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National Rehabilitation Association
P.O. Box 150235
Alexandria, VA 22315
1-888-258-4295
Fax (703) 836-0848
TDD (703) 836-0849
Email: info@nationalrehab.org

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Employee Perceptions About Factors Influencing Their Return to Work After a Sick-leave Due to Depression

Marc Corbière
Université du Québec à Montréal
Centre de Recherche de l'Institut Universitaire en Santé Mentale de Montréal

Geneviève Bergeron
Université du Québec à Montréal

Alessia Negrini
Institut de recherche Robert-Sauvé en santé et en sécurité du travail

Marie-France Coutu
Université de Sherbrooke

Esther Samson
Association québécoise pour la réadaptation psychosociale

Geneviève Sauvé
McGill University

Tania Lecomte
Université de Montréal & Centre de Recherche de l'Institut Universitaire en Santé Mentale de Montréala

Background: Depression is now recognized as one of the principal causes of work disability worldwide. Although a significant proportion of workers return to work (RTW) following a sick leave due to depression, longer absences and potential relapses are frequent. **Objective:** The study's objective is to identify the subjective factors that facilitate or hinder RTW of individuals who are going through the RTW process after depression. **Method:** Using a qualitative design, semi-structured interviews with 19 individuals who were on sick-leave due to depression, were conducted to investigate their perceptions regarding RTW. **Results:** Three major themes emerged from the analyses: The decisions around the time of RTW (e.g., agreement with the physician), the progressive return-to-work and the implementation of RTW accommodations (e.g., functions, tasks), and the attitudes and behaviors of colleagues and immediate supervisors facilitating or hindering RTW (e.g., support received from the immediate supervisor and colleagues, discredit by people from the work environment). **Conclusions:** These results stress the importance of the decision-making process regarding the timing of RTW, the implementation of work accommodations, and the attitudes and behaviors of the actors in the organization. Future studies should more thoroughly investigate the factors influencing the employers' and immediate supervisors' decisions to grant work accommodations to returning employees after a sick leave due to depression.
Keywords: Depression, return-to-work, work accommodations, stigma

Depression, is one of the most common mental disorders, affecting over 121 billion people worldwide (Prins, 2013). According to the World Health Organization, depression is one of the principal causes of work disability (Prins, 2013; World Health Organization, 2013). Sick leave due to depression can be perceived as a major burden by employers and insurers given the costs related to the loss of productivity and to the human resources involved during the leave and during the return to work (RTW) process (Corbière et al., 2015; Crompton, 2011; Koopmanschap, Burdorf, & Lötters, 2013).

Dewa, Loong, Bonato, and Hees (2014) reported that a significant proportion of people who take depression-related sick leaves actually return to work (RTW). Yet, for many, the RTW process can be complex and filled with hurdles. The complexity is due to the numerous factors, namely legislative and organisational, as well as the multiple stakeholders involved in RTW. For instance, depending on the country and the size of the organization, different legislative frameworks regulate RTW (Cornelius, van der Klink, Groothoff, & Brouwer, 2011; Vornholt et al., 2017). Studies and reviews have shown that RTW processes are facilitated when organizations have rehabilitation policies (Baril, Berthelette, & Massicotte, 2003; Durand, Corbière, Coutu, Reinharz, & Albert, 2014; St-Arnaud et al., 2014). Such policies enable training and educational opportunities to employers and immediate supervisors regarding RTW of employees following depression (Loisel et al., 2001; St-Arnaud et al., 2014).

A plethora of stakeholders can also be implicated in RTW (e.g., employers, immediate supervisors, union representatives, employees), and each may have different perspectives on these factors (Corbière et al., 2015; Cullen et al., 2017). Evidence to date suggests that the successful RTW of individuals following depression is predicted by personal characteristics of all of these stakeholders (e.g., attitudes), namely of the employee him or herself (de Vries, Koeter, Nabitz, Hees, & Schene, 2012; Koopmans et al., 2010) as well as the characteristics of the health professionals (Horppu, Martimo, Viikari-Juntura, Lallukka, & MacEachen, 2016), insurer's representatives (Shaw, Hong, Pransky, & Loisel, 2008), employers (McDowell & Fossey, 2015), immediate supervisors (Negrini et al., in press; McGuire et al., 2015), unions (Corbière et al., 2015), and colleagues (Dunstan & Maceachen, 2014). For instance, the attitudes and behaviors of immediate supervisors have been documented as influencing RTW of employees, although few studies have focused specifically on employees with depression (Kristman et al., 2016; Negrini et al., in press; Nieuwenhuijsen, Verbeek, de Boer, Blonk, & van Dijk, 2004). Frequent communication with the employee, a comprehensive and open attitude displayed by the immediate supervisor as well as mutual trust between the two parties have all been described as positively influencing RTW (Blank et al., 2008; de Vries et al., 2012; Durand et al., 2014). Other authors have further suggested that the RTW process is positively influenced by the employer's (or immediate supervisor's) flexible level of decisional autonomy combined with a considerate and respectful leadership style (Johnston et al., 2015; McGuire et al., 2015; Schreuder et al., 2013). The employer's capacity and willingness to offer accommodations are also key to the RTW process. Work accommodations are recognized facilitators of RTW of employees with depression, given the residual symptoms often experienced (e.g. fatigue, concentration and memory difficulties) (Andersen et al., 2012; Blank et al., 2008; Corbière et al., 2017). Work accommodations can take many forms, for instance, giving clear feedback and guidelines for tasks to temporarily reducing or modifying working schedules or adjusting workload and responsibilities (de Vries et al., 2012; Corbière et al., 2015; Negrini et al., 2018. As expected, negative and stigmatizing attitudes in employers, refusal to implement accommodations, as well as pressure toward productivity and performance, have been documented as negatively influencing RTW of employees with depression (Andersen, Nielsen, & Brinkmann, 2012).

Several authors have suggested that colleagues' attitudes and support also play a key role in the RTW process (de Vries et al., 2012; Kosny et al., 2013). More precisely, colleagues displaying a supportive and understanding attitude as well as providing positive comments to the returning employee appear to have a positive effect on their RTW (de Vries et al., 2012). Tjulin, Maceachen, and Ekberg (2010) proposed that colleagues' positive impact on RTW also stem from behaviors, such as calling absent employees, or informally offering to share tasks. As expected, colleagues displaying resentment toward the returning employee (e.g., because of additional work) or jealousy regarding accommodations the returning employee is granted will negatively influence the employee's RTW (Corbière et al., 2015; Dunstan & Maceachen, 2014; Tjulin et al., 2010).

Other stakeholders can also influence RTW of individuals with depression. For example, interactions with health insurances can be experienced as stressful, given for instance difficulties in understanding insurance company documents relating to mental health problems (Corbière et al., 2017), whereas dealings with rehabilitation services are usually perceived as beneficial (Andersen et al., 2012), especially when the person feels listened to and taken seriously (Haugli, Maeland, & Magnussen, 2011). Support from the medical team as well as a proper evaluation of the health issues have been reported to positively influence RTW (de Vries, Brouwer, Groothoff, Geertzen, & Reneman, 2011).

Despite increasing interest for predictors of RTW of employees following depression (Blank, Peters, Pickvance, Wilford, & Macdonald, 2008; Cornelius et al., 2011; Costa-Black, 2013; Lagerveld et al., 2010), little has been uncovered regarding the factors facilitating and hindering their RTW, above and beyond the stakeholders' attitudes and behaviors described above. Numerous quantitative studies have been conducted on the impact of depression in workers (Adams et al., 2017; Adler et al., 2006; Alonso et al., 2011; Buist-Bouwman, de Graaf, Vollebergh, & Ormel, 2005; Druss, Rosenheck, & Sledge, 2000; Grzywacz & Ettner, 2000; Lerner, Adler, Chang, Berndt, Irish, Lapitsky, et al., 2004; Lerner & Henke, 2008; Nigatu et al., 2017; van den Berg et al., 2017), but few qualitative studies investigating the employee's perspective have been published.

Marc Corbière, Université du Québec à Montréal, Département d'éducation et pédagogie, C.P. 8888, Succursale Centre-Ville, Montréal (Québec) Canada H3C 3P8. Tel: +1 514-987-3000 #5593

Email: corbiere.marc@uqam.ca

Therefore, the study's aim is to investigate the perceptions of employees with depression who are going through a RTW process, in order to identify the factors that facilitate or hinder their RTW while taking into consideration the influence of various RTW stakeholders. A more detailed understanding of these factors will provide an opportunity to identify interventions that are more likely to facilitate RTW and will contribute to developing knowledge in the field of occupational rehabilitation.

Methods

This study followed a descriptive interpretative design (Thorne et al. 2004). Gallagher (2014) notes that this type of eclectic qualitative research allows one to take into account the investigators' and participants' subjectivities and to identify a phenomenon by defining its components. We wished to describe, more specifically, the facilitating and hindering RTW factors perceived by people with depression, while considering the attitudes and actions of potential stakeholders involved in the RTW process. Semi-structured interviews were conducted by a trained interviewer (E.S.). The interview guide covered perceived factors by employees regarding their sick leave due to depression (Corbière et al., 2016), as well as those related to the return to work after depression (present article). This study was approved by the ethics committee of the University of Sherbrooke. Participants received financial compensation for their participation in this study.

Procedures and participants

All 24 interviews, lasting on average 1.25 hours, were conducted between November 2011 and June 2012 ; more information regarding the recruitment and selection process are available in the Corbière et al.'s study (2016). Most interviews were conducted in Quebec (Canada), in person (21/24) by one interviewer, while three were completed by phone to reach individuals from remote locations and those unable to travel to the interview site. All interviews were numerically recorded and subsequently transcribed by a professional transcriptor. Individuals were recruited from different sources and organizations to widen the pool of participants. Recruitment posters were submitted to various institutions, and contacts were established with the human resources departments of organizations from various activity sectors as well as provincial associations working in mental health. Inclusion criteria for participating in the study were to speak French or English, and to have taken a depression-related sick-leave from work in the last 5 years (i.e. having received a medical diagnosis of major depression).

Analysis

The qualitative analysis followed an iterative process (Gallagher, 2014). Emerging themes and categorical codes were identified in the context of exploring facilitating and hindering RTW factors perceived by people with depression. The verbatim transcripts were coded using QDA-Miner software (https://provalisresearch.com/). A book of codes was first created based on the main facilitating and hindering RTW factors identified in the literature presented in the introduction. Two raters (M.C. & E.S.), coded the first three interviews, with the first version of the book of codes and identified emerging codes. Then, raters independently categorized the verbatim transcripts of eight interviews and compared their codes. The inter-rater agreement was 80%, with discussions leading to consensus and 100% agreement on the final coding. Discrepancies were rare and linked to coding omissions rather than different codes. Given the high inter-rater agreement, the subsequent coding of verbatim transcripts was completed by a single rater. When necessary, two raters met to discuss a section of a verbatim transcript. Verbatim transcripts were analyzed in French, but are reported here in English. Finally, based on a descriptive and interpretative approach (Gallagher, 2014), frequencies were calculated for each component, particularly the perceived facilitating and hindering factors of RTW, to learn about their relevance for participants in this study.

Results

During the five years preceding the time of the interview, all 24 participants (French Canadians) had been on sick leave due to depression while still being employed. Only 19 (79.2%) returned to work for the same employer after their sick leave. We analyzed the verbatim only of the participants who returned to work for their employers to help limit the factors related to RTW stage. When asked the question: Does your depression relate to: a) your personal life? b) your work? c) your work and personal life (i.e., a combination of both elements), 6 of the 19 (31.6%) participants reported that their depression was entirely related to their work and 13 (68.4%) stated that it was linked to both their work and personal life (see Table 1). Two thirds of the 19-participants were women (*n*=13) and almost three quarters of them held a university degree (*n*=14). About half of the participants were 31 to 45 years of age (*n*=9), married or common-law spouses (*n*=9), lived in a large urban center (*n*=10), and more than three-quarters worked in the public sector (*n*=15). The participants' profiles are presented in Table 1. Most participants (*n*=15) had been on a sick leave between three months and less than one year before returning to their employer (Table 1). Absences that were shorter or longer were marginal. During the three months after RTW, 14 individuals continued to work for the same employer and five left their organization (Table 1).

In the following paragraphs, we describe the emerging themes regarding the facilitating and hindering RTW factors (1) the decision about the timing of RTW, and (2) the progressive return-to-work and the implementation of RTW accommodations, and (3) attitudes and behaviors of colleagues and immediate supervisors.

1. Decision about return-to-work timing

In most cases (*n*=12), the time to RTW was decided through a common agreement between the individual with depression and the health professional. This type of common agreement could be illustrated by the following verbatim: "I was able to do what…the majority of things could be done at home, but the idea of returning to work was troubling me. So, after talking about it with my general physician, we decided to extend" (Participant #10).

The situation of other participants was different. Three of them returned to work at their general physician's insistence, despite their own hesitations or doubts regarding their ability to go back to work: "I saw him again, and then, I told him, I don't feel ready, etc. And then, he challenged me a little. Which was a good thing" (Participant #13).

Two people returned to work against their general physician's advice. Following their return, these participants did not remain employed for more than three months.

> The doctor said, well, you can try to go back, but it is clear that you shouldn't return. […] he told me, well, I can give you a note, saying that, we will try a return of 1 day, 2 days, so that you can prove to yourself, that in fact, that… it won't work […] And, indeed, it didn't… it didn't work out. (Participant #11)

Five participants temporarily returned to work for their employer for a period of three months or less (see Table 1). In evaluating how the decision regarding the time to RTW was made, we observe the following (four participants out of five, Table 1): Participants #7 and #14 were forced to return to work at the insistence of the employer's physician, despite the fact that they did not feel ready to go back. Participant #11 insisted on returning to work, against her physician's recommendation. As for participant #17, she decided to return to work after only three weeks of sick leave (without progressive RTW implemented), despite initially being allowed 2 months, after which a re-evaluation of her condition was to be scheduled.

In these cases, a non-consensual decision between employees on sick leave and their health professionals regarding the time of RTW resulted in relapses (from 1 to 3 months later). Furthermore, we investigated if other reasons could explain relapses by comparing this group of participants to others (n=14). The only difference we found between the groups staying at work >3 months vs. ≤ 3 months was the absence of progressive RTW (7% vs. 20%, Table 1). To summarize, the absence of consensus between the employee on sick leave and health professionals regarding the right time to return to work, as well as the absence of progressive RTW, appear to partly explain these participants' relapses.

Table 1. Participants' profiles (n=19)

Participant #	Gender	Age	Employment sector	Years in the organization	Length of absence from the organization (months)	Reasons associated with the depression	Progressive return to work	Duration of the progressive return to work	Quit their employer after returning to work
1	M	51-55	Public	27	12	Work related	Yes	> 6months*	No
2	M	46-50	Public	13	9	Personal life and work related	Yes	< 1month	No
3	M	46-50	Public	10	8	Personal life and work related	Yes	> 3months <6months	No
4	M	26-30	Public	1	4	Personal life and work related	Yes	> 1month <3months	Yes
5	F	36-40	Public	7	8	Personal life and work related	Yes	> 1month <3months	No
6	F	36-40	Public	9	7	Personal life and work related	Yes	< 1month	No
7	F	31-35	Public	4	3	Work related	Yes	< 1month	Yes
8	F	26-30	Public	11	4	Personal life and work related	No	N/A	No
9	F	46-50	Public	8	4	Work related	Yes	> 1month <3months	No
10	F	31-35	Public	1,5	3	Personal life and work related	Yes	in process	No
11	F	31-35	Public	15	2	Work related	Yes	missing	Yes
12	F	26-30	Private	4	11	Personal life and work related	Yes	> 1month <3months	No
13	M	31-35	Private	8	3	Personal life and work related	Yes	> 1month <3months	No
14	F	46-50	Public	13	2,5	Work related	Yes	> 1month <3months	Yes
15	F	26-30	Private	5	6	Personal life and work related	Yes	> 1month <3months	No
16	F	26-30	Private	6	3	Personal life and work related	Yes	> 1month <3months	No
17	F	41-45	Public	8	1	Personal life and work related	No	N/A	Yes
18	F	41-45	Public	10	6	Personal life and work related	Yes	< 1month	No
19	M	41-45	Public	18	5	Work related	Yes	> 6months*	No

*The duration of the progressive return-to-work is longer than 6 months since several relapses occurred for these participants

2. Progressive return to work and the implementation of return-to-work accommodations

Progressive return to work

Almost all the participants (n=17) had progressively returned to work and within three months 12 out of 17 were back to a regular schedule. More than half of the participants (n=11) returned to their jobs with the same work conditions as before their sick leave (apart from the progressive return, when present). Among participants who reported that changes had been implemented, accommodations were offered or discussed for only a few of them. Discussions on this theme were between the employer and/or the physician: "She [the psychiatrist] elaborated for me a program for returning to work […] task adjustments. No personnel supervision. Day work only. Change of division" (Participant #1).

Some study participants benefited from accommodations that were put in place on their employers' or colleagues' initiatives. However, the accommodations had not been previously discussed with the returning employee. In other cases, it was the employees themselves who defined the conditions that they believed would facilitate their RTW and who requested specific accommodations to their immediate supervisor.

Implementation of work accommodations

Facilitating factors of the accommodations related to functions and tasks (Table 2) included progressive reintegration of tasks (and sometimes a decrease in the duties assigned), as well as progressively returning to the previous work schedule. The authors analyzed both factors together in this article because even though the majority of participants (17/19) benefited from a progressive return, only one third of the sample also had the opportunity to have their work reorganized.

> Its certain that in the beginning, they didn't give me a pile of files, which I would characterize as complex, you know. […] They gave me more simple files. At the beginning, I was told, even during the first week, that I would just enter data. (Participant #8)

The participants' comments revealed that progressive returns can indeed facilitate RTW, but not without pitfalls. Without task reorganization, a progressive return may not be sufficient to ensure a successful RTW. Participants mentioned additional factors linked to tasks and functions that promoted their RTW. Three participants found it helpful that their replacements remained in their positions for a short time, even after their return to work: "The files transfer, it took place over several weeks because the person who was transferring me the files, he was not expected somewhere else. In another location. So, the fact that my colleague, he took the time" (Participant #6).

Table 2. Factors promoting return-to-work

Category and factor	n
Accommodations relative to tasks/functions	8[a]
Progressive return of tasks / lightening of tasks	5[b]
The person who replaced the absent employee stays for a little while	3
Flexibility and latitude in the choice of new tasks or functions	2
Specific restrictions to the work tasks	2
Availability of training/updates covering changes that happened during the leave	1
Changing department/function	1
Reduction of travel	1
Postponing deadlines	1
Being accompanied during tasks	1
Teaming up with a colleague	1
Accommodations relative to schedule	7
Progressive return	6
Elimination of overtime	3
Flexibility of the progressive return – permission to reduce the number of work days, to expand the progressive return period	1
Flexibility of schedule	1
Attitudes and behaviors of the immediate supervisor	7
Support and comprehension	4
Openness toward accommodations, and endorses them	2
At the time of the return-to-work, meeting with the employer/immediate supervisor	2
Follow-up/ feedback	1
Helps the employee to set his/her limits, filters the demands placed on the employee	1
Acts like a mentor, a protector	1
Has experience with mental health issues	1
Attitudes and behaviors of colleagues	6
Support from the team / colleagues	3
Small encouragements, encouraging team	3
Other factors promoting return-to-work	7
Follow-up with health professional	4
Medication	2
Other helpful factors	3

a: Number of participants who mentioned at least one factor in the category
b: Number of participants who mentioned the factor

The following factors were also reported by participants as facilitating RTW: (1) having a flexible choice in terms of tasks, (2) having specific restrictions respected (e.g., no night shifts), (3) changing departments, (4) less travelling, (5) postponing deadlines, and (6) being paired with a colleague who could help when needed. When employees with depression returned to work, they mentioned experiencing a heightened response to stress as well as residual symptoms (such as fatigue) or functional limitations linked to concentration problems. Consequently, the implementation of specific work adjustments was perceived as facilitating RTW.

Finally, some participants noted the following facilitating factors promoting RTW related to the work schedule (besides progressive returns, which have already been discussed): no overtime, the flexibility of their progressive return (i.e., the possibility of returning to fewer working days), and the flexibility of their schedule.

With respect to factors hindering return-to-work, during the interviews, almost all the participants (17) spontaneously reported that they had faced one or several factors they judged as difficult during their return, often opposed to the definition of work accommodations. Those factors hindered their RTW at different degrees (see Table 3).

Table 3. Factors hindering return-to-work

Category and factor	n
Factors related to tasks/functions	8[a]
Work overload	4[b]
Lightened schedule, but unchanged workload	3
No training about changes that took place during the leave	2
The individual takes the same files, without progression/replacement during his/her absence	2
Unwanted new functions	1
Organizational factors	7
New work team / new direction at the time of the return	5
Unhealthy climate	4
Insufficient work equipment	1
Incoherent organizational restructuration	1
Factors related to the reaction of the work environment to the individual's return	7
The individual is perceived as weak, needing protection / infantilization	2
The individual is perceived as incompetent, no longer able to do his/her work, less credible	2
Prejudices	2
Indifference, ignorance	1
The team interprets the individual's behaviors as a function of his/her sickness/medication	1
People are uncomfortable with the individual, avoidance	1
The individual is perceived as repetitively depressive	1
Denial of what the individual has experienced	1
High expectations from the work team	1
Colleagues expecting that the individual still work overtime	1
Colleagues did not know about the individual's return	1
Immediate supervisor or human resources do not know how to reintegrate the individual	1
Official announcement during a meeting of the individual's return, in the presence of the individual	1
The individual's limits (fatigue, lack of concentration)	5
Factors related to the attitudes and behaviors of the immediate supervisor or another contact person	4
Conflicts, difficult communication with the immediate supervisor	2
Lack of contact with the board of directors during the absence	1
Lack of follow-up from the immediate supervisor	1
Factors related to the work schedule	2
No possibility to return to a smaller number of working days	1
Work full days	1
Full-time return (no progressive return)	1
Others	4
Conflicts with colleague(s)	2
Leaves of absence that are too short	1
Others	1

a: Number of participants who mentioned at least one factor in the category
b: Number of participants who mentioned the factor

Impeding factors related to tasks and functions were also included (table 3): work overload, having a lighter schedule (progressive return) and yet keeping the same amount of work, and a lack of training addressing changes that occurred during the employee's sick leave, as mentioned here: "And there was a big work overload. I talked about it to my supervisors, but nothing changed" (Participant #5).

Organizational factors could also create difficulties during RTW. Some participants noted: a new work team, a new management team, as well as an unhealthy work environment.

> I thought that it was bad when I left. I come back, and it's very bad. Very bad. […] The board of directors knew about it and, the recommendations were that they were hiring an external firm to come…to diagnose the organization, which was sick. (Participant #2).

3. Attitudes and behaviors of immediate supervisors and colleagues

Immediate supervisors

Immediate supervisors can play an important role in facilitating RTW. Some participants reported the following factors to be helpful: the follow-up made by the immediate supervisor, and the immediate supervisor's support, comprehension, and open-mindedness regarding work accommodations.

> I was well-known from the direction, they knew that I had been on a sick leave for that, and they told me look, you come and talk to us and there is no problem, and… you know, they don't put too much on your shoulders. (Participant #5)
>
> or
>
> At some point, I was realizing that, you know, at the computer, I was not as good. The new systems were installed, the fact that I needed… a little help, and… thanks to the commander, he paired me with an agent who… […] who helped me a lot… (Participant #1)

More specifically, some participants also mentioned that their immediate supervisor helped them set their limits: "Each week, he was asking for an update, knowing how it was going. And at some point, he told me OK, now, you'll need to calm down, you shouldn't do too much" (Participant #4).

Two participants reported having a preliminary meeting with their employer or immediate supervisor before their return. In both cases, this meeting was perceived as a facilitating element that promoted RTW in many ways. One of these meetings was informal and took place in a restaurant two weeks before RTW. The returning employee and the employer/supervisor mainly discussed work, changes that occurred since the employee's leave and news about colleagues. The other meeting reported in the interviews was formal and included the returning employee, the employer, the immediate supervisor, and a representative of the insurance company. The meeting aimed to: clarify the RTW process for all parties, describe the employee's current abilities to the employer, and discuss which tasks and schedule would take place during the progressive return.

> The insurance woman, in some way, she really wanted to know which tasks I had to do so that she could ensure me that it was not too much for me… And you know, each time that… let's say, that a controller or my boss was saying something, she would always confirm with me that it was okay. (Participant #15)

To a lesser extent, some participants also recounted hindering factors related to their immediate supervisors' attitudes and behaviors (*n*=4, table 3): "the clinical coordinator was not meeting with me, she was not supervising me to see how I was doing" (Participant #2).

Colleagues

Some participants mentioned that the support and encouragement received from their colleagues upon their return facilitated the process.

> The smiles, the… people were telling me "oh, you look well". It's… "you look radiant, you seem confident". It's all those small things, and those who talk less, I knew they talked less, but just a smile, they were happy to see me. (Participant #14)

A number of participants pointed out that they received negative reactions from people in their work environment during their return (table 3). For example, some were perceived as weak or needing protection, considered less competent or less credible, and faced prejudice: "He's not able to do the job, it was always coming back to this" (Participant #3) or negative comments like "Hey you have a good doctor, you, to get six months… So, it was almost like they were asking for my doctor's number and address, you know,- to go get a vacation too" (Participant #19).

Discussion

In this study, we investigated the facilitating and impeding factors of RTW from the perspective of individuals experiencing depression, considering two phases of RTW i.e. the decision to return to work, and the RTW stage. Below, we detail the three principal emerging themes resulting from this study: (1) the decision-making process about RTW, (2) the progressive return-to-work and the implementation of work accommodations, and (3) the attitudes and behaviors of the immediate supervisor and colleagues as facilitators or barriers in the RTW process.

The decision-making process about RTW

The results of this study suggest that a key element influencing the RTW process is when the decision about the timing of returning to work is made from a common agreement between the health professional and the absent employee. More precisely, when a health professional and the absent employee do not agree on the work return date, RTW results in poorer job tenure. We hypothesise that participants did not identify the disagreement related to RTW as an obstacle, because they had not projected themselves that far ahead (i.e. weeks after returning to work). These results underline the importance of shared decision-making, not only for returning to work, but also for maintaining employment. Shared decision-making is defined as a process involving the individual and one or more stakeholders. It includes the sharing of information, preferences and values, which facilitates the establishment of common objectives and action plans that will eventually be re-evaluated and readjusted during the RTW process (Coutu et al., 2015; Stacey et al., 2016). However, many professionals believe that they are using shared decision-making when, in fact, the decisions are most often one-sided (Coutu et al., 2015; King, Taylor, Williams, & Vanson, 2013). Our results show that negative outcomes followed situations where the health professionals and the employee on sick leave (i.e. participants in this study) did not take time to systematically evaluate multiple options to decide on the best time to consider returning to work that would ensure job tenure. This shared decisional power between physicians and their patients has been reported to positively impact patient treatment adherence, knowledge and well-being (Légaré et al., 2014). These results highlight a crucial decision point in RTW and possible recovery of the absent employee, namely the appropriate and agreed upon RTW timing.

The progressive return-to-work and the implementation of work accommodations

First, it is worth noting that for most participants (*n*=12), there were no established organizational policies related to the RTW plan nor discussions on work accommodations (Durand et al., 2014; St-Arnaud et al., 2014). Nevertheless, ten study participants perceived the implementation of work accommodations as facilitating their RTW, especially the progressive returns accompanied by task reorganization. A progressive RTW not accompanied by task reorganization could increase the stress of employees who are asked to do the same amount of work in less time while still being in a vulnerable state. These results are related to two important concepts: therapeutic RTW and *margin of manoeuver*. Therapeutic RTW postulates that work schedules, task volume and content, should be reviewed in order to avoid compromising RTW. Durand, Vézina, Baril, Richard, and Ngomo (2008) have defined *margin of manoeuver* as the level of liberty granted to employees to organize their work in order to meet their productivity objectives without adverse effects on their health.

In this study, implemented work accommodations emerged as an essential factor to facilitate RTW of employees on sick leave due to depression. Even though some studies have suggested that work accommodations and natural supports (e.g., gradual introduction of tasks, support from colleagues) facilitate RTW (for a review see Corbière, Villotti, Lecomte et al., 2014), to the best of our knowledge, only a few have explored the effects of different types of work accommodations on RTW. One study by Bolo et al. (2013) proposed that work accommodations granted to employees struggling with a common mental disorder (such as depression) reduced the risks of having the same illness one year later. Such accommodations are generally inexpensive to put in place, and consequently, why these are rarely implemented should be studied (MacDonald-Wilson, Rogers, Massaro, Lyass, & Crean, 2002). In our study, work accommodations that are available and recognized as helpful cover a wide array such as flexibility of tasks and schedule, less travelling, and being paired with a colleague, to name a few. In order to be implemented in the workplace, work accommodations have to be discussed with the immediate supervisor. Interestingly, in Negrini et al.'s study (2018), the most significant predictor of RTW of employees with depression is the supervisor's intention to take measures to facilitate their RTW, above and beyond employee-related (e.g., age, previous absences), organisational (e.g., size, sector), immediate supervisor-related (e.g., gender, level of education), and relational factors (e.g., quality of the relation between supervisor and employee, contact during the sick leave). The role of this key actor is consequently important for the return to work and implementation of work accommodations. In fact, in Negrini et al' study (2018), the work accommodations most often implemented in the workplace were linked to the immediate supervisors behaviors and attitudes: offer time to assist/orient the employee, provide rewards, recognition, and emotional support to the employee (i.e. sustain cohesion, be empathic, respond to the employee's needs, and highlight his or her strengths). In other words, attitudes and behaviors from immediate supervisors can facilitate the implementation of work accommodations and natural supports for employees returning to work after a sick leave due to depression, hence the importance to offer support and training for immediate supervisors.

Attitudes and behaviors of immediate supervisors and colleagues in the RTW process

The results of this study suggest that the attitudes and behaviors of the immediate supervisor, such as providing support, showing understanding and openness toward accommodations and planning one or more meetings during RTW, generally have a positive effect on the RTW process. These results have been corroborated by several studies (Blank et al., 2008; Dewa, 2014; Durand et al., 2014; Negrini et al., 2018). Two systematic reviews on the attitudes and behaviors of immediate supervisors and the RTW process of employees experiencing a mental illness (Cornelius et al., 2011; Lagerveld et al., 2010) stress that the scientific evidence is still limited, particularly regarding how good communication (e.g., between immediate supervisors and returning employees experiencing mental illness) can accelerate the RTW process.

In the same vein, attitudes and behaviors from colleagues, such as support and some attention paid to the returning employee, were also mentioned in this study as affecting RTW. These results have been corroborated by other studies (Lysaght & Larmour-Trode, 2008; Plaisier et al., 2012). Our results also support results from other studies stating that colleagues' reactions can be perceived as barriers to the RTW process (Dewa, 2014; Corbière et al. 2014). More specifically, RTW can be hampered when colleagues perceive the returning employees as weak, less credible, needing protection, incompetent or unable to complete their tasks. According to MacEachen, Clarke, Franche, and Irvin (2006)' study, returning employees perceive themselves as socially diminished and feel the need to justify their health condition to their colleagues, employers, and friends. The authors also reported that several employees felt observed and sensed that the validity of their health condition and their right to receive accommodations was being questioned. According to Corbière et al. (2015), returning employees, colleagues, union representatives, and employers, all display discomfort and prejudices toward depression. This uneasiness creates an additional source of stress for returning employees as it can modify the nature and amount of support that they receive (Corbière et al., 2015).

Limitations

This study has limitations: First, all the participants in the study perceived that the cause of their depression was either partially or completely related to work – no participant mentioned personal or social reasons for their depression (i.e. outside from the workplace). As such, our study's results might be biased and more focused on the workplace than if the depression had other causes. Second, we do not have information regarding the depression relapses of employees in our study. Multiple sick-leaves due to depression could influence the RTW process (Nielsen et al., 2011). Third, this study could present with a recall bias since the depression could have occurred up to five years ago, for some participants. Fourth, of the four participants who disagreed with their physician about the timing of their RTW, two were evaluated by physicians hired by their employer instead of their own physician. Factors relating to the quality of the therapeutic alliance (or other types of alliances such as conflicts of interest) could explain this disagreement, but were not assessed in this study.

Notwithstanding the study's limitations mentioned above, our results corroborate with the recent literature in the field of work disability. Indeed, Cullen et al. (2017) mentioned in their recent review of effectiveness of workplace interventions in RTW for diverse populations, including common mental disorders, the following domains as essential: the coordination between stakeholders, work accommodations, the inclusion of CBT interventions, and a combination of the above three domains. Moreover, Gragnano et al. (2017) recently conducted a Review of Reviews on factors predicting RTW, across multiple disorders and again stressed the role of supervisor and co-worker support.

Clinical implications

Even though this study was conducted a few years ago, the results reflect the current reality pertaining to the return to work of people with common mental disorders such as depression. Rehabilitation professionals' interventions should not only target the employee on sick leave but also the immediate supervisor. For instance, immediate supervisors could receive information on existing policies, benefits of work accommodations and cognitive-behavioral concepts and techniques considered useful for people with depression returning to work (Lecomte & Corbière, 2017). Training targeting specific skills necessary for supervising employees in the context of RTW following depression could also be offered. According to Johnston et al. (2015), such skills include the capacity to manage the duration of work absences, appropriately react to the returning employee's anxiety and other symptoms, manage confidentiality issues, maintain a good work relationship during and after a mental illness episode, and implement preventive measures in the context of a RTW plan. Rehabilitation counselors could, in parallel, develop alliances with other stakeholders from the organisation (e.g., HR, unions) in order to implement collaborative teamwork to develop a work accommodation plan that is feasible and relevant for the supervisor, employee and colleagues.

Conclusion

This study investigated the perspectives of employees' RTW following depression regarding the hindering and facilitating key factors they identified in relation to various stakeholders. By questioning individuals who took a sick leave due to depression, we found that decisions about the return date, implementation of work accommodations, as well as attitudes and behaviors of the immediate supervisor and colleagues were key factors of the RTW process. Future research should explore in more detail the factors influencing the physician's decision-making process related to the RTW of individuals diagnosed with a common mental disorder, such as depression. In addition, the factors influencing the immediate supervisor's decisions to grant or deny work accommodations to returning employees experiencing depression must be investigated. Novel interventions should be offered to supervisors in order to improve the success of RTW, namely by increasing their knowledge and understanding of policies, accommodations and mental health-related issues of the employee.

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Attitudes and Reflections of Vietnamese Managers Toward Their Employees with Disabilities

Pei-Ju Chao
Duy Tan University

Tsu-Hsuan Hsu
Duy Tan University

Ying-Ting Huang
Duy Tan University

Joseph N. Ososkie
University of Northern Colorado

Juliet H. Fried
University of Northern Colorado

Vietnam is in the emerging stage of supporting people with disabilities in terms of employment rights and job opportunities. Limited research has been conducted regarding job performance and employability since people with disabilities were transitioned to competitive workplace settings. The objective of this study was to examine attitudes and reflections of Vietnamese managers toward their employees with disabilities and to determine their awareness of disability-related regulations that may impact their future hiring practices of individuals with disabilities. Results indicate Vietnamese managers had slightly positive to positive reflections toward their employees with disabilities. However, the findings also indicate the majority of the participants in the present study were not aware of laws and regulations mandated to support people with disabilities in relation to employment opportunities and challenges.

Key words: attitudes, employees with disabilities, United States Agency for International Development, Vietnam

Vietnam, located on the Indochina Peninsula in Southeast Asia, had a population of 91.71 million people in 2015 (General Statistics Office of Vietnam, 2016). Disability rates among Vietnamese were inconclusive and contradictory until the National Coordinating Council on Disability (NCCD; 2010) published its first annual report. According to the NCCD 2010 report, the percentage of Vietnamese people with disabilities aged five or older was about 7.8% of its total population, which was equivalent to 6.7 million people. The report revealed various congenital and acquired disabilities among the people of Vietnam and specified causes of disabilities to include environmental pollution, war diseases and illnesses, and traffic and labor accidents due to industrialization and urbanization. The Law on Persons with Disabilities of 2010 separated disability into categories. Forms of disability include physical, sensory, visual, mental and psychiatric, and intellectual. Degrees of disability included exceptionally serious, serious, and mild (Ministry of Justice, 2017, General Provisions, para. 3).

Tsu-Hsuan Hsu Ph.D., International School, Duy Tan University, 254 Nguyen Van Linh, Danang, Vietnam.

Email: hsu.tsuhsuan@duytan.edu.vn

The concepts of disability in Vietnam may be classified in various ways. For example, Hunt (2005) mentioned that, "Vietnamese ascribed disability to a more traditional belief that it is punishment for sins committed by one's ancestors [while] the modern perspective on disability attributes almost all forms of disabilities to injuries from the war" (p. 214). The traditional viewpoint toward people with disabilities held by Vietnamese is very similar to Asian countries such as China, Taiwan and Korea. For instance, Taiwanese people within a Chinese-influenced culture believe in reincarnation and consider people with disabilities to have done something bad that caused them to incur their disabilities (Chang & McConkey, 2008; Huang, Ososkie, & Hsu, 2011). Similarly Kim-Rupnow (2005) stated that "some Koreans believe disability can be caused by supernatural agents, such as punishment from God or the curse of the devil for their sins, or those of their parents, or even their ancestors" (p. 119).

"Being disabled is not being unable" is a popular slogan in Vietnam that indicates people with disabilities should work and earn a living (Hayden, Tran, Nguyen, Tran, & Chang, 2015). However, reliable data on the employment rates for Vietnamese with disabilities is scarce. For example, the United Nations (2016) reported that the employment rate of Vietnamese people with disabilities was not available, and the unemployment rate for the entire country was about 9%. Obtaining accurate information about the employment rate of Vietnamese people with disabilities is difficult at best.

With supports from the U.S. Agency for International Development (USAID; 2016), relevant organizations have constantly collaborated with central and provincial governments to provide vocational training and employment placements for people with disabilities. For example, the Catholic Relief Services (CRS), an official agency from the U.S. Catholic community, implemented the Inclusion of Vietnamese with Disabilities project that was supported by the USAID and included private funds from 2006 to 2014. In its first phase of service between 2005 and 2010, the CRS collaborated with different provincial governments to provide on-the-job vocational and information technology training curricula for Vietnamese with disabilities who were 16 to 30 years of age (Nguyet & Ha, 2009). Assisting children with disabilities in gaining access to education and health care was a consistent goal during this 10-year long project as well (Catholic Relief Services-Vietnam, 2017).

The Vietnamese Assistance for the Handicapped (VANH; 2017) was founded in 1991 and is regarded as one of the earliest organizations supporting people with disabilities. From 2006 to 2014, the VANH also implemented a similar project supported by the USAID that focused on developing and promoting disability relevant programs including vocational rehabilitation services and employment placements. Furthermore, coordinated by the VANH and Vietnam Chamber of Commerce and Industry (VCCI), the Blue Ribbon Employer Council (BREC) was founded in 2007 with funding support from the USAID. Through help from national and international employers who preferred to promote employment opportunities for people with disabilities, the BREC grew from 25 members to over 195 employers in 2013 (VANH, 2017). All of the above examples illustrate that Vietnam has slowly but gradually improved its employment programs for people with disabilities through assistance from international and national organizations.

U.S. Agency for International Development--Vietnam

The USAID was created after the passage of the Foreign Assistance Act of 1961. The passage of the Foreign Assistance Act formed the USAID as a single agency responsible for administrating various supports to foreign countries particularly in terms of economic and social needs. Its Vietnam program began in 1989 when it started supporting Vietnamese with disabilities regardless of cause through two funds: the Patrick Leahy War Victim Fund and the Displaced Children and Orphans Fund (USAID, 2016).

While the USAID had collaborated on different projects with the government of Vietnam (GVN) and related organizations, providing proper assistance to improve the lives of people with disabilities was one of its major missions. For example, the Inclusion of Vietnamese with Disabilities program, funded by the USAID and implemented by the VANH, was one of those projects (USAID, 2017). Other prominent programs included establishing a Disability Information System (DIS) for facilitating case management, developing inclusive education programs with the Vietnamese Ministry of Education and Training, creating parent associations of children with disabilities, and partnering with colleges and universities to build and provide vocational training curricula for Vietnamese with disabilities (USAID, 2016). All of these programs indicated that USAID--Vietnam cooperated closely with the GVN and local nonprofit organizations to address the particular needs of people with disabilities.

Social Protection for Vietnamese People with Disabilities

The most comprehensive legislation for supporting Vietnamese with disabilities was the Law on Persons with Disabilities, which was amended with the Ordinance on Disabled Persons and promulgated in 2010. This legislation regulated several significant issues in supporting Vietnamese with disabilities in the areas of education rights, accessibility to public areas, social participation, healthcare services, vocational training programs, legal assistance, etc. The Law on Persons with Disabilities of 2010 defines a person with a disability in Article 2 as follows: "A person who is impaired in one or more body parts or suffers functional decline manifested in the form of disability which causes difficulties to his/her work, daily life and study" (Ministry of Justice, 2017, General Provisions, para. 2).

The USAID has a significant role in providing financial and technical supports for the GVN in drafting and enacting disability-related regulations. Hayden et al. (2015) indicated that the efforts made by the USAID resulted "in the passage of 24 legal documents, including the Law on People with Disabilities, and various implementing decrees and circulars in health care, education, vocational [and relevant] employment and social inclusion sectors in support of persons with disabilities" (p. 21). Those legal and policy provisions related to disability issues included Education Law 2005, Vocational Training Law 2006, Revision of Vocational Law to include Persons with Disabilities 2007, and Decree on Administrative Fines for Violations of the Law on People with Disabilities 2013 (Hayden et al., 2015).

Barriers to the Employment of Persons with Disabilities

Negative attitudes by employers against people with disabilities are major obstacles that interfere with the employment outcomes of people with disabilities (Diksa & Rogers, 1996; United Nations, 2016). Employers' concerns include insurance claims, casualties, and limited job skills (Kaye, Jans, & Jones, 2011; Lengnick-Hall, 2007). Other concerns from managers due to their persistent prejudices include increased supervisory time and cost of disability-related accommodations, decreased productivity, and worry about providing long-term supports (Hernandez, McDonald, Divilbiss, Horin, Velcoff, & Donoso, 2008).

Some researchers found attitudes toward people with disabilities could be changed due to various contact experiences (Huang, Hsu, Chen, Fried, Ososkie, & Bezyak, 2014). For example, Hsu and colleagues (2015) found duration of work contact changed attitudes toward workers with disabilities in a positive direction held by workers without disabilities. Other researchers found that attitudes toward people with disabilities could change due to previous contact experiences (Perry, Ivy, Conner, & Shelar, 2008). Educational attainment was regarded to have influenced people's attitudes toward individuals with disabilities. Some researchers indicated people with higher educational degrees seemed to have more positive attitudes toward persons with disabilities due to the possibility of being more open-minded and knowledgeable about disability issues (Lau & Cheung, 1999; Scior, Kan, McLoughlin, & Sheridan, 2010).

However, the findings of other studies illustrated that it was difficult to assume the influences of demographic variables on people's attitudes toward individuals with disabilities. For example, Popovich, Scherbaum, Scherbaum, and Polinko (2003) found gender could have an impact on attitudes toward people with disabilities, whereas Chenoweth, Pryor, Jeon, and Hall-Pullin (2004) reported gender had no significant influence on the same issue. Similarly, some researchers found younger people had positive attitudes toward people with disabilities (Yazbeck, McVilly, & Parmenter, 2004) and older people had negative attitudes toward people with disabilities due to their limited education and their limited level of disability awareness (Dorji & Solomon, 2009); while other researchers indicated age was not at all a factor influencing people's attitudes toward people with disabilities (Al-Abdulwahab & Al-Gain, 2003; Perry et al., 2008). Research findings are inconsistent in determining the impact of demographic factors on attitudes toward people with disabilities.

Purpose of Study

Although people with disabilities in Vietnam have been provided job opportunities gradually, very few studies have been conducted to explore their job performance and challenges they might encounter in the workplace. To obtain a better understanding of those issues, three research questions were addressed in the present study: (1) What are the employability attitudes and concerns of Vietnamese managers toward their employees with disabilities? (2) To what extent are gender, age, educational attainment, type of contact, years of work experience, and position associated with employability attitudes of Vietnamese managers toward their workers with disabilities? and (3) What are the future hiring practice tendencies and knowledge of disability laws and regulations of Vietnamese managers regarding people with disabilities based upon their current employment experiences? Results will allow researchers to explore whether the job skills of employees with disabilities properly meet market demands, whether it is necessary to promote disability awareness in the workplace, and whether there is a need to provide particular trainings to meet the needs of employees with disabilities in the workplace.

Method

Participants

Three criteria for eligibility of research participants were developed to guide this study. First, participants must not identify as having a disability when the study was conducted. Self-identification and screening conducted by companies were two methods to ensure participants meet this criterion. Second, participants must be native Vietnamese. Third, participants must be employers, managers, supervisors, human resource personnel, and have relevant positions that allow them to hire or supervise workers with disabilities (Copeland, Chan, Bezyak, & Fraser, 2009; Millington, Miller, Asner-Self, & Linkowski, 2003; Paez & Arendt, 2014). According to Robbins and Coulter (2016), "managers can be classified as first-line, middle, or top" based on their job responsibilities and roles within organizations (p. 37). As a result, managers are defined into three categories in this study: supervisor (known as first-line mangers, manager (known as middle managers), and owners (known as top managers).

Before collecting data, demographic information divided research participants into three roles as owner, manager, and supervisor. This is known as quota sampling which is "to identify relevant categories among the population [that researchers] are sampling to capture diversity among units" (Neuman, 2014, p. 249). This allowed researchers to obtain the required numbers of participants needed in three categories at the beginning of the study. Participants were asked to pick only one of the listed positions that can be used to describe their primary role and responsibility.

For recruitment purposes, the researchers contacted USAID and VANH to obtain the list of Blue Ribbon Employer Council members. The members of BREC were considered the strongest supporters who were willing to hire people with disabilities in Vietnam. A list of BREC memberships was provided by the USAID and VANH after requests were made. The purpose of the study was clearly described in a letter and provided to persons contacted through e-mails or in-person visits. Finally, the sample recruited for data analysis in this study included 132 Vietnamese managers in 30 companies, which exceeded the minimum required sample size of 90 based on G Power estimates.

The work settings of participants included factories, schools, distribution logistics companies, travel agencies, wholesale and retail facilities, health care services, beauty salons, and financial institutions. Among the 132 participants, seven were removed due to self-disclosure as a person with a disability or having three or more items missing from their survey and/or demographic sheet.

The ages of participants in the study ranged from 24 to 52 years with a mean age of 35.3 years. According to the International Monetary Fund (2017), "Vietnam has a young population (median age of 26) with the largest age cohort between 20 and 34" (p. 9). Thus, the average age of Vietnamese managers in this study paralleled Vietnam's demographics. The final number of participants was 125, resulting in a response rate of 94.5%. Detailed demographic information of participants is summarized in Table 1.

Instruments

Two instruments were used in order to meet the objectives of the study: The Attitudes Toward the Employability of Persons with Severe Handicaps Scale (ATEPSH; Schmelkin & Berkell, 1989) and the Attitudinal Statement about Employees with Disabilities (ASED; Paez & Arendt, 2014). People-first language was utilized in those two measures. For example, the term "people with severe handicaps" was changed to "people with disabilities" in the ATEPSH Vietnamese version. Also, all items of these two Likert's scale instruments were recorded from 1--*Very strongly disagree* to 6--*Very strongly agree* without providing any neutral choices. Equalizing the values of these two scales also allowed the researchers to conduct further comparative analyses

Table 1

Demographic Information of Research Participants

Characteristic	*N*	Percent	Mean	*SD*
Gender				
Male	63	50.4		
Female	62	49.6		
Age			35.73	5.96
Under 29	26	20.8		
30-34	33	26.4		
35-39	33	26.4		
40 and above	33	26.4		
Educational attainment				
High school or less	37	29.6		
Junior or technical college degree	40	32		
Undergraduate degree	46	36.8		
Graduate degree	2	1.6		
Years of work experience			6.08	3.09
Under four years	44	35.2		
Five to nine years	68	54.4		
10 years and above	13	10.4		
Position				
Owner	26	20.8		
Manager	41	32.8		
Supervisor	58	46.4		
Types of employee disabilities				
Intellectual	1	0.8		
Physical	103	82.4		
Visual, hearing and/or speech	21	16.8		
Other Contact Experiences with People with disabilities				
(Multiple Choices if Marks Yes)				
No	4	3.2		
Yes	121	96.8		
I have a family member/relative with a disability	24	19.8		
I have a spouse/partner with a disability	2	1.7		
I have a friend with a disability	55	45.5		
I have a neighbor with a disability	50	41.3		

N=125

Attitudes Toward the Employability of Persons with Severe Handicaps Scale. The ATEPSH is a 32-item instrument with three subscales originally, developed to examine attitudes about employability of people with disabilities held by regular and special education teachers (Schmelkin & Berkell, 1989). Schmelkin and Berkell (1989) used the ATEPSH to explore attitudes of educators toward the possibility of employment of people with disabilities and produced appropriate Cronbach's alpha values on these subscales--.85, .60, and .68, respectively.

Construct validity analyses were conducted by Schmelkin and Berkell (1989) and indicated three factors underlying this instrument: (a) appropriateness of competitive employment for People with disabilities, (b) disadvantages of competitive employment: focus on others, and (c) disadvantages of competitive employment: focus on people with disabilities. Rimmerman (1998) who examined attitudes of Israeli corporate executives toward people with disabilities also verified the factors loaded on those subscales.

Later, it was revised and divided into two subscales after the developers conducted further factor analysis: 11 items of appropriateness of competitive employment (ACE) and 10 items of disadvantages of competitive employment resulted (DCE; Brown, Berkell, & Schmelkin, 1992). The two subscales were negatively correlated to explore issues of whether people with disabilities can be dependable workers in the community (ACE) and whether employers are generally resistant to hiring workers with disabilities (DCE).

This instrument (See Appendix A) was used by researchers to explore attitudes of top business managers and graduate business students with work experiences. For example, Levy, Jessop, Rimmerman, and Levy (1992) used the ATEPSH to study perspectives of Fortune 500 corporate executives on the employability of people with disabilities and found the Cronbach's alpha values for the subscales of ACE and DCE-focus on others were .89 and .74. A study conducted by Rimmerman (1998) examined factors relating to employability of people with disabilities held by Israeli corporate executives. Furthermore, Huang and colleagues (2014) utilized the ATEPSH to examine employability attitudes of Taiwanese graduate business students and produced an acceptable internal consistency reliability value of .76 on the full scale. In this study, internal consistency reliability analysis produced appropriate Cronbach's alpha values of .78 for ACE and .71 for DCE.

Attitudinal Statement about Employees with Disabilities. The ASED (see Appendix B) was developed by Paez and Arendt

(2014) for the purpose of examining managers' attitudes toward their employees with disabilities in the hospitality industry. According to Paze and Arendt (2014), "[a] paper questionnaire was developed and pilot tested with educators and foodservice managers for content and face validity" (p. 178). The ASED included 22 attitudinal statements that could be utilized to explore attitudes toward employees with disabilities held by managerial professionals. Four factors were loaded after conducting factor analysis: 11 statements of teamwork and costs (TC), four statements of job training (JT), four statements of characteristics of employees with disabilities (CHAR), and three statements of social and technical skills of employees with disabilities (STS).

Ten of the ASED statements were adapted and modified from the Employer Attitude Assessment Questionnaire (EAAQ) developed by Chi and Qu who used it to measure employers' attitudes toward workers with disabilities (Chi & Qu, 2003). Chi and Qu further reported the results of their studies yielded acceptable Cronbach alpha reliability values from .64 to .87. Paez and Arendit (2014) utilized the ASED in their study and produced acceptable Cronbach's alpha values for each of the four factors--.92, .73, .74, and .72, respectively. In this study, the researchers produced highly acceptable alphas of .81, .81, .84, and .82 for each of the four factors in order.

Procedure

The researchers used a "double translation" technique (Brislin, Lonner, & Thorndike, 1973; Chen, Brodwin, Cardoso, & Chan, 2002) to have the ATEPSH and ASED proofread and translated by Vietnamese and international professionals who had proper knowledge in English and Vietnamese. The double translation technique required efforts from professionals who are not only bilingual but also possess related knowledge to ensure the meanings of the research instruments could be translated and presented precisely. The final versions of these two instruments were checked by professionals who have their highest degrees in business and vocational rehabilitation.

The researchers contacted BREC members located in Ho Chi Minh City and Da Nang City, the largest cities of the south and central regions in Vietnam, and nearby areas. Participants willing to join the study were provided two surveys and one demographic form. A snowball sampling technique was also implemented to recruit potential participants from BREC acquaintances who were not BREC members but had hired people with disabilities. The researchers collected all documents about three to four weeks later to ensure the participants had enough time to record their attitudes and perceptions toward their employees with disabilities. Data were collected from November 2016 to February 2017.

Statistical Analysis

Three research questions were explored and addressed in this study. To answer the first question, the data were organized and computed by using Microsoft Excel 2016 and Statistical Package for the Social Science (SPSS) 19.0 for Windows. The mean, median, and standard deviation of ATEPSH and ASED were calculated, respectively. The item mean and composite scores for those two instruments were calculated and determined. The Cronbach's alpha values of both surveys and their subscales were also computed and evaluated.

To answer the second research question, demographic information of participants was examined. Because of the small sample size and the younger age of the research participants, demographic factors were sorted into the following categories. First, age was divided into four ranges: 29 and under, 30-34, 35-39, and 40 years and above. Educational attainment was classified as follows: high school or less, junior or technical college, undergraduate and graduate. The position of participants was categorized as owner, manager, and supervisor.

Furthermore, years of work experience was partitioned as three types: four years and under, 5-9 years, and 10 years and above. Finally, other contact experiences with people with disabilities were grouped into three types as follows: having a family member/relative with a disability, a friend with a disability, and a neighbor with a disability. Having a spouse/partner with a disability was deleted due to a very limited sample size ($N = 2$). Pearson correlation and one-way ANOVA were run to determine whether these six demographic factors had associations on ATEPSH and ASED, respectively.

Finally, the third research question addressed in this study explored disability awareness and future hiring practice tendencies of people with disabilities held by participants. A descriptive data analysis was utilized for this inquiry. A chi-square test was also implemented to exam whether demographic factors were associated with participants' awareness of disability-related laws and regulations. Possible explanations of findings were provided and discussed.

Results

Attitudes towards Employees with Disabilities

The higher the score of ACE the more favorable the attitude toward employees with disabilities whereas the lower score of DCE the more favorable the attitude toward employees with disabilities (Brown et al., 1992). As a result, these two subscales of the ATEPSH must be negatively associated. After conducting bivariate correlation analysis, an appropriate negative correlation of -.35 between ACE and DCE was found. Among the 11 items of the ACE, item 2 was rated the highest and then followed by items 1, 12, 19, and 14 in order. As for the DCE subscale, item 20 was rated as the highest and then was followed by items 17, 10, 8, and 13 (see Appendix A). The item mean score of the ACE was 4.45 with a standard deviation of .47. As for the DCE subscales, the item mean was 3.16 with a standard deviation of .42. Overall, results (see Table 2) showed that the participants had slightly positive to positive attitudes and reflections toward their employees with disabilities.

The composite score was also determined for the ASED on all 22 items (see Appendix B). Mean scores for each of the four factors of the ASED were calculated with the following results: 3.60 (team work and cost/TC), 3.36 (job training/JT), 3.90 (characteristics/CHAR), and 4.57 (social and technical skills/STS). The overall mean of the ASED was 3.74, which indicated the research participants had slightly positive attitudes and reflections toward their employees with disabilities. Among the 11 items of the TC, item 2 was rated the highest, which indicated employees with disabilities were comfortable to work with by their counterparts without disabilities as perceived by the participants. As for the CHAR factor, the research participants also had positive reflections about loyalty of their employees with disabilities to their organizations. Finally, results of the STS factor showed providing training in social and technical skills was considered as important to employees with disabilities (see Table 2).

To re-examine the accuracy of results found in the previous analysis, items residing in DCE of the ATEPSH were reverse scored. As a result, these two subscales of the ATEPSH must be positively associated. This allowed the researchers to study and compare the overall scores of ATEPSH and ASED at the same time. The final scores of the ATEPSH and ASED ranged from 21 to 126 and 22 to132. For both instruments, the higher scores meant more positive attitudes and reflections toward employees with disabilities. Finally, the composite mean score of the ATEPSH was 88.01 with a standard deviation of 7.54, whereas the composite mean score of the ASED was 82.33 with a standard deviation of 9.43. Results confirmed that participants held slightly positive to positive attitudes and reflections toward their employees with disabilities.

Demographic Factors on ATEPSH and ASED

A Pearson correlation was implemented to study whether these six demographic factors had associations on ATEPSH. Results showed educational attainment ($r = .19$, $p < .05$) and position of participants ($r = -.30$, $p < .01$) were significantly associated with ATEPSH. To re-examine the accuracy of results reported above, a one-way analysis of variance (ANOVA) was utilized to inspect the relationships of these two demographic factors with ATEPSH. Again, educational attainments ($F(2,122) = 3.25$, $p < .05$) and positions of participants ($F(2,122) = 7.78$, $p < .001$) had significant associations on ATEPSH. Results illustrated participants who held a graduate/undergraduate degree had more positive and favorable attitudes toward their employees with disabilities, followed by participants with a junior or technical college degree. In addition, owners had more favorable and positive attitudes toward their employees with disabilities followed in order by managers and supervisors. The detailed results are presented in Table 3.

Similarly, a Pearson correlation was used to examine the relationships between these six demographic factors and ASED. The outcomes indicated years of work experience ($r = -.21$, $p < .01$) and different contact experiences ($r = -.20$, $p < .01$) were associated with ASED. To re-inspect results found through Pearson correlation, a one-way ANOVA was utilized. Results again indicated that years of work experience ($F(2,122) = 3.49$, $p < .05$) and other contact experience with people with disabilities ($F(2,120) = 4.18$, $p < .05$) were significantly associated with ASED. Results clearly indicated only participants with less than four years of work experience had the most favorable attitudes toward their employees with disabilities. In addition, only participants who had a family member or a relative with a disability had positive reflections toward their employees with disabilities. The detailed results are presented in Table 4.

Awareness of Disability-Related Laws

The third question was to explore disability awareness and future hiring practice tendencies of Vietnamese managers toward people with disabilities. To answer this inquiry, participants were asked to indicate significant pieces of legislation and legal documents targeted for people with disabilities on their demographic sheets if they had heard or had been aware of them. The information presented in Table 5 clearly indicates the majority of participants were not aware of disability-related laws and regulations. The one they were most aware of was the Revised Transportation Law, which is related to standard access to transportation such as buses and trains. On the other hand, only about 20% of participants heard about the Education Law, which was specifically designed for supporting people with disabilities in terms of educational rights. The most comprehensive legislation for supporting individuals with disabilities, the Law on Persons with Disabilities, was unfamiliar to participants.

Table 2

Summary of the Results of the ATEPSH and ASED

	ATEPSH				ASED		
Content	*N*	*Mean*	*SD*	Content	*N*	*Mean*	*SD*
Composite Mean	125	88.01	7.54	Composite Mean	125	82.33	9.43
ACE Mean	125	4.45	.47	TC Mean	125	3.60	.54
DCE Mean	125	3.16	.42	JT Mean	125	3.36	.80
				CHAR Mean	125	3.90	.77
				STS Mean	125	4.57	.60

Note. ACE = Appropriateness of Competitive Employment; DCE = Disadvantages of Competitive Employment; TC = Teamwork and Costs; JT = Job Training; CHAR = Characteristics of Employees with disabilities; STS = Social and Technical Skills of Employees with disabilities.

Table 3

Associations of Educational Attainment and Position on ATEPSH

Variables	Categories	*N*	*Mean*	*SD*	*F*	*p*
Educational Attainments	(1) High school or less	37	86.60	6.71	3.25	.042
	(2) Junior or technical college	40	86.76	6.03		
	(3) Graduate/Undergraduate	48	90.15	8.82		
Position	(1) Owner	26	90.38	6.89	7.78	.001
	(2) Manager	41	90.34	7.61		
	(3) Supervisor	58	85.29	6.94		

$p < .05$

Associations of participants' demographic factors with their awareness of disability-related laws and regulations were also found when a chi-square test was utilized. First of all, compared to participants with less educational attainment, those with an undergraduate or a graduate degree were aware of laws/regulations of The Revised Transportation Law ($X^2(2, N=54) = 7.28$, $p < .05$), Vocational Training Law ($X^2(2, N=53) = 13.45$, $p < .05$), The Amended Labor Code ($X^2(2, N=42) = 11.14$, $p < .05$), Law on People with Disability and Decree 28 ($X^2(2, N=34) = 13.55$, $p < .05$), and Decree on Administrative Fines for Violations of the Law on People with Disabilities ($X^2(2, N=33) = 10.69$, $p < .05$) that are listed in Table 5. Secondly, compared to owners and supervisors, managers were mostly aware of laws/regulations of two ($X^2(2, N=53) = 6.74$, $p < .05$), three ($X^2(2,$

N=42) = 13.03, $p < .05$), four ($X^2(2, N=34) = 15.93$, $p < .05$), five ($X^2(2, N=33) = 11.82$, $p < .05$), and six ($X^2(2, N=25) = 15.51$, $p < .05$).

Thirdly, participants who indicated that they have a friend with a disability were mostly aware of Vocational Training Law ($X^2(2, N=53) = 7.65$, $p < .05$) and the Amended Labor Code ($X^2(2, N=42) = 7.24$, $p < .05$) compared to those with other contact experiences with individuals with disabilities. An association was found between years of working experiences on Decree on Administrative Fines for Violations of the Law on people with disabilities ($X^2(2, N=33) = 6.24$, $p < .05$). Results are presented in Table 6.

Finally, the research participants were asked if they were willing to hire people with disabilities in the foreseeable future. Results were encouraging because 109 participants (87.2%) indicated they would hire people with disabilities when there was a need.

Discussion

Vietnam is in the emerging stage in supporting people with disabilities in terms of employment. In this study, three questions were examined. A detailed discussion is presented in these sections based on the outcomes of three addressed questions.

Attitudes toward Employees with Disabilities

While positive attitudes and reflections toward employees with disabilities were found, it did not mean the participants had no concerns at all. As for the ATEPSH, a high level of parental concern about job placement in the regular worksite was perceived (Item 7). Some researchers found typical parental concerns of their young adults with disabilities in the workplace including: safety issues, negative attitudes held by employees without disabilities, a lack of appropriate transportation, distance of worksites, unsatisfied about current jobs, limited physical strengths, and families had enough financial abilities to support their children with disabilities (Hsu, Ososkie, & Huang, 2009; Lindsay, McDougall, Menna-Dack, Sanford, & Adams, 2015). Thus, parental overprotection could be viewed as one of the major barriers prohibiting people with disabilities from obtaining and retaining jobs.

A high level of frustration at real work sites (Item 18) of employees with disabilities was also perceived. Possible explanations could be found when examining the results of Items 16 and 11 of ATEPSH, which indicated a lack of a social network and distractions at natural job settings could be the main reasons. In fact, a lack of friendships of employees with disabilities in the workplace is not a secret. Researchers have indicated employees with disabilities were always physically present rather than socially included in the workplace (Hsu et al., 2009). Past positive and negative work experiences would also have significant impacts on the work performance of employees with disabilities (Wehman, Sima, Ketchum, West, Chan, & Luecking, 2015).

While potential possible explanations were provided, clearer evidence could be obtained through the examination of ASED. For example, the participants ranked very high the importance of providing social (Item 22), technical (Item 21), and communication skills (Item 20) for employees with disabilities. While those skills are important for all employees regardless of their abilities, participants perceived that their employees with disabilities to lack those essential competences for them to be socially included in the workplace. Participants also perceived their employees with disabilities needed more special attention from supervisors (Item 11) and would cost more to train (Item 6). These findings illustrated employees with disabilities were perceived as having limited proper work skills and competence compared with their counterparts without disabilities, which would ultimately lead them to feel frustrated about working in competitive employment settings.

Demographic Factors on ATEPSH and ASED

Participants who held a graduate or undergraduate degree had more positive attitudes and reflections toward employees with disabilities in terms of employability, followed by the junior or technical college degree holders. Higher educational attainment acted as a positive factor and was associated with attitudes toward employees with disabilities on the ATEPSH. Potential explanations could be that they were more knowledgeable and open-minded toward disability and relevant issues due to their higher educational backgrounds (Lau & Cheung, 1999; Scior et al., 2010).

Secondly, owners had the most favorable employability attitudes toward their employees with disabilities compared with managers and supervisors on the ATEPSH. However, supervisors had the least favorable attitudes toward the same issue. This finding illustrated an essential challenge faced by employees with disabilities since they might have to interact with first-line supervisors on a daily basis. The influence of supervisors' support in relation to the issue of turnover intention has been examined in different types of organizations (Galletta, Portoghese, Penna, Battistelli, & Saiani, 2011; Mayer, Kuenzi, & Greenbaum, 2010). Positive

Table 4

Associations of Years of work Experience and Other interactions with People with disabilities on ASED

Variables	Categories	*N*	*Mean*	*SD*	*F*	*p*
Years of work experience	(1) Under four years	44	85.18	10.26	3.49	.03
	(2) Five to nine years	68	81.10	8.61		
	(3) 10 years and above	13	79.08	8.89		
Other interactions with People with disabilities	(1) Family members/relatives	24	85.76	9.51	4.18	.02
(Mark for all apply)	(2) Friend	55	81.61	10.11		
	(3) Neighbors	50	80.36	8.06		

$p < .05$

Table 5

Awareness of Disability-Related Laws and Legislations

Law/Regulation	Heard or Knew	Percent
1. The Revised Transportation Law (2008)	54	43.2
2. Vocational Training Law (2006)	53	42.4
3. The Amended Labor Code (2012)	42	33.6
4. Law on People with Disability and Decree 28 (2010)	34	27.2
5. Decree on Administrative Fines for Violations of the Law on people with disabilities (2013)	33	26.4
6. Education Law (2005)	25	20.0

supports from supervisors, such as caring and concern for accommodations, could reduce procedural injustice and discrimination (Snyder, Carmichael, Blackwell, Cleveland, & Thornton, 2010). On the contrary, negative attitudes of supervisors could be a major barrier to hiring and retaining employees with disabilities (Paez & Arendt, 2014).

Results illustrated supervisors might encounter some difficulties, making them have less favorable attitudes toward their employees with disabilities. A potential explanation could be that supervisors had a better understanding of their employees with disabilities in terms of work competence. Another possible explanation could be that supervisors might have to deal with job modifications and reasonable accommodations, which intensified pressures. Questioning whether they were capable of providing long-term supports to their employees with disabilities could be another major reason (Hernandez et al., 2008).

Unlike educational attainment and position that had associations on the ATEPSH, other interaction experiences with people with disabilities and years of work experience were two factors that were associated with attitudes toward employees with disabilities on ASED (see Table 4). To be clear, participants with family members or relatives with disabilities had significant positive attitudes toward employees with disabilities. In addition, participants

Table 6

Results of Chi-square Test and Descriptive Statistics for Awareness of Laws/Regulations by Demographic Factors

	Law1	Law2	Law3	Law4	Law5	Law6
Education	$df=2$; $\chi^2=7.28$; $p=.026$*	$df=2$; $\chi^2=13.45$; $p=.001$*	$df=2$; $\chi^2=11.14$; $p=.004$*	$df=2$; $\chi^2=13.55$; $p=.001$*	$df=2$; $\chi^2=10.69$; $p=.005$*	$df=2$; $\chi^2=.59$; $p=.746$
High school or less	10 (18.5)	7 (13.2)	5 (11.9)	3 (8.8)	3 (9.1)	6 (24.0)
Junior or technical college	17 (31.5)	18 (34.0)	14 (33.3)	10 (29.4)	11 (33.3)	8 (32.0)
Under- and graduate	27 (50.0)	28 (52.8)	23 (54.8)	21 (61.8)	19 (57.6)	11 (44.0)
Position	$df=2$; $\chi^2=5.45$; $p=.066$	$df=2$; $\chi^2=6.74$; $p=.034$*	$df=2$; $\chi^2=13.03$; $p=.001$*	$df=2$; $\chi^2=15.93$; $p=.000$*	$df=2$; $\chi^2=11.82$; $p=.003$*	$df=2$; $\chi^2=15.51$; $p=.000$*
Owner	12 (22.2)	10 (18.9)	12 (28.6)	12 (35.3)	9 (27.3)	5 (20.0)
Manager	23 (42.6)	24 (45.3)	20 (47.6)	16 (47.1)	17 (51.5)	16 (64.0)
Supervisor	19 (35.2)	19 (35.8)	10 (23.8)	6 (17.6)	7 (21.2)	4 (16.0)
Years of work	$df=2$; $\chi^2=.60$; $p=.741$	$df=2$; $\chi^2=2.00$; $p=.368$	$df=2$; $\chi^2=5.15$; $p=.076$	$df=2$; $\chi^2=1.63$; $p=.443$	$df=2$; $\chi^2=6.24$; $p=.044$*	$df=2$; $\chi^2=2.24$; $p=.327$
Four years and under	21 (38.8)	22 (41.5)	14 (33.3)	15 (44.1)	12 (36.4)	6 (24.0)
Five-nine years	28 (51.9)	25 (47.2)	20 (47.6)	16 (47.1)	14 (42.4)	15 (60.0)
Ten years and above	5 (9.3)	6 (11.3)	8 (19.1)	3 (8.8)	7 (21.2)	4 (16.0)
Other contact	$df=2$; $\chi^2=3.32$; $p=.190$	$df=2$; $\chi^2=7.65$; $p=.022$*	$df=2$; $\chi^2=7.24$; $p=.027$*	$df=2$; $\chi^2=1.04$; $p=.594$	$df=2$; $\chi^2=4.83$; $p=.090$	$df=2$; $\chi^2=2.21$; $p=.331$

with less than four-years of work experience had significant favorable attitudes toward employees with disabilities.

The possible explanation was that participants with the shortest years of work experience might be influenced by the concept of social desirability bias (Krosnick, Judd, & Wittenbrink, 2005). This would drive them to answer questions in a manner perceived to be in a favorable direction. It is also possible that participants with the least amount of work experience might just be reporting their true perceptions about employees with disabilities, and these may be influenced by their exposure to improved disability-related services in recent years. On the contrary, participants who had longer years of work experience might be capable of expressing their true feelings without considering the consequences.

Awareness of Disability-Related Laws

Through supports from the USAID, 24 pieces of disability-related legislation and regulations were passed (Hayden et al., 2015). However, whether there was a gap between development and implementation of these pieces of legislation was questionable (Hayden et al., 2015). To address this issue, related questions were provided to participants for their responses. Results clearly indicated the majority of participants were not aware of those laws and regulations as presented in Table 5. If lack of announcement and promotion is the main cause of unawareness of disability-related laws and regulations, the GVN needs to advertise greatly its disability laws, awareness programs, and relevant services to educate Vietnamese managers and relevant professionals.

The findings may also support results from Hayden et al. (2015) who indicated full implementation of disability-related laws in Vietnam had not been fulfilled and was inhibited for several reasons: insufficient funding resources, lack of monitored or evaluated service systems, limited human resources for implementing laws and regulations, and insufficient number of professionals with the proper knowledge and skills in serving people with disabilities to meet their unique needs. Therefore, it is possible that the findings indicate that most efforts made by the GVN for serving people with disabilities could still be in the legal development phase rather than implementing already mandated laws and regulations.

When examining whether demographic factors had associations on awareness of disability-related laws and regulations, the results clearly indicated that participants with a graduate or undergraduate degree were aware of disability-related laws and regulations compared to others with less educational attainment. This could be the result of the efforts made by the USAID and related organizations who assisted to include disability issues in textbooks for B.A. and M.A. levels and trainings for both students and lectures in different universities, vocational training colleges, and social service agencies (USAID; 2015; USAID; 2016). As a result, participants with higher educational attainments may be more knowledgeable about disability and sensitive to relevant information.

In addition, managers were aware of laws/regulations compared to owners and supervisors. While the roles of manages can vary, managers acknowledged that their "informational roles in-

volve collecting, receiving, and disseminating information" (Robbins & Coulter, 2016; p. 42). Therefore, it is understandable that managers were mostly aware of disability-related laws and regulations especially because they have to deal with employment issues related to persons with disabilities on a regular basis.

Furthermore, participants who indicated that they have friends with disabilities were aware of Vocational Training Law and the Amended Labor Code. Results of relevant research also yielded similar findings indicating people who stated they have friends with disabilities were the ones who were the most supportive people for individuals with disabilities in terms of their employment rights (Horner-Johnson et al., 2002; Huang et al., 2014). A possible explanation is that being a friend of persons with disabilities would increase disability knowledge and understanding because of being aware of the difficulties their friends might have in the workplace; thus, increasing their awareness of disability laws, regulations, and related services.

Finally, whether participants were willing to recruit more people with disabilities in the foreseeable future was another question to which they were asked to respond. Results were heartening because 109 participants (87.2%) indicated they would hire people with disabilities when appropriate job vacancies were available to them. While intentions and actions are two different concepts and are not necessarily correlated, results were encouraging because it could be a hidden message that work competences of their employees with disabilities were recognized by participants.

Implications for Practice

In this study, several important findings were discovered based on the perspectives of business owners, managers, and supervisors. For example, a high level of frustration and a high level of parental overprotection of employees with disabilities were mentioned. Several methods could be used to deal with these issues. Inviting successful business men and women with disabilities to give a presentation about job survival techniques and strategies for employees with disabilities would be a good idea. In addition, building "employee resource groups made up of employees connected by some common dimension of diversity, [such as employees with and without disabilities]," should be promoted within companies (Robbins & Coulter, 2016, p.176). This would provide opportunities to employees, regardless of their abilities, to receive the support they need in a timely manner.

Also, a mentoring system should be established that would allow a senior employee with a disability to be matched "with a new or inexperienced employee [with a disability] with the intention that [he/she] would provide formal or informal training" (Hanley-Maxwell, Owens-Johnson, & Fabian, 2003, p. 394). These approaches would provide opportunities for employees with and without disabilities to share their thoughts and feelings in order to reduce stress levels while seeking solutions for difficulties and challenges they have encountered. By applying these techniques mentioned above, both management staff and employees with and without disabilities should be beneficiaries.

The findings also indicate owners and managers had more favorable attitudes toward employability of employees with disabilities compared to supervisors on the ASED scale. In fact, supervisors might have the most pressure compared to other professionals within their companies since they have to deal with owners, managers, and employees at the same time. According to the organizational support theory (OST), employees fulfill their roles successfully as long as their contributions and works are recognized and rewarded (Kurtessis, Eisenberger, Ford, Buffardi, Stewart, & Adis, 2015). Therefore, intangible and tangible rewards such as verbal encouragement and monetary support should be available to first-line supervisors (Casimir, Ng, Wang, & Ooi, 2014). Also, a long-term and continued support to solve concerns of first-line managers, such as accommodations and job modification should be provided by employment specialists who refer their job seekers to the companies (Gilbride & Stensrud, 2003; Huang et al., 2014). This may ensure the challenges and difficulties encountered by first-line supervisors could be solved in a timely manner.

Limitations and Future Research

Several limitations of this study were identified that might drive future studies. First, since this study was conducted by using quantitative research methods, additional information might be found when interviews and observations are taken into consideration. This would help researchers obtain a greater understanding of how managers perceive employees with disabilities. Also, future researchers could examine perceptions of employees with disabilities, rather than managers, regarding challenges and difficulties they might have encountered in the workplace. Results of this comparative study could provide significant information for business management, vocational rehabilitation counselors, social workers, and relevant professionals to improve future practices and services.

Second, only one participant reported having workers with intellectual disabilities (see Table 1) in this study. The main reason for this circumstance was that public educational programs and related transitional services were very limited to Vietnamese with intellectual disabilities (Rydstrom, 2010; Lich, Ngoc, & Tung, 2014). Therefore, future studies should be conducted to explore difficulties and challenges of Vietnamese with intellectual disabilities in terms of education and employment concerns from the perspectives of managers, people with disabilities and their families.

Third, the "quota and levy" system requiring companies to limit seven working-hours per day for their employees with disabilities was removed from the amendments to the Vocational Training Law and Labor Code for the purpose of providing incentives for business organizations to hire more people with disabilities (USAID, 2017). However, the requirement of hiring about 2-3% of their total employees with disabilities was also taken out. Therefore, whether the original objective of this removal was achieved should be further examined and evaluated.

Fourth, people's attitudes toward disability issues may be changed due to their life experiences of acquiring disabilities, disability legislation knowledge, availability of social services, and various interaction experiences with persons with disabilities

(Antonak & Livneh, 1991; Huang et al., 2014, Perry et al., 2008). Therefore, the opinions provided by participants regarding the issues of future hiring practices of people with disabilities and their awareness of disability laws and regulations could be changed back and forth. This meant that the information obtained from participants may represent their perceptions toward disability issues at this particular period of time when the study was conducted, rather than their lifelong perceptions toward the same issues.

Finally, while recruited participants exceeded the minimum required sample size of 90 based on G Power estimates, the small sample size of this study should not be overlooked. Results of this study should not be generalized to represent the majority of Vietnamese managers' attitudes toward employees with disabilities and relevant issues. Future relevant large-scale studies should be conducted to obtain a greater understanding of employment issues of Vietnamese with disabilities based on managers' perception, such as employability of people with disabilities in sheltered and competitive settings and reasonable accommodation services in the workplace.

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Appendix A

Item Analysis for the Attitudes Toward the Employability of Persons with Severe Handicaps Scale (ATEPSH)

Item	Statement	Min	Max	Mean	SD	Median	Rank
	Appropriateness of competitive employment (Cronbach's alpha=0.78)	**25**	**66**	**48.91**	**5.17**	**48**	
1	In competitive work site, people with disabilities can learn appropriate social skills.	3	6	4.66	.70	5	2
2	With appropriate support services, people with disabilities can be dependable workers in the community.	3	6	4.70	.69	5	1
4	Competitive employment affords people with disabilities the opportunities to lead relatively normal lives.	2	6	4.50	.86	4	6
5	No amount of training can prepare people with disabilities for competitive employment.	2	6	4.09	.87	4	11
6	Competitive employment settings enhance the productivity of people with disabilities.	2	6	4.21	1.03	4	10
9	Income earned from competitive employment can change the quality of life for people with disabilities.	2	6	4.44	.93	4	7
12	Exposure to people with disabilities in job settings promotes positive attitudes on the part of non-handicapped coworkers.	2	6	4.62	.92	5	3
14	People with disabilities can be trained for competitive employment.	3	6	4.54	.67	5	5
15	On-the-job training at community based work sites is effective for people with disabilities.	2	6	4.26	.72	4	9
19	It is possible for people with disabilities to receive appropriate job training in the community.	2	6	4.57	.88	4	4
21	Productivity rates of workers with disabilities can be as high as those of workers who are not handicapped.	2	6	4.34	.94	4	8
	Disadvantages of competitive employment (Cronbach's alpha=0.71)	**12**	**56**	**31.61**	**4.18**	**32**	
3	A controlled job simulation environment is more suitable for people with disabilities than is actual on-the-job training.	1	6	3.04	.69	3	6
7	Most parents of people with disabilities prefer that they can placed in sheltered workshops rather than in competitive employment settings.	2	6	3.66	.90	4	9
8	Employers are generally resistant to hiring workers with disabilities.	1	5	3.00	.74	3	4
10	The productivity of non-handicapped coworkers decreases when they work with individuals with disabilities.	1	6	2.90	.68	3	3
11	The natural job setting provides too many distractions that impede the vocational training process for people with disabilities.	2	6	3.17	.94	3	8
13	People with disabilities present the employer with absence and punctuality problems.	1	6	3.01	.81	3	5
16	Non-handicapped co-workers are not likely to interact with workers with disabilities.	1	5	3.14	.78	3	7
17	Mistreatment and abuse of people with disabilities by co-workers are frequent occurrences.	1	5	2.87	.92	3	2
18	Frustration experienced by people with disabilities at real work sites is greater than that experienced in sheltered workshops.	1	5	4.02	.72	4	10
20	Competitive employment for people with disabilities takes jobs away from non-handicapped workers.	1	6	2.79	.65	3	1
	Overall (Cronbach's alpha=0.80)	**37**	**122**	**80.52**	**5.40**	**80**	
	***Overall when DCE was reversed**	**42**	**124**	**88.01**	**7.54**	**86**	

Appendix B

Item Analysis for the Attitudinal Statement about Employees with Disabilities (ASED)

Item	Statement	Min	Max	Mean	SD	Median	Rank
	Teamwork and costs (Cronbach's alpha=0.81)	**16**	**66**	**39.62**	**5.99**	**37**	
1	I feel it is not too costly to give additional training to Employees with disabilities.	2	6	4.04	.82	4	3
2	Employees with disabilities do not make other employees uncomfortable.	1	6	4.12	.10	4	1
3	Employees with disabilities do not increase operational costs.	1	6	4.08	.02	4	2
4	Supervisors do not find/would not find it hard to get disabled employees to adopt new ways of doing the job.	2	6	3.93	.82	4	4
5	Employees with disabilities don't need special attention from coworkers.	1	6	3.26	.90	3	8
6	Depending on the job, it does not cost-would not cost me more to train Employees with disabilities.	1	6	3.21	.93	3	10
7	Depending on the job, Employees with disabilities are not harder to train than EWODs.	1	6	3.45	.89	3	7
8	EWD do not work slower than EWODs.	1	6	3.22	.88	3	9
9	Depending on the disability, it does not cost-would not cost me more to train Employees with disabilities.	2	6	3.58	.92	4	5
10	Depending on the disability, Employees with disabilities are not harder to train than EWODs.	2	6	3.56	.96	4	6
11	After training, Employees with disabilities do not need special attention from supervisors.	2	6	3.18	.88	3	11
	Job training (Cronbach's alpha=0.81)	**5**	**24**	**13.45**	**3.21**	**12**	
12	I do not use/would not use different training methods for Employees with disabilities.	2	6	3.36	.92	3	2
13	I do not believe disabled employees need to be trained differently than EWODs.	1	6	3.16	.85	3	3
14	I train/would train all employees using the same methods whether they are disabled or not.	1	6	3.32	.93	3	4
15	I do not use/would not use the same training tools for Employees with disabilities as those without disabilities.	1	6	3.61	.28	3	1
	Characteristics (Cronbach's alpha=0.84)	**6**	**23**	**15.61**	**3.07**	**16**	
16	I feel EWD are more dependable than EWODs.	2	6	3.85	.98	4	4
17	EWD are absent less often than EWODs.	1	6	3.96	.87	4	2
18	I believe that generally, Employees with disabilities cooperate better than EWODs.	2	5	3.86	.95	4	3
19	EWD are more loyal to the organization than EWODs.	1	6	3.94	.93	4	1
	Social and technical skills (Cronbach's alpha=0.82)	**9**	**18**	**13.70**	**1.80**	**13**	
20	Providing training on communication skills for Employees with disabilities is important.	3	6	4.53	.68	4	3
21	Providing training on technical skills for Employees with disabilities is important.	3	6	4.55	.67	4	2
22	Providing training on social skills for Employees with disabilities is important.	3	6	4.62	.76	5	1
	Overall (Cronbach's alpha=0.84)	**36**	**131**	**82.33**	**9.43**	**78**	

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Sexual Health Education: A Missing Piece in Transition Services for Youth with Intellectual and Developmental Disabilities?

Bradley W. McDaniels
University of Kentucky

Allison R. Fleming
Penn State University

Transitioning to adult life is a complex time for all young people and includes assuming adult roles in work, independent living, and social relationships. As young adults with intellectual and developmental disabilities (IDD) access a broader array of social settings in their transition, including higher education, work, and independent living situations, social issues take on greater importance. Maintaining age appropriate relationships, including sexual relationships, is a critical piece of inclusion. However, students with IDD are not afforded the same access to sexual health information offered to other students. This lack of information and opportunity for development leaves young adults with IDD unfamiliar with many aspects of human sexuality and social relationships and potentially unprepared to function in adult social settings. This article provides an overview of the scope and importance of sexual health knowledge for young adults with IDD, limitations in current educational practices, practices and resources for addressing sexual health knowledge for this population, and suggestions for ways that rehabilitation counselors can ensure attention to this area within the transition process without going beyond our scope of practice.

Keywords: sexual education, sexuality, intellectual disabilities, rehabilitation counseling, transition.

The Bureau of Labor Statistics (2016) reported the employment rate for individuals with any type of disability for 2015 as 17.5% versus 65.0% for those without disabilities. The National Spinal Cord Injury (SCI) Statistical Center (2015) reported that there are approximately 17,000 new cases of SCI each year. According to this report, the number of people living with a spinal cord injury in the United States is estimated to be in the range of 243,000 to 347,000 individuals. This National SCI report also indicates that only 12% of individuals with SCI are employed one year after injury. The number of employed individuals with SCI 20 years after injury increases to 35.1%. Clearly, individuals with SCI are achieving employment outcomes at a much lower rate than individuals without disabilities (The National SCI Statistical Center, 2015).

Researchers have revealed a number of factors associated with successful employment outcomes for people with SCI. Education has been found to be one of the strongest predictors of return to work, as individuals with college level backgrounds and retraining are more likely to return to work following an SCI (Blackwell, Leierer, Haupt, & Kampitsis, 2003; Hess, Ripley, McKinley, & Tewksbury, 2000; Krause, Terza, Erten, Focht, & Dismuke, 2012; Marini, Lee, Chan, Chapin, & Romero, 2008; Ottomanelli & Lind, 2009; Pflaum, McCollister, Strauss, Shavelle, & DeVivo, 2006; Tomassen, Post, & van Asbeck, 2000; Yasuda, Wehman, Targett, Cifu, & West, 2002). Another study found that having worked in managerial, professional, or office occupations prior to injury was significantly associated with a greater probability of employment post-injury and associated with higher job stability (Krause, Terza, Saunders, & Dismuke, 2012).

Bradley McDaniels, MS, CRC is a Doctoral student in rehabilitation counseling in the Department of Early Childhood, Special Education, and Rehabilitation Counseling at the University of Kentucky. Taylor Education Building, 237G Lexington, KY 40506.

Email: Bradley.mcdaniels@uky.edu

Sexuality is important for all individuals. In fact, the World Health Organization (WHO, 2006) stresses that sexuality is a central aspect to being human. Because sexuality is integral to being human, equitable services and education should be afforded to all, including individuals with IDD (Friedman & Owen, 2017). Sexuality is greater than just participation in sexual relationships; it encompasses sexual knowledge, beliefs, attitudes, and behaviors (Murphy & Young, 2005). It also includes gender expression, how we feel about our bodies, how we feel about our relationships with others, our physical and emotional growth, and how we reproduce (Alberta Health Services, 2009). Sexual development is intertwined with fulfilling basic social needs such as being liked and accepted, giving and receiving affection, maintaining privacy and control over our own bodies, and feeling attractive (Murphy & Young).

Sexual health education is a controversial topic within the U.S. public education system (Hall, Sales, Komro, & Santelli, 2016). Sexual health education was introduced in the U.S. in 1913, as a way to reduce disease and promote sexual morality consistent with accepted norms and expectations (Elia & Tokunaga, 2015). For many years, the leading philosophy of sexual health education was largely abstinence-based and focused on reducing disease and pregnancy in unmarried heterosexual couples. Concerns have been expressed regarding the impact of programming that is sex-negative, heteronormative and exclusionary of diverse individuals (e.g., individuals with disabilities, those identifying as LGBTQA) on socio-sexual norms (Elia & Tokunaga). More recently, development of comprehensive, evidence-based sexual health education has been emphasized but is not widely available (Schalet et al., 2014). In fact, there is no national curriculum for sexual health education in the U.S., resulting in a "highly diverse patchwork of sex education laws and practices" (Hall et al., 2016, p. 595). The Guttmacher Institute (2016) reported that 24 states and the District of Columbia (DC) mandate sexual health education, and 27 require that when it is provided, it meet specific requirements: 13 require medical accuracy of information; 26 require that the information be age appropriate; 8 require that instruction be culturally appropriate and free of racial, ethnic, or sex bias; and two prohibit programs from promoting religion (https://www.guttmacher.org/state-policy/explore/sex-and-hiv-education). Considering the contentious nature of sexual health education within the public education landscape, it is not surprising that for students with intellectual disabilities, access to education, information, and appropriate curricula is seriously lacking (McDaniels & Fleming, 2016). Youth and young adults with IDD have the same needs and desires as their peers in sexuality related matters and, therefore, would benefit from receiving sexuality education (Eastgate, 2008).

The transition stage for youth and young adults with disabilities has received greater attention following the 2014 passage of the Workforce Innovation and Opportunity Act (WIOA). Youth and young adults with IDD represent a significant portion of the transition population, with figures estimated as encompassing a third of all youth with any kind of special healthcare need (McManus et al, 2013). Despite 30 years of legislation mandating increased attention to individuals with IDD, outcomes (e.g., employment, independent living, developing meaningful social relationships) have been disappointing (Butterworth et al., 2013). Rehabilitation counselors, particularly those with heavy involvement in transition services, have an opportunity for greater involvement with youth and young adults in this stage to provide a more comprehensive approach to preparation for adult life. Sexuality is part of the rehabilitation counseling scope of practice but often does not receive much attention, particularly for clients with IDD. Reasons for this have been cited in the literature and include a belief that the topic is out of the rehabilitation counselors' purview (Kendall, Booth, Fronek, Miller, & Geraghty, 2003), lack of preparedness to address sexuality (Haboubi & Lincoln, 2003), and inadequate coverage of this topic with youth with disabilities in general (Holland-Hall & Quint, 2017). Additionally, considering the assertion that parents should be the primary educators of children with regard to sexuality, parents consistently voice the need for increased support and assistance (Sexuality Information and Education Council of the United States [SIECUS], 2004). Parents are integral members of successful transition planning teams and should be involved in the sexuality education decision-making in public schools (Haradert et al., 2009). As such, working in concert with the transition planning team, including rehabilitation counselors, is critical to appropriate sexuality education. The purpose of this paper is to serve as a primer in sexual health education and interventions for addressing sexual health when working with transition youth with IDD so that counselors may ensure inclusion in the individualized education plan (IEP). We are not advocating that transition rehabilitation counselors take on the role of sexuality educator; rather, we are suggesting utilizing their participation in transition planning to ensure that the issue of sexuality education has been adequately addressed.

Relevance of Sexuality for Transition

The desired outcome of secondary education is effective transition into adulthood, which includes competitive employment, independent living, and a satisfactory quality of life (QOL; Flannery & Hellemn, 2015). For individuals with disabilities, the processes of effective transition include the development of a variety of adult roles – often conceptualized as working, living, and participating in the community. Developing meaningful relationships is essential for acquiring satisfactory post-secondary employment, education, and independent living; all are considered optimal post-secondary outcomes (Eisenman & Celestin, 2012). Greater independence in the community is often determined by the individual's level of social skill, including the ability to safely interact with strangers, get necessary information from others, and participate in community activities. Similar to other areas required for successful transition outcomes, social development happens over the individual's adolescent years and cannot be limited in attention to just the transition planning stage.

Aggleton and Campbell (2000) posit that sexuality issues should be communicated in ways that serve to enhance the individual's self-efficacy through the establishment of social skills. Moreover, Goldman (2008) asserts that sexuality education provides the ideal setting to provide adolescents with necessary social skills that can prepare them for fulfilling future interactions. Ac-

cordingly, Aggleton and Campbell argue that effective sexuality education can positively impact students' opportunities for both civic engagement and employment.

Although the focus of transition in rehabilitation counseling and special education has historically been on educational, training, and employment outcomes, additional outcomes warrant exploration. Halpern (1994) maintains that employment is only one of several goals of transition; other considerations include post-secondary education, maintaining a home, becoming involved in the community, and experiencing satisfactory personal and social relationships. As young adults with IDD transition into a broader array of social settings, including post-secondary institutions, adult group living situations, and workplace settings, their ability to function socially is critical to their success and safety in these environments. However, limitations in social and communication skills associated with IDD often preclude individuals from fully participating with their peers and developing meaningful relationships. In a qualitative study by Abbot and McConkey (2006), individuals with ID cited lack of skill and knowledge on healthy living and lifestyle information as perceived barriers to community participation and suggested that access and encouragement toward healthy lifestyle information would help them overcome this barrier. Clearly, there is correlation between an individual's social and sexual development.

Socialization and Sexual Development

Socio-sexual development is lifelong and takes different shapes during various life stages. Young children may express curiosity about their own bodies or those of their same or opposite gender friends. Older children, particularly those approaching puberty, may be experiencing hormonal and body changes and desires to engage in more adult-like sexual behavior (Gray & McIntyre, 2017). Inherent in sexual development is interaction and connection with other people, and social skills are the foundation of our ability to connect with others. These skills are used to initiate contact and respond to others and include both verbal and non-verbal communications and attitudes (Vaughn et al., 2001). Peer interactions afford children and adolescents opportunities to practice and refine social skills and learn group norms. As they mature, the typical progression is that adolescents spend more time with peers and less time with parents, making peer groups even more critical to social development at this stage. Although there is great heterogeneity in the social competence of youth and young adults with IDD, generally, limitations are widely observed. Specific areas of difficulty include engaging in reciprocal interactions, adapting to novel social situations, and understanding social cues (Carter & Hughes, 2005). The complexity of social interactions deepens in the transition age / stage, where youth and young adults may engage in more meaningful friendships with one other person (e.g., a best friend), enter romantic relationships, and need to be able to adjust to the communication and social boundary needs of others in a variety of settings and situations (Carter & Hughes). The complexity and difficulty associated with achieving these developmental milestones is observable in many youth and young adults; as evidenced by work on college campuses addressing safety related to sexual relationships and assault (Amar, Strout, Simpson, Cardiello, & Beckford, 2014). Because of the lack of support in social interactions faced by many youth and young adults with IDD, isolation from peers becomes more prominent during this developmental stage. Related to the topic of sexual health, this isolation is even more problematic because peers are where many adolescents report getting much of their information on sexual health and sexuality (Holland-Hall & Quint, 2017; Murphy & O'Callaghan, 2004).

Sexuality and Sexual Health: A Missing Piece

Disparities in education and healthcare, including access to sexuality education and sexual-related services, continue to exist for individuals with IDD (Di Giulio, 2003; Parish & Saville, 2006). The consequences of this lack of attention are considerable. Without appropriate sexual knowledge, persons with IDD can be precluded from experiencing adequate socialization and meaningful relationships commensurate with QOL in adulthood (Galea, Butler, Iacono, & Leighton, 2004). Accordingly, as a result of an individual's lack of knowledge and understanding about sexuality, a person with IDD may experience underdeveloped socio-sexual skills (Murray & Minnes, 1994). Recent literature supports the challenges related to inadequate social skills on the sexual development of individuals with Autism Spectrum Disorders (ASD; Holland-Hall & Quint, 2017) and cerebral palsy (Wiegerink, Roebroeck, Donkervoort, Stam, & Cohen-Kettenis, 2006). Halpern (1994) indicated that the opportunity for one to experience quality intimate relationships is frequently a critical component to both personal and social adjustment in an adult world, and we would add that this is at least partially dependent upon acquisition of the requisite knowledge of sexual health and sexuality. Harader, Fullwood, and Hawthorne (2009), asserted that inappropriate assumptions such as "adolescents with moderate disabilities could not participate in education to attain the skills that would lead to any acceptable form of quality of life" (p. 18) interfered with equal opportunities for sexuality education. A review of extant literature indicates, indeed, that adolescents with IDD possess low level of sexual knowledge and have fewer opportunities to learn about sexuality than their non-disabled peers (Cheng & Udry, 2002; Dukes & McGuire, 2009; Konstantareas & Lunsky, 1997; McCabe, 1999; McCabe & Cummins, 1996; Murphy & O'Callaghan, 2004; Swango-Wilson, 2011).

As a result of inadequate sexual knowledge, Timms and Goreczny (2002) espouse that persons with ID are often unaware of certain social taboos, such as invading another's personal space. Moreover, Elliot, Pring, and Bunning (2002) posit that engaging in inappropriate socio-sexual behavior affects the establishment of any type of relationship, not only those sexual in nature. Swango-Wilson (2009) expanded upon the issue of sexual knowledge by proffering that individuals with ID may lack the skills to establish appropriate sexual boundaries, which may result in sexual exploitation and interpersonal conflict. As a result of this deficit in skills, individuals with IDD may present with maladaptive socio-sexual behaviors (e.g., misinterpreting appropriate boundaries, making inappropriate remarks, acting out in socially inappropriate ways; Gougeon, 2010; Gray, Ruble, & Dalrymple, 2000; Henault, 2006). Moreover, individuals with IDD may need training in facial expressions, emotions, and non-verbal behaviors, all of which, if inappropriately decoded and deemed sexual in nature, may result in relational challenges both personally and in the workplace (Travers & Tacani, 2010). Ultimately, there is a relationship between social and sexual skills, and social and sexual skill deficits may result in barriers to fostering intimate relationships, engaging socially, and gaining and maintaining employment (Gougeon, 2010; Sullivan & Caterino, 2008; Travers & Tacani, 2010).

Sexuality and Individuals with IDD

Individuals with IDD have historically been segregated from the general population, and their sexual desires largely neglected and disavowed (Kempton & Kahn, 1991) resulting in the perpetuation of negative stereotypes regarding their sexual freedoms. Friedman and Owen (2017) argued, "sexuality in the context of IDD has only been recognized as a danger or a problem" (p. 2). Actions to suppress sexuality among individuals with IDD in our history include sterilization policies, sex-based segregation within institutionalized settings, and incorrect assumptions that they were sexual deviants or vulnerable victims who lacked the capacity for sexual relationships. Even now, the majority of sexuality related services provided to adults with IDD in community settings are reactive (e.g., to curb or stop sexual behavior) rather than proactive (Friedman & Owen, 2017).

A few investigators have explored the perceptions and sexual experiences of youth with IDD, and findings reinforce the notion that this group has sexual desires and is sexually active. Much of the available information on sexual activity and interest is filtered through parents and support providers (Servais, 2006). Weinholz, Seidel, Micheal, Haeussler-Sczepan, & Riedel-Heller (2016) reported that youth with disabilities are less sexually active than same-age peers without disabilities but report earlier first intercourse experiences, which provides the impetus for appropriate sexuality education. Results of a literature search revealed two qualitative studies of sexuality and sexual education among participants with IDD (Frawley & Wilson, 2016; Schaafsma, Kok, Stoffelen, & Curfs, 2017). Findings of both studies suggested that most participants had some exposure to sexual education, but it was heavily gendered and weighted toward heterosexual relationships and safe sex practices. Frawley & Wilson (2016) used the term "rule-based" to describe participant knowledge; for example, men shared knowledge about avoiding getting a woman pregnant and not abusing or forcing women into sex, and women discussed menstrual hygiene, safety, and avoiding pregnancy. Participants demonstrated only marginal and superficial knowledge on these topics and had several unanswered questions. The internet and social media were cited as sources of information and methods of connecting with potential partners. Further, several participants reported being in relationships, being sexually active, and desiring to have children someday. Only about half of sexually active participants in the Schaafsma study reported using condoms or other contraception. Participants talked about problems they had "finding, forming, and maintaining relationships" (p.32) and described relationship dynamics that are considered unhealthy (Schaafsma et al., 2017). Questions raised by participants in the Frawley and Wilson (2016) study reflect a need for deeper understanding of sexuality and sexual health to support "safe, informed, and pleasurable sexual relationships" (p. 482). Authors from both studies recommended expansion of sexual education for individuals with IDD to include relationship dynamics, parenting, and ensure ongoing contact to ensure maintenance of knowledge and skills.

Barriers to Appropriate Sexual Education for Young Adults with ID

Having access to comprehensive sexuality education affords individuals with IDD opportunities to experience a sexually satisfying life, and it provides them the knowledge to protect against sexual abuse, unplanned pregnancies, and sexually transmitted infections (Murphy & Young, 2005). The literature is fraught with data concerning the exceedingly high rate of sexual abuse among individuals with ID as compared to their non-disabled peers (Sullivan & Knutson, 2000; Spencer et al., 2005; Jones et al., 2012; Gougeon, 2009; Ailey et al., 2003). The lack of sexual knowledge presents a serious public health concern (Murphy & O'Callaghan, 2004) as evidenced by the work of McGillivray (1999), who reported that individuals with ID had little to no understanding regarding the proper use of condoms and believed that taking oral contraceptives lowered the risk of sexually transmitted infections (STI). The evidence supporting the inadequate sexual knowledge of persons with ID has substantive merit; however, developing effective interventions to mitigate the untoward effects and prepare transitional adolescents for adulthood appear to be wanting.

Engaging in responsible adult sexual behaviors is considered an important developmental task in the transition from adolescence to adulthood (Betz, Hunsberger, & Wright, 1994). Considering this, the operative question becomes how and from whom is an individual with IDD to receive appropriate and factual information relating to sexuality? Since the passage of the Individuals with Disabilities Education Act (IDEA) in 1975, students with disabilities have been afforded educational opportunities in inclusive classrooms to the greatest extent possible. Although this has undoubtedly led to greater adjustment and socialization skills, inclusion may be a hindrance to those with IDD in acquiring appropriate sexual knowledge due to the pace and pedagogic style employed in mainstream health education classes (Walker-Hirsch, 2007). Inclusive learning environments have merit but, when discussing the topic of sexuality, individuals with IDD may lack the confidence and understanding to ask questions that they are unsure about.

Considering the inappropriate sexual knowledge base, Whitehouse and McCabe (1997) argued for improved sex education for individuals with ID. Attempts to adapt existing, mainstream sexual education curricula to address the specific needs of individuals with ID have, however, proven unsuccessful (Gerhardt & Lanier, 2011; Koller, 2000; Travers & Ticani, 2010). Wolfe and Blanchett (2002) reviewed a number of available sexual education curricula and determined that only one adequately addressed the needs of those with ID, but it lacked empirical validation within the target population. Moreover, Schaafsma and colleagues (2013) concluded that most available curricula were unlikely to be effective for individuals with ID. Several reasons have been posited for the lack of effectiveness of utilizing available, mainstream curricula with students with IDD - the information is frequently indirect, vague, euphemistic, or overly technical (Addison, 2006; Ashcraft, 2006; Boehning, 2006), which results in conceptual barriers for adolescents with IDD.

Beyond the relative paucity of available sex education curricula appropriately developed for individuals with IDD lies the inherent challenge of ensuring that educators are sufficiently adept at conveying such information. According to Wolfe and Blanchett (2002), two of the barriers to effective sexuality education for individuals with disabilities are the lack of both educator training and materials suitable for meeting the needs of the students. Brantlinger (1992) concluded that special education professionals believe that sexual education may be one of the most critical components of the curriculum for secondary education students. Considering this, one could reasonably conclude that ensuring that educators are properly trained should be a priority but, according to research, this may not be occurring. Literature suggests that special education professionals reported receiving minimal training on how to effectively teach sexuality topics and the majority rated their professional preparation as inadequate (Blanchett, 2001; Howard-Barr, Rienzo, Pigg, & James, 2005; Foley and Dudzinski, 1995; May & Kundert, 1996; McKay & Barrett, 1999; Wolfe, Boone, & Blanchett, 1998).

Although much of the literature cited is dated, more recent research supports special educators' reported inadequacies associated with sexuality education preparation. Specifically, Martinello (2014) confirms this by espousing the notion that improved educator training is needed and may result in a more "sexually supportive environment for individuals with ID" (p. 168). Clearly, without adequate training in how to effectively teach sexual education topics, educators may be uncomfortable and ill prepared, which is precisely why collaboration is critical. Lastly, many teachers recognize the need for appropriate sexual education but expressed concern that it could lead to harmful or inappropriate behavior (Rohleder, 2010; Smith, 2008). Educator fears, lack of training, and confidence in teaching sexuality education needs to be assuaged for reasonable progress to be made toward educating individuals with IDD on issues relating to sexuality.

Outside of educational settings, medical professionals and support staff also express a lack of preparation and confidence in addressing issues related to sexuality and sexual health with individuals with IDD (Holland-Hall & Quint, 2017; Saxe & Flanagan, 2016). However, both pediatricians and support staff in residential settings are well-situated to address issues of sexuality and sexual health for persons with IDD. Pediatricians address adolescent growth and development and can be particularly helpful in assessing and increasing understanding of physical changes associated with puberty, sexual health, and safe sex practices (Holland-Hall & Quint, 2017). Additionally, anecdotal reports of community rehabilitation programs offering needed educational courses (e.g., https://www.relatewithkatypark.com/american-portraiture/) for individuals with IDD may serve as a promising practice. Direct care staff, because of the high levels of support they provide for individuals, have ample opportunities to be a source of information and support. Staff may feel hesitant to provide certain kinds of information, or unprepared to deal with these issues. Caregiver attitudes about sexuality among individuals with IDD are suggested to play a role in what kind of support is provided. Findings from several studies indicate neither training nor employer guidance on how to support individuals with IDD in sexuality issues (Saxe & Flanagan, 2016). Young adults with ID have described staff involvement in matters related to sexuality or sexual health as "interfering" and limited to the topic of safety (Schaafsma et al., 2017). The issues participants thought most important to include in sexual education for individuals with ID were, predictably, safety and appropriate behaviors but also building positive relationships, which encompassed topics such as marriage and sexual pleasure (Saxe & Flanagan).

Practices and Resources to Address Sexual Health Knowledge

In order to expand attention to sexual health and sexuality within the provision of transition services, counselors need to know what interventions and possible resources are available to educators and families as the transition team considers appropriate services. An important area to consider is available tools to assess sexual knowledge in adolescents with IDD. Thompson, Stancliffe, Broom, & Wilson (2016) provided a content analysis of available assessments including: The Human Relations and Sexuality Knowledge and Awareness Assessment for people with ID (HRSKAAP-ID); The Assessment of Sexual Knowledge (ASK), The Sexual Knowledge, Experience, and Needs Scale for People with an Intellectual Disability (SexKen-ID); the Socio-Sexual Knowledge and Attitudes Assessment Scale- Revised (SSKAAT-R); the General Sexual Knowledge Questionnaire (GSKQ); and the Sexual Knowledge and Behaviour Assessment Tool (SKABAT). Authors also interviewed clinicians who use assessment tools, although respondents only endorsed use of two of the six that were analyzed (HRSKAAP-ID and ASK). Results of the content analysis showed that psychometric properties of the tools are largely unavailable, with limited reliability and validity information. The ASK and SSKAAT-R reported validity, and ASK, SexKen-ID, SSKAAT-R, and GSKQ report at least one form of reliability. Instruments often feature drawings to provide examples for questions, with a few also including photographs. Only two depict any diversity in sexual orientation or cultural group in the illustrations. The majority of instruments include topics relative to relationship and what is appropriate for public versus private areas, legal issues associated with sexual relationships, physical aspects of development and sexuality (e.g., puberty, body parts, pregnancy), masturbation and intercourse, diseases, contraception, and orgasm. Libido, arousal, sex and technology (e.g., sexting, the internet), sexual aides or assistants, dysfunction, pleasure, and pain were largely ignored as topics (Thompson et al., 2016).

Thompson et al. (2016) respondents reported positive perceptions of using tools to assess knowledge, as it validates their work and recommendations to support sexual health of individuals with ID to support staff and family members. However, respondents described the tools as limited and insufficient if used alone. A major concern was the lack of guidance on what to do with the results as applied to educational needs of the individual. Other concerns included the risk of respondents answering in a socially desirable manner and the potential for responses to be misinterpreted by assessors. Some respondents also noted the illustrations were sometimes unclear to test takers and, because of their explicit nature, made discussions uncomfortable for some staff.

For adults with IDD living in the community, Medicaid Home and Community-Based Service (HCBS) waivers are a viable source of support for services related to sexuality and sexual health. Friedman and Owen (2017) analyzed use of Medicaid HCBS waivers to determine how and what types of sexuality services (e.g., education for contraception, sexuality awareness, victimization, reproductive healthcare) are provided. Using data from the 2015 fiscal year (FY), researchers found that 12% of waivers (n=111) nationwide included some type of sexuality service. Of these, the vast majority, 92%, were reactive in nature, used to curtail inappropriate behavior (e.g., inappropriate masturbation, touching). Only three services were identified as proactive, including two educational programs offered in New Mexico and Washington, DC, which emphasized social skills and sexuality education. Most of the services related to sexuality were embedded within habitation, or independent living services (76%) with the remainder provided as stand-alone. This finding supports the notion that sexuality education is important for the transition outcome of independent living goals.

Most effective methods to provide sexuality and sexual health information to individuals with IDD, as discussed previously, is an area with limited empirical support. However, a few general guiding principles have been proposed by Harader, Fullwood, and Hawthorne (2009): (a) an individualized approach tailored to the person's level of understanding and social situation; (b) concrete and specific examples, materials, or media that match the individuals ability level; (c) a variety of teaching strategies and materials (e.g., graphics, written modules, role playing, video modeling, peer modeling); and (d) continuing to provide learning opportunities over time to reinforce and ensure generalization of the information. Jamuna and Rani (2017) provide initial evidence of the effectiveness of the behavioral intervention and visual prompting on teaching appropriate touch (e.g., private and public parts, feelings, rights, "good and bad" touch) to women with mild ID. Participants increased knowledge of touching following participation in a visual prompting learning system.

Implications for Rehabilitation Practice

For rehabilitation counselors (RCs), the topic of sexual education may seem to be somewhat ancillary to their typical role and involvement with young adults. However, given the likely increased role of RCs in the transition process (e.g., Workforce Innovation and Opportunity Act [WIOA], 2016) and mandated emphasis on pre-employment transition services, we believe that this issue is relevant and important for practicing rehabilitation counselors working with young adults with IDD. According to the Rehabilitation Counseling Consortium (2005), an RC is one who possesses the specialized skills, knowledge, and attitudes necessary to effectively assist individuals who have disabilities in the achievement of their personal, social, psychological, and vocational goals. Considering this definition, the personal and social well-being of consumers, which includes aspects of sexuality, is clearly within the purview of RCs. Moreover, it is important to note that both the Commission of Rehabilitation Counselor Certification (CRCC, 2015), the (Council for Accreditation of Counseling & Related Programs (CACREP, 2015) list sexuality and disability as part of their knowledge/competency areas. Due to the holistic nature of RC practice, RCs are afforded the opportunity of spending significant time learning about all aspects of a consumer's life, which positions the RC in the role of establishing appropriate and necessary plans.

Although the majority of vocational rehabilitation (VR) counselors have large caseloads that may preclude them from effectively collaborating with local schools, VR transition specialists, who are integral participants in the secondary transition process, are uniquely positioned to influence change and inform special educators about potential gaps in student knowledge. Plotner and Dymond (2017), in their study evaluating the role of VR transition specialists in the development of curriculum, acknowledge that, as a result of their limited knowledge about post-school employment, special education teachers are positioned to accept recommendations from VR transitional specialists regarding the development of adequate vocational curriculum, and we would extend the utility of the collaboration between transition specialist and educators to help inform on other post-school adult milestones, including those related to safe community living, adult social interactions, and understanding social norms in employment settings. Although the literature clearly articulates the importance of ensuring relevant curricula for students matriculating through the transition process, VR counselors are frequently excluded from participating in assessing and prescribing curricular needs (Plotner, Trach, & Shogren, 2012). Collaboration between VR transition specialists and special educators has been a long-standing challenge but has been identified as a key component to improving post-secondary outcomes (Argan, Cain, & Cavin, 2002; Oertle & Trach, 2007; Taylor, Morgan, & Callow-Heusser, 2016). Although tools for effective collaboration is critical, and a plethora of literature is devoted to it, the developmental process is beyond the scope of this article. Because an understanding about curricular needs of individuals with significant disabilities as they relate to post-secondary success is critical, VR transition specialists are well positioned to collaboratively inform curricular decisions in an appropriately individualized manner (Bouck, 2012; Dymond, Renzaglia, & Hutchins, 2014).

Being an active participant at transition planning meetings, VR transition specialists have an opportunity to assist in identifying specific developmental areas of individualized educational plans (IEP). We are not proposing that VR transition specialists be responsible for sexuality education curriculum development; rather, because they are an integral component of the transition team, simply ensuring that sexuality issues are addressed in the IEP is an important role. This must be done in collaboration with educators, as school personnel are ultimately responsible IEP provision. As such, Travers and Tincani (2010) describe potentially critical elements of an individual's IEP, which should include: (a) the importance of sharing similar interests with others, (b) concepts of love and intimacy, (c) appropriate ways to express emotions, and (d) how to deal with rejection. These components are designed to address appropriate social skills because a critical consideration surrounding sexuality is ensuring one's ability to adequately assess and navigate the appropriate social and relationship challenges. A lack of awareness of what kinds of behaviors are considered appropriate or inappropriate and familiarity with social norms (e.g., proximity, appropriate touch) leaves young adults with IDD at risk for experiencing unwanted attention or abuse as well as possibly

offending or alienating coworkers or peers at work, in group living situations, or in the community. As such, social skills should be appropriately addressed in sexuality education curriculum as they are critical to a successful transition into the adult world. Because individuals with IDD frequently lose their jobs for reasons having to do with social awareness rather than for nonsocial reasons, including the social skills of sexuality in a student's IEP may ultimately result in improved post-secondary outcomes. The development of adequate social skills is a factor in outcomes, and Roessler, Brolin, and Johnson (1990) demonstrated that students with appropriate social skills have a higher quality of life and are more likely to be engaged in post-secondary employment.

Although a VR transition specialist would not be called upon to provide sexual education to a young person with IDD directly, he or she may work with special education teachers and parents to ensure that sexuality education is adequately included in the student's matriculation. Furthermore, as parents are encouraged to be involved in the transition planning process, one would be remiss not to discuss the issue of sexuality with them as well. The VR transition specialist would serve as a reference point for parents to facilitate sexuality discussions in the home by providing parents with educational materials (e.g. www.parentcentralhub.org, www.SIECUS.org) and resources (e.g., information on services available through Medicaid waivers). These resources would allow parents to have the necessary information to effectively engage adolescents in sexuality discussions prior to the time when the young adult may leave the home to enter the workplace or a post-secondary educational setting.

Although sexuality is an area addressed in the RC scope of practice, this is not a guarantee that RCs universally feel prepared to take on this topic with transition-aged consumers with IDD. In fact, literature regarding RC attitudes towards discussing issues of sexuality with any consumers, let along young adults with IDD, is hard to come by. Some findings indicate that professionals feel sexuality discussions are out of their purview (Kendall et al., 2003) and perceive personal inadequacies in knowledge and training with regard to sexuality (Burling, Tarvydas, & Maki, 1994; Foley et al., 1999; Haboubi & Lincoln, 2003). However, findings indicate that increased competency with respect to issues of sexuality and knowledge relative to sexuality and disability leads to increased comfort in addressing sexuality throughout the rehabilitation process (Kazukauskas & Lam, 2010). Resources are available for counselors wishing to enhance their knowledge of issues related to sexuality, such as assessment tools to help gauge the individuals understanding of sexual health and relationships. Counselors may also wish to collaborate with medical or direct care staff to ensure that issues related to sexuality and sexual health are addressed.

Conclusion

Clearly, sexual health and sexuality education for individuals with IDD is an ongoing challenge. The paucity of research addressing the role of VR transition specialists in ensuring that individuals with IDD have been provided with the necessary sexual knowledge and associated social skills to positively affect post-secondary outcomes results in unspecified roles, responsibilities, and opportunities for the specialist. As such, we have provided an overview of the scope of the problem along with some promising practices, which may lead to both improved outcomes and additional research. Although individuals with IDD have inadequate sexuality knowledge that negatively affect outcomes, these challenges can be overcome through the concerted efforts and collaboration between VR transition specialists, special educators, and parents. Addressing these challenges may result in improved social development and interactions in adult settings, which may ultimately result in improvement in measures of quality of life.

It is not reasonable to suggest (and we are not suggesting) that RCs become one-on-one sexual education providers for consumers, but they can advocate to ensure that each consumer is adequately prepared to transition into adulthood with the appropriate sexual knowledge to achieve successful outcomes. RCs work holistically with each consumer and, therefore, often have a better overall picture of areas of weakness, which should be addressed in the best interest of the consumer.

Future Research

In light of the challenges presented in this article, we believe additional research to provide additional insight into possible solutions is warranted. One area of needed attention is the preparation of graduate rehabilitation counselors to engage in meaningful discussions about sexuality. We believe that rehabilitation counselors, as a result of their holistic training, are in a unique position to provide guidance and facilitate the inclusion of sexuality education components to the student's IEP. Additionally, teaching rehabilitation counseling graduate students to assess their own biases and stereotypes toward individuals with IDD and sexuality that may affect his/her willingness to address issues of sexuality and sexual health. Another content area potentially in need of addressing is that of rehabilitation counselor's understanding and familiarity with the IEP development process. Lastly, special education teachers and transition rehabilitation counselors could benefit from research promoting greater understanding of what both parents and students with IDD want, need, and expect regarding sexuality education. This work should include a diverse sample to illuminate how culture influences norms and expectations among individuals and families. This knowledge would help to guide the development and implementation of appropriate and meaningful interventions. While education remains the responsibility of the school, the more comfortable and informed transition rehabilitation counselors are with this topic, the more they may be able to offer suggestions about developmental areas. We hope to have raised awareness to this important and largely unaddressed issue and, potentially, to inform future investigations and open discussions for rehabilitation practice.

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Impact of Workforce Innovation and Opportunity Act Changes on Agencies Serving Consumers with Blindness and Low Vision

Michele C. McDonnall
Mississippi State University

Adele Crudden
Mississippi State University

Anne Steverson
Mississippi State University

The purpose of this study was to investigate agencies' response to and their perceived impact of two specific changes associated with the Workforce Innovation and Opportunity Act (WIOA): 15% budget allocation for pre-employment transition services (pre-ETS) and elimination of the homemaker closure. Representatives from combined and separate agencies serving consumers with blindness and low vision in all 50 states and the District of Columbia participated in a telephone survey to provide information about the agency's response to these changes. Separate agencies were more likely to experience a challenge with the pre-ETS requirement, but were less likely to be impacted by the elimination of homemaker as a closure status. A concern for all agencies was the yet-to-be-determined impact on services to consumers over age 21.

The Workforce Innovation and Opportunity Act (WIOA), which became law in July 2014, was the first reauthorization of the Rehabilitation Act since 1998. Final regulations associated with WIOA were released in July 2016. WIOA changes included amendments to the Rehabilitation Act that made significant changes to the way state-federal vocational rehabilitation (VR) programs provide services to students with disabilities, and it eliminated the use of homemaker as a closure status (81 FR 55630, 2016). The long-term impact of these changes is unclear but there is the potential that these changes will have a more significant effect on VR agencies serving people who are blind or with low vision. This is because vision loss is associated with aging, disproportionately affecting older persons, with the prevalence of vision loss in youth less than 1% (Congdon et al., 2004; Erickson, Lee, & von Schrader, 2014) and because being closed as a homemaker is much more common among persons with vision loss. This study provides information about how VR agencies are responding to these two specific WIOA changes.

Michele C. McDonnall, NRTC on Blindness and Low Vision, P.O. Box 6189, Mississippi State, MS 39762.

Email: m.mcdonnall@msstate.edu

WIOA legislation requires that VR agencies reserve a minimum of 15% of their Federal budget allotment to work with local educational agencies to provide required pre-employment transition services (pre-ETS) to students with disabilities (81 FR 55630, 2016). According to WIOA, required pre-ETS include job exploration counseling, work-based learning experiences, counseling about postsecondary education, workplace readiness training, and self-advocacy instruction to consumers and "potentially eligible" youth to assist these youth in beginning their career planning and facilitating their paths toward competitive employment. Consequently, students receiving services need not be VR applicants or consumers to receive this array of services. Notably, expenses associated with postsecondary education, job placement services, or assistive technology may be provided to VR eligible consumers but are not regarded as pre-ETS (81 FR 55630, 2016). The final regulations are specific in differentiating pre-ETS from transition services (81 FR 55630, 2016), thus focusing the scope of pre-ETS to students. The intent of this legislative change is to expand the breadth and scope of vocational rehabilitation services to youth with disabilities so that they receive the services needed to facilitate their participation in competitive employment (81 FR 55630, 2016).

Pre-ETS may be an avenue to serve youth at a younger age, particularly those at high risk for failing to achieve competitive employment, and by offering them the necessary interventions to provide experiences and develop the skills that previous research has identified as leading to employment outcomes. One of the most well-documented factors associated with future employment for youth who are blind or have low vision is early work experiences (McDonnall & Crudden, 2009; McDonnall, 2010; McDonnall, 2011). Rehabilitation counselors reported that becoming involved with youth before they turn 16 years of age, communication among the various service systems and the family, parental involvement, and skill development facilitate competitive employment (Crudden, 2012). Among youth served by VR agencies, factors positively associated with employment outcomes included multiple work experiences, academic competence, self-determination, and use of assistive technology (McDonnall & Crudden, 2009). Interventions that promoted employment among youth who are blind or visually impaired include those directed at addressing career awareness and job seeking skills, parental involvement, and work experience, as well as behavioral interventions to improve independent living skills (Cavenaugh & Giesen, 2012).

Unlike many other disabilities, blindness and low vision are strongly associated with aging, with the vast majority of the population aged 65 and older (Congdon et al., 2004). Consequently, VR consumers with blindness and low vision tend to be older than VR consumers with other disabilities (McDonnall, 2016). Requiring VR agencies to allocate 15% of their entire budgets to pre-ETS may present unique challenges to VR agencies that exclusively serve consumers with blindness and low vision, as they are now required to spend a large portion of their budget on a small portion of their population.

In a further effort to promote integrated competitive employment, WIOA eliminated inclusion of homemakers and unpaid family workers in its definition of employment outcomes (81 FR 55630, 2016). Homemaker outcomes have typically been associated with older consumers, women, and consumers with blindness or low vision (Capella-McDonnall, 2006). Although VR agencies' use of homemaker as an employment goal has declined, the decrease has been less among persons with vision loss than among those with other disabilities (80 FR 21091, 2015; Capella-McDonnall, 2006). Commenters about WIOA regulations (81 FR 55630, 2016) made the case that utilizing the homemaker outcome was a means to provide services associated with vision loss, such as braille and orientation and mobility instruction, and that it facilitated movement into employment. However, WIOA regulations directed VR agencies to provide vocational counseling and guidance to these individuals so they could develop employment goals and be served in the VR system (81 FR 55630, 2016). Thus, WIOA legislation eliminates uncompensated employment outcomes, stresses the achievement of high quality employment (81 FR 55630, 2016), and ends the long debate about the legitimacy of the homemaker option as an appropriate VR closure (GAO, 1982; RSA, 2004).

The Independent Living Services for Older Individuals who are Blind (OIB), authorized under Title VII, Chapter 2 of the Rehabilitation Act, provides a mechanism to serve people 55 and older who need assistance to live independently. The average number of persons served through the OIB programs from 2008 through 2013 appears relatively stable, but the OIB program has limited funds and is potentially unable to meet the all needs of its consumers (Farrow & Steverson, 2016). The elimination of the homemaker closure is anticipated to result in an increase in requests for OIB services, and the legislation suggests that VR agencies provide training and technical assistance to Centers for Independent Living (CILs) to develop staff competencies to serve persons with vision loss (81 FR 55630, 2016).

Upon publication of the proposed WIOA regulations, VR agency administrators expressed concerns about these changes (Schroeder, 2015). WIOA went into effect in 2014, but no information has been published about agencies' response to the changes or the impacts of the changes thus far. The purpose of this study is to investigate agencies' response to and experiences with the changes to the Rehabilitation Act implemented by WIOA, with a focus on pre-ETS and elimination of the homemaker closure status. The current or anticipated impact of these changes on consumers served by the agency was also investigated.

Method

Participants

VR agencies in all 50 states and the District of Columbia who provide services to blind and visually impaired consumers (i.e., combined and separate, or blind, agencies) were invited to participate in the study. The agency director listed with the Council of State Administrators of Vocational Rehabilitation (CSAVR) was asked to participate, or recommend a designee to participate, in a survey conducted over the telephone. Twenty-seven agency respondents were the agency directors, 23 respondents were their designees, and one respondent was a direct contact of researchers, rather than being recommended by the agency director. Of the 23 designees, 11 were from combined agencies and 12 were from separate agencies. Representatives of combined agencies were asked to report, to the best of their ability, only for services concerning persons who are blind or have low vision. The designees from the 11 combined agencies were generally the directors of blind services. The designees from the 12 separate agencies were the assistant or deputy directors or other high-level administrators.

Procedure

Researchers conducted qualitative interviews with five state agency administrators to determine questions for the national VR agency directors' survey. The survey was piloted with three state agency administrators, and some slight changes to questions were made based on their responses and suggestions. The survey items covered in this report consisted of four questions about pre-ETS and three questions about the elimination of homemaker as a closure status. Survey items about pre-ETS included: how agencies were spending the 15% requirement; the potential impact the 15% requirement had, or will have, on the agency; potential reduction of services to consumers older than age 21 because of the new regulation; and potential difficulty meeting the 15% requirement. Survey items about the elimination of homemaker outcomes included: the impact of the elimination of homemaker outcomes; what services will now be available to homemaker or unpaid family worker applicants and who will serve them; and whether the agency is helping to prepare alternative service providers.

After finalizing the survey, requests were made to CSAVR and the National Council of State Agencies for the Blind to approve and support this research prior to contacting agency directors. CSAVR provided additional input into survey items. An announcement about the national survey was posted in CSAVR's weekly newsletter and emails were sent directly to agency directors requesting participation in the research study. Telephone contacts were initiated when emails did not generate responses. Researchers scheduled times with agency representatives to conduct the 30 to 45 minute survey via telephone. Interviews began in October 2016 and ended in June 2017 and were audio recorded. Verbatim transcripts of the survey responses concerning pre-ETS and elimination of homemaker as a closure status were generated from the recorded files.

Data Analysis

Descriptive statistics were used to summarize responses to closed-ended items. For open-ended items, researchers employed directed content analysis and used results to supplement descriptive statistics. Researchers analyzed the transcripts and identified key concepts. As patterns emerged, researchers counted and reported similar responses. Summaries of diverse responses were generated and evaluated for potential applicability or interest. To compare responses of separate versus combined agencies, percentages for each group were calculated. A statistical hypothesis test was not necessary to use with this data, as the data represents a population. Any differences noted between separate and combined agencies are real differences that do not need to be tested for significance.

Results

Pre-employment Transition Services

Agency representatives were asked if their agencies were doing any of a list of seven activities to help spend their reserved pre-ETS funds. Percentages of agencies that are counting each activity are provided in Table 1. The majority of agencies are utilizing all of the activities with the exception of serving youth at a younger age. Agencies that are not serving youth at a younger age typically began serving youth at age 14, or younger, prior to WIOA. Fourteen is the typical age that agencies begin serving youth currently, with 71.1% (n = 32) starting services at that age. A few separate agency representatives reported that they are not able to count services to youth at the age they begin serving them for pre-ETS purposes because the general agency in the state would not agree to that younger age.

Table 1
Percentages of Agencies Using Specific Activities to Help Spend Pre-ETS Funds

Activity	Percent	Frequency
Counting staff time towards this dollar amount	90.2	46
Establishing new programs for students (conducted by VR staff)	82.4	42
Providing new programs for students (conducted by external organizations)	98.0	50
Increasing the number of services provided to students	84.3	43
Increasing the amount of services provided to students (duration, intensity, frequency)	84.3	43
Providing additional training for staff who work with students	80.4	41
Serving students at a younger age than you did previously	45.1	23

Agency representatives were asked if they were doing anything else to count towards the 15%, and they provided this information as well as other comments about pre-ETS requirements. Four agencies hired staff who work exclusively with pre-ETS youth, including one agency that hired 20 new transition staff and supervisors after WIOA. One agency has counselors who work exclusively in the schools. Interestingly, one agency switched from having dedicated transition counselors to all counselors serving transition-age youth in response to WIOA. The reason given for this change was to reduce travel time, so that counselors could spend less time in transit and more time with consumers. Nine agency representatives commented on the increase in recruitment and outreach to youth that has occurred as a result of WIOA. Outreach to schools has increased dramatically for some agencies, and one representative indicated her agency is aggressively recruiting students to be involved in transition programs. Only one agency representative reported difficulty getting education partners involved, which presented a big challenge for that agency. Change in recruitment and outreach to students was the principal change associated with WIOA for one agency:

> *For us the biggest change has been making sure that we are getting out to the schools earlier. We are meeting with clients earlier… I have encouraged them to talk to the VI teachers and start getting in touch with parents with students who are in 7th and 8th grade. Maybe attend some IEP meetings, just to be able to start that line of communication.*

Impact of 15% Pre-ETS Requirement

Agency representatives were asked what impact the 15% requirement has had, or they anticipate it will have, on their agencies. The majority of respondents reported challenges, difficulties, and frustrations with WIOA implementation associated with the 15% requirement. Representatives were not specifically queried about an order of selection process, though 16 mentioned it. Five representatives expressed concern that their agencies would implement an order of selection or that the existing order of selection policy would be more restrictive due to WIOA. An additional state implemented an order of selection policy two years ago in response to WIOA. Regardless of whether an order of selection process was mentioned, many representatives expressed financial concerns in response to the 15% requirement. Several representatives discussed frustrations of agency personnel in trying to meet the WIOA requirements, the implementation of which require a significant amount of time and effort, for administrators, counselors, and other staff. Another often-mentioned challenge was being able to actually spend the 15%, which in part stems from the rigidity of the pre-ETS requirements. Representatives noted that much of what they provided to transition-age youth in the past cannot be counted toward the 15% requirement. As one representative stated:

It's a huge impact because it has been very narrowly scoped. It's 15% for a small subset of services, most of which didn't cost us a lot in the past, other than staff time.

Several agency representatives discussed their concerns about *appropriately* spending the 15% requirement. There was a concern expressed by a few representatives that there simply are not enough transition-age youth with blindness or visual impairment on whom to spend such a large portion of the agency's budget. This representative noted that the agency cannot rely on the general agency in the state to help spend some of the separate agency's 15%. One representative stated that the challenge is to develop new programs on which to spend the money, but noted that developing quality programs takes time. One agency representative stated that "*Frankly, we're having to do things that five years ago I would have said weren't reasonable*." Another representative had this to say about appropriately spending the money:

...if you don't have the population to spend it on, you're going to be penalized for not spending it? We're not an agency that wants to waste tax dollars. We consider ourselves to be good stewards of tax dollars, and so we're not going to spend money just to spend it.

Other agency representatives discussed the philosophical change, or shift in focus, caused by the 15% pre-ETS requirement. Agencies are clearly now expected to focus more on transition-age students than they did prior to WIOA, as illustrated by this comment from an agency representative:

I think it's defining a philosophical change in the programs from being a generalist agency. I think it's certainly doing what the WIOA wanted, making us all much more keenly aware of students with disabilities…

Another agency representative stated that the biggest impact for his agency was the shift in focus to pre-ETS and the need to develop new programs for these services to spend more than double what they were previously spending in this area, as well as how to serve everyone else with less money. Another representative stated:

The WIOA flips us from being a primary adult-based service to primarily being a youth service. We've had to really start talking with our staff about: We have to understand Special Education way better than we ever did.

Interestingly, eight agency representatives reported that the 15% pre-ETS requirements did not represent much of a challenge, or change, for their agencies. Six of the representatives were from separate agencies and only two were from combined agencies. They reported that their agencies had a significant focus on youth prior to WIOA, and a few stated they were already spending 15% on these services. One of these representatives indicated that the biggest challenge was not in meeting the requirements, but in making sure to accurately categorize and determine what qualifies for the 15% requirement. Another representative indicated that they have been providing many services for transition age youth for a long time, and now they need to start identifying and tracking those services, rather than just considering them part of their jobs.

Positive Aspects of 15% Pre-ETS Requirement

Although not asked about any positive aspects of the 15% pre-ETS requirement, many agency representatives (24%, n = 12) voluntarily presented positive aspects of the change. A similar percentage of separate (26.1%) and combined agency (22.2%) representatives noted positive aspects. Some felt there were negative aspects too, but did recognize the value that had come from this requirement. The most commonly mentioned positive aspect was that this change required the agency and its staff to be more creative or innovative, in terms of developing new programs and being creative in providing services to transition-age youth. It also helped some agencies begin serving youth at a younger age:

What WIOA did for us was helped us re-look at what we were doing and gave counselors that permission and motivation to say, "No, no, no. We need to really look at their skills earlier, so that they'll be ready for postsecondary school or for employment." It wasn't that we had a rule that we couldn't work with younger individuals. It was just that there was a tendency not to take applications for younger students.

Other commonly mentioned positive aspects were that it caused the agency to reach out and expand partnerships with external organizations and identify additional students who could benefit from services. Some representatives mentioned the value of the real work experiences additional youth were receiving as a result of the requirement. A few representatives talked about the expectation that outcomes for transition-age consumers will be better as a result of the change. One representative summed up his feelings about the change in this way:

So while there are some challenges to it, it also should, over the long term, result in some pretty good things. I'm excited that, in my opinion, pre-ETS will assist many young people and not fall into the trap of not working or not working very much in order to keep benefits.

Difficulty Meeting 15% Pre-ETS Requirement

Agency representatives were asked if they had, or they anticipated having, difficulty meeting their 15% pre-ETS requirement. Two representatives responded that they did not know or were unable to answer the question. A majority of agencies (57.1%, n = 28) are experiencing difficulty meeting the requirement. Separate agency representatives were more likely to report difficulty meeting the requirement: 62.5% compared to 52.0% for combined agency representatives. Despite this 15% requirement being a statewide requirement rather than an agency-level requirement, this will still be a challenge for separate agencies if the general agency is not spending more than 15%. One separate agency representative commented that he did not think his agency could meet the 15% requirement if it were required by agency rather than by state. Interestingly, although several separate agency representatives reported that they could meet the requirement with the help of the general agency in the state, one separate agency representative reported that her agency could easily meet the 15% requirement and would try to help the general agency by spending more than the required 15%.

Reduction in Services to Consumers Over Age 21

Agency representatives were asked whether the 15% pre-ETS requirement had caused the agency to reduce services available to consumers older than age 21. Three respondents were not able to provide an answer to this question. A majority of those who answered indicated that this had not happened: only 22.9% (n = 11) responded Yes. A slightly higher percentage of separate agency representatives answered Yes compared to combined agency representatives: 27.3% versus 19.2%. Despite the relatively low percentage of agency representatives who answered affirmatively to this question, almost all people who answered No followed that with an indication that it had not happened *yet*, but was a concern for the future. Some indicated it was too early to know what the impact on services to older consumers would be, while others indicated it will definitely happen in the future as essentially a portion of their budgets were cut. One representative described the impact to adult services in this way:

We haven't needed to do a severe reduction yet, but the counselors are being creative in being able to serve everybody that comes in the door that's eligible. But it's getting to be more and more difficult.

A few agencies described cost-savings methods they have instituted to help offset the reduction in funds for adult services. One agency has put in place fee schedules to help maximize the remaining budget, such as limiting expenditures for postsecondary education. Another agency is reviewing its policies about paying for certain equipment, such as hearing aids, and identifying the most cost-effective method to purchase those that can be used statewide. Another agency has changed their fee schedule for community rehabilitation providers (CRPs) in the state, so that they are paying less for some adult services and more for pre-ETS. Overall, the CRPs will receive approximately the same amount of money but will be compensated more heavily for providing pre-ETS. Two agency representatives discussed identifying other resources to cover the shortfall for adult services. One agency was actively working on identifying additional resources and another secured additional funding from its state legislature for state match funds.

Elimination of Homemaker Closure

Agency representatives were asked an open-ended question about the impact of the elimination of homemaker outcomes on their agency. Approximately half of the respondents (51.0%, n = 26) indicated that this change would have little or no impact on the agency, with more separate agencies reporting limited impact compared to combined agencies: 58.3% versus 44.4%. A common response from those who indicated limited impact was that their agency had already stopped using homemaker as a closure status, prior to WIOA, or used them sparingly. A few representatives reported that the agency had anticipated the change and had therefore responded prior to the implementation of WIOA.

For some agencies who were utilizing the homemaker closure, this change is a concern, primarily in terms of not being able to serve a group of people who need blindness services to help them become independent in their homes. A concern expressed by several agency representatives was that some people who come to the agency for services do not believe in their ability to work; once these people have the opportunity to learn blindness skills and alternative ways of accomplishing tasks, they realize their potential and decide to pursue employment. The elimination of the homemaker closure may remove that opportunity for these people. One representative described the problem in this way:

There are a lot of people out there that are not getting the array of services that they could previously get when we could make them homemakers. They're not getting, especially, the intensive adjustment to blindness-type training…and, as a result, I would say that they're not getting as much of an opportunity to consider their options for employment because a lot of times people would start off as homemakers and then realize they could work. I'd say we have less seniors moving toward employment.

Several representatives reported that the agency has provided training to its counselors about how to talk to new applicants about an employment goal. As one representative stated, they are working with staff to "*make sure they understand how we counsel people towards career goals and looking towards the future*." Another representative described the training with counselors this way:

So one of the things that we are doing on the front end is really working with our staff to counsel these individuals to help them to consider vocation rather than a homemaker goal because, you know, again, a lot of them change their mind and move into other things and so, we're saying, "Rather than to change your mind later, let's work on doing that career assessment" and we're planning stuff on the front when we do eligibility determination and plan development.

Another representative described their agency's approach this way:

…if someone comes in and says they need blindness skills training and they don't want to work, we provide a tremendous amount of vocational guidance to allow them to understand that work is possible. My personal feeling is that some of the older people that just want the training and don't want to go to work need to be exposed to their potential.

Some agencies are asking their referral sources to continue to refer people, even if they indicate they do not want to work, in order to have the opportunity to provide counseling to encourage employment. Some representatives reported that the agency would provide initial services, such as assessment at the blindness center, to give consumers a chance to learn more about their potential and consider all options before making a decision not to pursue employment. One agency representative mentioned that they make sure to explore all options for self-employment with consumers who indicate a desire for a homemaker goal.

Services for People with a Homemaker Goal

Agency representatives were asked about services that will be available within their states for people interested in a homemaker, or unpaid family worker, goal. An obvious potential source of services for those aged 55 or older is the Older Individuals who are Blind (OIB) program, which is operated through the agency. However, many representatives reported that the OIB program was overtaxed prior to WIOA passage. One person indicated that he anticipated OIB services being "*watered down a little bit*" to accommodate the additional people who previously received VR services under a homemaker goal. Other representatives also commented on the decrease in services consumers will receive in the OIB program compared to the VR program.

For people under the age of 55, common referral locations for agencies are Centers for Independent Living (CILs) or local blindness organizations/CRPs. A few representatives reported that the agency does not currently have anywhere to refer people who do not qualify for the OIB program. Approximately a quarter of representatives ($n = 13$) reported that they have state funds to serve people under age 55 who do not have an employment goal; consequently agency staff would serve them under a different funding mechanism. However, all the agencies that reported having state funds for this purpose indicated that the amount of funds available is very small. A few agencies plan to ask, or have asked, their state legislatures for funds to serve this population.

Agency representatives were asked whether their agencies are actively helping to prepare alternative providers to serve this population. Twelve representatives did not answer this question as they are not referring consumers to other organizations, either because they are providing services internally (with state funds) or they have not identified an appropriate referral source. Of the representatives who did respond, 38.5% ($n = 15$) reported that they are actively working with alternative providers to help them serve this population. More separate agencies (50%, $n = 8$) than combined agencies (30.4%, $n = 7$) are helping to prepare alternative providers. This is how one agency representative described assistance provided to CILs in his state:

> *Some of them (referring to the CILs) have jumped in and said that was fine, they can provide those services. Others are feeling as if they just aren't ready for that. We're working with them. We are actively working with those agencies to help them come up with ideas and help them figure out how to do that.*

Discussion

This is the first formal study evaluating the perceived impact of WIOA changes, specifically the pre-ETS requirement and elimination of homemaker as a closure status, on VR agencies serving consumers with blindness and low vision. Agency administrators reported on their agencies' response to and experiences with these changes, as well as the perceived current and future impact on their agency. The majority of agency representatives described challenges or difficulties associated with these WIOA changes. Our results support that the pre-ETS requirement has been more of a challenge for separate agencies than combined agencies. A larger proportion of separate agency representatives reported difficulty meeting the 15% requirement compared to combined agencies. Separate agency representatives were also slightly more likely to report that the requirement has caused them to reduce services to consumers who are older than age 21. It is important to note, however, that six separate agency representatives reported that the new requirement was not a big change for their agencies as they have traditionally provided intensive services to youth. Only two combined agencies made similar statements.

One of the big challenges to the pre-ETS requirement is the narrow scope of what qualifies to apply towards the 15%, which was mentioned by several respondents. For youth with visual impairments, assistive technology (AT) is vitally important, both to being successful in school and in the labor market after school. AT for these youth is often expensive, and although the school system may provide the needed technology, youth may not be able to use it whenever desired. AT or training in the use of AT would be a valuable expenditure of transition funds for youth who are blind or visually impaired as proficiency with technology is important for achieving competitive employment, yet it cannot count towards the required 15%. Another service that would be particularly important for this population is transportation assistance to attend programs and work experiences. Although the agency can provide this assistance, transportation expenditures cannot count towards the 15% requirement. Youth often need transportation to participate in the pre-ETS programs that are included in the 15%.

It is noteworthy that, without being asked, almost a quarter of respondents mentioned positive aspects of the pre-ETS requirement. Many agency representatives indicated that this regulation has compelled them to be creative and innovative in their service delivery for youth, and it has resulted in many new programs being offered to youth. The overarching message about the positive aspect is that it provides an opportunity to help youth more than the agencies have in the past. Several agencies have identified additional blind and visually impaired youth who are eligible for services through their expanded outreach efforts. Some respondents were particularly optimistic about the potential positive impact of the additional services being provided to youth because of the pre-ETS requirement, with the thought that the youth will have improved opportunities for competitive employment and may not need VR services when they are older.

Reduction in services to consumers over the age of 21 has been a concern because of the pre-ETS requirement. Most agency representatives reported that this has not happened – yet. Virtually all agencies acknowledged that this is a concern for the future, and some anticipated that this will happen in the future. For separate agencies, who exclusively serve a population that primarily consists of people of older ages, the pre-ETS requirements are more likely to have a negative effect on those over age 21. It is important to continue to monitor the impact of this regulation on adult consumers with visual impairments served by separate agencies.

Although the pre-ETS requirement has been more of a challenge for separate agencies, the elimination of the homemaker closure status was less likely to impact them. Separate agencies were more likely to report that they had eliminated homemaker closures or used them very sparingly before WIOA. Conversely, many separate agency representatives considered the homemaker closure an important goal under which to provide services to consumers, and they expressed concern about taking away services for this population. Many combined agency representatives also expressed concern about eliminating services for this population. In some states, independent living services are readily available for people who do not want an employment goal. However, in other states there are not viable options for these services, with the exception of the OIB program for those 55 and older, which is already overextended in many states. When consumers are not yet 55 years of age and do not have competitive employment as a goal, the primary option for service is through the CILs. In anticipation that CILs are not prepared to serve this population, WIOA final regulations suggested that VR agencies provide CIL staff training and technical assistance. Yet at the time of this survey most agencies were not providing this service. If VR agencies received funding for providing this service to CILs, potentially more could receive this support.

Some VR agencies receive funding from their state budgets to provide services to people with vision loss who do not to want to pursue a vocational goal. Agencies that do not currently receive such state funding may want to pursue this as an option. However, many states are experiencing financial concerns which may preclude those states from providing additional funds in a new area such as this. Additional research to investigate how to maximize the resources for people with a homemaker goal appears indicated.

Many agency representatives indicated that their agencies are doing what the WIOA regulations recommended, in terms of encouraging people who initially do not want to pursue employment to consider it as an option. Because consumers often change their minds about their vocational goals after learning even some basic blindness skills, several agencies allow the person to decide on their goal after they receive assessment. VR agencies can provide some services during the evaluation period so that consumers with newly acquired vision loss or deteriorating vision have the opportunity to become better adjusted and learn basic skills that might improve their confidence in the ability to continue or purse employment. Research conducted in the United Kingdom found that people are less likely to pursue employment within their first two years of vision loss (Bruce & Baker, 2005).

Conclusion

The implementation of the new WIOA regulations has been challenging for agencies, as most major changes tend to be. The greatest challenge described by agency representatives to the questions posed in this survey was appropriately spending the 15% required funds on pre-ETS. Overall, agencies seem to be adapting well to these major changes and many are enthusiastic about the positive benefits for students with disabilities. A big concern, and an unknown impact at the time of our survey, is the possible reduction in services to people over age 21. This is an important area of focus for future research with consumer data from the Rehabilitation Services Administration Case Service Report (RSA-911 data). Unfortunately, RSA-911 data is not currently available. Without this data, it will not be possible to empirically evaluate the effects of the WIOA changes. It is important that the RSA-911 be made available so researchers can determine the impact of WIOA regulations on VR service delivery and consumer outcomes.

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Identifying Rehabilitation Priorities Among Ex-prisoners Vulnerable to Mental llnesses and Substance Abuse

Shannon Dias
Queensland Centre for Mental Health Research

Geoffrey Waghorn
Queensland Centre for Mental Health Research

Stuart A. Kinner
The University of Queensland

Robert Ware
Griffith University

Ed Heffernan
The University of Queensland

The aim of this study was to explore whether post-release employment reduces the risk of reincarceration after controlling for known predictors of reincarceration including mental health vulnerability, substance abuse risk, gender, age, indigenous status, and prior imprisonment. The study was a secondary analysis of data from a multisite randomized control trial (N=774) conducted in Queensland, Australia across seven prisons between August 2008 and July 2010. Data were collected at a baseline interview prior to release, and at three follow-up telephone interviews at one, three and six months post-release. Vulnerability to mental illness and risk of substance abuse (adjusted hazard ratios ranged from 2.0-3.1), and limited employment post-release (adjusted hazard ratio 1.5, 95% confidence interval 1.1-2.1) increased the risk of reincarceration over and above the known effects of younger age, male gender, and prior incarceration history. The characteristics most associated with reincarceration can be used to triage candidates for more intensive forms of community based vocational rehabilitation.

A substantial proportion of the overall cost of prisons in developed countries can be attributed to ex-prisoners returning to prison after release. Internationally, reincarceration estimates are as high as 55% within five years of release (Durose, Cooper & Snyder, 2014; Fazel & Wolf, 2015). In Australia, a national adult prison census on 30 June 2016 found that 56.2% of 38,845 prisoners had prior incarcerations (ABS, 2016). The same national census reported that 64% of Queensland prisoners had prior incarcerations, 91% were male, and 32% were indigenous (Aboriginal or Torres Strait Islanders) (ABS, 2016). Reincarceration remains challenging in Australia and in other developed countries, because decades of research and substantial investment in prison-based programs, transition programs, and post-release supervision, do not appear to have reduced reincarceration rates.

Community rehabilitation, which involves identifying the most at risk subgroups and designing tailored interventions to facilitate more successful transitions, is one potential strategy for reducing reincarceration. The aims of this study support the goals of community rehabilitation by exploring whether post-release employment reduces the risk of reincarceration after controlling for known predictors of reincarceration, including mental health vulnerability, substance abuse risk, gender, age, indigenous status, and prior imprisonment.

Geoffrey Waghorn, Queensland Centre for Mental Health Research (QCMHR), The Park Centre for Mental Health, West Moreton Hospital and Health Service, Queensland Health, Brisbane, Australia..

Email: grmwag@hotmail.com

In a meta-analysis of 131 studies of the predictors of recidivism, Gendreau, Little and Goggin (1996) found that: younger age, being male, past criminal activity, having criminal associates, antisocial personality, prior substance abuse, and low social achievement, were each associated with recidivism. This was defined as any post-release arrest, conviction, reincarceration, parole violation, or a combination of those. In an Australian study of ex-prisoners (*n*=238), unstable accommodation, being homeless, and not being employed after release were each negatively associated with staying out of prison (Baldry, McDonnell, Maplestone & Peeters, 2004). These results are consistent with a large community study in Norway where Skardhamar and Telle (2012) found that post-release employment significantly reduced the risk of re-offending, for all categories of principal offence, among a national cohort consisting of every person released from prison in 2003.

Other researchers have found that various attributes of criminal history increase the risk of both general recidivism and violent re-offending. However, the relative importance of clinical characteristics such as mental health diagnosis and substance abuse risk as predictors of recidivism remains unclear. An international meta-analysis of longitudinal studies published between 1959 and 1995 (Bonta, Law, & Hanson, 1998) examined 35 predictors of general recidivism among ex-prisoners, including those with a history of mental disorder. The authors found that the strongest positive predictors were: adult criminal history, juvenile delinquency, anti-social personality, and non-violent criminal history; and these applied to both those with and without mental disorders. Other significant predictors but with weaker associations were younger age, poor institutional adjustment, past psychiatric hospital admissions, male gender, substance abuse, and family problems. Psychosis, mental health treatment history, and having any mental disorder, protected against general recidivism. Interestingly, socio-economic status, race, education level, and previous problems with employment, were not found to be associated with general recidivism.

A more recent systematic review and meta-analysis of 27 studies produced different findings with respect to the association between mental disorders and recidivism. Fazel and Yu (2011) found an increased risk of repeat offending among those with psychotic disorders, compared to individuals without any psychiatric disorder. However, there was little difference in repeat offending between those with psychotic disorders compared to those with other psychiatric disorders. They found no evidence of a protective effect of having any mental disorder compared to having no mental disorder, against recidivism.

The international evidence is more consistent with respect to the impact of psychiatric disorders comorbid with substance abuse on recidivism, particularly when this is defined as returning to prison. Baillargeon et al. (2010) retrospectively examined the records of 61,000 Texas prisoners for the previous six years and found that those with comorbid psychiatric and substance use disorders exhibited a substantially higher risk of multiple incarcerations compared to those with psychiatric disorders alone, or a substance use disorder alone. Wilson, Draine, Hadley, Metraux and Evans (2011) followed 24,290 prisoners released from an urban US jail for four years. They found that 50% of people diagnosed with mental illnesses and no comorbid substance abuse, recorded at least one return to prison in the four year period following initial release, compared to 68% of those with a mental illness comorbid with substance abuse. The authors concluded that substance abuse is the driving force behind recidivism among people with mental illnesses.

Hall, Miraglia, Lee, Chard-Wierschem and Sawyer (2012) explored predictors of general and violent recidivism among prisoners with serious mental disorders leaving prison in New York State. They found that length and diversity of criminal history predicted general re-arrest, as did substance abuse diagnoses. Protective factors were participation in community mental health treatment, parole supervision, and parole coordinated with mental health services. Younger age, male gender and prior history of violence predicted re-arrest for violence. Another relevant finding was that no mental health indicators were associated with re-arrest for violence (Hall, Miraglia, Lee, Chard-Wierschem, & Sawyer, 2012).

In Australia, Thomas, Spittal, Taxman and Kinner (2015) investigated health-related predictors of reincarceration and found that a number of health-related attributes predicted reincarceration after adjustment for known risk factors including criminal history, drug-related sentence, younger age, male gender, and being indigenous. The health-related attributes that independently increased the risk of reincarceration were: risky use of cannabis, amphetamines or opioids prior to incarceration; use of central nervous system medications (as a proxy for psychiatric disorders); and reporting prior to release that maintaining physical health post-release was not important. Other aspects of health (sedentary behaviour, obesity, multiple lifetime chronic illnesses, and a history of self-harm) reduced the risk of reincarceration. Inclusion of health-related variables in the model improved prediction of reincarceration by five percent compared to a model with only demographic and criminal justice predictors.

The proportions of prisoners classified as affected by psychiatric disorders, including substance use disorder, depends on how these disorders are diagnosed and how diagnostic groups are classified. A systematic review of the prevalence of psychotic disorders among 33,588 prisoners worldwide found that 4% of males and females had a diagnosis of psychosis (Fazel & Seewald, 2012). In a national prisoner health study in Australia, 49% of prison entrants and 44% of prison discharges were classified as having a history of any mental disorder including substance abuse or dependence (AIHW, 2015, p.37). Mental disorders including substance abuse are thought to contribute to post-release adjustment difficulties with respect to accessing affordable mental health treatment, accessing income support payments, and obtaining suitable housing and employment (Denton, 2014; Mallik-Kane & Visher, 2008).

The main rehabilitative strategies of transition programs developed by forensic mental health services have typically focused on linking ex-prisoners with psychiatric disorders to appropriate mental health and substance abuse treatment services. However, this clinical approach is often not supported by community-based rehabilitation as a direct method for developing community engagement (Lindquist & Skipworth, 2000). This omission may re-

flect the limited availability of funding for more broadly defined rehabilitation services. It may also reflect a lack of service coordination in support of a broader approach to rehabilitation into the wider community. Although clinical approaches are important, they may lead to narrow interpretations of rehabilitation as either too mental health focused, or too exclusively concerned with substance abuse. A more general approach to community-based rehabilitation would typically focus on increasing socially valued role functioning (Waghorn, Chant and King, 2007) by supporting service user role preferences and, where demand warrants it, by providing more intensive and evidence-based forms of vocational rehabilitation (Marshall et al., 2014).

Community based rehabilitation in psychiatric outpatient settings is often considered as important as continuing mental health treatment and care for preventing hospital readmissions, and for reducing mental health service utilization in the longer term (Schneider, 2003). In line with the high value placed on rehabilitation in community mental health, a specialized form of supported employment has been developed. This is intended for those with severe mental illnesses to directly address, in a person-centered way, each individual's vocational goals. Known as the Individual Placement and Support (IPS) approach (Drake & Bond, 2014) this method is two to three times more effective in terms of commencing competitive employment in the open labor market, than other forms of vocational rehabilitation to which it has been compared (Kinoshita et al., 2013; Marshall et al., 2014).

This approach has also been trialed among those released from prison with severe and persistent mental illnesses, with promising results (Bond et al., 2015). At one year follow-up 31% of those allocated to the IPS program had commenced competitive employment compared to 7% among those who received a less intensive job-club intervention with peer support. The groups did not differ significantly during the follow-up in terms of hospitalizations, arrests or incarcerations, although the latter was encouragingly low at 2% for both groups. The authors noted that IPS is effective in this target group but may need further augmentation in order for higher proportions to attain competitive employment.

The aim of this study was to explore whether post-release employment reduces the risk of reincarceration, after controlling for established predictors of reincarceration including mental health vulnerability, substance abuse risk, gender, age, indigenous status, and prior imprisonment. This was explored by investigating: (1) which individual characteristics were associated with employment in the first six months post-release; (2) which individual characteristics were associated with return to prison six months or more after release from prison; (3) whether vulnerability to mental illness or substance abuse risk prior to release from prison, increased or decreased the risk of returning to prison after controlling for other known risk factors; and (4) whether the extent of employment in the first six months following release from prison reduced the risk of returning to prison. The answers to these investigations were expected to aid identification of rehabilitation priorities in terms of identifying the individual characteristics that help classify those most likely to benefit from more intensive forms of vocational rehabilitation.

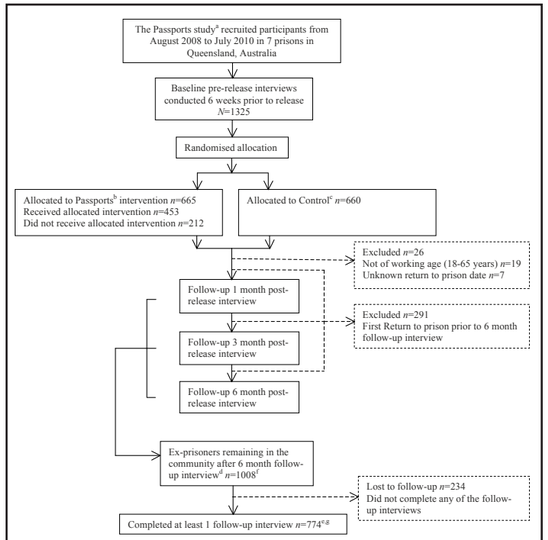
Methods

Study Design and Setting

The longitudinal data in this investigation were collected as part of a randomized controlled trial known as the Passports Study. The primary purpose of the trial was to evaluate the effect of a low-intensity case management intervention on health service utilization within the first six months after release from custody. Participants were recruited from seven correctional centers in Queensland, Australia between August 2008 and July 2010 (Kinner et al. 2013; Kinner, van Dooren, Boyle, Longo, & Lennox, 2014). Baseline interviews were conducted in private settings in prison within six weeks of expected release by trained interviewers using a structured questionnaire that typically required 60-90 minutes to complete. Randomization occurred after the baseline interview. All community follow-up interviews were conducted by telephone at one, three, and six months following participants' index release from prison. Follow-up interviews conducted in prison were either by telephone or in person. This investigation is a secondary analysis of the original data with the new purpose of exploring whether post-release employment reduces the risk of reincarceration, after controlling for mental health vulnerability, substance abuse risk, and other established predictors of recidivism. The design of the study is shown in Figure 1.

Participants

Eligible participants were sentenced adult prisoners aged 18 to 65 years who were scheduled to be released from prison within



Notes: a This randomized controlled trial examined a low-intensity case management intervention for adult ex-prisoners in four prisons in south-east Queensland and three prisons in north Queensland. b. The nature of the Passports intervention is reported by Kinner et al., 2013. c Participants in the control condition received a letter summarizing their health status at release and usual post-release care which may or may not have included transitional support provided by Queensland Corrective Services (QCS). d A lag release period of approximately six months was necessary to enable those released to obtain employment. e This subsample was used to examine predictors of first return to prison 6-months after release (see Table 1). f This subsample was used to examine predictors of attrition. Those that did not complete any of the three follow-up interviews were compared to those who completed at least 1 follow-up interview (see Table 2). g This subsample was used to examine predictors of limited post-release employment. Those employed at none or one interview were compared to those employed at two or three follow-up interviews (see Table 3).

Figure 1: Participant flow diagram.

six weeks and were able to provide written informed consent for participation. Remand (pre-trial) prisoners were excluded due to the uncertainty of their release dates. Women were oversampled by including two women's prisons in the sample of seven prisons, to increase statistical power for gender-specific analyses. Ethics approval for the study was granted by the University of Queensland's Behavioural and Social Sciences Ethical Review Committee, and the Queensland Corrective Services Research Committee.

Additional Data Sources

In addition to structured interviews at baseline and follow-up, participant consent was obtained from 1268 participants to access their prison medical records which included medication charts. Medical records were obtained for 1062 participants and medication charts were obtained for 1231 participants, with data from both medical records and medication charts available for 1029 participants. Research assistants reviewed and summarized medical information from hard-copy medical records and medication charts, focusing on the frequency, nature, diagnosis and outcomes of health service utilization during the index episode of imprisonment. Information retrieved from medical records was coded according to the International Classification of Primary Care-2 (ICPC-2) (World Organization of National Colleges…, 1998). Mental health diagnoses as recorded by visiting medical officers and forensic psychiatrists were classified according to ICPC-2 diagnostic codes. Psychiatric medications were examined at the time of recruitment into the study and coded according to the Anatomical Therapeutic Chemical (ATC) classification system, using the Defined Daily Dose (DDD) as a unit measure (World Health Organization Collaborating Centre for Drug Statistics Methodology, 2015).

Dependent Variables

The primary dependent variable was time in days to first return to prison after the last follow-up interview (approximately six months) following release from the index episode of imprisonment. A release period of six months was necessary to preserve time order and to enable those released to have the opportunity to obtain employment of sufficient duration to contribute to community integration, and to protect against returning to prison. Prison release dates from the index episode of imprisonment, and reincarceration dates, were supplied by Queensland Corrective Services (QCS) and covered the period from 10 September 2008 (first release) to 31 December 2013 (study end date).

Classifying Vulnerability to Psychiatric Disorders

Three sources of information were used to classify vulnerability to psychiatric disorders. Vulnerability rather than diagnosis was ascertained from these three sources because no one source was considered sufficient for a diagnosis of a psychiatric disorder. The three sources were as follows:

1. Self-reported mental health disorders. In the baseline interview participants were asked *"Have you ever been told by a doctor, psychologist or psychiatrist that you have a mental illness?"* (No/Yes), *"if YES, what type of mental illness (es) have you been diagnosed with?"*(Anxiety disorder, Depression, Substance abuse or dependence, Schizophrenia, Other mental illness (specify) and *"if YES do you currently have any of these mental illnesses?"*

2. Prison medical records. Provisional and final psychiatric diagnoses at every healthcare encounter with a health professional (visiting medical officer, psychologist, psychiatrist) during the index incarceration period were abstracted and classified according to the following ICPC-2 codes: Schizophrenia (P72); Bipolar Affective disorder (P73); Psychosis Not Otherwise Specified (P98); Anxiety disorder or anxiety state (P74); Depressive disorder (P76); Phobia or compulsive disorder (P79); Personality disorder (P80); Post-traumatic stress disorder (P82); Anorexia nervosa or bulimia; Other psychological disorders (P99); Acute alcohol abuse (P16); Chronic alcohol abuse (P15); Drug abuse (P19).

3. Medication charts. Any psychiatric medications noted as administered during the index episode of imprisonment were coded according to the ATC classification system and the DDD measuring unit (World Health Organization Collaborating Centre for Drug Statistics Methodology, 2015). Low doses of antipsychotics are sometimes used in prisons for reasons other than to treat psychotic disorders, such as helping with sleep disturbance. Therefore psychotic disorders were only inferred from anti-psychotic medications when the dose recorded was at or above a therapeutic clinical dose according to the ATC. Only one anti-psychotic (Quetiapine) was found to have been administered at sub-therapeutic doses (<300mg) according to the Therapeutic Guidelines (Psychotropic) Version 5 (The Royal Australian and New Zealand College of Psychiatrists, 2009).

Vulnerability to psychiatric disorders was initially identified within each of the three data sources by noting references to any psychiatric disorders including substance abuse. Cases where no psychiatric references were recorded or implied were classified as having no vulnerability to psychiatric disorders. These non-psychiatric cases may have included other mental disorders such as intellectual impairments, neurological disorders and dementias because our definition of psychiatric disorders intentionally excluded these types of mental disorders.

Since we had no evidentiary basis to prefer one information source over another, and because the different sources showed good to moderate convergence, we used a binary approach in each of the three sources, with the final classification also binary, representing any positive classification of vulnerability to any psychiatric disorder in any one or more of the three sources, versus none in all three sources. The extent of convergence among the three data sources for classifying type of psychiatric disorder ranged from 7.1% to 10% for the Psychotic disorder category, 18.7% to 37.5%, for 'Other mental disorders', and 74.1% to 52.5% for the 'No psychiatric disorder category'. Self report identified the fewest persons with a psychiatric disorder, while medical records registered the most. The term 'vulnerable' was then used to describe those potentially affected by a psychiatric disorder without implying more diagnostic precision than is reasonable from the nature of the data sources.

Comorbidity with Substance Abuse

The association between substance abuse and this composite measure of psychiatric disorders vulnerability was assessed using the Alcohol Use Disorders Identification Test (AUDIT) (Dybek et al., 2006; Fiellin, Reid, & O'Connor, 2000) for detecting alcohol use disorders, and the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) (Hides et al., 2009) for detecting

other substance use disorders. The AUDIT was used to identify participants with a history of risky alcohol use in the 12 months before entry to prison. The ASSIST was used to identify risky use of alcohol, cannabis, hallucinogens, methamphetamines, illicit benzodiazepines, heroin, other opiates, inhalants, ecstasy, and cocaine in the three months before entry into prison. Participants scoring below threshold on both the AUDIT for alcohol (score of 0-7) and the ASSIST for other substances (score 0-3) were classified as at none to low risk for any substance use disorders. Those with scores 8-15 on the AUDIT; and 4-26 for other substances on the ASSIST were classified as at moderate risk of substance use disorders. AUDIT scores of 16 or more for alcohol, and ASSIST scores of 27 or more for substances other than alcohol, indicated high future risk of substance abuse.

To tease out the independent effects of vulnerability to any psychiatric disorders from the frequently comorbid effects of substance abuse risk, we created a new six level variable by crossing the binary vulnerability to any psychiatric disorder with three levels of substance abuse risk (none to low; moderate; and high).This generated a new composite: vulnerability to psychiatric disorder and substance abuse risk variable, with six mutually exclusive categories of vulnerability and substance abuse risk.

Employment Status

Self-reported information on employment status was collected during the one, three and six month follow-up interviews following release into the community. Participants were asked at the one-month post-release interview: *How were you mainly employed since your release*? At the three and six month follow-up interviews they were asked: *How were you mainly employed since your last interview?* An employment status variable was created in two stages. First we generated a dichotomous employment status variable (employed vs. not employed) at each follow-up time point. The employed category included full-time, part-time and casual employment. The not-employed category included those of working age who were unemployed and looking for work, along with those not in the labor force (not available for or not looking for employment). Next, by combining observations at one, three and six months, we constructed an employment duration indicator in the first six months following release. This was converted to a binary form by contrasting those recorded as employed at two or three follow-up interviews, with those employed at none or one interview only, in the six months following release. This was necessary because employment duration was not formally measured and a non-binary version, although more sensitive, would imply more precision about employment duration than is supported by the data.

Other Covariables

Informed by previous findings in the literature we also examined age, gender, indigenous status, relationship status, educational attainment, employment history in the six months prior to prison entry, and incarceration history, as covariables in a simultaneous adjusted Cox proportional hazards regression model. Allocation to the Passports intervention was also included as a covariable in these multivariable analyses.

Attrition

Attrition in longitudinal studies can vary by treatment group and if so, can be an alternative explanation for any group differences observed. Attrition is also an important secondary outcome variable in vocational rehabilitation because those who do not receive a sufficient dose of rehabilitation are usually considered failures because they are unlikely to attain the benefits expected compared to those who complete the program. We adjusted for the effect of attrition in this study by excluding from the main analysis all those who completed the baseline interview but did not complete any subsequent interviews. In addition, baseline variables were used to model attrition as a binary outcome variable. This was useful because while we had no employment information from those who did not attend at least one follow-up interview, we did have accurate dates for when they returned to prison. These return to prison records enabled us to compare those lost to follow-up, to those who participated in at least one post-release interview, on a range of individual characteristics as well as on the primary dependent variable, the proportion returning to prison after six months of release in the community.

Statistical Analysis

Summary statistics are presented as frequency and percentages for categorical variables. Correlations among independent variables were first examined via a bivariate polychoric correlation matrix. Next, predictors of the time to reincarceration in days following six months release was explored by an unadjusted Cox proportional hazards regression model, and then by an adjusted simultaneous Cox proportional hazards regression model. The Breslow method for estimating partial effects of independent variables was used (Breslow, 1974). Observations were censored at 31 December 2013 if individuals had not been reincarcerated prior to this date. Effect estimates are reported as hazard ratios (HR) in Table 1. The associations between baseline characteristics and attrition were examined using both unadjusted and adjusted logistic regression models. These effects are reported as odds ratios (OR) in Table 2. Finally, the same subset of independent variables was examined as predictors of the extent of employment following release, in both unadjusted and adjusted simultaneous logistic regression models, as shown in Table 3. Statistical analyses were conducted using Stata statistical software version 13.0 (StataCorp, 2013).

Table 1: Individual characteristics associated with time in days to first re-incarceration after approximately six months of release (*N*=774).

Individual characteristics	n (%)	HR[2] (95% CI)	AHR[3] (95% CI)
Age (years)			
18-24	178 (23.0)	**2.8 (1.8-4.4)**	**2.1 (1.3-3.3)**
25-34	285 (36.8)	**2.5 (1.6-3.9)**	1.5 (1.0-2.4)
35-44	188 (24.3)	**1.7 (1.0-2.6)**	1.2 (0.7-1.9)
45+ (ref.)	123 (15.9)	1.0	1.0
Gender			
Male	600 (77.5)	1.3 (0.9-1.7)	**1.5 (1.1-2.1)**
Female (ref.)	174 (22.5)	1.0	1.0
Indigenous status			
Yes	156 (20.2)	**1.8 (1.4-2.4)**	1.3 (1.0-1.7)
No (ref.)	618 (79.8)	1.0	1.0
Partner status			
No partner	484 (62.5)	1.0 (0.8-1.3)	1.1 (0.8-1.4)
Partnered (ref.)	290 (37.5)	1.0	1.0
Educational attainment			
Less than year 10	295 (38.2)	**1.3 (1.1-1.7)**	0.9 (0.7-1.1)
Year 10 or higher (ref.)	478 (61.8)	1.0	1.0
Employment history 6 months prior to prison			
Not employed	360 (46.5)	**1.6 (1.3-2.0)**	1.2 (0.9-1.5)
Employed (ref.)	414 (53.5)	1.0	1.0
Incarceration history			
Prior imprisonment	447 (57.7)	**3.7 (2.8-4.9)**	**2.9 (2.1-3.9)**
First imprisonment (ref.)	327 (42.3)	1.0	1.0
Intervention type allocation			
Passports	374 (48.3)	1.1 (0.9-1.3)	1.1 (0.9-1.5)
Control (ref.)	400 (51.7)	1.0	1.0
Vulnerability to mental illness and substance abuse[4]			
Yes MI, High-risk SA	128 (16.5)	**4.4 (2.6-7.6)**	**2.4 (1.4-4.2)**
Yes MI, Moderate-risk SA	65 (8.4)	**4.8 (2.6-8.7)**	**3.0 (1.6-5.6)**
Yes MI, Low-risk SA	36 (4.7)	**3.0 (1.5-6.4)**	**3.1 (1.5-6.6)**
No MI, High-risk SA	242 (31.3)	**5.6 (3.4-9.3)**	**3.1 (1.9-5.4)**
No MI, Moderate-risk SA	166 (21.5)	**2.8 (1.6-4.9)**	**2.0 (1.1-3.5)**
No MI, Low-risk SA (ref.)	137 (17.7)	1.0	1.0
Employment in first 6 months following release			
Employed at 0 or 1 post-release interviews	570 (73.6)	**2.1 (1.6-2.9)**	**1.5 (1.1-2.1)**
Employed at 2 or 3 post-release interviews (ref.)	204 (26.4)	1.0	1.0

Notes: 1 The Hazard Ratio is the relative rate of reincarceration following release for six months, given stated group membership compared to the reference category (ref.). Hazard ratios >1 that are statistically significant (confidence interval does not span unity) mean that the expected frequency of reincarceration at any point in time after six months of release is significantly higher among members of that group compared to the reference group. The 95% confidence interval is given in parentheses. 2 Unadjusted Cox regression hazard ratios. 3 AHR means Adjusted Hazards Ratio, from the simultaneous Cox proportional hazards regression model where the hazards ratios are adjusted for age, gender, indigenous status, partner status, educational attainment, employment history 6 months prior to prison, incarceration history, intervention type, vulnerability to mental illness and substance abuse, and employment in first 6 months following release. 4 Vulnerability to mental illness and substance abuse risk was defined in six levels by crossing the binary classification of vulnerability to psychiatric disorders (yes or no) with three levels of substance abuse risk (none to low; moderate; and high) derived from scores on two standardized measures of substance use prior to prison entry (AUDIT & ASSIST). Statistically significant results at the 95% confidence level are shown in bold typeface.

Results

The individual characteristics most associated with earlier return to prison after six months release in the community in both unadjusted and adjusted models are shown in Table 1. Following multivariable adjustment for age, gender, indigenous status, partner status, educational attainment, employment history, incarceration history, intervention type allocation, vulnerability to mental illness and substance abuse risk, and employment post-release; the strongest positive predictors of time to return to prison were, in order of strength, mental illness vulnerability and substance abuse risk (adjusted hazards ratios [AHR] 2.0-3.1), incarceration history (AHR 2.9), younger age (2.1), male gender (1.5), and limited post-release employment (1.5). Being indigenous (1.8), not being employed in the six months prior to entering prison (1.6), and completing less than ten years of education (1.3), were significant as unadjusted predictors but lost statistical significance in the fully adjusted model. Relationship status (partnered versus not partnered), and intervention type were not associated with time to first reincarceration following six months release, in either the unadjusted or adjusted models (see Table 1).

Table 2: Individual characteristics associated with attrition. Comparing those lost to follow-up to those who completed at least one follow-up interview (*N*=1008).

Individual characteristics	Attrition		Logistic regression models	
	Baseline completed and no FU interviews *n*=234 n,%	Completed at least 1 FU interview *n*=774 n,%	OR[1], 95% CI	AOR[2], 95% CI
Age (years)				
18-24	71(28.5)	178(71.5)	**1.8 (1.1-3.0)**	1.4 (0.8-2.4)
25-34	84(22.8)	285(77.2)	1.3 (0.8-2.1)	1.0 (0.6-1.8)
35-44	52(21.7)	188(78.3)	1.3 (0.8-2.1)	0.9 (0.5-1.7)
45+ (ref.)	27(18.0)	123(82.0)	1.0	1.0
Gender				
Male	183(23.4)	600(76.6)	1.0 (0.7-1.5)	1.1 (0.8-1.7)
Female (ref.)	51(22.7)	174(77.3)	1.0	1.0
Indigenous status				
Yes	86(35.5)	156(64.5)	**2.3(1.7-3.2)**	**1.7 (1.2-2.5)**
No (ref.)	148(19.3)	618(80.7)	1.0	1.0
Partner status				
No partner	167(25.6)	484(74.4)	**1.5 (1.1-2.1)**	**1.6 (1.1-2.2)**
Partnered (ref.)	67(18.8)	290(81.2)	1.0	1.0
Educational attainment				
Less than year 10	109(27.0)	295(73.0)	**1.4 (1.1-1.9)**	1.0 (0.7-1.4)
Year 10 or higher (ref.)	125(20.7)	478(79.3)	1.0	1.0
Employment history in 6 months prior to prison				
Not employed	134(27.1)	360(72.9)	**1.5 (1.1-2.1)**	1.3 (0.9-1.8)
Employed (ref.)	100(19.5)	414(80.5)	1.0	1.0
Incarceration history				
Prior imprisonment	169(27.4)	447(72.6)	**2.2 (1.6-3.0)**	**2.0 (1.4-2.9)**
First imprisonment (ref.)	57(14.8)	327(85.2)	1.0	1.0
Intervention type allocation				
Passports	133(26.2)	374(73.8)	**1.4 (1.0-1.9)**	**1.4 (1.1-2.0)**
Control (ref.)	101(20.2)	400(79.8)	1.0	1.0
Vulnerability to mental illness and substance abuse[3]				
Yes MI, High-risk SA	33 (20.5)	128 (79.5)	1.6 (0.9-2.9)	0.9 (0.5-1.8)
Yes MI, Moderate-risk SA	20 (23.5)	65 (76.5)	1.9 (1.0-3.8)	1.3 (0.7-2.8)
Yes MI, Low-risk SA	12 (25.0)	36 (75.0)	2.1(0.9-4.6)	1.9 (0.8-4.4)
No MI, High-risk SA	89 (26.9)	242 (73.1)	**2.3 (1.4-3.8)**	1.4 (0.8-2.5)
No MI, Moderate-risk SA	58 (25.9)	166 (74.1)	**2.2 (1.3-3.7)**	1.6 (0.9-2.8)
No MI, Low-risk SA (ref.)	22 (13.8)	137 (86.2)	1.0	1.0

Notes. 1 Univariable logistic regression model (one independent variable and one dependent variable) producing an unadjusted odds ratio (OR) as a point estimate of the strength of the relationship. 2 Simultaneous multivariable logistic regression model producing an adjusted odds ratio (AOR), adjusted for age, gender, indigenous status, partner status, educational attainment, employment history six months prior to prison, incarceration history, intervention type, and vulnerability to mental illness and substance abuse. The binary dependent variable was whether or not the person completed at least one follow-up interview. 3 Vulnerability to mental illness and substance abuse risk was defined in six levels by crossing the binary classification of vulnerability to psychiatric disorders (yes or no) with three levels of substance abuse risk (none to low; moderate; and high) derived from scores on two standardized measures of substance use prior to prison entry (AUDIT & ASSIST). Statistically significant results at the 95% confidence level are shown in bold typeface.

We also examined the characteristics of those excluded from the study (*n*=291) because they returned to prison before the six-month post-release interview. It is possible that those who were so excluded had different attributes to those who returned to prison after the six month post-release interview (*n*=429). Bivariate logistic regressions and a simultaneous multiple logistic regression, examined the binary dependent variable returning to prison before the six month interview contrasted with returning to prison after the six month interview. The independent variables were the same as in the analysis to investigate attrition (see Table 2). The only significant unadjusted predictor of returning to prison within six months was educational attainment. Less than 10 years of education was positively associated with returning to prison within six months of index release (OR 1.4, 95% confidence interval 1.0-1.9). There were no significant predictors in the adjusted regression model. In addition, 139 of those who returned to prison within six months did not complete any of the three follow-up interviews. This investigation indicates that following multivariable adjust-

ment, ex-prisoners who were excluded from this study through returning to jail within six months of index release, were not significantly different from those who returned to prison after completing the six month follow-up interview, on any of the variables examined.

The possibility that attrition influenced the measure of post-release employment was also investigated. This arose because employment was classified into two levels, and to qualify for the higher level a participant needed to attend at least two of three post-release interviews. Therefore some participants would have been classified as least employed, irrespective of their actual employment status, because they completed only one follow-up interview. To explore the influence of this we conducted a further analysis of the subset of participants who completed all three interviews. In this sub-sample (n=541) the pattern of results shown in Table 1 was largely preserved except that post-release employment (adjusted hazards ratio 1.3, 95% confidence interval 0.8-1.9) and indigenous status (adjusted hazards ratio 1.2, confidence interval 0.8-1.8) lost statistical significance as adjusted predictors of time to reincarceration. This is expected with reduced statistical power which is consistent with a broader confidence interval and a similar point estimate. Both variables retained their significant relationships in the unadjusted Cox proportional hazards regression (post-release employment hazards ratio 1.6, 95% confidence interval 1.1-2.2; indigenous status hazards ratio 1.6, 95% confidence interval 1.1-2.3).

Discussion

Mental Health Vulnerability and Substance Abuse Risk

We explored the extent to which vulnerability to mental illness and substance abuse risk influenced the risk of returning to prison after six months in the community, while controlling for other known risks for returning to prison. We found that both mental illness vulnerability and substance abuse risk separately and jointly increased the hazard of returning to prison sooner after six months in the community in the adjusted Cox regression model. This finding supports previous studies showing that mental illness exacerbates rather than protects against reincarceration. In contrast to one previous meta-analysis (Bonta, Law, & Hanson, 1998) mental illness vulnerability hastened return to prison after six months of release, in a relationship that was not explained by other variables in the model. This suggests that reducing both mental health vulnerability and substance abuse risk may be important components of a broader rehabilitation strategy aiming to reduce reincarceration.

The Contribution of Employment in the First Six Months Post-release

Limited employment (at none or one follow-up interview) in the first six months following index release from prison was associated with a more rapid return to prison, in both univariable and multivariable models. The adjusted association between employment and time to reincarceration was stronger than that between being indigenous and time to reincarceration. Indigenous status lost statistical significance in the adjusted model indicating that the other variables in the model explain this effect. This is an important result given the widespread recognition that indigenous Australians are at greater risk of reincarceration after release from prison (ABS, 2010; 2016).

Employment in the six months prior to index prison entry, and ten or more years of formal education, were the strongest predictors of substantial employment post-release. However, the importance of employment as a rehabilitation target also depends on the extent that stable employment can be established among this target group. While not all forms of vocational rehabilitation are likely to be successful, one evidence-based approach to supported employment (IPS, Marshall et al., 2014) has succeeded, in multiple randomized controlled trials in several developed countries, in changing the employment status for over 60% of participants with severe mental illnesses and comorbid substance use disorders. In addition, in one USA application to ex-prisoners, 31% of those with severe mental illness in the intervention group obtained competitive employment within 12 months of release (Bond et al., 2015), compared to 7% in the control group.

In Australia, Graffam, Shinkfield and Lavelle (2014) found that long-term post-release employment assistance programs reduce re-offending. They also identified several promising augmentations to vocational rehabilitation for ex-prisoners, including support to appropriately disclose criminal history. Supporting disclosure strategies for people with severe mental illness has recently emerged as a promising augmentation to IPS supported employment (McGahey, Waghorn, Lloyd, Morrissey & Williams, 2016). Disclosure support for ex-prisoners could encompass any sensitive personal information likely to trigger employer-stigma, such as diagnosis, treatment, disabilities and work restrictions, forensic and criminal justice histories. Given evidence that vocational rehabilitation may be effective for ex-prisoner participants, and can significantly reduce re-offending, establishing stable employment following release represents an important priority for community-based rehabilitation programs.

Table 3: Individual characteristics associated with limited post-release employment.

	Employment in first 6 months		Logistic regression models	
Individual characteristics	Employed at 0 or 1 post-release interviews n=570	Employed at 2 or 3 post-release interviews n=204	OR[1], 95% CI	AOR[2], 95% CI
Age (years)				
18-24	122 (68.5)	56 (31.5)	1.0 (0.6-1.7)	0.6 (0.3-1.2)
25-34	228 (80.0)	57 (20.0)	**1.9 (1.2-3.0)**	1.1 (0.6-1.9)
35-44	136 (72.3)	52 (27.7)	1.2 (0.7-2.0)	1.0 (0.5-1.7)
45+ (ref.)	84 (68.3)	39 (31.7)	1.0	1.0
Gender				
Male	424 (70.7)	176 (29.3)	**0.5 (0.3-0.7)**	0.6 (0.3-1.0)
Female (ref.)	146 (83.9)	28 (16.1)	1.0	1.0
Indigenous status				
Yes	134(85.9)	22(14.1)	**2.5 (1.6-4.1)**	1.2 (0.7-2.2)
No (ref.)	436(70.6)	182(29.4)	1.0	1.0
Partner status				
No partner	367 (75.8)	117 (24.2)	1.3 (1.0-1.9)	**1.6 (1.1-2.3)**
Partnered (ref.)	203 (70.0)	87 (30.0)	1.0	1.0
Educational attainment				
Less than year 10	245 (83.1)	50 (16.9)	**2.3 (1.6-3.3)**	**1.7 (1.1-2.5)**
Greater or equal to year 10 (ref.)	325(68.0)	153(32.0)	1.0	1.0
Employment history in the 6 months prior to prison				
Not employed	333 (92.5)	27 (7.5)	**9.2 (5.9-14.3)**	**6.5 (4.1-10.4)**
Employed (ref.)	237(57.2)	177(42.8)	1.0	1.0
Incarceration history				
Prior imprisonment	372 (83.2)	75(16.8)	**3.2 (2.3-4.5)**	**2.2 (1.5-3.3)**
First imprisonment (ref.)	198 (60.5)	129(39.5)	1.0	1.0
Intervention type				
Passports	276 (73.8)	98 (26.2)	1.0 (0.7-1.4)	1.0 (0.7-1.5)
Control (ref.)	294(73.5)	106(26.5)	1.0	1.0
Vulnerability to mental illness and substance abuse risk[3]				
Yes MI, High-risk SA	116 (90.6)	12 (9.4)	**7.8 (3.9-15.4)**	**3.9 (1.8-8.4)**
Yes MI, Moderate-risk SA	50 (76.9)	15 (23.1)	**2.7 (1.4-5.2)**	1.5 (0.7-3.3)
Yes MI, Low-risk SA	28 (77.8)	8 (22.2)	**2.8 (1.2-6.6)**	**3.1 (1.1-8.3)**
No MI, High-risk SA	183 (75.6)	59 (24.4)	**2.5 (1.6-3.9)**	**2.0 (1.1-3.4)**
No MI, Moderate-risk SA	117 (70.5)	49 (29.5)	**1.9 (1.2-3.1)**	1.7 (1.0-2.9)
No MI, Low-risk SA (ref.)	76 (55.5)	61 (44.5)	1.0	1.0

Notes. 1 Univariable logistic regression model (one independent variable and one dependent variable) producing an unadjusted odds ratio (OR) as a point estimate of the strength of the relationship. 2 Simultaneous multivariable logistic regression model producing an adjusted odds ratio (AOR), adjusted for age, gender, indigenous status, partner status, educational attainment, employment history six months prior to prison, incarceration history, intervention type, and vulnerability to mental illness and substance abuse. The binary dependent variable was whether or not the person completed at least one follow-up interview. 3 Vulnerability to mental illness and substance abuse was defined by crossing the binary classification of vulnerability to psychiatric disorders (yes or no) with three levels of substance abuse risk (none to low; moderate; and high) derived from scores on two standardized measures of substance use prior to prison entry (AUDIT & ASSIST). Statistically significant results at the 95% confidence level are shown in bold typeface.

In challenging individual cases an intensive employment intervention augmented with treatment interventions for both mental disorder and substance abuse, represents a promising way to reduce reincarceration risk. Individual characteristics including age, gender, indigenous status, vulnerability to mental illness, substance abuse risk, employment history, and educational attainment; can triage those most in need of more intensive forms of vocational rehabilitation such as IPS. When mental illness vulnerability and substance abuse risk are also present, access to further assessment and community-based treatment, provided in parallel to and coordinated with vocational rehabilitation, is indicated.

The findings of the present study are consistent with several well-established in the literature; namely that prior incarceration history, male gender, younger age, and substance abuse risk, increase the risk of returning to prison. Being indigenous was associated with shorter time to reincarceration in unadjusted terms, and with post-release employment (also unadjusted), and was associated with attrition in both the unadjusted and adjusted regression models. In vocational rehabilitation programs targeting ex-prisoners, the risk of attrition among indigenous participants can be reduced by engaging with indigenous communities and organisations, and employing indigenous staff, particularly those with cross-cultural communication skills and personal experiences of incarceration.

Previous studies have reported that poor employment history and low educational attainment increase the risk of not being employed (Waghorn et al., 2012). Findings of the present study suggest that employment history and educational attainment are related to unemployment after release from prison, and may therefore mediate the relationship between post-release employment and reincarceration. Being employed in the six months before entering prison, and completing ten years of formal education, were both positively associated with post-release employment. These same individual characteristics were not associated with return to prison after six months in the adjusted analyses. These findings are consistent with the view that educational attainment and a prior employment history protect against reincarceration via a relationship to post-release employment. To our knowledge this is the first study to identify an indirect role for these variables.

This indirect relationship is important because low educational attainment and a poor employment history increase labor force disadvantage. These are attributes which can be taken into account when prioritizing candidates for more intensive forms of vocational rehabilitation on release from prison. In practical terms, it also makes sense to try to address this disadvantage during imprisonment through literacy and numeracy courses and relevant vocational skills training, as long as any interventions are informed by the local labor market and consistent with the person's career preferences.

Implications for Reducing Reincarceration

These results suggest several opportunities to reduce reincarceration. Three coordinated interventions appear needed to address mental illness vulnerability, substance abuse risk, and increase employment post-release. Prior to release, within-prison efforts to address literacy and numeracy, and personal career goals, could help to increase employment literacy so that long term barriers to future employment are reduced.

A remaining challenge is to identify those most in need of an intensive multi-dimensional approach to post-release community rehabilitation. This is important because few countries can afford to provide costly and intensive vocational rehabilitation, intensive mental health services, or substance abuse treatments; to all those that might benefit. In addition, complementary strategies at a regional or national level may also be needed to reduce barriers to employment among those at some risk of unemployment who do not, on these criteria, qualify for individually focused forms of vocational rehabilitation.

Strengths and Limitations

This study has important strengths. The study on which this secondary analysis is based involves a large, representative sample from seven Queensland prisons, of working age adults released into the community and followed for approximately six months post-release. Even so, caution is warranted when interpreting these results because there were several important limitations. First the original study was not designed for the purpose of this secondary analysis. Therefore some of the variables examined are sub-optimal for this secondary purpose. For instance, the definition of duration of employment based on whether the person was employed or not at each follow-up interview, did not assess duration of employment over the release period. Nevertheless, our measure of employment post-release proved sufficiently sensitive for this purpose. A more continuous measure of employment duration post-release might reveal stronger relationships than those found in this analysis. Future studies could expand on this work by introducing more comprehensive measures of employment (e.g. type, amount, quality) in order to understand how employment contributes to community integration, reduces reoffending, and delays returning to prison.

Another measurement issue that concerns all studies of ex-prisoners is the problem of classifying the nature and type of mental illness or psychiatric disabilities. Prisons are not ideal places in which to conduct reliable psychiatric diagnostic interviews or assessments of substance abuse risk, even if standardized scales are used. In this case we used three sources of mental health information with unclear diagnostic reliability and validity. To accommodate this we interpreted positive indicators on any of the three sources as indicative of increased vulnerability to a psychiatric disorder, rather than inferring diagnosis. Even though this method had utility in this analysis, future studies should, where possible, incorporate research-standard diagnostic interviews to determine primary disorder category, disorder severity, and likely extent of social and occupational impairments on release.

Another limitation arose because we used a unique definition of reincarceration, namely delayed return to jail after six months of release in the community. This was necessary to preserve the time order for inferring causation. In order for post-release employment to cause greater community integration and delay reincarceration, it must have the same opportunity as other variables in the model to precede the event of returning to prison or not. We explored whether those who returned to prison in the first six months and who were excluded from our analyses, had different attributes to those who returned to prison after six months in the community. In unadjusted terms, those who returned early to prison differed from those who returned after six months, by a greater proportion having less than 10 years of formal education (odds ratio 1.4, 95% confidence interval 1.0-1.9). No other differences on the independent variables of interest were found after multivariable adjustment. This result along with a pattern of findings largely consistent with previous research, suggests that our definition of reincarceration was adequate for this purpose.

We considered other alternative explanations for these results. It is possible that post-release employment is not protective but merely a by-product of the other individual attributes that reduce the risk of returning to prison. If that were so we would expect the correlates of limited post-release employment to be almost the same as the correlates of reincarceration. While there was overlap in correlation patterns (compare Tables 1 and 3) three important differences counter this explanation. The strongest adjusted predictor of post-release employment in Table 3 was employment history, which was not significant as an adjusted predictor of time to return to jail in Table 1. In addition, educational attainment and partner status were associated with post-release employment but not with reincarceration in the adjusted regression model (see Table 3).

Unequal attrition in longitudinal studies can be an alternative explanation for results when two groups are being compared. To assess the impact of attrition we compared those who completed the baseline interview only and no follow-up interviews (234 of 1008, 23.2%), to those who completed at least one follow-up interview (774 of 1008, 76.8%). In order of strength in adjusted terms, not completing any follow-up interview was significantly associated with: prior incarceration history, being indigenous, not being in a relationship, and the Passports intervention. Attrition was not associated in the adjusted model with any combination of mental illness vulnerability and substance abuse risk, poor employment history, or low educational attainment. Those who were allocated to the Passports intervention were more likely to not attend any follow-up interview.

Conclusions

This study identified some important targets for interventions to reduce reincarceration following six months of release in the community. Vulnerability to mental illness, risk of substance abuse, and not being employed post-release all increased the hazard of reincarceration over and above the known effects of age, sex, being indigenous, and a prior incarceration history. The personal characteristics most associated with reincarceration can now be utilized to prioritize candidates for more intensive forms of community based vocational rehabilitation. Exactly how thresholds for prioritizing candidates are set in different countries and provinces may depend on the local context, pressure of demand for services, availability of resources, and the availability of more intensive forms of community rehabilitation integrated with substance abuse treatments and continuing mental health care.

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Emergency Preparedness Knowledge and Confidence in Providing Services for People with Disabilities: An Exploratory Analysis Among Rehabilitation Counseling Students

Matthew E. Sprong
Northern Illinois University

James L. Soldner
University of Massachusetts Boston

Bryan K. Dallas
Northern Illinois University

Emergency preparedness of people with disabilities is of great importance and interest to the rehabilitation counseling discipline. The purpose of the current study was to explore emergency preparedness knowledge of rehabilitation counseling master level graduate students and confidence related to providing emergency preparedness services (e.g., psychological first aid). A sample of master's level rehabilitation counseling students (n = 145) rated on average slight disagreement to slight agreement in terms of whether each item of the EPKCS survey was covered in their Rehabilitation Counselor Education (RCE) program. In terms of assisting people with disabilities develop self-preparedness plans, findings revealed that respondents on average slightly disagreed that information on how to provide these services was provided during their courses within their RCE program. A simple linear regression revealed that a significant proportion of the total variation in confidence in providing emergency-preparedness related services were predicted by training. Increasing emergency preparedness content within the RCE curriculum may: (1) directly increase confidence among rehabilitation professionals in training, as demonstrated in our findings, (2) increase emergency self-preparedness of people with disabilities, and (c) assist programs in meeting accreditation standards.

Keywords: emergency preparedness, rehabilitation counseling, disability, rehabilitation training, self-preparedness, ethics, CACREP accreditation standards

Prior to July 1, 2017, the Council on Rehabilitation Education (CORE) was the primary accreditation body for Rehabilitation Counselor Education (RCE) programs. On July 1, 2017, CORE merged with the Council for Accreditation of Counseling and Related Educational Programs (CACREP) to create one accreditation body (i.e., CACREP). RCE programs that are now accredited by CACREP or will be pursuing accreditation can choose between two specialty tracks, including clinical rehabilitation counseling (CLRC) and general rehabilitation counseling. Emergency preparedness of people with disabilities is of great importance and interest to the rehabilitation counseling discipline and of programs accredited by CACREP. CACREP accreditation standards (2016) has specific common core standards related to disaster preparedness (i.e., 2.F.1.c.; 2.F.5.m) that must be incorporated within the RCE curriculum. Moreover, programs specializing in CLRC must include CACREP accreditation 5.D.2.e. within the

Matthew E. Sprong, CRC, LCPC, CADC, CLCP, School of Interdisciplinary Health Professions, Northern Illinois University, 1425 W. Lincoln Hwy, DeKalb, IL 60115.

Email: msprong1@niu.edu

curriculum, and programs specializing in General Rehabilitation Counseling must include CACREP accreditation standard 5.H.2.g. within the curriculum. Another organization that recognized the importance of emergency preparedness for people with disabilities is the Commission of Rehabilitation Counselor Certification (CRCC), which is the largest rehabilitation counseling organization responsible for the credentialing of rehabilitation counselors. In terms of rehabilitation counseling certification, the CRCC revised professional ethics manual included standard D.3.b., which is related to rehabilitation professionals making reasonable efforts to provided continued client services in the event that a disaster arises. Please see Table 1 for the CACREP and CRCC standards related specifically to emergency preparedness.

Prior to the aforementioned organizations (CACREP and CRCC) recognizing the importance for disaster preparedness for the clients with disabilities served, the federal government developed a task force after the September 11, 2001 terrorist attacks comprising of disability community leaders and disaster relief groups to identify the specific needs of people with disabilities during emergency situations (National Organization on Disability [NOD], 2001). From this task force, an Emergency Preparedness Initiative (EPI) arose and had two main objectives, including: (1) "make sure that the special needs of people with disabilities are adequately addressed prior to an emergency in order to minimize the adverse impact on them and their communities" and (2) "ensure that people with disabilities are included in the emergency planning process at all levels of government and the private sector so they can offer their insights, knowledge, and resourcefulness" (p. 2).

A nationwide survey was also introduced as part of the EPI, referred to as the Harris Interactive Survey (2001). The survey was developed and utilized as part of a grant that was funded by the U.S. Department of Homeland Security and was targeted towards emergency managers throughout the nation. Results revealed that 69% of emergency managers incorporated people with disabilities into their emergency plans, and 22% stated they had a plan under development. Specific plans revealed that only 54% had plans for dealing with students with disabilities in schools; 50% did not have a special needs registry that included people with disabilities; 59% did not have plans for pediatric populations; and 76% did not have a paid expert to deal with emergency preparedness for people with disabilities. Among all respondents, 39% had not purchased specialized equipment, 36% had no special training that was offered, and 73% said no funding had been received to comply with the goals of the Emergency Preparedness Initiative (NOD, 2001). Moreover, 42% of the respondents had a public awareness campaign specifically targeting people with disabilities to supply emergency information. In addition, 16% out of the 42% of those that did have a public awareness campaign had it in accessible format, such as braille, cassette, and large type.

In light of this data, it is evident that disability populations continue to be minimized in regards to emergency planning. One explanation may be centered around attitudes toward people with disability. Even though there have been attempts to include people with disabilities in emergency planning, it appears that many major components are being missed (i.e., assistive devices). The task force identified four broad themes that were in need of being addressed: (1) know who your community members are by developing a special registry, (2) develop a method of communicating with your community members, (3) create a comprehensive evacuation plan, and (4) include people with disabilities in planning the recovery phase after a disaster occurs.

Inclusion of Persons with Disabilities. Making sure that persons with disabilities are involved in the emergency planning process is vital to assure that plans accommodate the functional needs of individuals with disabilities. For example, with respect to Emergency Operating Centers (EOCs), Neal (2003) identified that although EOCs are the focal point of disaster response operations, a systematic analysis is needed to determine how to design and configure effective EOCs. The inclusion of community involvement may serve crucial in providing advocacy for persons with disabilities to be included when conducting the systematic analysis for EOCs. If persons with disabilities do not get involved in this process, consideration on accommodating the functional needs will not be addressed adequately. EOCs are extremely important facilities for responding to and recovering from various disasters but it is unknown if emergency-management function is operating at peak performance and it was determined that simulated EOCs will enhance preparedness efforts (Lattanzio & Peterson, 2005). The difficulty that persons with disabilities face in disaster situations is that they were not included in the simulated EOC.

Considering the strong push by the federal government to develop protocols that specifically address the needs of people with disabilities in disaster planning, White, Fox, Rooney, and Rowland (2007) conducted a study of emergency managers (those responsible for developing and carrying out disaster protocols) knowledge of people with mobility impairments in their local areas and found 57% of respondents did not know how many people with mobility impairments live within their jurisdiction, 43% use some type of data source as a surveillance mechanism for planning and/or providing services, 17% use the database systems that were primarily self-report registries, and another 17% use an estimate, while 10% use census data. A similar study conducted by Kailes and Enders (2007) involved measuring the guidelines of agencies that assist individuals with disabilities and found that of the 18 sites that participated in the study, 80% did not have guidelines in place to assist people with mobility impairments and only five sites (28%) had any plans to develop specific guidelines. Furthermore, four out of six sites that have guidelines consulted with advocacy organizations for seniors or people with disabilities during the planning stage. The intent was to investigate what steps could be taken to increase the role of people with mobility impairments in the planning stages on the local, state, and federal levels. Furthermore, Kailes and Enders (2007) suggested that the community stimulate interest in emergency preparedness among persons with disabilities, teach people with disabilities how to access information about emergency planning and preparedness and how to provide information to others that assist them in individual and community planning efforts. In order to make the most effective emergency preparedness plans, it was also recommended that people with disabilities be proactive with emergency management systems and local health providers, utilize educational information to make a shift in attitudes of people with disabilities for not

self-identifying with the registries, and get agencies that provide services to people with disabilities to disseminate information.

Expansion of the Emergency Preparedness Initiative

The U.S. Department of Homeland Security (2010) expanded on the Emergency Preparedness Initiative's (EPI) overall goals of making sure that people with disabilities have been included in disaster planning. The NOD / Harris Survey (2001) revealed that 58% of people with disabilities did not know whom to contact about emergency plans in their community, and 61% had not made plans to quickly and safely evacuate their homes. Likewise, 44% of people with disabilities indicated they were at least somewhat anxious, while 18% of people with disabilities were extremely or very anxious (compared to 8% of people without disabilities). Due to these findings, NOD was interested in developing a protocol for emergency preparedness professionals to assist people with disabilities in developing self-preparedness plans. The U.S. Department of Homeland Security developed a guide for emergency personnel and within this guide, it was recommended that for a person with a disability to be fully prepared, they must have adequate knowledge related to: (1) general emergency preparedness, (2) their own functional needs, (3) communication with appropriate personnel and supports, (4) how to evacuate and access accessible transportation, and (5) how to have a shelter-in-place.

The first domain, General Emergency Preparedness Knowledge, is compiled of knowledge and perception of disasters (e.g., are people with disabilities aware of the seriousness and importance of disaster preparedness). The functional needs category is related to people with disabilities being aware of their "restriction or limited ability to perform activities normally considered routine" (U.S. Department of Homeland Security, 2010, pg. 17). The participant guide provides examples of functional need issues that may prevent independence: (1) Access to electric power, (2) lack of prescription medications available, and (3) limited assistance from attendants or caregivers. Other items, such as gloves for people in wheelchairs (will help prevent cuts if glass has broken) should also be considered.

The communication category includes developing a plan in which people with disabilities can contact emergency-response personnel by using accessible communication devices (e.g., people who are deaf or hard of hearing, or people with severe speech difficulties). The evacuation and access to accessible transportation category is related to people with disabilities being capable of safely self-evacuating or being evacuated by others (NOD, 2007). This may include identifying accessible modes of transportation that is available, being included on a registry (if available within the local community) so that emergency personnel can locate and assist as needed, and locating an accessible shelter (e.g., surveying community shelters for disability-related barriers) if evacuation is needed. Having an emergency kit that includes prescription medication, medical information, and necessary supplies may be beneficial if immediate evacuation is necessary. If evacuation and transportation is unavailable (e.g., debris is blocking personnel from getting to the individual with a disability, people with disabilities need to be prepared to shelter-in-place. This includes the necessities such as food and water, but also medications, refrigeration, and back-up power (Sprong, Lewis, Soldner, & Koch, 2011).

As described above, there have been great efforts to meet the needs of people with disabilities as demonstrated with the EPI, the response by the federal government, and the accreditation and ethical standards related to rehabilitation counseling. However, there are several disability-related factors (e.g., assistive technology) that are not being considered by emergency managers. With the strong push by CACREP and the CRCC, and the disability-specific training that master-level rehabilitation counseling students obtain, they are very well positioned to assist people with disabilities in developing appropriate emergency preparedness systems to prevent serious injury or death, if and when disasters do arise. Although, an ongoing need still remains to assist people with disabilities in practicing appropriate self-preparedness (National Council on Disability, 2007). Parsons and Fulmer (2007) suggested that state agencies should promote the message of personal preparedness and that this should be a priority in an emergency planning strategy. Furthermore, Parsons and Fulmer stated that many free sources of information are available and many providers offer ample amounts of information and services.

The purpose of the current study was to explore emergency preparedness knowledge of rehabilitation counseling master level graduate students and confidence (confidence in one's abilities) related to providing emergency preparedness services (e.g., psychological first aid). Specifically, we were interested in observing how well Rehabilitation Counselor Training Programs were meeting the CACREP accreditations and Rehabilitation counseling specialty standards and the CRCC ethical standards. The current study was intended to answer three specific research questions.

- *Research Question 1:* Are Rehabilitation Counseling Training Programs providing adequate emergency preparedness for people with disabilities training and are students confident in their abilities to provide these services? to people with disabilities?
- *Research Question 2:* Does emergency-preparedness training in an RCE-training program predict confidence in providing these services
- *Research Question 3:* How adequate is emergency-preparedness training to students enrolled in a rehabilitation counselor education program in meeting specific CACREP common core and clinical rehabilitation or general rehabilitation counseling accreditation standards?

Methods

Participants

Master's level rehabilitation counseling (RC) students currently enrolled in an RCE program accredited by CACREP were recruited to participate in the present study. Of the 187 participants that responded, 145 completed the entire survey. We conducted a random sampling procedure on the full 97 CORE accredited academic institutions. This was performed by using online random sampling software (research randomizer – online: https://www.randomizer.org). Each University received a numeric code. Each of these codes was entered into the online randomization software. The first 15 codes that were generated served as our participant pool. We contacted each program to determine the amount of students enrolled in their master's RC academic program so that we could calculate a response rate. The range of students enrolled per

institution was 20 to 136. The total population was 663 students, for an overall response rate of 21.87%.

The mean age of the student respondents was 34.28 (SD = 12.292) and 61% (n = 114) identified as being of the female gender (Male = 11.8% [n = 22]; Neutral = .5% [n = 1]; Non-binary Transgender = .5% [n = 1]). In terms of educational year in program, 27.8% indicated they were a 1st year Master's student (n = 52), 27.3% indicated they were a 2nd year Master's student (n = 51), 10.7% indicated they were a 3rd year Master's student, and 92% of all study participants indicated they were attending the Master's program as a full-time student (n = 133). A total of 42.8% (n = 80) indicated less than 1-year or no direct rehabilitation counseling related professional work experience, 12.8% (n = 24) indicated 1-2 years of direct rehabilitation counseling related professional work experience, 8.6% (n = 16) indicated 2-4 years of direct rehabilitation counseling related professional work experience, 9.6% (n = 18) indicated more than 4 years of direct rehabilitation counseling related professional work experience [note: 26.2% did not indicate their years of direct rehabilitation counseling related professional work experience, n = 49]. Of the sample, 58.6% indicated their race was white, non-Hispanic (n = 85), 15.9% indicated being black or African American (n = 23), and the remainder of the sample (25.5%) indicated being of a different race (n = 37).

Instrument

The Emergency Preparedness Knowledge and Confidence Scale (EPKCS) is a 42-item multi-response scale that was developed to gather information related to: (1) the training that study participants received during their master's degree program in rehabilitation counseling, and (2) how confident the respondent is in providing emergency preparedness services to people with disabilities. Question(s) 1 – 21 were related to how much emergency preparedness training the respondent received during the Master's degree program and all questions had the same anchor (i.e., I have received training within my educational program related to). In our demographic and supplemental questions, we asked if any respondents received emergency preparedness training in another capacity (e.g., conference, continuing education). No respondents indicated that they received emergency preparedness training in another capacity. Questions 22 – 44 were related to how confident respondents were in providing emergency preparedness-related services to people with disabilities and each item within this portion of the survey had the same anchor (i.e., I feel confident in my understanding of how to). Study participants were presented with each statement (e.g., I have received training within my educational program related to assisting persons with disabilities prepare an evacuation kit / I feel confident in my understanding of how to assist persons with disabilities prepare an evacuation kit), and were instructed to select between 1 of 6 responses (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree). All the questions within each subscale were combined to obtain a total score. The range for each subscale was from 21 – 126, with higher scores on each subscale indicating higher agreement related to receiving adequate training or having confidence in relation to emergency preparedness for people with disabilities.

Survey Item Construction. The items on each survey were developed utilizing four sources. Two survey items were developed related to the CACREP Common CORE Accreditation standards (i.e., 2.F.1.c.; 2.F.5.m.) and the CLRC specialty accreditation standard (5.D.2.e.), one item was developed from the CRCC code of professional ethics (D.3.b.), and the remaining survey items were developed by Baker & Cormier (2015), and the U.S. Department of Homeland Security (2010). As aforementioned in the introduction and literature review section, there are five components of emergency self-preparedness *(i.e., general emergency knowledge, their own functional needs, communication with appropriate personnel and supports, how to evacuate and access accessible transportation, and how to shelter-in-place*). Therefore, the remaining survey items were developed to ascertain knowledge of rehabilitation counseling master level graduate students, and confidence related to assisting people with disabilities within each of these five areas. As shown in Table 1, the accreditation and ethical standards are presented, as well as the corresponding survey item question.

Survey Development. Prior to collecting data from the desired sample, the instrument was reviewed by a panel of PhD-level Rehabilitation Counseling Educators (n = 3) to analyze the content of each response item, and to assess if the five domains of self-preparedness and ethical / accreditations standards were adequately included within the survey. Two of the panel members had experience in instrument development, and two of the panel members had published in the area of Emergency Preparedness for people with disabilities. The survey was distributed to each panel member, and corrections were made to the survey after feedback was obtained. This process continued until there was 100% agreement that the survey was appropriate to distribute to the desired sample.

Factor Analysis (Adequate Training). An exploratory factor analysis was performed on question(s) 1-21 to identify and compute scores for the factors underlying adequate training related to emergency preparedness. The data were screened for Univariate outliers, and the minimum amount of data for factor analysis was satisfied, with a final sample size of 145 (Note: 7 participants did not complete all of the demographic questions, but were still used because all of the items from the survey were completed). Initially, factorability of the knowledge component of the EPKCS was examined using several well-recognized criteria. A total of 21 of the 21 items correlated at a minimum of .700 with at least one other item, suggesting reasonable factorability. The Kaiser-Meyer-Olkin measure of sampling adequacy was .958, above the recommended value of .60 (Garson, 2013). Bartlett's test of sphericity was significant ($\chi^2_{(210)}$ = 3516.09, p < .000). Diagonals of the anti-image correlation matrix exceeded .900, supporting inclusion of each item in the factor analysis. Communalities were all above .500, confirming all other items shared some common variance. Therefore, Factor Analysis was conducted with all 21 items.

Table 1. Accreditation (CACREP & CLRC - 2016) and ethical standards (CRCC - 2017) related to disaster preparedness.

Accreditation / Ethical Standard	Description of standard	EPKCS Item Number	EPKCS Question
CACREP II.F.1.c	Counselors' roles and responsibilities as members of an interdisciplinary emergency management response team during a local, regional, or national crisis, disaster or other trauma-causing event.	20	How rehabilitation counselors fit into a multi-disciplinary emergency management team.
CACREP II.F.5.m.	Crisis intervention and suicide prevention models, including the use of psychological first aid strategies	19	Provide crisis counseling to persons with disabilities before, during, or after a disaster.
CACREP V.D.2.e.	Operation of an emergency management system within rehabilitation agencies and in the community in relation to accommodating individuals with disabilities	11	Effectively develop emergency operation plans that incorporate the functional needs of persons with disabilities.
CRCC Ethical Standard D.3.b.	DISASTER PREPARATION AND RESPONSE. Rehabilitation counselors make reasonable efforts to plan for continued client services in the event that rehabilitation-counseling services are interrupted by disaster, such as acts of violence, terrorism, or a natural disaster.	21	How to provide continued services to persons with disabilities when the usual location is inaccessible.

Note: The EPKCS item number is corresponding to table 2. On the actual survey, participants were presented with 42 items and the training / self-efficacy questions were separated according to the anchor.

Principle component analysis (PCA) was utilized because the primary purpose was to identify and compute scores for the factors underlying the EPKCS. When extracting items, a researcher has a choice to enter a fixed number of factors to have the model extract. This is a confirmatory factor analysis and is used when prior research has indicated a specific number of factors for the construct being investigated. As aforementioned, we chose to not indicate a specific number of factors because we were conducting an exploratory factor analysis to determine if all of the questions loaded on one factor (i.e., knowledge of emergency preparedness). The factor analysis revealed that one factor explained 70.387% of the variance. The Varimax solution for factor rotation was used for the purposes of the current study. Internal consistency for this scale was examined using Cronbach's alpha, and resulted in good overall consistency, α = .979.

Factor Analysis (Confidence). An exploratory factor analysis was performed on question(s) 22-42 to identify and compute scores for the factors underlying the respondent's perceived competence related to emergency preparedness. The data were screened for Univariate outliers, and the minimum amount of data for factor analysis was satisfied, with a final sample size of 145. Initially, factorability of the knowledge component of the EPKCS was examined using several well-recognized criteria. All 21 items correlated at a minimum of .700 with at least one other item, suggesting reasonable factorability. The Kaiser-Meyer-Olkin measure of sampling adequacy was .960, above the recommended value of .60 (Garson, 2013). Bartlett's test of sphericity was significant ($\chi^2_{(231)}$ = 3453.500, p < .000). Diagonals of the anti-image correlation matrix exceeded .900, supporting inclusion of each item in the factor analysis. Communalities were all above .500, confirming all other items shared some common variance. Therefore, Factor Analysis was conducted with all 21 items.

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Procedures

Prior to distributing our survey, we obtained approval from the Institutional Review Board (Protocol # HS15-0254). Data collection procedures for the study included an email that was sent to coordinators of RCE programs to request approval to contact students enrolled in their program. The sampling frame consisted of a list of CORE accredited RCE programs (N = 97) located on the CORE website, and the coordinators of each program were emailed a script that included the purpose of the study and informed consent material. Coordinators were contacted and asked to distribute the recruitment email to the students enrolled in their Master's degree program. Coordinators that agreed distributed the materials to their students via email and students could choose to participate in the study by clicking on the Qualtric's link. After participants clicked on the link, a welcome paragraph appeared, explaining their rights when participating. The welcome paragraph described the purpose of the study, their role in the study, the right to discontinue the survey at any time, and confidentiality assurance. After clicking the next button, participants were presented with the survey items. After completing the survey items, participants received the demographic questionnaire. Once the demographic questionnaire was completed, participants were provided a link to a separate survey where they could enter their information in for a chance to win 1 of 10, $15 VISA gift cards. Program coordinators were contacted on four separate occasions to request that they distribute the survey materials again to the students enrolled in their programs.

Data Analysis

Descriptive statistics were used in research question(s) one and three to provide summaries of how RC students rate the adequacy of the training that they received for each item of the EPKCS, and how confidence each would be in providing such services to people with disabilities. With descriptive statistics, we were unable to reach any conclusions since descriptive statistics only allow for the summarization of data displayed.

A linear regression analysis was used to assess the relationship between emergency-preparedness-related training and confidence in providing emergency-preparedness-related services to people with disabilities. Where correlational analysis provides the associated strength and direction (i.e., positive or negative) of a linear relationship, a linear regression analysis determines how an incremental change in the predictor variable will influence the mean of the dependent (i.e., outcome) variable, with the effect quantified by the regression coefficient b_1 (Sprong, Dallas, Paul, Xia, 2018).

Results

Research Question 1: **Are Rehabilitation Counseling Training Programs providing adequate emergency preparedness for people with disabilities training and are students confident in their abilities to provide these services?**

A frequency distribution analysis was conducted to observe how students' rate the adequacy of emergency-preparedness training within their RCE program. As aforementioned, student participants were presented with a statement and were instructed to provide a rating of strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree. As displayed in Table 1, the mean and standard deviations are presented for each individual item on the EPKCS. Most items (n = 14) had an average score in the slightly disagree category. Item(s) 5, 8, 11, 12, 15, 16, and 17 were rated in the disagree category (e.g., I have received training within my educational program related to assisting people with disabilities develop personalized emergency preparedness plans to effectively shelter-in-place before, during, or after a disaster; response [M = 2.77(SD = 1.45)]). The overall mean score for training was 66.80. However, despite lower ratings for emergency-preparedness the overall confidence in providing these services was higher at 80.12. The range of possible scores was between 21-126 for each category (i.e., training, confidence) of the EPKCS.

Research Question 2: **Does emergency-preparedness training in an RCE-training program predict confidence in providing these services to people with disabilities?**

A simple linear regression analysis was conducted to determine if confidence in providing emergency-preparedness related services (dependent variable) could be predicted from adequacy of emergency-preparedness training received (independent variable) within a RCE master's degree program. The null hypothesis tested was that the regression coefficient (i.e., the slope) was equal to 0. The data were screened for missing data and violation of assumptions prior to analysis. There were no missing data for the sample analyzed within the statistical analysis and no assumptions were violated. The results of the simple linear regression suggest that a significant proportion of the total variation in confidence in providing emergency-preparedness related services was predicted by training. In other words, the more training a student received, the more confident the student was in providing emergency-preparedness related services to people with disabilities, $F(1, 136) = 120.65$, $p = .000$. Additionally, we found the unstandardized slope (.620) and standardized slope (.686) are statistically significantly different from 0 ($t = 10.98$, $df = 136$, $p = .000$). The confidence intervals for the standardized slope does not include 0 (.508, .731), further confirming that training is a statistically significant predictor of confidence in providing emergency-preparedness related services. R-squared for the regression model indicates that approximately 47% of the variation in confidence scores was predicted by training scores. This suggests a large effect (Cohen, 1988).

Research Question 3: **How adequate is emergency-preparedness training to students enrolled in a rehabilitation counselor education program in meeting specific CACREP common core and clinical rehabilitation or general rehabilitation counseling accreditation standards?**

A frequency distribution analysis was conducted to observe how students' rate the adequacy of training as it relates to specfic CACREP (2016) accreditation and CRCC (2010, 2017) ethical standards. As aforementioned, student participants were presented with a statement and were instructed to provide a rating of strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree. As displayed in Table 2, the mean and standard deviations are presented for each standard. Question(s) 20 and 40 on the EPKCS were related to CACREP standard II.F.1.c. (i.e., counselors' roles and responsibilities as members of an interdisciplinary emergency management response team during a local, regional, or national crisis, disaster or other trauma-causing event) and had an overall mean response of 3.53 (SD = 1.54). Question(s) 19 and 39 on the EPKCS were related CACREP standard II.F.5.m. and CLRC standard E.4. (i.e., crisis intervention and suicide prevention models, including the use of psychological first aid strategies) and had an overall mean response of 3.12 (SD = 1.51). Question(s) 21 and 42 were related to the CRCC ethical standard D.3.b. (i.e., DISASTER PREPARATION AND RESPONSE. Rehabilitation counselors make reasonable efforts to plan for continued client services in the event that rehabilitation counseling services are interrupted by disaster, such as acts of violence, terrorism, or a natural disaster.) and had an overall mean response of 3.68 (SD = 1.37). These average scores would be associated with the slightly disagree category (e.g., I have received training within my educational program related to providing crisis counseling to people with disabilities before, during, or after a disaster). Although the mean response for each of these standards was in the slightly disagree category, the mean response of students' confidence in providing these services were in the slightly agree category (M = .405 – 4.27, SD = 1.28 – 1.36).

Table 2. Mean and standard deviations for training and confidence-related questions

Emergency Preparedness Knowledge and Competency Scale (EPKCS) Questions:

(1) I have received training within my educational program related to…
(2) I feel confident in my understanding of how to…

1. Assisting/assist persons with disabilities maintain independence before, during, and after a disaster
2. Assisting/assist persons with physical disabilities learn where and how to access emergency-information during a disaster
3. Assisting/assist persons with visual disabilities obtain emergency-information during a disaster.
4. Assisting/assist persons with psychological disabilities obtain emergency-information during a disaster.
5. Assisting/assist persons with cognitive disabilities obtain emergency-information during a disaster.
6. Assisting/assist persons with sensory disabilities obtain emergency-information during a disaster.
7. Effectively advocating/advocate for specific functional needs of persons with disabilities when emergency preparedness plans are being developed or modified within a rehabilitation agency.
8. Effectively assisting/assist persons with disabilities locate accessible transportation before, during, and after a disaster arises.
9. Assisting/assist persons with disabilities locate emergency sites that provide a power source for those requiring power source needs.
10. Assisting/assist persons with disabilities or their care providers in accessing medical care during or after a disaster.
11. Effectively developing/develop emergency operation plans that incorporate the functional needs of persons with disabilities.
12. Effectively assisting/assist local disaster preparedness teams in conducting community assessments to determine the demographic population of persons with disabilities within a local community.
13. Accessing/access the emergency alert delivery system or community alert system.
14. Communicating/communicate to persons with disabilities from culturally diverse populations when a disaster arises.
15. Assisting/assist persons with disabilities obtain accessible shelter before, during, or after a disaster.
16. Whether service animals are allowable in emergency community shelters before, during, or after a disaster.
17. Assisting/assist persons with disabilities develop personalized emergency preparedness plans to effectively shelter-in-place before, during, or after a disaster.
18. Assisting/assist persons with disabilities prepare an evacuation kit.
19. Providing/provide crisis counseling to persons with disabilities before, during, or after a disaster.
20. How rehabilitation counselors fit into a multi-disciplinary emergency management team.
21. How to provide continued services to persons with disabilities when the usual location is inaccessible.

Discussion

Both CACREP and CRCC continue to recognize the important role that counseling professionals (e.g., Rehabilitation Counselors, Mental Health Counselors) can play during disasters for people with disabilities. This is evident by the accreditation standards presented in the common-core standards (i.e., CACREP II.F.1.c., CACREP II.F.5.a.) and rehabilitation counseling ethical standards (CRCC D.3.b.). Findings from the current study indicated that RCE programs should increase emergency preparedness content within their curriculum. Specifically, findings revealed that respondents on average reported slight disagreement to slight agreement in terms of whether each item of the survey was covered in their RCE program (e.g., I have received training within my educational program related to assisting people with disabilities develop personalized emergency preparedness plans to effectively shelter-in-place before, during, or after a disaster response [M = 2.77(SD = 1.45)]). Furthermore, increasing emergency preparedness content within the curriculum may directly increase self-efficacy among rehabilitation professionals in training, as demonstrated in our findings.

In terms of assisting people with disabilities develop self-preparedness plans, findings revealed that respondents on average slightly disagreed that this information was provided during their courses within their RCE program (M = 2.77, SD = 1.45) but were still confident in their ability to provide these services (M = 3.67, SD = 1.40). Due to the fact that there are millions of Americans with severe disabilities, assisting in the pre-planning for potential disaster-related situations (e.g., flooding, earthquake, Derecho storms) may help to decrease mitigation efforts (impact of the disaster such as associated costs, injuries, deaths) (U.S. Census Bureau, 2012). With the steady increase in federally declared disasters, it has become evident that people with disabilities need to be included in all levels of disaster preparedness (e.g., local emergency planners, self-preparedness). The lack of inclusion of people with disabilities in preparedness planning have been well-documented (e.g., Fox et al., 2007; Kailes & Enders, 2007; NOD 2012, 2001). Smith and Notaro (2009) concluded that current government and non-government organizations have not done enough to address the emergency preparedness needs of people with disabilities (e.g., lack of education directly towards people with disabilities on emergency preparedness-related services available within the local community). Therefore, it is imperative that the Rehabilitation profession (e.g., RCE program educators) make a proactive response to increasing inclusion of people with disabilities in the planning process, improving rehabilitation professionals' competencies related to emergency preparedness, and increasing emergency preparedness content within the curriculum of RCE programs. Although RCE programs that have switched over to CACREP are still in the transition phases, they should consider the results of this survey when developing curriculum to meet the common core standards and the specialty standards (i.e., clinical rehabilitation, traditional rehabilitation). Additionally, there were no CORE standards prior to the merger that focused on emergency-preparedness, so we expected that training programs may not completely address this topic within courses.

Table 3. Mean and standard deviations for accreditation (CACREP, CLRC, and Rehabilitation Counseling - 2016) and ethical standards (CRCC - 2017) related to disaster preparedness.

Accreditation Standard	EPKCS Item	Training			Confidence		
		N	*M*	*SD*	*N*	*M*	*SD*
CACREP 2.F.1.c.	20	145	3.53	1.54	139	4.24	1.32
CACREP 2.F.5.m.	19	145	3.12	1.51	139	4.12	1.31
CACREP 5.D.2.e.	11	145	2.92	1.54	139	3.83	1.48
CRCC Ethical Standard D.3.b.	21	145	3.68	1.37	139	4.05	1.36

Limitations

There were four main limitations of the current study. First, the self-report nature of the survey research. In particular, self-report measures, are susceptible to illusory superiority bias (Alicke & Govorun, 2005), where respondents may have overestimated their confidence in providing emergency preparedness related services. Furthermore, participants may have also underestimated confidence in their ability. Second, the time-frame between the exposure of emergency preparedness protocols and the survey administration time frame. The time frame between exposure to emergency preparedness content in the RCE program and when they completed the survey may also be another limitation. Participants may have been exposed to emergency preparedness content earlier in their program and they may have been unable to retain some of the information or recall that they covered specific information described in the survey, or gained knowledge from other previous experiences (e.g., job/in-service training). Additionally, students may not have taken courses where emergency preparedness content is provided. Third, we did not include the new rehabilitation counseling specialty accreditation standards. The new rehabilitation counseling specialty accreditation standards by CACREP were released after we began data collection. Standard 5.H.2.g. (i.e., awareness and understanding of the impact of crisis, trauma, and disaster on individuals with disabilities, as well as the disability-related implications for emergency management preparation) was included in these new standards and we were unable to account for this when developing the survey and collecting data, as we already began this. A final limitation was the low-response rate. Although we received a response rate of 21.87% and included a simple random selection for the study design, we were hoping to have a greater response rate considering we utilized Dillman's method of multiple points of contact for online surveys and provide participant incentives as aforementioned. The response rate was low, providing limitations to external validity of the results (i.e., generalizability).

Recommendations

Self-Preparedness Plan

As aforementioned, the U.S. Department of Homeland Security developed a guide for emergency personnel and within this guide, it was recommended that for a person with a disability to be fully prepared, they must have adequate knowledge related to: (1) general emergency preparedness, (2) their own functional needs, (3) communication with appropriate personnel and supports, (4) how to evacuation and access accessible transportation, and (5) how to shelter-in-place. Rehabilitation professionals who work with people with disabilities could benefit in the development of a self-preparedness plan by assisting the individual with each of these categories. For example, rehabilitation professionals could obtain disaster-related information (e.g., ready.gov) and contact information from local emergency management agencies to provide

to their clients. Furthermore, rehabilitation professionals could be familiar with community resources available within a small geographic region from where services are rendered to provide to each client.

Psychological First Aid & Crises Intervention

The U.S. Department of Veterans Affairs (2016) stated there are three phases of reactions during a disaster, including: (1) emotional response (e.g., shock/disbelief, sadness, guilt, feelings of hopelessness, anger, distress), (2) physiological response (e.g., trembling/shaking, insomnia, fatigue, nausea/diarrhea, muscle tension, headaches), and (3) behavioral response (e.g., dietary changes, isolation, impulsivity, dependence on others, use of drugs/alcohol). In some instances, rehabilitation counselors' may be able to provide psychological first aid and/or crisis intervention strategies to help reduce the psychological barriers that people with disabilities are experiencing because of a disaster. In order to provide effective psychological first aid, rehabilitation counselors would need to: (1) promote a sense of safety, (2) promote calming, (3) promote a sense of self and collective efficacy [e.g., control or the situation], (4) promote connectedness, and (5) promote hope (Hobfoll et al., 2007). To accomplish psychological first aid, rehabilitation counselors will need to be well versed in providing crisis interventions.

Although there are different models of crisis intervention, Baker and Cormier (2015) outlined a particularly useful 7-step crisis intervention model by Dass-Brailsford (2010). This includes: (1) assessing the lethality of the situation (e.g., is the client displaying immediate suicide crisis), (2) establish rapport with the client / make psychological contact and rapidly establish collaborative relationship, (3) identify specific / major problems by listening to the person's story (including sequence of events), (4) encourage an exploration of feelings and emotions and assist the person in managing the feelings, (5) generate and explore alternatives and new coping mechanisms, (6) use behavioral strategies when developing an action plan and restore functioning through implementation of action plan, and (7) plan to follow-up with the individual.

Additionally, rehabilitation professionals that are well-versed in providing crisis intervention will need to learn the specific protocols when a disaster arises. This includes the stabilization of injury and illness, and providing attention to the physical and psychological needs of people with disabilities (Dass-Braislford, 2010). Both psychological first aid and crisis intervention may be needed during the impact phase of the disaster [i.e., time period immediately connected to the event], the immediate post-disaster phase, or during the recovery phase [i.e., people begin to adjust to the reality that the recovery period may be a long period of adaptation and change] (Baker & Cormier, 2015). Furthermore, rehabilitation educators may consider implementing psychological aid and crisis intervention training within their clinical courses to maximize the likelihood that students become familiar with the application of these concepts.

Future Research Considerations

The last large survey that gathered data on people with disabilities and emergency preparedness was last conducted in 2001 (NOD / Harris Interactive Survey). It would be beneficial to conduct another large survey to determine the impact of the Emergency Preparedness Initiative on self-preparedness of people with disabilities. Given the 2017 CORE-CACREP merger (CORE, 2015, July), adoption of the clinical rehabilitation specialty (CACREP, 2015), and future of mental health in rehabilitation counseling (Tarvydas, Leahy, & Zanskas, 2009; Leahy, Munzen, Saunders, & Strauser, 2009), it may be beneficial to survey counselor educators from CACREP-accredited programs. CACREP standard 5.H.2.g. (rehabilitation counseling specialty) should be included or considered when designing future studies. Finally, exploring the knowledge domain of actual rehabilitation professionals related to emergency preparedness would be helpful in determining appropriate materials for educational interventions (e.g., continuing education units) to assist in improving competency in this area.

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Competencies for Effective Program Evaluation and Quality Assurance in Vocational Rehabilitation

Scott A. Sabella
University at Buffalo

Matthew E. Markve
Idaho Division of Vocational Rehabilitation

Darlene A. Groomes
Oakland University

Michael T. Shoemaker
Utah State Office of Rehabilitation

This study explored the primary competencies considered necessary for successful practice of program evaluation and quality assurance (PEQA) roles within state vocational rehabilitation (VR) agencies. A mixed methods approach was utilized to analyze responses from a survey of members of a community of practice of PEQA specialists in VR (N = 43) in order to identify the foremost competencies that define PEQA effectiveness and investigate the relative importance of these characteristics. A thematic analysis of the 190 distinct qualitative responses revealed five primary competencies: (a) methodology and data analysis, (b) interpersonal skills and effective communication, (c) project management, (d) knowledge of the state-federal VR system, and (e) critical thinking. The resulting primary competencies were then compared to current educational standards in rehabilitation and program evaluation fields to evaluate degree of fit.

Keywords: program evaluation, quality assurance, vocational rehabilitation, competencies, state vocational rehabilitation, performance management, rehabilitation education

Performance management may be defined as a strategic and systematic approach to ensuring the effectiveness of an organization through improvements to the performance of individuals, teams, and/or the systems in which they function (Armstrong, 2006). Within modern state vocational rehabilitation (VR) agencies, program evaluation and quality assurance (PEQA) specialists play a pivotal role in the assessment of individual performance, organizational performance, and the design of strategies for continuous improvement. The Rehabilitation Act of 1973, as amended, established evaluation standards and performance indicators for state VR programs (Evaluation Standards and Performance Indicators, 2000) and this increased demand for accountability led to an expansion of program evaluation systems and personnel within state VR agencies (Rubin & Roessler, 2008). Subsequently, PEQA systems have become more significant, sophisticated, and refined in public VR; with the appearance of greater numbers of PEQA specialists who are further defining and shaping their role and function. The recent passage of the Workforce Innovation and Opportunities Act (WIOA) may only hasten this trend, as state VR agencies adapt to new rules, performance measures, and prescribed partnerships with other governmental agencies (U.S. Department of Labor, 2016). The increased emphasis of accountability in public VR programs, the recent expansion of PEQA specialist positions, and the scarcity of relevant literature convey a need to advance the understanding of the competencies which are necessary to perform PEQA functions effectively.

Scott Sabella, Department of Counseling, School, and Educational Psychology, University at Buffalo, 419 Baldy Hall, Buffalo, NY 14260.

Email: sasabell@buffalo.edu

Competency Identification

Competency can be defined as the ability to apply knowledge and skills to real world circumstances in order to get a desired outcome (Benner, 1982; Trinder, 2008). More precisely, it is the ability to perform the necessary functions of an occupation and successfully cope with the naturally occurring contingencies inherent in all jobs (Trinder, 2008). Part of the process of professionalization for any discipline involves the specification and adoption of a taxonomy of competencies that serve as the foundation for practice (Stevahn & King, 2014). Stevahn, King, Ghere, and Minnema (2005) contend that identification of competencies can benefit a field in four central ways: improved training for new and experienced professionals, enhanced reflective practice, the expansion of understanding and research on evaluation, and the advancement of professionalization of the field. These authors note that competencies can provide the foundation for curriculum and coursework, guide professional development, or be a measuring stick for self-evaluation and reflective practice. They further state that identifying competencies may advance understanding by facilitating the generation of new models or through the testing of existing theory. Finally, competencies are initial steps in the professionalization of a field as they provide a basis for the formulation of standards required for individuals to practice within that discipline (Trinder, 2008).

The field of rehabilitation has a history of researching and establishing the requisite job functions and knowledge domains that make up the essential competencies of rehabilitation counselors (Leahy, Chan, & Saunders, 2003; Leahy, Muenzen, Saunders, & Strauser, 2009), yet program evaluation domains have been absent from these inventories despite the fact that rehabilitation counselors are frequently filling PEQA specialist positions. In public VR, PEQA specialists are required to have a high level of proficiency in both PEQA and VR sectors. The senior leadership within state VR agencies are approaching the hiring process for these specialists in two ways: (a) developing individuals from within the organization who have knowledge of the VR system, assuming they can then acquire the necessary PEQA knowledge or (b) hiring individuals with advanced PEQA abilities from external sources and teaching them the state VR-specific knowledge (Cummings et al., 2011). External applicants may face significant initial hurdles in understanding the VR process, applying regulations, and more importantly they may lack the experience to arrive at meaningful informed judgements in unique VR contexts. Frequently, the agency selects internal candidates with no formal training or expertise in evaluation (Cummings et al., 2011), but who become "accidental evaluators" (Stevahn et al., 2005) and are expected to perform in this environment of increasing accountability.

Accreditation Influences

In July, 2017 the Council on Rehabilitation Education (CORE) completed their merger with the Council for Accreditation of Counseling and Related Education Programs (CACREP), whereby CACREP carries forward as the primary accreditation body for Master's level rehabilitation education programs. The CACREP (2016) standards for knowledge and practice include common foundational curriculum areas required of all counselor education students and then more specialized content based on any number of "entry-level specialty areas," such as the newly formed rehabilitation counseling area. The most relevant PEQA practice content is within CACREP's professional counseling identity section, consisting eight common standard areas including one entitled "research and program evaluation." Although rehabilitation counselors are often filling these VR PEQA positions, there is limited research or theoretical literature delineating the knowledge, skill, or attitude requirements needed for PEQA practice in VR.

PEQA Competencies

In program evaluation literature, essential program evaluation competencies have been organized into a taxonomy of knowledge, skills, and dispositions to promote greater understanding and to identify areas for growth that would advance both personal development and organizational aims (Stevahn et al., 2005). King, Stevahn, Ghere, and Minnema (2001) developed and validated a taxonomy of essential evaluator competencies (TEEC) that represented the unique roles and tasks performed by program evaluation specialists. These competencies were reduced and revised by Stevahn et al. (2005) into six essential categories:

- **Professional practice** competencies focus on fundamental norms and values underlying evaluation practice, such as adhering to evaluation standards and ethics.
- **Systematic inquiry** competencies focus on the more technical aspects of evaluation practice, such as design, data collection, analysis, interpretation, and reporting.
- **Situational analysis** competencies focus on analyzing and attending to the unique interests, issues, and contextual circumstances pertaining to any given evaluation.
- **Project management** competencies focus on the nuts and bolts of conducting an evaluation, such as budgeting, coordinating resources, and supervising procedures.
- **Reflective practice** competencies focus on one's awareness of evaluation expertise, needs for growth,… and engaging in professional development activities.
- **Interpersonal competence** focuses on the people skills… such as communication, negotiation, conflict, collaboration, and cross-cultural skills. (Stevahn et al., 2005, p. 52)

A pilot investigation of state VR program evaluation competencies was conducted for the *36th Institute on Rehabilitation Issues, Performance Management: Program Evaluation and Quality Assurance in Vocational Rehabilitation* (Cummings et al., 2011). The study utilized a listserv of 120 PEQA specialists within state VR agencies and simply asked, "What are the 5 main competencies (knowledge, skills, and abilities) that VR program evaluators need to be effective?" Results from a thematic analysis of the 24 replies yielded six self-identified competencies: (a) knowledge of the state-federal VR system, (b) data analysis and interpretation, (c) interpersonal skills, effective communication, and translation, (d) judgments and recommendations, (e) report writing and presentation, and (f) objectivity.

Although this pilot exploration yielded interesting results, several questions remained: (a) what is the relative importance of each of these self-identified competencies? (b) has the field of PEQA in state VR evolved since this initial inquiry? and (c) how do these competencies relate to current competency standards within the field?

Purpose

The purpose of this study was to further the understanding of what makes an effective program evaluator in state VR agencies. The main research question was *What are the perceived primary competencies of effective PEQA practitioners in state VR?* This general research question was approached using the following four subquestions:

Sub-question 1. What is the perceived relative importance of the six self-identified competencies found in the pilot study by Cummings et al. (2011)?

Sub-question 2. What are the principle competencies that are currently perceived as the most important for successful program evaluators?

Sub-question 3. How does the taxonomy from the current study's thematic analysis compare to the competencies found in Cummings et al. (2011)?

Sub-question 4. How do these principle competencies compare with current competency standards within the fields of rehabilitation and program evaluation?

Methods

Participants

The study employed a purposive sampling method to select individuals who were likely to be "information rich" (Gall, Gall, & Borg, 2007) with respect to PEQA in state VR agencies. For this reason, the Summit Group on Performance Management in VR listserv of 360 individuals was utilized. The Summit Group can be defined as a community of practice of state VR program evaluators and those committed to excellence in PEQA within state VR agencies (Shoemaker & Sabella, 2010) and is principally comprised of individuals who hold the primary PEQA responsibilities within state VR agencies, with a smaller percentage (approximately 25%) who are rehabilitation educators, researchers, and training and technical assistance specialists. The respondent demographic data was limited to professional characteristics and agency type.

Out of the 360 members of the Summit Group, 43 individuals completed the entire survey and thus were included in the data analysis (11.9% response rate). Within the sample, 81.4% of individuals stated that they were state VR agency employees (54.3% general agencies, 34.3% combined agencies, and 11.4% blind agencies). When asked about their job titles, 51.2% of respondents reported they were PEQA specialists, 16.3% were other agency administrators, 11.6% were technical assistance/training specialists, 7.0% were supervisors or managers, 7.0% were counselor educators, and 7.0% were other. The respondents averaged 15.8 (*SD* = 10.6) years in the field of rehabilitation and 6.0 (*SD* = 6.4) years in a PEQA role. Based on a Mann-Whitney U comparison test, no significant differences were found between those with less than average PEQA experience and those with more than average PEQA experience in quantitative responses (competency importance) at the alpha = .05 threshold. When asked how many full-time equivalent program evaluation positions were employed in their agency, the range was 0 to 8, the mean was 2.62 (*SD* = 2.22), and the median was 2.00.

Instrumentation and Procedure

A web-based survey was created in Survey Monkey and included five demographic questions, six ranking items, and one open-ended response question. To explore the relative importance of the self-identified competencies from the pilot investigation (Cummings et al., 2011), the six competencies were described in brief detail (2-4 statements) and then the respondents were asked to rank them in order from 1 (most important) to 6 (least important) according to their importance in influencing VR program evaluators' effectiveness. To investigate the current perceptions on PEQA competencies we included an open-ended question asking "What are the top five competencies that are most important for a successful state VR agency program evaluator?" Respondents were prompted that they could "enter a phrase or describe the elements of each competency in a few sentences."

A brief description of the study goals and a link to the web-based survey was disseminated to 360 potential participants through the Summit Group listserv via email. Those participants who followed the link were presented with a description of the purpose of the study, brief instructions, a consent form, and prompts that responses would be kept anonymous.

Data Analysis

To answer sub-question 1, the rank-order scores found in the present study were compared against each other to see if any were significantly higher or lower in relative perceived importance. The competencies were compared using non-parametric tests which are appropriate for rank-order scores that violate parametric assumptions (Gall, Gall, & Borg, 2007). First, a Friedman (1937) test was performed to detect whether there were any differences in perceived importance across all of the competencies at the $p = .05$ level. Then, follow-up Wilcoxon signed-rank tests were conducted among all competency pairs (15 pairings), to more specifically differentiate these differences. A conservative Bonferroni correction of $p = .003$ was utilized in these pair comparisons to reduce the likelihood of making a Type I error due to multiple comparisons (Dunn, 1961). The ranking scores for the six competency items were transformed to simplify interpretation such that lower scores equate to lower ranking of importance and higher scores equate to higher ranking of importance: 1 transformed to 6, 2 transformed to 5, 3 transformed to 4, 4 transformed to 3, 5 transformed to 2, and 6 transformed to 1.

The open-ended responses (sub-question 2) were analyzed using common qualitative data reduction techniques to extract the underlying themes. The constant comparative method (Creswell, 2007; Glaser & Strauss, 1967; Merriam, 1998) was employed and followed these steps: (1) examination of the responses, (2) categorizing and coding emerging patterns, (3) comparing later segments of data to earlier patterns, and (4) refining the established themes through multiple examination iterations. In an effort to control for interpretive validity (Altheide & Johnson, 1994), three researchers independently coded and then derived themes from the raw responses. These themes were then cross-checked against each other and further refined into consensus domains. The resultant themes were then compared to the pilot study competencies (sub-question 3), to assess the qualitative similarities and differences between these frameworks.

To evaluate external coherence (Hodder, 2000) and answer sub-question 4, the emergent primary VR PEQA themes were compared for consistency with: (a) program evaluation competency theory described in Stevahn et al. (2005) and (b) the current standards for graduate program in rehabilitation counseling education endorsed by CACREP (2016).

Results

Relative Importance of PEQA Competencies (Sub-question 1)

The rank-order scores of the six self-identified competencies from the Cummings et al. (2011) pilot study were evaluated to explore their perceived relative importance and to determine whether there were significant differences in importance among these competencies. Table 1 presents descriptive statistics for competency scores and reveals that the competencies with the highest mean importance ranking were data analysis and interpretation; knowledge of state-federal VR system; and interpersonal skills and effective communication.

The scores were further evaluated to determine if there were significant differences in perceived importance across competencies. A non-parametric Friedman test revealed significant differences in perceived importance among the six competencies ($\chi^2 = 43.64$, $p < .001$). Follow-up Wilcoxon signed-rank tests were performed among all 15 competency pairs to further examine the configuration of these differences as presented in Table 2. A Bonferroni correction p value = .003 was utilized during these multiple comparisons to control for the increased chance of Type I error. As presented in Table 2, judgement and recommendations, objectivity, and report writing and presentation were all found to be significantly lower in importance than data analysis and interpretation. Additionally, the report writing and presentation competency was found to be significantly lower in perceived importance than all of the competencies, except objectivity. None of the other pairs were significant at the conservative alpha correction level.

These results show that respondents believed the top three most important competencies were data analysis and interpretation; knowledge of state-federal VR system; and interpersonal skills and effective communication. The paired comparisons presented in Table 2, show that the other three competencies (judgement and recommendations, objectivity, and report writing and presentation) were all lower in importance than data analysis and interpretation. Additionally, the report writing and presentation competency was lower in importance than most other competencies. We interpret this to suggest that data analysis and interpretation, knowledge of VR, and interpersonal skills should be considered primary competencies within a taxonomy of program evaluation within state VR; that judgments and recommendations and objectivity should be considered further for their inclusion; and that report writing and presentation be discarded.

Table 1

Descriptive Statistics for Importance Scores of the Six Self-Identified Competencies

Competency	Mean	SD	Median
Data analysis and interpretation	4.53	1.29	5.0
Knowledge of vocational rehabilitation	3.98	1.93	4.0
Interpersonal skills and communication	3.88	1.62	4.0
Judgments and recommendations	3.42	1.35	4.0
Objectivity	3.07	1.67	3.0
Report writing and presentation	2.12	1.28	2.0

Note. $N = 43$. Higher scores correspond with higher ranking of perceived importance.

Table 2

Wilcoxon Signed-Rank Tests of Differences in Importance Between Competencies

	DA	K	IS	J	O	RW
Data analysis and interpretation (DA)	-	-1.39	-1.62	-3.00**	-3.85**	-4.91**
Knowledge of vocational rehabilitation (K)		-	-0.16	-1.36	-2.02*	-3.73**
Interpersonal skills and communication (IS)			-	-1.33	-1.94	-4.17**
Judgment and recommendations (J)				-	0.91	-3.77**
Objectivity (O)					-	-2.46*
Report writing and presentation (RW)						-

Note. $N = 43$. Results represent standardized Z test statistics. $p < .05$*. Bonferroni correction, $p < .003$**.

Identification of Current Competency Themes (Sub-question 2)

There were 190 distinct statements in response to the open-ended question "What are the top five competencies that are most important for a successful state VR agency program evaluator?" Three researchers independently coded and derived themes from the raw qualitative responses. These themes and associated responses were then cross-checked against each other and further refined into consensus domains (25 responses did not fit under any theme). Five VR PEQA themes emerged as the primary competencies for PEQA specialists that best represented the participant responses: (a) methodology and data analysis, (b) interpersonal skills and effective communication, (c) knowledge of the state-federal VR system, (d) project management, and (e) critical thinking.

Methodology and data analysis. The most prevalent theme described by participants (52 responses) was related to research and program evaluation methodology and the analysis of data. This competency area included a general understanding of research and program evaluation principles, but also more specific technical statistics and data analytic skills. Importantly, this theme incorporated an awareness of the influence of unique contextual dynamics when applying these principles and techniques to a given agency or program. Examples of responses from this category were "survey design," "systematic inquiry," "situational analysis," "qualitative versus quantitative approaches," "how to design and frame evaluation questions," and "analytic skills including data mining, manipulation, analysis, and reporting."

Interpersonal skills and effective communication. There were 32 responses which were categorized under this theme. This competency area is characterized by the ability to work on relational levels, promote collaboration and teamwork, and to communicate information effectively to internal and external stakeholders through verbal or written formats. Response examples within this competency included: "building rapport with clients and other agencies," "communication ability whether in verbal report or written report form, for communicating results and information," "competencies that focus on people skills, such as communication, negotiation, conflict resolution, collaboration, and diversity."

Knowledge of the state-federal VR system. There were 29 responses that were recorded under this theme. Respondents acknowledged that in order to properly apply PEQA principles and

methods, the practitioner must have a thorough understanding of the complexities of the state-federal VR system, such as disability principles, federal and state regulations, the VR process, agency policies and procedures, the federally mandated performance measures, and the unique circumstances of their VR program. Examples of participant responses in this competency area were "knowledge of VR and disability related foundational principles," "knowledge of RSA required program elements," "understanding of the application of law, rule, policy, and procedure," "understanding how our state implements the VR process."

Project management. There were 28 responses which were categorized under this theme. This competency is comprised of professional skills that allow the program evaluator to effectively manage processes, staff, and resources as they complete their assigned functions and projects. This involves a variety of professional abilities such as organizational skills, thoroughness and accuracy, timeliness, staff supervision, and documentation. The following are examples of participant responses within this theme: "manages time and tasks well," "organizational abilities; thoroughness," "ability to train/supervise staff," "process of managing an evaluation project, such as budgeting, coordinating resources, and supervising."

Critical thinking. There were 24 responses that were coded within this theme. This competency is perceived as a combination of problem solving skills, creative thinking, objective decision-making, and reflective practice. This also involves investigative skills and generating innovative solutions. Critical thinking attends to ethical concerns and using sound judgment in evaluation practice. Examples from participants that were coded under this theme were "problem solving skills, creativity when looking at challenges," "understanding challenges, contributing factors, and possible solutions," "innovation, thinking outside the box for problem solving," "reflective practice," "overcoming preconceived notions about outcomes," and "ethics/integrity."

Comparisons to the Cummings et al. (2011) Pilot Themes (Sub-question 3)

The five primary VR PEQA competencies found in the current study were qualitatively compared to the six self-identified competencies found in the Cummings et al. (2011) pilot study to explore the level of agreement between these two taxonomies. Three of the competencies appeared to directly correspond: methodology and data analysis, knowledge of the VR system, and interpersonal skills and effective communication, supporting these as essential VR PE competencies. The current study identified a new theme named critical thinking which incorporated elements of two competencies from the pilot study (objectivity and judgment), but broadened this further to aspects of innovative problem solving. The current study also identified project management as a new prominent theme. This theme had no corresponding competency within the pilot study but certainly is representative of a responsibility of practicing PEQA specialists and may reflect growing administrative roles for these positions. Finally, the report writing and presentation competency from the pilot study was not a salient theme in the current study's responses, though upon consideration, these skills may be best categorized under the interpersonal skills and effective communication competency.

Comparisons to Established Standards and Competencies (Sub-question 4)

The five primary VR PEQA competency themes were also compared to perspectives from the rehabilitation field (CACREP) and the program evaluation field (TEEC; Stevahn et al., 2005). This comparison allows for examination of the degree of fit between the study findings and these current standards, as well as potential gaps in knowledge for VR PEQA specialists coming from either an exclusively rehabilitation or program evaluation background. In general, the five primary VR PEQA competencies have considerable overlap with established program evaluation competencies, with some nuanced differences in categorization. The same is true of the comparisons to CACREP standards, with a few noteworthy omissions.

First, the five primary VR PEQA competencies were compared to corresponding domains with the CACREP (2016) standards for master's and doctoral-level programs and the newly established rehabilitation counselor entry level specialization (CACREP, 2017). The methodology and data analysis competency matches well with CACREP's "Research and Program Evaluation" common core area of the "Professional Counseling Identity" section, specifically items 2.F.8.c to 2.F.8.i. The knowledge of the state-federal VR system competency is thoroughly covered and embedded throughout the newly adopted "Section 5: Entry-Level Specialty Areas- Rehabilitation Counseling" section. The critical thinking competency is most closely related to ethical practice consideration (2.F.8.j, 2.F.1.i) and self-evaluation (2.F.1.k) content within the CACREP standards, though these items do not fully reflect the problem-solving, innovation, and decision making skills characterized by this competency. The CACREP standards include interpersonal skills and effective communication competency skills within the Counseling and Helping Relationships" subsection (2.F.5), though this is only in the context of the therapeutic relationship which differs appreciably from other professional relationships. Finally, the standards do not address project management as a necessary counselor competency.

Next, the taxonomy from the field of evaluation (TEEC; Stevahn et al., 2005) was compared to the five primary VR PEQA competencies found in the current study. There was considerable overlap across content, despite differences in naming and categorization. The methodology and data analysis VR PEQA competency correlates best with the TEEC's "Systematic Inquiry" (and related subsections) domain which focuses on technical aspects of evaluation practice, such as "design, data collection, analysis, interpretation, and reporting" (p. 52). The interpersonal skills and effective communication VR PEQA competency parallels the TEEC's "Interpersonal Competence" (and related subsections) which emphasizes use of written and verbal communication skills, negotiation, conflict resolution, teamwork, and cultural competence. Both the VR PEQA competencies and the TEEC include sections on "Project Management" and associated skills in resource coordination, staff management, and timeliness. Understandably, there is no competency within the TEEC that specifically addresses the knowledge of the state-federal VR system though it does include a section named "Situational Analysis" which acknowledges the contextual factors present in each unique evaluation environment. Under this section, the evaluator must have an awareness

of the program, processes, interests of stakeholders, and organizational context. In the VR, this equates to an understanding of the state-federal VR system, partners, and the unique features of each state program. Finally, the critical thinking VR PEQA competency is reflected across numerous sections within the TEEC, such as ethical behavior, using good judgment, making sound recommendations, providing rationale for decisions, remaining open to input from others, flexibility in changing plans when needed, and reflective practice.

Discussion

Five Primary VR PEQA Competencies

The present study utilized a mixed methods approach to explore the competencies that constitute a successful PEQA specialist in state VR. The findings indicated a set of five primary VR PEQA competencies: (a) methodology and data analysis, (b) knowledge of the state-federal VR system, (c) interpersonal skills and effective communication, (d) project management, and (e) critical thinking, that represent a logical integration and refinement of the Cummings et al. (2011) pilot study themes into a more precise and validated framework. These results in large part corroborate previous findings but may also show the evolution of the field, emergence of new job functions, and further specification of roles. The results also highlight that these five VR PEQA competencies are well represented within the current educational standards for rehabilitation counseling education, yet there is certainly room to broaden this language in order to reinforce the message that PEQA is an essential part of VR service delivery.

The ranking results and thematic analysis suggest that data analysis and interpretation is regarded as the most important competency for PEQA specialists. This was not surprising as this competency is ostensibly what separates the state VR PEQA specialist from other rehabilitation professionals. Even so, when comparing the qualitative responses from the pilot project against the current results, there appeared to be greater discernment, toward a deeper understanding of program evaluation principles, research theory and methodology rather than purely technical data analysis functions. This difference lies in an understanding of the principles which provide the foundation for inquiry, the appropriate design of projects to empirically answer questions, and understanding the organizational context of the evaluation (Stevahn et al., 2005).

Knowledge of the state VR system was also viewed as an essential competency theme, ranking second highest in importance and likewise being prominently represented within the qualitative responses. The uniqueness of the state VR system confounds many who enter these agencies from external sources. State VR administrators respect the complexity of the state-federal VR grants and appear more willing to hire or promote individuals from within because they understand the VR component, even if they lack advanced program evaluation knowledge (Cummings et al., 2011). This focus on the state-federal VR system and associated regulations has only been hastened by the passing of the WIOA and subsequent substantial changes to the rules for state planning and performance accountability (U.S. Department of Labor, 2016). As the new WIOA regulations and guidance are launched by federal funding agencies related to common performance measures, program evaluators are expected to serve as state VR system experts, to ensure accurate interpretation of, and compliance with, the law.

Certain soft-skills appear to be fundamental to the PEQA process as reflected in the interpersonal skills and effective communication competency. Interpersonal skills enable the development of partnerships and in effective communication you ensure transmission of the data message across all levels of the organization and to external partners. For example, the PEQA specialist may assume a formal interpersonal style when discussing PEQA information with governmental representatives or may adopt a more egalitarian approach when attempting to tactfully give corrective feedback to counselors. When comparing the CACREP standards related to this theme, there are certainly some parallels with counseling skills. While both stress elements of cultural sensitivity, building rapport, establishing collaborative relationships, and conflict resolution, a counseling relationship can differ greatly in terms of the focus and function. The counselor enters into a therapeutic relationship with an individual to assist them in working toward their own personal goals. By contrast, interpersonal skills and effective communication within the PEQA specialist realm involves the translation of information to varied audiences and forming professional relationships on a public level rather than an individual client level.

The findings indicated that participants recognized the importance of project management skills in the practice of VR PEQA activities. This theme was not substantially reflected in the 2011 pilot study but does align with program evaluation theory. As Stevahn and King (2014) describe, project management focuses on the coordination and management of resources, information, and processes as one plans for and conducts evaluation activities. This recognition of project management skills within VR program evaluation may show an evolution in the PEQA specialists' roles and a heightened awareness of these administrative concerns. The modern PEQA specialist may be asked to develop projects from start to finish, managing budgets and staff, while trying to ensure proper accuracy, timeliness, and coordination of information.

The results point toward a refinement in classification of the objectivity and judgment and recommendations competencies derived from the pilot study. These were both subsumed under a broader classification entitled critical thinking. Critical thinking is a process that guides decision-making. This construct is made up of reasoning, reflective thinking, creativity, and problem-solving as one processes competing arguments and information (DiYanni, 2016; Hunter, 2014). This necessarily includes the application of ethical principles and self-reflective thinking, but extends beyond this, toward making reasoned judgments of all kinds. Critical thinking is about evaluating evidence, applying knowledge, making causal connections, and then thinking creatively and flexibly in order to solve a problem (DiYanni, 2016). The current CACREP standards include the understanding and application of ethical principles, but broader aspects of critical thinking should be considered relevant as well.

The results did not support the inclusion of report writing and presentation into a distinct competency category of its own as it was ranked significantly lower in importance than each other

competency category and there were few qualitative responses related to this domain. Because report writing and presentation are essentially means of communicating information, these skills were incorporated under the interpersonal skills and effective communication theme. This revised classification is also supported by prevailing PEQA competencies (Stevahn et al., 2005), which include verbal and written communication skills under interpersonal competence.

Implications for State VR Agencies

In the current age of austerity, there is increasing scrutiny of public programs and corresponding heightened demands for transparency and accountability (Leslie & Canwell, 2010). Additionally, the WIOA and federal review guidance (US Department of Education, 2016) have substantially elevated the importance of PEQA in public rehabilitation through changes to performance indicators, enhanced internal control dictates, mandated interagency data alignment, broad expansion of reporting requirements, and extensive modification to the traditional scope of services. State VR agencies are adapting to meet these new needs by establishing more sophisticated PEQA systems and hiring PEQA specialists who play a vital role in data usage across the agency. PEQA specialists who have knowledge and skills in the five primary PEQA competencies ensures that program data is based on appropriate methodology, accurately, and correctly, applied in the VR context. These competencies assure ethical use of data, enhanced judgment, and a more organized PEQA process. Finally, they promote partnership, teamwork, more effective transmission of information to internal and external stakeholders.

Administrators should encourage PEQA principles across all levels so that each individual understands how the use of data contributes to the quality and continuous improvement of the agency. For example, counselors may use PEQA data in order to provide more effective services and better informed choice to the individuals they work with. Supervisors may use PEQA results to assure compliance with policy, to evaluate supervisees, and to inform personnel training. Administrators require PEQA data to assure adequate controls, manage financial and human resources, inform programmatic decision-making and strategic planning, and for political accountability and advocacy (Sabella, 2017). Lastly, stakeholders like funders, service providers, or advocacy groups may use agency data to provide feedback from an external perspective or defend the proper use of public resources. In each case, the purpose behind PEQA activities is to improve program performance that helps individuals with disabilities achieve their goals of inclusion, independence, and vocational outcomes (Cummings et al., 2011).

A survey by the Government Accountability Office suggests the following strategies to facilitate the use of PEQA evidence: (a) a culture of leadership support for PEQA activities and the use of evidence, (b) building evidence for important questions through rigorous methods, and (c) engaging stakeholders throughout the PEQA process (U.S. GAO, 2013). The communication of PEQA results may also be enhanced through strategies such as (a) creating closer working proximity between VR administrators and the PEQA team, (b) developing relationships with internal and external stakeholders, (c) reporting PEQA results to the right groups at the right time, (d) and presenting results in a digestible format for each target audience.

Limitations

The generalizability of this study may be limited by the sample size, the lack of detailed participant demographic information, and the use of a purposeful, convenience-based sample. Furthermore, as Stevahn and King (2014) point out, despite the usefulness of developing competency taxonomies, there remains a lack of agreement of how to best identify and model competencies, such that a single protocol is not supported. The study utilized perceptions by practitioners which holds a certain degree of inheren bias and error, but also is a commonly used method for identifying important competencies in PEQA and VR disciplines (Leahy, Chan, & Saunders, 2003; King, Stevahn, Ghere, & Minnema, 2001). Additionally, the research design was descriptive in nature, and as a result, interpretations cannot be made regarding predictive or causal relationships among variables. Furthermore, qualitative analysis involves a level of subjectivity in coding, categorization, and interpretation. Within the study, the interpretive validity of qualitative responses was controlled through having multiple investigators confirm emerging findings through triangulation of competency themes (Merriam, 1998).

Conclusion and Recommendations

The recent emergence of more structured performance management processes in state VR agencies has led to the hiring of greater numbers of PEQA specialists who are evolving in their role and function. Although there is wide variation in organization and PEQA roles across state VR agencies, there is a measure of universality that supports the development of a competency taxonomy designed to advance theoretical understanding, efforts to train professionals, reflective practice, and the professionalization of the field (Stevahn et al., 2005). The authors contend that it is vital for PEQA practitioner to be well-balanced and well-rounded in their knowledge and skills in the primary competencies that allow them to be successful, namely: methodology and data analysis, interpersonal competence and effective communication, knowledge of the VR system, project management, and critical thinking.

The ascension of PEQA in VR and the hiring of "accidental" PEQA specialists highlight the need to improve existing preparation and continuing education systems. The authors recommend that rehabilitation education institutions and credentialing bodies further infuse the five primary VR PEQA competencies into existing programs and standards that guide the development of rehabilitation professionals. It would also be beneficial to further expand education and training opportunities for entry-level state VR PEQA specialists, so they may develop their knowledge and skills in these five areas. For example, The Summit Group on Performance Management in VR exists, in part, to orient new program evaluators to the position, provide a forum for peer learning, and provide continuing learning opportunities for PEQA specialists in VR (Shoemaker & Sabella, 2010). Additionally, the Rehabilitation Services Administration has recently established the Technical Assistance Center for VR PEQA housed within the University of Wisconsin Stout Vocational Rehabilitation Institute to increase the number of competent evaluators in state VR and develop continuing education opportunities designed to raise the capacity of evaluators who are already in the field (PEQATAC, 2016).

The PEQA literature base within VR is sparse but growing. In addition to commentary pieces, we recommend that additional qualitative and quantitative research is needed to further specify the job functions under each core competency, to uncover promising VR PEQA practices from the field, and to explore the efficacy of VR PEQA professional development interventions. Ensuring qualified and competent program evaluators facilitates continuous improvement in state VR agencies with the goal of providing better services and achieving improved outcomes for individuals with disabilities.

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