Transition collaboration has been discussed as a potential coupler, joining secondary and postsecondary professionals’ efforts to improve transition outcomes. Although transition collaboration remains understudied and under discussed, there is growing attention to rehabilitation professionals’ participation. Among rehabilitation professionals involved in transition are state vocational rehabilitation counselors, community rehabilitation providers, and centers for independent living personnel, all of which have related but distinctive roles. The purpose of this article is to stimulate discussion and generate knowledge regarding transition collaboration by updating and extending the Oertle and Trach (2007) transition literature review that emphasized rehabilitation professionals’ involvement in transition collaboration. Operationally defined practices and a structural and measurement model are proposed. The implications for rehabilitation are discussed and recommendations for improvement are offered.

In keeping with person-centered, inclusive approaches to education, all high school students are encouraged to pursue postsecondary education and/or employment to their optimal capacity. Influenced by research evidence and legislation highlighting transition planning and services, students with disabilities are entering postsecondary education and competitive employment in greater numbers than ever before (Newman et al., 2011). Yet moving from the entitlement system, which is the basis for primary and secondary education, to the qualification-based adult support system often results in disproportionately poorer postsecondary outcomes (e.g., Baer, Daviso, Queen, & Flexer, 2011; Banks, 2014; Taylor & Seltzer, 2011). Consequently, students with disabilities still lag behind their peers without disabilities in terms of high school completion, employment rates, and postsecondary education access (Harkin, 2013; Kessler Foundation & National Organization on Disability, 2010; Luecking & Luecking, 2013; Newman et al., 2011).

The term transition has become common vernacular of rehabilitation and special education professionals in reference to the planning and service needs of secondary students with disabilities in their movement to postsecondary settings (Cobb & Alwell, 2009). Encompassing social, career, and academic goals, transition is a multi-phased, multiple-stakeholder endeavor requiring transition-specific professional training, curricula/program planning, and service delivery approaches (Cobb & Alwell 2009; Plotner, Oertle, & Kumpiene, 2015; Plotner, Trach, Oertle, & Fleming, 2014; Trach, Oertle, & Plotner, 2014). Partly because transition services cross professional lines and partly because of fragmented regulations, services to high school students with disabilities are often under-coordinated and hence not optimally effective (e.g., Bassert & Kochhar-Bryant, 2006; Oertle & Trach, 2007; Taylor & Seltzer, 2011).

Theoretical models based in organizational behavior, social psychology, and management have been found to be applicable to collaboration (Bryson, Crosby, & Stone, 2006; Thomason & Perry, 2006; Thomson, Perry, & Miller, 2007; Kester, 2013), which is commonly viewed as a significant component of effective transition practices (Kohler, 1993; Kohler, 1996; Noyes & Sax, 2004; Plotner, Trach, & Strauser, 2012; Rouleau, 2012; Sax & Noyes, 2008). However, more research is necessary to firmly establish theoretical parameters of collaboration in transition. Although there are numerous examples of successful formalized transition projects, many of which incorporate collaboration (Albright, Hasazi, Phelps, & Hull,
Overview of Transition Research

Since the term transition was first used by Madeline Will of the United States (US) Office of Special Education and Rehabilitation Services (OSERS) (Will, 1984, 1986), roughly thirty years of research have yielded a handful of theoretical and applied models. These models have been utilized to ground and organize the four overarching themes found in transition:

- curricula/interventions (e.g., Condon & Callahan, 2008; Koch, 2000; Morningstar et al., 2010; Plotner & Oertle, 2011; Rouleau, 2012; Test, Fowler, et al., 2009; Test, Mazzotti, et al., 2009);
- planning and service delivery frameworks (e.g., Halpern, 1985; Kohler 1993, 1996; Kohler & Field 2003; Noyes & Sax, 2004; Oertle & Bragg, 2014; Plotner, Trach, & Strauser, 2012; Rouleau, 2012; Sax & Noyes, 2008; Will, 1996);
- training and professional competencies (e.g., Benitez, Morningstar, & Frey, 2009; deFur & Taymans, 1995; Plotner, Trach, & Shogren, 2012; Stodden, Yamamoto, & Folk, 2010); and
- collaboration among stakeholders (e.g., Agran et al., 2002; Benz, Lindstrom, & Latta, 1999; FIESTA, 2014; Kester, 2013; Noonan, Erickson, & Morningstar, 2013; Noyes & Sax, 2004; Oertle & Trach, 2007; Oertle, Plotner, & Trach, 2015; Oertle, Trach, & Plotner, 2013; Rouleau, 2012; Scarborough & Gilbride, 2006; Taylor, 2013; Test, Mazzotti, et al., 2009).

Collaboration, however, has lagged behind the other three major themes in terms of theoretical development and empirical testing as evidenced by the limited research in which evidence-based practices have been identified (Cobb & Alwett, 2009; Cobb et al., 2013; Landmark, Ju, & Zhang, 2010; Test, Fowler, et al., 2009) and the predictive relationship to outcomes has been determined (Test, Mazzotti, et al., 2009).

Predicting Student Success

Though collaboration serves as the backbone on which effective transition service delivery is based, a brief look at how a few other areas of transition research are faring is necessary to place collaboration into context. More specifically, research in which individual and institutional predictor variables have been found to be associated with postsecondary employment and education could be influential in identifying collaboration activities among stakeholders. In particular, malleable variables could be used to shape student preparation and guide transition planning and service delivery.

Individual and cultural factors. Many researchers have reported on demographic variables that correlate with postsecondary outcomes; for example, Baer, Flexer, and Dennis (2007) and Baer et al. (2011) found that disability severity, academic proficiency in high school, and amount of transition assistance required by a student predicted transition suc-
cess. Similarly, Hasnain and Balcazar (2009) found significant interactions between race/ethnicity, gender, education, and socioeconomic level and inclusion in community-versus facility-based employment (i.e., sheltered work), with people of color less likely to be employed in competitive, community-based settings than their White peers. A few studies have focused on intrinsic characteristics that correlate to postsecondary employment and/or education, including Newman et al. (2011) who found long-term implications of social interaction and outcomes, and Essex (2012) who found correlations between transition success and measures of self-determination. Similarly, Banks (2014) found a connection between cultural and social capital and postsecondary transition success.

Curricular methods and interventions. Career preparation and development that includes (a) access to the general curriculum (e.g., Division of Career Development and Transition [DCDT], 2012; Test, Mazzotti, et al., 2009), (b) career and technical education (e.g., Cobb et al., 2013; Kalchik & Oertle, 2010; Kohler, 1993; Rabren, Carpenter, Dunn, & Carney, 2014; Test, Mazzotti, et al., 2009), and (c) paid and unpaid work experiences during high school have been repeatedly shown to predict positive postsecondary outcomes (e.g., Benz et al., 2000; Cobb & Alwell, 2009; Kohler, 1993; Luecking & Fabian, 2000; Rutkowski, Daston, Van Kuiken, & Riehle, 2006; Test, Mazzotti, et al., 2009). Further, Kohler (1993) found that along with participation in career and technical education; parent involvement in the transition process, and interagency collaboration were cited in 50% of the literature as key to postsecondary success. Landmark et al. repeated Kohler’s methods in 2010, finding similar results.

The Current State of and What’s Needed in Transition Collaboration Research

At the core of the transition process are collaborative efforts that are within-and cross-systems, typically occurring among secondary school personnel (i.e., general, career and technical, and special educators; school counselors) and rehabilitation professionals as well as other community service providers (e.g., college disability services professionals; healthcare specialists; social security administrators; child welfare caseworkers; WIOA employment counselors). The Individuals with Disabilities Education Improvement Act (IDEA, 2004) and the Rehabilitation Act and its Amendments (Rehabilitation Act) are the two major laws that govern transition practices and specifically pertain to special education and VR so their partnership receives the most attention. Among other responsibilities, IDEA (2004) mandates special educators coordinate with appropriate entities in establishing and meeting Individual Education Plan (IEP) transition goals, while the Rehabilitation Act contains transition provisions for rehabilitation professionals. Both IDEA and the Rehabilitation Act contain directives for the secondary education and VR systems to work in coordination but leave it up to the state and local levels to establish how this will be executed. Unfortunately, the U.S. Government Accountability Office [GAO] (2012) has determined that state level agreements have not translated into effective local partnerships, and although local level community transition teams have been shown to increase collaboration (Kester, 2013; Noonan et al., 2013), these teams operate with great variation with little study of their efficacy.

Additionally, IDEA provides transition funding to the secondary school system and the Rehabilitation Act funds both VR and CILs. To the contrary, CRPs are neither directly governed by nor do they receive funding from either act. Though more complicated and therefore often left out of the dialogue, CILs and CRPs must be included in the transition collaboration discussion because of the critical role they play in the effective VR service delivery (Holloway, Evenson, Haag, & Garber, 2008).

Formalized Transition Model Projects

Demonstration model projects offer a forum for experimentation using an ecological approach to transition research. Because IDEA and the Rehabilitation Act do not specify the components of transition collaboration (Bassett & Kochhar-Bryant, 2006; Oertle & Trach, 2007), and case law generally does not establish precedent, demonstration projects may provide a baseline from which professionals can craft successful, collaborative transition practices.

Several transition projects funded by state and federal entities have yielded many promising approaches that focus on curricula, training, service delivery, and collaboration. The “Youth Transition Project,” the “Great Oaks Project,” and “Teaching All Students Skills for Employment and Life” (TASSEL) have yielded consistent results (see Izzo & Lamb, 2003). All three projects improved students’ transition outcomes by integrating multi-scale collaboration with student-specific interventions in academics and life skills, and focused development of self-determination and career development skills (e.g., Aspel et al., 1999; Benz et al., 1999; Izzo & Lamb, 2003).

Demonstration also offers a comprehensive way to apply theory-based frameworks such as Kohler’s “Taxonomy for Transition Programming” (Kohler, 1996), the National Collaborative on Workforce and Disability for Youth’s “Guideposts for Success” (NCWD/Y, 2005), or demand-side employment strategies (Gilbride & Stensrud, 1992; Chan, 2009). For example, resulting in increased successful student transition outcomes, “Project SEARCH High School Transition Program” (Project SEARCH), used targeted collaboration among employers, educators, VR, and community agencies within a demand-side model which stressed local employer demand (Rutkowski et al., 2006).

A few projects have focused specifically on improvement of interagency collaboration; for example, Horn et al. (1998) reported on a jointly funded transition-to-work project between a state VR agency and the state education agency in which IEP and Individual Plan for Employment (IPE) plans were coordinated; 77.8% students in the program were employed upon graduation. Another example, the “Maryland Seamless Transition Collaborative” (MSTC), was based on a
synthesis of transition research called, "Guideposts for Success" (NCWD/Y, 2005). Early MSTC descriptive research by Luecking and Luecking (2013) has contributed to the evidence base by documenting the steps involved in, "systematically delivering seamless transition services" (p. 2) state-wide. Further, Fabian and Luecking (2015) observed that transitioning youth were significantly more likely to have secured jobs at VR case closure when teams rated highly on the Levels of Collaboration survey (Frey, Lohmeyer, Lee, & Tollefson, 2006). However, in contrast, Fabian & Luecking (2015) found when using the Questionnaire on Collaboration (QoC) (as cited in Fabian & Luecking, 2015), that "the odds of successful rehabilitation would decrease as the team scores on the QoC increased..." (p. 3). Based on these early findings, they concluded that the intention of the collaboration appeared to be influential on VR youth case closure outcomes. Fabian and Luecking (2015) further added, "collaboration is obviously a complex construct, requiring significant additional research to define and develop measures to operationalize it" (p. 3).

Professionals directly involved in transition as well as leaders and policy makers have much to learn from these demonstrations. Common to these model projects were emphasis on (a) transition as a formalized and structured process, (b) the student taking leadership of their plan formulation, (c) parents and families actively involved in the decision-making process for IEP transition components, and (d) professionals from both the school and area agencies having well defined duties and responsibilities. Such short term demonstration projects have the potential to become templates for implementation and evaluation of long-term, large-scale efforts.

Theory Development

Theories have a tendency to appear abstract; however, theories anchor assertions (Parsons, 1938). The knowledge generated through the theory development process "contribute to that community’s collaborative knowing" (Stahl, 2004, p.4). Parsons further contends that,

...the alternative for the scientist in the social or any other field is not as between theorizing and not theorizing, but as between theorizing explicitly with a clear consciousness of what he is doing with the greater opportunity that gives of avoiding the many subtle pitfalls of fallacy, and following the policy of the ostrich, pretending not to theorize and thus leaving one’s theory implicit and uncritizised, thus almost certainly full of errors (1938, p. 15).

Intrinsically, researchers use theories to decipher the gaps, shape their research questions and design, guide their choice of the variables to be researched, and ultimately, they use theory to set the context for how they interpret their findings (Parsons, 1938; Stahl, 2004). Fundamentally, theory serves as a basis from which researchers can use empirical studies to validate practices (Carter et al., 2013; Kohler, 1993; Landmark et al., 2010). Applied to transition collaboration, theory could be used to advance both research and practice. Yet, collaboration theories have not been widely adapted for serving the transition-age population but development of collaboration theories may help to further define collaboration, delineate collaboration responsibilities and expectations, and improve measurement of its impact on transition outcomes (Oertle & Trach, 2007; Trach, 2012).

Transition collaboration theory development and its calibration are needed steps in the process of formalizing transition to improve outcomes. A combination of professional opinion and observed outcomes of interventions, theories serve as a logical starting point for policy, model, and program development and for this reason collaboration theories from other fields can be found applicable to transition. More specifically, organizational behavior theories could be of use because, just like in business, they allow conceptualization of how separate entities can address and solve complex problems and share responsibility and cost for their attainment while allowing those entities to contribute their strengths while remaining autonomous (Gray & Wood, 1991; Wood & Gray, 1991). Parsons (1938) described the benefits of looking to related fields for theory development as, "...a source of cross fertilization of related fields of the utmost importance. This often leads to very important developments within a field which would not have taken place had it remained theoretically isolated" (p. 20).

Defined in general as "an interactive process between organizations that involves negotiation, development and assessment of commitments, and implementation of those commitments" (Wenger, 2000, p. 98), the most prevalent collaboration theories tend to be based on resource dependence theory (Pfeffer & Salancik, 1978), which concerns interdependence of organizations with limited resources (Thomson et al., 2007; Thomson, Perry, & Miller, 2008), and social learning theory, which posits that organizations benefit best from taking a learning-oriented role with attention paid to both intraorganizational and interorganizational relationship-building (Thomson et al., 2007, 2008; Wenger, 1998). Responding to Wenger’s (2000) call for more social science collaboration research, Thomson et al. (2007) conceptualized and measured collaboration with a sample of directors of organizations participating in AmeriCorps and used their findings to construct a multidimensional model of collaboration. Thomson et al. (2008) later advanced their prior research (2007) by empirically tying the collaboration process to outcomes.

Operational Definition

Collaboration is repeatedly noted as a factor in transition outcomes in both theory (Kohler, 1996; Kline & Kurz, 2014) and practice (e.g., Noyes & Sax, 2004; Oertle & Trach, 2007; Honeycutt et al., 2015; Riesen, Morgan, Schultz, & Kopfman, 2014); however few scholars have set forth operational definitions for transition collaboration or have discussed the within- and cross-systems influences on collaborative practices that add to its complexity. The lack of operational definition and guidelines for practices can be linked back, in part, to IDEA and the Rehabilitation Act. Despite common use of the term collaboration as a significant component of transition planning and service delivery, this term does not appear in
neither IDEA nor the Rehabilitation Act in connection with transition, but, rather the term coordination is used (IDEA, 2004; Rehabilitation Act).

In transition practice and research, coordination and collaboration have been used interchangeably; but, they obviously have different meanings. Yet, the components of coordination and collaboration are theorized as interrelated along a spectrum (Frey et al., 2006). Whereas coordination, an earlier stage, consists of "shared information and resources, defined roles, frequent communication, and some shared decision making" (Frey et al., 2006, p.387), collaboration is the final stage and is more nuanced (Frey et al., 2006). In collaboration, "members belong to one system, have frequent communication that is characterized by mutual trust, and reach consensus on all decisions" (Frey et al., 2006, p.387). Defined in this way, collaboration becomes part of an overall transdisciplinary approach to transition planning and service delivery. Drawing from the fields of healthcare and early childhood education, transdisciplinarity has been described as "transcending the disciplinary boundaries. ...[in which] members from different disciplines work together using a shared conceptual framework, goals, and skills" (Choi & Pak, 2006, p. 356) to develop a shared mission (King et al., 2009).

Substantiated by the literature, approaches to transition service delivery continue to evolve with collaboration discussed as an operational goal among professionals. Furthermore, while relatively new to the transition conversation, the use of transdisciplinarity has the potential to advance transition efforts by moving beyond multi- and interdisciplinary approaches (Choi & Pak, 2006, 2007) to an approach that may be more in-line with the goals of transition (i.e. successful seamless movement from secondary to postsecondary settings). According to King et al. (2009), to unlock the potential benefits of using a transdisciplinary approach the professionals involved need (a) "a sound understanding of principles of interprofessional teamwork" (p.221), (b) "detailed and up-to-date dual purpose reports documenting roles and plans" (p. 221), (c) a "personal responsibility to engage", and (d) "systematic and deliberate teaching of skills to professionals with different viewpoints, experiences, and levels of understanding" (p.220).

Measurement

The application of collaboration theory and its measurement is a relatively new area of transition research. However there are a few examples. Applying Thomson et al.'s (2007) collaboration construct to transition and the interagency collaboration strategies identified by Noonan, Morningstar, & Erickson (2008), Noonan et al. (2013) measured the impact of a collaboration focused, year-long training on community transition teams. Noonan et al. (2013) found increased levels of collaboration. In 2013, Kester conducted an empirical study of the application of Wenger's 1998 social theory of learning to a cross-systems transition communities of practice, also finding improvements in collaboration. These researchers are the first to apply collaboration theory to transition. Much more research is strongly needed to fully operationalize and measure collaboration in transition and uncover its impact on outcomes (Fabian & Luecking, 2015).

To assist in closing the gaps in transition research, the Transition Collaboration Model (TCM) is proposed (see Figure 1). The TCM was primarily constructed from the work of Thomson & Perry, 2006; Thomson et al. (2007, 2008), the literature reviewed for this paper, the experiential background of the first author, and the research synthesis upon which the proposed operational definition is based (see Operationally Defined Practices section). Specifically within the context of transition, the factors (a) leadership (i.e., as measured by structures for shared mission/vision and processes for joint decision-making along with mechanisms for accountability), (b) interest (i.e., as measured by organizational self-interest, collective interest, and the benefit/challenge payoff), and (c) trust (i.e., as measured by truth-telling, follow-through, and consequences) are hypothesized to have shared properties that are associated with collaboration, and as such, have predictive relationships.

The TCM is a structural frame within which to measure the precision of the indicators (depicted in squares, see Figure 1), their related factors (Leadership, Interest, and Trust depicted in circles, see Figure 1) as well as the strength and direction of the predictive relationships with the transition collaboration construct (depicted in the largest circle in Figure 1). What's more, the individual and cultural factors, curricular methods and interventions, among other transition-related variables could be analyzed as covariates. Further, once the TCM structural and measurement components are specified, the predictive relationships of the transition collaboration construct with transition outcomes could be tested. Typical sources of outcome data such as Indicators 1, 2, 8, 13, and 14 (IDEA, 2004) and VR's statuses 22, 26, 28, 32, and 34 along with RSA-911 data could be used; but, the identification and collection of additional outcome data is necessary to fully account for the impact of rehabilitation as the data collection currently falls short in scope. The use of the TCM to measure transition collaboration has the potential practical benefits of (a) making theory more concrete, (b) strengthening strategic planning, (c) providing an avenue for discussion and establishment of priorities and expectations, (d) developing consensus, (e) evaluating and developing policies and practices, and (e) being a reflective tool for relationship building.

Operationally Defined Practices

Perhaps because the field has yet to summarily define collaboration and develop theory within its bounds, there exists only a few examples of empirical research in which interagency transition practices were analyzed. In one study, Noonan, McCall, Zheng, & Erickson (2012) used mixed methods to investigate current and changing collaboration practices of established state-level transition teams, and in another study, Warrington et al. (2004) conducted a large scale review of the interagency and cross-professional collaboration literature in the UK. These researchers found that common interagency practices that led to success were (a) information sharing, (b) flexibility in scheduling, and (c) shared leadership with open
communication. These findings compliment the interagency transition practices proposed within the "Taxonomy for Transition Programming" (Kohler, 1996) and the collaborative partnership competencies presented within the conceptual VR transition model (Plotner, Trach, & Strauser, 2012).

Large scale reviews such as Warmington et al. (2004) have yet to be replicated in the US. However, combining what has been learned from collaboration research in related fields and transition-specific research, these findings serve as a starting point for operationally defining and establishing an evidence-base for transition collaboration practices. Synthesizing the identified interagency practices (Choi & Pak, 2006; Choi & Pak, 2007; Frey et al., 2006; King et al., 2009; Kohler, 1996; Plotner, Trach, & Strauser, 2012), transition collaboration could be operationalized as

• using formal interagency agreements that document the incentives for working together, establish a shared conceptual person-centered and family-centered framework along with stating the common transition goals and vision;

• having an identified leader that changes as needed, involving all relevant stakeholders with clearly defined roles and responsibilities that transcend disciplinary boundaries;

• developing an orientation manual and disseminating it through a comprehensive orientation to services;

• using standardized, formal and informal assessment methods from multiple disciplines simultaneously to develop, coordinate, and evaluate intervention plans;

• communicating frequently to exchange and pool information, knowledge, skills, and resources;

• attending and actively participating in planning meetings;

• developing and participating on a local transition planning council;

• participating in ongoing skill enhancement through planned joint professional development; and

• using constructive, ongoing evaluation of performance among team members.

As operationally defined, transition collaboration can manifest into and be used as (a) quality indicators to guide implementation and evaluation of policies, (b) standards for teaching transition competencies, (c) activities for practical applications, and (d) items on an instrument to be used and analyzed within the TCM. Moreover, instrument development and subsequent research would complement; and extend the scope and capability of current transition collaboration because of the focused measurement of transition specific collaboration activities. Therefore this instrument could be used independent of or in tandem with other instruments such as the Transition Collaboration Survey (Noonan et al., 2013) and/or the Levels of Collaboration (Frey et al., 2006) which have been used to measure change.

Implications for Rehabilitation

To continue the conversation started by Oertle and Trach (2007), there is value-added when rehabilitation is involved in transition because outcomes are improved. Educators, researchers, and practitioners interested in improving transition outcomes must collaborate to continue to make advances and address the on-going barriers that exist. Although connected, specific implications for education, research, and practice are presented next.

Education

Pre-service. Opportunities for pre-service transition education have been growing. More common are special education programs that have certificates or endorsements in transition. However, rehabilitation counseling master’s programs have begun to include concentrations in transition with some joint coursework (i.e., involving pre-service VR counselors and special educators) which is providing early opportunities for transition training.

Plotner’s and Fleming’s (2014) survey of university rehabilitation counselor curricula offers one of the few quantitative studies that focuses on how much and what transition information master’s students are learning. Of the Program Chairs who responded, 33% were from departments that housed both rehabilitation counseling and special education. Nevertheless, regarding transition education and training, only five of the 30 rehabilitation master’s programs had a certificate or spe-

![Figure: Proposed Transition Collaboration Model](image-url)
cialized degree in transition and 86% of programs offered no courses specifically focused on transition. In contrast, 52% reported that transition content was infused into coursework and 72% responded that students had options for transition internships/practicums. Yet, this growing but still limited exposure to transition content has been repeatedly shown to be insufficient in preparing counselors for work in transition (Ki-erpiec, 2012; Oertle et al., 2013; Plotner & Fleming, 2014).

In-service. In transition research conducted by Oertle et al. (2015; 2013), in-service VR counselors, CRPs and CIL personnel with transition caseloads were surveyed about their transition participation, expectations, and collaboration. In both studies, well over one-half of the rehabilitation professionals reported attending conferences and workshops to learn about transition. However, the majority reported that their major source of transition training was on-the-job. Highlighting the need for formalized training specific to transition, as many as a third of these rehabilitation professionals reported sometimes or often not knowing what is expected of them. What’s more, nearly a quarter reported not knowing what is expected of them during transition planning meetings. Similarly, Plotner, Trach, and Strauser (2012) and Plotner, Trach, and Shogren (2012) found that VR counselors perceived the provisions of career planning and counseling, career preparation experiences, and establishing and maintaining collaborative ties as important areas of competency in transition service delivery, yet reported only little to moderate preparation in these areas.

Currently, there are no national transdisciplinary organizations or subgroups focused on the networking, professional development, or the continuing education needs of professionals involved in transition. As a subgroup of the Council on Exceptional Children (CEC), the DCDT has a website, hosts an annual conference specifically addressing special education transition professional development and networking, and has crafted and disseminated, the “CEC Advanced Special Education Transition Specialists Standards” (CEC, DCDT, 2013). On the other hand, transition has not garnered the same level of attention from rehabilitation organizations such as the National Council on Rehabilitation Education (NCRE), the American Rehabilitation Counseling Association (ARCA), nor the National Rehabilitation Association (NRA). Although, NRA does have the Transition Specialties Division, thus far, however, there has been no national transition conference for rehabilitation professionals. Furthermore, only a few transition-focused presentations have been typically offered at these rehabilitation organizations’ annual conferences.

There are some statewide transition conferences (e.g., Illinois, Wisconsin) that have multi-stakeholder audiences (i.e., educators, healthcare providers, rehabilitation professionals, postsecondary educators, and transitioning students and their families). However, these statewide transition conferences are not nationally connected via social media, the web, or any other method, making cross-state collaboration nearly impossible. Furthermore, there is no national source of information about these statewide transition conferences and there are no means for state transition leaders to connect with each other. The whereabouts of a home for and structure of a national transdisciplinary transition dialogue has yet to be discussed or addressed.

Note on CRPs and CILs. Despite the role that CRPs and CILs play in transition service delivery within and outside of the VR system, their education and training needs have had little comprehensive attention. CRPs and CILs have inconsistent educational and training requirements resulting in varying levels of preparation (Holloway et al., 2008); leading to fragmented services and a wide-range of success rates (Plotner & Trach, 2010). The oversight of the transition-focused educational needs of CRP and CIL personnel must be addressed given their integral involvement in transition planning and services (Oertle et al., 2015; Oertle et al., 2013).

Putting it all together. It follows that research must be put into practice in the form of in-service and pre-service training specific to transition. Transition-specific training must begin while the educators and rehabilitation professionals are still in school and continue while in the field. Presently, special education and rehabilitation counseling students generally do not share classes during school and rarely attend the same transition-specific in-service trainings (Oertle & Trach, 2007; Plotner, Trach, & Shogren, 2012). As collaboration will be an intrinsic part of the working futures of professionals involved in transition planning, early efforts at joint education, emphasizing division of labor and knowledge plus application of the use of different agencies is essential. Curricula borrowed from business management and education training, especially use of mock case studies in collaboration, could be developed to train both special educators and rehabilitation professionals in simulations of future real-life situations (Brazil & Teram, n.d.). Transition training must incorporate how to collaboratively develop curriculum and structure the student’s IEP and postsecondary rehabilitation plans such as VR’s IPE to connect secondary efforts to postsecondary opportunities and outcomes.

Plotner and Fleming (2014) raised an important question about the capabilities of rehabilitation counseling faculty to provide transition-specific education. Based on the results of a systematic content analysis of rehabilitation counseling journals where only 4% of articles were on transition (Plotner, Shogren, & Strauser, 2011), it can be concluded that faculty are not prepared or at the very least are underprepared. Faculty preparation, curriculum mapping for cross-curricular comparison and development as well as more transdisciplinary pre-service and in-service opportunities through joint trainings (i.e., education and rehabilitation together) are greatly needed.

Research

Rehabilitation transition research and practice have drawn heavily from what has been learned through the lens of special education. Research from the special educator’s point of view does have value in adding to the rehabilitation knowl-
edge base; for example, Shaw, Dukes, and Madaus (2012) focused on what special educators can do to improve transition, while Test and Cease-Cook (2012) offered a review of evidence-based transition practices primarily generated from the special education literature translated for rehabilitation. Further, Shaw's and Dukes' (2013) call for a research agenda on evidence-based transition to postsecondary education practices can also be applied within the context of VR. However it is only when rehabilitation-specific research adds to the transition knowledge base that deeper understanding of the impact of rehabilitation professionals' involvement in transition can be fully realized.

Rehabilitation transition research. Researchers have used a variety of research methods to understand rehabilitation influences on transition. For instance, Lamb (2003) used case study to investigate the role of VR counselors in transition; in this study, interview and survey methods were used to assess opinions of VR counselors regarding their role in and understanding of the transition process. Other authors have come forth with suggestions on the role of rehabilitation generated from reviews of the literature (e.g., Oertle & Trach, 2007) and competencies identified through survey of in-service VR counselors (e.g., Plotner, Trach, & Strauser, 2012). Results of large-scale comprehensive studies such as that by the Study Group (2007), in which nationwide statistics were analyzed on the most-often used, most successful, and least successful transition practices of VR counselors are valuable, yet least-often implemented. However, in recent research by Honeycutt et al. (2015), mixed methods were used in a nationwide investigation of transition within the VR system to assess current VR involvement and its impact. Simply stated, investigations from a rehabilitation perspective offer information about transition that is absent without it.

CRPs and CILs. Only a handful of researchers have included CRPs (Oertle et al., 2015; Oertle et al., 2013; Riesen et al., 2014) and even fewer have involved CILs (Oertle et al., 2015; Oertle et al., 2013) in their transition research. Therefore, much of the rehabilitation transition point of view has been primarily generated from VR counselors. Much like with their oversight in education, CRPs and CILs must be included in rehabilitation transition research because CRPs and CILs are pivotal community entities and are instrumental in the delivery of services within and outside of the VR system (Holloway et al., 2008; Oertle et al., 2015; Oertle et al., 2013).

Furthermore, little is known about the intricate relationship among CRPs, CILs and VR counselors; from what has been learned, these rehabilitation professionals are working in collaboration and independent of each other and have distinctive roles when it comes to transition (Oertle et al., 2015; Oertle et al., 2013). It is logical to conclude that to advance the understanding of transition collaboration from a rehabilitation perspective, CRPs' and CILs' transition involvement must be incorporated within more of the transition research

So Many More Questions, So Few Answers. Some of the research questions proposed by Oertle and Trach (2007) have received attention. However, there are many questions that remain unanswered (see Table 1).

The current literature still does not provide answers to these questions. As Oertle and Trach (2007) speculated, "The answers could be helpful in developing strategies to improve interagency collaboration efforts during transition activities" (pp. 42-43). The operational definition and proposed TCM could be used to address some of these transition research questions. Clearly, more studies that focus on the rehabilitation professionals’ perspectives regarding transition service delivery within- and cross-systems collaboration are necessary.

Synergetic dissemination. As discussed earlier, there is currently no national transition professional organization or conference across disciplines. Likewise there are no peer-reviewed cross disciplinary transition-focused scholarly journals. The CEC’s DCDT does have an official journal, Career Development and Transition for Exceptional Individuals (CD-TEI), which is peer-reviewed, but is predominantly directed toward a special education audience. Rehabilitation professionals do not have any scholarly journal solely dedicated to transition and only 4% of articles in rehabilitation journals were found to have transition content (Plotner et al., 2011). Therefore, no national forum exists for transition researchers to disseminate, critique, and generate knowledge; as such, transition research is somewhat fragmented which only adds to the difficulty of knowledge translation. What appears to be needed however is not another field-specific transition organization, but a national transdisciplinary transition organization from which to generate, launch, and share knowledge through networking, research, and professional development.

Practice

Oertle and Trach (2007) synthesized the typical and needed transition practices of educators and rehabilitation professionals (see Oertle & Trach, 2007, Table 1, p. 39). Many of these practices are still typical which means much of the needed changes in transition practices proposed in 2007 remain today. Furthermore, Johnson (2000) argued that (1) increasing collaboration, (2) engaging students' and their families' involvement, (3) facilitating opportunities for postsecondary community-based outcomes, (4) ensuring inclusion and preparation, and (5) ensuring meaningful completion of secondary education were the top five transition service challenges. All of the challenges presented by Johnson (2000) continue to exist as well.

Rehabilitation professionals are finding themselves involved in the transition process now more than ever before (Honeycutt et al., 2015). Moreover, rather than waiting for an invitation to participate, rehabilitation professionals are increasingly taking the initiative to encourage collaboration with their local school districts and other adult service providers through outreach and marketing of their services, initiation of contact, and regularly attending IEP meetings (Oertle et al., 2015; Oertle et al., 2013). However, collaboration has been
found to be linked with successful transition outcomes (Fabian & Luecking, 2015; Noonan et al., 2013) as well as to be a barrier to success (Fabian & Luecking, 2015; Riesen et al.,

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<td><strong>Rehabilitation Transition Questions That Remain Unanswered</strong></td>
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Note. *Adapted from “Interagency Collaboration: The Importance of Rehabilitation Professionals’ Involvement in Transition” by K. M. Oertle & J. S. Trach, 2007, pp. 42-43. Journal of Rehabilitation, 73, 36-44. Copyright 2007 by the National Rehabilitation Association. Reproduced with permission from the National Rehabilitation Association P.O. Box 150235 Alexandria, VA 22315*
Documentation. In addition to role confusion, unclear expectations, and limited preparation impacting rehabilitation professionals’ transition participation (Oertle et al., 2015; Oertle et al., 2013; Plotner, Trach, & Shogren, 2012), documentation and its use is field specific and, as such, does not easily translate from secondary to postsecondary settings. Complicating matters further, transition assessment procedures can be overlapping and findings conflicting (Luft, 1999). To continue the work began at the 2003 National Transition Documentation Summit (Kochhar-Bryant & Izzo, 2006), leadership must provide the legs for the structuralization of IEP, IPE, and Summary of Performance (SOP) as a priority for strengthening within- and cross-systems collaboration (Lamb, 2007; Kochhar-Bryant & Izzo, 2006; Steere & DiPipi-Hoy, 2013) and increasing the fluidity of the transfer of transition-related information among stakeholders (Kochhar-Bryant & Izzo, 2006).

Recommendations for Improvement
Recognize Transition as a Specialized Field
Of overarching concern is the need to formalize transition as a specialized field within both education and rehabilitation. This idea involves a multitude of corollaries. First, professionals at all levels (researcher, administrator, and practitioner as well as agencies and professional accrediting bodies as a whole) must recognize that the unique population of emerging adults (i.e., usually defined as ages 16 through 22 when referencing transition; Arnett, & Schwab (2012) extend this distinctive developmental period to age 29) require unique services that necessitate specific interventions (Arnott, 2000; Lamb, 2007; Plotner et al., 2014). Second, funding for programs, hiring, and pre-professional/professional development must be directed to specifically target the needs of the transition-age population. Third, leaders and educators must recognize transition as a specific transdisciplinary subfield that is characterized by sharing information and skills across disciplinary boundaries in collaboration as defined by the needs of the transitioning student and their family (King et al., 2009) with application within a multi-tiered system of supports (MTSS) (Morningstar, Bassett, Kochhar-Bryant, Cashman, & Wehmeyer, 2012). Finally, professional organizations and legal/accrediting bodies of education and rehabilitation must be utilized to offer opportunities for certification in transition-specific competencies and chances for transition-specific professional meetings and conferences that reach across disciplines (Honeycutt et al., 2015; Oertle & Trach, 2007; Plotner, Trach, & Shogren, 2012).

Address the Need for Transition-Specific Rehabilitation Training Standards
As the field of transition becomes a specialty unto itself, not only will effective interventions continue to be established, but the training requirements of those who implement them will also continue to need to be identified and formalized to cultivate highly qualified transition professionals prepared to work in collaboration to make positive changes in the post-secondary trajectory of the transition-age population with disabilities.

Professionals in the rehabilitation field serving the transition-age population have clearly different roles than that of general rehabilitation counselors (Plotner et al., 2014); while some research has been done to identify professional competencies of VR counselors (e.g., Plotner, Trach, & Strauser, 2012), most researchers have concentrated on the needs of secondary school educators (e.g., Test, Fowler, et al., 2009; Test, Mazzotti, et al., 2009). Nonetheless, there is a growing empirical transition research base in rehabilitation. For instance, VR counselors’ transition competencies within the domains of a conceptual VR transition model have been identified (Plotner, Trach, & Strauser, 2012; Plotner, Trach, & Shogren 2012) extending the research of Kohler (1996) and deFur and Taymans (1995). In addition, the differences in service delivery for transition-age VR consumers have been documented (Plotner et al., 2014). Although the rehabilitation professionals’ transition competencies have not been studied collectively (i.e., VR counselors, CRPs, and CILs) the research based on VR counselors provides a basis for further development and application in existing and developing pre-service and in-service education offerings.

Research the use of Long Term, Evidence-Based Transition Collaboration Practice
Transition can only be strengthened by applying the results of empirical research in the long-term implementation of evidence-based practices firmly grounded through the development of transition-specific collaboration theory. These formalized practices need to be standardized and sustained across local and/or state education agencies. Components should be similar or standard across schools and students (Bullis, 2013; Dowdy, 1996), but include flexibility within the curricular and programming to account for differences in demographics, cultural linguistic diversity (CLD), communities, and labor markets (Anderson & Smart, 2010; Condon & Callahan, 2008).

Despite a shortage of quantitative transition collaboration studies that meet the Institute of Education Sciences (IES) What Works Clearinghouse (WWC) standards (Cobb et al., 2013) and correlational studies that include predictor and outcome variables (Test, Mazzotti, et al., 2009), researchers have shown that collaboration leads to greater outcomes for students (e.g., Benz et al., 1999; Fabian & Luecking, 2015; Horn et al., 1998; Rukowski et al., 2006; Test, Mazzotti et al., 2009). Complimenting Hasazi, Furney, and DeStefano’s findings (1999), Oertle et al. (2015) found that formal collaboration mechanisms supported by the administration were among the top reasons rehabilitation professionals reported for their involvement in transition collaboration. Furthermore, rehabilitation professionals stated that transition collaboration led to valued partnership and better outcomes (Oertle et al., 2015). Similarly, Winsor, Butterworth, and Boone (2011) reported greater success in interagency collaboration when the administrative environment encouraged shared contribution in-kind. In addition, Jorgensen-Smith and Lewis (2004) found that components of successful interagency collaboration in-
clude clear delineation of roles and structure in the program setup.

Clearly, the evidence-based practices generated through multiple studies and model demonstration projects that emphasize collaboration must be more widely implemented. Furthermore, rehabilitation policies and practices that promote the development and refinement of transition collaboration can only come to fruition with the evaluation of its long-term use and investigation of the impacts on transition outcomes. Therefore, to be effective, rehabilitation must commit to the long-term use and study of evidence-based transition practices that are implemented and tested through a consistent policy framework.

**Conclusion**

Transition must become a recognized, distinct subfield within both education and rehabilitation professions that has collaboration as a central component. Particular to rehabilitation, certifying and accrediting bodies for students and professionals must recognize transition as a unique field through establishment of competency standards and endorsement of pre and in-service training. Furthermore, rehabilitation professionals must continue to take the initiative to work with local schools and other providers while working together to create a common set of implementation plans and outcome standards. Rehabilitation educators must continue to address the knowledge, skills, and abilities needed to meet the needs of the changing make-up of VR consumers that this growing transition-age population entails. The synergy of research, education, and field leadership is necessary to advance transition efforts across disciplines in collaboration.

Leadership is greatly needed to organize, connect, and develop a cohesive transition research agenda along with transition-focused pre-service and in-service education. Planned comprehensively, rehabilitation leaders could advance transition collaboration by reaching out to secondary transition leaders to not only further develop their own transition knowledge, skills, and abilities but also those of cadres of in-service and pre-service professionals. Delivery of evidence-based, transition-specific education can be used to advance transition efforts by cultivating qualified professionals who are transdisciplinarily educated and networked.

Historically, the responsibility for transition implementation fell largely upon the shoulders of special educators. Special educators are still responsible for initiating the transition process and establishing the first transition plan for each student (IDEA, 2004). However rehabilitation professionals are playing an increasingly greater part in developing transition plans with students while they are still in high school and actualizing these plans after high school in their communities; thus rehabilitation professionals have an influential part in the resulting transition outcomes. As more and more of the transition-age population and their families access the public VR system, education, research, and field leaders will be looked upon to provide direction. In particular, of great need in the field is evidence-based guidance to more clearly define transition roles and deliberate and articulate expectations as well as develop collaboration measurement models with strategies to improve efficacy. The proposed operationally defined transition collaboration and TCM could be of use in meeting this need.

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