships in the career development of successful deaf persons. *Journal Of Deaf Studies And Deaf Education, 9*(4), 442-458. doi:10.1093/deafed/enh053

Hallquist, M. N. & Wiley, J. F. (2018). MplusAutomation: An R Package for Facilitating Large-Scale Latent Variable Analyses in Mplus Structural Equation Modeling, 1-18. doi: 10.1080/10705511.2017.1402334.

Hauser, P. (2017, April). Mentoring aspiring scientists. Symposium in Research and Child Development Pre-Conference Workshop. Austin, TX.

Henson, R. K., & Roberts, J. K. (2006). Use of exploratory factor analysis in published research: Common errors and some comment on improved practice. *Educational & Psychological Measurement, 66*(3), 393-416.

Hintermair, M. (2008). Self-esteem and satisfaction with life of deaf and hard-of-hearing people—A resource-oriented approach to identity work. *Journal of Deaf Studies and Deaf Education, 13*(2), 278–300.

Hope, J. (2017). Consider needs of deaf people in space design. *Disability Compliance for Higher Education, 22*(6), 9. doi:10.1002/dhe.3026

Hopper, M. (2011). *Positioned as bystanders: deaf students' experiences and perceptions of informal learning phenomena.* Doctoral Dissertation at the University of Rochester, NY. http://hdl.handle.net/1802/14798

Jambor, E., & Elliot M. (2005). Self-esteem and coping strategies among deaf students. *Journal of Deaf Studies and Deaf Education, 10*, 63–81.

Jamieson, J. R., Zaidman-Zait, A., & Poon, B. (2011). Family support needs as perceived by parents of preadolescents and adolescents who are deaf or hard of hearing. *Deafness & Education International, 13*(3), 110–130.

Listman, J., Rogers, K., & Hauser, P. (2011). Community Cultural Wealth and Deaf Adolescents' Resilience. 10.1007/978-1-4419-7796-0_11.

Kelly, R. R. (2015). The employment and career growth of deaf and hard-of-hearing individuals. Rochester, NY: REACH Center for Studies on Career Success, National Technical Institute for the Deaf, Rochester Institute of Technology. Retrieved from: http://www.raisingandeducatingdeafchildren.org/2015/01/12/the-employment-and-career-growth-ofdeaf-and-hard-of-hearing-individuals/

Koberg, C. S., Boss, R. W., & Goodman, E. (1998). Factors and outcomes associated with Mentoring among health-care professionals. *Journal of Vocational Behavior, 53*(1), 58–72.

Lederberg, A. R., Prezbindowski, A. K., & Spencer, P. E. (2000). Word-learning skills of deaf preschoolers: The development of novel mapping and rapid word-learning strategies. *Child development, 71*(6), 1571-1585.

Long, G. L., & Beil, D. H. (2005). The Importance of Direct Communication during Continuing Education Workshops for Deaf and Hard-of-Hearing Professionals. *Journal of Postsecondary Education and Disability, 18*(1), 5-11.

Luekte, B. (2009). Evaluating deaf education Web-based course work. *American Annals of the Deaf, 154*(1), 62–70.

Luft, P. (2016). What Is different about deaf education? The effects of child and family factors on educational services. *The Journal of Special Education, 51*(1), 27–37.

Luft, P. (2012). Employment and independent living skills of public school high school deaf students: Analyses of the transition competence battery response patterns. *Journal of the American Deafness and Rehabilitation Association, 45*(3), 292–313.

Maiorana-Basas, M., & Pagliaro C. M. (2014). Technology Use Among Adults Who Are Deaf and Hard of Hearing: A National Survey. *The Journal of Deaf Studies and Deaf Education, 19*(3), 400–410. https://doi.org/10.1093/deafed/enu005

Marschark, M., Lang, H. G., & Albertini, J. A. (2002). *Educating deaf students: From research to practice.* Oxford: Oxford University Press.

Marschark, M., Leigh, G., Sapere, P., Burnham, D., Convertino, C., Stinson, M., & Noble, W. (2006). Benefits of sign language interpreting and text alternatives for deaf students' classroom learning. *Journal of Deaf Studies and Deaf Education, 11*(4), 421–437.

Mitchell, R. E. (2017). Demographics. In G. Gertz & P. Boudreault (Eds.), *The SAGE deaf studies encyclopedia* (pp. 296–298). Thousand Oaks, CA: SAGE.

Morrow, S., Gonzalez, A., Hampton, T., & Lantz, A. (2015). Working with ODEP to create systems change: The story of two protégé states. *Journal of Vocational Rehabilitation, 42*(3), 195–200.

Muthen, L.K. and Muthen, B.O. (1998-2017). Mplus User's Guide. Eighth Edition. Los Angeles, CA: Muthen & Muthen

National Deaf Center on Postsecondary Outcomes. (2017). Research summarized! Developing collaborative and integrated systems. Washington, DC: U.S. Department of Education, Office of Special Education Programs, National Deaf Center on Postsecondary Outcomes. Retrieved from www.nationaldeafcenter.org

National Institute on Deafness and Other Communication Disorders (2107). Cochlear Implants. https://www.nidcd.nih.gov/health/cochlear-implants

Newman, L., Wagner, M., Knokey, A.-M., Marder, C., Nagle, K., Shaver, D., & Schwarting, M. (2011). The post-high school outcomes of young adults with disabilities up to 8 years after high school: A report from the National Longitudinal Transition Study-2 (NLTS2) (NCSER 2011–3005). Menlo Park, CA.

Noonan, B. M., Gallor, S. M., Hensler-McGinnis, N. F., Fassinger, R. E., Wang, S., & Goodman, J. (2004). Challenge and success: A Qualitative study of the career development of highly achieving women with physical and sensory disabilities. *Journal of Counseling Psychology, 51*(1), 68

Palmer, J. L., Cawthon, S. W., Garberoglio, C. L., & Ivanko, T. (2019). *ACCESS is more than accommodations: 2018–2019 deaf college student national accessibility report.* National Deaf Center on Postsecondary Outcomes, The University of Texas at Austin.

Portes, A (1998). Social capital: its origins and applications in modern sociology. *Annual Review of Sociology, 24*, 1–24. doi:10.1146/annurev.soc.24.1.1

Ragins, B. R. (2010). Relational mentoring: A positive approach to mentoring at work. In K. Cameron & G. Spreitzer (Eds.), *The handbook of positive organizational scholarship* (pp.519–536). New York, NY: Oxford University Press.

R Core Team (2018). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

Rindskopf, D., & Rose, T. (1988). Some theory and applications of confirmatory secondorder factor analysis. *Multivariate behavioral research, 23*(1), 51-67.

Rodgers, K. D., & Young, A. M. (2011). Being a deaf role model: Deaf people's experience of working with families. *Deafness and Education International, 13*(1), 2–16.

Rose, D. H., Harbour, W. S., Johnston, C. S., Daley, S. G., & Abarbanell, L. (2006). Universal design for learning in postsecondary education: Reflections on principles and their application. *Journal of Postsecondary Education and Disability, 19*(2), 135–151.

Schick, B., Williams, K., & Kupermintz, H. (2006). Look who's being left behind: Educational interpreters and access to education for deaf and hard-of-hearing students. *Journal of Deaf Studies and Deaf Education, 11*(1), 3-20. doi:10.1093/deafed/enj00

Schumacker, R. E., & Lomax, R. G. (1996). *A beginner's guide to structural equation modeling.* Mahwah, NJ: Lawrence Erlbaum Associates.

Shogren, K. A., Lopez, S. J., Wehmeyer, M. L., Little, T. D., & Pressgrove, C. L. (2006). The role of positive psychology constructs in predicting life satisfaction in adolescents with and without cognitive disabilities: An exploratory study. *The Journal of Positive Psychology, 1*(1), 37–52.

Slike, S. B., & Berman, P. D. (2008). Integrating multiple media sources to teach synchronous online courses to learners who are deaf or hard of hearing. *Journal of Instruction Delivery Systems, 22*(3), 10–13.

Smith, D. H. (2013). Deaf adults: Retrospective narratives of school experiences and teacher expectations. *Disability & Society, 28*(5), 674–686. doi:10.1080/09687599.2012.732537

Stapleton, L. D. (2017). Audism and Racism: The Hidden Curriculum Impacting Black d/Deaf College Students in the Classroom. *Negro Educational Review*, Vol. 67 Issue 1-4, p149-168. 20p.

Stinson, M. S. (2010). Current and future technologies in the education of deaf students. In M. Marschark & P. E. Spencer (Eds.), The Oxford handbook of deaf studies, language, and education (Vol. 2, pp. 93-100). New York: Oxford University Press.

Vygotsky, L. S. (1962). *Thought and language*. Cambridge, MA: MIT Press.

Wehmeyer, M. L., Shogren, K. A., Palmer, S. B., Williams-Diehm, K. L., Little, T. D., & Boulton, A.(2012). The impact of the self-determined learning model of instruction on student self-determination. *Exceptional Children, 78*(2), 135–153.

Yosso, T. J. (2005) Whose culture has capital? A critical race theory discussion of community cultural wealth, *Race Ethnicity and Education*, 8:1, 69-91, DOI: 10.1080/1361332052000341006

Appendix A

Accessibility Survey Questions

(1 = “Not Likely,” 2 = “Somewhat Likely,” 3 = “Likely,” 4 = “Extremely Likely”)
1. Online course materials are likely to be accessible to me.
2. Videos my classmates share are likely to have captions.
3. Faculty use technology-based live polls during class to encourage classroom participation.
4. Images descriptions are likely to be available if I need them.
5. Faculty are likely to support individual differences and diverse perspectives in the classroom.
6. Faculty are likely to work with me towards solving access challenges (e.g., assignment format, classroom activities, room arrangement).
7. I am likely to feel welcome engaging in conversations with faculty.
8. I am likely to feel welcome engaging in conversations with classmates.
9. Classmates are likely to support individual differences and diverse perspectives in the classroom.
10. Classmates are likely to work with me towards solving access challenges (e.g., small-group discussions, group projects).
11. Faculty are likely to give me enough time to process information in class.
12. Faculty are likely to provide slides or notes ahead of time.
13. Faculty are likely to make an effort to communicate with me (e.g., make direct eye contact, wait for the interpreter to finish, write notes back-and-forth).
14. Faculty are likely to adapt their teaching strategies to accommodate my communication preferences.
15. Faculty are likely to engage in discussion of class content via email.
16. Faculty are likely to supplement lectures with slides and/or handouts.
17. Videos that are display around campus are likely to have captions.
18. Safety and emergency announcements are likely to be accessible to me.
19. Classrooms are likely to be free of excess distracting noise (e.g., loud fans, echoes)
20. Campus housing is likely to have accessibility features such as flashing light doorbells.
21. Campus fire alarms are likely to be accessible to me.
22. Classroom lighting is likely to be appropriate so I can easily see my instructor or interpreter.
23. The Disability Service Office is likely to consider my communication preferences when providing services.
24. What is the most difficult thing about being a student at your institution?
25. I am likely to be provided with consistent access providers (e.g., speech-to-text, interpreters).
26. The Disability Service Office is likely to provide dual-accommodations such as interpreters and in class speech-to-text providers.
27. The Disability Service Office is likely to collect formal feedback from me about my service providers.
28. The Disability Service Office is likely to respond to my requests in a timely manner.
29. The Disability Service Office is likely to have a clear policy about what to do if I cannot make it to class.
30. My school is likely to provide accessible opportunities for networking.
31. My school is likely to host deaf-related events on campus.
32. I am likely to see a deaf faculty member on campus.
33. I am likely to have opportunities to connect with role models.
34. I am likely to have a deaf peer I can talk to that is supportive.
35. I am likely to become friends with my classmates.
36. I am likely to call campus home.
37. I am likely to participate in campus student activities.
38. I am likely to ask for help from my friends.
39. I am likely to ask for help from resources or offices on campus.

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Internet Addiction, Identity Distress, and Depression among Male Adolescents Transitioning to Young Adults: A Qualitative Study

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This qualitative paper focuses on exploring the relationship of three concepts—internet addiction, identity distress, and depression—as seen in male adolescents and young adults afflicted with internet use disorder. It includes in-depth interviews with eight participants. Recordings of the interviews were transcribed; themes and subthemes were identified and organized. The findings reveal two theories, indicating different sequences among the three concepts. One theory posits that participants initially encountered identity distress and subsequently experienced depression, prompting them to self-medicate with internet activities and gaming. The second theory suggests that the participants developed internet addiction first, and as a result, they lost the abilities and aspirations to pursue their life goals, and therefore suffered identity distress followed by depression. To effectively treat male adolescents and young adults afflicted with internet addiction, clinicians must possess knowledge and skills related to age-specific development, mental health, and addiction. Implications are discussed.

Keywords: adolescent and young adult males, depression, identity distress, internet addiction

In the past decades, internet technology has become accessible in many regions in the world, and the negative consequences of its excessive use or addiction by some individuals have led to serious public health issues globally (Darvesh et al., 2020; Kuss, Griffiths, Karila, & Billieux, 2014). Adolescents are particularly at risk for negative consequences as they are more susceptible to various mental health issues owing to the neuro-developmental plasticity in their stage of adolescence (Cerniglia et al., 2017). The rates and amount of time of adolescents' gaming engagement have increased in past decades, especially for males (Brand, Todhuntere, & Jervis, 2017; Rideout, Foehr, & Roberts, 2010). Although some Asian countries appear to have high internet addiction prevalence and have attracted attention in this regard, other regions of the world have also been experiencing this phenomenon. For example, Darvesh and colleagues' (2020) scoping reviews indicate that among the general population, internet gaming disorder prevalence range was 0.21-33.33% for the European region, 0.25-38.90% for the region of the Americas, and 1.20-57.50% for the Western Pacific region.

Tang and colleagues (2018) compared US college students with Asian college students and found that overall, although the Asian college students have a higher prevalence in the areas of "internet addiction" (13.8% for China, 12.9% for Japan, compared to 8.0% for the US) and "online social networking addiction" (44.9% for China, 34.3% for Japan, and 25.4% for the US), the US college students have a higher prevalence in "online gaming addiction" (24.8% for the US compared to 20.4% for China and 14.6% for Japan). Some earlier studies showed lower internet addiction prevalence rates (4% - 6%) among the US college students (e.g., Christakis, et al., 2011; Yates et al., 2012). This could be attributable to the time-trend factor in that more recent prevalence studies may show a higher rate because of the wider internet accessibility and more addictive gaming options availability to more individuals. However, we should interpret internet addiction prevalence rates with caution as factors such as the various operational definitions and measurement tools for the variable of "internet addiction," different cut-off points, and diverse sampling methods may interfere with the outcomes, and scholars have long advocated for a standardized

definition and measurement tool for internet addiction research (Darvesh et al., 2020; Kuss et al., 2014). Regardless, the field has seen more adolescents and young adults who have dropped out of college because of their uncontrollable online gaming and who sought treatment either of their own accord or because of their parents' ultimatum. Using the data from the 2017 American College Health Association—National College Health Assessment (N=43,003 undergraduates), Stevens and colleagues (2020) found that 10 percent of the students reported that they experienced problematic internet use or internet gaming problems and that their academic performance has suffered because of it.

Although the World Health Organization included gaming disorder as a formal diagnosis in its 11th revision of the International Classification of Diseases (ICD-11), the inclusion has raised many debates (van Rooij, Ferguson, Carras, Kardefelt-Winther, Shi, & Aarseth, et al. 2018). The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) states that "the seemingly high prevalence rates, both in Asian countries and, to a lesser extent, in the West, justified inclusion of this disorder in Section III of DSM-5" (American Psychiatric Association [APA], 2013, p. 796). The reason *DSM-5* includes Internet Gaming Disorder only under "Conditions for Further Study" in Section III is because they felt the field still has insufficient knowledge about this disorder and that "an understanding of the natural histories of cases [afflicted with internet addiction], with or without treatment, is still missing" (APA, 2013, p. 796). Regardless of whether internet gaming problems should be categorized as a formal diagnosis or not, it is a fact that more and more individuals, especially adolescents and young adults, require professional help to combat this problematic behavior. This paper, therefore, attempts to shed some new light on: (1) the issue of whether internet gaming can become addictive to a person; (2) how internet gaming affects an adolescent/young adult, from a developmental perspective, and how clinicians can better help this client population.

Method

Although we have seen many quantitative studies investigating the topic of internet gaming behavior and disorder, so far only limited research explores the qualitative nature of the formation, or the course, of such a disorder. Many researchers have advocated for more in-depth qualitative studies on internet addiction (e.g., Kuss et al., 2013). The data in this paper are from part of a larger qualitative research project that delves into the natural history of the course and formation of internet gaming/activities disorder. The project was approved by the university institutional review board and was was implemented at a treatment program in a northwestern state in the US. In-depth interviews were conducted, each lasting about two-and-a-half hours. All interviews were audiotaped with participants' permission and informed consent. The project was funded by the University Faculty Opportunity Award and each participant was compensated with 30 dollars for their time.

A natural history of a disease timeline follows the sequence of the stage of susceptibility, exposure, pathologic changes, onset of symptoms, usual time of diagnosis, stage of clinical disease, and stage of recovery, disability, or death (Centers for Disease Control and Prevention, 2012). In addition to the background of the participants, such as their age, gender, race/ethnicity, and mental disorder diagnoses other than internet addiction, four guiding questions led the interviews: (1) their life stories: in what way internet addiction has entered and manifested in their lives; (2) the clinical courses of internet addiction as experienced by them; (3) factors that led them to seek treatment and their experiences of the treatment and the recovery journey; and (4) other related areas. The four guiding questions were supplemented with follow-up questions probing further critical elements initially shared by participants.

The audiotapes were transcribed verbatim and reviewed regarding the overall contents. Each interview transcript was again read in detail, and units or themes that connote meaning were identified and coded. Commonalities and differences within each transcript and among the different transcripts were sought and organized. Trends of theories were developed through the process of linking various relevant identified themes or variables, as well as of reconciling and justifying the relationships among them. This current paper is based on the narratives of eight participants who dropped out of college because of uncontrollable internet gaming and other activities.

Results

Brief Description of Respondents

All eight participants were males who were attending a technology addiction treatment program at the time of the interviews.[1] The mean age was 24 years (SD=3.30; Range=20-30). The ethnic/racial background included one African American, three Asian Americans, and four Whites. All participants were college dropouts. The treatment fees for all participants were self-paid by their parents. They had engaged in a variety of online activities, including multi-player and single-player games, videos, YouTube, Reddit, Netflix, various discussion forums, chatroom role-playing, animated character communities, and pornography.

[1] Note: To safeguard confidentiality, some background information that might have identified participants has been altered.

Three Elements Identified and Two Theories Emerged See Figure 1

We identified three elements (all capitalized and bolded in Figure 1) common to all eight participants, and from these, two theories. The three elements are: (a) *Internet addiction:* All participants consider themselves addicted to online activities, mainly gaming, but also a combination of porn, chat room, manga, anime, etc. All of them perceive that their internet addiction is severe and that it has interfered with their life. (b) *Identity distress*: All participants experience identity struggle, which takes various forms, including discordant values between the participants and their parents; accidents that shattered the participants' dreams; and impaired abilities to quit or cut down internet addiction, which thwarts participants' aspirations and life goals. (c) *Depression*: All participants experienced depression. Seven had a formal diagnosis of depression and were prescribed antidepressants; five of the seven had episodes of suicidal ideations, while two did not seek suicide but reported feeling no drive to live. One reported feeling depressed but was without a formal diagnosis or medications prescribed in that regard. The two theories have the same three conditions, but with different sequences.

The first theory: Identity distress precipitates depression, which subsequently prompts online addiction as self-medication. Three participants (Participants A, B, and C) were under this theory. This theory depicts a situation where there are incompatibilities between the life goals and identities adolescents would choose for themselves and those that reality actually imposes on them. Such incongruities create tremendous pressure in adolescents. To cope with the negative emotions, adolescents may resort to means that they know of, especially those that can bring about appetitive effects—in this case, online activities and gaming. At least two circumstances of identity crisis were discovered: (a) the adolescents suffer a physical injury or psychological trauma, which impedes them to pursue the life goals that they had previously set out for themselves; (b) the adolescents' choices of life goals are in conflict with those established for them by their parents. Adolescents also indicated two functions of their online addiction: (a) to help them escape stress and despair; (b) to link them with communities that provide nonjudgmental acceptance, and thus allow them to be themselves.

Identity distress and depression. *An accident ruined a dream.* Participant A was a basketball player since high school and had joined the basketball team after entering a university. He enjoyed athletics and was proud of his talent as a basketball player. Unfortunately, he was injured soon after his first year in college. He became very distressed, depressed, and addicted to online gaming during his recovery from the injury. Although he had played video games since childhood, gaming had never taken priority over meaningful life goals and had never been a concern until he became injured and lost hope for his long-established professional goal.

Participant A described how his injury impacted him and the importance of offering support to the injured college athlete. He said: "I think getting counseling as soon as somebody gets injured is important, because it doesn't matter how tough you are, if you are injured, it will mentally affect you. Nobody thinks about the psychological effects; they only think about the physical stuff." He continued:

> They just told me . . . that when I recovered, I would play basketball again. I was pretty positive about it at first, but after a while, I started really missing it. That was a huge part of my life that's no longer there . . . I . . . didn't have something that could help me to get through.

He also felt that he was treated as less useful by other people. He said, "As soon as I got injured, it seemed that the coaches stopped caring about me. I was broken and they didn't need me anymore, so I basically felt I was completely alone; I had no hope!"

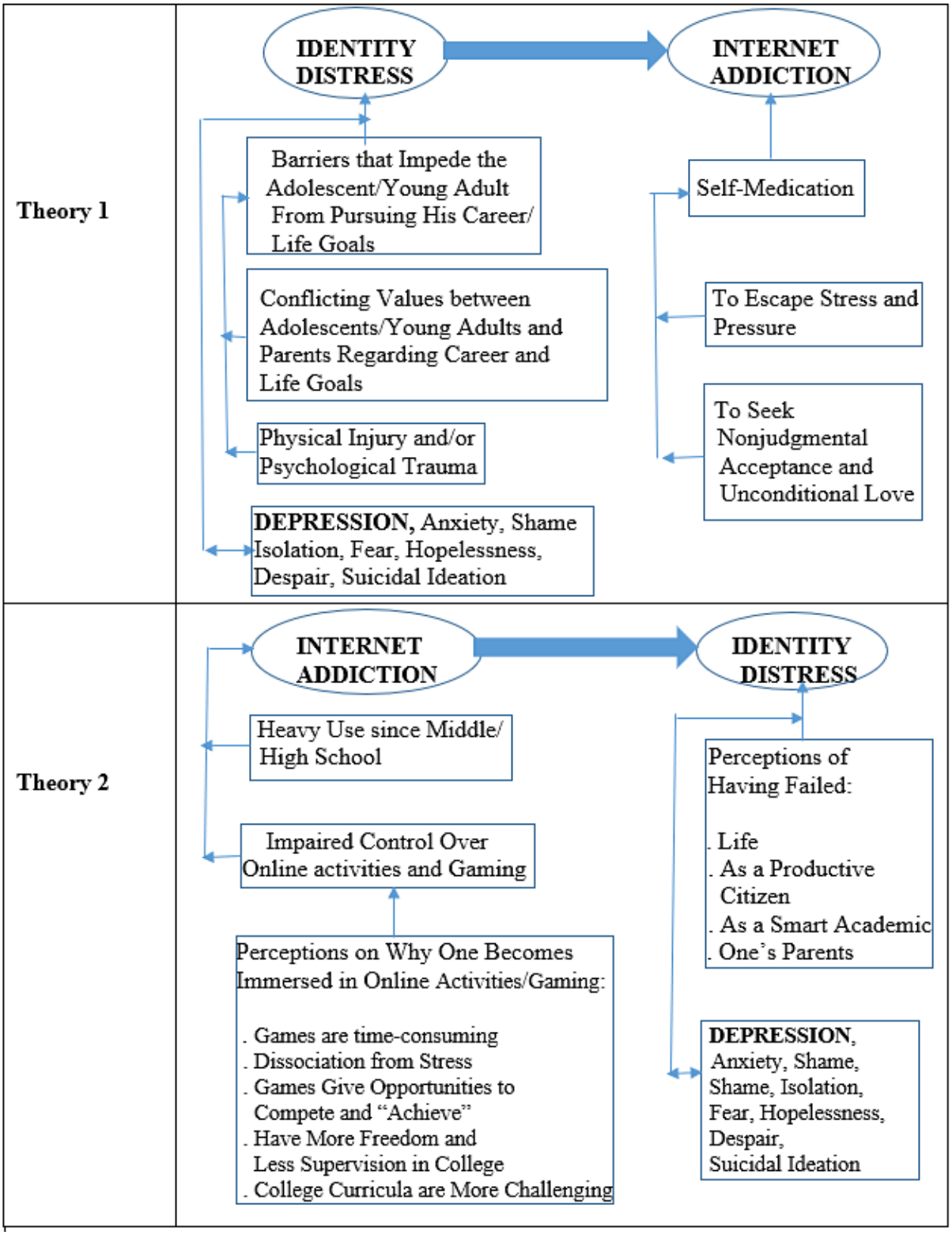
One of his major fears is about his future. He doesn't know what goal to pursue with his life now, since he can no longer be a professional basketball player. Eventually, Participant A figured out a solution—he could become a teacher and a basketball coach. He said: "It took me a long time to figure out that I wasn't the failure. I just took a different path."

Incompatible choices between adolescents and parents. Like Participant A, Participants B and C flunked out of their universities. Like Participant A, they enrolled a second time in other colleges, but dropped out again. Both participants believe that their parents set unrealistically high expectations for them with regard to academic performance, and that they prefer a different direction in their future professional goals than that set out by their parents.

Initially, Participant B began treatment at his parents' request; somewhat surprisingly, he himself now wanted to stay in treatment longer, even though he had completed all treatment requirements and was eligible to go home. He said: "I'll get more recovery before I go home. The support for my sobriety won't be there [home]." He stated that there was always tension while growing up that he had to meet a standard in order to be praised. He said:

> So the games started to pick [up] around when I identified the pressure. . . . I usually got A's, sometimes B's. My parents would say, 'you can't get B's, you have to get A's, because I know you can get A's.' . . . When I got my B or C, my parents took my computer away.

Figure 1. Two Theories Explaining the Relationships among Identity Distress, Internet Addiction, and Depression



During high school, drawing and art became dominant in his life. Although he is passionate about art, he said that his parents oppose his choice of at as a career, as it is too difficult to succeed in this field. “Putting more of myself into this [art] is not so accepted from them,” he said. With regard to career choice, he said that his parents want him to make “money and [be] secure.” He ended up choosing a major that he does not have any passion for.

Participant C said, “For . . . a lot of my life, I was the straight A student... I did sports, I did science club, once I started, rather, I felt a ton of expectations on me!” A phrase he remembers hearing a lot was “Don’t do anything but your best!” and he constantly felt the expectation that he needed to perform. He said,

> While they [parents] didn’t intend it to be understood as ‘only make straight A’s,’ I took it that way because I knew I was capable of acing all my classes. . . . I put a ton of pressure on myself to over perform . . . and when I didn’t live up to expectations, I put a ton of shame on myself.

He continued, “Traumatic shame . . . This ties in to my low self-esteem, my self-worth, and when I’m not doing things as best as I can . . . I get really down on myself. It really affects me in my daily life.”

Participant C was struggling with high school because “I wasn’t at all interested in academic work.” As a college freshman, he “stopped attending classes fully” during the first semester, because he “didn’t care about” his education. He felt college classes were boring and “very stressful.” Today, he said that he is one hundred percent sure that college is not for him and that he wants to focus on vocational skills training and become a welder.

Internet addiction. *To escape stress and pressure.*

Participant A would resort to gaming to escape from negative emotions such as depression, anxiety, loneliness, and helplessness. He said: “I dropped out of school, and I no longer play basketball which was my passion. I don’t have any of these things that I wanted to have in my life. . . . [Those thoughts] made me feel really depressed. To escape from those thoughts, I would play video games.”

Participant A stated, “It was the first time in my entire life that I wasn’t able to work out or do anything that I wanted to do because I was a very active person. . . . I ended up shutting myself in the dorm room all the time, either watching movies on Netflix or playing video games.” Prior to his injury, video gaming had never been a priority nor a problem for him although he did like gaming. He said:

> Prior to the injury, gaming might get in the way of my social life, but it never got in the way of anything else such as responsibilities. I never considered it [gaming] as a priority, even if I was fully immersed in it. . . . I always wanted to do the more meaningful stuff.

Participant A said he started video games to fill the time when he didn’t have much to do. At first, he felt it was okay, as it wasn’t really cutting into his class time. But about a month after his injury, he started getting to the point of staying up all night playing video games and not going to class the next day, or going to basketball team events which he was supposed to attend even though he was injured. And three-quarters of the way through the semester, he had only 50% attendance in his classes. He dropped out of college that year. He said that he played online games for only about one and a half to two hours a day prior to his injury, but increased that to four hours a day after the injury initially, and eventually eight to 14 hours a day. He said, “I wasn’t doing anything besides play video games.” He described how he eventually developed tolerance to gaming:

> It was that I wasn’t getting the same thing out of it than before from the game. I needed more to feel good again. When I first started playing, I could play one and a half to two hours, and I would feel good. But it got to the point where if I didn’t play nonstop, I would immediately feel miserable again!

Participant B does not regard his relationship with his parents as close. He didn’t “talk to anybody about how I felt.” Growing up, the most prevalent feeling he had was loneliness. He said, “I didn’t talk to my parents about feelings. I think in my head, it wasn’t safe to do so. I don’t think it was acceptable. Even if I talk about feelings, the pressure is still there.” Gaming to Participant B was like an escape. He said: “I didn’t pay attention to gaming, like what was so attractive to me . . . I didn’t pay attention to that; I was just having fun . . . Everything else fades away and I am having fun because I am playing a game.”

Participant B’s internet and gaming use increased when he first got to college. He would spend time on games and “tons of animated stuff and porn.” He said, “That’s what I did instead of studying, working out, socializing...” He started internet activities in middle school, but at the time was able to still manage well his school work and life, as his parents often reminded him not to spend too much time on internet activities and would take away certain privileges if his grades slipped. “When I went away to college, it got hard to manage,” he said.

Participant C said that although he engaged in both video games and online pornography, he is more addicted to porn than video games. “Porn distracts me from the daily stressors of life, not video games,” he said. He stated that his parents extremely oppose his porn use:

> When I had access to porn . . . I consumed as much as I could. Eventually my parents always, always found out. There were monitoring tools on my laptop. I kept finding ways around it, and they kept finding out. And this repeated multiple times over the years. My relationship with my parents got pretty strained.

Participant C talked about the function viewing pornography served to him: "Pornography is always available 24 hours a day; I can check my phone and get instant gratification of seeing a new image. It helps me avoid stress and depression. It keeps me busy; it keeps my mind occupied."

To seek nonjudgmental acceptance and unconditional love. For Participant C, his online activities include not only gaming and pornography but also interactions with an online community wherein people enact animated characters, a community that provides him acceptance and love. In the community, he can create a character and interact with other characters created by other members. He said, "The theme of the community is creating your own character that you can identify with. It's my character and it's sort of just a reflection of me." Community members not only meet online but also in person for gatherings, from which some "real" friendships can be developed. He identifies with this community dearly, saying: "It's a community where I don't have to be afraid of showing my full self, whereas, in various parts of the real world, sometimes you have to watch out for that, and you can't always be out and proud of who you are." He continued: "I don't know how to express my emotions to my parents or my therapist, and I didn't know how to express that finding porn and this online community was a big relief to me, to find a community with no expectations on me, where I can be myself no holds barred."

The second theory: Internet addiction precipitates identity distress, which subsequently brings about depression and other negative emotions. Five participants (Participants D, E, F, G, H) were under this second theory. The second theory suggests that adolescents indulge in online activity and gaming first, which subsequently affects their college education, leading to identity distress and depression as their addiction has now threatened their abilities to complete a college education, as they drift away from achieving their professional goals and life dreams. Unlike Participants B and C in the first theory group who opposed their parents' values with regard to who these young men are and what they want to become in life, the five participants in the second theory group had consistent orientations with their parents concerning their life goals. These adolescents and young adults want to pursue "success" as defined by their parents; they were eager to make their parents proud of them. Their stumbling into online addiction shattered their dreams. They are keenly aware of the fact that their online addiction has damaged, and will continue to damage, their academic performance in college and future commitment to fulfill their life goals, but they feel powerless to overturn their addiction. The identity distress subsequently triggers depression, anxiety, fear, shame, despair, and hopelessness.

The nature of internet addiction. Of the five participants, three had been heavily involved with online activities and gaming since middle and high school. Although their online activities engagement did not cause them apparent trouble prior to college, these pursuits expanded after they entered college, perhaps because of lack of parental supervision and the gradual-development nature of addiction. Two participants had engaged in light online activities and gaming prior to college, and their excessive use and subsequent addiction only developed while in college. Regardless, all five participants had impaired control over their online activities and gaming, and they also continued to engage in the addictive behavior despite negative social consequences such as college academic failure and damaged family relationships.

Heavy use since middle and high school, worsened in college. Participant D's father introduced him to games during his early years, but his academic performance did not suffer until high school and later in college. He said, "I guess I had [a] pretty decent intuitive grasp on at least early education, because I did very well with very little effort, so I had plenty of time to do my homework and then spend the rest of [my] time playing games." In college, he would spend 13 hours gaming per day at worst. He said,

> As I grew up and went through school, the work got harder . . . and my game playing also got more. So my grades started going down near the end of high school. . . . The first year of college I did okay, and then the second year I did very badly because I was spending all my time on the internet playing video games to the point that I wasn't doing homework anymore or sleeping properly.

Participant E considers himself a "video game addict" who has been addicted since elementary school. He started playing games at age five and has been doing video games his whole life. He perceived that his heavy exposure to online games may be related to his parents' pro-technology values and attitudes. He said, "They [parents] always thought that the time I spent in gaming would somehow translate into the usefulness of the future." Over the years, his gaming patterns have had ups and downs, but never reached a level that impeded his normal life. During high school, he had a part-time job and was an almost straight-A student. He never had issues with gaming until he went away to college.

Impaired control over online activities and gaming. The participants experienced powerlessness and self-loathing regarding their online addiction. Participant F said,

> A lot of times in college I felt like I wanted to change myself but then I felt like I wasn't in control of my

> own body, and that was incredibly frustrating and made me really hate myself because I knew what I was doing was wrong, I knew that I needed to stop doing it, but I was so addicted . . . that I just kind of shut all those thoughts out with lies and apathy . . .

Participant G said:

> I would wake up, and would start gaming. I'd do a warm-up game, then I'd play for it. Originally, I'd play for maybe three or four hours which I thought was fine, but at its worst, I was playing like 16-18 hours a day out of 24 hours . . .

Perceptions on why one becomes immersed in online activities and gaming: (1) Games are time-consuming. Participant D said:

> The thing about the multi-player games is . . . to play that game correctly, there can't be interruptions. That's what made a lot of people notice that this is a problem when people don't want to leave the game, because they have other human players wanting them to stay in order to play the game correctly.

Similarly, Participant G said: "Once the match starts, you have to stay there at the computer the entire time; if you walk away, you will abandon your team, you could lose the game; you cannot leave, you shouldn't even take your eyes off the screen the whole time."

(2) Dissociation from stress. Participants mentioned that gaming allows them to "zoom out" of stressful life situations, which is prevalent especially when a person transitions from high school to college, or from dependent to independent developmental stages. Participant D said: "It's the feelings around, like, pressure, the deadlines, and missing opportunities that triggers me to feel unhappy and want to escape [or] self-medicate with technology." Likewise, Participant G said:

> What I liked about that was that once I started a game, my entire mind was in the screen, in the game and I had no opportunity to think about school or depression or anxiety.... The fact that I was constantly stimulated allowed me to forget about everything else.

Similarly, Participant E said:

> I didn't learn any methods to cope with stress besides hiding. When I got stressed out as a kid, I ran into my computer . . . The same thing started happening in college when I started getting stressed out by papers or finals. All of this was just making me want to hide, so I just kept gaming.

(3) Games give opportunities to compete and "achieve." Another reason is that those activities and games give participants opportunities to compete and thus to get a sense of "achievement," which they longed for—initially from academics, but they perceived that goal too far away to pursue now. Participant G said: "Because my mind was being [stimulated] . . . a lot of . . . mental calculations, that kept your mind constantly moving and a lot of strategy when trying to make a decision . . . so it allowed me to feel competent in my, what I called, like, my skill." He continued,

> As I started to play the game more, I started to get better at it and I started to really focus on my achievements in the game more than my achievements in school, and I thought. . . I'm really good at this game, I need to practice this game. I treated this game like a job.

Similarly, Participant F said he would play certain games if most of his friends played those games, solely because he then would have opportunities to compete with them. He said, ". . . because it helped boost my self-worth, because I would tell myself I was good at this thing."

(4) Have more freedom and less supervision. One other factor was that participants suddenly had a lot of freedom as they no longer had parental supervision after entering college. Participant F said, "I wasn't being supervised . . . there was no one to tell me to buckle down and study like my parents used to." This factor is exacerbated when the participants do not have self-discipline abilities.

Participant G said:

> My first semester [in college] . . . I would say I struggled a little bit, because. . . a real challenge for me was having the freedom. I'd suddenly be in college and be able to do whatever I want with all my time. I struggled with time management and prioritizing school over socializing.

(5) College curricula are more challenging. The lack of self-discipline is worsened by the fact that college curricula are more challenging than those of high school, and the participants' commitment to academics often is further weakened when experiencing frustration while doing assignments and studying for exams. To make matters worse is the enticement of the appetitive nature of online activities and gaming that usually provide immediate gratification.

Participant D said:

> I always realized that I shouldn't be doing this [gaming], but I did it anyways, because it was easier, it was more fun, it provided more short-term enjoyment than doing the work. And the work could always be done tomorrow, except it couldn't be.

Participant F said:

> [Some of the classes] were very difficult . . . in my mind I knew that it was going to be harder . . . but . . .I still felt in my heart . . . that I could expend the amount of effort that I expended in high school and have it work in college; it was kind of like an ego thing, I'm smart, I can just read this textbook one time, I don't have to do practice problems. . . having that turn out to not be true was pretty damaging to my ego.

Participant G said:

> I was still on my computer every day when I was in high school . . . but it wasn't until college when . . . I started to do poorly in my academics, I started to lose this sense of pride that I had, as an A student; I used to be so good at school, and all of a sudden. . . I'm not smart enough, and I'm not disciplined enough . . . and it became easier for me to say, hey . . . do you want to play a game, yeah, let's play a game together . . .

Identity distress and depression. Participants overwhelmingly revealed that internet addiction is their major problem and that they feel depressed because they recognize that their internet addiction has impaired their daily functions and life development. They also pointed out that many clinicians to whom they were first referred for treatment erroneously considered that sequence oppositely, perceiving that depression was actually their major problem, and that depression caused their internet addiction. Participant E came to the insight that he is depressed because his gaming addiction has impeded him from living a productive and normal life. Similarly, Participant H said, "My therapist at that time thought that the gaming was a symptom of depression, rather than the depression being a symptom of the gaming. I don't think she was right."

Participant G was sent to a college counselor because of academic failure. He said, "I don't think there are too many people that do focus on stuff [internet addiction] like that. . . The technology stuff was the cause but what I was going to therapy for was depression."

Clinicians' emphasis on depression rather than internet addiction could also be related to a client's not sharing with clinicians the information regarding one's internet addictive behavior. Participant F would sometimes play games throughout an entire night and would end up being sleep deprived, making his studying aversion and procrastination even worse. He had the insight that his poor academic grades were related to his procrastination and online addiction, but, he said, "instead of improving my study habits, I started to feel a lot of depression and anxiety over the fact that I wasn't doing very well [in my academic performance]." He did not relay his heavy use of online activities or gaming to his therapist, who in turn, gave him a depression diagnosis. Meanwhile, his internet use became worse, he said, "as instead of stopping the internet in order to do better, I started using the internet and video games more and more and more, in order to avoid those feelings of anxiety and depression . . ."

Unlike some participants in the first theory group, the identity distress of the participants in the second theory group has more to do with their inability to stop their online addictive behaviors, to commit themselves to completing a college education, and to fulfill their life goals and make their parents proud of them. Their identity distress and struggles result in enormous negative emotions, including shame, depression, anxiety, fear, and low self-esteem.

Perception of having failed life. Participant G said:

> I was locked in these patterns that distracted me for too long, so I never got to do the work. And now it's making me depressed . . . for the fact that I knew that I wasn't working [to] the potential that I should be, that I could be doing.

He continued,

> I was reaching to a point where I . . . flat out wasn't doing basically any work outside of going to classes, and usually falling asleep because I wasn't sleeping. . . . I did run into depression . . . and also a lot of anxiety to the point where I wasn't suicidal but I also didn't have much will to live.

Likewise, Participant E said,

> I am pretty sure my depression was about the addiction-related issues. The fact that I wasn't living my life, like depression came as a consequence of that and all the acting out I was doing.

His "acting out" behaviors included drinking, smoking marijuana, and watching pornography in addition to gaming. According to him, porn, alcohol, and cannabis were used to heighten the rewarding effects of internet gaming. He said,

> Disappointment in myself, not taking care of myself, not eating well or sleeping well, not having a job or succeeding. I did nothing except play computer games . . . felt totally checked out of life, and didn't have a relationship or a girlfriend. All those things were very depressing, so that's where the depression came from.

Similarly, Participant D remembered a visit to his cousin, who is about the same age but succeeding in his endeavors, "when just despair and hopelessness really took over me." He said,

> I don't like to say that it was because of my cousin's success. I mean in some way it was, but it was really more about the fact that I didn't see myself as [having made] any progress towards the things that I wanted. He had made progress on the things he always wanted in life . . . That was what made me feel that I really needed gaming again.

Perception of having failed as a productive citizen. Participant H said,

> As I became more and more hooked on this game and spending my time smoking [weed] and just gaming, I became very fearful of people finding out that I, this like perfect student, was wasting my time, doing unproductive things and so I would hide. I tried to hide my habits . . ."

Similarly, Participant D said:

> I would get up in the morning, and they would all be in class for, you know, the morning to early to midafternoon. I would wake up, generally hide in my dorm room, and pretend I wasn't here until they got back from classes. I hid because that made it seem like I had, too, left to go to class.

Perception of having failed as a smart academic. Participant F said:

> Throughout childhood, I did well in school. I kind [of] equate my self-worth with academic achievement. . . . Academics just became, like, my identity. . . . If I'm not strong in academics, then . . . what am I? I'll be useless . . . I'm a failure . . .Right now, I'm working on self-worth; people suggested to me to treat myself like I would treat other people. People will treat other people a lot kinder than they treat themselves in terms of failure. So I have been working on that . . .

Perception of having failed one's parents. Participant H said:

> When I was growing up, I think I internalized this idea that I needed to prove myself to my parents. . . . I challenge that belief now and I know I don't have to do that, but I still feel like I need to, at the very least, I want to make my parents proud.

Similarly, Participant F said,

> There's also the fact that I also want affirmation from other people . . . like I want my parents to be proud of me . . . A big part of that . . . because I want to be academically successful, I want my parents to be able to see me, to be proud . . . Pretty much anything I do, I should be doing well.

Depression, anxiety, shame, isolation, fear, hopelessness, despair, and suicidal ideation. Participant H talked about how he tried to isolate himself. He said,

> I was planning on going back to school in the fall that year . . . and I ended up not going back to school . . . for a solid year, that was the worst of my depression, my gaming. I completely isolated myself in my room. I cut myself off entirely from all of my friends. . . I didn't leave the house for pretty much a year straight, except to maybe get some fast food late at night.

Participant H also talked about his sense of helplessness and hopelessness. He has worked at an entry-level job at a local grocery store for some years but longed to go back to college and pursue a professional career. He felt his internet addiction has blocked his dream. He said:

> I enjoy the job very much, but it is not what I want to do forever, and so I've been saying these things for years now . . . I want to go back to school. . . . yet I never made a move.. . . I've made no moves because all of my energy went towards the game instead.

Participant D talked about his hopelessness, self-hatred, and suicidal ideation. He said,

> Prior to that . . . I felt like I probably was an addict, but I didn't know for sure.. . . kind of still just a finger crossed, 'I really hope I am not an addict' sort of mind set. And it was when I realized that . . . [when] I get stressed I am used to hiding, it was to medicate the emotions, for checking the box that yes, I am an addict. I don't have any doubt about it anymore. . . and I also felt like exhausted. Everything I had at my personal disposal [I] have tried to overcome it, and I had failed. And I just didn't see any other way to overcome it.

He continued,

> Each time was only to get more food so I could go back and keep gaming . . . that was when just despair and hopelessness really took over me. At that point every second I spent into gaming made me hate myself a little bit more. . . . the fact that I hate myself causes me to game more, which makes me hate myself even more for that. I started to feel very unworthy as a person and started planning my suicide.

Discussion

While various factors that predict or associate with online game addiction have been suggested—such as social motivation or lower social self-efficacy (Blinka & Mikuska, 2014), relationship satisfaction (Lee & Kim, 2017), introversion (Kuss et al., 2013), narcissistic personality traits (Payam & Mirzaeidoostan, 2019), emotional bonds to avatars (Mancini, Imperato, & Sibilla, 2019), and sensation seeking (Bekir & Celik, 2019)—this study focuses on identity distress and depression as they were revealed from our in-depth interview approach. Although the relationship between internet addiction and depression has been well established (e.g., Fuchs, Riedl, Bock, Rumpold, & Sevecke, 2018; Morrison & Gore, 2010; Przepiorka. Blachnio & Cudo, 2019; van Rooij et al., 2010), it is not clear whether there is a causal relationship (Fuchs et al., 2018; Ko, Yen, Yen, Chen, & Chen, 2012), and what the in-depth, qualitative nature of the linkage is. Findings of this study show the possibility of a bi-directional relationship between depression and internet addiction, with the impact of identity distress; this provides a perspective explaining the nature and course of the internet addiction–depression relationships within the developmental contexts of male adolescents transitioning to young adulthood.

Although we had no preconceived hypothesis about the relationships between internet addiction and depression, our qualitative findings are consistent with recent quantitative studies (e.g., Chi et al., 2019; Lau et al., 2018; Gamez-Guadix, 2014; Sela, Zach, Amichay-Hamburger, Mishali, & Omer, 2020). For example, Lau et al. conducted a large, longitudinal study with two subsamples, comparing adolescents' baseline scores with their 12-month follow-up scores. The first

subsample contained adolescents with no internet addiction at baseline; the second subsample included non-depressed adolescents at baseline. Lau and colleagues found that 11.5% of the first subsample acquired new incidence of internet addiction during the 12-month follow-up and adolescents' probable depression status at baseline significantly predicted new incidence of internet addiction. They also found that approximately 38.9% of the second subsample developed probable depression at the follow-up and adolescents' internet addiction status at baseline "significantly predicted new incidence of probable depression" (p.633).

The contribution of our qualitative study includes not only identifying bidirectional relationship between internet addiction and depression, but also providing scenarios that offer a perspective to understand the nature and course underpinning the relationship. Specifically, the narratives of the eight adolescents/young adults indicate: adolescents/young adults may experience identity crises because of physical injury or psychological trauma that jeopardize their abilities to pursue their dreams, as well as expectations from their parents that are irreconcilable with their own plans for themselves. Such identity struggles bring about depression, anxiety, and pain to the adolescents/young adults, leading them to resort to online activity and gaming to escape or cope. This finding is consistent with part of Sela and colleagues' (2020) findings. Sela et al. found that negative family environment (low family expressiveness and high family conflict) is associated with problematic internet use and time spent online among adolescents. They also suggested that one mediator between family environment and problematic internet use was depression. In other words, they suggest that a dysfunctional family environment (e.g., low family expression and high family conflict) leads to depression, which in turn, leads to problematic internet use.

On the other hand, our qualitative findings also show that many adolescents/young adults suffer identity conflicts and depression primarily after they develop online addiction. These adolescents/young adults share similar identity and life goals with their parents' expectations; however, their internet addiction problems impair their abilities to pursue their life goals. They subsequently suffer self-doubt, shame, powerlessness, depression, and pain, perceiving that they have failed society, their parents and themselves. This finding appears to be consistent with the internet addiction–positive youth development–depression model suggested by Chi and colleagues (2019). Chi et al. suggested that internet addiction can affect depression directly and indirectly. They reported that "positive youth development" mediates the association between internet addiction and depression, in that internet addiction decreases an adolescent's "positive youth development," which in turn, increases the adolescent's depression. In other words, internet addiction may affect a person's cognitive, emotional, and social competence—including their identity, self-actualization, and other psychological resources—which then leads to the increase of depression.

More importantly, our qualitative study discovers the significance of the role of identity distress in the bidirectional relationship. Both the "depression to internet addiction" relationship and the "internet addiction to depression" relationship involve the concept of identity distress, despite the natures of identity distress involved being somewhat different. Literature has pointed out that the establishment of an identity that can guide oneself and differentiate oneself from others is one major task in adolescent development (Erikson, 1956; Foelsch, Schlüter-Müller, Odom, Arena, Borzutzky & Schmeck, 2014). A healthy identity allows the growing adolescent and young adult to build life goals for himself or herself, develop satisfying interpersonal relationships, and maintain self-esteem. The process of developing "self-direction" and "self-definition" may be met with stumbling blocks because of various predispositions, vulnerabilities, and inadequate environmental supports. Some adolescents may subsequently experience negative emotions and manifest dysfunctional behaviors, such as anxiety, depression, poor impulse control, pain, and despair (Foelsch et al., 2014; Forthun & Montgomery, 2009). Some other adolescents may even form a negative or deviant self-identity, including a "user" identity (Forthun & Montgomery, 2009). Studies have emphasized the importance of integrating identity issues into assessment and treatment planning when working with adolescent clients, as adolescents who are diagnosed with clinical disorders tend to also suffer identity distress and difficulty (Wiley & Berman, 2013).

Conclusion

Scholars have advocated for more qualitative studies on the topic of internet addiction as currently most research in the area is quantitative. Our study is one of the few qualitative studies that offers an in-depth understanding of the factors of internet addiction, identity distress, and depression in the developmental process of an adolescent transitioning to young adulthood. Our results highlight the importance of identity distress and its role in the internet addiction–depression relationship. A person's identity distress may lead to depression and subsequently to internet addiction as self-medication; on the other hand, a person may be trapped into internet addiction, which subsequently leads to identity distress and depression. Although we specified a temporal

sequence among the three variables, the relationships are not necessarily causal relationships as potential rival variables have not been ruled out. This study has limitations. First, it is a qualitative study with eight participants, and it is important for the hypothesis generated by this study to be tested by future larger-scale quantitative studies. Second, the participants were all male adolescents and young adults who came from families of middle- or high-socio-economic status (SES), therefore the results are applicable only to those groups. Future studies that include female subjects and subjects of other SES backgrounds can enhance our understanding of the phenomenon of online addiction. Although our analyses treat depression as a result of identity distress, depression can also be part of the withdrawal symptoms of online addiction. The two theories posited conceptualize the three major variables using a linear sequence, but the relationships among these variables could also be circular. Although this study has limitations, its in-depth interview approach enables us to better understand the qualitative nature of online addiction.

To treat adolescents transitioning to young adults who exhibit internet addiction, clinicians must possess knowledge and skills related to age-specific development, mental health, and addiction. Many adolescents/young adults afflicted with online addiction are assessed as having depression as the root or major problem by clinicians who are trained to work with the general adolescent/young adult client population. These clinicians may possess rich knowledge and skills with regard to the areas of adolescent development and overall mental health, but insufficient knowledge and skills in the area of addiction. Some participants mentioned that their generalist therapists tended to emphasize only their depression, leaving their addiction problem untreated, and so ultimately, their overall treatment was not successful. In addition, some generalist therapists who are not equipped with addiction treatment knowledge and skills may offer iatrogenic therapy. For example, some participants were told that they can start playing games in moderation after receiving a certain period of counseling, or that they may increase their social connection via going to an internet café and making actual, in-person social interactions with other gamers instead of doing it through virtual interactions. Both strategies can be detrimental to addiction recovery. For some people with severe addiction, the key to recovery is total abstinence; “use in moderation” often leads to relapse (Dawson, Goldstein, & Grant, 2007; Harvard Medical School, 2009). Cue-induced relapse has often been observed (O’Brien, Childress, McLellan, & Ehrman, 1993; Sinha & Li, 2007; Wikler, 1973). Physically interacting with other gamers in an internet café may increase social connection, but it may also further reinforce a person’s addictive gaming behavior.

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References

American Psychiatric Association (2013). D*iagnostic and statistical manual of mental disorders* (Fifth Edition). Arlington, VA: American Psychiatric Association.

Bekir, S., & Celik, E. (2019). Examining the factors contributing to adolescents’ online game addiction. A*nnals of Psychology, 35*(3), 444-452.

Blinka, L., & Mikuska, J. (2014). The role of social motivation and sociability of gamers in online game addiction. *Cyberpsychology: Journal of Psychosocial research on Cyberspace, 8(*2), article 6.

Brand, J.E., Todhunter, S. & Jervis, J. (2017). *Digital Australia 2018.* Eveleigh, NSW: Interactive Games & Entertainment Association.

Centers for Disease Control and Prevention (2012). Natural History and Spectrum of Disease. *In Principles of epidemiology in public health practice.* http:/www.cdc.gov/ophss/csels/dsepd/ss1978/lesson1/section9.html

Cerniglia, L., Zoratto, F., Cimino, S., Laviola, G., Ammaniti, M., & Adriani, W. (2017). Internet addiction in adolescence: Neurobiological, psychosocial and clinical issues. *Neuroscience and Biobehavioral Reviews, 76,* 174-184.

Chi, X., Liu, X., Guo, T., Wu, M., & Chen, X. (2019). Internet addiction and depression in Chinese adolescents: A moderated mediation model. *Frontiers in Psychiatry. 10*, 816. doi: 10.3389/fpsyt.2019.00816.

Christakis, D.A., Moreno, M.M., Jelenchick, L., Myaing, M.T., & Zhou, C. (2011). Problematic internet usage in US college students: A pilot study. *BMC Medicine, 9*:77.

Darvesh, N., Radhakrishnan, A., Lachance, C.C., Nincic, V., Sharpe, J.P., Ghassemi, M., Straus, S.E., & Tricco, A.C. (2020). Exploring the prevalence of gaming disorder and internet gaming disorder: A rapid scoping review. *Systematic Reviews, 9*:68.

Dawson, D.A., Goldstein, R.B., & Grant, B.F. (2007). Rates and correlates of relapse among individuals in remission from DSM-IV alcohol dependence: A 3-year follow-up. A*lcoholism: Clinical and Experimental Research, 31*(12), 2036-2045.

Erikson, E. (1956). The problem of ego identity. *Journal of the American Psychoanalytic Association, 4*(1), 56-121.

Foelsch, P.A., Schlüter-Müller, S., Odom, A.E., Arena, H.T., Borzutzky A., & Schmeck, K. (2014). *Adolescent identity treatment: An integrative approach for personality pathology.* Springer.

Forthun, L.F., & Montgomery, M.J. (2009). Profiles of adolescent identity development: Response to an intervention for alcohol/other drug problems. *Alcoholism Treatment Quarterly, 27*, 132-149.

Fuchs, M., Riedl, D., Bock, A., Rumpold, G., & Sevecke (2018). Pathological internet use—An important comorbidity in child and adolescent psychiatry: Prevalence and correlation patterns in a naturalistic sample of adolescent inpatients. *BioMed Research International.* Article ID 1629147.

Gamez-Guadix, M. (2014). Depressive symptoms and problematic internet use among adolescents: Analysis of the longitudinal relationships from the cognitive-behavioral model. *Cyberpsychology, Behavior, and Social Networking, 17*(11), 714-719.

Harvard Medical School (2009). Alcohol abstinence vs. moderation. *Harvard Mental Health Letter*, Harvard Health Publishing. Retrieved 05/30/2019 from http://www.health.harvard.edu/mind-and-mood/alcohol-abstinence-vs-moderation.

Ko, C.H., Yen, J.Y., Yen, C.F., Chen, C.S., & Chen, C.C. (2012). The association between internet addiction and psychiatric disorder: A review of the literature. *European Psychiatry, 27,* 1-8.

Kuss, D.J., van Rooij, A., Shorter, G.W., Griffiths, M.D., & van de Mheen, D. (2013). Internet addiction in adolescents: Prevalence and risk factors. *Computers in Human Behavior, 29*(5), 1987-1996.

Kuss, D.J., Griffiths, M.D., Karila, L., & Billieux, J. (2014). Internet addiction: A systematic review of epidemiological research for the last decade. *Current Pharmaceutical Design, 20(*25), 4026-4052. doi: 10.2174/13816128113199990617

Lau, J.T.F., Walden, D.L., Wu, A.M.S., Cheng, K.M, Lau, M.C.M., & Mo, P.K.H. (2018). Bidirectional predictions between internet addiction and probable depression among Chinese adolescents. *Journal of Behavioral Addictions, 7*(3), 633-643.

Lee, C., & Kim, O. (2017). Predictors of online game addiction among Korean adolescents. *Addiction Research & Theory, 25*(1): 58-66.

Mancini, T., Imperato, C., & Sibilla, F. (2019). Does avatar's character and emotional bond expose to gaming addiction? Two studies on virtual self-discrepancy, avatar identification and gaming addiction in massively multiplayer online role-playing game players. *Computers in Human Behavior, 92*, 297-305.

Morrison, C.M., & Gore, H. (2010). The relationship between excessive internet use and depression: A questionnaire-based study of 1,319 young people and adults. P*sychopathology, 43*(2), 121-126.

O'Brien, C.P., Childress, A.R., McLellan, A.T., & Ehrman, R. (1993). Developing treatments that address classical conditioning. In F.M. Tims and C.G. Leukefeld (Eds.). *Cocaine treatment: Research and clinical perspectives* (pp. 70-91). National Institute on Drug Abuse Research Monograph 135. Rockville, MD: U.S. Department of Health and Human Services.

Park, B., Han, D.H., Roh, S. (2017). Neurobiological findings related to internet use disorders. *Psychiatry and Clinical Neurosciences, 71*, 467-478.

Payam, A.Z., & Mirzaeidoostan, Z. (2019). Online game addiction relationship with cognitive distortion, parenting style, and narcissistic personality traits in students. *Iranian Journal of Psychiatry and Clinical Psychology, 25*(1), 72-83.

Przepiorka, A., Blachnio, A., & Cudo, A. (2019). The role of depression, personality, and future time perspective in internet addiction in adolescents and emerging adults. *Psychiatry Research, 272*, 340-348.

Rideout, V.J., Foehr, U.G. & Roberts, D.F. (2010). *Generation M2: Media in the lives of 8- to 18-year-olds: A Kaiser Family Foundation Study.* https://www.kff.org.

Sela, Y., Zach, M., Amichay-Hamburger, Y., Mishali, M., & Omer, H. (2020). Family environment and problematic internet use among adolescents: The mediating roles of depression and fear of missing out. *Computers in Human Behavior, 106*. 106226.

Sinha, R. & Li, C.S. (2007). Imaging stress- and cue-induced drug and alcohol craving: Association with relapse and clinical implications. *Drug and Alcohol Review, 26*(1), 25-31.

Stevens, C., Zhang, E., Cherkerzian, S., Chen, J.A., & Liu, C.H. (2020). Problematic internet use/computer gaming among US college students: Prevalence and correlates with mental health symptoms. *Depression and Anxiety, 1-10*. doi: 10.1002/da.23094

Tang, C.S.K., Wu, A.M.S., Yan, E.C.W., Ko, J.H.C., Kwon, J.H., Yogo, M., Gan, Y.Q., & Koh, Y.Y.W. (2018). Relative risks of internet-related addictions and mood disturbances among college students: A 7-country/region comparison. *Public Health, 165*, 16-25.

Van Rooij, A.J., Ferguson, C.J, Carras, M.C., Kardefelt-Winther, D., Shi, J. & Aarseth, E. et al. (2018). A weak scientific basis for gaming disorder: Let us err on the side of caution. *Journal of Behavioral Addictions, 7*(1), 1-9.

Van Rooij, A.J., Schoenmakers, T.M., Vermulst, A.A., van den Eijnden, R.J.J.M., & van de Mheen, D. (2010). Online video game addiction: Identification of addicted adolescent gamers. *Addiction, 106*, 205-212.

Wikler, A. (1973). Dynamics of drug dependence. Implications of a conditioning theory for research and treatment. *Archives of General Psychiatry 28,* 611–616.

Wiley, R.E., & Berman, S.L. (2013). Adolescent identity development 219- distress in a clinical sample. *Journal of Clinical Psychology, 69*(12), 1299-1304.

Yates, T.M., Gregor, M.A., & Haviland, M.G. (2012). Child maltreatment, alexithymia, and problematic internet use in young adulthood. *Cyberpsychology, Behavior, and Social Networking, 15*(4), 219-225.

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Predicting Exercise Behaviors of College Students with Disabilities

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Objective: The purpose of this study was to examine whether constructs embedded in Bandura's social cognitive theory influence exercise behaviors in college students with disabilities. The constructs of exercise self-efficacy, exercise outcome expectancies, impediments to exercise (i.e., stress, alcohol abuse, and physical barriers to exercise), and facilitators to exercise (i.e., social support and climate towards disability) were considered. **Participants:** Participants were college students registered through the disability support services offices of two Midwestern universities. Method: Data was primarily analyzed using hierarchical linear regression analysis. **Results:** Exercise self-efficacy, exercise outcome expectancies, and facilitators of social support were found to have a significant relationship with physical activity participation for college students with disabilities. **Conclusion:** Results from this study largely support the use of social cognitive theory in predicting college students with disabilities physical activity. Outcomes of this study may prove useful in developing university-based physical activity programs aimed at promoting initial physical activity participation and maintaining positive healthy behaviors.

Keywords: exercise. social cognitive theory, disabilities, college students

Health is an important aspect of optimal functioning that promotes integration into all aspects of society for people with and without disabilities (Lynch & Chiu, 2009; Ravesloot, Seekins, & White, 2005). The lack of physical activity (PA) and poor dietary-intake choices have been repeatedly shown to have a negative effect on health and wellbeing and on the maintenance of a healthy weight (Plotnikoff et. al, 2015). In fact, the lack of physical inactivity has been called the number one public health concern of the twenty-first century (Trost, Blair, & Khan, 2014). Participation in PA has been shown to increase both physical and psychological health (Bradshaw, Lovell, & Harris, 2005; Faulkner & Biddle, 1999; Knöchel et al., 2012; Roberts & Bailey, 2011). Further, PA has been recognized as an integral aspect of disease prevention, and low levels of PA have the potential to restrict functional independence and increase the risk of chronic disease (Washburn, Zhu, McAuley, Frogley, & Figoni, 2002). More specifically, physical exercise has been shown to diminish stress, enhance mood, and help to prevent obesity. In contrast, inadequate PA has been linked to a number of negative health outcomes that include obesity, anxiety, depression, and other health conditions (Eichorn, Bruner, Short, & Abraham, 2018). Another advantage for engaging in PA is that individuals can see the results of increasing their PA in a very short period of time with positive outcomes. This strategy also creates a new context for health, fitness, and recreation. The immediate effects of increasing PA with minimal cost to the government or health insurance companies make this strategy very appealing at the present time (Keating, Guan, Piñero, & Bridges, 2005).

Unfortunately, people with disabilities often face chall--enges and barriers related to community engagement, including, but not limited to, PA. For example, people with disabilities may have obstacles in relying on adequate accessibility and transportation to fitness facilities, physical barriers (mobility), minimal social support, and medication side effects. In a 2016 research project examining barriers and facilitators that impact PA for people with disabilities, it was found that the most frequently cited factors were in the psychological subcategories of affect and emotion, attitudes/ beliefs/perceived benefits and self-perceptions and the body functions and structures theme (Martin, Ma, Latimer- Cheung, & Rimmer, 2016). The authors noted that specifically, negative mood, depression, anxieties, fears, and embarrassment related to activity were frequently cited as affective/emotional barriers (Martin et al., 2016).

The college years provide a critical window as health behaviors developed in young adulthood may impact long-term health and quality of life. Research has shown that an increase in obesity or weight gain in college raises the risk for serious health conditions later on in life (e.g. diabetes, circulatory issues, respiratory concerns), health conditions that influence long-term health (Greene et al., 2011). Researchers often emphasize PA during the transition from high school to college. A study by Li et al., (2016) found that moderate to vigorous PA decreased from high school to one year after high school and that social contextual factors helped to predict PA during this transitional period. Kampf and Teske (2013) showed that PA, as measured by the number of times students used recreation facilities on campus was a significant predictor of student retention after the first year of college. This finding supports the self-reported perceptions of undergraduate and graduate students on the positive influence of recreational facilities and programs on retention and well-being (Devine, 2013; Henchy 2011, 2013). Also, the results of a study conducted by Tyson, Wilson, Crone, Brailsford, & Laws (2010) noted that students who participated in high levels of PA showed significantly lower levels of anxiety and depression than the medium and low PA groups. These outcomes have caused researchers suggest that health professionals and administrators in both high schools and post-high school organizations (e.g. universities, worksites) recognize the need for interventions to address this issue.

As more people with disabilities enter higher education (Fleming, Edwin, Hayes, Lockard, & Locke, 2018), this population needs to have the same opportunities, including an active healthy lifestyle. PA may play an even more important role in the lives of people with disabilities. For people with disabilities, concern for health and healthy behaviors often demand even greater emphasis, with nearly 10% of students with disabilities who fail to graduate from college reporting health as a primary cause (Newman, Wagner, Cameto, Knokey, & Shaver, 2010). Research has shown that people with disabilities lead more sedentary lives and experience more obesity and associated co-morbidities when compared with the general population (Katz, McHorney, & Atkinson, 2000; Paeratakul, Lovejoy, Ryan, & Bray, 2002; Weil et al., 2002). This gap in PA between people with and without disabilities is likely caused by multiple factors. In addition to limits stemming directly from disability, college students with disabilities may face environmental challenges preventing them from engaging in healthy behaviors such as a lack of accessible exercise facilities and transportation (Henchy, 2011). These challenges and barriers are compounded by the disruption of previously established habits of PA common to all students in the stress of transitioning to college life and adjusting to the demands of higher education.

The benefits of PA are clear for both people with and without disabilities. However, there is minimal data showing what specific factors influence PA among college students with disabilities. It is not only important to increase PA, but also to maintain and sustain this lifestyle change. Therefore, it is helpful to identify potential factors that promote or prevent exercise. This current study examined factors influencing PA of college students with disabilities using social cognitive theory as the framework for the study.

Bandura's social cognitive theory (SCT) is widely known as an applied theory for understanding how people acquire and maintain certain behaviors (Eagle et al., 2017; Wise, 2002). Bandura (1977) proposed that human motivation and action are regulated by forethought and the perceived control one has over a situation. Based on these ideas, Bandura later conceptualized five specific factors that influence an individual's behavior: (a) self-efficacy or the confidence in one's ability to execute the behavior, (b) outcome expectancy or belief about the anticipated consequences of engaging in behavior, (c) facilitators and impediments to achieving the desired goals, (d) knowledge, including information about risk and benefits of behavior change, and (e) goals (Bandura, 2004). The aim of this study was to examine whether the first three of Bandura's five factors for influencing human behavior predict the PA of college students with disabilities. The focus of this study was to investigate the cognitive and psychological components of SCT as predictors to exercise; therefore, the research did not include the factors of observational learning or modeling. The SCT construct of self-efficacy is a prominent factor in multiple health promotion models. The SCT theory, as a whole, has been applied to several health behavior studies including adhering to medical recommendations (William & Bond, 2002), eating a healthy diet and managing one's weight (Schnoll & Zimmerman, 2001). An example of this applicability comes from Motl et al. (2002) who found that applications of SCT assisted adolescents in participating in vigorous PA/exercise, with self-efficacy as the strongest predictor of moderate and vigorous PA/exercise. This current study provides a partial test of the theory by testing the research hypothesis that exercise self-efficacy, exercise outcome expectancy, exercise facilitators (i.e., climate towards disability and social support) and exercise impediments (i.e., stress, alcohol abuse and physical barriers to exercise) will each serve to predict exercise behaviors of college students with disabilities.

Method

In the following section, we present the methodology for the study including participants, procedures, and measures. A quantitative descriptive design utilizing hierarchical linear regression was used to evaluate whether the constructs of SCT predict exercise behaviors for college students with disabilities.

Participants

The sample for this study included 75 college students who self-reported as having a disability. The age range for participants was 18-47 (M = 24, SD = 7.9). Among participants, 20 were male (26.7 %), 53 female (70.7%), one transgender (1.3%), and one did not report (1.3%). A total of 53 were Caucasian (70.7%), five African American (6.7%), three Hispanic/Latino (4%), four Asian (5.3%), seven reported having two or more races (9.3%), and two reported Other (2.7%). A majority of the participants reported having either a learning disability or mental illness as their primary disability. The breakdown of disability type, from most to least common, was 39 (52%) with a psychiatric condition or mood disorder, 31 (41.3%) with a learning disability or attention deficit hyperactivity disorder, 10 (13.3%) with a chronic health condition, five (6.7%) with brain injury, five (6.7%) who were deaf or hard of hearing, four (5.3%) with autism spectrum disorder, two (2.7%) with mobility impairment (e.g. spinal cord injury), and one (1.3%) for both intellectual disability or cognitive deficit as well as for blind or visual impairment. Another seven (9.3%) reported an unspecified disability. For the purposes of this study, only the disability category was included.

Procedure

Data for this study were collected from two Midwestern universities. Disability resources staff from each university sent an email with a survey link to students who had registered for receiving campus disability services. The staff sent 3 reminders to each student to participate in the study over the course of one semester. Each disability resource center was sent an email invitation with a link to the informed consent form and survey with completion of the survey accepted as consent to participate. The anonymous online survey was developed and hosted on Qualtrics (www.qualtrics.com). The survey was sent out from both universities in the spring semester of 2015 and then again in the fall of 2016. To encourage responses, participants were entered in a drawing to win one $150.00 gift card from Amazon.com.

Measures

Variables included in the model are shown in Table 1, excluding demographics. A brief description of each variable follows.

Table 1. *Descriptive Statistics for Study Measures (N=75)*

Measure	M	SD
Friend and Family Support for Exercise Habits Scale	1.87	0.83
College Students with Disabilities Campus Climate	4.43	1.04
Perceived Stress Scale	40.08	7.82
Short Michigan Screening Test	0.32	0.93
Barriers to Health Promoting Activities for Disabled Persons Scale	1.94	0.42
Patient Health Questionnaire - 4	9.61	3.78
Outcome Expectations for Exercise Scale	2.06	0.72
Physical Exercise Self- Efficacy Scale	2.93	0.67
The Physical Activity Scale for Individuals with Physical Disabilities	16.59	14.33

Stress. Stress was examined using the Perceived Stress Scale (PSS-4) developed by Cohen, Kamarck, and Mermelstein (1983). The Perceived Stress Scale (PSS) is a self-report questionnaire developed by Cohen et al. (1983) to measure a person's evaluation of their overall stress levels over the previous month. Respondents rate how often they experience stressful situations on a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). The higher the score on the PSS, the greater the respondent perceives that their demands exceed their ability to cope. The reliability and validity of the PSS-4 have been well established in a variety of settings and in multiple languages (Cohen et al., 1983; Cohen & Williamson, 1988; Mezzacappa et al., 2000; Mimura & Griffiths, 2004; Muller & Spitz, 2003; Stowell, Kiecolt-Glaser, & Glaser, 2001; Warttig, Forshaw, South, & White, 2013). The most recent normative sample showed a Cronbach's alpha of .77. Cronbach's alpha coefficient for the scale in the present study was computed to be .88.

Physical barriers to exercise. Perceived barriers to health -promoting activities were measured using the Barriers to Health Promoting Activities for Disabled Persons Scale (BHADP) developed by Becker, Stuifbergen, and Sands (1991). The BHADP is composed of 18 items making up three subscales: (a) intrapersonal barriers (e.g. too tired), (b) interpersonal barriers (e.g. other responsibilities), and (c) environmental barriers (e.g. lack of transportation). All items focus on different problems that might make it difficult for

them to engage in health behaviors (Chiu, Lynch, Chan, & Rose, 2012). Responses are scored on a Likert scale from 1 (*never*) to 4 (*routinely*). Scores range from 18-72 with higher scores reflecting more perceived barriers. The BHADP was found to have good internal consistency reliability (.82 - .85; Becker & Stuifberger, 2004). Cronbach's alpha coefficient for the scale in the present study was computed to be .80.

Alcohol abuse. The Short Michigan Alcoholism Screen--ing Test (SMAST) was used to measure alcohol abuse (Selzer, Vinokur, & van Rooijen, 1975). The SMAST consists of 13 items with scores ranging from 0 to 13. Higher scores denote greater levels of problematic alcohol use. All questions are answered with *Yes* or *No* answers only. The number of answers in the affirmative is then summed, with higher scores reflecting a greater potential level of alcohol abuse. The SMAST has been evaluated for reliability with findings indicating adequate internal consistency, with a Cronbach's alpha of .93 for the overall score (Selzer et al., 1975). Cronbach's alpha coefficient for the scale in the present study was computed to be .73.

Depression and anxiety. The Patient Health Question--naire-4 (PHQ-4) was used to measure the levels of anxiety and depression (Kroenke, Spitzer, Williams, & Löwe, 2009). The PHQ-4 is a 4-item inventory rated on a 4-point Likert scale. Responses are scored on a Likert scale from 1 to 4, with higher scores reflecting greater levels of depression and anxiety. The PHQ-4 has been validated in large clinical (n=2149) and general population (n=5030) samples (Kroenke et al., 2009), with a Cronbach's alpha of (>.80). Cronbach's alpha coefficient for the scale in the present study was computed to be .91.

Social support for exercise. Social support for exercise was measured with the Friend and Family Support for Exercise Habits Scale (Sallis, Grossman, Pinski, Patterson, & Nader, 1987). The scale consists of 20 items. Example items include "My friend gave me helpful reminders to exercise") and "My family member gave me encouragement to stick with my exercise program. Each item is rated on a 5-point Likert scale ranging from 1 (*none*) to 5 (*very often*). Scores on this measure range from 20 to 100, with higher scores reflecting more friend and family support for engaging in PA/exercise. Cronbach's alpha has been reported as .84 for the friend support subscale and .91 and .61 for the participation/involvement and rewards/punishments factors of the family support subscale, respectively. Cronbach's alpha coefficient for the scale in the present study was computed to be .94.

Climate towards disability. Items from the College Students with Disabilities Campus Climate (CSDCC) developed by Lombardi, Murray, and Gerdes (2011) were used to measure climate towards disability. It contains 43 items that are asked using a Likert scale ranging from 1 (*never true)* to 6 (*always true*). For this study, the following three items were used from this instrument: "I wish I attended another university"; "I feel comfortable on this campus," and "I feel the overall campus environment is supportive of students with disabilities." The Cronbach's alpha for the CSDCC survey has shown to be 0.80 (Nunnally, 1975) and within subscales ranged from .88 on Peer Support to .58 on Faculty Attempts to Minimize Barriers. Cronbach's alpha coefficient for the scale in the present study was computed to be .75.

Exercise self-efficacy. Exercise self-efficacy was measured using the Spinal Cord Injury Exercise Self-Efficacy Scale (ESES; Kroll et al., 2007). The ESES is a 10-item instrument with a 4-point Likert scale (1 = *not at all true* to 4 = *always true*). Although originally developed for people with SCI, scale items are generic enough to be applied across people with different types of physical disabilities (e.g. "I am confident that I can overcome barriers and challenges with regard to physical activity and exercise if I try hard enough," and I am confident that I can be physically active or exercise even when I am feeling depressed."). Scale items elicit beliefs about personal ability to engage in routine physical exercise. Total scores range from 10 to 40, with higher scores reflecting more confidence in one's ability to engage in routine physical exercise. The scale has excellent internal consistency reliability with Cronbach's alphas ranging from .87 to .93 in the original study (Kroll et al., 2007). Cronbach's alpha coefficient for the scale in the present study was computed to be .93.

Exercise outcome expectancy. The outcome expectancy of general health was measured using the Outcome Expectations for Exercise Scale (OEE) developed by Resnick, Zimmerman, Orwig, Furstenberg, & Magaziner (2000). The OEE has nine items that focus on the positive expectations of exercise (e.g. "Exercise improves my endurance in performing my daily activities"). The OEE uses a 5-point Likert-type scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). Scores on this measure range from 9 to 45, with higher scores reflecting lower outcome expectations for engaging in PA/exercise. The reliability and validity of the scale have been demonstrated (Resnick et al., 2000), with a Cronbach's alpha of 89. Cronbach's alpha coefficient for the scale in the present study was computed to be .93.

Exercise behavior. The Physical Activity Scale for Individuals with Physical Disabilities (PASIPD) was used to measure PA for individuals (Washburn et al., 2002). PASIPD is a well-validated, self-report measure that measures areas of lifestyle PA. The PASIPD contains 12 items and five factors: (a) home repair and lawn and garden work, (b) housework,

(c) vigorous sport and recreation, (d) light/moderate sport and recreation, and (e) occupation. Respondents are asked to indicate the frequency and duration of engagement in each activity. Scores are computed by multiplying the average hours per day of an activity by a metabolic equivalent of task (MET) value, which represents the intensity of physical activities. The scores are summed across all items, and the maximum possible score is 199.5 MET hours per day (MET-hr/d). Test–retest reliability for the PASIPD over a one-week interval was reported to be .77 (van der Ploeg et al., 2007). Internal consistency coefficients for the five PASIPD factors range from .37 to .59 (Washburn et al., 2002). Cronbach's alpha coefficient for the scale in the present study was computed to be .76.

Data Analysis

Hierarchical regression analysis (HRA) was used in order to evaluate the incremental variance accounted for by each predictor set in the model with self-reported PA serving as the dependent variable. The Statistical Package for the Social Sciences (SPSS) version 22.0 was used to perform the computations. Three sets of predictors were entered in sequential steps matching with Bandura's framework, namely (a) facilitators to exercise, (b) barriers to exercise, and (c) SCT factors. Facilitators to PA included measures of social support and school climate towards students with disabilities. Barriers to PA included alcohol use problems, perceived stress, perceived barriers to exercise, and depression. Finally, SCT factors included self-efficacy and outcome expectancy for PA. The correlations among the dependent variable and the predictor variables ranged from small to medium and the correlation matrix for all variables are presented in Table 2.

Results

Results of the hierarchical regression analysis are presented in Table 3, including values of change in R2 (ΔR2), unstandardized regression coefficients (B), standard errors (SE B), and standardized coefficients (β) for the predictor variables at each step and in the final model.

Table 3. *Hierarchical Regression Analysis for Prediction of Physical Activity Behavior (N = 75)*

			At Entry Into Model			Final Model		
Variable	R^2	ΔR^2	B	*SE B*	β	B	*SE B*	β
Step One	0.04	0.04						
Learning Disability vs other			2.50	4.80	0.07	-0.98	4.40	-0.03
MI vs Other			-.4.65	3.84	-0.16	-2.31	4.12	-0.08
Step Two	0.24	0.19***						
Social Support			7.18	1.96	0.42***	6.25	2.01	0.36**
College Climate			2.04	1.55	0.15	1.34	1.65	0.10
Step Three	0.24	0.01						
Perceived Stress			0.05	0.30	0.03	0.17	0.30	0.09
Drinking Problem			-1.19	1.76	-0.08	0.10	1.67	0.01
Perceived PA Barriers			-1.62	4.11	-0.05	3.97	4.23	0.12
Depression			0.12	0.60	0.03	0.52	0.57	0.14
Step Four	0.38	0.13**						
PA Outcome Expectancy			5.66	2.26	0.28*	5.66	2.26	0.28*
PA Efficacy			6.43	3.19	0.30*	6.43	3.19	0.30*

Note: = learning disability; MI = mental illness; PA = physical activity; MAST = The Short Michigan Alcoholism Screening Test

Table 2. *Correlations for Variables Used in Hierarchical Regression Analyses*

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Physical Activity Behaviors	1.00										
2	LD vs other disability	0.15	1.00									
3	MI vs other disability	-0.20*	-0.52***	1.00								
4	PA Support	0.46***	0.33**	-0.30**	1.00							
5	Supportive School Climate	0.27*	0.15	-0.34**	0.26*	1.00						
6	Perceived Stress	-0.26*	-0.24*	0.53***	-0.45	-0.44***	1.00					
7	Drinking Problem (MAST)	-0.16	-0.07	0.10	-0.10	-0.32**	0.25*	1.00				
8	Perceived PA barriers	-0.15	-0.01	0.30**	-0.13	-0.33**	0.40***	0.12	1.00			
9	Depression	-0.19	-0.22*	0.56***	-0.29**	-0.47***	0.67***	0.22*	0.32**	1.00		
10	PA Outcome Expectancy	-0.43***	-0.02	0.19*	-0.24*	-0.28**	0.25*	0.20*	0.28**	0.32**	1.00	
11	PA Efficacy	0.39***	0.18	-0.33**	0.28**	0.40***	-0.61***	-0.34**	-0.55***	-0.49***	-0.41***	1.00

Note: *p < .05**p < .01, ***p< .001***; LD = learning disability; MI = mental illness; PA = physical activity; MAST = The Short Michigan Alcoholism Screening Test.

The two disability type dummy variables (learning disability versus other, and mental health disability versus other were entered in the first step of the regression analysis. This set of variables did not account for a significant amount of variance in PA scores, $R = 0.21$, $\Delta R^2 = 0.04$, $\Delta R^2 = 0.04$, $F\ (2,\ 72) = 1.64$, $p = 0.20$. Being students with mental health disabilities was negatively related to PA scores ($r = .20$, $p < .05$). In contrast, a learning disability was not significantly related to PA ($\beta = -.16$, $t\ (74) = -1.21$, $p = 0.23$). Facilitators to PA were entered in the second step of the regression analysis. The addition of these variables accounted for a significant increase in variance of PA beyond that explained by the demographic covariates in the first step: $R = 0.49$, $R^2 = 0.24$, $\Delta R^2 = 0.19$, $F\ (2,\ 70) = 8.81$, $p < .001$). Social support for PA contributed significantly to the change in variance of PA scores ($\beta = 0.42$, $t\ (74) = 3.66$, $p < .001$) while school climate did not ($\beta = 15$, $t\ (74) = 1.31$, $p = .195$). Barriers to PA were entered in the third step of the regression analysis. This set of variables did not account for a significant amount of variance in PA scores beyond that explained by the predictors entered in the first and second steps, $R = 0.49$, $R^2 = 0.24$, $\Delta R^2 = 0.01$, $F\ (4,66) = 0.16$, $p > 0.05$.

In the final step, the two SCT factors were entered into the model. The addition of these two variables accounted for a significant amount of variance in PA scores beyond that explained by the previously entered variables, $R = 0.61$, $R^2 = 0.38$, $\Delta R^2 = 0.13$, $F\ (2,\ 64) = 6.73$, $p < 0.01$. Both self-efficacy for PA ($\beta = 0.30$, $t\ (74)$, $= 2.02$, $p < .05$) and outcome expectancy for PA ($\beta = 0.28$, $t\ (74) = 2.51$, $p < .05$) significantly contributed to the variance in the model, with higher levels of outcome expectancy and self-efficacy associated with an increase in PA behaviors of college students with disabilities. Social support for PA remained a significant predictor of PA in the final model ($\beta = 0.36$, $t\ (74) = 3.11$, $p < .01$).

The final regression model accounted for 38% of the variance in PA. Controlling for all other factors, social support for PA, PA outcome expectancy, and PA self-efficacy were significant predictors of college students with disabilities exercise behaviors, supporting the ability of Bandura's SCT factors to predict PA level.

Discussion

The purpose of the present study was to examine the utility of SCT as a model for predicting PA in college students with disabilities. The final model accounted for approximately 38% of the variance in PA, with self-efficacy, outcome expectations, and social support significantly predicting PA. In the final analysis, no impediments significantly influenced the degree to which individuals participated in PA. However, it was noted in the correlational analysis that each impediment (e.g. perceived stress, alcohol use, depression, and perceived barriers) had an inverse relationship with PA, offering support for the importance of acknowledging potential barriers to ensure the greatest likelihood of behavior change. These findings align with previous research and hold meaning for enhancing the lives of college students with disabilities. A recent article by Rimmer, Lau, and Young (2016) noted that studies related to PA and people with disabilities recommended that community service providers begin to consider options to make their exercise facilities and programs more accessible to people with disabilities. The researchers posit that sustainable effects of a successful short-term clinical exercise trial after the supports are removed (e.g. qualified research staff, funding for transportation, no charge for the program, and accessible facilities) is currently one of the major challenges confronting exercise and rehabilitation scientists. Therefore, understanding how to decrease the barriers for long term success is vital to assist students with disabilities to engage in long term positive outcomes post the college years.

The promise of the results lies in the fact that self-efficacy, outcome expectancies, and social support are factors that have been shown to be modifiable in college student populations. Thus, it seems likely that interventions aimed at increasing these factors in relation to PA would lead to increasing PA and establishing healthy lifestyles during this critical window for college students. The effect on long-term health outcomes for people with disabilities could be substantial. According to Racette, Deusinger, Strube, Highstein, and Deusinger (2005), weight gain, lack of regular exercise, and unhealthy eating patterns appeared to be typical among students in a study with data collected during 1999 and 2000. Findings such as this warrant more research and examination of how adverse behaviors may contribute to a decrease in exercise behaviors for college students with and without disabilities.

These results are also aided by previous research offering strong support for use of SCT-based interventions to encourage PA uptake and maintenance in settings serving both the general population and individuals living with disabilities, although not with college and university students (e.g. Keegan, Chan, Ditchman, & Chiu, 2012; Short, James, & Plotnikoff, 2013). For example, the value of social support for encouraging PA among people with disabilities has been consistently noted (Chiu et al., 2012; Gross, Vancampfort, Stubbs, Gorczynski, & Soundy, 2016; Huck, Finnicum, Morrison, Kaseroff, & Umucu, 2018; Stanish & Temple, 2012). Previous research on health behavior change has highlighted the importance of supportive climates (e.g. Ryan, Patrick, Deci, & Williams, 2008), and this may hold true for

university settings as well.

Despite some emphasis on adequate social supports in the college setting and emphasis on PA supports for people with disabilities, much less has been done to consider PA social supports specifically for college students with disabilities. There are a number of formal and informal ways that such supports might be fostered at the individual and institutional level for college students with and without disabilities. For instance, a formal institution-level approach might be to provide structures with accessibility for people with disabilities to engage in PA and fitness classes. At the individual and informal level, an additional support could include a peer mentoring program that promotes the interaction of senior students with incoming freshmen to promote healthy lifestyles. In this role, mentors could help mentees with the resistance of visiting the campus recreation facilities for the first time, finding group classes that might serve as a good fit, or taking advantage of other physical activities within the community (e.g, hiking, skiing, cycling). Additionally, college and university administrators could foster PA efforts with student recreation programs and wellness personnel to promote the use of facilities and services by students with disabilities. This might include a new marketing strategy that caters to wellness staff training, a health promotion philosophy, and advertising to promote inclusive fitness programs for students with disabilities. Higher education administrators could also hire certified inclusive fitness trainers, and perhaps offer skill building and fitness classes for students with disabilities.

Given the previously cited connection between health and college completion for students with disabilities, disability resource centers might do well to emphasize campus level supports for PA, including their availability and accessibility. Where lacking, disability resource centers would do well to advocate for greater availability and accessibility. Of course, many instances of health barriers resulting from disability cannot be ameliorated simply by increased PA. That said, people with disabilities noted for experiencing a risk for preventable secondary conditions may stand to benefit from formal supports to engage in desired PA, and a disability resource center may be the entity on campus most equipped to provide it. Disability services on campus can provide resources and education on PA and peer support for students during the initial intake which may help students feel more comfortable.

Regarding self-efficacy and outcome expectancies, recreation centers, intramural sports staff, and other stewards of PA on campus may play a critical role by ensuring that other staff and trainers are knowledgeable on disability accommodations for PA. Despite the fact that, barriers to PA on college campuses did not have a significant influence on PA in our sample, one of the most effective means for increasing self-efficacy and outcome expectancies is a history of positive experiences or success in the targeted task. It stands to reason then that staff or trainers with expertise on how to support and facilitate an inclusive and safe environment with disability accommodations will positively impact student's perceived self-efficacy and outcome expectancy related to PA. In support of the SCT, exercise self-efficacy for students with disabilities could also be enhanced with greater peer support and integrated group fitness classes at the university level.

Limitations

In interpreting the findings of this study, several consider--ations should be made. The instrument utilized for data collection was an anonymous self-report survey, and consequently, may not align with actual exercise behaviors. Socially desirable responding may also have influenced the sample to provide inaccurate answers when describing their alcohol intake due to the sensitive nature of the topic, or because they are concerned about the consequences of underage drinking. It is important to note that, based on an a priori analysis, the study was not sufficiently powered. It is possible that some of the non-significant variables (e.g. disability type, barriers) might be predictive of PA participation in a larger sample. Additionally, the small sample limited the demographic variables that could be included in the regression model. The fact that this study recruited participants from only two universities is another potential factor to consider regarding the outcome. However, due to the small sample population, it warrants a follow-up study with recruitment from other universities in a future study.

Future Research

The results of this study offer several considerations for future research. First, it would be beneficial to investigate any group differences in studies utilizing more diverse samples. For example, it would be advantageous for further research to examine how self-efficacy is or is not related to college athletic performance in a comparison study between college students with disabilities and college students without disabilities. According to Anstiss, Meijen, and Marcora, (2018), the relationship between self-efficacy and performance is distinct in the endurance sport domain. For example, the types of factors fostering the development of self-efficacy for individuals with physical disabilities may be somewhat different from factors promoting self-efficacy among individuals living with various mental disorders. Different groups of individuals with disabilities may report different experiences. Furthermore, it would be useful to compare

individuals from different universities in diverse geographical areas to create a more generalizable understanding of how college students with disabilities consider PA-related behavior.

To fully understand the relevance of this study's findings, it will also be important to evaluate the outcomes of specific interventions aimed at enhancing SCT states among college students with disabilities, such as strategy-based experimental studies. A review by Williams and French (2011) provides several suggestions for how interventions might facilitate a positive sense of the SCT constructs. However, until such strategies are found to be effective for encouraging PA-behavior among college students with disabilities, the true applicability of SCT for this group will remain unknown.

References

Anstiss, P. A., Meijen, C., & Marcora, S. M. (2018). The sources of self-efficacy in experienced and competitive endurance athletes. *International Journal of Sport and Exercise Psychology,* 1-17.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior, 31*(2), 143-164.

Becker, H., & Stuifbergen, A. (2004). What makes it so hard? Barriers to health promotion experienced by people with multiple sclerosis and polio. *Family & community health, 27*(1), 75-85.

Becker, H., Stuifbergen, A. K., & Sands, D. (1991). Development of a scale to measure barriers to health promotion activities among persons with disabilities. *American Journal of Health Promotion, 5*(6), 449-454.

Bradshaw, T., Lovell, K., & Harris, N. (2005). Healthy living interventions and schizophrenia: A systematic review. *Journal of Advanced Nursing, 49*(6), 634-654.

Chiu, C. Y., Lynch, R. T., Chan, F., & Rose, L. (2012). The Health Action Process Approach as motivational model of dietary self-management for people with multiple sclerosis: A path analysis. *Rehabilitation Counseling Bulletin, 56*(1), 48-61.

Cohen, S. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The Claremont Symposium on Applied Social Psychology. The social psychology of health* (pp. 31-67). Thousand Oaks, CA: Sage Publications.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*(4), 385-396.

Cohen, S. & Williamson, G. (1988). Perceived stress in a probability sample of the US in S. Spacapam & S. Oskamp (Eds.), The social psychology of health: Claremont symposium on applied social psychology (pp. 31-67).

Devine, M. A. (2013). Group Member or Outsider: Perceptions of Undergraduates with Disabilities on Leisure Time Physical Activity. *Journal of Postsecondary Education and Disability, 26*(2), 119- 133.

Eagle, D., Chan, F., Iwanaga, K., Reyes, A., Chiu, C., Bezyak, J., Brooks, J. M., Keegan, J. & Muller, V. (2017) Health promotion for people with disabilities: A primer for rehabilitation counsellors. *Australian Journal of Rehabilitation Counseling*, 23(2), 98-111.

Eichorn, L., Bruner, K., Short, T., & Abraham, S. P. (2018). Factors that affect exercise habits of college students. *Journal of Education and Development, 2*(1), 20.

Faulkner, G., & Biddle, S. (1999). Exercise as an adjunct treatment for schizophrenia: A review of the literature. *Journal of Mental Health, 8*(5), 441-457.

Fleming, A. R., Edwin, M. Hayes, J. A., Lockard, A. J., & Locke, B. D. (2018). Treatment-seeking college students with disabilities: Presenting concerns, protective factors, and academic distress. *Rehabilitation Psychology, 63*(1), 55-67.

Greene, G. W., Schembre, S. M., White, A. A., Hoerr, S. L., Lohse, B., Shoff, S., ... & Blissmer, B. (2011). Identifying clusters of college students at elevated health risk based on eating and exercise behaviors and psychosocial determinants of body weight. *Journal of the American Dietetic Association, 111*(3), 394-400.

Gross, J., Vancampfort, D., Stubbs, B., Gorczynski, P., & Soundy, A. (2016). A narrative synthesis investigating the use and value of social support to promote physical activity among individuals with schizophrenia. *Disability and Rehabilitation, 38*(2), 123-150.

Henchy, A. (2011). The influence of campus recreation beyond the gym. *Recreational Sports Journal, 35*, 174-181.

Henchy. A. (2013). The perceived benefits of participating in campus recreation programs and facilities: A comparison between undergraduate and graduate students. *Recreational Sports Journal, 37*, 97-105.

Huck, G. E., Finnicum, C., Morrison, B., Kaseroff, A., & Umucu, E. (2018). Consumer perspectives on physical activity interventions within assertive community treatment programs. *Psychiatric Rehabilitation Journal, 41*(4), 312-318.

Kampf, S., & Teske, E. J. (2013). Collegiate recreation participation and retention. *Recreational Sports Journal, 37*, 85-96.

Katz, D. A., McHorney, C. A., & Atkinson, R. L. (2000). Impact of obesity on health-related quality of life in patients with chronic illness. *Journal of General Internal Medicine, 15*(11), 789-796.

Keating, X. D., Guan, J., Piñero, J. C., & Bridges, D. M. (2005). A meta-analysis of college students' physical activity behaviors. *Journal of American college health, 54*(2), 116-126.

Keegan, J. P., Chan, F., Ditchman, N., & Chiu, C. Y. (2012). Predictive ability of Pender's health promotion model for physical activity and exercise in people with spinal cord injuries: A hierarchical regression analysis. *Rehabilitation Counseling Bulletin, 56*(1), 34-37.

Knöchel, C., Oertel-Knöchel, V., O'Dwyer, L., Prvulovic, D., Alves, G., Kollmann, B., & Hampel, H. (2012). Cognitive and behavioral effects of physical exercise on psychiatric patients. *Progress in Neurobiology, 96*(1), 46-68.

Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: The PHQ–4. *Psychosomatics, 50*(6), 613-621.

Kroll, T., Kehn, M., Ho, P., & Groah, S. (2007). The SCI Exercise Self-Efficacy Scale (ESES): Development and psychometric properties. *International Journal of Behavioral Nutrition and Physical Activity, 4*(34).

Li, K., Liu, D., Haynie, D., Gee, B., Chaurasia, A., Seo, D. C., ... & Simons-Morton, B. G. (2016). Individual, social, and environmental influences on the transitions in physical activity among emerging adults. *BMC public health, 16*(1), 682.

Lombardi, A. R., Murray, C., & Gerdes, H. (2011). College faculty and inclusive instruction: Self-reported attitudes and actions pertaining to Universal Design. *Journal of Diversity in Higher Education, 4*(4), 250-261.

Lynch, R. T., & Chiu, C. Y. (2009). Health promotion interventions for people with chronic illness and disability. In F. Chan, E. Cardoso, & J. Chronister (Eds.), *Psychosocial interventions for people with chronic illness and disability: A handbook for evidence-based rehabilitation health professionals* (pp. 277-305). New York: Springer Publishing Company.

Martin Ginis, K. A., Ma, J. K., Latimer-Cheung, A. E., & Rimmer, J. H. (2016). A systematic review of articles addressing factors related to physical activity participation among children and adults with physical disabilities. *Health psychology review, 10*(4), 478-494.

Mezzacappa, E. S., Guethlein, W., Vaz, N., & Bagiella, E. (2000). A preliminary study of breast-feeding and maternal symptomatology. *Annals of Behavioral Medicine, 22*(1), 71-79.

Mimura, C., & Griffiths, P. (2004). A Japanese version of the perceived stress scale: translation and preliminary test. *International Journal of Nursing Studies, 41*(4), 379-385.

Motl, R. W., Dishman, R. K., Saunders, R. P., Dowda, M., Felton, G., Ward, D. S., & Pate, R. R. (2002). Examining social-cognitive determinants of intention and physical activity among black and white adolescent girls using structural equation modeling. *Health Psychology, 21*(5), 459.

Muller, L., & Spitz, E. (2003). Évaluation multidimensionnelle du coping: Validation du Brief COPE surune population française. *L'Encéphale, 29*(6), 507-518.

Newman, L., Wagner, M., Cameto, R., Knokey, A. M., & Shaver, D. (2010). *Comparisons across time of the outcomes of youth with disabilities up to 4 years after high school. A report of findings from the National Longitudinal Transition Study (NLTS) and the National Longitudinal Transition Study-2 (NLTS2)* (NCSER 2010-3008). National Center for Special Education Research. Menlo Park, CA: SRI International.

Nunnally, J. C. (1975). The study of change in evaluation research: Principles concerning measurement, experimental design and analysis. In E. L. Struening, & M. Guttentag (Eds.), *Handbook of evaluation research* (pp. 101-137). New York, NY: Sage.

Paeratakul, S., Lovejoy, J. C., Ryan, D. H., & Bray, G. (2002). The relation of gender, race and socioeconomic status to obesity and obesity comorbidities in a sample of U.S. adults. *International Journal of Obesity & Related Metabolic Disorders, 26*(9), 1205-1210.

Plotnikoff, R. C., Costigan, S. A., Williams, R. L., Hutchesson, M. J., Kennedy, S. G., Robards, S. L., ... & Germov, J. (2015). Effectiveness of interventions targeting physical activity, nutrition and healthy weight for university and college students: a systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity, 12*(1), 45.

Racette, S. B., Deusinger, S. S., Strube, M. J., Highstein, G. R., & Deusinger, R. H. (2005). Weight changes, exercise, and dietary patterns during freshman and sophomore years of college. *Journal of American College Health, 53*(6), 245-251.

Ravesloot, C., Seekins, T., & White, G. (2005). Living well with a disability health promotion intervention: Improved health status for consumers and lower costs for health care policymakers. *Rehabilitation Psychology, 50*(3), 239–245. doi:10.1037/0090-5550.50.3.239

Resnick, B., Zimmerman, S. I., Orwig, D., Furstenberg, A. L., & Magaziner, J. (2000). Outcome expectations for exercise scale utility and psychometrics. Journal of Gerontology Series B: *Psychological Sciences and Social Sciences, 55*(6), S352-S356.

Rimmer, J. H., Lai, B., & Young, H. J. (2016). Bending the arc of exercise and recreation technology toward people with disabilities. *Archives of physical medicine and rehabilitation, 97*(9), S247- S251.

Roberts, S. H., & Bailey J. E. (2011). Incentives and barriers to lifestyle interventions for people with severe mental illness: A narrative synthesis of quantitative, qualitative, and mixed methods studies. *Journal of Advanced Nursing, 67*(4), 690-708.

Ryan, R. M., Patrick, H., Deci, E. L., & Williams, G. C. (2008). Facilitating health behavior change and its maintenance: Interventions based on self-determination theory. *European Health Psychologist, 10*(1), 2-5.

Sallis, J. F., Grossman, R. M., Pinski, R. B., Patterson, T. L., & Nader, P. R. (1987). The development of scales to measure social support for diet and exercise behaviors. *Preventative Medicine, 16*(6), 825-836.

Schnoll, R., & Zimmerman, B. J. (2001). Self-regulation training enhances dietary self-efficacy and dietary fiber consumption. *Journal of the American Dietetic Association, 101*(9), 1006-1011.

Selzer, M. L., Vinokur, A., & van Rooijen, L. (1975). A self-administered short Michigan Alcoholism Screening Test (SMAST). *Journal of Studies on Alcohol, 36*(1), 117-126.

Short, C. E., James, E. L., & Plotnikoff, R. C. (2013). How Social Cognitive Theory can help oncology-based health professionals promote physical activity among breast cancer survivors. *European Journal of Oncology Nursing, 17*(4), 482-489.

Stanish, H. I., & Temple, V. A. (2012). Efficacy of a peer-guided exercise program for adolescents with intellectual disability. *Journal of Applied Research in Intellectual Disabilities, 25*(4), 319-328.

Stowell, J. R., Kiecolt-Glaser, J. K., & Glaser, R. (2001). Perceived stress and cellular immunity: When coping counts. *Journal of Behavioral Medicine, 24*(4), 323-339.

Trost, S. G., Blair, S. N., Khan, K. M. (2014) Physical inactivity remains the greatest public health problem of the 21st century: evidence, improved methods and solutions using the '7 investments that work' as a framework. Br J Sports Med 48:169–170. https://doi.org/10.1136/bjsports-2013-093372

Tyson, P., Wilson, K., Crone, D., Brailsford, R., & Laws, K. (2010). Physical activity and mental health in a student population. *Journal of Mental Health, 19*(6), 492-499.

Üstün, T. B., Chatterji, S., Kostanjsek, N., Rehm, J., Kennedy, C., Epping-Jordan, J., ... & Pull, C. (2010). Developing the World Health Organization disability assessment schedule 2.0. *Bulletin of the World Health Organization, 88*(11), 815-823.

van den Berg-Emons, R. J., L'Ortye, A. A., Buffart, L. M., Nieuwenhuijsen, C., Nooijen, C. F., Bergen, M. P., ... & Bussmann, J. B. (2011). Validation of the Physical Activity Scale for individuals with physical disabilities. *Archives of physical medicine and rehabilitation, 92*(6), 923-928.

Warttig, S. L., Forshaw, M. J., South, J., & White, A. K. (2013). New, normative, English sample data for the short form perceived stress scale (PSS-4). *Journal of Health Psychology, 18*(12), 1617-1628.

Washburn, R. A., Zhu, W., McAuley, E., Frogley, M., & Figoni, S. F. (2002). The physical activity scale for individuals with physical disabilities: Development and evaluation. *Archives of Physical Medicine and Rehabilitation, 83*(2), 193-200.

Weil, E., Wachterman, M., MacCarthy, E., Davis, R., O'Day, B., Iezzoni, L., & Wee, C. C. (2002). Obesity among adults with disabling conditions. *Journal of the American Medical Association, 288*(10), 1265–1268.

Williams, K. E., & Bond, M. J. (2002). The roles of self-efficacy, outcome expectancies and social support in the self-care behaviors of diabetics. *Psychology, Health & Medicine, 7*(2), 127-141.

Williams, S. L. & French, D. P. (2011). What are the most effective intervention techniques for changing physical activity self-efficacy and physical activity behavior—and are they the same? *Health Education Research, 26*(2), 308-322.

Wise, R. A. (2002). Brain reward circuitry: Insights from unsensed incentives. *Neuron, 36*(2), 229-240.

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FROM THE FIELD

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Learning on the Journey: A Humanities Odyssey from Academia to Corporate America and Back

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An experienced career services professional shared with me an aphorism he and his peers often use: "if you don't know where you're going you'll end up somewhere else." This paper is the story of my career-long journey. I started out to find one thing but ended up finding many other valuable things instead. Seen over time, my journey appears random, like the flight of a butterfly. As a story, it is like a butterfly pinned in a display case, stopped so others can see its characteristics and patterns. What appears random is a combination of serendipity and intentionality. *Reflection* results in course corrections. *Discipline* generates forward motion. *Agency*—the confidence that one controls one's destiny—supports risk-taking.

The story's foundation is a humanities education: under--graduate English major at a small liberal arts college and interdisciplinary graduate work in literature, history, and social science. My education cultivated perennially valuable skills in critical thinking, communication, and problem solving as well as a disposition to continued *Learning*. As a result, I acquired useful capabilities along the way.

Many of the lessons I learned throughout the journey were about job search principles familiar to career professionals and experienced job changers. Other lessons were about tools I needed to create relationships with people who were willing to take a stand for me. The story, though, is as much about how and when I learned as what I learned. I was largely self-taught. I did not have the benefit of working with career professionals until midway in the journey. I hope that the story of my journey, paused for examination, will provision job seekers in every career phase with principles and tools for their own journeys. I also hope the story of my journey will remind career professionals, whether more or less experienced, trained in career counseling or in business functions, of the credence and validity of enduring job search principles and techniques. Above all, I hope my story will confirm the value of a humanities education.

Setting Out

I set out to be a college professor. I majored in English literature as an undergraduate at Occidental College. My graduate work in American Studies and teaching assistantships at Purdue and the University of Iowa started me on the path. Then things changed. When I was finishing my PhD in 1975, traditional academic jobs were hard to find, especially for those of us in non-technical disciplines. They still are. I watched other graduate students in my department cobble together contract and part-time teaching jobs at various institutions. This did not seem like a viable long-term career track. I needed to find alternative opportunities. I ended up with a human resources job in General Motors. How I did so reflected current thinking and best practices at the time. However, I learned them by trial and error.

At first, I fell into the "is majoring in English worth it?" swamp where data showed that the market questioned the value of an English major. It still does. As recently as 2019, a Bankrate study ranked 162 college majors by median income and unemployment rate. English came in at 132. A 2019 survey of 250,000 college graduates by Payscale reported that one in five with a humanities degree said that, next to their student loans, their choice of major was their biggest educational regret, and in 2017, Market Watch called English "the most regretted college major in America." Attitudes were no different in the early and mid-1970s, and it was worse for those with advanced degrees.

I also had to overcome prejudices regarding the relationship between liberal arts education and work. I was anxious because I did not know how to connect and articulate what I learned in college classrooms with the realities of the world of work, especially in contrast with other candidates who had studied science, technology, and business. It was difficult for me to assure my parents and in-laws that there would be a return for me and my wife, Barbara, on our

investment in my education.

Furthermore, I encountered prejudices which I thought academics held of business people and which I thought business people held of academics. This was the 1970's. The Vietnam war continued to rage, supported by industrialists and disparaged by students and academics. I believed those in business thought of academics as intellectual snobs, cultural elitists, fuzzy thinkers, averse to competition, radical, impractical, isolated and taking refuge from the real world, performing tasks that were not work in fields that were irrelevant. I thought most academics believed business people to be unethical, motivated solely by profit, exploitative, narrow-minded, and uneducated. I needed to correct these misconceptions.

To begin, I established two tracks to seek employment following receipt of my PhD. During my doctoral program at Iowa I served as a graduate student representative to the boards of the mid-continent and national American Studies associations. I liked that work. It involved dealing with leading professors and graduate students from other universities on issues like conference planning and trends in curriculum and research. So on my first track I explored non-traditional career options outside the academy where I might leverage that experience and where academically cultivated skills could be useful and valued. The second track was to apply for traditional academic faculty positions. I pursued the two tracks simultaneously.

On the first track I quickly learned that I needed to gain internal strength and self-confidence in my worth so I could represent it to non-traditional employers of humanities PhDs. Initially I engaged the faculty and administrators that I worked with in my graduate programs at Purdue and Iowa, and in the American Studies associations. They shared predictable ideas with me: journalism, historical societies, museums, educational technology, presidential libraries, non-teaching roles in higher education, the federal government, think tanks, consulting. These were good places to begin, but I wanted more market knowledge and sought it on my own.

I found that, in reality, employers did hire liberal arts graduates. A late 1970's Midwest College Placement Association study revealed that over two-thirds of companies did so, averaging fifteen per-cent of total hires. The Bell System conducted longitudinal studies that concluded "humanities and social science majors in particular continue to make a strong showing in managerial skills and have experienced considerable business success." Studies of employers by UCLA, Michigan State, Midwest College Placement Association, Personnel Journal, and the University of Missouri concluded that employers wanted employees who were not narrowly trained, but who could read, write, compute, solve problems and adequately express themselves. These were the factors that affected which candidates were hired and which were subject to negative decisions. I began to gain confidence that I could contribute beyond my subject matter expertise.

I hardly started my exploration of non-traditional opportunities when the second track yielded a newly-minted humanities PhD's dream job offer: a tenure track position as an Assistant Professor at Virginia Commonwealth University in Richmond. Strangely, this proved to be a dilemma for me. While it was an offer my fellow PhD friends would have killed for, I had reservations. I had been a teaching assistant at both Purdue and Iowa, and I had not found that to be particularly satisfying. Graduate teaching assistants were provided little to no training in curriculum development or delivery. I wasn't very good then at lecturing or facilitating discussions. Moreover, the thought of teaching the same courses semester after semester, year after year, felt like the kiss of death to me. The Babe Ruth chapter of my dissertation on "Popular Heroes of the 1920's" had been published as an article in the *Journal of Popular Culture*, but the prospect of generating more peer-reviewed academic research seemed tedious and lacking practical impact. Most importantly, I wanted to explore non-traditional options, and I had hardly started that. If I took the VCU job, I would always wonder what I'd missed. I looked back with regret on some opportunities I passed up in high school and college to concentrate on my studies, and I didn't like those feelings. In high school many of my friends were in the jazz band. Although I liked the music they played, I did not play an instrument myself. However, one day a notice appeared in the school's daily announcements. The jazz band sought someone who wanted to learn to play the bass; no experience required. I was intrigued, but too shy and too committed to my studies to answer the ad. It ran for a long time before they found someone. Since then, I've regretted the missed opportunity to be part of an ensemble.

In college, when the campus was embroiled in the controversies of the mid-60's I was asked to take over as editor of the school newspaper. I was respected because I was a good student. I was known to be a thoughtful and articulate writer but not associated with any particular side. I turned this down in favor of my studies. Here, too, I looked back with regret at a missed opportunity. If I accepted the VCU job, I knew I would again be in a position to regret what might have been. I declined the offer. My friends thought I was crazy, but I took the risk. That decision worked out well, and it changed my attitude toward risk-taking. I learned that it's important to have decisions to make. They clarify your values because,

regardless of the outcome, you know what you chose and why.

First Stops: Course Correction 1

While I wrestled with the VCU decision, one of the other members of the American Studies Association board was working on a grant to fund two one-year positions with the US Information Agency's cultural affairs division. She and I agreed that such a position would be a good fit for me. Unfortunately, her anticipated funding got cut to two half-time positions. I offered what seemed like a sensible suggestion: combine the two into one full-time position and hire me! To my surprise, she agreed. In August 1975 Barbara and I were off to Washington DC where I was to be the US representative of a group of German high school teachers who were creating a curriculum on American culture to teach their students English. They needed to identify US-produced audio-visual materials to supplement the instruction.

The project leader was a tall caped German aristocrat. The lead teachers were a married couple based in Hamburg. Through this project, I was able to travel to Hamburg twice, once by myself in December and once with Barbara at the end of the project in June. This was our first experience of international travel together. On the December trip, I traveled on Icelandic Airlines from New York to Reykjavik to Luxembourg where I caught a train to Hamburg, my first experience with a European railroad. I was to stay with the Hamburg couple at their home. I arrived in Hamburg after dark and took a bus to their neighborhood. I had their address written on a piece of paper which I showed to the bus driver. Their home was just beyond the end of the line. I was the last person on the bus at the last stop. I knew no German, and the driver knew no English. So, adopting the common practice of those speaking to someone who doesn't know their language, he explained how to find my hosts' house very s-l-o-w-l-y and LOUDLY. While his volume and speed did not help me understand his directions, I did find their home. It was very comfortable, and the company was congenial. I learned a lot about their preferences and standards for the materials I was proposing to them. My judgements were based on topic content and theirs were based on cross-cultural applicability. It proved useful for the project to bring our perspectives about such tools as audio cassettes and filmstrips closer together. In addition, I had to adapt to the typical northern European breakfasts of brown bread and cheese, and my host gave me his "obscenic" tour of Hamburg by driving me through the red-light district.

While the project introduced me to international travel and began to make me aware of different cultural perspectives, the career development took place in Washington, DC. Barbara and I lived there during the US Bi-centennial year, and there was much to see and do in and around Washington. All museums and monuments had special exhibitions. We were within driving distance of colonial and Civil War sites in Northern Virginia, Maryland, and Southern Pennsylvania, and we saw many. Friends and relatives visited us frequently to take advantage of the Bi-centennial celebrations. We caught Potomac fever. As the one-year US Information Agency project neared completion I tried hard to find ways to stay in the area and work for the federal government.

My co-workers had a different idea. Based on my work with the German project, they strongly encouraged me to apply for the Foreign Service. I tried very hard to get into the Foreign Service, taking the examination three years in a row. I always did well on the written examination, but I did less well on the interviews. A high introvert, I had not yet mastered the art of casual conversation on politics, arts, and international affairs. To get international experience to enhance my qualifications, my USIA colleagues advocated that I take a Fulbright lectureship outside the U.S., and Iran had an opportunity similar to my USIA project. To recognize the US Bi-centennial, Iran was establishing programs in American Studies at four Iranian universities. The idea was that if Iranian students knew more about American culture, they would be better job candidates for all the American companies that were moving into Iran. I was awarded a one-year lectureship to start the program at the University of Isfahan in what was at the time the second largest city in Iran. While the programs at the other three schools were placed in social science departments, mine was housed in the department of foreign languages. It was to be used as part of the curriculum for English majors, a perfect fit given my USIA experience. Isfahan's renown as "The Pearl of Persia" based on its Seventeenth Century arts and monuments added allure to the opportunity.

When I learned I had been accepted, I rushed home. Barbara and I had to look up where Iran was in our atlas. We decided that this would be a once-in-a-lifetime experience, not to be passed up even though it tilted me back to academia and would require continued job hunting when it was over. We decided to risk it.

Our experience in Iran was life-changing. The perspectives gained through living and working in a culture so very different than the one we were used to, especially a Muslim one, set us on a course for a life of openness to other countries and cultures. Living in Iran when it was building towards revolution gave us insight into events that shaped the relationship between our two countries for the next 40 years and more. The two temporary cross-cultural experiences furthered personal awareness and risk tolerance, influenced my

subsequent personal development and decision-making, and opened the way to new opportunities.

Listening And Learning: Course Correction 2

At the conclusion of my lectureship Barbara and I returned to Washington, DC in July 1977, eighteen months before the Shah fell. Without benefit of reliable telephone service, internet or email in Iran, I was unable to start my search from there. To call Tehran from Isfahan, for example, it was necessary to delegate the task of dialing to a low-level department employee and return hours later to take the call when it finally went through.

When we arrived in Washington, Barbara was seven months pregnant with our first son; I had no job and no prospects. Recalling how a colleague helped me get into the USIA, I set about networking furiously. I used conversations to gain knowledge of different jobs and organizations, amazed by what people found to do and how it satisfied them. I again applied for the foreign service. I tried to find government jobs that would enable us to stay in Washington, DC. I approached museums and other organizations that I thought might value someone with some knowledge of history and the ability to communicate and solve problems. I gained greater insight into which of my skills were valued outside the academy.

In the end, a friend of my father, a General Motors executive, introduced me to other GM executives who worked in Human Resources: the Vice President of Personnel, his capable second-in-command, and the Director of Placement and College Relations, among others. A conversation with one generated opportunities to speak with others in an attempt to find the right fit for a humanities PhD in an engineering-driven company. As I moved from one to another, I gradually learned smarter and smarter things to say. My first answer to what I was looking for was naive: I aspired to "get on the corporate ladder and advance."

In speaking with many others, I came to better understand the role and needs of the human resources function in GM and the unique value that I, a humanities PhD with international experience, could bring. The PhD meant that I could discipline myself over a long period of time to achieve a goal. The interdisciplinary humanities focus of my degree meant that I could see connections across boundaries to innovate, and the international experience showed that I was sensitive and adaptable to different cultures. As a result, I was able to develop and articulate some vision of how I could uniquely contribute to GM over time. This encouraged decision-makers to see how I could benefit short-term and how the company could benefit long-term from placing me in a desirable entry-level opportunity.

This dialog took time, though. Given the sense of urgency I felt to land an income and the impending birth of our child, I grew impatient with what I perceived to be GM's indecision. I issued an ultimatum: if you are interested, make me an offer; otherwise, I have to move on. As a result, I was offered a job as a Salaried Employee in Training on the corporate Personnel Administration and Development Staff that provided human resources services to the research and engineering staffs at the GM Technical Center in Warren, MI, a suburb of Detroit. Barbara and I relocated there in late October 1977, two weeks after the birth of our first son.

My position was a one-year rotational assignment starting with employment, hiring technicians and scientists, and moving to compensation. I discovered that I liked human resources work, and I found a group of congenial co-workers.

Reframing

I was pleased to have landed in a large and diverse corporation in a function where the work was satisfying. The experience of meeting, talking to, and working with men and women in GM, especially in Human Resources, dispelled the stereotypes I first encountered and demonstrated the proper—and more fulfilling—relationship between liberal arts education and work. Hiring practices showed that I had not been asking the right question. To successfully land the GM opportunity I had to reframe the quest. The question was not "what am I going to do with my education?" The more useful question, especially for candidates with humanities backgrounds, was "what is the work and what does it take to do it?" In other words, following John Stuart Mill's admonition that "men are men before they are lawyers or physicians, or manufacturers," it is important to distinguish between jobs in which one steps up to a task and applies oneself and professions in which school-learned knowledge is applied to work. As a humanities PhD, I qualified for jobs in which skills and judgment rather than subject area knowledge are applied, and in which managerial potential could be demonstrated.

This orientation fit with GM's emerging business challenges. Roger B. Smith, GM Chairman at the time, said the "new generation of business leadership . . . must continue to compete in the traditional marketplace where goods and services are sold, yes, but it must also enter a new marketplace—a marketplace of ideas, where the forces that shape society have always been determined. Only leadership with many and varied talents can hope to be successful in such an ideological marketplace—and this is why the liberal arts in industry are assuming so much importance today." The problem is that too often, as the then executive director of the American

Association of State Colleges and Universities put it, "corporate presidents go around making lovely speeches written by Ivy Leaguers about the value of a liberal arts education, but somehow don't communicate these views to their personnel departments doing the hiring." Recruiters can be stuck asking what one is going to do with a liberal arts education so they hesitate to recommend them as candidates to their internal customers, hiring managers. Liberal arts students are risky because their career interests are undemonstrated, their ability to adapt can't be predicted, and their skills can't be pigeonholed into specific job requirements on requisition forms. Smith's platitudes were no help to recruiters. I wanted to do something about that, and I soon got my chance.

Midway through my rotational assignment, I was transferred to downtown Detroit to join GM's corporate Placement and College Relations activity which oversaw college recruiting of engineers and a few MBAs at universities GM considered to be its "key institutions." The company aspired to collect their "fair share" of top technical talent from these schools. I worked closely with recruiters from various divisions to learn their organizations' talent needs. I worked closely with top executives who oversaw GM's relationships with a portfolio of the key institutions, including University of Michigan, University of Pittsburgh, University of Kansas, Marquette University and others. While working in that department I learned that GM's experience in hiring liberal arts graduates was similar to that of other employers. Centralized hiring records showed that twenty-two percent of salaried employees and eighteen percent of upper management held liberal arts degrees. Non-technical jobs existed in manufacturing, finance, accounting, purchasing, personnel, sales, materials management, and quality control. I completed a study that showed over two-thirds of GM's college hires were non-technical—split about evenly between business and liberal arts majors—and that there was no corporate oversight or selectivity exercised on the incoming stream of this talent and the institutions from which they came. I created a pilot program to recruit at ten elite midwestern liberal arts colleges where we found extraordinary students interested in opportunities with a manufacturing company. GM hired some of them even though a corporate hiring freeze was announced on the eve of the inaugural recruiting career fair. The results of this work won over nonbelievers in finance, engineering, and manufacturing functions who doubted the worth of this talent resource.

Initial work in GM's personnel staff, at the Technical Center and in the corporate headquarters, confirmed my liking for human resources work, and it introduced me to executives, managers, professionals, and other co-workers who were intelligent, committed, and good colleagues. I was able to make useful and important contributions. I felt I was accepted and treated well within the organization, and I had fun with my job. These became two touchstones that I used as a shorthand review of my progress and satisfaction year after year: was I having fun and did I feel well-treated?

First Landing: Reflection

At this stage, I had successfully transitioned from academia to corporate America, with a detour through a taste of the foreign service and a year abroad as an expatriate. The process by which I made this transition was largely self-made and self-directed. It was informed by two classic books: *Go Hire Yourself an Employer* by Richard K. Irish, "a comprehensive manual featuring proven strategies and techniques for job hunters," and Richard Bolles' *What Color is Your Parachute*, still positioned in 2020 (with a forthcoming 2021 edition) as "your guide to a lifetime of meaningful work and career success." The process reframed my quest for non-traditional employment and allowed me to approach the market with a broad perspective and confidence in my own skills and experiences. Through networking I interviewed for information and discovered what motivates and satisfies others. This boosted my confidence: "I could do that."

Networking also developed my knowledge of skills and traits that employers valued in entering talent regardless of field of study. I learned to tell stories that showcased my experience and learning, and I applied my new knowledge to the search. I used creativity to identify and articulate transferrable skills and to gain opportunities, such as combining funding to create the USIA position. I exercised courage to take risks, declining the VCU job and embracing the opportunity in Iran. I was candid and said what needed to be said to move opportunities such as the USIA project and GM's interest forward. I was courteous and treated others as I would want to be treated. This turned out to be a differentiator. I learned that I should be seeking a person as much as a position, someone who was willing to gamble on someone like me because of a shared connection—a mutual acquaintance, similar educational background, common interests—something that allowed them to be comfortable championing my potential. This was the case for me with General Motors. I met a VP level executive who had been a Harvard professor and one who had graduated as a history major from a small liberal arts college. I met another key decision-maker who had been a history major at Yale. In today's market, decision makers must connect with a diverse candidate pool. Mentors and sponsors, often of different races than candidates, remain critical links. Education and placement organizations facilitate

connections. While individuals of different races may share personal connections, their mutual interest is in the advancement of top talent.

Although my approach was rooted in internal strength, confidence in my self-worth, and demonstrable skills, it was neither systematic nor well-disciplined. It was only later that I learned how I could bring discipline to the quest and connect a desirable immediate opportunity to a longer-term future. At that time, all I knew to do was to talk to as many people as I could and try to learn as much as I could about where I might enter. Later I learned to also seek for knowledge, experience, contacts, and learning that would get me closer to bringing a longer-term vision to life.

Corporate America

To my detriment, I did not apply a similar process to my GM career development. Instead, I relied on mentors and sponsors to put me forward for opportunities. This worked well for a time. In 1981 when the finance and insurance organization then known as GMAC moved its headquarters from New York to Detroit I was the first person hired in Detroit. I left the placement and college relations staff to hire the people in Detroit who would replace those left behind in New York. I later moved to supervise the executive and expatriate compensation area for the GMAC organization. Here again I found congenial colleagues who valued my work and treated me well, including the personnel director, my direct managers, key employees in my department, and other co-workers. After four years at GMAC, I moved back to the corporate personnel staff to research and write policies and papers on people strategies. Here, too, the department director and my peers were fun to work with, and we did important work. I also was able to continue college relations work for GM at Yale and Columbia universities in collaboration with high level executives who oversaw the GM relationships with those schools. As such I headed teams of alumni to promote GM philanthropy and recruiting at those schools. I was judged a high potential employee and was on a fast track for an executive position in less than ten years.

An unexpected but welcome diversion occurred in 1986 when I received an offer to join the path-breaking GM-Toyota joint venture in Fremont, California, NUMMI (New United Motor Manufacturing, Incorporated). This placement was partially a result of an executive's knowledge of my California roots. Bill MacKinnon was a top executive on the personnel staff, GM's key executive for Yale, and a mentor to me since my first days in GM. He was remarkable in his ability to retain details of his employees' personal interests and circumstances. For example, in passing I once mentioned that my father, a Californian, had served in the Navy during World War II on a heavy cruiser, the USS Salt Lake City. Later Bill ran across an oil painting of the ship. He managed to send my father a photograph of the painting which my father had framed. It hung on my father's wall till his death. It now hangs on my wall in tribute to my father and to Bill. Bill recalled my California background along with my GM track record and high potential designation, and he sponsored me for the Bay Area assignment. By then Barbara and I had another son, born in 1981 (the year my mother died), and the relocation to California enabled our boys to connect with many relatives, including their grandfather, the World War II Navy veteran.

The three-year NUMMI assignment was another life-changing experience. Toyota's system of automobile manufacturing and its supporting organizational culture and leadership philosophy were very different from GM's and yielded higher quality and lower cost vehicles. My exposure to it led me to an assignment in GM Europe, a newly-formed organization that was directing the transition of all GM's European operations from mass production to lean production. During my interviews, I asked GM Europe top management to speak about their challenges in leading the change. Listening to their responses allowed me to show how my experience with the Toyota Production System could be applied. I leveraged that knowledge to ask for a promotion to accept the assignment with GM Europe. As a result, two roles were combined, and I was promoted to executive in charge of both management and organization development to support the transition. My experience in GM Europe was enlightening but challenging, and I struggled. This is chronicled in an unflattering *Harvard Business Review* case study about corporate use of expatriate assignments and the preparation and post-assignment utilization of expatriates.

Shock And Grief

In 1992, at the conclusion of the three-year assignment in Europe, I was repatriated to Detroit and back into the corporate personnel staff. At the time, the North American auto industry was in a depression. Although in my new job I led development and delivery of quality improvement workshops for 1200 employees that resulted in reductions in business process time and effort, it felt like my real job was to teach supervisors how to tell people they were no longer needed. Furthermore, colleagues I had worked with over the years were leaving the organization. I had a succession of three bosses in less than a year. In the absence of many of my past sponsors, mentors, and bosses, my struggles as an expatriate caused decision makers to perceive my earlier career negatively, a 'reverse halo effect.' Reputation tarnished,

my job performance assessment in my new organization suffered. I no longer felt like I was having fun, and I no longer felt I was well-treated. I learned that I should have added a third question to my simple assessment questions: was I comfortable in the organization's culture? My experiences in the Japanese and European organizations made me feel like an outsider back in GM North America.

By 1993 GM was offering severance packages, and I was encouraged to accept one—or a demotion. My failure to adapt my job-seeking experience to a career development process inside a huge multi-organization corporation came home to roost. I lacked internal coaching and mentoring resources to develop realistic self-awareness of my situation and the range of potential GM career options.

The feedback I received with the offer of a buyout was painful to hear. My experience in GM Europe and how it was perceived colored perceptions of my prior experiences as well as how my performance in my new job was evaluated. I was offered an opportunity to be a candidate for another job in the organization, but I was told I finished "dead last." At the same time, the corporate business objective was to eliminate the number of executives and highly paid individuals, and I was no longer a high potential investment. I was confused, hurt, disappointed, and felt isolated. I sought counsel from my past mentors and sponsors, one of whom had left GM himself. In a breakfast conversation one shared a similar experience in his past. When he was confronted with the prospect of lowered responsibility he requested a more drastic multi-level demotion and worked his way back up. However, I took the communication I received personally and felt compelled to leave the organization.

To deal with my hurt, I went through something like Elizabeth Kubler-Ross's stages of grief. Although my job at the time of my repatriation felt okay, the current downturn in GM North America generated rumors and signals of change that resulted in worry and concern. Still, I was shocked to learn that the layoffs and terminations applied to me. At first, I experienced denial—this couldn't happen to me given the investment the organization made in me and my career. Furthermore, I'd accrued valuable human capital in lean manufacturing, the human resources systems and leadership practices that supported it, and how to lead the organization change needed to implement it. I became angry and blamed my plight on the loss of the enlightened people with whom I'd worked over the years and the unenlightened group that remained. In fact, I hadn't invested in maintaining and developing internal social capital. Too proud and disappointed to bargain, I decided to leave GM and accepted the buyout.

I became depressed and sought help, first from a trusted friend and counselor at church and then from a clinical psychologist. Meanwhile, I asked for GM sponsorship to become certified in Myers Briggs and to attend the Dale Carnegie Course. I thought the former could help me develop a consulting practice and the latter would help me rebuild confidence and address some of the feedback I'd received in the communication about my severance. GM was agreeable. As it turned out, it was not necessary for me to put the Myers Briggs training to use as an income opportunity. However, the Dale Carnegie course was very inspiring, as much for what I saw it doing for the other participants as well as for how I benefitted. I was so pleased with the outcomes for me and others that I volunteered as a "graduate assistant" in programs before leaving Detroit to take a new position in the Phoenix area. This involvement helped me move forward from depression to new opportunities.

Discipline: Course Correction 3

Fortunately, the GM severance package included the services of an outplacement firm, Drake Beam Morin. Once I started sessions at DBM, I was able to accept my situation, commit to a process and timeline to find a new opportunity, and take advantage of the significant financial windfall in the severance incentive. Working with DBM's disciplined processes helped me understand and expand the self-made process that took me to the US Information Agency and General Motors years before. Using their professional guidance and tools, I again set out to seek opportunities on two tracks. First, I sought human resources opportunities. Second, reversing the thinking I used when leaving graduate school, I enlarged my perspective. I wondered if there were universities that would value an academic credential, experience in corporate human resources, particularly education and training and organization development, and significant international experience. Thunderbird, then known as The American Graduate School of International Management, did so. It was a stand-alone graduate business school in the Phoenix area that specialized in international management and had a reputation for applied education. I accepted a position in executive education starting in January 1994.

What did I learn at DBM to enable a transition? First, a mid-career transition is a three-phase process that should be treated as a job in itself. It takes time and disciplined effort. It is a marketing job, and the product is you. The first phase is the *Foundation*—assessments, coaching and counseling, and reflection to gain self-knowledge. I examined my past experiences to discern what satisfied and dissatisfied me in my prior jobs and organizations—working climate, culture, rewards and recognition, personal development, advancement,

and bosses. I came to understand my values, my priorities, and what motivates me. I distilled my likes and dislikes, experiences and accomplishments, and personal characteristics and priorities into job preferences and likely best fits. These in turn informed the resume and interview messages that I crafted in the second phase: *Preparation*.

In the Preparation phase I developed the tools needed to execute a search: an introductory message, resume, network of contacts and coaches, research resources, interview techniques, list of references, negotiation tactics. I then deployed these tools in the third phase: *Campaign*.

In phase three I used my introductory message to generate opportunities to share my resume. The resume created opportunities for further conversations, both networking and interviews. Some conversations helped clarify my job preferences. For instance, interviewing for a senior human resources position in one large company, the HR vice president characterized his career as human-resources focused from high school onwards—undergraduate business major to graduate degree in industrial and labor relations to a series of progressively more responsible HR positions. That gave me second thoughts about mainline HR work. It sounded dreadfully dull in contrast to my internationally-oriented experience to that point. Ideally, though, first interviews were to lead to additional conversations with decision-makers which would result in an offer and the opportunity to analyze it and negotiate terms.

One of DBM's best values for me was providing a place to go every day to conduct my search work. I accessed office space and equipment, telecommunications service, and administrative support. I settled in among a group of peers who were all focused on the same task—finding the next opportunity. We became a support network, sympathizing and celebrating with one another as opportunities came and went. I became friends with another person who was leaving GM. We had not known one another in our GM roles. A Harvard graduate, he shared Harvard job search resources with me. We compared feelings about whether it was worth staying in a place we did not like for the sake of perks like company cars and substantial benefit coverages. The DBM environment and services made it easier to conduct a search for employment as a job. I secured a new position in four months.

In planning and executing a marketing campaign, I learned three more valuable lessons.

1. Seek first to be helpful. I learned to present how I could help prospective employers with their needs or problems rather than focusing on how their opportunities would benefit me. To support this, I also learned the tools of consultative selling and the ability to present my accomplishments in a Problem-Action-Result format that connected my experience to the needs of potential employers. This lesson holds true for networking as well as for interviewing. A networking conversation is most effective when you can help your contact understand how he or she might help you before you ask for assistance.
2. Realize that the process is two-way. I learned to seek a mutually beneficial match. Therefore, I had to find out as much as I could about the new employer as well as communicate as much as I could about myself in that context. That was not hard. I used my research skills to prepare questions and then listened. People love to tell you about themselves if you ask. When I was looking to leave Thunderbird, senior leaders at Southern Methodist University (SMU)'s Cox School of Business opened up about their opportunities and challenges, just as the GM Europe interviewers did years earlier, and I was able to relate those to my experiences at Thunderbird. In the process I became convinced that Cox School leaders, especially the dean and the associate deans for the faculty and the graduate degree programs, would be wonderful colleagues, from whom I could learn much about managing a business school, not just my own area. And so it was.
3. Understand that it is a numbers game. The more leads I could generate the better my chances of landing a job. As I interviewed for information, my network expanded. I tried not to leave a conversation until I had at least three referrals. I realized I needed only one offer, so I was not discouraged by rejection. I learned that "no" is not just an answer. It is an opportunity to get feedback, to learn objections to my candidacy, and how to overcome them. For example, as a candidate for HR positions, I featured my experience with NUMMI's innovative human relations systems that supported the Toyota Production System. Organizationally, Toyota and GM managers shared responsibility to advise local managers in the plant. When I was considered for a senior HR position at a prestigious Ivy League university this structure made my line HR experience, especially in labor relations, look weak. With that feedback, I could adjust how I presented my experience for subsequent opportunities.

As I worked with DBM to leave GM and recalled what I'd learned in seeking to transition out of academia into corporate America, I developed a model that structured my campaign. It combined the strategic planning pyramid I learned in GM Europe with a sales funnel that narrowed as I progressed through the stages of an opportunity until I, the sole survivor,

dropped out the bottom of the funnel. I populated the resulting diamond shape with information specific to my search. It allowed me to specify the mission of my quest, its vision, my beliefs and values. It displayed my strategies: search for HR opportunities in industry and academia, sell my experience in Total Quality Management, NUMMI, and my international experience as differentiators. Be open to other possibilities. And it included ten initiatives for a successful campaign. The execution of those initiatives would generate contacts that would pass through the sales funnel: qualification, development, offer, negotiation and acceptance.

Second Landing: Reflection

After I applied disciplined assessment, preparation, implementation, and analysis, I knew that I should still remain open and flexible to unforeseen and unimagined opportunities. Even exploring my second track, university business school executive education did not enter my thinking until I saw a Thunderbird ad in *The Chronicle of Higher Education*. I knew when I saw it that the position could be a good match for me. My first contact generated a request for more information about my capabilities in administration, marketing, and program design and development. This generated a five-page response that gave specific detailed explanations of my experience and accomplishments in those areas. Through the subsequent communication I discovered objections to my candidacy: transition from corporate to academic organizations, revenue generation, and pay. I countered these through dialog and offered constructive solutions. On the transition from corporate America to academia I explained that I was frustrated with a bloated GM bureaucracy, and that I sought an opportunity where my day-to-day decisions would make a tangible difference in the organization's success. While I originally thought that my experience in corporate training and organization development would be my experience most transferrable to a business school, my success as a recruiter showed my ability to influence and persuade which supported my ability to generate revenue. On pay, I reminded them that I specified an acceptable compensation range during the initial interview and if they were unable to support that I was willing to walk away, disappointed that we had wasted each other's time. To help, I suggested adding a course on Strategic HRM for me to teach that would boost my pay to a level I could accept. We came to an agreement, and I spent ten successful years at Thunderbird generating millions of dollars in revenue through personal sales and managing a department that generated $8 to $20 million in annual revenue depending on the organization charts. After a few years I asked to be bought out of my HRM course so that I could concentrate on the revenue generation activities that I liked, was good at, and benefitted the school more than my teaching efforts.

Academia

In university-based executive education work I found my niche. At Thunderbird I was able to work on important international business problems with the best faculty and people in many companies that had jobs similar to those that I had in GM. The programs we developed and delivered generated significant revenue for the school, enhanced its reputation, and benefitted faculty. When Thunderbird entered a downward spiral due to late 1990's market changes in graduate business education and 9-11's impact on foreign student enrollment, I was able to find a similar position at the Cox School of Business at Southern Methodist University (SMU) in Dallas, a full university rather than a stand-alone business school. I retired in 2018, after nearly fifteen years at the Cox school.

An Executive Education job was the only one I would ever want in a business school. I led entrepreneurial businesses with responsibility for staffing, product development, marketing and sales, operations, profit and loss. Because the programs I offered were non-credit, I could select only the best faculty to develop and deliver experiences targeted to specific business and career development problems without regard to entrance requirements, credit hour specifications, or examinations. The results for participants and their sponsoring companies were immediate and tangible. My teams had to meet the challenges of fast growth, turn around, international expansion, and industry downturns due to economic contractions and unanticipated shocks such as 9-11 and SARS. I had access to the brands and resources of prestigious educational institutions. I was able to work with many companies in a variety of industries to provide the management development components of solutions to their most challenging and vexing business problems. I was long-tenured at two schools in a high-pressure industry that typically turned executive education leaders over rapidly. The answers to my annual touchstone questions—was I having fun, did I feel well-treated, and was the culture compatible—were always net positive.

The Journey: Reflection

The principles and processes I used to transition from academia to corporate America and back again have not changed. The tools have. People with liberal arts and humanities educations still need to overcome misconceptions that limit their career options. Data is available to do this. *How Liberal Arts and Sciences Majors Fare in Employment*, a 2014 report from the National Center for Higher Education

Management Systems and the Association of American Colleges and Universities "provides a much-needed corrective to claims that most liberal arts graduates—those with a degree in a humanities, arts, or social science field—are unemployed or unemployable." The same study's information can spark confidence in candidates. It found that ninety-three percent of employers agree that "candidates' demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than their undergraduate major." These are the same skills that employers valued in the 1970's and 80's. The study also showed that while entry level salaries for liberal arts majors may be lower, over the course of their careers liberal arts majors close the earnings gap with professional majors. This is especially true for those with advanced degrees.

Although core skills of thinking, communication, and problem-solving remain key, a 2013 Hart Associates Study of employers identified additional competencies that twenty-first century employers value: innovation, ethical judgement and integrity, and the ability to work with others from diverse cultural backgrounds, unsurprising in times of complex global challenges and fast-paced change. These traditional and newer skills track with what contemporary placement professionals find to be the most highly transferrable and what management development experts look for in those who aspire to higher positions. Employers ultimately value people at all levels who:

- are aware of their own personality styles and behavior preferences, how they are perceived by others, and how that impacts their ability to carry out their roles.
- are discerning about the styles and preferences of others and possess interpersonal communication skills to motivate them and build effective teams.
- work with others to solve boundary-spanning problems.
- communicate direction to mobilize large groups and lead change.
- align their personal values with their organization's and can pursue opportunities to challenge the organization when needed.
- create trust based on competence, reliability, and reciprocity in relationships.

People with liberal arts and humanities educations possess these skills and traits in abundance. Therefore, candidates and employers should be able to acknowledge the real relationship between education and work, especially at entry levels—a demonstration of achievement and intelligence, discipline and skill, breadth of perspective and the ability to learn that can be applied to a task. Fortunately, new twenty-first century tools are available to support seeking opportunities to do this:

- "Flipped" classrooms focus on discussion of concepts and knowledge acquired through outside resources, allowing people to learn more from their fellow students.
- Projects and internships, especially in community service, provide skill-building practice and contribute to solving social problems.
- Assessments that profile individual strengths generate insight to facilitate collaboration.
- Increasing numbers of reliable and valid methods that minimize subjectivity and increase predictability:
  - assess capacity to solve problems and deal with complexity.
  - confirm attributes like motivation, openness, and perseverance.
- Design-thinking tools help align work and life views and support journey planning.
- Formal coaching and mentoring provide ongoing feedback that supports application of new learning and behavior change.
- New perspectives on diversity and inclusion encourage non-white candidates to discern and articulate the unique value that they bring based on their sources of difference; many organizations now prepare them to do so and facilitate connections with prospective employers.
- Social media, online, and virtual resources generate networking opportunities and support research on organizations and prospective employers.

It is up to candidates to undertake the work of discovery. It is life work as well as career work. It should start early, in college or even high school. I started near the end of graduate school when I decided to seek employment opportunities outside the traditional academic path. Early on I reframed the quest with a proper understanding of the relationship between education and work. I learned how to differentiate myself from other candidates and how I could add unique value to organizations. From the beginning, I networked to gain contacts and information. I later learned of additional resources and how to organize a disciplined campaign. Through that I came to understand a customer-focused recruiting process. Over time I used reflection and self-analysis to identify values, priorities, and goals. I applied research and creativity to gain market knowledge. Although I learned these lessons along the way, starting out I did one thing right. I committed to excellence in completing my education and honing the liberal arts skills.

When it came time for me to leave GM, thanks to DBM, I

learned to focus on what's first, as well as on what's next. I learned that finding work I loved meant finding an learned that finding work I loved meant finding an organization in which I could comfortably exercise my values and passions as well as my skills. It's an identity quest, and it takes time. As Pro Bronson writes in "What Should I Do with My Life?" (*Fast Company*, 66, January 2003 pp 69ff) "your calling isn't something you inherently 'know,' some kind of destiny." It involves discovery and development of talents that you didn't have coming out of college. While analysis, discipline, and rigor are important, your decisions shouldn't be wholly analytical. You must also listen to your heart. As Bronson concludes, "we are all writing the story of our life. It's not a story of conquest. It's a story of discovery. Through trial and error, we learn what gifts we have to offer the world and are pushed to greater recognition about what we really need." We also learn choice is not one-way. Doors don't close forever.

Settling In

I set out to become a college professor. I closed that door, but I later discovered that the higher education value chain includes elements that precede and follow the core transfer of information that takes place in a classroom. The chain includes activities to get people to come to the school, to look after them while they are there, and to keep them engaged when they leave. Many experienced business executives who turn to education late in their careers think only of teaching. I was able to expand my perspective and learn that while I did not excel in the classroom, I excelled in advocating for the value of my institution and getting people to it. I was able to return to academia where I excelled in building teams that could support exceptional experiences for experienced adults. Those experiences enabled them to learn from their instructors, their own experiences, and those of others. As a result, their individual and organizational performance improved, and many went on to new opportunities. In the end, my career journey transformed many other careers. The story of my journey will equip job seekers to make their own successful journeys and career professionals to help them navigate. It will give all readers confidence in a humanities education as the foundation.

Author Biography

Dr. Frank Lloyd is the former Associate Dean of Executive Education at Southern Methodist University's (SMU) Edwin L. Cox School of Business, where he led development and delivery of award-winning executive leadership programs that transformed careers and innovative corporate partnerships that transformed organizations. He was the driving force in the creation of a national center of excellence on Latino leadership, and he was instrumental in the launch of the James M. Collins Executive Education Center, one of the nation's premier learning facilities for working professionals. Dr. Lloyd joined SMU's Cox School from the Thunderbird School of Global Management in Arizona, where he was Vice President of Executive Education. Prior to joining Thunderbird, Dr. Lloyd was a human resources executive with General Motors, focused primarily on employee and organization development. Among the highlights of his career, he was responsible for organization development and leadership training for GM Europe during its transition from mass to lean production, and he was the first GM Human Resources manager assigned to New United Motor Manufacturing, Inc. (NUMMI), the historic joint venture between GM and Toyota noted for its innovative labor management relations and the introduction of the Toyota production system and human relations methods. Dr. Lloyd's work at SMU combined with his prior experience at the Thunderbird School and General Motors, gives him over 30 years global experience in the development of high performing leaders and organizations. Dr. Lloyd is an emeritus member of the Board of Directors of UNICON, the Global Consortium for University-based Executive Education, an association of the top 100+ business schools worldwide. He served on the national board of Inroads, a forty-five year old international organization with the mission to develop and place talented underserved youth in business and industry and prepare them for corporate and community leadership. He is the past chair of the board of Daystar US which mobilizes resources to support Daystar, a non-denominational Christian university in Nairobi, Kenya whose mission is to prepare servant leaders for Africa. He is also a member of the board of Literacy Achieves, a Dallas, Texas based non-profit that equips non-English speaking adults and their young children with English literacy and life skills to promote their self-sufficiency and well-being. Dr. Lloyd was a Fulbright lecturer at the University of Isfahan in Iran. He also served as a U.S. Information Agency curriculum consultant for Germany. He earned a master's degree at Purdue University and a Ph. D. at the University of Iowa. His undergraduate degree is from Occidental College. He holds an Executive Certificate in Nonprofit Governance from The University of Texas at Dallas' Institute for Excellence in Corporate Governance.

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Bright Futures: Creating College Opportunities/Programs for Students with Fetal Alcohol Spectrum Disorder

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Higher education institutions that strive to serve the needs of diverse post-high school groups and those seeking to boost enrollment by serving new populations should consider developing programs specifically tailored to the considerable number of young people in our nation with fetal alcohol spectrum disorder (FASD). Though often bright and highly verbal, these young people may have impairments in working memory, impulse control, processing speed, executive/adaptive functioning, and receptive language skills —things which would make attending college a challenge. Parents worry about their kids' ability to navigate the campus, stay on task, navigate the social milieu, and even though many parents feel their kids may be able to do college coursework, most feel they would still need accommodations in the areas of executive and adaptive functioning.

FASD is an often-overlooked disability, yet it is 2.5 times more common than autism (Flannigan, Unsworth, & Harding, 2018). It is more common than spina bifida, Down syndrome, and muscular dystrophy combined (National Organization on Fetal Alcohol Syndrome, 2014). According to some research, as many as 1 in 20 babies are born each year with FASD (May et al., 2018). FASD has been called a "silent epidemic"—epidemic in number, and silent in that it has been underdiagnosed and unrecognized, and those with FASD have been under-supported. However, there is currently bipartisan-sponsored legislation working its way through the House and Senate called the "Advancing FASD Research, Prevention and Services Act", which, if passed, will allocate more than $40 million for services and programs for those with FASD (Advancing FASD Research, Prevention, and Services Act, 2019–20).

Although FASD affects people across the globe as well as people of all socio¬economic levels, some populations seem to experience a disproportionately high prevalence. For example, in 2012, the late Chicago psychiatrist Dr. Carl Bell was stunned to discover that 39% of more than 600 patients he studied in the south side of Chicago where he practiced had FASD. He called this a "hidden epidemic of fetal brain damage," responsible for perpetuating a cycle of violence, poverty, crime, and poor outcomes, and concluded that FASD is the "biggest public health problem for African Americans since slavery" (Washington, 2015). This was an important revelation because those with FASD require unique interventions in order to thrive, and typical behavior modification strategies and reward/consequence systems used for other behavioral disorders do not typically work for FASD (Zieff, Schwartz-Bloom, & Williams, 2016). However, he had much reason for hope, as proper diagnosis leads to proper support and improved outcomes.

Other populations with disproportionately high prevalence of FASD include U.S. children in foster care, 70% of whom are estimated to be affected by prenatal alcohol exposure (National Organization on Fetal Alcohol Syndrome, 2012), those in prison—who, according to a Canadian study, are believed to be 19 times more likely to have FASD—and indigenous populations (Humphreys, 2019).

Research suggests that women do not intentionally seek to harm their unborn children. Though some women are problem drinkers who can't succeed in stopping drinking during pregnancy, many women simply may drink before they know they are pregnant. In fact, almost half of all pregnancies are unplanned (Rich, 2016). Thus, in the window between conception and awareness of pregnancy, prenatal brain damage of a fetus can occur with surprisingly small amounts of alcohol consumption. The Centers for Disease Control (CDC) now recommends that no amount of alcohol is safe during pregnancy.

People with FASD have many positive traits; they are commonly: "Highly verbal, bright in some areas, artistic, musical, mechanical, athletic, friendly, outgoing, affectionate,

determined, willing, helpful, generous and good with younger students" (Specialist Schools and Academies Trust, 2018). Many parents would also state that their kids are socially driven, eager to fit in, and eager to please. Most want to be seen as "typical" and generally are not accepting of being in programs with those with more obvious intellectual or physical impairments.

If those with FASD are not supported, or if expectations for their performance are consistently too high, they are at high risk of developing secondary manifestations, called "secondary disabilities," such as: fatigue; tantrums; irritability; frustration; anger; aggression; fear; anxiety; avoidance; withdrawal; shut down; lying; running away; trouble at home, school and community; legal trouble; drug/alcohol abuse; and mental health problems (depression, self-injury, suicidal tendencies)" (Specialist Schools and Academies Trust, 2018). These secondary disabilities may further lead to the poor life outcomes experienced by the FASD population, and include a much higher than average prevalence of addictions, homelessness, institutionalization, incarceration, disrupted school experience, trouble with the law, suicidal ideation, problems with employment, and inability to live independently. Further, individuals with FASD whose IQs are higher than 70 actually have worse outcomes than those with a lower IQ (Rasmussen, Andrew, Zwaigenbaum, & Tough, 2008). Indeed, in order to understand FASD, professionals and parents must be able to come to grips with the fact that someone can be bright and articulate and still be profoundly impaired. Duke University's "Understanding Fetal Alcohol Spectrum Disorders: A Comprehensive Guide for K-8 Educators," shares this quote: "Almost without exception, children with FAS[D] fall in the mentally handicapped range in terms of adaptive behavior, no matter how bright they are intellectually" (Zieff et al., 2016). Because they are articulate and bright in some ways, individuals with FASD risk being misunderstood, and risk having expectations that are too high placed on them, setting them up for failure.

When programs and supports are specifically geared towards adolescents and adults with FASD, their challenges and adverse outcomes can be mitigated. But few interventions exist for adolescents with FASD. Even though FASD is, at this time, a lifelong disability, nearly all FASD interventions are geared towards school-aged children, even though adolescents and adults face greater challenges than children (Pei, Flannigan, Walls, & Rasmussen, 2016), and are at risk for the adverse life outcomes mentioned above. One helpful intervention particularly geared towards adolescents and young adults, and an intervention that many parents desire, is post-secondary programming.

Though there are no 2-year or 4-year colleges in the U.S. with programs specifically designed to support individuals with FASD, some 148 colleges have developed either autism support programs or describe themselves as being autism friendly (Endlich, n.d.). Students with FASD are sometimes advised to enroll in autism support programs at colleges—but the disabilities and the accommodations required by students with FASD are not the same as those provided to individuals with autism. However, colleges that have autism programs in place, as well as colleges that run summer bridge programs or specialty summer camps for high school students, would likely not find it difficult to develop another specialty program—such as one for FASD.

Post-secondary institutions are in the unique position of being able to offer adolescents an intervention, a rite of passage, and a time to mature, which at this time do not exist. Some individuals with FASD would be able to work towards a degree, while others would benefit from socialization and an independent living experience on a college campus, practicing employment and life skills needed in adulthood.

Adoptive and biological parents of children with FASD have begun to network formally and informally through websites, Facebook pages, support groups, and organizations. They help spread awareness about FASD, share experiences, and seek support and services for their children—not just for childhood, but throughout the lifespan. Some of these parents have come up with a wish list of components they would like to see in a post-secondary program for FASD. This is shared below. Input from adults with FASD who had college experience was also included.

Features of an FASD college program would include:

1. Presence of FASD-informed staff. FASD-informed staff is crucial for a successful FASD college program. FASD is a poorly understood disability, and strategies that work with other disabilities do not necessarily work with FASD.
2. FASD students being more sheltered and supervised than a typical college experience, perhaps with a cohort group in which kids live, eat, and learn together, with a low-student-to-staff ratio.
3. Smaller-sized campus (5,000 or fewer students). Small, well-supervised environments often work best for those with FASD.
4. Alcohol- and drug-free environment, as studies have shown that without support, greater than 1 in 3 adolescents and adults with FASD have developed substance abuse problems due to impaired impulse control. (In the world of FASD, it is thought easier to prevent a habit than to break one).

5. Fun counselor-led group activities and communications/social skills support, since many with FASD struggle with isolation and difficulty forming positive or lasting friendships.
6. Life skills/"adulting" type classes, including education on topics specific to building FASD success.
7. Academic support and possibly the option to take classes online in a learning lab environment with peers and coach versus attending regular classes with peer mentoring, note-taking help, and coaching to keep pace with assignments and turn in assignments.
8. Training about employment as it pertains to someone with FASD—and how to maximize their chances for employment success.
9. A variety of programs of varying length and purpose: For example, programs for those who are degree-seeking versus certificate programs versus independent living skills programs versus a gap year program. Some students may want to work towards a degree, while others may benefit from a rite-of-passage, supportive college-type experience with peers which provides training on topics as listed above.
10. Wellness and stress reduction training. Those with FASD are often easily overwhelmed and at risk for developing secondary mental health issues such as depression.
11. For those completing a degree program: The option to take a reduced work load. In conversations with FASD-affected adults, those who graduated typically took longer to complete their programs.
12. For those completing a degree program, executive functioning accommodations and academic tutoring/coaching.
13. FASD college programs could perhaps be run as a summer camp, or run concurrently with the academic year.
14. Offering internships to master's level students of psychology and social work could provide specialized staffing for college programs as well as train FASD-informed professionals.

Parents and young people with FASD would undoubtedly appreciate being included in any conversation a college might have about developing a program for FASD. In fact, adults with FASD have an often-repeated mantra, "Nothing about us without us."

Specialized knowledge of FASD interventions would be an important factor in FASD college programming. Professionals should know that both evidence-based and empiric interventions are being developed for FASD. Research has been increasing over recent years, specifically in the areas of "parent education and training, attention and self-regulation, adaptive functioning, nutrition, medication" (Petrenko & Alto, 2017, para. 5).

Empirical interventions for young adults can include occupational therapy, mentoring, housing initiatives, supported employment, financial literacy counseling/mentoring, supervision, adapting the environment, stress reduction, the concept of an "external brain" or support people to assist individuals with FASD, mental health support, self-regulation training, and cognitive training to improve memory and math skills. Executive functioning and adaptive functioning training specifically for those with FASD will almost certainly be a topic of research in the years to come.

In conclusion, FASD is a poorly understood disability which affects a sizable number of people in the United States. To date, there are zero-to-few post-secondary programs specifically designed to support individuals with this challenging disability.

A large segment of our population is failing to meet their potential. Society is failing individuals with FASD and communities are missing out on their gifts and contributions when they are not offered tailored programs and supports. Colleges and post-secondary institutions have an untapped source of students and an opportunity to take a leadership role in developing programs to serve and support individuals with FASD.

Acknowledgement

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For Further Study

For further information about FASD and interventions, please consult these resources:

Your Alberta FASD Learning Series: 97 videos (see https://www.youtube.com/playlist?list=PLvrD8tiHIX1JS6FX1OEN9N4_QAt2B1N3t) on aspects of FASD including mentoring, cognitive strategies, the adult learner, building brain boxes, FASD and mental health, addiction and FASD, FASD and the justice system, housing and FASD, Dating and sexuality, Internet safety, and more.

Centers for Disease Control: FASD Treatments: https://www.cdc.gov/ncbddd/fasd/treatments.html?fbclid=IwAR0StOVcrVIQ5dl1Lt3mCY-1CiRqvmMdr5rIC8G aB_g-16jL2mB7XR7IhJw

A Guide on Fetal Alcohol Spectrum Disorders for School Psychologists and Counselors: https://www.ccf.ny.gov/files/9313/7969/7041/Take20Another20Look_FASD20for20School20Psychologists-WEB.pdf

KNOWFASD: Intelligence Quotient (IQ): https://edmontonfetalalcoholnetwork.org/2019/02/05/knowfasd-intelligence-quotient-iq/

Fetal Alcohol Spectrum Disorders Education Strategies Handbook: https://www.usd.edu/-/media/files/medicine/center-for-disabilities/handbooks/fasd-educational-strategies-handbook.ashx?la=en

Supporting Employment Success in FASD: https://canfasd.ca/wp-content/uploads/2018/09/Guide-and-Final-Report-Supporting-Employment-Success-in-FASD.pdf

Independent Living: https://fasdsocalnetwork.org/independent-living/?fbclid=IwAR3y6fQSBWSZvDcjOuipyLib_5-0WtWcQ7Zm_OQA3Mcl5V2YWSGdr9ndHiA

Value of Occupational Therapy for Individuals with Fetal Alcohol Spectrum Disorders: https://www.youtube.com/watch?v=kDPv64Grrfw

Canada FASD Research Network: CANFASD.ca

National Organization on Fetal Alcohol Syndrome: NOFAS.org

References

Advancing FASD Research, Prevention, and Services Act, S.2879, 116th Cong. (2019–2020). https://www.congress.gov/bill/116th-congress/senate-bill/2879

Endlich, E. (n.d.). *Autism in college.* Top College Consultants. www.topcollegeconsultants.com/autism-in-college/

Flannigan, K., Unsworth, K., & Harding, K. (2018, July). *CanFASD issue paper: The prevalence of fetal alcohol spectrum disorder* [Technical report]. canfasd.ca/wp-content/uploads/2018/08/Prevalence-1-Issue-Paper-Final.pdf.

Humphreys, A. (2019, April 30). Canadian study identifies five most vulnerable groups for FASD. *The Cochrane Times.* https://www.cochranetimes.com/health/canadian-study-identifies-five-most-vulnerable-groups-where-fetal-alcohol-problems-are-particularly-devastating/wcm/ee513813-1a14-4568-9be0-a233a1371aaf

National Organization on Fetal Alcohol Syndrome. (2012). *FASD: What the foster care system should know.* http://www.nofas.org/wp-content/uploads/2012/05/fostercare.pdf

National Organization on Fetal Alcohol Syndrome. (2014). *FASD: What everyone should know.* http://www/wp-content/uploads/2014/05/Fact-sheet-what-everyone-should-know.pdf.

Pei, J., Flannigan, K., Walls, L., & Rasmussen, C. (2016, February 4). Interventions for fetal alcohol spectrum disorder: Meeting needs across the lifespan. *International Journal of Neurorehabilitation, 3*(1), 1–9. https://doi.org/10.4172/2376-0281.1000192

Petrenko, C. L. M., & Alto, M. E. (2017). Interventions in fetal alcohol spectrum disorders: An international perspective. *European Journal of Medical Genetics, 60*(1), 79–91. https://doi.org/10.1016/j.ejmg.2016.10.005

Rasmussen, C., Andrew, G., Zwaigenbaum, L., & Tough, S. (2008, March). Neurobehavioural outcomes of children with fetal alcohol spectrum disorders: A Canadian perspective. *Paediatric Child Health, 13*(3), 185–191. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2529423/

Rich, S. D. (2016). *The silent epidemic: A child psychiatrist's journey beyond death row. Understanding, treating and preventing neurodevelopment disorder associated with prenatal alcohol exposure.* Lulu Publishing Services.

Specialist Schools and Academies Trust. (2018). *Foetal alcohol spectrum disorders.* Complex Learning Difficulties and Disabilities Research Project (CLDD). https://barrycarpentereducation.files.wordpress.com/2018/11/001c-fasd-info-copy.pdf

Washington, L. (2015, July 12). "An answer, 'The Answer,' to Chicago violence." *Chicago Sun Times.* https://chicago.suntimes.com/opinion/2015/7/12/18604646/laura-washington-an-answer-the-answer-to-chicago-violence

Zieff, C. D., Schwartz-Bloom, R. D., & Williams, M. (2016). *Understanding fetal alcohol spectrum disorders (FASDs): A comprehensive guide for pre-K-8 educators*. sites.duke.edu/fasd/chapter-6-the-fasd-student-and-behavioral-issues/.

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