

Importance of Communication Channels and Office Culture in Adoption and Dissemination of  
Trauma Informed Practices in Organizations

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## Importance of Communication Channels and Office Culture in Adoption and Dissemination of Trauma Informed Policy in Organizations

The frustration that a parent, guardian, or caseworker must feel when working with children who have experienced trauma is easy to understand. As research continues to reveal the long-term detrimental effects of trauma, it is important for child welfare professionals to understand how best to treat trauma. Putting these best practices in place within an organization, though, is often difficult to begin and takes a long time to implement. Push back against implementation, time needed to train workers, and incomplete or misunderstood communication of practice can lead to poor outcomes for these children. Thus, understanding the ways in which new practice spreads within an organization (adoption and dissemination) is crucial for effective therapeutic implementation in a community. Office culture is often presented as the means for a new policy to take root. Office culture can either increase dissemination or hamper it based on attempts to reinforce old practices or concerns over sunk costs (Grote & Baitsch, 1991; Johns, Bayer, & Fairchild, 2016). Office culture though is not the only component needed in spreading policy. For adoption and dissemination to be effective, communication paths are necessary to spread ideas. In this paper, adoption and dissemination was examined by assessing the Mental Health Connection and Karyn Purvis Institute of Child Development (MHC-KPICD) implementation of Trust-Based Relational Intervention<sup>®</sup> (TBRI<sup>®</sup>). This study investigated the importance of communication and office culture on adoption/dissemination, predicting that communication would mediate the relationship between office culture and adoption/dissemination.

Adoption and dissemination of new policy is important in the field of child development because it has a major impact on how aid is given to children in need. To help illustrate this

need, there are an estimated 98,730 children involved in family protection cases and 20,000 children involved in home removals in the state of Texas alone (CPS Family Preservation [FPR]: Children Served, 2017; Child Protective Services [CPS] Conservatorship: Removals, 2017). These numbers indicate a large population of children that will have consistent contact with a state social worker, as well as multiple welfare agencies. These agencies can bring relief to children in need by providing early intervention, training on preventing trauma at home, and support for a child's caretakers (Cross, 2017). Effectively meeting these three needs can be difficult when multiple agencies are involved. Inconsistencies in implementation of therapies can cause negative health outcomes for patients (Snelgrove-Clarke, Davies, Flowerdew, & Young, 2015). Research has shown that consistency and involvement are very important in a child's development (Bradley, Caldwell, & Rock, 1988; Landry, Smith, Swank, Assel, & Vellet, 2001) overall as well. Research has also shown that positive service experience and higher levels of consistency between parents and therapists lead to better outcomes for children and families (Day, Michelson, & Hassan, 2011; Kazdin, Whitley, & Marciano, 2006). Thus, a consistent therapeutic practice is important for children receiving services, and effective communication between professionals is necessary to support this practice.

### **Adverse Childhood Experiences (ACEs)**

The largest indicator of the need for consistent and effective therapy comes from the research conducted on Adverse Childhood Experiences, or ACEs. Much of the research into the long-term impact of trauma uses the ACEs research as a basis. Studies have found increased physical health concerns for children with exposure to one or more of the ten ACEs: 1) emotional abuse, 2) emotional neglect, 3) child physical abuse, 4) physical neglect, 5) child sexual abuse, 6) drug or alcohol addicted family member, 7) incarcerated family member, 8) loss

or death of a parent, 9) mentally ill family member, or 10) domestic violence (Purewal Boparai et al., 2018). Children who experience more ACEs tend to have more negative adult outcomes (Purewal Bopari et al., 2018). There is a growing concern that the current system(s) set up in the United States to help children with a history of trauma may not effectively address the root trauma (Oral et al., 2016). This concern has triggered the growth of Trauma Informed Practices (TIP) within the public health sector, so that the culture and structure of organizations can begin to match the need of the clients (Oral et al., 2016).

While information on the ACEs is important for understanding childhood trauma, there are concerns about how best to apply the information. Research shows that early home visitation can result in positive long-term outcomes, although preventing primary ACEs from occurring can be difficult (Felitti et al., 1998). Preventing continued traumatization is important in ensuring that children from low- or high-risk cases can begin to heal. In addition, it is difficult to define a high-risk case when using the ACEs (Steele, Murphy, & Steel, 2010). The dose-response nature of ACEs is partially explained by *risk factor caravans*, where a cascade effect of similar ACEs build on one another based on the child's history and environment (Greeson et al., 2014). With the resulting train of ACE's symptoms, effective intervention and attempts at prevention may need significant retooling. Therefore, a consistent therapeutic practice is needed to ensure that *all risks* are addressed. The use of an attachment framework may assist in meeting the needs of *high risk* ACEs (Steele, Murphy, & Steel, 2010). Deciding upon the best therapeutic action, based on solid research and theory, is necessary for any organization that is attempting to be trauma-informed (Greeson et al., 2014; Steele, Murphy, & Steel, 2010). Despite these difficulties, many studies have shown positive results among professional settings that

serve children with ACEs. The need to effectively help children with ACEs means a shift to practices that understand trauma.

### **Trauma-Informed Practice**

One of the leading ways that organizations are ensuring a unified therapeutic practice implementation is by ensuring that they use a Trauma-Informed Practice (TIP) model. Organizations that are considered in line with TIP, or use a trauma-informed approach, will support trauma-specific interventions that incorporate inclusivity and safety into that organization's structure (Substance Abuse and Mental Health Services Administration, 2014). Unfortunately, it is also within this structure where the attempt to provide a consistent and effective therapeutic plan may fall apart. If a child is seeing multiple professionals within an organization, there is a greater chance for inconsistency, which may lead to worse outcomes for that child (Snelgrove-Clarke, Davies, Flowerdew, & Young, 2015). For this reason, it is important that TIP-based interventions spread effectively and efficiently within organizations. But determining effective adoption and dissemination of a TIP-based program is often difficult. Hanson and Lang (2016) explain that the definitions of what is "TIP" can change from organization to organization, and ensuring fidelity within an organization can be difficult. Attempts at cost-effective TIP strategies and what is considered "good practice" also need to be taken into account when discussing implementation (Hanson & Lang, 2016).

Purewal Bopari et al. (2018) recently completed a meta-analysis of research on both ACEs and TIP. The researchers found that three factors seemed key to healthy outcomes for children with ACEs: early intervention engagement, greater intervention engagement, and strong parenting skills (Purewal Bopari et al., 2018). These match the three needs for children who come from a traumatic background, listed previously in the Introduction section. Because

children move across settings and deal with multiple caregivers and therapists, especially in CPS cases and adoption, ensuring consistent trauma-informed engagement is needed. Thus, any program attempting to heal children with ACEs should work to ensure that all staff know the TIP strategy and that the strategy is well communicated amongst any organizations that may work with a particular child (Feletti et al., 1998). To ensure consistency, any large-scale application of TIP should ensure that the staff can easily perceive the benefit of change, and the organizational structure is prepared to ensure that the change occurs (Marsac et al., 2016). Marsac and colleagues (2016) found that the use of organizational frameworks can ensure the optimal spread of TIP. Thus, the implementation of a TIP program spreads using communication from specific leaders and staff who can reach the most practitioners (Marsac et al., 2016).

Another concern is that the effort to increase the amount of TIPs available, based on the ACEs data, creates a climate where effective assessment of TIP-based programs are difficult (Hanson & Lang, 2016). There are multiple ways to implement TIP-based programs, all of which may have different definitions of what “best practice” TIP may look like. Ineffective assessments can lead to the incorrect use of interventions. Hanson and Lang (2016) explain that there is often little distinction between TIP “best practice,” and people just doing the best with what they have. An organization may attempt to implement TIP, while leaving out an important component, because the best practice is not specified. It is important that organizations attempting to implement TIP use evidence-based interventions. This is associated with concerns about finding the “real world” indicators of relevance for treatments by evaluating outcomes using “real-world” indicators that stakeholders care most deeply about (Kazdin, 2006), especially when symptoms are often discovered after clients are already in treatment (Greeson et al., 2013).

Evidence-based interventions can help provide a set of identified and validated indicators for behavior improvements.

### **Trauma Informed Policies in a Community**

To create an environment where “best practice” can meet the needs of those with ACEs, many communities have attempted to provide consistent TIP over a large area. This may also be seen in the collaboration between multiple organizations. Research finds that using one of multiple forms of TIP can create an effective comprehensive program within an organization to ensure that staff are prepared to approach youth with ACEs (Kramer, Sigel, Conners-Burrow, Savary, & Tempel, 2013; Sigel, Kramer, Conners-Burrow, Church, Worlet, & Mitrani, 2013; Kerns, Pullmann, Negrete, Uomoto, Berliner, Shogren, Silverman & Putman, 2016). Research has shown that after six months, positive gains in child behavior and a reduction in PTSD symptomology are seen, when a community uses any evidence-based model of trauma informed practice (Bartlett, Griffin, Spinazzola, Goldman Fraser, Rosa Norona, Bodian, Todd, Montagna & Barto, 2018). Likewise, children within community-level implementation of TIP were less likely to report maltreatment in both biological and adopted families (Barto, Bartlett, Ende, Bodian, Rosa Norona, Griffin, Fraser, Kinniburgh, Spinazzola, Montagna & Todd, 2018). Community-level treatment is important and effective in meeting the needs of children and helping parents in preventing maltreatment. This is seen in the implementation of Trauma-Focused Cognitive Behavioral Therapy (TFCBT), Communities That Care (CTC), SAFESPACE, the Placement Stability Project (PSP), Assessment Permanency Project (APP), or the creation of the National Child Traumatic Stress Network training program (NCTSN) (Akin, Strolin-Gotzman, & Collins-Camargo, 2017; Haggerty, Haan, Catalano, Cinson, Vann, & Lansing, 2016; Kramer, Sigel, Conners-Burrow, Savary, & Tempel, 2013; Sigel, Kramer,

Coners-Burrow, Church, Worley, & Mitrani, 2013). The implementation of a TIP model though can be difficult and strategies are needed to aid in disseminating or spreading this new policy.

One strategy for using “best practice” in TIP in a community is ensuring that there is a shared trauma language within that community. A shared trauma language is the consistent use of common terms, common understanding of the physical and psychological effects of trauma, and specific and appropriate response to this trauma (Henry, Richardson, Black-Pond, Sloane, Atchinson, & Hyter, 2011). If there is a lack of understanding of the impact of trauma between organizations, a child may receive drastically different responses when consistency is needed. Snelgrove-Clarke and colleagues emphasized the importance of consistency to create the best outcome for a child (2013). The creation of the NCTSN training program, or the creation of Communities that Care are examples of multiple agencies creating a shared language to overcome this problem (Haggerty et al., 2016; Kramer et al., 2013). The National Child Traumatic Stress Network found that there is often a large variation in the response to, and language used, about trauma between specialized groups like the Juvenile Justice System and Trauma Specialists (Ko, Kassam-Adams, Wilson, Ford, Berkowitz, Wong, Brymer, & Layne, 2008).

Interdisciplinary collaboration using similarly trauma-focused practices can ensure that traumatic stress is understood and addressed (Ko et al., 2008). Using a common language increases the understanding of the practices both within individual agencies and between agencies within a collaborative (Barto, Bartlett, Von Ende, Bodian, Norona, Griffin, Fraser, Kinniburgh, Spinazzola, Montagna, & Todd, 2018). This need for consistency goes beyond simple interdisciplinary collaboration, and includes collaboration with key community leaders who can shape opinions and sway where resources are allocated (Salazar, Haggerty, Haan,

Catalano, Vann, Vinson, & Lansing, 2016). A shared language also increases a community's ability to understand the value of keeping a consistent trauma-informed base as the community grows and changes (Salazar et al., 2016). Berliner and Kolko (2016) critiqued the trauma-informed movement for not operationalizing the core concepts with a common language, leading to confusion and poor implementation. A common trauma language can also increase communication between organizations and shift the culture within an organization to promote TIP (Sigel, Kramer, Conners-Burrow, Church, Worley, & Mitrani, 2013).

This community-based approach allows for “champions” to come forward and increase the “buy-in”, or acceptance, of the practices by those in the community, thus changing an organization's culture. Research has found that comprehensive change within an organization needs those in positions of influence to support the program and push it forward (Kramer, Sigel, Conners-Burrow, Savary, & Tempel, 2013). Supervisor and administrator support can lead to appropriate funding and implementation support needed to start and complete the adoption of TIP (Kramer, Sigel, Conners-Burrow, Savary, & Tempel, 2013). A “champion” can ensure that policymakers and funders are informed about, and understand, the large requirements in time and money for effective implementation (Akin, Strolin-Goltzman, & Collins-Camargo, 2017). The communication between organizations within a collaborative can also increase the enthusiasm and “buy-in” towards the project (Akin, Strolin-Goltzman, & Collins-Camargo, 2017). Work between organizations increases the communication and spread of a new policy, by facilitating new thinking about implementation and coordinating efforts to streamline training across organizations (Akin, Strolin-Goltzman, & Collins-Camargo, 2017). This communication between organizations can also help to monitor staff attitudes and opinions, and to tailor support for those staff (Kerns, Pullmann, Negrete, Uomoto, Berliner, Shogren, Silverman, & Putnam,



2016). Researchers find that supervisors who are well-informed about the TIP model will use their role to support TIP practices and increase budgetary allotments as needed (Kramer, Sigel, Conners-Burrow, Savary, & Tempel, 2013). However, to better understand how TIP is implemented one must look at the concepts of adoption and dissemination.

Adoption includes recognizing a need, deciding to adopt a solution, and proceeding to implement it (Wisdom, Chor, Hoagwood, & Horwitz, 2013). Adoption is commonly measured in terms of level of adoption, rate of adoption, or degree of adoption (Mendel, Meredith, Schoenbaum, Sherbournem, & Wells, 2008). Likewise, there may be a need for de-adoption of old practices in an organization before full adoption can occur (Wisdom, Chor, Hoagwood, & Horowitz, 2013). Because of the causal chain needed for effective adoption, it is often easier to understand adoption and de-adoption in terms of theory (Wisdom, Chor, Hoagwood, & Horowitz, 2013). Wisdom et al. (2013) use the presence, and lack, of specific adoption constructs to measure adoption. Dissemination is defined by how quickly and completely new policy or innovation spreads within an organization after the initial adoption occurs (Rogers, 2003). Looking for changes within an organization can help provide the key indicators for rating adoption or dissemination.

### **Dissemination Theory**

The current study is guided by Rogers' diffusion of innovation theory to help to explain how dissemination occurs within an organization or organizations. Rogers' diffusion of innovation theory gives a broad overview of how an innovation spreads throughout an organization and of the factors that increase dissemination. Rogers (2003) outlines four factors needed for adoption of an innovation, including time, adequate organization culture/ structure,

change agents, and communication. This theory helps to explain why any TIP intervention may spread in an organization, or group of organizations, efficiently or poorly.

Before discussing diffusion of innovation theory, it is important to review a few key terms. The first term is *innovation*, which is an idea or invention that reduces uncertainty in the cause-and-effect relationship for reaching a desired outcome (Rogers, 2003). This definition also includes the knowledge to effectively use the innovation (Rogers, 2003). This may be the use of Assessment Permanency Project or Placement Stability Project (Akin, Strolin-Gotzman, & Collins-Camargo, 2017). The implementation of this innovation is known as *adoption* and the spread of adoption is considered *dissemination*, or *diffusion*. Specifically, Rogers (1995) defined *adoption* as the “full use of an innovation” and *diffusion (dissemination)* as “the process in which an innovation is communicated through certain channels over time in a social system (p. 5).” For there to be dissemination in an organization the innovation must go through five steps (Rogers, 2003). The initial step is the creation of the innovation. Next, an adapter, or *change agent*, finds the innovation and brings it to their organization. At this time, in order for the *change agent* to be effective, the office culture must be conducive to adopting a new innovation. After the initial introduction, the innovation begins to spread through effective communication channels, and then time needs to pass for late adopters to recognize the need for the innovation. Finally, the social structure comes into play again, providing the support for the innovation to flourish once the majority of staff have begun implementation (Rogers, 2003).

Rogers (2003) considered any form of new technology as an innovation. Thus, a significant policy change, like the one associated with effective implementation of any TIP program, would be considered an innovation. Significant policy change, when viewed as an innovation, can be considered a path to meeting an organizational vision. This organizational

vision was studied through the lens of Rogers' model, with the intervention policy studied as the innovation (Kohles, Bligh, & Carsten, 2013). The researchers found that an organization vision worked well within Rogers' model (Kohles, Bligh, & Carsten, 2013). Researchers also found that bi-directional communication was a major indicator of how well the vision was implemented (Kohles, Bligh, & Carsten, 2013). This finding is supported in other research, showing that how an organization is perceived from within is important for both leadership and staff (Kohles, Bligh, & Carsten, 2012). This helps to explain a mediating effect communication may have on office culture. Employee perception of the innovation is also a key factor in understanding how the initial innovation will be received (Kohles, Bligh, & Carsten, 2013). Before any adoption occurs, staff within an organization must decide whether that innovation has a relative advantage when compared to the idea it is replacing (Rogers, 2002). Thus, when one is discussing the importance of an innovation its' relative advantage must be stressed (Lock & Kaner, 2000).

Early adopters, or change agents, are those that attempt to introduce the innovation at the earliest point in the diffusion process. It is at this point where interpersonal communication factors are least important within the organization (Lovejoy, DeMireva, Grayson, & McNamara, 2009). Rogers viewed the adoption of an innovation as an inverted "U," with change agents adopting the innovation within the first two standard deviations of the model. The first 50% of staff within an organization that begin to use the innovation are considered the early majority. Research shows that the positive opinions of the innovation of those in other fields and organizations, as well as from research, increase the likelihood of the early majority to adopt (Lovejoy, DeMireva, Grayson, & McNamara, 2009). The late majority, on the other hand, are mainly swayed by the positive effects they see their coworkers enjoying (Lovejoy, DeMireva, Grayson, & McNamara, 2009). In the early adopter phase, large projects like a collaborative or

conference, provide the most assistance by providing weak professional ties that allow new innovations to permeate an organization (Brown & Konrad, 2001). Also in this phase, change agents are most important. These are individuals within an organization or department that are willing to take more risks and attempt new ideas (Lovejoy, DeMireva, Grayson, & McNamara, 2009). Also, this is an important time for the organizational culture to allow for staff to take risks and feel trusted by their organization to try new ideas.

Once there is an adopter or adopters in place to handle the innovation's spread, proper communication channels need to be utilized to foster growth. While it does take time for a new innovation to spread, dissemination of ideas is a very social process that involves a lot of interpersonal communication and interaction (Rogers, 2003). It is through this communication, and time, that the largest growth of innovation adoption occurs beyond the initial change agents. Once these change agents are in place, it is important to utilize them to promote adoption and, more importantly, activate peer communication to help spread the innovation (Martin, Herie, Turner, & Cunningham, 1998). Lomas, Enkin, Anderson, Hannah, Vayda, and Singer (1991) found that opinion leaders within the medical field provided the most effective form of innovation dissemination, and a large part of this was the communication channels that they opened. Leader-follower communication and follower-leader communication are necessary when spreading these innovations in an organization (Kohles, Bligh, & Carsten, 2013). Leaders give the followers important cues for implementing the innovation, while the followers help to spread and provide feedback on the innovation's growth (Kohles, Bligh, & Carsten, 2013). Research shows that poor implementation will result when those in leadership positions do not understand the new treatment or policy (Kezar, Gehrke, & Elrod, 2015). These key players in

the organization are the ones who can inhibit change agents from implementing new policies (Kezar, Gehrke, & Elrod, 2015).

In the author's view, these communication channels provide the most important aspect of innovation dissemination. By facilitating communication channels within an organization, and between organizations, new ideas can spread, and the innovation is able to move beyond the starting innovator. A newer aspect involved in communication channels is the addition of online communication and the ability to spread face-to-face services beyond the physical office (Lee, 2004). Online assistance and therapy centers are now an option for clients, and many aspects of the large training events that initially introduced the managers to TIP are now available digitally (Purvis, Cross, Jones, & Buff, 2012). Simple acts of providing training seminars and practicing TIP in the workplace provided the communication network needed to spread any form of TIP (Purvis, Cross, Jones, & Buff, 2012; Sigel et al., 2013; Fraser et al., 2014).

When discussing the importance of communication channels, it is important to remember the final factor in Rogers Diffusion Theory, social systems/structures. Rogers viewed the social system as a set of items (policy, beliefs, memo's, etc...) that combine to solve the goals of an organization (Rogers, 2003). Thus, the norms of the social system have to be conducive to the needs of the innovation for dissemination to truly coalesce (Rogers, 2003). The social system and the social structure (the patterns these units take up) help to support the communication of ideas that make up the dissemination process (Rogers, 2003). Rogers (2003) viewed the social system as that which established the groundwork for an organization to implement any innovation. The social structure is also where dissemination can go awry, with negative feedback (i.e., resistance to change) and a poor social system set up impeding the implementation process (Rogers, 2002). By attempting to change the social structure within a

system, though, it is easier for change agents to bring about dissemination (Keller & Galanter, 1999). Also, the use of paid continuing education and employee reward systems helps to reduce the negative social structures that may get in the way (Singhal & Rogers, 1999). Research has demonstrated that when the strategy for implementing change is in sync with the focus of the change, there is a greater success rate (Kezar, 2001). In research specifically about TIP implementation, it was only after the office climate and staff attitudes change that effective aid for youth can occur.

### **TIP Dissemination (Diffusion) in a Community**

While one can see the need for TIP to aid children, and how dissemination and adoption theory explains how TIP may spread, there are additional considerations when disseminating it in a large community. To better define the social system explained by Rogers, one can look at Office Culture. An office culture is “the way things are done here” and represent shared norms, beliefs and expectations in a working environment (Patterson Silver Wolf, D., 2015). In adoption and dissemination, the social context can influence the adherence to new protocols or programs (Hemmelgarn, Glisson, & James, 2006). This can also be understood as the social system of an organization, or the interrelated units that are used to reach a common goal (Rogers, 1995). As explained by Rogers, proper implementation cannot begin without an office culture ready to let a new idea take root. Likewise, without an open office culture where ideas are communicated openly, there is a good chance that the new idea may never spread. A shift in office culture was the first major hurdle many projects found when attempting to implement TIP, like Communities that Care or APP, in a community (Salazar et al., 2016; Akin, Strolin-Goltzman, & Collins-Camargo, 2017). Research suggests that both changing the norms within an organization and changing the attributes of systems in an organization are both effective ways of

increasing dissemination (Rogers, 2002). Thus, the concept of office culture is important both before and after the adoption of a new innovation occurs. This research also found that activating and supporting peer communication networks were needed for diffusion of the innovation (Rogers, 2002).

Diffusion research shows that the spreading of a new idea is a very social process, where coworkers spread the new idea by talking about and using the innovation (Rogers, 1995). Thus, communication channels are an important component in the ability of a new idea to spread. Likewise, it is through communication with outside groups that new ideas are exchanged and are allowed to permeate into a new program to create more adaptive behaviors from workers in an organization (Granovetter, 1983). Both inter- and intra-organizational communication are key to any new practice being adapted. A tie, even a weak one, with another organization is perfect for bringing in a new idea, and the strong ties within an organization help it spread (Barra & Agliari, 2011). While communication networks are important for disseminating the idea to the organization as a whole, there needs to be an appropriate organizational culture for that idea to survive. These two concepts, office culture and communication networks, were the main predictors for this paper.

This primary path for early adoption shows that an organization with an open office culture will experience more adoption and dissemination. This can be explained through the concept of influence in an organization. An office culture that supports shared influence among staff is one in which staff feel they are able to impact their coworkers in positive ways. This influence can be seen in the need for champions in the successful implementation of NCTSN training in Arkansas (Kramer et al., 2013). Low influence may result in staff not spreading new ideas, not taking initiative in implementing new policies, or reduced desire to try a new idea.

Monitoring of attitudes and opinions within the Washington state welfare system aided in the adoption of SCARED (Kerns, et al., 2016). This shows the importance of office culture in adopting TIP in a large organization. This may also reduce the available communication networks for the innovation to pass through. If employees do not feel they have appropriate influence, there is little need for policy-based communication.

While office communication networks are influenced by the organization's culture (Rogers, 2003), it is important to recognize the need for communication structures to pass on new ideas. While something like influence may impact the likelihood that staff will pass on a new policy, if the staff do not interact, there is no way for the policy to spread. Thus, office communication networks provide a mediating effect on the interaction between office culture and adoption and dissemination (Baron & Kenny, 1986). Communication networks provide a method for the reduction of stress, through coworker communication and communication with management. While office culture may have a direct impact on the rate of adoption and communication in an organization, office communication may underlie this culture in effectively spreading a new policy. Ko et al. (2008) found that providing a shared language between organizations helped to increase the effectiveness of NCTSN training. The shared language and open communication ensured that there was ongoing support for trauma informed care through TF-CBT (Sigel et al., 2013). These show the need for communication in beginning and continuing adoption and dissemination in a collaborative.

### **The Current Study**

These concepts of dissemination help to explain why there are many factors involved in effective dissemination. Specifically, the impact of office culture and communication are important for effective dissemination of TIP within large organizations within a large community



of like-minded organizations. In the current study, organizational culture was measured through multiple concepts, including influence, cohesion, leadership engagement, stress, and several others. Often organization culture is referenced to explain “why a company operates smoothly and efficiently” or “poorly and toxic” (Hemmelgarn, Glisson, & James, 2006). These concepts and the social context in a work environment can influence the adherence to new protocols, like TBRI® (Hemmelgarn, Glisson, & James, 2006). Thus, organizational culture can make attempts at implementation difficult, if the culture is resistant to change and reinforces old practices (Grote, & Baitsch, 1991). Another way to view the office culture and understand how that culture impacts the dissemination of new ideas is by using Bolman and Deal’s (2013) framework theory. Structural frames can provide the lens to best understand which of the existing policies and procedures can be used to help introduce a new policy as well (Laursen, 2015). This may include management processes, feedback loops, rules and roles in an organization, and the goals and policies put down by leadership (Lyon, Nadershahi, Nattestad, Kachalia, & Hammer, 2014). This also explains why organizational culture is important both before and after an innovation is initially adopted.

The purpose of the research was to investigate the importance of communication channels and office culture on dissemination of new practices for staff within an organization taking part in a large scale project. As new therapies are created and state-level policies that impact local agencies continue to change, there is a greater need to understand how to aide in the transmission of new policies. While dissemination can occur in many ways, it is the crux of this paper that communication channels must be in place to allow ideas to flow, and the culture within an organization must be prepared to implement this new policy. The current study uses health care professionals in Tarrant County from multiple organizations with varying levels of

internal and external communication. Each of these organizations, while similar in clientele, have different organizational cultures. TBRI<sup>®</sup> is the primary form of policy that is being reviewed in this project, as well as several behavior management strategies used in these agencies. The MHC-KPICD TBRI<sup>®</sup> Pilot Project provides a method for reviewing how behaviors and TBRI<sup>®</sup> use change for organizations based on the culture and communication within organizations. This study tested four primary hypotheses regarding intra-office communication and culture. The research was designed to investigate the following:

H1: Office culture at time one will predict the amount of adoption/dissemination of TBRI<sup>®</sup> based skills and pro TIP-based behaviors by staff, with organizations that have an open style of office culture (e.g., higher rates of autonomy, satisfaction, influence, etc.) adopting TBRI<sup>®</sup>/TIP behaviors more effectively than those without after at time two (six months).

H2: Office culture at time one will be related to the level of intra-office communication that occurs at time one, with higher levels of office culture (e.g., higher rates of autonomy, satisfaction, influence, etc.) predicting higher levels of intra-office communication (e.g., coworker communication, meetings, etc.).

H3: Intra-office communication at time one will predict the amount of adoption/dissemination of TBRI<sup>®</sup> based skills and pro TIP-based behaviors by staff, with higher levels of intra-office communication (e.g., coworker communication, meetings, etc.) predicting higher levels of TBRI<sup>®</sup>/TIP behaviors at time two.

H4: Intra-Office communication will mediate the relationship between office culture and adoption/dissemination, with intra-office communication (e.g., coworker communication,

meetings, etc.) predicting adoption/dissemination of TBRI® while controlling for office culture (e.g., higher rates of autonomy, satisfaction, influence, etc.).

## **Methods**

### **Participants**

The current study used data collected from the Mental Health Connection – Karyn Purvis Institute of Child Development Trust Based Relational Intervention® Pilot Project (MHC-KPICD TBRI Pilot Project). Organizations were recruited through contacts at Mental Health Connection. Data were collected for a baseline (Time point one) and for the mid-year of the project (Time point two). Participants throughout the study were majority female ( $n = 719$  for all respondents, 82%) professionals based in and around the Tarrant County region of Texas. Those taking part in the study were mental health professionals and/or professionals that work with children. This includes individuals working in social work, the education system, medical facilities, etc. The study participants were between the ages of 20 and 72, with a mean age of 40 years for the all respondents in the study. The majority of the participants from both surveys were ethnically Caucasian, followed by African American and Hispanic ethnicities. A thorough explanation of the demographics for respondents taking part only in the baseline, the mid-year or in both surveys is presented in Table 1. Participants were required to be those in staff or leadership positions in Mental Health Connection partner agencies. Participation in the research portion of the project was not required for those participating in the project, but was encouraged. All organizations were asked to meet a 75% completion rate for baseline data collection and Mid-year survey collection. These organizations were given a set of thank-you gifts (i.e., cookies, TBRI DVD's, etc.) for staff from the KPICD for each survey. Data collection began in December 2017 and is ongoing until January 2021.

Table 1. –Subject Demographic Table

	<i>Baseline Response</i> ( <i>n</i> = 414)	<i>Mid-Year Response</i> ( <i>n</i> = 198)	<i>Combined Response</i> ( <i>n</i> = 261)
<b>Mean Age, Years</b> (standard deviation)	39.44 (11.80)	42.16 (12.03)	39.03 (11.21)
Range	21 – 72 years	20 – 72 years	21 – 68 years
<b>Gender, n (%)</b>			
Female	341 (82%)	149 (75%)	229 (88%)
Male	58 (14%)	19 (10%)	26 (10%)
Other	4 (1%)	0 (0%)	1 (0.4%)
No Response	11 (3%)	30 (15%)	2 (2%)
<b>Race, n (%)</b>			
American Indian	5 (1%)	0 (0%)	2 (1%)
Asian	10 (2%)	2 (1%)	3 (1%)
Black/ African American	91 (22%)	45 (23%)	45 (17%)
Hispanic	72 (17%)	31 (16%)	35 (13%)
Pacific Islander	1 (0.2%)	1 (1%)	0 (0%)
Other	8 (2%)	7 (4%)	15 (6%)
White	209 (50%)	82 (41%)	157 (60%)
No Response	10 (2%)	30 (15%)	4 (2%)
<b>Degree, n (%)</b>			
Associate's Degree	26 (6%)	2 (1%)	6 (2%)
Bachelor's Degree	135 (33%)	24 (12%)	81 (31%)
Doctoral Degree	22 (5%)	4 (2%)	3 (1%)
High School Diploma	16 (4%)	3 (2%)	1 (0.4%)
Master's Degree	173 (42%)	132 (67%)	158 (61%)
Other	7 (2%)	1 (1%)	2 (1%)
Some College, no degree	25 (6%)	2 (1%)	6 (3%)
No Response	10 (2%)	30 (15%)	4 (2%)
<b>Licensure, n (%)</b>			
Certified	180 (43%)	151 (76%)	133 (51%)

*Note.* *N* = 873. Baseline Response are those that only responded at Baseline Survey. Mid-Year Response are those that only responded at Mid-Year Survey. Combined Response are those that responded to both surveys.

To ensure as large a study population as possible, baseline data were collected at two time points, an initial baseline consisting of 14 organizations and a second baseline consisting of 10 organizations. The initial baseline (Baseline One) consisted of CASA of Tarrant County, Cook Children's Medical Center (including six separate departments), Crowley ISD, Lena Pope Early Learning Center, MHMR Hope House and Lighthouse Christian Academy, The Women's Center, Santa Fe Youth Center, ACH child and family services, the Center for Transforming Lives, The Parenting Center, University of North Texas Health Sciences, JPS behavioral Health,

and Fort Worth ISD. This initial baseline data collection was sent out in December of 2017, and was closed in January of 2018. 363 staff members responded to the initial baseline and 75 leadership members responded to the initial baseline.

Baseline Two was created to include organizations that joined the project after the initial baseline began, or were waiting on internal Memorandum of Understanding (MOU's) and internal Institutional Review Board (IRB's) to be completed. Those taking part in the second baseline responded to the same survey as those in Baseline One, with the exception of the PARTNER tool, a tool created to assess and analyze network and/or collaborative connectivity. The Second Baseline included the following organizations; Clayton Yes, Safe Haven of Tarrant County, Walsh Elementary School (Aledo ISD), MHMR Tarrant County Youth, Teen Life, Child Care Associates, CK Family Services, MHMR Early Childhood Intervention, Private Practitioners and PSP Counseling. The secondary baseline was sent out in March 2018 and was closed in April of 2018. 193 Staff members responded to the secondary baseline, and 44 leadership members responded to the secondary baseline. The combined response for both baselines was 556 respondents from staff, and 119 respondents from leadership (for a breakdown of organization response, see Table 2).

The Mid-year survey was conducted using the combined agency lists from Baseline 1 and Baseline 2, with data collection occurring at one time. No information was collected on leadership of staff positions on the mid-year. The Mid-year survey data were collected from September to November in 2018. Those taking part in the Mid-year survey responded to questions in regards to TBRI based skills and Behavioral Management/ TIP skill strategies. The survey was sent to respondents from each of the organizations, and of those 459 staff and leadership members (53%) responded. No differences were found between those that did and

did not respond. The following organizations were included in the Mid-year survey; CASA of Tarrant County, Cook Children’s Medical Center (including six separate departments), Crowley ISD, Lena Pope Early Learning Center, MHMR Hope House and Lighthouse Christian Academy, The Women’s Center, Santa Fe Youth Center, ACH child and family services, the Center for Transforming Lives, The Parenting Center, Clayton Yes, Safe Haven of Tarrant County, Walsh Elementary School (Aledo ISD), MHMR Tarrant County Youth, Teen Life, Child Care Associates, CK Family Services, MHMR Early Childhood Intervention, PSP Counseling, University of North Texas Health Sciences, JPS behavioral Health, and Fort Worth ISD (for a breakdown of organization response, see Table 2).

Table 2. – Response Rate for Organizations by Survey

<i>Organization</i>	<i>Baseline Response (n = 675)</i>	<i>Mid-Year Response (n = 459)</i>
ACH	92 responses	44 responses
Aledo ISD	3 responses	9 responses
Alliance for Children	62 responses	46 responses
CASA	25 responses	18 responses
Center for Transforming Lives	1 response	0 response
Childcare Associates	9 responses	7 responses
CK Family Services	31 responses	20 responses
Clayton – YES	3 responses	3 responses
Cook Children’s Medical Center	105 responses	19 responses
Crowley ISD	9 responses	2 responses
Fort Worth ISD	45 responses	166 responses
JPS Behavioral Health	2 responses	1 response
Lena Pope	44 responses	39 responses
MHMR	128 responses	7 responses
PSP Counseling Services	5 responses	6 responses
Safe Haven	57 responses	31 responses
Santa Fe Youth	6 responses	6 responses
The Parenting Center	3 responses	5 responses
The Women’s Center	23 responses	26 responses
Unlisted	2 responses	2 responses

## Procedures

This study used data from the Mental Health Connection – Karyn Purvis Institute of Child Development Trust Based Relational Intervention<sup>®</sup> Pilot Project, which has the objective of creating a collaborative network in the Tarrant County region of Texas (Fort Worth, Texas). The study used a collaborative model, where multiple organizations form a network, develop implementation goals, and reach those goals through training resources provided by the Karyn Purvis Institute of Child Development (KPICD). The collaborative consists of partner organizations brought into the network by Mental Health Connection of Tarrant County (MHC) who meet regularly to determine the best course of action for implementation. The MHC-KPICD project will last for three years with the purpose of implementing TBRI<sup>®</sup> throughout the area and to improve child-, organization-, and network-level outcomes. All coordination and contact was organized through Mental Health Connection.

Organizations that were interested in taking part in the study registered through MHC and completed a Partner Application. This application included consent forms for the organization, questions on organization size, and information about the project. This also allowed organizations that required their own IRB's or MOU's to prepare their documentation. Every organization taking part in the project provided a list of staff for the study, including contact information and information on position within the organization. The contact lists, updated before each survey roll-out, were used to deliver all surveys. Data collection occurred at three points over the year, providing beginning-, mid-, and end-of-year data points for analysis of TBRI<sup>®</sup> skills. In the current project there were two separate baseline data collection phases to help include organizations that joined the project late or were having difficulties completing MOU's.

All surveys were distributed using an email link, giving basic information about the study and explaining that there was an incentive (e.g., agencies were given candy/ water bottles for the mid-year survey and TBRI training DVD's/ toys/ candy for the baseline survey) for taking part. Once the survey link was selected, participants were taken to a Qualtrics survey based on their designation (leadership or staff). They were shown the consent form, and all participants who consented were taken to the survey. Participants who did not consent were taken to a thank-you page and did not answer survey questions. Incentives for completion were provided for each respondent. Each organization that had a 75% completion rate received a TBRI<sup>®</sup> reward bag (materials valued around \$20). This incentive system was used throughout the study to increase participation. Participants were given a month to complete the baseline survey. After baseline data collection was completed, organization leadership sent participants to TBRI<sup>®</sup> training sessions scheduled for various time points throughout the study period. These, as well as predetermined “champions” were used to take TBRI<sup>®</sup> back to the organizations.

After the trainings began, each organization completed an implementation plan. These implementation plans were used to track the organization-wide efforts to implement TBRI<sup>®</sup>. These could be steps towards implementing TBRI<sup>®</sup> completely, or smaller steps to marginally implement parts of the TBRI<sup>®</sup> program. Once these implementation plans were in place, every organization received monthly calls from KPICD study investigators to review how effectively the implementation was occurring and whether any changes needed to be made to the implementation plan. These calls also provided information on whether extra skills training or extra assistance was needed from the KPICD. These calls occurred monthly for the first year and then were decreased to quarterly based on need in the second year.



Additionally, each organization was asked to take part in a mid-year and end-of-year data collection survey. Before each survey, organization representatives provided a new list of participants for the project. Both the mid- and end-of-year surveys were distributed through email and conducted on Qualtrics. The mid-year survey included questions on demographics, TBRI®-skills, and behavior management practices. The data gathered were used to measure the influence that trainings had on TBRI® skill use in organizations. At the beginning of year two, a survey similar to the baseline survey was conducted asking all the questions from the baseline survey excluding the demographics and background information. Questions were added asking about changes in professional roles and those in leadership were asked to provide information on changes to the organization. Data were collected and stored on password protected computers at TCU.

### **Measures**

Baseline data collection included measures of demographics, basic background and professional role information; a measure of TIC attitude through the ARTIC-10; a measure of resiliency based on the work of Taormina (2015); organizational culture questions adopted from the TCU Survey of Organizational Functioning (TCU SOF) and Workshop Evaluation (WEVAL), both developed by the Institute of Behavioral Research at TCU; TBRI® skill knowledge based on a measure developed at the KPICD; a measure of Behavior Management based on a measure developed at the KPICD; and measures of intra-office communication adopted from the Policy Communication Index developed by Cannary, Riforgiate, and Montoya (2013). Those in leadership positions were asked to also complete extra questions of organization make-up and complete the Checklist to Assess Readiness to Implement TBRI® based on the work of Barwick (2011). Mid-Year data collection included measures of behavior

management and TBRI® skill use. To ensure confidentiality all research participants created their own research ID, which was used throughout the study. Each organization also selected a training, evaluation and research liaison between the KPICD and their organization. These data collected in the study are only available to the KPICD.

### **Organizational Culture Measures**

*Texas Christian University Survey of Organizational Functioning (TCU SOF)* Measured at time point one (Baseline). Developed and validated by the Institute of Behavioral Research at Texas Christian University (Broome, Knight, Edwards, & Flynn, 2009). This measure is self-administered by program staff and is used to show how prepared an organization is to implement new policies or change current policies. The TCU SOF includes measures from the TCU Organizational Readiness for Change (Lehman, Greener, & Simpson, 2002), also created by the Institute of Behavioral Research. The TCU SOF consists of 162 questions. Each question uses a five-point Likert scale, where a score of one corresponds to a rating of strongly disagree, a score of three on the scale corresponds to neither agree nor disagree, and a score of five corresponds to strongly agree. Scores for items that were worded in the opposite direction from the scale were reflected (by subtracting the value from 6). Scores for items within a scale were averaged and multiplied by 10 for a range of 10 to 50. The current study uses eight of the scales from the TCU-SOF to decrease survey fatigue and increase the likelihood of data collection. The scales were selected because they corresponded to office climate on a theoretical basis and were based on experiences from previous TBRI implementation in Oklahoma and Texas. These eight scales were selected based on tests of Cronbach's alpha from previous research into TBRI® evaluation, specifically the KPICD Oklahoma City collaborative. Cronbach's alpha coefficient provided an estimate of internal consistency for the factors measured (Cronbach, 1951). The scale

purification was conducted using the standards presented by Wieland et al. (2017) with both statistical and theoretical judgement criteria being used to determine scale selection. Scale purification (the process of eliminating items from a multi-item scales) used the experiences from a previous study in Austin, Texas, and Oklahoma City. These scales included autonomy, burnout, cohesion, communication, influence, mission, job satisfaction, and stress.

These primary scales used from the TCU SOF were taken from constructs of office climate and job attitudes. The SOF measures of climate included autonomy, cohesion, communication, mission, and stress and were developed using some measures of the TCU Organization Readiness for Change scale (Lehman, Greener, & Simpson, 2002). Based on Becan, Knight and Flynn (2011); mission is the recognition of goals within an organization (“Your duties are clearly related to the goals of this program.”), cohesion is the perceived ability to work as a unit (“Staff here all get along very well.”), autonomy is the ability to make decisions in the office (“Management here fully trusts your professional judgment.”), communication is the back and forth between staff and management (“The formal and informal communication channels here work very well.”), and stress is the perception of how much strain there is in the workplace (“The heavy workload here reduces program effectiveness.”). The coefficient alpha reliability for the five factors of the SOF organizational climate scale is .87 (Broome, Flynn, Knight, & Simpson, 2007) indicating high reliability. Burnout and job satisfaction are based on the SOF measures of job attitudes and represent feelings of cynicism or exhaustion (“You feel depressed.”) and satisfaction in work (“You are proud to tell others where you work.”) respectively (Broome, Knight, Edwards, & Flynn, 2009). These two measures showed high reliability through coefficient reliability alphas (burnout = .74, job satisfaction = .78) in psychometric analyses (Broome, Knight, Edwards, & Flynn, 2009). Influence is based on staff

attitudes and indicates how much perceived clout a person has in an organization (Broome, Flynn, Knight, & Simpson, 2007). An example of influence is, “You frequently share your knowledge of child welfare with other staff.” Leadership engagement from the TCU Workshop Evaluation form (TCU WEVAL; Joe, Becan, Knight & Flynn, 2017) is the commitment, involvement and accountability of those in charge in an organization (Joe, Becan, Knight & Flynn, 2017). An example of leadership engagement is, “Leadership at your facility recognizes staff that use new approaches, such as TBRI®.” Coefficient reliabilities for engagement based on program support were high with an alpha of .78 at Dual Diagnosis training and an alpha of .80 at Therapeutic Alliance training (Bartholomew, Joe, Rowan-Szal, & Simpson, 2007).

### **Organizational Communication Measures**

*Policy Communication Index* – Measured at time point one (Baseline). This measure was developed and validated by Canary, Riforgiate and Montoya (2013) to aid in measuring policy communication in organizations. The researchers designed this measure to help show how different policies spread in an organization in response to the large amount of prescribed practices impacting many fields. Each question uses a five-point Likert scale, where a score of one corresponds to a rating of strongly disagree. A score of three on the scale corresponds to neither agree nor disagree, and a score of five corresponds to strongly agree. Each separate factor is used to determine the amount of communication that occurs within the organization. Factors included were meeting communication (i.e., “In meetings, people ask for TBRI® details.”), personal expression of policy (i.e., “I offer suggestions about TBRI®.”), coworker communication (i.e., “Coworkers and I talk about what is right and wrong about TBRI®.”), and written instruction (i.e., “I get written instructions on TBRI®.”). Respondents were also asked to estimate the amount of information they take and receive from each factor of the measure (e.g., I

get information about policy from meetings 80% of the time). Canary, Riforgiate, and Montoya (2013) found that reliability for the composite PCI was high ( $\alpha = .91$ ).

### **Measures of Adoption and Dissemination**

*TBRI<sup>®</sup> Skills and TIP Behavior Practices* - Measured at time point 1 (Baseline) and 2 (Mid-year). Latent measure for TBRI<sup>®</sup> adoption and dissemination based on time point 1 in TBRI<sup>®</sup> skills and TIP behavior practices. This included positive and negative behavior management practices. Respondents were asked to rate these behavior practices for both themselves and their coworkers. This measure was made up of 26 questions regarding TBRI<sup>®</sup> exposure and an estimate of behavioral management responses (i.e., grounding, redirecting behavior, punishments) and TBRI<sup>®</sup> skills (i.e., use of playful interactions, calming activities, redo's). Behavioral management strategies include punishment, grounding, using a level system, time outs, positive reinforcement, redirecting negative behaviors, ignoring negative behaviors, using medication, using restraints, or other behavioral management practices. TBRI<sup>®</sup> skills broadly asked about connecting principles (i.e. mindful awareness), engagement strategies (i.e. using healthy touch), proactive strategies (i.e. using life value terms like "with respect"), responsive strategies (i.e. using a playful response), physiological strategies (i.e. providing adequate nutrition), and ecological strategies (i.e. preparing schedules). Each question used a five-point Likert scale, where a score of one corresponds to a rating of never used and a score of 5 being always used.

### **Analytic Plan**

This study was designed to test the following four hypotheses: (a) office culture predicts the use of pro-TBRI<sup>®</sup> skills and behavior management strategies at time point two, (b) office culture is related to office communication at time one, (c) office communication predicts changes

in the use of pro-TBRI® skills and behavior management strategies, and (d) office communication mediates the relationship between office culture and staff use of pro-TBRI® skills and behavior management strategies in an organization. The analytic plan includes the following steps: data cleaning, covariate testing, assumptions testing, measurement model testing, and hypothesis testing.

Data cleaning steps followed the current best practices (Osbrone, 2013). First, survey respondents who only completed their demographic data (i.e., did not respond to survey items) were removed from the sample, as these data were not used in the analysis. Second, a test for outliers was conducted using scatter plots. If needed after using the scatter plots, a cluster analysis could be used due to the large data set and m-estimators based on z-scores (Rousseeuw & Hubert, 2011). Based on these results, any cases remaining in the sample that have with missing scale data and/or outlier values would be reviewed to determine if they needed to be dropped (Osborne, 2013). The cluster analysis was not needed for the study. Comparisons were conducted between the sample being kept and the sample being dropped for each variable to determine if there was an underlying cause for the dropped data. Any data that were removed or missing were analyzed to ensure that the data was missing at random or missing completely at random, thus ensuring that there was not an underlying cause for the missing responses (Soley-Bori, 2013). To ensure that any other missing data was random, several analyses were conducted. Demographic data from baseline to time point two was examined using ANOVA's to determine if there was a cause for attrition due to age or a shift in career. Comparisons between organizations using chi square analyses were conducted as well to determine if there was a large shift in organization staff. Comparisons were made from time point one to time point two to rule out a systemic cause for missing data including factors like high organization burnout rates at

time point one, high organization stress levels at time point one, low job satisfaction ratings, low scores in TBRI® skill use, and low leadership engagement. Any root cause for missing data will be explained in the results section of this paper.

To ensure that missing data were accounted for, imputation using Maximum Likelihood Robust (MLR) in MPlus was used. Multiple likelihood was used on partially completed survey responses to avoid model bias and loss of power (Langkamp, Lehman, & Lemeshow, 2010). Using MLR ensured that data imputation used a variance-covariance matrix with all available data points to create efficient estimates with correct standardized errors (Soley-Bori, 2013). Using MLR to handle missing data provided two advantages. The first was that MLR is a simpler method to handle missing data (Allison, 2012). The second was that MLR is conducted in one model, so any inconsistencies that might occur with multiple imputations were not a concern (Allison, 2012). Data analysis used Markov Chain Monte Carlo estimates to perform the imputation in MPlus, and model analysis used robust maximum likelihood to improve model estimation (Graham, 2009).

**Preliminary analyses.** After the data were cleaned, preliminary analyses were conducted to verify that the data met the assumptions for the planned analyses (Field, Miles, & Field, 2012). Preliminary analyses for the study were conducted using IBM's SPSS statistical software, version 24. Preliminary analysis tested for a normal distribution within the data to ensure that there was a linear relationship between the independent and dependent variables, statistical independence, and that there was homogeneity of variance between respondents (Field, Miles, & Field, 2012). Standard descriptive statistics, reliability coefficients and tests of skew and kurtosis were reviewed to determine normality and equality of variance (Ghasemi & Zahediasl, 2012). A Shapiro-Wilk test, using cutoff values of 1.96 and -1.96 were used to determine normality

(Ghasemi & Zahediasl, 2012). Due to the robust nature of a large sample size, violations of normality are less common, but testing occurred in case the data needed to be transformed in any way (Ghasemi & Zahediasl, 2012). Testing for linearity, homogeneity of variance, and independence used both scatter plots of observed and predicted values and scatter plots of residuals. Variance between organizations was analyzed using t and f tests.

Covariate analysis were checked to determine if there were any confounding factors in the data after all dropped cases were removed. A set of Analysis of Covariance (ANCOVA's) were used to examine if there were any differences in the data based on demographics, including gender, age, educational background, licensure and position. Covariance testing was conducted between organizations to determine if there were demographic factors influencing responses. Any factors that were related were added to the model as covariates or will be explained in the discussion.

**Design of the structural model.** Outside of normal assumptions for data analysis, five conditions must be met for a structural equation model (Kline, 2010). The design of the final structural model (see Appendix A, Figure 4) meets the temporal requirements for the study, and also show the association and direction between the independent variables and the dependent variable (Kline, 2010). Assumption and covariate testing provided insight into possible confounding or extraneous variables, which were removed from the final model (Kline, 2010). Likewise, the preliminary analyses showed the form of the distribution of the data meeting the final requirement outlined by Kline (2010). These preliminary analyses helped to provide insight into making specifications to the model after confirmatory factor analyses were conducted to determine that each scale fit the sample.



**Confirmatory factor analysis.** Each scale included in the methods section (TCU SOF, WEVAL, and PCI) was tested to ensure that the measurement model fit the study population. Conducting a confirmatory factor analysis (CFA) for each measure showed how well each indicator within the latent variable used in the study (e.g., office communication) group together and help explain the latent variable in a complete model using fit indices (Levine, 2005). The CFAs also estimated how well indicators assess the same latent variable (Levine, 2005). Each construct was made of data collected from the baseline and mid-year surveys. CFA estimates were compared to previous research using the same measures to ensure consistency between the research samples. After the measures were tested, the measurement model was created.

**Office culture construct.** To create the construct of office culture, a confirmatory factor analysis was conducted using the indicators: autonomy, communication, satisfaction, mission, stress, burnout, cohesion, and influence from the TCU SOF and leadership engagement from the TCU WEVAL. Mission was fixed at one for this model. Because the TCU SOF uses ordinal data, the CFA used robust least weighted squares, to deal with any asymmetry in the responses (Kline, 2016). The measure had more than three indicators, meeting the minimum requirements for a CFA model (Kline, 2016). Each indicator listed previously was added into a model, uncorrelated, to test that the correct amount of indicators were included (Hayduk & Glaser, 2000). Next, pattern coefficients were set to zero to ensure that the model had acceptable fit (Hayduk & Glaser, 2000). The proposed model for the confirmatory factor analysis is seen in Appendix A, Figure 1. All correlations between indicators are assumed based on theoretical background.

**Office communication construct.** A second confirmatory factor analysis was conducted to create the construct of office communication, using the indicators of coworker

communication, meeting communication, personal expression and written communication from the Policy Communication Index. This CFA was conducted in the same manner as the previous CFA. Personal expression of policy was fixed at one. This model can be seen in the Appendix A, Figure 2.

***TBRI® adoption and dissemination construct.*** To test the latent construct of TBRI® adoption and dissemination, SPSS was used to randomly split the sample in half, and conduct an exploratory factor analysis (EFA) on half of the sample (Besnoy, Danzler, Besnoy, & Byrne, 2016). Halved, this study's sample size still supports the 20:1 subject to item ratio that is recommended by Costello and Osborn (2005). The EFA was used to conduct an item-level analysis to test item distribution. The factor structure and factorability of the model was also checked. To create the construct of adoption and dissemination, the EFA tested the indicators TBRI®-based skills and behavior management practices (Figure 3 in Appendix A). These indicators were included into the model at the same time, with re-specification occurring by removing one indicator at a time until there was a consistent goodness of fit (Maulik & Millsap, 2000). After the EFA was completed and the factor structure was determined, a CFA was conducted to confirm the EFA using the second half of the randomly sampled data.

A path model was created using SEM with each of the latent constructs created above, after specification was complete. The path model was created showing the influence between each latent variable created and specified above. The final mediation model is seen Figure 4 in Appendix A. The path model shows the influence of the constructs of office culture, office communication and TBRI® skill at time point one on TBRI® skills at time point two. Office culture influenced office communication in the model. TBRI® skills at time point one was set to covary with office culture at time point one. The model was re-specified one item at a time until

the best fit for the model was determined using a Chi-Square test, Root Mean Square Error of Approximation (RMSEA), and Normed Fit Indexes (NFI). Critical values for the Chi-Square test used for specification were any  $p$  value greater than .05. Normed Fit Index critical values were set above .90, which is considered marginal, depending on the other fit indexes. Finally, an RMSEA value of .05 was used in accordance with Kenny, Kaniskan, and McCoach (2014) for a good fit. A moderate fit for the model was specified according to Hu and Bentler (1999), using a Root Mean Square Residual (SRMR) value of less than .08, an RMSEA value of less than .06, and a Tucker-Lewis Index (TLI) of greater than .90. Hu and Bentler (1999) make a point that none of these values are set in stone if there are no better theoretically appropriate alternatives for the model.

**Method of Specification.** The current study used a four-step method for testing structural regression measurement modeling to help diagnose any misspecification and create a model with the fewest constraints (Hayduk & Glaser, 2000; Mulaik & Millsap, 2000). The first step was to include all the indicators from the study and all the factors in the study without any specification, in analyses to determine whether there are were an appropriate number of factors in the model (Hayduk & Glaser, 2000). As recommended by the literature, this model includes different predetermined indicators based on a priori theory set without relationships between the indicators being specified (Mulaik & Millsap, 2000). This ensured that the appropriate number of indicators were included in the model (Mulaik & Millsap, 2000). The second step added specification to pattern coefficients, and if the fit was appropriate, the model moved to the third step (Kline, 2016). If there was a poor fit, the model was revised. The third step added direct casual effects and fixed zero restraints were introduced (Mulaik & Millsap, 2000).

The final step was hypothesis testing. Hypothesis testing was conducted using Structural Equation Modeling through the use of indirect effects outlined by Pearl in *The Casual Foundations of Structural Equation Modeling* (2012). Once a goodness of fit was met for the final path model direct and indirect effects indicated the relationships between each latent construct. To examine hypothesis one (office culture will predict the amount of adoption/dissemination of TBRI® based skills and pro TIP-based behaviors), the direct and indirect effects of the path model were examined using the standardized coefficient and  $R^2$  for the path between office culture and TBRI® Skill at time point two. To examine hypothesis two (office culture will predict the level of intra-office communication that occurs), the direct and indirect effects between office culture and office communication were examined looking at the standardized coefficient and  $R^2$  for the path between office culture and office communication at time point one. To examine hypothesis three (intra-office communication that occurs will predict the amount of adoption/dissemination of TBRI® based skills and pro TIP-based behaviors by staff), the direct and indirect effects between office culture and office communication at time point one were examined using the standardized coefficient and  $R^2$  for the path between office communication and TBRI® Skill at time point two. To examine hypothesis four (whether intra-office communication acts as a mediator for office culture), the indirect effects for the relationships between office culture and TBRI® skills through office communication by a significant standardized coefficient and  $R^2$ .

### **Results**

All analyses were conducted using MPLUS version 7 (Muthen & Muthen, 2010) and IBM's SPSS statistical software. The data were cleaned using SPSS and the practices put forward by Osborne (2013). No outliers were found or removed from the data. Linearity,

independence, and homogeneity of variance were reviewed by scatter plot. A Shapiro-Wilk test found values that fell within the  $\pm 1.96$  cut offs set by Ghasemi and Zahediasl (2012). Values for kurtosis fell within the  $\pm 2.00$  values for a normal distribution (George & Mallory, 2010).

**Missingness.** Analyses for missingness were conducted to determine if there were any trends in missingness. There was not a significant difference in missingness between different racial groups ( $X^2 [7, N = 984] = 11.67, p = .112$ ), gender groups ( $X^2 [2, N = 983] = .71, p = .701$ ), age groups ( $X^2 [51, N = 953] = 56.13, p = .289$ ), educational backgrounds ( $X^2 [7, N = 985] = 8.59, p = .286$ ), or positions in organizations ( $X^2 [518, N = 981] = 547.98, p = .175$ ). There was a significant difference in missingness when comparing those respondents with or without licensure ( $X^2 [5, N = 975] = 15.57, p = .008$ ), though follow up analysis could not find a reason for this difference. An analysis comparing those who responded at time one and time two showed no significant differences between different racial groups ( $X^2 [28, N = 984] = 26.57, p = .542$ ), gender groups ( $X^2 [8, N = 983] = 9.24, p = .323$ ), age groups ( $X^2 [204, N = 953] = 200.49,$

Table 3.– Means, Standard Deviations, and between organization ANOVA Table for TCU Survey of Office Function and Policy Communication Index

<i>Variables</i>	<i>Mean (SD)</i>	<i>bdf</i>	<i>wdf</i>	<i>F-statistic</i>	<i>p</i>
Influence	36.50 (6.94)	29	600	2.12	.001
Mission	36.68 (5.00)	29	608	4.59	.000
Cohesion	35.94 (5.16)	29	608	3.74	.000
Communication	34.97 (6.17)	29	607	5.39	.000
Stress	29.04 (8.31)	29	607	5.67	.000
Job Satisfaction	38.73 (3.76)	29	605	3.66	.000
Leadership Engage.	35.89 (8.90)	29	607	11.01	.000
Autonomy	32.73 (3.73)	29	597	1.99	.002
Burnout	22.04 (1.15)	29	603	2.30	.000
Meeting Comm.	3.02 (1.15)	29	595	4.50	.000
Coworker Comm.	2.96 (1.15)	29	614	3.69	.000
Office Instruction	2.62 (1.17)	29	603	3.10	.000
Personal Expression	3.03 (1.11)	29	500	4.29	.000

Note.  $N = 675$ .  $SD =$  Standard Deviation;  $bdf =$  Between Degrees of Freedom,  $wdf =$  Within Degree of Freedom approximation.

$p = .556$ ), educational backgrounds ( $X^2 [28, N = 985] = 25.95, p = .596$ ), or positions in organizations ( $X^2 [2072, N = 981] = 2067.93, p = .521$ ). This comparison showed that the data analysis could proceed with the data at each time point.

Both means and standard deviations for the Policy Communication Index, TCU Survey of Organization Functioning are found in Table 3. A one-way Analysis of Variance (ANOVA) was conducted for each construct for the TCU SOF and the PCI for each factor to determine if there was a difference between organizations (to determine covariates needed). The results of each ANOVA showed that there was a difference between organizations in their responses to each construct in the TCU SOF,  $p$ 's  $\leq .002$ . Likewise, the results for the ANOVA for the PCI showed a difference between each organization on each PCI scale,  $p$ 's  $\leq .001$ . These differences were taken into consideration when creating the path modeling for each analysis, by including multi-level cluster analysis in MPLUS based on organization. The scales for job satisfaction, mission, influence, and cohesion were the highest rated means for the collaborative on the TCU SOF. Burnout and stress were the lowest rated means for the collaborative. The means for the collaborative for the PCI were almost all at a consistent level, although office instruction was reported as the least used form of policy communication.

Table 4. – Factor Loadings for Office Culture

Factor Loading	Std. Est. (Est.)	S.E.	$t$	$r^2$	$p$
OFFCUL by Influence	.32 (1.0)	.04	7.85	.11	.000*
OFFCUL by Mission	.66 (1.5)	.02	28.56	.44	.000*
OFFCUL by Cohesion	.76 (1.7)	.02	39.80	.58	.000*
OFFCUL by Stress	-.59 (-2.1)	.03	-18.44	.35	.000*
OFFCUL by Job Satisfaction	.70 (1.1)	.06	12.13	.49	.000*
OFFCUL by Leadership	.54 (2.1)	.08	7.12	.29	.000*
OFFCUL by Autonomy	.47 (0.8)	.04	12.53	.22	.000*
OFFCUL by Burnout	-.40 (-1.2)	.05	-8.45	.16	.000*
OFFCUL by Communication	.81 (2.2)	.02	45.16	.65	.000*

Note.  $N = 675$ . All figures with \* represent significant value. Std. Est. = standardized estimate, Est. = unstandardized estimate, S.E. = Standard Error.

**Office Culture.** A Confirmatory Factor Analysis (CFA) was conducted to determine if the TCU Survey of Organization Functioning (TCU SOF) was an appropriate measure for this project. The initial model included all variables and no covariates. Fit statistics for the initial model were poor with a poor Root Mean Square Error of Approximation (*RMSEA Estimate* = 0.16,  $p \leq .001$ ), poor Tucker Lewis Index ( $TLI = 0.69$ ) and a moderate Standardized Root Mean Square ( $SRMR = .077$ ). The chi-square statistic can be ignored due to the large sample size used in this model. Because the model did not meet the minimum requirements for model fit, researchers used the MPLUS algorithm Mod Indices to determine appropriate paths to increase the goodness of fit. Five modifications indicated by mod indices were used to increase the goodness of fit, (see Table 1 in Appendix B for change in fit statistics for each model) leading to five correlations between indicators. Each modification included the addition of a covariate among the indicators (see Figure 1 in Appendix C). The *RMSEA* of the final model (*Estimate* = .06,  $p \leq .001$ ) showed a good fit with an estimate of .06, with an upper confidence interval of .08 and a lower interval of 0.04. Both the  $TLI = 0.96$  and the  $SRMR = .03$  indicated a good fit between the model and the data. The scaled indicators (Influence, Mission, Cohesion, Stress, Communication, Job Satisfaction, Leadership Engagement, Autonomy and Burnout) used to create the construct of Office Culture were all significant,  $p$ 's  $\leq .001$ , while controlling for each other (see Table 4). Burnout was positively related to stress ( $b = 0.48, t = 14.5, p \leq .001$ ) and negatively related to job satisfaction ( $b = -0.27, t = -6.78, p \leq .001$ ). Leadership engagement was positively associated with mission ( $b = 0.34, t = 8.45, p \leq .001$ ). Stress was positively associated with influence ( $b = 0.24, t = 5.86, p \leq .001$ ) and autonomy ( $b = 0.2, t = 4.69, p \leq .001$ ).

Table 5.– Factor Loadings for Office Communication

Factor Loading	Std. Est. (Est.)	S.E.	t	r <sup>2</sup>	p
OFFCOMM by Meeting	.84 (1.0)	.02	55.70	.84	.000*
OFFCOMM by Coworker	.92 (1.1)	.01	79.65	.71	.000*
OFFCOMM by Instruction	.91 (1.1)	.01	74.37	.84	.000*
OFFCOMM by Expression	.53 (0.6)	.03	15.33	.28	.000*

Note.  $N = 675$ . All figures with \* represent significant value. *Std. Est.* = standardized estimate, *Est.* = unstandardized estimate, *S.E.* = Standard Error.

**Office Communication.** A second CFA was conducted to determine if the Policy Communication Inventory (PCI) was an appropriate measure for this project. Fit statistics for the initial model were poor with a poor RMSEA (*RMSEA Estimate* = 0.54,  $p \leq .001$ ), poor TLI (*TLI* = 0.00) and a poor SRMS (*SRMR* = 0.39). The chi-square statistic can be ignored due to the large sample size used in this model. The MPLUS algorithm Mod Indices was used to increase model fit. One modification was used to increase the goodness of fit leading to one correlation between indicators. The *RMSEA* of the final model (*Estimate* = .08,  $p \leq .001$ ) approached a good fit, with a lower confidence interval of 0.01. Both the *TLI* = 0.99 and the *SRMR* = .01 indicated a good fit between the model and the data. The scaled indicators (meeting communication, coworker communication, office instruction, and personal expression) associated with Office Communication were all significant,  $p$ 's  $\leq .001$  while controlling for each other (see Table 5). Personal expression was positively related to coworker communication ( $b = 0.51$ ,  $t = 14.94$ ,  $p \leq .001$ ).

**TBRI<sup>®</sup> Skill Use and Behavioral Management Practices.** Means and standard deviations for TBRI<sup>®</sup> skill use and behavioral practices at the baseline (time point one) and mid-year (time point two) are found in Table 6. Paired samples t-tests were used to determine if there was a significant difference between TBRI<sup>®</sup> skills and behavior practices between time points. TBRI<sup>®</sup> skills almost uniformly increased from time one to time two, with the exception of the



use of schedules (see Table 6). There was a significant increase between mindfulness ( $p = .014$ ), healthy touch ( $p \leq .001$ ), life value terms ( $p = .018$ ), and behavioral scripts ( $p = .018$ ). Hydration was approaching significance ( $p = .057$ ). Based on Table 6 the largest increase in TBRI® skill means over time were healthy touch (an increase of .43), mindful awareness (an increase of .26), life value terms (an increase of .25), behavioral scripts (an increase of .24), and hydration (an increase of .22). There was a significant increase in the means of grounding from time one to time two ( $p \leq .001$ ). Conversely, there was a significant decrease in the means of positive reinforcement ( $p = .034$ ) and medicating ( $p \leq .001$ ) from time one to time two. The decrease

Table 6. – Means and Standard Deviations for TBRI Skills and Behavior Management Strategies at Time 1 and Time 2

<i>Variables</i>	<i>Skill</i>	<i>Mean Time 1 (SD Time 1)</i>	<i>Mean Time 2 (SD Time 2)</i>
SB01	Punishment	1.49 (1.34)*	1.41 (1.22)*
SB02	Grounding	1.01 (1.24)* †	1.43 (1.42)* †
SB03	Level System	1.32 (1.51)*	1.34 (1.37)*
SB04	Time Outs	1.38 (1.43)*	1.28 (1.23)*
SB05	Pos. Reinforcement	3.63 (1.74)* †	3.40 (1.75)* †
SB06	Redirecting	3.56 (1.77)*	3.37 (1.75)*
SB07	Ignoring	2.45 (1.58)*	2.26 (1.55)*
SB08	Medicating	1.32 (1.48)* †	0.99 (1.18)* †
SB09	Restraints	0.95 (0.94)*	0.90 (0.83)*
SB10	Other Behavioral	0.88 (1.44)*	1.07 (1.51)*
T1_STC01	Mindfulness	3.24 (1.77)* †	3.50 (1.49)* †
T1_STC02	Voice	3.62 (1.67)*	3.74 (1.49)*
T1_STC03	Healthy Touch	2.70 (1.73)* †	3.13 (1.62)* †
T1_STC04	Playful Interaction	3.34 (1.66)*	3.52 (1.53)*
T1_STC05	Life Value Terms	3.17 (1.74)* †	3.42 (1.58)* †
T1_STC06	Behavioral Scripts	2.98 (1.72)* †	3.22 (1.63)* †
T1_STC07	IDEAL Response	2.85 (1.77)*	2.87 (1.68)*
T1_STC08	Levels of Response	3.05 (1.83)*	3.12 (1.62)*
T1_STC09	Physical Activity	2.97 (1.80)*	3.03 (1.63)*
T1_STC10	Hydration)	2.92 (1.84)*	3.14 (1.68)*
T1_STC11	Sensory Needs	2.55 (1.77)*	2.57 (1.69)*
T1_STC12	Rituals	2.57 (1.79)*	2.67 (1.67)*
T1_STC13	Artifacts	1.90 (1.69)*	1.96 (1.54)*
T1_STC14	Transitions	2.87 (1.83)*	2.88 (1.74)*
T1_STC15	Schedules	3.04 (1.91)*	3.02 (1.72)*
T1_STC16	Other TBRI Skills	0.84 (1.53)*	0.95 (1.49)*

Note.  $N = 873$ .  $SD =$  Standard Deviation; \* indicates a significant difference between organizations in ANOVA's, † indicates a significant difference between time point one and two.

between the means for ignoring behavior was near significance ( $p = .052$ ) from time one to time two. Overall, there was a decrease in the means of behavior management strategies used in organizations from time one to time two.

**TBRI<sup>®</sup> skills use.** An Exploratory Factor Analysis (EFA) was conducted to determine what indicators best represent TBRI<sup>®</sup> skills use as a single construct. The data set was divided into two groups randomly using the “select random data” command in SPSS. These data sets provided data for the EFA, and the CFA to confirm the indicators. Ratings for coworkers were dropped from the model due to missing data or responses listed as unknown. Each factor that was assumed to be important to the construct TBRI<sup>®</sup> skill use was added to the model to test for significance. Based on the r-square values, several indicators were dropped due to two tailed non-significance with  $p$ 's  $\geq 0.231$  (see Table 2 in Appendix B for values). Based on this, the factors other TBRI<sup>®</sup> skills, other behavioral management skills, grounding, a level system, time outs, medicating and restraints were dropped from the model. Using the remaining indicators a CFA was conducted with moderate to poor initial fit statistics with a poor RMSEA (*RMSEA Estimate* = 0.147,  $p \leq .001$ ), moderate TLI (*TLI* = 0.80) and a moderate SRMS (*SRMR* = 0.06). Mod Indices was used to increase model fit, with seven modifications used to increase the goodness of fit, (see Table 3 in Appendix B for change in fit statistics for each model) leading to six correlations between indicators. Each modification included the addition of a covariate among the indicators (see Figure 3 in Appendix C). The *RMSEA* of the final model (*Estimate* = .10,  $p \leq .001$ ) was poor. Both the *TLI* = 0.91 and the *SRMR* = .05 indicated a good fit between the model and the data. See Table 7 for a full list of indicators for the model and Figure 3 in Appendix C for covariance values. All edits to indicators made to TBRI<sup>®</sup> skills at time one were carried over to TBRI<sup>®</sup> skill use at time two.

Table 7. – Factor Loadings TBRI Use Confirmatory Factor Analysis

Factor Loading	Std. Est. (Est.)	S.E.	t	r <sup>2</sup>	p
TBRIUSE1 by B1_SB01	.46 (1.0)	.08	6.07	.22	.000*
TBRIUSE1 by B1_SB05	.70 (1.9)	.05	13.20	.49	.000*
TBRIUSE1 by B1_SB06	.73 (2.0)	.05	14.63	.53	.000*
TBRIUSE1 by B1_SB07	.54 (1.4)	.09	5.83	.29	.000*
TBRIUSE1 by B1_STC01	.83 (2.2)	.03	26.68	.69	.000*
TBRIUSE1 by B1_STC02	.82 (2.0)	.03	24.26	.67	.000*
TBRIUSE1 by B1_STC03	.79 (2.1)	.04	20.78	.62	.000*
TBRIUSE1 by B1_STC04	.86 (2.1)	.03	34.86	.75	.000*
TBRIUSE1 by B1_STC05	.78 (2.1)	.04	20.61	.61	.000*
TBRIUSE1 by B1_STC06	.83 (2.2)	.03	27.23	.69	.000*
TBRIUSE1 by B1_STC07	.74 (2.0)	.05	15.95	.55	.000*
TBRIUSE1 by B1_STC08	.82 (2.3)	.04	23.70	.67	.000*
TBRIUSE1 by B1_STC09	.87 (2.4)	.03	30.49	.76	.000*
TBRIUSE1 by B1_STC10	.79 (2.2)	.04	22.13	.62	.000*
TBRIUSE1 by B1_STC11	.84 (2.3)	.05	18.60	.71	.000*
TBRIUSE1 by B1_STC12	.82 (2.3)	.04	19.29	.67	.000*
TBRIUSE1 by B1_STC13	.70 (1.8)	.07	9.70	.50	.000*
TBRIUSE1 by B1_STC14	.83 (2.3)	.03	24.54	.68	.000*
TBRIUSE1 by B1_STC15	.81 (2.4)	.04	20.09	.66	.000*

Note. N = 873. All figures with \* represent significant value. Std. Est. = standardized estimate, Est. = unstandardized estimate, S.E. = Standard Error.

**Office culture and TBRI<sup>®</sup> skill use.** A simple path model was designed to test whether office culture had relationship with TBRI<sup>®</sup> skill use at time two. The model was run using ANALYSIS = COMPLEX, creating a two level analysis with clustering based on organization to control for differences within each agency. Fit statistics for the initial model were moderate with a poor RMSEA (*RMSEA Estimate* = 0.10,  $p \leq .001$ ), a moderate TLI (*TLI* = 0.82) and a moderate SRMS (*SRMR* = 0.58). The MPLUS algorithm Mod Indices was used to increase model fit. Thirteen modifications were used to increase the goodness of fit, (see Table 4 in Appendix B for change in fit statistics for each model) leading to 13 correlations between indicators. The *RMSEA* of the final model (*Estimate* = .06,  $p = .004$ ) was approaching a good fit, with confidence intervals from .056 to .072. Both the *TLI* = 0.93 and the *SRMR* = .05 indicated a

good fit between the model and the data. There was a significant positive relationship between Office Culture and TBRI® Skill Use at time two,  $b = .23$ ,  $t = 2.58$ ,  $p = .01$ . The scaled indicators for both Office Culture ( $p$ 's  $\leq .001$ ) and TBRI® Skill Use ( $p$ 's  $\leq .001$ ) were all significant, while controlling for each other. See Table 8 for a full list of indicators for the model and Figure 4 in Appendix C for covariance values. The path model shows that when office culture scores were high at time point one, TBRI skill use by organizations tended to be high at time point two.

Table 8.– Factor Loadings for Office Culture, and TBRI Use

Factor Loading	Std. Est. (Est.)	S.E.	t	r <sup>2</sup>	p
OFFCUL by Influence	.25 (1.0)	.06	4.50	.06	.000*
OFFCUL by Mission	.60 (1.7)	.04	13.77	.36	.000*
OFFCUL by Cohesion	.77 (1.9)	.05	15.40	.59	.000*
OFFCUL by Stress	-.65 (-3.1)	.04	-17.68	.42	.000*
OFFCUL by Job Satisfaction	.70 (1.4)	.05	24.74	.49	.000*
OFFCUL by Leadership	.64 (3.3)	.06	12.97	.41	.000*
OFFCUL by Autonomy	.40 (0.8)	.04	9.83	.16	.000*
OFFCUL by Burnout	-.39 (-1.4)	.04	-9.19	.15	.000*
OFFCUL by Communication	.84 (2.8)	.03	24.74	.70	.000*
TBRIUSE2 by T1_SB01	.45 (1.0)	.03	14.73	.20	.000*
TBRIUSE2 by T1_SB05	.79 (3.1)	.04	17.96	.63	.000*
TBRIUSE2 by T1_SB06	.82 (3.2)	.04	21.66	.68	.000*
TBRIUSE2 by T1_SB07	.62 (2.0)	.04	15.82	.39	.000*
TBRIUSE2 by T1_STC01	.79 (2.4)	.05	17.05	.62	.000*
TBRIUSE2 by T1_STC02	.89 (2.9)	.03	33.30	.79	.000*
TBRIUSE2 by T1_STC03	.86 (2.9)	.03	29.81	.74	.000*
TBRIUSE2 by T1_STC04	.89 (2.9)	.03	29.43	.79	.000*
TBRIUSE2 by T1_STC05	.88 (2.9)	.02	36.59	.77	.000*
TBRIUSE2 by T1_STC06	.88 (3.0)	.03	34.25	.77	.000*
TBRIUSE2 by T1_STC07	.83 (2.8)	.02	34.66	.69	.000*
TBRIUSE2 by T1_STC08	.85 (2.9)	.03	28.86	.72	.000*
TBRIUSE2 by T1_STC09	.85 (2.8)	.03	27.66	.72	.000*
TBRIUSE2 by T1_STC10	.77 (2.7)	.04	21.49	.60	.000*
TBRIUSE2 by T1_STC11	.78 (2.6)	.04	19.98	.60	.000*
TBRIUSE2 by T1_STC12	.83 (2.9)	.02	41.85	.69	.000*
TBRIUSE2 by T1_STC13	.71 (2.8)	.03	23.62	.51	.000*
TBRIUSE2 by T1_STC14	.83 (3.0)	.02	39.17	.69	.000*
TBRIUSE2 by T1_STC15	.83 (3.0)	.03	28.52	.68	.000*

Note.  $N = 873$ . All figures with \* represent significant value. Std. Est. = standardized estimate, Est. = unstandardized estimate, S.E. = Standard Error.

**Office culture and office communication.** A second simple path model was designed to test whether office culture had a relationship with office communication, while controlling for differences across agencies. Fit statistics for the initial model were poor with a poor RMSEA (*RMSEA Estimate* = 0.13,  $p \leq .001$ ), a poor TLI ( $TLI = 0.77$ ) and a poor SRMS ( $SRMR = 0.08$ ). The MPLUS algorithm Mod Indices was used to increase model fit. Six modifications were used to increase the goodness of fit, (see Table 5 in Appendix B for change in fit statistics for each model) leading to six correlations between indicators. The *RMSEA* of the final model (*Estimate* = .07,  $p = .001$ ) was approaching a good fit, with confidence intervals from .06 to .08. Both the  $TLI = 0.93$  and the  $SRMR = .07$  indicated a moderate fit between the model and the data. The scaled indicators for both office culture ( $p$ 's  $\leq .001$ ) and office communication ( $p$ 's  $\leq .001$ ) were all significant, while controlling for each other. See Table 9 for a full list of indicators for the model and Figure 5 in Appendix C for covariance values. There was a significant positive relationship between office culture and TBRI<sup>®</sup> skill use at time two,  $b = .28$ ,  $t = 5.61$ ,  $p \leq .001$ .

Table 9.– Factor Loadings for Office Communication and Office Culture

Factor Loading	Std. Est. (Est.)	S.E.	t	r <sup>2</sup>	p
OFFCUL by Influence	.28 (1.0)	.04	7.47	.08	.000*
OFFCUL by Mission	.68 (1.7)	.02	27.98	.46	.000*
OFFCUL by Cohesion	.74 (1.9)	.02	33.18	.54	.000*
OFFCUL by Stress	-.60 (-2.5)	.05	-12.67	.36	.000*
OFFCUL by Job Satisfaction	.67 (1.2)	.06	11.46	.45	.000*
OFFCUL by Leadership	.55 (2.6)	.08	6.71	.30	.000*
OFFCUL by Autonomy	.47 (0.9)	.04	10.67	.22	.000*
OFFCUL by Burnout	-.37 (-1.3)	.03	-12.67	.14	.000*
OFFCUL by Communication	.81 (2.5)	.02	33.80	.65	.000*
OFFCOMM by Meeting	.92 (1.0)	.02	47.25	.84	.000*
OFFCOMM by Coworker	.84 (0.9)	.03	29.02	.70	.000*
OFFCOMM by Instruction	.91 (1.0)	.01	63.38	.84	.000*
OFFCOMM by Expression	.54 (0.6)	.07	8.33	.30	.000*

Note.  $N = 675$ . All figures with \* represent significant value. *Std. Est.* = standardized estimate, *Est.* = unstandardized estimate, *S.E.* = Standard Error.

There was a correlation between office culture and office communication, with higher scores for office culture in an organization relating to higher scores in office communication.

**Office communication and TBRI® skill use.** A third simple path model was designed to test whether office communication had a relationship to TBRI® skill use at time two while controlling for differences within agencies. Fit statistics for the initial model were moderate with a poor RMSEA (*RMSEA Estimate* = 0.12,  $p \leq .001$ ), a moderate TLI (*TLI* = 0.82) and a good SRMS (*SRMR* = 0.06). The MPLUS algorithm Mod Indices was used to increase model fit. Twelve modifications were used to increase the goodness of fit, (see Table 6 in Appendix B for change in fit statistics for each model) leading to 12 correlations between indicators. The *RMSEA* of the final model (*Estimate* = .07,  $p \leq .001$ ) was poor. Both the *TLI* = 0.93 and the *SRMR* = .06 indicated a moderate fit between the model and the data. There was not a significant relationship between office communication and TBRI® skill use,  $b = .13$ ,  $t = 1.27$ ,  $p = .21$ . The scaled indicators for both office communication ( $p$ 's  $\leq .001$ ) and TBRI® skill use ( $p$ 's  $\leq .001$ ) were all significant, while controlling for each other. See Table 10 on the next page for a full list of indicators for the model and Figure 6 in Appendix C for covariance values. This indicates that office communication in an organization does not have a significant relationship with TBRI® skill use by organization.

Table 10.– Factor Loadings for Office Communication and TBRI Use

Factor Loading	Std. Est. (Est.)	S.E.	t	r <sup>2</sup>	p
OFFCOMM by Meeting	.89 (1.0)	.04	20.51	.80	.000*
OFFCOMM by Coworker	.86 (1.0)	.04	22.16	.73	.000*
OFFCOMM by Instruction	.88 (0.9)	.02	38.04	.83	.000*
OFFCOMM by Expression	.55 (0.6)	.07	7.59	.34	.000*
TBRIUSE2 by T1_SB01	.46 (1.0)	.03	18.52	.20	.000*
TBRIUSE2 by T1_SB05	.81 (3.1)	.04	19.60	.68	.000*
TBRIUSE2 by T1_SB06	.83 (3.2)	.03	27.81	.74	.000*
TBRIUSE2 by T1_SB07	.66 (2.0)	.04	15.01	.45	.000*
TBRIUSE2 by T1_STC01	.80 (2.4)	.04	19.26	.59	.000*
TBRIUSE2 by T1_STC02	.89 (2.9)	.03	36.26	.75	.000*
TBRIUSE2 by T1_STC03	.84 (2.7)	.04	19.30	.74	.000*
TBRIUSE2 by T1_STC04	.90 (2.9)	.03	36.23	.77	.000*
TBRIUSE2 by T1_STC05	.89 (2.9)	.02	44.94	.71	.000*
TBRIUSE2 by T1_STC06	.89 (3.0)	.03	35.66	.71	.000*
TBRIUSE2 by T1_STC07	.85 (2.8)	.03	34.04	.64	.000*
TBRIUSE2 by T1_STC08	.85 (2.8)	.03	26.10	.65	.000*
TBRIUSE2 by T1_STC09	.84 (2.8)	.03	28.51	.70	.000*
TBRIUSE2 by T1_STC10	.81 (2.8)	.04	22.16	.56	.000*
TBRIUSE2 by T1_STC11	.80 (2.6)	.03	30.20	.56	.000*
TBRIUSE2 by T1_STC12	.86 (2.9)	.02	51.79	.74	.000*
TBRIUSE2 by T1_STC13	.71 (2.1)	.04	19.40	.48	.000*
TBRIUSE2 by T1_STC14	.87 (2.9)	.02	45.44	.71	.000*
TBRIUSE2 by T1_STC15	.82 (2.9)	.04	20.48	.64	.000*

Note.  $N = 873$ . All figures with \* represent significant value. *Std. Est.* = standardized estimate, *Est.* = unstandardized estimate, *S.E.* = Standard Error.

**Office communication, office culture, and TBRI® skills use.** A final mediation model was conducted in MPLUS, using the model indirect command to determine if office communication mediated the relationship between office climate and TBRI® skills use at time two (see Figure 1 for the final design). Responses were clustered based on their organization using the COMPLEX analysis command. The fit statistics for the initial model were poor with a poor RMSEA (*RMSEA Estimate* = 0.10,  $p \leq .001$ ), a poor TLI ( $TLI = 0.71$ ) and a poor SRMS ( $SRMR = 0.1$ ). Using mod indices, 14 modifications were made to the model. Overall, the goodness of fit for the final path model, while controlling for similarities in groups based on organization, would be considered mediocre. The overall model had a significant chi-square statistic,  $X^2(1202, N = 1077) = 2317.78, p \leq .001$ . The chi-square statistic can be ignored due to

the large sample size used in this model. The *RMSEA* (*Estimate* = .08,  $p \leq .001$ ) was approaching an acceptable level with an estimate of .084, with an upper confidence interval of .089. Both the *TLI* = 0.82 and the *SRMR* = .08 indicated a moderate fit between the model and the data (see Table 7 in Appendix B for change in fit statistics for each model). The TLI was reported based on the recommendations of Kenny and McCoach (2003).

**Significant findings.** The factor loadings for each factor were all significant. The first indicator for each construct (influence, PCI coworker communication, B1\_SB01, T1\_SB01) was scaled in the model. The indicators (influence, mission, cohesion, stress, job satisfaction, leadership, autonomy, burnout, and communication) associated with office culture were all significant,  $b's \geq -0.68$ ,  $t's \geq -13.89$ ,  $p's \leq .001$  while controlling for each other. The indicators (coworker communication, meetings, office instruction, and personal expression) associated with office communication were all significant,  $b's \geq 0.58$ ,  $t's \geq 7.61$ ,  $p's \leq .001$  while controlling for each other. The indicators (punishment, positive reinforcement, redirecting, ignoring, mindfulness, voice, healthy touch, playful interactions, life value terms, behavioral scripts, the IDEAL response, levels of response, physical activity, hydration, sensory needs, rituals, artifacts, transitions, and schedules) associated with TBRI<sup>®</sup> use at time one were all significant,  $b's \geq 0.39$ ,  $t's \geq 5.85$ ,  $p's \leq .001$  while controlling for each other. The indicators (punishment, positive reinforcement, redirecting, ignoring, mindfulness, voice, healthy touch, playful interactions, life value terms, behavioral scripts, the IDEAL response, levels of response, physical activity, hydration, sensory needs, rituals, artifacts, transitions, and schedules) associated with TBRI<sup>®</sup> use at time two were all significant,  $b's \geq 0.44$ ,  $t's \geq 10.34$ ,  $p's \leq .001$  while controlling for each other. For each latent variable factor loading please see Table 8 in the Appendix B.



Covariances for the final model were all significant. There was a significant relationship between the construct of office culture and TBRI<sup>®</sup> use at time one,  $b = 0.31, t = 2.25, p = .025$ . Within the construct of office culture there was a positive relationship between burnout and stress ( $b = 0.51, t = 9.08, p \leq .001$ ) and a negative relationship between burnout and job satisfaction ( $b = -0.28, t = -5.35, p \leq .001$ ). The constructs of office communication, personal expression and coworker communication were positively related ( $b = 0.41, t = 4.36, p \leq .001$ ). Within the construct of TBRI<sup>®</sup> skills at time one there were five covariances. Redirecting and positive reinforcement were positively related ( $b = 0.86, t = 14.23, p \leq .001$ ), voice and mindfulness were positively related ( $b = 0.47, t = 6.39, p \leq .001$ ), the IDEAL response and levels of response were positively related ( $b = 0.52, t = 3.52, p \leq .001$ ), schedules and transitions were positively related ( $b = 0.45, t = 4.66, p \leq .001$ ), and rituals were positively related to artifacts ( $b = 0.51, t = 9.08, p \leq .001$ ). Within the construct of TBRI<sup>®</sup> use at time two, there were seven covariances. Redirecting and positive reinforcement were positively related ( $b = 0.64, t = 5.68, p \leq .001$ ), redirecting and ignoring were positively related ( $b = 0.29, t = 3.99, p \leq .001$ ), voice and mindfulness were positively related ( $b = 0.55, t = 7.89, p \leq .001$ ), the IDEAL response and levels of response were positively related ( $b = 0.52, t = 3.64, p \leq .001$ ), schedules and transitions related ( $b = 0.31, t = 2.88, p = .004$ ), rituals were positively related to physical activity ( $b = 0.4, t = 3.2, p \leq .001$ ), and rituals were positively related to sensory needs ( $b = 0.38, t = 3.42, p \leq .001$ ).



Figure 1. Mediation model being tested for the relationship between Office Communication, Office Culture and TBRI use at the Mid-year survey. Includes correlations between indicators and relationship between constructor and individual indicators. Standard estimates and standardized errors are provided. \* indicates significant values,  $p < .01$ .

There was a significant relationship between TBRI<sup>®</sup> skills use at time one and TBRI<sup>®</sup> skills use at time two,  $b = .67, t = 12.54, p \leq .001$ . More TBRI<sup>®</sup> skill use at time one were associated with more TBRI<sup>®</sup> skill use at time two. There was a significant relationship between office culture and office communication,  $b = 0.31, t = 2.25, p = .025$ . There was a non-significant path between office culture and TBRI<sup>®</sup> skill use at time two ( $b = 0.07, t = 1.32, p = .187$ ) and office communication and TBRI<sup>®</sup> skill use at time two ( $b = -0.31, t = -0.54, p = .589$ ). Using the MPLUS command model indirect, the direct effect of office culture on TBRI<sup>®</sup> skill use at time two was found to be non-significant,  $b = 0.07, t = 1.32, p = .187$ . The indirect path office culture to office communication to TBRI<sup>®</sup> skill use at time two was also non-significant,  $b = -0.01, t = -.59, p = .556$ . Both the direct and indirect path were poor predictors of TBRI<sup>®</sup> skill use at time two.

### Discussion

Based on the results above, the hypotheses presented at the beginning of this paper were tested with support for the ideas that office communication is closely related to office culture and that office culture has some impact on TBRI<sup>®</sup> skill usage. The data did not support the hypothesis that office communication provides a mediating effect on the path between office culture and TBRI<sup>®</sup> skills for organizations. Office communication by organization was not related to TBRI<sup>®</sup> skill use at time two, either by itself or included in the overall large model. One mediating path that was not predicted was the indirect path seen between office culture, TBRI<sup>®</sup> skill use at time one, and TBRI<sup>®</sup> skill use at time two (see Figure 1 in results). This path shows a synergy between office culture and base TBRI<sup>®</sup> skill use at time one that may lead to an increase in TBRI<sup>®</sup> skill use at time two based on the average increase in TBRI<sup>®</sup> skill use within

an organization seen in Table 6. Overall, these results show the importance of an organization's office culture in a large collaborative-based project.

**Change in TBRI Skill use.** The general increase in the use of TBRI® skills from time one to time two was a positive indication that the collaborative was working. While not all were statistically significant (see Table 6 in results), self-reported TBRI® skill use increased for all TBRI® skills listed except for schedules (T1\_STC15) within organizations. All the statistically significant differences between the two time points for TBRI® skill use were in a positive direction, indicating a perceived increase in use over time. The largest differences from time point one to two included multiple skills that are considered proactive strategies (life value terms and behavioral scripts) and connecting strategies (mindfulness and healthy touch). The largest increase over time was in the use of mindfulness. Mindfulness is important for adults to truly connect with a child and allow those adults to respond flexibly to behaviors (Purvis, McKenzie, Razuri, Cros, & Buckwalter, 2014). Mindfulness especially is not easily seen in the workplace and its increase may indicate discussions between coworkers. Mindfulness skills need to be taught (often verbally), and cannot be easily replicated through imitation. Roger (2003) would view this as the importance of coworker communication for the early majority in spreading a new innovation. This also seems to match the high factor loadings for coworker communication on the PCI seen in Table 5. Another large increase was in the use of proactive strategies. This may indicate a shift towards attempting to meet the need of the child, instead of reacting to a child's behavior when correcting (Purvis, McKenzie, Razuri, Cros, & Buckwalter, 2014). This may help explain why there was an overall decrease in the mean use of behavioral management strategies seen in Table 6. If respondents within the collaborative were attempting to stay on top of behavioral outbursts before they occur, this could explain why there was a decrease in the use

of behavioral management strategies. This may also indicate growth of a culture that is conducive to TBRI® ideas.

**Office Culture and TBRI® Skill use.** Roger's theory of diffusion states the importance of including social structures in attempting to understand how any new idea spreads within an organization (Rogers, 2003). The TCU SOF was used to measure culture in this project, and each of the SOF's scales (influence, communication, autonomy, job satisfaction, leadership engagement, cohesion, burnout, stress, and mission) can be helpful in understanding how office climate may have a positive relationship with TBRI® skill use. When looking at the MHC-KPICD TBRI® pilot project, one of the main concerns was ensuring that there was a shared culture and language between organizations in discussing treatment. This need for consistency is important in attempting to create lasting change within a large organization or group of organizations (Salazar et al., 2016). Influence and communication are important when discussing a shared language within an organization (Smidts, Pruyn & Van Riel, 2001). The first path model tested in this study showed that high scores in office culture were associated with high scores in TBRI® skill usage at time two. (Note: This model did not include TBRI® skills at time one which was the primary predictor of TBRI® skills at time two in the final model.) This early analysis does provide some context for later models. Cohesion, job satisfaction, and communication were the three indicators that contributed the most to the latent construct of office culture (see Table 8). Likewise, job satisfaction and influence were reported as some of the highest of TCU SOF scales (see Table 3). An office culture that is rated highly in these skills would have staff that feel they are listened to and can make a difference in their workplace. A new policy, like TBRI®, would easily flourish in such an environment based on dissemination theory (Rogers, 2003). The path model between office culture and TBRI® skill use at time two

supports this idea well. The high factor loadings for communication from the TCU SOF for most of the path models tested also supports an open office culture where staff discuss their work.

Based on the results of previous attempts to introduce TIP into a community, shared language is an important factor to dissemination (Kramer et al., 2013). Some of the largest differences in TBRI<sup>®</sup> skill use were in the use of life value terms, behavioral scripts, and healthy touch (see Table 6). These are simple TBRI<sup>®</sup> terms that are easy to spread within an organization based on communication. This terminology is often reinforced in training sessions to ensure fidelity to TBRI<sup>®</sup>. These can be considered common terms that help everyone to respond appropriately to trauma (Henry et al., 2011). These common terms can also help to build coherence and a shared set of goals within a department (Reinholz & Apkarian, 2018). These terms can help to provide the framework for organizations to express their goals or missions to their staff. Thus, an understanding of mission is needed when discussing the office culture as well.

**Office Culture, Leadership, and Shared TIP language.** The way a shared language is used within an organization is often controlled by power dynamics within that department (Reinholz & Apkarian, 2018). Leadership engagement and cohesion provide some context for understanding how power structures can inhibit or enhance dissemination. The four frame theory (Bolman & Deal, 2008), views an organizational culture as evolving and changing based on shifts in power, structure, symbols and people. Sustainability for dissemination is found in the structure of an office culture (Bolman & Deal, 2008). Conversely, power struggles can lead to dissemination being held up or reversed (Reinholz & Apkarian, 2018). Cohesion and leadership engagement both help to explain why some organizations may experience more

TBRI<sup>®</sup> skill use than others. Supervisors who are well-informed about TIP practices are more likely to support those practices (Kramer, et al., 2013). Many organizations within the MHC-KPICD TBRI<sup>®</sup> project reported strong leadership “buy in” from the beginning in their implementation plans.

Those in a leadership or power position provide the overall goal of the department or organization (Reinholz & Apkarian, 2018). Leadership engagement can also help to set the overall culture within the organization. Organizations with a strong understanding of mission can also work towards better implementation. An organization that provides a large amount of support and clear goals can ensure that staff begin to use a new innovation (Reinholz & Apkarian, 2018). A clear sense of mission and strong leadership engagement support this idea, and may lead to increased fidelity to TBRI<sup>®</sup>. There was an overall decrease in the use of behavioral management strategies from time point one to time point two and a general increase in TBRI use (see Table 6). Strong leadership engagement, a shared TBRI<sup>®</sup> based language and an understanding of how this language aids the organization mission may help explain why behavioral management strategies decreased at time two.

**Office Culture and Change Agents.** Another important facet in spurring change within an organization is “change agents” or “champions”. The need for change agents to feel they have the ability to make a difference helps to increase the rate of change in an organization (Lovejoy, DeMireva, Grayson, & McNamara, 2009). Rogers (2003) defined change agents as those who brought an innovation; he felt that change agents were the important first step in implementing any new innovation. When reviewing the TCU SOF, one can see that leadership engagement and communication were strongly related to office culture and respondents stated that these were factors that represented their organization. This may show that these staff

members feel that they need some strong change agents or leaders within their organization to increase implementation (e.g. staff who feel that their leadership will listen and implement their ideas regularly, or feel that their coworkers pay attention and copy how they decide to implement new policies). Likewise high levels of autonomy were reported by those in the large project (see Table 3). Job satisfaction, communication and office culture are all closely linked and job satisfaction may be key to understanding how communication and office culture increase dissemination (Muchinsky, 1977). The change agent, or “champion,” can ensure that those in power are informed about and understand the large requirements in time and money for effective implementation (Akin, Strolin-Goltzman, & Collins-Camargo, 2017). These leaders, or “champions,” give the cues that late adopters follow (Kohles, Bligh, & Carsten, 2013).

**Office Culture and Office Communication.** Office culture and office communication can also be hard to distinguish from one another. Muchinsky (1977) pointed to the problems inherent in attempting to parse apart broad multidimensional concepts. Communication and office culture are often tied up with one another and may be impossible to completely pull apart. This can be seen in the results of the second path analysis (see Figure 5 in Appendix C), which looked at office culture and its relationship to office communication. The results of this path model showed that as office culture increased, office communication also increased. One can view the communication climate (or office communication) as a sub section of the broader office climate (Smidts, Pruyn, & van Riel, 2001). The research of Smidt, Pruyn, and van Riel (2001) showed that communication is more centrally linked to the organization than to the content of the conversation. The open climate is what is important for communication to occur. We see this in the current study, both in the close connection between office culture and office communication, but also in the lack of mediation occurring in the final model. Office communication and office



culture appeared to be tied closely together in the final model as well. This supports hypothesis two, that office culture is closely related to office communication. As office culture increases, so does office communication.

Hypothesis three and hypothesis four were unsupported by the data. Looking at hypothesis four, office communication was not a good predictor of TBRI<sup>®</sup> skill use at time two in the final mediation model. This may be due to the close connection between office culture and office communication seen in the mediation model. This reinforced the idea that communication networks are highly influenced by office culture (Rogers, 2003). The changing of norms and the increase in an open communication culture are effective ways that dissemination can be increased (Rogers, 2002). It may be that the communication channels, especially in a large organization, are fully supported by the office culture that is in place. Rogers (1995) originally viewed office culture as the social system of the organization and adoption cannot begin without a proper culture in place. This idea is supported in how closely connected communication was with office culture in each model they are together. Multiple agencies attempting to form a trauma informed practice (TIP) community needed the shared language and culture to effectively begin to implement their new practices (Salazar et al., 2016; Kramer et al., 2013). The change in an organizations culture may be the “buy-in” necessary for an organization to begin implementing TBRI. Organizational culture is found to be instrumental in starting the team-work and “buy-in” necessary to begin adoption (Bleser, Miller-Day, Naughton, Bricker, Cronholm, & Gabbay, 2014). Past research has found that the organization culture was helped by consistent meetings and positive promoting synergy (Bleser et al., 2014), which supports the close connection between office culture and office communication. In the

mediation model though, the most important aspect in determining TBRI<sup>®</sup> skill use at time point two is TBRI<sup>®</sup> skill use at time point one.

**Office Culture and Early TBRI skills.** One unexpected result from the final mediation model was the indirect path connecting office culture, TBRI<sup>®</sup> skill use at time one (early TBRI<sup>®</sup> skills) and TBRI<sup>®</sup> skill use at time two (late TBRI<sup>®</sup> skills). The covariance between office culture and early TBRI<sup>®</sup> use shows a significant positive relationship between the two constructs. This connection, between office culture and early TBRI<sup>®</sup> use, shows how an open office culture may be important in implementing a new policy at an organization early (at time one). This also shows the importance of having a champion to aid in dissemination and an office culture prepared for this change. The strongest relationship to late TBRI<sup>®</sup> skills in the large mediation model was early TBRI<sup>®</sup> skill use. This seems to support the idea of both the early adopter wave and the need for “champions” in an organization due to the strong relationship and the increase in the average TBRI<sup>®</sup> base skills from time one to time two (see Table 6). These champions would be considered change agents and are often bringing in expertise from outside of their field (Lovejoy, DeMireva, Grayson, & McNamara, 2009). These change agents (champions or early adopters) are also the ones that evangelize the new policy or treatment in organizations. This is supported in the results from the Policy Communication Index, which showed that office instruction was the least common way that a new policy was discussed (see Table 3). New policy, in this case TBRI<sup>®</sup>, was reportedly discussed the most in meetings or between coworkers. Respondents reported that their supervisor was the most common way they heard about TBRI<sup>®</sup>. The effective dissemination of the Patient Centered Medical Home was found to be enhanced by meetings with knowledgeable leaders to discuss the change in the organization (Bleser et al.,

2014). A champion in a place of power is able to provide the sanctioning and resources to ensure adoption occurs (Reinholz & Apkarian, 2018).

While someone with skill in TBRI® is important in predicting future TBRI® use, the significant covariance with office culture speaks to the importance of an open office culture for those skills to be used and shown. Perceived influence was rated highly by respondents on the TCU-SOF, which may indicate that those taking the survey felt they had the ability to influence the office's culture (see Table 3). This reinforces the idea that the social system must be prepared to meet the needs of the innovation for dissemination to truly occur (Rogers, 2003). An office culture that has shifted to be more open allows for change agents to more easily bring about dissemination (Keller & Galanter, 1999). Research in TIP implementation has shown that office climate and staff attitude is important for any adoption to occur (Akin, Strolin-Goltzman, & Collins-Camargo, 2017; Kramer et al., 2013). This can also be seen by the increase in the TBRI skills that were most common during the early parts of the project. The most commonly used TBRI skills from time point one to time point two were the same (voice quality, playful interactions, and mindfulness), but TBRI® specific skills like life value terms and healthy touch increased in use by a larger amount (see Table 6). This may show that the TBRI® skills that champions understand are taught more frequently, and more of the overall TBRI® mindset permeates the project. If the TBRI® skills that were more universal (like planned schedules) were the only factor that impacted late TBRI® use, one would expect the most common skills to grow the most. An open office culture may allow for the more global learning of TBRI® skills. For instance, an office culture that is welcoming to new ideas and gives staff autonomy to enact policy as they see fit will have an easier time implanting TBRI® practices like a sensory room or a less rigid disciplinary system. By combining an open environment and those with the skills to

implement TBRI<sup>®</sup>, one can assume that the future adoption of TBRI<sup>®</sup> (or any policy) will be successful.

### **Limitations**

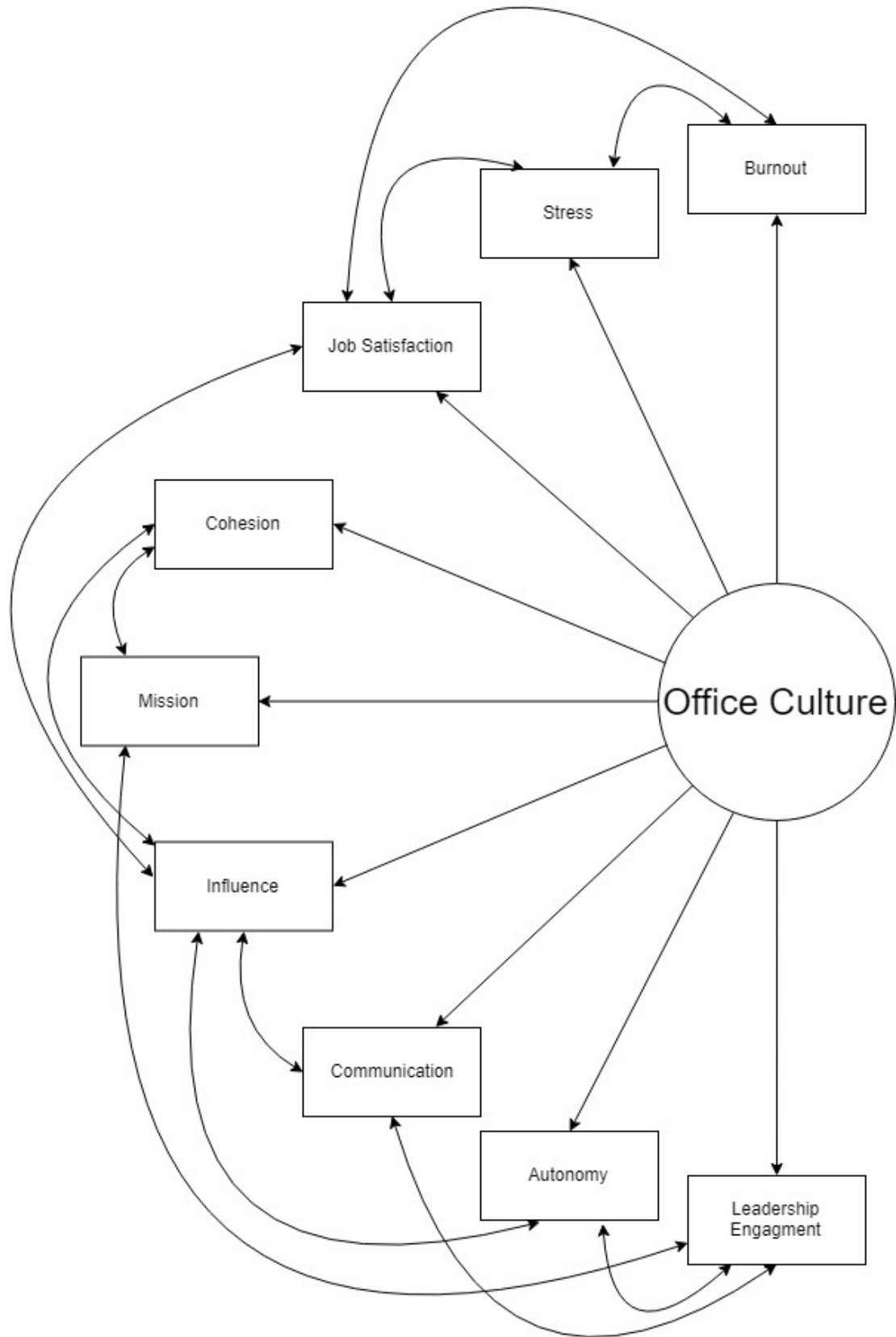
There were several limitations in this project. The first was that the interaction between professional licensure and missing data were not controlled for in the models. Having a license may impact how each respondent may have used TBRI<sup>®</sup> and whether the respondent would stay with an organization. Those with a license may have more issues implementing TBRI<sup>®</sup> because of their previous experience (i.e., there is a resistance to change from long-used and well-known practices). Conversely, licensure may make it easier to implement TBRI<sup>®</sup> because of past experience implementing a therapy or policy. This may have limited the ways that TBRI<sup>®</sup> was discussed between and within organizations. It may also explain the problems with using communication channels to predict TBRI<sup>®</sup> skill use at time two. A limitation was that there were several small organizations included in the analysis, with less than five staff. Also, several organizations had a large drop in response rate from time one to two. Ideally there would be a larger sample size for all organizations, but the final analysis shows a generalized pattern across organizations when one controls for organization. Another limitation was that data collection from time one and time two were staggered due to the two baselines. While each organization started the training at the same time, the delay in baseline data collection may have impacted TBRI<sup>®</sup> knowledge or use. Likewise, some organizations may have begun their training while taking the baseline. That said, implementing any new practice or policy within a group will have to move through predetermined communication channels. The time frame that TBRI<sup>®</sup> was implemented in an organization was a limitation. While every organization was invited into the collaborative at the same time, they did not start receiving training for their staff at the same

time, and progress toward getting all or a majority of staff trained occurred at different rates. A major component of dissemination theory is allowing for the time for the new policy to spread. This study may have collected data before TBRI<sup>®</sup> had a chance to effectively spread to each of the organizations. There may be a limitation in terms of generalizability of the results of this study, both due to these organizations being early adopters within the community (thus motivated to change) and the field of work that is being studied. The policies that are used within early childhood intervention may not spread a way similar to policies for drug treatment or private enterprise. A final limitation is that there was no way to ensure equal fidelity between organizations. Each organization may have different needs, and thus TBRI<sup>®</sup> may not be implemented at the same rate between each organization in the collaborative. This can also help to explain some of the variation in the use of behavioral management strategies used, as some organizations may not have the ability to use medication or restraints. These limitations should be considered for future research.

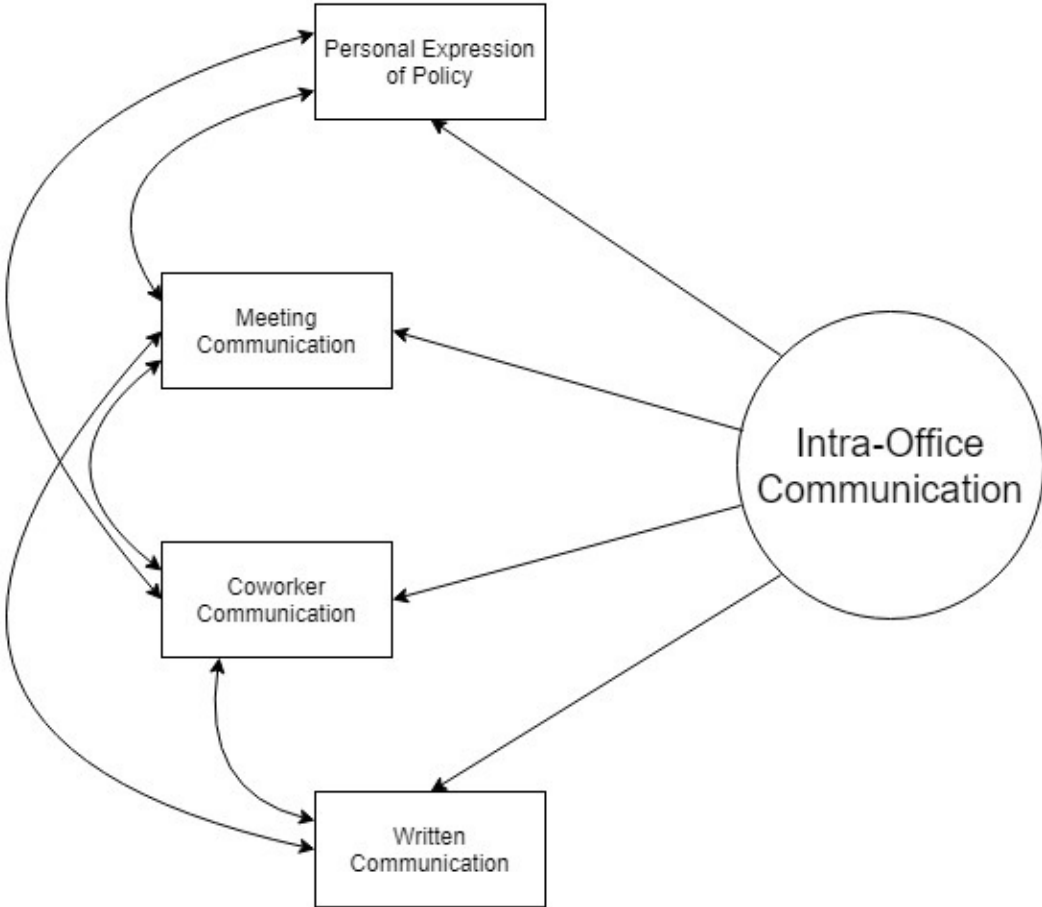
This project hoped to show the importance of communication and office culture within any large organization or collaborative. The results showed that office culture and office communication were inexorably tied together. Based on these results one should consider office communication an important part of office culture, but not the most important aspect for ensuring that there is dissemination throughout an organization. Skills in TBRI<sup>®</sup> at time one and office culture combined appeared to provide an indirect path for TBRI<sup>®</sup> skill use in the future. This gives credence to the idea that an office culture with individuals who feel they can effectively use a new treatment may be the best way to increase treatment use. To ensure that any treatment is able to grow within an organization, ensuring an open office culture with workers that feel they have influence is an important first step.

Appendix A –Figures for Proposed Models

Appendix A Figure 1. Proposed Confirmatory Factor Analysis for Office Culture based on the TCU SOF and the TCU WEVAL

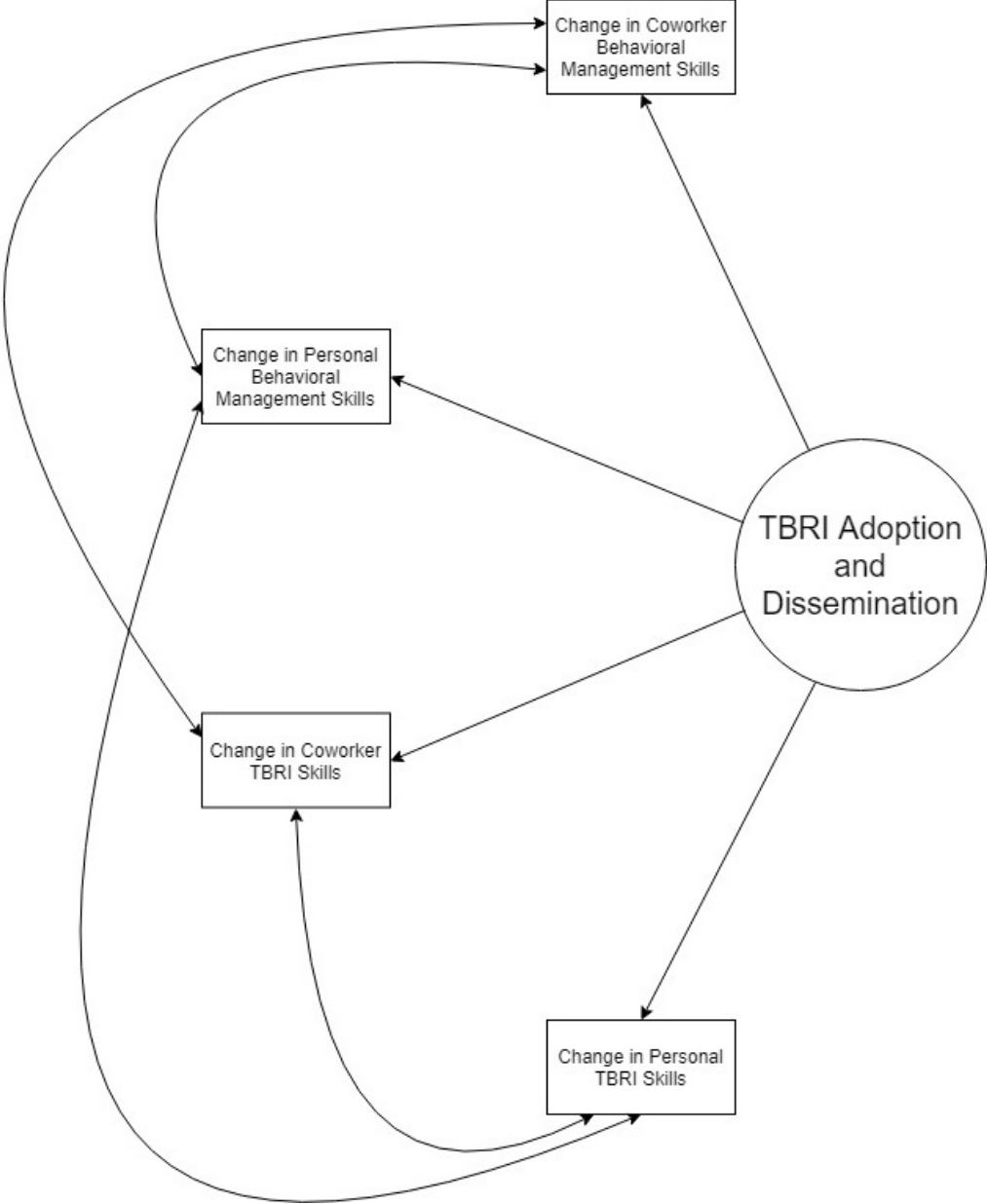


Appendix A Figure 2. Proposed Confirmatory Factor Analysis for Office Communication based on the PCI

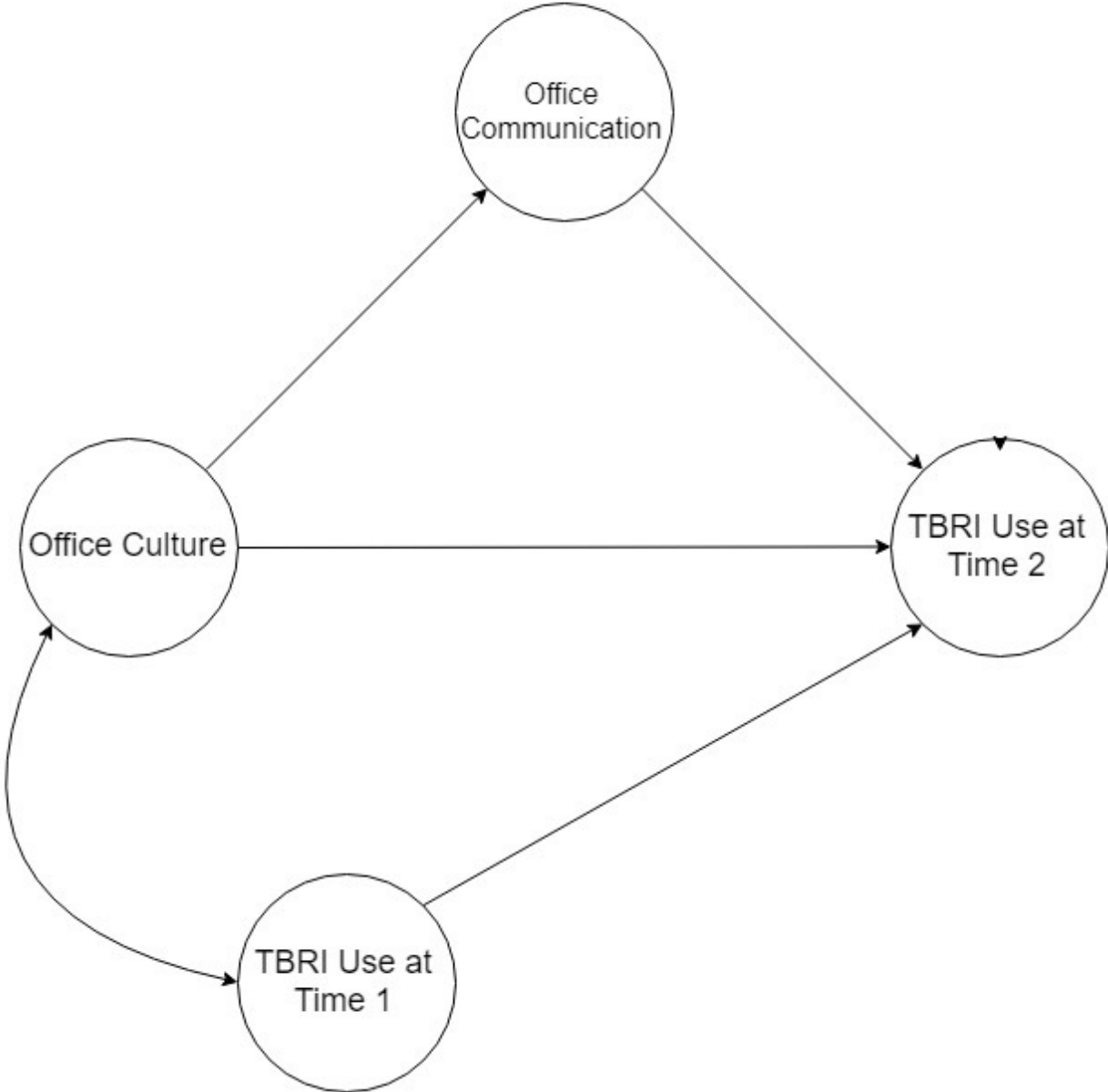




Appendix A Figure 3. Proposed Cofimatory Analysis for TBRI Adoption and Dissemination (TBRI Skill Use)



Appendix A Figure 4. Proposed Mediation Model for Office Culture, Communication and TBRI Adoption (Use)



Appendix B – Figures and Goodness of Fit Tables for Completed Models

Appendix B Table 1. – Goodness-of-fit indexes for Office Culture

Model	$\chi^2$ (df)	RMSEA (CI, p)	SRMR	TLI
Model 1	350.70 (27)*	.144 (.131-.158, $p \leq .001^*$ )	.074	.68
Model 2	192.97 (26)*	.106 (.098-.120, $p \leq .001^*$ )	.057	.83
Model 3	135.90 (25)*	.088 (.074-.102, $p \leq .001^*$ )	.052	.88
Model 4	108.44 (24)*	.087 (.076-.098, $p \leq .001^*$ )	.047	.91
Model 5	82.72 (23)*	.067 (.052-.083, $p = .033^*$ )	.040	.93
Model 6	58.64 (22)*	.054 (.037-.071, $p = .330$ )	.033	.96

Note. 873 participants. All figures with \* represent significant value. Chi square analysis was not used due to sample size. *TFI* = Tucker Lewis index; *RMSEA* – root mean square error of approximation; *SRMR* = standardized mean square residual.

Appendix B Table 2. – R-Square of TBRI Use Exploratory Analysis Dropped Indicators

R-Square	Est.	S.E.	Std. Est.	Two-Tailed p
B1_SB10	.102	.133	0.76	.446
B1_STC16	.156	.193	0.81	.421
B1_SB03	.188	.192	0.98	.327
B1_SB02	.092	.065	1.42	.154
B1_SB08	.170	.102	1.66	.097
B1_SB04	.197	.112	1.76	.079
B1_SB09	.193	.076	2.54	.011

Note.  $N = 873$  participants. All figures with \* represent significant value. *Std. Est.* = standardized estimate, *Est.* = unstandardized estimate, *S.E.* = Standard Error.

Appendix B Table 3. – Goodness-of-fit indexes for TBRI Use Confirmatory Factor Analysis

Model	$\chi^2$ (df)	RMSEA (CI, p)	SRMR	TLI
Model 1	1046.72 (152)*	.147 (.138-.155, $p \leq .001^*$ )	.062	.80
Model 2	781.21 (151)*	.123 (.115-.132, $p \leq .001^*$ )	.058	.86
Model 3	708.80 (150)*	.117 (.108-.125, $p \leq .001^*$ )	.056	.87
Model 4	644.27 (149)*	.110 (.101-.119, $p \leq .001^*$ )	.055	.89
Model 5	606.12 (148)*	.106 (.098-.115, $p \leq .001^*$ )	.053	.89
Model 6	565.25 (147)*	.102 (.093-.111, $p \leq .001^*$ )	.053	.90
Model 7	534.44 (146)*	.099 (.090-.108, $p \leq .001^*$ )	.051	.91
Model 8	508.54 (145)*	.096 (.087-.105, $p \leq .001^*$ )	.050	.91

Note.  $N = 873$  participants. All figures with \* represent significant value. Chi square analysis was not used due to sample size. *TFI* = Tucker Lewis index; *RMSEA* – root mean square error of approximation; *SRMR* = standardized mean square residual.

Appendix B Table 4. – Goodness-of-fit indexes for Office Culture and TBRI Use

Model	$\chi^2$ (df)	RMSEA (CI, p)	SRMR	TLI
Model 1	1054.70 (349)*	.102 (.095-.109, $p \leq .001^*$ )	.058	.82
Model 2	947.06 (348)*	.094 (.087-.101, $p \leq .001^*$ )	.058	.85
Model 3	903.98 (347)*	.091 (.084-.098, $p \leq .001^*$ )	.057	.86
Model 4	865.28 (346)*	.088 (.081-.095, $p \leq .001^*$ )	.057	.87
Model 5	829.69 (345)*	.085 (.078-.093, $p \leq .001^*$ )	.054	.87
Model 6	796.43 (344)*	.082 (.075-.090, $p \leq .001^*$ )	.054	.88
Model 7	765.46 (343)*	.080 (.072-.087, $p \leq .001^*$ )	.052	.89
Model 8	741.12 (342)*	.078 (.070-.085, $p \leq .001^*$ )	.052	.90
Model 9	718.87 (341)*	.076 (.068-.083, $p \leq .001^*$ )	.052	.90
Model 10	694.67 (340)*	.073 (.066-.081, $p \leq .001^*$ )	.051	.91
Model 11	669.20 (339)*	.071 (.063-.079, $p \leq .001^*$ )	.050	.91
Model 12	636.02 (338)*	.067 (.059-.075, $p \leq .001^*$ )	.049	.92
Model 13	615.92 (337)*	.065 (.057-.073, $p \leq .001^*$ )	.049	.93
Model 14	602.01 (336)*	.064 (.056-.072, $p \leq .001^*$ )	.048	.93

Note.  $N = 873$  participants. All figures with \* represent significant value. Chi square analysis was not used due to sample size. *TFI* = Tucker Lewis index; *RMSEA* – root mean square error of approximation; *SRMR* = standardized mean square residual.

Appendix B Table 5. – Goodness-of-fit indexes for Office Communication and Office Culture

Model	$\chi^2$ (df)	RMSEA (CI, p)	SRMR	TLI
Model 1	550.84 (64)*	.131 (.121-.142, $p \leq .001^*$ )	.083	.77
Model 2	422.97 (63)*	.114 (.104-.124, $p \leq .001^*$ )	.075	.83
Model 3	301.29 (62)*	.094 (.083-.104, $p \leq .001^*$ )	.073	.88
Model 4	263.78 (61)*	.087 (.076-.098, $p \leq .001^*$ )	.070	.90
Model 5	223.01 (60)*	.078 (.068-.090, $p \leq .001^*$ )	.070	.92
Model 6	197.37 (59)*	.073 (.062-.084, $p \leq .001^*$ )	.068	.93
Model 7	187.42 (58)*	.071 (.060-.083, $p \leq .001^*$ )	.066	.93

Note.  $N = 873$  participants. All figures with \* represent significant value. Chi square analysis was not used due to sample size. *TFI* = Tucker Lewis index; *RMSEA* – root mean square error of approximation; *SRMR* = standardized mean square residual.

Appendix B Table 6. – Goodness-of-fit indexes for Office Communication and TBRI Use

Model	$\chi^2$ (df)	RMSEA (CI, p)	SRMR	TLI
Model 1	783.44 (229)*	.121 (.112-.130, $p \leq .001^*$ )	.061	.82
Model 2	687.72 (228)*	.109 (.100-.119, $p \leq .001^*$ )	.060	.85
Model 3	640.91 (227)*	.105 (.095-.114, $p \leq .001^*$ )	.059	.86
Model 4	602.90 (226)*	.100 (.091-.110, $p \leq .001^*$ )	.058	.88
Model 5	573.49 (225)*	.097 (.087-.106, $p \leq .001^*$ )	.058	.88
Model 6	545.05 (224)*	.093 (.083-.103, $p \leq .001^*$ )	.057	.89
Model 7	520.17 (223)*	.090 (.080-.100, $p \leq .001^*$ )	.056	.90
Model 8	502.25 (222)*	.087 (.077-.097, $p \leq .001^*$ )	.055	.91
Model 9	481.89 (221)*	.084 (.074-.095, $p \leq .001^*$ )	.058	.91
Model 10	464.87 (220)*	.082 (.072-.092, $p \leq .001^*$ )	.058	.92
Model 11	443.46 (219)*	.079 (.068-.089, $p \leq .001^*$ )	.058	.92
Model 12	442.93 (218)*	.075 (.064-.086, $p \leq .001^*$ )	.058	.93
Model 13	410.71 (217)*	.073 (.062-.084, $p \leq .001^*$ )	.058	.93

Note.  $N = 873$  participants. All figures with \* represent significant value. Chi square analysis was not used due to sample size. TFI = Tucker Lewis index; RMSEA – root mean square error of approximation; SRMR = standardized mean square residual.

Appendix B Table 7. – Goodness-of-fit indexes for Communication, Culture and TBRI Use

Model	$\chi^2$ (df)	RMSEA (CI, p)	SRMR	TLI
Model 1	3017.29 (1219)*	.105 (.101-.110, $p \leq .001^*$ )	.100	.71
Model 2	2933.53 (1219)*	.103 (.098-.108, $p \leq .001^*$ )	.088	.72
Model 3	2646.10 (1216)*	.094 (.089-.099, $p \leq .001^*$ )	.088	.77
Model 4	2609.21 (1215)*	.093 (.088-.098, $p \leq .001^*$ )	.088	.78
Model 5	2576.66 (1214)*	.092 (.087-.097, $p \leq .001^*$ )	.088	.78
Model 6	2540.30 (1213)*	.091 (.086-.096, $p \leq .001^*$ )	.087	.79
Model 7	2506.24 (1212)*	.090 (.085-.095, $p \leq .001^*$ )	.085	.79
Model 8	2468.24 (1210)*	.088 (.083-.093, $p \leq .001^*$ )	.085	.80
Model 9	2429.39 (1208)*	.087 (.082-.092, $p \leq .001^*$ )	.085	.80
Model 10	2411.56 (1207)*	.087 (.082-.092, $p \leq .001^*$ )	.085	.80
Model 11	2392.55 (1206)*	.086 (.081-.091, $p \leq .001^*$ )	.085	.81
Model 12	2374.56 (1205)*	.085 (.080-.090, $p \leq .001^*$ )	.084	.81
Model 13	2356.74 (1204)*	.085 (.080-.090, $p \leq .001^*$ )	.084	.81
Model 14	2338.76 (1203)*	.084 (.079-.089, $p \leq .001^*$ )	.083	.82
Model 15	2317.87 (1202)*	.084 (.078-.089, $p \leq .001^*$ )	.083	.82

Note.  $N = 24$  organizations, 1077 participants. All figures with \* represent significant value. Chi square analysis was not used due to sample size. TFI = Tucker Lewis index; RMSEA – root mean square error of approximation; SRMR = standardized mean square residual.

Appendix B Table 8. – Factor Loadings for Office Communication, Culture, and TBRI Use

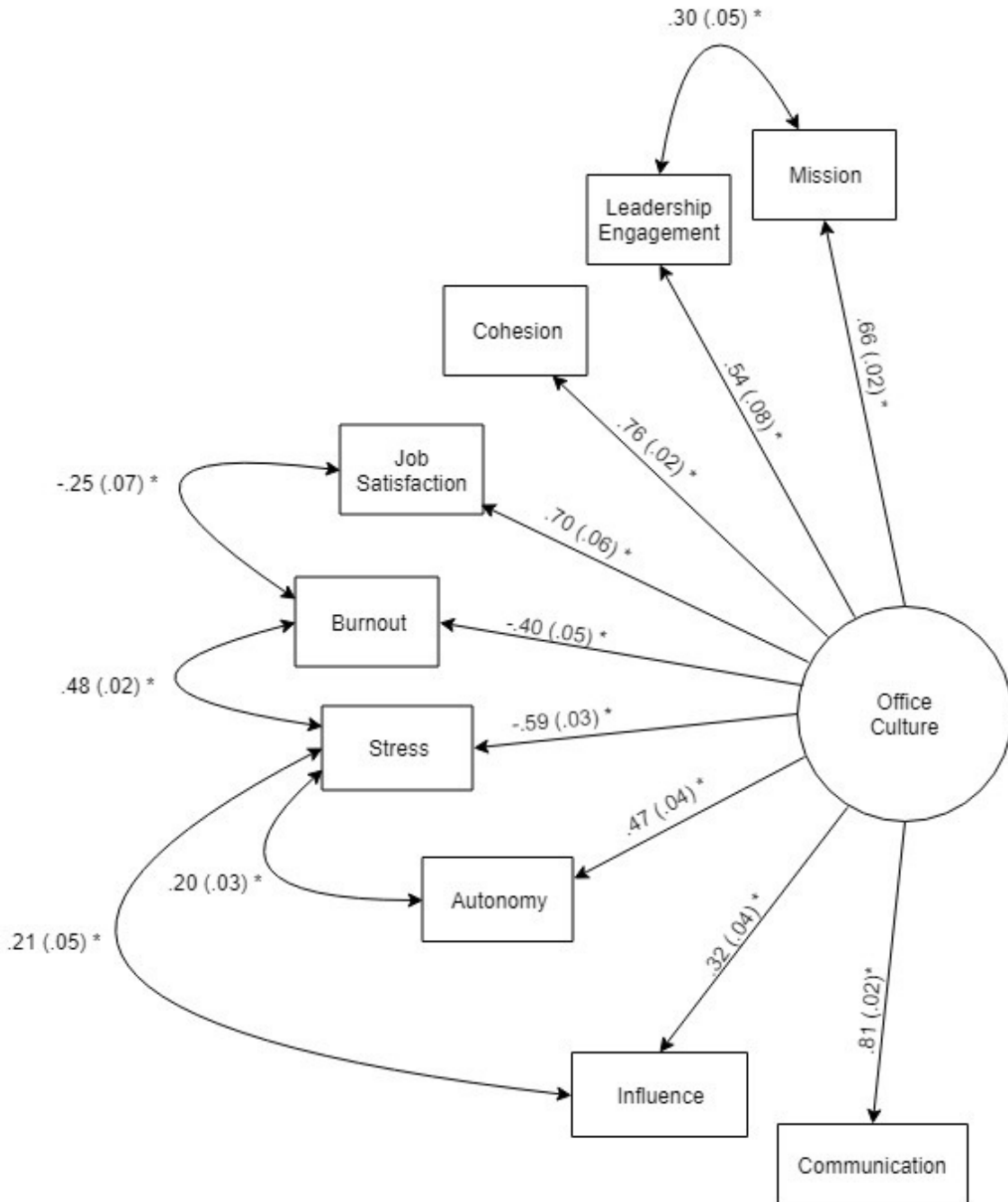
Factor Loading	<i>Std. Est. (Est.)</i>	<i>S.E.</i>	<i>t</i>	<i>r</i> <sup>2</sup>	<i>p</i>
OFFCUL by Influence	.25 (1.0)	.06	4.27	.06	.000*
OFFCUL by Mission	.69 (2.0)	.05	13.77	.47	.000*
OFFCUL by Cohesion	.73 (1.8)	.06	11.96	.53	.000*
OFFCUL by Stress	-.68 (-3.4)	.05	-13.89	.46	.000*
OFFCUL by Job Satisfaction	.67 (1.3)	.05	13.42	.45	.000*
OFFCUL by Leadership	.70 (3.9)	.08	9.10	.50	.000*
OFFCUL by Autonomy	.39 (0.8)	.08	5.11	.15	.000*
OFFCUL by Burnout	-.44 (-1.5)	.07	-6.69	.20	.000*
OFFCUL by Communication	.79 (2.8)	.05	15.70	.62	.000*
OFFCOMM by Meeting	.89 (1.0)	.04	23.97	.80	.000*
OFFCOMM by Coworker	.85 (1.1)	.05	17.31	.73	.000*
OFFCOMM by Instruction	.91 (1.0)	.02	48.18	.83	.000*
OFFCOMM by Expression	.58 (0.7)	.08	7.61	.34	.000*
TBRIUSE1 by B1_SB01	.39 (1.0)	.07	5.83	.15	.000*
TBRIUSE1 by B1_SB05	.71 (2.7)	.08	9.19	.50	.000*
TBRIUSE1 by B1_SB06	.74 (2.8)	.06	11.74	.55	.000*
TBRIUSE1 by B1_SB07	.54 (1.8)	.05	11.03	.30	.000*
TBRIUSE1 by B1_STC01	.86 (2.9)	.05	17.93	.74	.000*
TBRIUSE1 by B1_STC02	.87 (2.9)	.05	17.55	.75	.000*
TBRIUSE1 by B1_STC03	.78 (2.9)	.04	19.77	.61	.000*
TBRIUSE1 by B1_STC04	.90 (3.2)	.03	30.67	.81	.000*
TBRIUSE1 by B1_STC05	.81 (3.0)	.06	14.17	.66	.000*
TBRIUSE1 by B1_STC06	.88 (3.1)	.03	35.48	.78	.000*
TBRIUSE1 by B1_STC07	.71 (2.6)	.09	7.64	.50	.000*
TBRIUSE1 by B1_STC08	.77 (3.0)	.06	12.13	.59	.000*
TBRIUSE1 by B1_STC09	.85 (3.1)	.04	24.28	.72	.000*
TBRIUSE1 by B1_STC10	.75 (2.8)	.08	9.88	.57	.000*
TBRIUSE1 by B1_STC11	.79 (2.9)	.03	27.83	.63	.000*
TBRIUSE1 by B1_STC12	.80 (2.9)	.02	37.12	.64	.000*
TBRIUSE1 by B1_STC13	.66 (2.3)	.03	24.10	.44	.000*
TBRIUSE1 by B1_STC14	.80 (2.9)	.03	26.69	.64	.000*
TBRIUSE1 by B1_STC15	.77 (3.0)	.04	22.09	.60	.000*
TBRIUSE2 by T1_SB01	.44 (1.0)	.04	11.72	.20	.000*
TBRIUSE2 by T1_SB05	.82 (3.2)	.04	18.53	.68	.000*
TBRIUSE2 by T1_SB06	.86 (3.2)	.03	32.93	.74	.000*
TBRIUSE2 by T1_SB07	.67 (2.1)	.05	12.67	.45	.000*
TBRIUSE2 by T1_STC01	.77 (2.3)	.07	10.34	.59	.000*
TBRIUSE2 by T1_STC02	.87 (2.7)	.04	20.97	.75	.000*
TBRIUSE2 by T1_STC03	.86 (2.8)	.04	23.39	.74	.000*

TBRIUSE2 by T1_STC04	.88 (2.8)	.04	24.06	.77	.000*
TBRIUSE2 by T1_STC05	.84 (2.8)	.04	20.97	.71	.000*
TBRIUSE2 by T1_STC06	.84 (2.8)	.03	24.91	.71	.000*
TBRIUSE2 by T1_STC07	.80 (2.7)	.04	18.74	.64	.000*
TBRIUSE2 by T1_STC08	.81 (2.7)	.05	15.27	.65	.000*
TBRIUSE2 by T1_STC09	.84 (2.8)	.05	18.27	.70	.000*
TBRIUSE2 by T1_STC10	.75 (2.5)	.06	12.26	.56	.000*
TBRIUSE2 by T1_STC11	.77 (2.5)	.04	21.59	.56	.000*
TBRIUSE2 by T1_STC12	.86 (2.9)	.02	37.02	.74	.000*
TBRIUSE2 by T1_STC13	.70 (2.1)	.05	13.79	.48	.000*
TBRIUSE2 by T1_STC14	.84 (2.9)	.02	35.91	.71	.000*
TBRIUSE2 by T1_STC15	.80 (2.8)	.05	17.15	.64	.000*

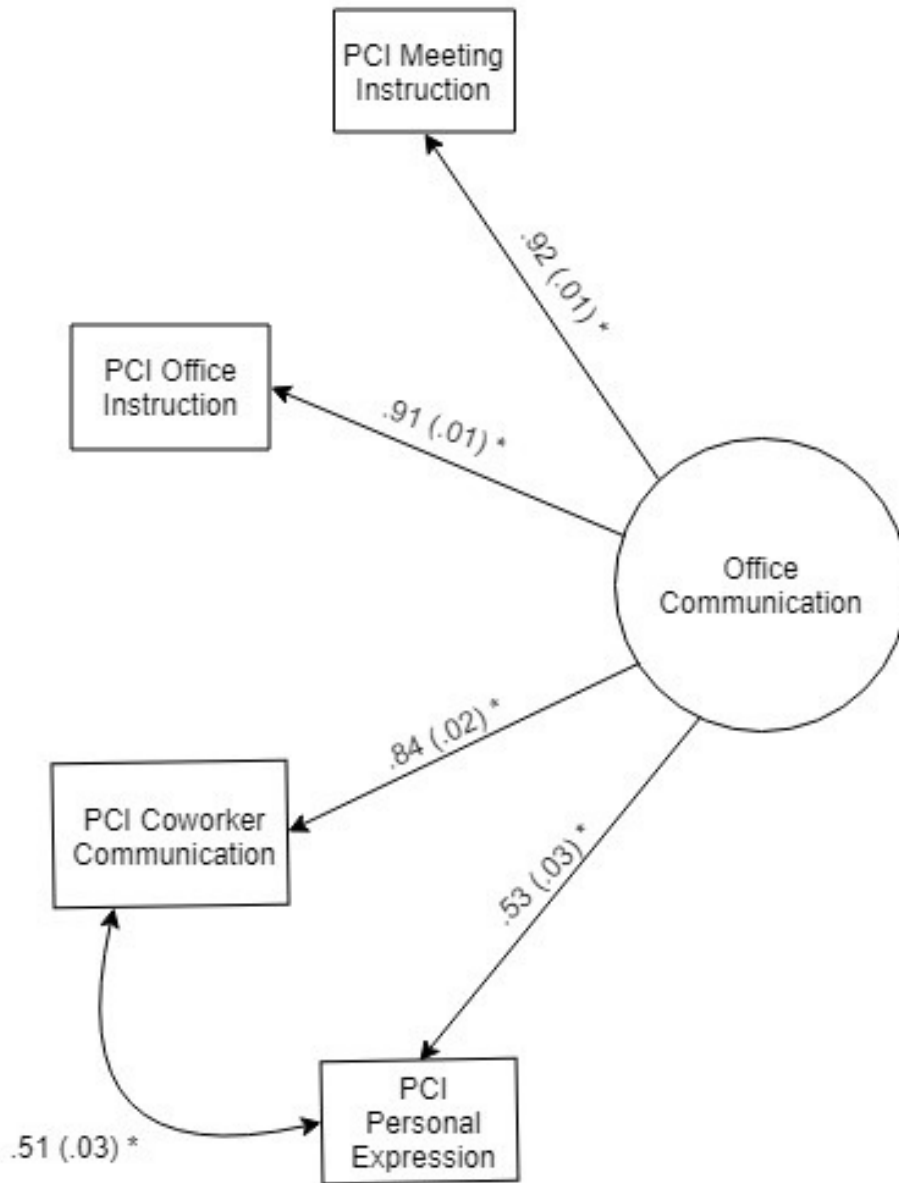
*Note.*  $N = 873$  participants. All figures with \* represent significant value. *Std. Est.* = standardized estimate, *Est.* = unstandardized estimate, *S.E.* = Standard Error.



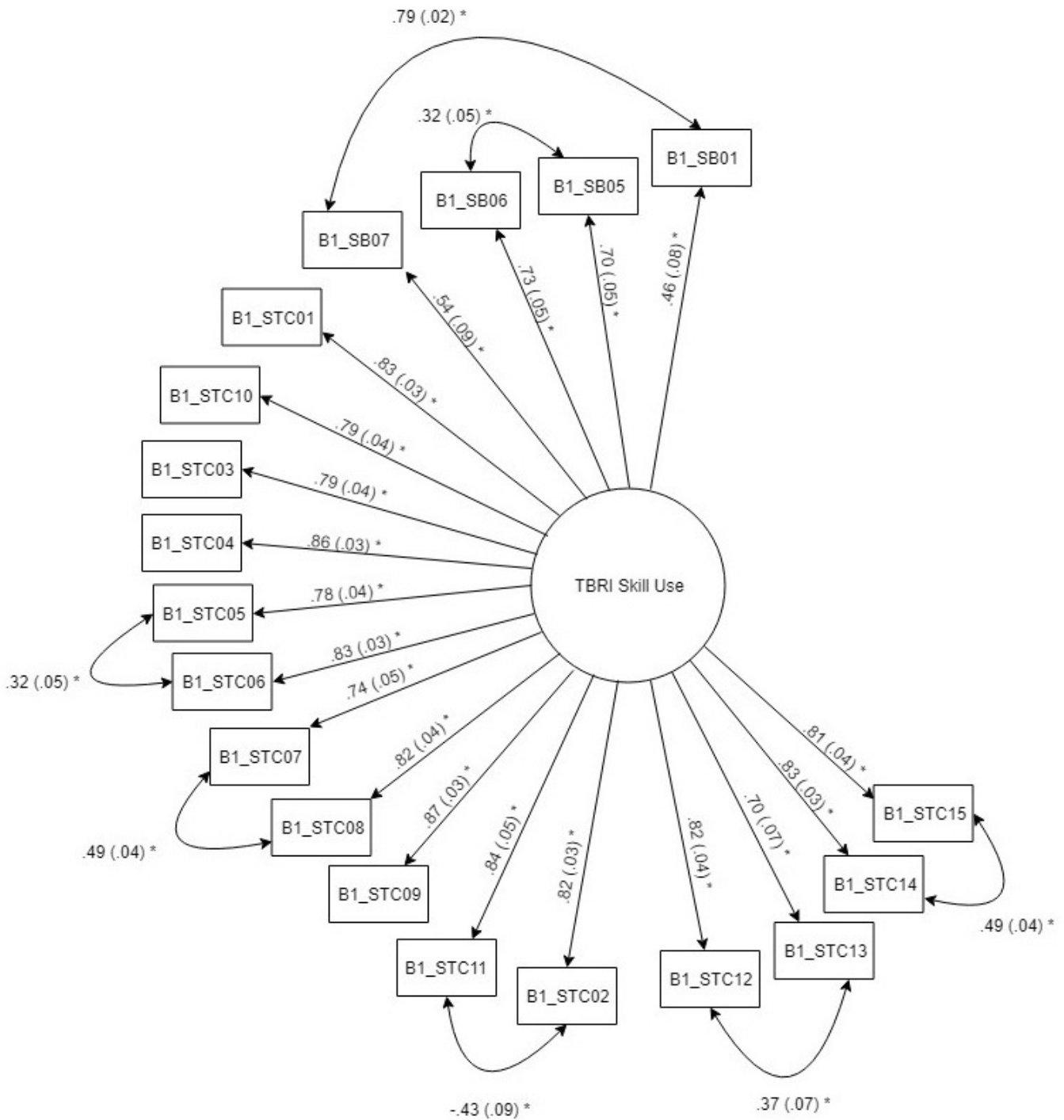
Appendix C –Figures for Factor and Fitted Structural Models



Appendix C. Figure 1. Confirmatory Factor Analysis being tested for the construct of Office Culture using the MHC-KPICD TBRI Pilot Project. Includes correlations between indicators and relationship between construct and individual indicators. Standard estimates and standardized estimates are provided. \* indicates significant values,  $p < .01$ .

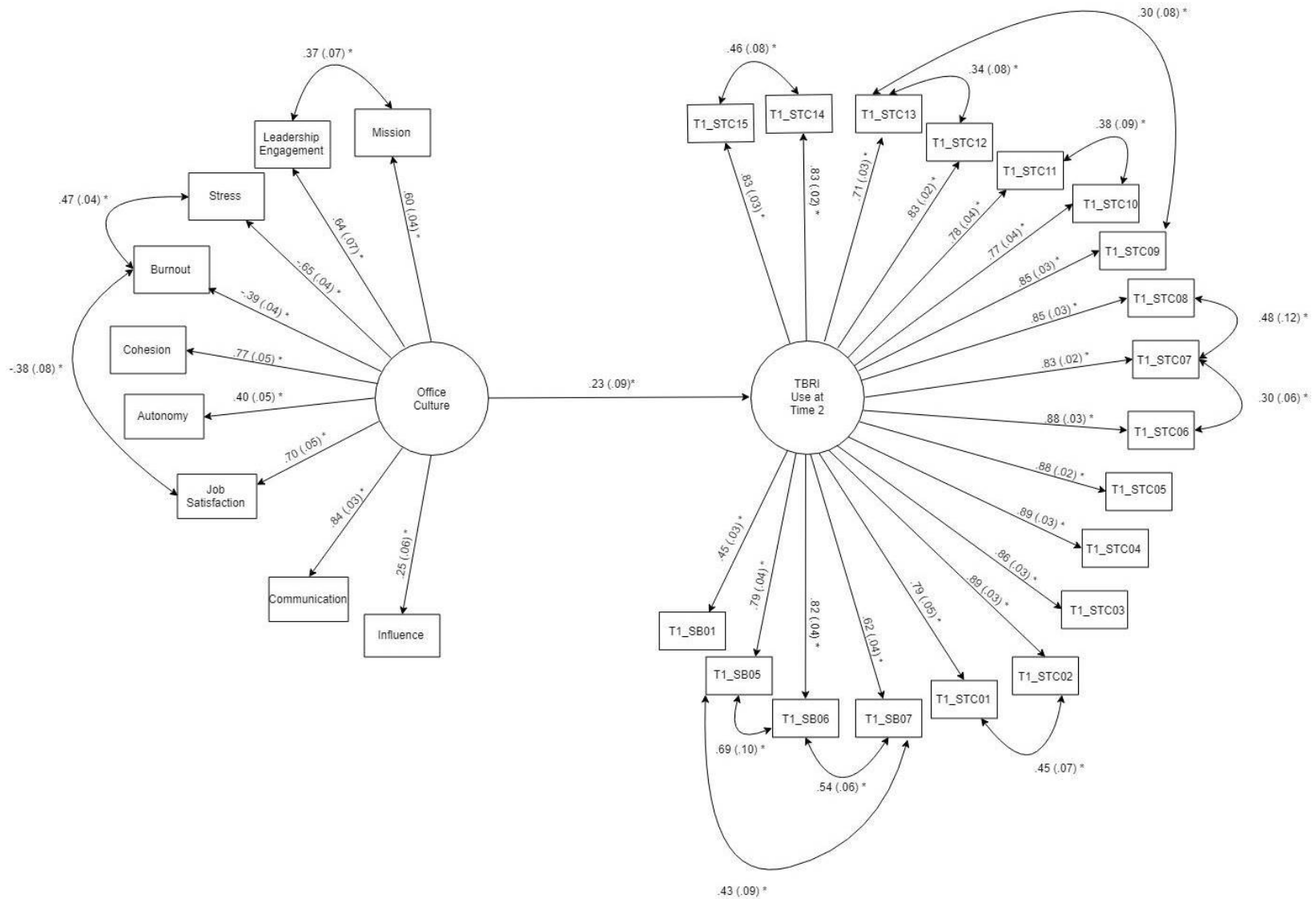


Appendix C. Figure 2. Confirmatory Factor Analysis being tested for the construct of Office Communication using the MHC-KPICD TBRI Pilot Project. Includes correlations between indicators and relationship between construct and individual indicators. Standard estimates and standardized estimates are provided. \* indicates significant values,  $p < .01$ .



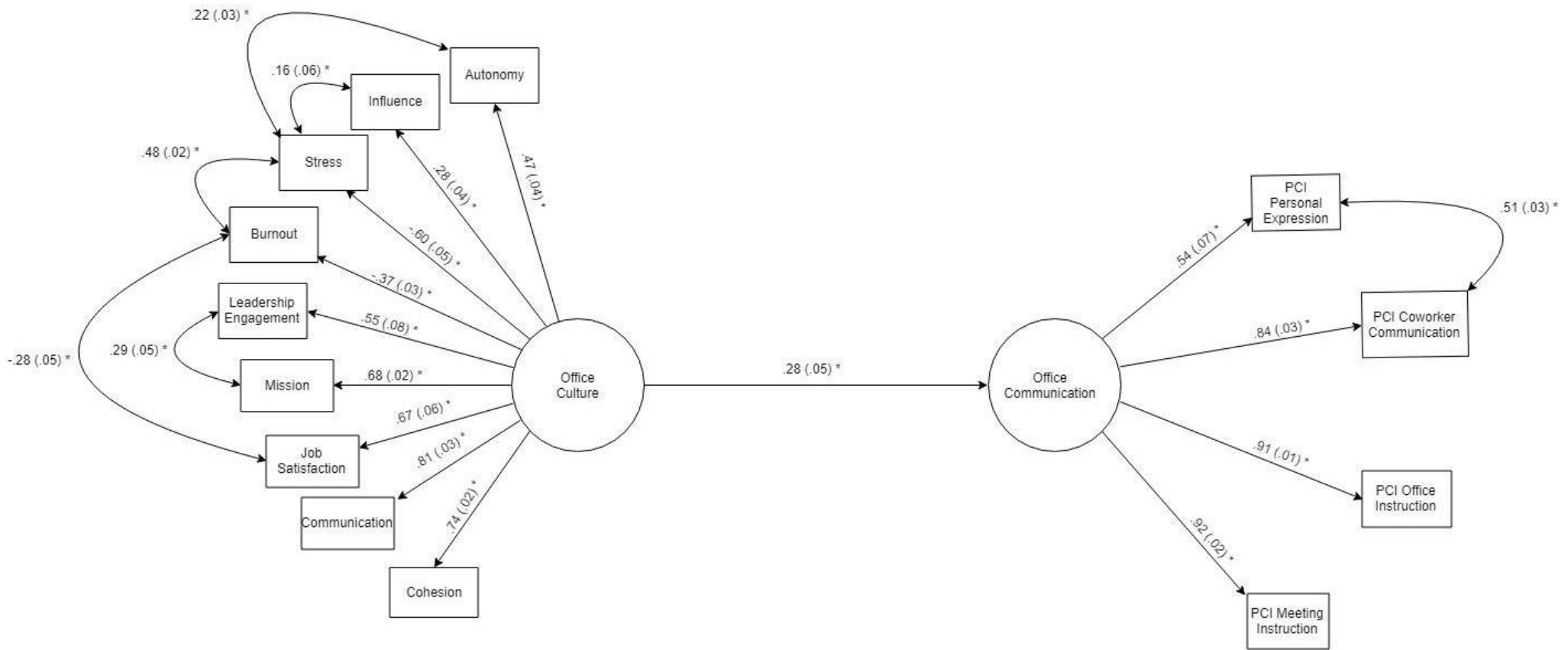
Appendix C. Figure 3. Confirmatory Factor Analysis being tested for the construct of TBRI Skill Use using the MHC-KPICD TBRI Pilot Project. Includes correlations between indicators and relationship between construct and individual indicators. Standard estimates and standardized estimates are provided. \* indicates significant values,  $p < .01$ .

# COMMUNICATION CHANNELS IN DISSEMINATION



Appendix C. Figure 4. Path model being tested for the relationship between Office Culture and TBRI use at the Mid-year survey. Includes correlations between indicators and relationship between constructor and individual indicators. Standard estimates and standardized errors are provided. \* indicates significant values,  $p < .01$ .

## COMMUNICATION CHANNELS IN DISSEMINATION



Appendix C. Figure 5. Path model being tested for the relationship between Office Culture and Office Communication. Includes correlations between indicators and relationship between constructor and individual indicators. Standard estimates and standardized errors are provided. \* indicates significant values,  $p < .01$ .



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## Education:

- Bachelor of the Arts in Psychology and Sociology-
  - University of Texas at Dallas - May 2008
- Master's Degree in Human Development and Childhood Disorders –
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## **Technical Writing:**

- Trust Based Relational Intervention Practitioner Training Executive Summary and Assessment:
  - October 2016 Training, March 2017 Training, April 2017 Training, September 2017 Training, October 2017 Training, March 2018 Training
- Practitioner Training Lecturer Assessment and Evaluation Reports
  - March 2017, April 2017, September 2017, October 2017, March 2018
    - Casey Call, Daren Jones, David Cross, Henry Milton, Jamie Hurst De Luna Evaluations
- 60 + Mentor Effectiveness Reports
- Data Analysis and Report for MHC-KPICD Collaborative 1
- Data Analysis and Report for MHC-KPICD Collaborative 2
- Data Analysis and Report for Individual Agencies MHC-KPICD Collaborative

## **Training and Presentation Experience:**

- One Year Data Finding Presentation to Executives of MHC-KPICD Collaborative
- Presentation of Data Collection Plan for MHC Collaborative
- 2 Day Training Presentation for MHC Collaborative
- Presentation of Findings to Executives of MHC-KPICD Collaborative
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- October Child and Adolescent Wellness Training Presenter
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## **Relevant Work Experience:**

- **Child Protective Services - Investigator**
  - October 2008 to March 2010
- **The Friendship Project – Research Assistant**
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## ABSTRACT

### IMPORTANCE OF COMMUNICATION CHANNELS AND OFFICE CULTURE IN ADOPTION AND DISSEMINATION OF TRAUMA INFORMED PRACTICES IN ORGANIZATIONS

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Ensuring that a new policy or therapy is implemented effectively and quickly is a major concern for organizations. Adoption is taking up the new policy and dissemination is the speed and spread of the new policy. The current study reviews how office culture and office communication impact adoption and dissemination, and whether communication mediates the relationship between office culture and adoption. Using the training of professionals in Tarrant County in the therapy TBRI ( $n = 24$  organizations, 873 participants across organizations), office culture and office communication was measured as well as TBRI skill use at two time points. Using MPLUS and multilevel structural equation modeling, path models and a mediation model were tested to determine the impact of office culture and office communication on TBRI use by organizations. Results showed that communication did not mediate the relationship between culture and TBRI skills. Communication and culture were correlated and office culture alone could predict TBRI skill use at time two. The results show the importance of culture on policy adoption, and shows how closely tied together communication and office culture are to one another.