

Running head: RELATIONSHIP DEVELOPMENT POST TBI

A Manual to Support the Development of Romantic Relationships and Sexuality for
Adolescents and Young Adults with Traumatic Brain Injury

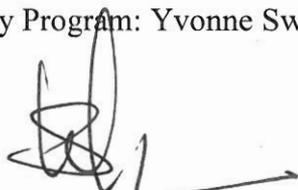
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Abstract

Traumatic brain injuries (TBIs) affect an estimated 1.4 million individuals in the United States annually (Braden et al., 2010), most often affecting those between the ages of 15-19 years (Kerr, Harmon, Marshall, Proescholdbell, & Waller, 2014). Individuals with TBI experience impaired judgment, impulsivity, and a decrease in emotional regulation, which may result in verbal and nonverbal behaviors that negatively impact the development of sexuality and the formation of romantic relationships (Kay & Lezak, 1990). Additionally, people who sustain TBIs as children or adolescents are also faced with challenges of typically developing teens (e.g., impulsivity and undeveloped executive functioning skills), further hindering their ability to develop romantic relationships and sexuality. HeadStrong, a nonprofit organization that provides support services to adolescents and young adults with TBI, expressed a need for a resource to assist in the development of sexuality and romantic relationships for individuals within this population. A self-paced manual was created to provide individuals with TBI between the ages of 14 to 30 with strategies to aid in the development of skills needed for successful engagement in romantic relationships and expression of sexuality. This manual is available through the HeadStrong organization.

Keywords: romantic relationships, sexuality, traumatic brain injury, adolescents, young adults

A Manual to Support the Development of Romantic Relationships and Sexuality for Adolescents
and Young Adults with Traumatic Brain Injury

Romantic relationships and sexuality are significant aspects of most adolescents' and young adults' lives. Romantic relationships describe the mutual, personal involvement agreed upon by two individuals (Collins, 2003), while the term sexuality describes the sexual identity of an individual and can be expressed through thoughts, desires, and behaviors (World Health Organization [WHO], 2006). In order to develop romantic relationships and sexuality, adolescents and young adults must navigate the complexities of their social environment. Individuals' body functions, body structures, and personal factors also impact participation in healthy romantic relationships and the development of their sexuality.

Traumatic brain injuries (TBIs) can cause cognitive and physical dysfunction as well as behavioral and emotional impairments (Fuller, 2009). Dysfunction in emotional regulation skills may impact an individual's ability to respond accurately to various social, environmental, or occupational demands. Emotional regulation skills are crucial when building relationships. Many individuals with TBI experience impaired judgment, impulsivity, and a decrease in emotional regulation, which may result in verbal and nonverbal behaviors that negatively impact the formation of new relationships (Kay & Lezak, 1990). Communication and social skills are of the utmost importance for relationship development, including empathizing and socially acceptable disclosure of emotions and use of touch (American Occupational Therapy Association [AOTA], 2014). Dysfunction in interpersonal and communication skills are among the most common impairments leading to participation restrictions in people post TBI (Braden et al., 2010), making

it difficult for them to navigate the social environment and develop romantic relationships and sexuality (D. Douglass, personal communication, February 1, 2014).

Resources contributing to the development of romantic relationships and sexuality are needed to address the unique challenges of adolescents and young adults with TBI who are navigating this critical aspect of their development (D. Douglass, personal communication, February 1, 2014). Therefore, a manual has been created to illustrate effective strategies for the development of romantic relationships and expression of sexuality for individuals with a TBI.

Background

Relationships Among Adolescents and Young Adults

Engaging in romantic love and intimate interpersonal relationships are significant milestones in adolescence and young adulthood that lay the foundation for success in future relationships (Collins, 2003). Collins (2003) defines a romantic relationship as a voluntary, continual interaction between two individuals that is mutually agreed upon by both parties and that is typically marked by expressions of affection and the expectation of sexual behavior (Collins, 2003). Participation in romantic relationships may increase adolescents' and young adults' developing self-esteem and influence the beliefs about their own physical appearance and personal value (Harter, 1999; Kuttler, La Greca, & Prinstein, 1999). Additionally, research has suggested that romantic relationships during adolescence and young adulthood promote the development of adaptive psychosocial skills, such as conflict management and emotional regulation skills (Collins, 2003). Without adequate dating experience, some adolescents may be unable to develop and hone the skills required to form and maintain successful romantic relationships (Madsen & Collins, 2011). The development of these romantic relationships during

the adolescent and young adult years is crucial to promote healthy relationships well into adulthood (Kuttler et al., 1999).

While the term ‘romantic relationships’ describes the interpersonal connection developed by two individuals, it does not fully encompass adolescents’ and young adults’ experience and expression of sexuality. “Sexuality encompasses the energy that motivates us to find love, contact, warmth, and intimacy” (Moreno, Lasprilla, Gan, & McKerral, 2013, p. 70). The WHO (2006) defines sexuality as:

... a central aspect of being human throughout life and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, ethical, legal, historical, religious and spiritual factors (p. 5).

Romantic relationships and expressions of sexuality vary wildly among individuals and may develop in a variety of ways (Furman & Collins, 2009). While romantic relationships are the primary foundations through which the exploration of one’s sexuality occurs, romantic relationships are not required in order to participate in various expressions of sexuality (Moore & Rosenthal, 2006).

Relationship formation among typically developing young adults. Typically developing adolescents and young adults tend to acquire their views and ideas of romantic relationships and sexuality from parents and peers; however, the impact of this influence is

dependent upon the type of bond created. Sroufe, Egeland, and Carlson (1999) found that secure, trusting relationships formed with parents or caregivers will impact an adolescent's or young adult's emotional regulation skills as well as his or her ability to connect and form relationships with others. Similarly, a positive correlation has been found between an individual's commitment to his or her parents and the commitment made to a partner when in a romantic relationship (De Goede, Branje, Van Duin, VanderValk, & Meeus, 2012). Even with supportive parental guidance, an adolescent's social peer group will impact his or her views, attitudes, and behaviors as the influence of peers dramatically increases during adolescence (Moore & Rosenthal, 2006). Peers may influence whether or not individuals engage in sexual activity, the types of beliefs they may have toward romantic relationships, as well as general knowledge on the topic of sexuality (Moore & Rosenthal, 2006).

Some parents may find it difficult or uncomfortable to initiate a discussion about romantic relationships and sexuality with their children; however, a lack of openness and communication regarding this topic may have an impact on their children's perception of romantic relationships and sexuality more than they realize (Moore & Rosenthal, 2006). By not discussing the topic of sexuality openly with their children, parents are conveying the message that sexuality is a negative and taboo topic. If individuals perceive that their parents are uncomfortable discussing this topic, they are less likely to turn to them for guidance later on (Snegroff, 2000). Adolescents prefer to obtain health information from trusted and respected authority figures or peers, however, if adolescents are uncomfortable or feel they will be judged, they will turn to less interactive and indirect sources (e.g., television, web pages, or print; Smart, Parker, Lampert, & Sulo, 2012), which may or may not be reliable.

Impulsivity is common in many typically developing adolescents and young adults, which can make it challenging to employ the self-regulation needed to navigate the social environment for successful engagement in romantic relationships and developing sexuality. This may be due to the fact that the frontal lobe, the region of the brain that is responsible for rational and logical thought processes, does not completely develop until approximately 25 years of age (American Academy of Child and Adolescent Psychiatry, 2011; Johnson, Blum, & Giedd, 2010). The prefrontal cortex contains the mechanisms for inhibitory control, an executive function that is responsible for limiting behaviors that would be considered ill-suited for a given context (Luciana, 2013). Damage to the prefrontal cortex is common following a TBI and can lead to amplified impulsivity post injury (Cattran, Oddy, & Wood, 2011). Therefore, individuals with TBI may experience increased difficulty in the development of romantic relationships and sexuality.

Traumatic Brain Injuries

TBIs affect an estimated 1.4 million individuals in the United States annually (Braden et al., 2010), most often affecting those between the ages of 15-19 years (Kerr, Harmon, Marshall, Proescholdbell, & Waller, 2014). Various physical, cognitive, and behavioral impairments can result from TBIs including, but not limited to, decreased self-esteem, difficulties in executive functioning, and emotional dysregulation (Ponsford, 2013). Physically, an individual may experience hemiplegia, ataxia, and abnormal reflexes following a TBI, dependent upon the location of the damage (Fuller, 2009). Cognitively, an individual's memory, attention, and executive functions can be disrupted (Fuller, 2009). Additionally, the cognitive impairments following a TBI are correlated with behaviors such as impulsivity, verbal interruptions, and

irritability (Fuller, 2009). These common sequelae of TBI will vary among individuals and depend upon both the location and the severity of the damage (Betty Clooney Center, 2005) and may interfere with an adolescent's or young adult's ability to develop and participate in romantic relationships and sexuality.

Social and interpersonal communication post TBI. Impaired social interaction skills are common sequelae of TBI (Braden et al., 2010), including the ability to label and match the emotional expressions of others (Croker & McDonald, 2005). Rosenbaum and Rabin (2012) stated that frontal lobe damage can lead to impaired ability to recognize the expressions and emotions of others, decreasing one's ability to draw upon past experiences and make informed decisions. Difficulty with social interaction skills may limit the ability of adolescents and young adults with TBI to participate and communicate effectively in social situations (Braden et al., 2010). Individuals with TBI who believed they had poor social skills were less likely to be involved in social groups and felt their quality of life had diminished (Dahlberg et al., 2006). Overall, impairments in social skills can lead to the disintegration of current relationships, causing the individual with TBI to be isolated from those they enjoy spending time with (Watts & Douglas, 2006).

Emotional regulation post TBI. Emotional regulation is a learned skill, which allows an individual to exhibit emotional responses that are consistent with varied situations and contexts (Cattran et al., 2011). The orbitofrontal region of the brain, often injured during a TBI, may result in the decreased ability to recognize contextual cues; thereby, decreasing one's ability to respond in a socially acceptable manner. This decrease in social insight can further limit one's ability to adapt to a given situation or recognize the impending consequences of his or her

actions, contributing to what appears to be an overall lack of self-awareness and emotional regulation (Cattran et al., 2011; Dyer, Bell, McCann, & Rauch, 2006). Following a TBI, it is common for individuals to be ineffective at regulating behaviors related to feelings of aggression and irritability. Additionally, these moments of frustration are often sudden, unexpected, and not indicative of an individual's pre-injury demeanor (Cattran et al., 2011). Kersel, Marsh, Havill, and Sleigh (2001) found that individuals one year post TBI reported that they continued to experience impatience, increased sensitivity, and mood changes, which caused distress.

Aggression and irritability post TBI. Historically, aggressive behaviors have been described following a TBI. A general consensus on the definition of aggression following a TBI has not been reached within the literature, as it is unclear "if differing expressions of aggression are distinct syndromes or if it constitutes a continuum of symptoms" (Rao et al., 2010, p. 1). Research has shown that aggression and irritability are closely associated following a TBI (Wood & Thomas, 2013). Aggressive behaviors following a TBI most often manifest as threats of violence and verbal aggression rather than physical forms of aggression (Dyer et al., 2006). Post injury, aggressive behaviors may stem from feelings of agitation and irritability (Wood & Thomas, 2013) as increased irritability has been commonly reported after brain injury (Yang, Hua, Lin, Tsai, & Huang, 2011). Irritability, as defined in the Diagnostic and Statistical Manual of Mental Disorders, is characterized by frequent annoyance and anger due to minor events (American Psychiatric Association, 2013).

A study done by Yang et al. (2011) discovered that people post TBI rated themselves as having irritability, which included the subcomponents of annoyance and verbal aggression. The patients' scores of perceived verbal aggression post TBI were lower than the scores reported by

their families. However, both self-report and family-report indicated a similar increase in annoyance post TBI (Yang et al., 2011). These findings indicate that individuals with TBI are aware of their internal emotional changes post injury, yet are less aware of the external manifestation of these changes (i.e., verbal aggression; Yang et al., 2011).

Social implications of TBI. One of the lesser-researched psychosocial consequences for individuals with TBI is that of increased incarceration rates. A study conducted by Sarapata, Herrmann, Johnson, and Aycock (1998) found that 50% of individuals who were convicted of a non-violent felony had a history of TBI. For individuals with TBI, decreased cognitive skills, impulsivity, aggression, and pre-morbid factors may influence the likelihood of engaging in some type of criminal behavior (Sarapata et al., 1998). Slaughter, Fann, and Ehde (2003) found that 87% of individuals in a sample of inmates at a Pierce County jail in Washington State reported a history of TBI. Similarly, Kaba, Diamond, Haque, MacDonald, and Venters (2014) found that 50% of males and females between the ages of 16-18 who had been admitted into the New York City jail system had a history of TBI. While Kaba et al. (2014) did not document the cause of incarceration in their sample, they proposed that the common sequelae of TBI (e.g., disinhibition and emotional dysregulation) may correlate with criminal behavior.

Simpson, Blaszczynski, and Hodkinson (1999) use a broad definition of sex offending, describing it as a sexual act that causes the distress and discomfort in another individual. Behaviors such as inappropriate touching, sexual aggression, and verbal disinhibition may be exhibited post-TBI, and are considered components of sex offending. Simpson et al. (1999) found that sexual disinhibition correlated with damage to the frontal lobe of the brain. Due to a lack of understanding surrounding the nature and the side effects of TBI, many adolescents and

young adults with TBI may be reported and jailed for behaviors consistent with sex offending (D. Douglass, personal communication, February 1, 2014).

The vulnerability experienced by many young men and women following a TBI makes them more susceptible to prostitution and coerced relationships (D. Douglas, personal communication, February 1, 2014). Disinhibition, associated with damage to the frontal lobe, may present as promiscuity (Betty Clooney Center, 2005). Additionally, women who lack self-awareness post TBI may unintentionally exhibit behavior that suggests a willingness to engage in romantic relationships or sexual activity, increasing their risk of being coerced or deluded into engaging in sexual activity (Kay & Lezak, 1990). In a study done by Kuosmanen and Starke (2011), individuals with intellectual disabilities were found to have a decreased ability to keep themselves safe and were extremely vulnerable to being coerced into prostitution. A Norwegian study by Pro Sentret, an organization that provides support services for individuals involved in prostitution, found that women with intellectual disabilities who had been trafficked into the world of prostitution were impulsive and unable to predict the outcome of a given situation (as cited by Kuosmanen & Starke, 2011). The characteristics of individuals with intellectual disabilities closely resemble those of individuals with TBI, which may indicate an increased risk of coercion into unwanted relationships.

In order to successfully develop romantic relationships and sexuality, it is important that individuals with TBI understand the sequelae that may arise post injury and develop strategies to successfully navigate their social environment. To accurately convey this information to individuals with TBI, it must be presented in a clear and coherent manner that is consistent with their abilities to learn and retain new information.

Learning and memory formation post TBI. Memory loss has been shown to be one of the most debilitating side effects following a TBI (Vakil, 2005). Explicit memory is the conscious ability to recall or identify information, while implicit memory is the subconscious use of knowledge gathered from previous experiences and the ability to apply it to a current situation (Rocdiger, 1990). Vakil and Oded (2003) found that explicit memory is more impaired following a TBI than implicit memory, which may remain intact as long as the individual is able to use existing knowledge and does not have to generate new concepts or ideas. If either forms of memory are affected post TBI, the individual's ability to learn new information and form new skills may be impacted.

There are no generalized methods for teaching individuals with TBI, as learning is dependent upon the location and severity of the injury and may vary case by case (Betty Clooney Center, 2005). The Acquired Brain Injury Outreach Service (2011) suggests breaking tasks into small steps, verbal repetition of new information, and the continual practice of newly developed skills to assist in the process of memory retention. Research has supported the use of self-generated learning for improving retention of new information among people post TBI (Goverover, Chiaravalloti, & DeLuca, 2010; Schefft, Dulay, & Fargo, 2008). Self-generated learning refers to the formation of ideas and behaviors independent of direct instruction in order to facilitate the retention of new information (Schefft et al., 2008). Schefft et al. (2008) found that self-generated learning improved participants' memory and cued recall. Likewise, Goverover et al. (2010) found that individuals with TBI who were taught functional tasks (i.e., meal preparation and finance management) using self-generated learning had significantly

improved recall ability when compared to those who passively received instruction on task completion.

Conclusion

Given the challenges of the sequelae post TBI, compounded with the typical challenges faced in adolescence and young adulthood, individuals with TBI may require additional support to develop romantic relationships and sexuality. Therefore, a manual has been created to provide individuals with TBI between the ages of 14 to 30 with a user-friendly tool to support them in the development of and participation in romantic relationships and sexuality, while helping to decrease negative social implications that may follow a TBI. Ultimately, this manual will aim to assist in the development of romantic relationships and sexuality, allowing individuals with TBI to live more satisfying and fulfilling lives.

Purpose Statement

The purpose of this project was to provide a resource manual to individuals with TBI, between the ages of 14 and 30, and their families to facilitate development of the social interaction skills needed to engage in successful romantic relationships and develop healthy sexuality.

Project Overview

The HeadStrong organization “supports youth and young adults living with brain injury and their families, educates about brain injury, and advocates for prevention and recovery support” (HeadStrong, 2014, para. 2). Desiree Douglass, the founder of HeadStrong, expressed a need for a manual aimed towards adolescents and young adults, 14 to 30 years old with a TBI, who experience difficulty developing sexuality and engaging in romantic relationships.

Therefore, a manual was created to address the skills needed for the development of romantic relationships and sexuality after TBI.

The “It Takes Two to Tango” manual is designed primarily for youth and adolescents with TBI, but it can be used as a resource for friends and family members of individuals with TBI to aid in their understanding of this topic, allowing them to better assist the person with TBI in the development of romantic relationships and sexuality. Procedures outlining the development of this project can be found in Appendix A.

The manual consists of a table of contents, five modules and a conclusion. The first module focuses on how a TBI may impact an individual’s perception of and participation in his or her social environment. Sequelae discussed within this first module include: diminished self-awareness, diminished ability to recognize other’s emotions, emotional dysregulation (increased aggression, irritability, and impulsivity), and the increased risk of being taken advantage of (emotionally and sexually). Each of the subsequent modules will address selected social challenges related to romantic relationships and sexuality that may present challenges to people post TBI, with strategies on how to manage each issue. Module titles include:

Module 1: “What Can I Expect Now That I Have a TBI?”

Module 2: “Matching Your Actions to Certain Situations”

Module 3: “People Can Be Confusing: How to Tell What Other People are Feeling.”

Module 4: “Taking Charge of Your Emotions”

Module 5: “Engaging in Healthy Relationships”

Modules two through five will provide the reader with illustrated scenarios related to romantic relationships and sexuality, as well as a list of strategies for solving issues related to

that specific topic. The illustrations will depict how to incorporate the listed strategies in various situations (see example in Appendix B). Readers are then provided with worksheets that may help them apply these strategies to situations occurring within their own lives in order to promote self-generated learning (see example in Appendix C). Careful consideration was taken throughout the development of this manual to ensure readability and usability for the reader. The manual has high contrast pages (i.e., black ink on white paper) with minimal details within the illustrated scenarios in order to decrease distractibility for the reader. Additionally, to facilitate information comprehension, the manual was written at a sixth grade reading level with limited text.

Goals and Project Outcomes

Goal 1: After reading the manual, adolescents and young adults with TBI will describe common challenges they face that impact relationships, in order to increase self-awareness and promote relationship development and sexuality.

Objective 1: Upon completion of the first module in the manual, individuals with TBI will independently identify two challenges post TBI that have affected their romantic relationship development.

Objective 2: Upon completion of the first module in the manual, individuals with TBI will be able to provide one example of how their previously mentioned challenges may impact their relationship development.

Goal 2: After reading the manual, adolescents and young adults with TBI will identify strategies from module 2, 3, and 4 in order to increase their potential for successful relationship development.

Objective 1: Upon completion of the second module in the manual, the reader will state one strategy they will use to increase their self-awareness, in order to promote successful relationship development.

Objective 2: Upon completion of the third module in the manual, the reader will state one strategy they will use to improve their ability to recognize other's emotions, in order to promote successful relationship development.

Objective 3: Upon completion of the fourth module in the manual, the reader will state one strategy they will use to increase their emotional regulation skills, in order to promote successful relationship development.

Goal 3: After reading the manual, adolescents and young adults with TBI will describe the skills needed to remove themselves from an unhealthy or unsafe dating or sexual situation.

Objective 1: After completion of the fifth module in the manual, the reader will independently identify two characteristics of healthy and unhealthy relationships.

Objective 2: After completion of the fifth module in the manual, the reader will independently identify two strategies on how to remove him/herself from an unhealthy or unsafe relationship.

Goal 4: This manual will aid care partners (i.e., peer mentors, family, and friends) in facilitating sexuality and romantic relationship development for adolescents and young adults with TBI.

Objective 1: After reading the manual, care partners will know how to assist and support individuals with TBI in the development of romantic relationships and sexuality.

Objective 2: After reading the manual, care partners will be able to identify clients who would benefit from the use of this tool.

Overall progress towards goals: An assessment tool has been developed and provided to HeadStrong to assess effectiveness and usability of the manual (see example in Appendix D). Use of this assessment tool may provide HeadStrong with the information needed to make improvements or expand upon future development of the manual.

Implications for Occupational Therapy

The Person-Environment-Occupation (PEO) model was developed by Law et al. (1996) to describe the dynamic interaction between the person, his or her environment, and the meaningful occupations he or she choose to engage in. A person is defined as a holistic being encompassing the mind, body, and spirit who may take on a variety of roles throughout life (Law et al., 1996). The environment describes where the person engages in an occupation; it can include the cultural, social, economical, and physical aspects of an environment (Law et al., 1996). Lastly, an occupation is defined as a meaningful activity that the person chooses to engage in, which fulfills an intrinsic need (Law et al., 1996). The successful integration of the person, occupation, and environment results in occupational performance (Law et al., 1996).

Occupations, client factors, performance skills, and performance patterns are interrelated domains that make up an occupational being (American Occupational Therapy Association [AOTA], 2014). As described by the Occupational Therapy Practice Framework (OTPF), occupations are daily activities that an individual chooses to engage in that are integral to a person's identity and have "particular meaning and value" to the individual (AOTA, 2014, p. S5). Activities of daily living (ADL) and social participation are two of the subdomains that fall under the domain of occupations. ADL are tasks that are focused on the care and maintenance of one's own body, while social participation describes active involvement with other individuals

(AOTA, 2014). Sexual activity, “activities that result in sexual satisfaction and/or meet relation or reproductive needs,” is an ADL as classified by the OTPF (AOTA, 2014, p. S19). A peer/friend relationship is a component of social participation and is described as engagement in activities with other individuals at “different levels of interaction and intimacy” (AOTA, 2014, p. S21). As occupations are at the core of the foundation of occupational therapy practice, occupational therapy practitioners are well equipped to address sexuality and romantic relationships among individuals with TBI.

Following a TBI, a person’s cognitive, behavioral, and emotional skills may have changed, which will influence his or her ability to interact with the environment and engage in meaningful occupations. In order to successfully develop romantic relationships and sexuality, the person may need to establish self-awareness, social interaction skills, and emotional regulation skills. Education and training are common interventions used by occupational therapists in order to help their clients develop needed skills (AOTA, 2014). By educating the individual with TBI of the changes that may occur post injury and promoting the development of the aforementioned skills, he or she may be better prepared to participate in activities related to romantic relationships and sexuality (e.g., romantically pursuing an individual, dating, engaging in sexual activities).

Through skilled activity analysis, occupational therapy practitioners are able to determine the motor, process, and social interaction skills that are required when developing romantic relationships and sexuality. In this way, occupational therapy practitioners are able to provide this population with the knowledge, skills, support, and encouragement required to develop these types of relationships. While the manual has been designed for use through HeadStrong, it also

has the potential to be used by occupational therapy practitioners in treatment for patients with TBI who may have goals related to sexuality and participation in romantic relationships.

Limitations

Limitations during project development have been identified in hopes of limiting the occurrence of challenges that may arise for future developers, should they choose to expand upon this project. Firstly, discussion with individuals with TBI and their family and friends during the project's development was limited. Increased input from individuals with TBI throughout the project may have allowed for a more comprehensive manual that could meet a wider range of individual's needs. Gathering input from individuals with TBI, as well as family and friends, is strongly recommended, so that the manual can be modified or expanded to meet the needs of this population. Additionally, due to transportation and scheduling conflicts, piloting the project was difficult. Organization of the pilot sessions should have begun sooner in order to limit the occurrence of these conflicts.

Special Circumstances/Sustainability

HeadStrong is currently the only organization that will be utilizing this manual. Therefore, to ensure the project's sustainability, HeadStrong will be provided with a survey assessment tool to ensure product effectiveness and usability. Successful implementation of this manual may lead to further research in this area, which is needed to promote increased occupational performance for this population. Additionally, HeadStrong will be provided with a digital copy of the manual's contents in order to reproduce the manual and increase accessibility of this information for adolescents and young adults with TBI.

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Appendix A

Procedure for Project Development

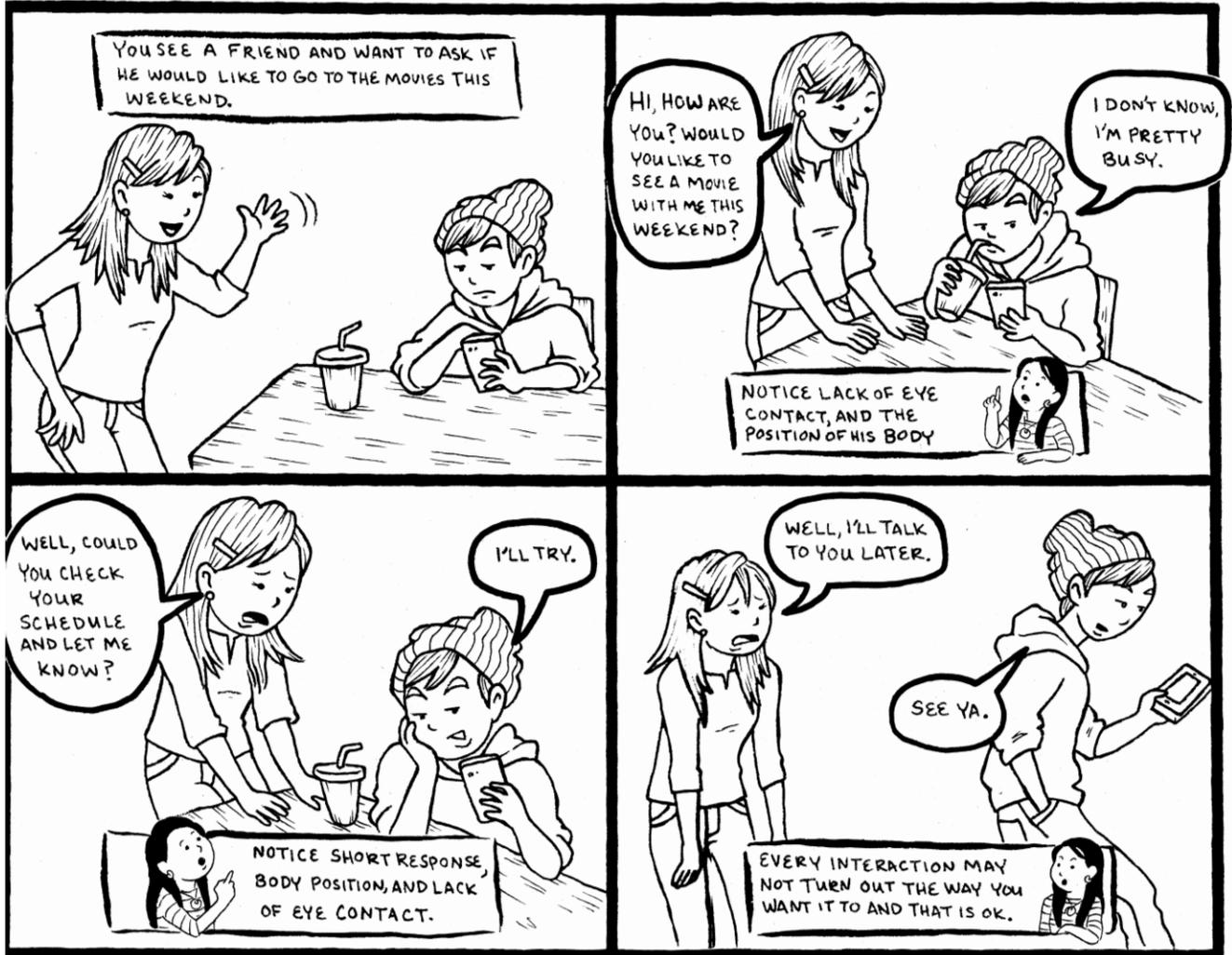
In order to develop the “It Takes Two to Tango” manual, the authors researched the literature for information on the side effects following a TBI (e.g., decreased social participation, emotional regulation, impulsivity, aggression) and how these side effects may impact relationship development. Completion of a literature review brought to light the lack of education on relationship development post TBI and the negative consequences that may occur (e.g., sex offending, incarceration, and/or forced relationships). Additionally, the authors reviewed the literature to discover the most effective teaching methods needed to successfully convey this information to the specified population.

The authors met with Donn Marshall, PhD, Director of Counseling, Health, and Wellness at the University of Puget Sound, to discuss sexual assault prevention and strategies to promote safe dating habits. The authors then created scenarios depicting common situations to address the typical challenges faced by individuals with TBI, as well as strategies on how to overcome these challenges.

One module of the manual (module 3) was created first and piloted by two young men with TBI, ages 14 and 25, and their mothers. Pilot sessions were performed individually due to the intimate nature of the manual topic. Upon the completion of the piloting sessions the authors integrated the volunteers’ feedback into the module being tested, as well as all subsequent modules in the manual. Anne James, PhD, OTR/L, FAOTA and Juli McGruder, PhD, OTR, educators and occupational therapists with experience working with people with TBI, reviewed the manual and provided additional feedback.

Appendix B

Sample Illustration of Module Three



Appendix C

Sample of Self-Generated Learning Worksheet

*This is a worksheet to help you work on recognizing the emotions of others. This can be completed alone, with a family member, or with a friend.

How can you apply these strategies for successful interaction in your own life?

Imagine a situation where you would like to interact with someone and write it in the box below.

Think of the people involved in this interaction and list them in the box below.

What strategies (listed on the previous page) would you like to use during this interaction? List them in the box below.

How can you apply the strategies you wrote above to your chosen situation for successful interaction? List your answer in the box below.

Appendix D

Assessment Tool to Measure Effectiveness of the “It Takes Two to Tango” Manual

For the individual with TBI:

Question	Answer
List two challenges that you have faced since your TBI that have impacted your ability to form relationships.	Challenge 1: Challenge 2:
Give an example of how these challenges may affect your ability to connect with others and form relationships.	Example 1: Example 2:
List one strategy you can use to help increase your self-awareness when interacting with others.	Strategy:
List one strategy you can use to help you recognize other’s emotions during a social interaction.	Strategy:
List one strategy you can use to help improve your emotional regulation when in a frustrating social interaction.	Strategy:
List two characteristics of a healthy relationship and two characteristics of an unhealthy relationship.	Healthy: 1. 2. Unhealthy: 1. 2.
List two strategies you can use to remove yourself from an unhealthy or unsafe relationship.	Strategy 1: Strategy 2:

Assessment Tool to Measure Effectiveness of the “It Takes Two to Tango” Manual

For care partner:

After reading this manual, how confident are you in your ability to use this tool to assist and support an individual with TBI in the development of romantic relationships?				
1	2	3	4	5
Not confident			Confident	
After reading this manual, how confident are you in your ability to identify clients who would benefit from the implementation of this tool?				
1	2	3	4	5
Not confident			Confident	