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Supported Education: A Scoping Review

Naomi Davids-Brumer 1, BA, BSc (OT), MSc (OT)
Supervisor: Professor Bonnie Kirsh 2, BSc (OT), MEd, PhD

1 MSc (OT) Department of Occupational Therapy and Occupational Science, University of Toronto

2 Professor, Department of Occupational Science and Occupational Therapy, University of Toronto

Corresponding Author:
Naomi Davids-Brumer
Department of Occupational Therapy and Occupational Science
University of Toronto
500 University Avenue
Toronto, Ontario
M5G 1V7
Canada

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Abstract

Background: The onset of mental illness is commonly between the ages of 16-25, affecting students in the midst of their educational pathways. The challenges faced by these students result in an increase in abandoned educational goals compared with their well peers. These challenges led to the development of supported education (SEd); however, there has been no comprehensive review of this intervention to date. **Purpose:** This study aims to determine how the literature conceptualizes and operationalizes the term “supported education”. **Method**: This scoping review used the framework developed by Arksey and O’Malley. Eight databases were searched for the terms “supported education” and “supportive education” in titles, abstracts, and keywords. **Findings:** Supported education has defining characteristics, underlying theories, service delivery models, and interventions. Interpretation & Discussion: Although the need for SEd is clear, more work is needed to develop a universally accepted service delivery practice, with national policies to support its implementation.

Keywords: supported education; postsecondary education; mental illness; students; scoping review

Introduction:

The age of onset of mental illness most often falls in late adolescence or early adulthood, between the ages of 16-25 years (Egnew, 1993; Jacobs, Selby & Madsen, 1996; Mental Health Commission of Canada, 2018). This developmental stage corresponds with the time many students are pursuing their post-secondary education. Symptoms of mental illness, including difficulty concentrating, decreased motivation, organization and time management, in addition to side effects of medication, can be disruptive to educational attainment (Kirsh & Markoulakis, 2013; Mowbray & Megivern, 1999; Rudnick, et al., 2013; Salzer, 2012; Soydan, 2004; Storrie,

Ahern & Tuckett, 2010). Aside from symptoms, students deal with stigma, which hinders early intervention because it impacts student willingness to self-identify as needing support from campus wellness services (Storrie, et al., 2010). Stigma impedes other aspects of the postsecondary experience including students' interactions with faculty, family, and friends (Kirsh, et al., 2016; Rudnick, et al., 2013; Salzer, Wick & Rogers, 2008; Soydan, 2004). This combination of factors means that many young adults with mental health symptoms fail to become post-secondary students or fail to complete their post-secondary education compared with their well peers (Kessler, Foster, Saunders & Stang, 1995; Stoneman & Lysaght, 2010), with drop-out rates higher among students who do not seek campus-based supports (Gutman, Kerner, Zombek, Dulek & Ramsey, 2009). The inability to complete post-secondary education can lead to a cascade of negative outcomes including, but not limited to, decreased employment opportunities, lower income and socioeconomic status, and decreased self-esteem (Gutman, et al., 2009; Morrison & Clift, 2006; Stein, 2005; Stoneman & Lysaght, 2010; Unger, Padee & Shafer, 2000).

Supported education is an intervention that emerged to address these identified issues, as well as consumers' increasing interest in pursuing post-secondary education and in seeking jobs beyond those available to them through supported employment (SE) programs (Penney, 2016). Supported education (SEd) is defined as: "Education in integrated settings for people with severe psychiatric disabilities for
whom postsecondary education has not traditionally occurred or for people for whom postsecondary education has been interrupted or intermittent as result of a severe psychiatric disability and who, because of their handicap, need ongoing support services to be successful in the education environment" (Unger, 1990, paragraph 6).

Although SEd has been developing over the past 30 years, there are few review papers exploring this intervention. Two reviews, referenced in the included documents, focus on only a select number of articles (Leonard & Bruer, 2007; Rogers, Kash-MacDonald, Bruker & Maru, 2010). Because the field continues to evolve, with more post-secondary institutions offering supports for students struggling with mental health issues and multiple approaches to service delivery, an updated review paper is needed to gain an overview of the field and map the literature on the topic to date (Levac, Colquhoun, & O'Brien, 2010). A scoping review allows for exploration of the field and can incorporate multiple study designs, offering a better understanding of the "extent of the landscape" (Colquhoun, et al., 2014). This scoping review identifies how SEd is being conceptualized and operationalized, based on published literature. It will first explore where the research is being conducted and where SEd programs are implemented. It will then clarify how SEd is defined in the literature and some of its critical features. Finally, it will explore theoretical underpinnings of SEd, and how services are delivered to students both in terms of service delivery models and specific supports and accommodations utilized across SEd programs. This review will conclude with a discussion of what we have learned and where further research is needed. The significance of this research will be described within the context of mental health services for Canadian youth.

Method

This scoping review adopted the framework developed by Arksey and O'Malley (2005), clarified by Levac, Colquhoun, and O'Brien (2010) which includes six stages: identifying the research question; identifying relevant studies; study selection; charting the data; collating, summarizing and reporting the results; and an optional consultation exercise.

Identifying the research question

The research question in this scoping review is: How does the literature conceptualize and operationalize the term "supported education"? The aim is to understand the key elements of its definition, underlying principles and models, and operationalization as they have been implemented to date, as reflected in the literature. It also aims to identify commonly shared understandings of SEd as well as variations in implementation that are evident. The efficacy and outcomes of SEd are seen to be a separate and subsequent piece of research that will build on this knowledge.

Identifying relevant studies

Relevant studies were identified through searching multiple databases in the fields of health sciences, social sciences, psychology, and education. These included: CINAHL, Cochrane, ERIC, Embase, Medline, PsychInfo, Scopus and Sociological abstracts, from their inception to February 12, 2018. A research librarian was consulted on two occasions to discuss and review the search strategy. Because the term "supported education" has not yet been mapped, articles with the term "supported education" or "supportive education" in the title, abstract, or author identified keywords were included in the search. Although some grey literature was found through internet searching and unpublished theses and dissertations, this information was not synthesized into this review article due to resource constraints and priority of peer reviewed research, which allows for a more systematic approach to examining SEd. The search had no limits regarding language or timeframe.

Study selection

Article screening review was completed by the first author and a second reviewer, a PhD candidate in the health field. All records identified from the initial search were transferred from their databases to RefWorks legacy where the level I screening was conducted on titles, abstracts and keywords. Studies were included if they had the term "supported education" or "supportive education" in the title, abstract or keywords and were related to post-secondary education for students with mental illness. Studies were excluded if students' primary diagnosis was developmental delay or autism spectrum. Disagreements between reviewers were discussed and resolved through consensus; consultation with the research supervisor was sought when needed. Following the title, abstract and keyword review, a level II screening was completed in which the full article was reviewed. This procedure was conducted by the same two reviewers. The studies were specifically screened for whether they defined, conceptualized or operationalized supported education. Articles whose full text was not available in English, as well as conference proceedings were excluded at this point. As well, any papers that did not contribute to the research questions, such as firsthand accounts, which noted but did not expand on the SEd and services utilized, or editorials, were also excluded. Full texts were stored and tagged in Mendeley; RefWorks did not have the capacity to store full document PDFs. Again, discrepancies between reviewers were resolved via discussion until consensus was reached.

Charting the data

The data extraction form was developed by the primary author, and reviewed by the second extractor and the research supervisor. Extracted fields included full reference information, location of first author, definition of SEd, models associated with SEd, operational features, location of the SEd program, demographic information regarding study participants, and disciplines of service providers. Goals of SEd outlined in the article, when present, were also extracted as was any other unique information gleaned from the articles, for example barriers for students with mental illness, funding sources, etc. A data extraction trial on two articles was conducted by both reviewers and compared to ensure accuracy. The reviewers then proceeded through the full set of included articles (an additional 124 references), extracting available data for all fields. Documents which were ordered through interlibrary loans (ILL) but could not be obtained by May 18, 2018 were noted but not included.

Collating, summarizing and reporting the results

The articles were analyzed for the fields outlined above. Data extraction focused on definitions, underlying principles and models and operational features, in accordance with the primary reason for conducting the scoping review. Additionally, participant demographics were included. Data extraction was completed independently by two consistent reviewers. Once extracted, the information was synthesized across the fields, with a focus on research and researcher location, models, and operational features. Models were further subcategorized into theoretical models, service delivery models, and models incorporating SEd with other service delivery practices. This information was then examined in the context of the current practice environment.

Consultation exercise

Although no formal consultation was completed, the research supervisor is a stakeholder in this field, having researched and published extensively in this area throughout her career. As well, the first author and her supervisor are involved in a Canadian Institute of Health Research (CIHR) grant on an adapted supported education intervention delivered by occupational therapists for students with mental health challenges. This has provided numerous opportunities to learn about and discuss SEd with consumers, service providers and faculty, and contextualize it from multiple perspectives.

Results

The initial search yielded 1,302 documents, which was reduced to 715 after duplicates were removed. Level I review of titles, abstracts and keywords left 243 documents for full text screening. A full-text reading of those 243 articles was completed, to confirm that the articles were about a post-secondary population with mental health needs, and that they addressed the research question. If the articles did not contribute to the research question i.e. they mentioned SEd only in passing, without defining or operationalizing it, they were excluded. 105 articles were removed following screening based on selection criteria (see figure 1 for additional details regarding excluded articles). An additional 12 documents could not be obtained through inter-library loan either within the timeframe of the study or because the documents could not be borrowed, and were also omitted. The final pool comprised 126 articles, from which data were extracted independently by the two extractors. Figure 1 is a PRISMA diagram outlining the data selection process. Table 1 outlines year of publication and country of the papers' first author.

Figure 1. Data Selection Process

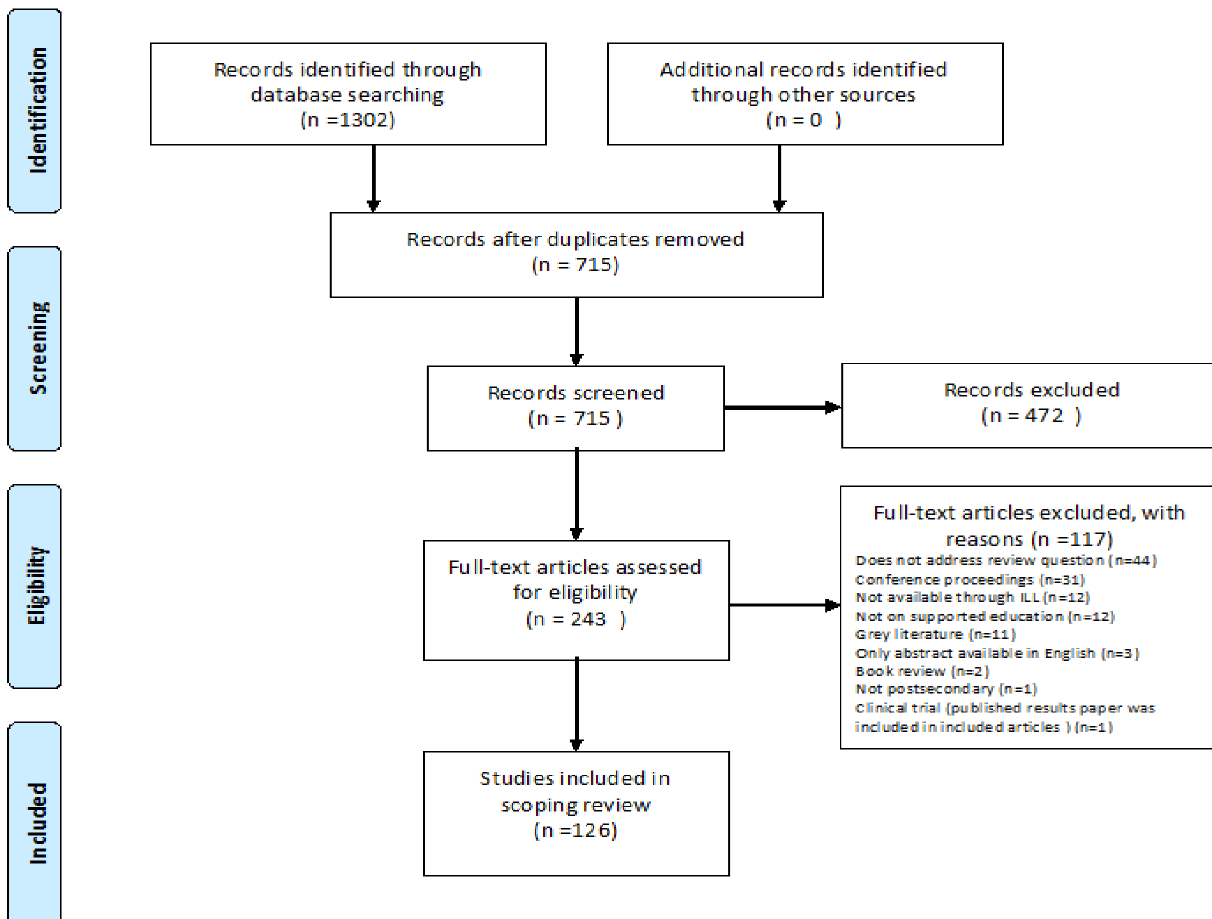

Table 1 - Publications Divided by Year of Publication and Country of First Author

Year of Publication	**Decade**	**Number of papers**	**Percentage of total**
	1990-1999	38	30.1
	2000-2009	46	36.5
	2010-2018	42	33.3
Country of First Author	**Country**	**Number of papers**	**Percentage of total**
	United States (US)	94	74.6
	Canada	11	8.7
	United Kingdom (UK)	8	6.3
	Australia	6	4.8
	Israel	5	4.0
	Malaysia	1	0.8
	New Zealand	1	0.8

Publication Dates

Examination of publication dates (Table 1) of the included papers, shows a slight increase in the number of publications during the 2000-2009 time frame (46 publications), compared with 1990-1999 time frame (38 publications). The databases for this review were searched on February 12, 2018, with only two publications from 2018 included in the review. Although we cannot compare the number of publications from 2000-2009 with 2010-2019 as these data are not yet available, there were 42 papers on SEd published from 2010 through February 12, 2018 included in this review.

Location of Supported Education Program Implementation

The vast majority of published research identified in the search is North American, and out of the US specifically. Of the 126 papers reviewed, 21 are by first authors not located in North America. The earliest SEd programs outlined in the literature began in Toronto at George Brown College (Goyette, 1995) in the 1970s and at Boston University's Centre for Psychiatric Rehabilitation (Penney, 2016; Unger, 1989) in the 1980s. Since then, many SEd programs have been implemented throughout the US; 42 documented in this review are at various locations in the US (e.g. Becker, Martin, Wajeeh, Ward, & Shern, 2002; Bellamy & Mowbray, 1998; Burson, 2003; Egnew, 1993; Hain & Gioia, 2004; Holter & Paul, 2004; Housel, 1993; Humensky, Essock, & Dixon, 2017; Jacobs, Selby, & Masden, 1996; Lieberman, Goldberg, & Jed, 1993; Russell & Strauss, 2004; Schindler & Sauerwald, 2013; Unger, 1991; Unger, Pfaltzgraf, & Nikkel, 2010; Wolf & DiPietro, 1992). The research also looks at program implementation in other countries such as Australia (Best, Still, & Cameron, 2008; Ennals, Fossey, Harvey & Killackey, 2014; Robson, Waghorn, Sherring, &Morris, 2010), Canada (Fernando, King & Eamer, 2017; Stoneman & Lysaght, 2010), Holland (Mowbray, Korevaar, & Bellamy, 2002), Israel (Ponizovsky, Grinshpoon, Sasson & Levav, 2004; Shor, 2017), UK (Davies, Davies, Davies & Moule, 2002; Isenwater, Lanham, & Thornhill, 2002; Morrison, Clift, & Stosz, 2010l; Rinaldi, Perkins,

McNeil, Hickman, & Singh, 2010; Ringland, 2007; Waghorn, Still, Chant, & Whiteford, 2004) and the study from Malaysia focusses on the importance of supported education, as a service which is not yet available there (Yahaya, Ramli, Yahaya, & Yen, 2010).

Defining Features of Supported Education

The key elements of the definitions of "supported education" from the articles included in this review, regardless of their country of origin, echo the definition offered by Unger in 1990: that SEd targets people with psychiatric disabilities and offers services to address the needs of these consumers in their post-secondary educational pursuits (Bateman, 1997; Becker, Martin, Wajeeh, Ward, & Shern, 2002; Bellamy & Mowbray, 1998; Burson, 2003; Cook & Solomon, 1993; Corrigan, Wassel, & Rafacz, 2008; Ennals, Fossey, Harvey, & Killackey, 2014; Gutman & Schindler, 2007; Hain & Gioia, 2004; Isenwater, Lanham, & Thornhill, 2002; Krupa & Carter, 2012; Levine & Orlowski, 1997; Loewen, 1993; Mansbach-Klienfeld, Sasson, Schvartz, & Grinshpoon, 2007; Manthey, 2011; Megivern, Anderson, Wentworth, Barnhart, & Howard, 2004; Morrison, Stosz, & Clift, 2008; Mowbray, Bybee, Collins & Levine, 1998; Mowbray, Bybee & Shriner, 1996; Mowbray & Megivern, 1999; Mowbray, Moxley, & Strauch Brown, 1993; Rinaudo & Ennals, 2012; Smith-Osborne, 2012). Several authors highlight the significance of the student role as being inherently valuable and the importance of freedom from stigma (Bellamy & Mowbray, 1998; Buckles, et al., 2008; Frankie, et al., 1996; Gutman, et al., 2009; Mansbach-Kleinfeld, et al., 2007; Mowbray, et al., 2005; Mowbray, Gutierrez, Bellamy, Szilvagyi, & Strauss, 2003; Soydan, 2004). Others discuss the importance and benefits of normalizing experiences or environments as hallmark features of SEd (Frankie, et al., 1996; Mowbray, Bellamy, Megivern & Szilvagyi, 2001).

Another defining element of SEd is the duration of the support offered. Conceptualized as follow-along, "time-unlimited"(Solomon & Cullen, 2008), ongoing or continuous support (Manthey, 2011; Mowbray, Bybee & Collins, 2001; Mowbray, Bellamy, Megivern, et al., 2001; Kidd, Bajwa, McKenzie, Ganguli & Khamneh, 2012; Russell & Strauss, 2004; Unger, 1989), SEd services assist students to not only attempt, but to succeed in their educational endeavours; these supports are available as long as they are needed. Many authors advise that SEd should be individualized and based on client choice (Mowbray, et al., 1993; Mowbray, Gutierrez, et al., 2003; Mowbray, et al., 2005; Mansbach-Kleinfeld, et al., 2007, Solomon & Cullen, 2008; Lloyd & Tse, 2010; Schindler & Sauerwald, 2013). This idea is highlighted by Unger (2014) who emphasizes that individualized SEd services "are tailored to meet the unique and changing needs of each person", and "services are evaluated on an ongoing basis so that they can be revised, as needed, to keep them responsive to student needs" (p. 297). Several articles go beyond defining SEd to discuss the goals of SEd. One research paper outlines the goals as "to improve post-secondary educational choice, access, and retention through appropriate accommodations for persons with psychiatric disabilities" (Anthony & Unger, 1991, p. 146). Ringeisen et al. (2017) delineated four different SEd goals including: setting and achieving educational goals, improving educational competencies, assisting with navigating the educational environment, and improving attitude and motivation.

Looking at goals more broadly within the review documents, education is promoted either as an entity in itself or as a stepping stone to other goals, most commonly employment. Some see the pursuit of or completion of education as the goal of SEd programs (e.g., Burson, 2003; Gutman & Schindler, 2007; Loewen, 1993; Manthey, Rapp, Carlson, Holter & Davis, 2012; Mowbray, et al., 2005; Mowbray, Bellamy, et al., 2001; Mowbray, Megivern, & Holter, 2003; Mowbray, Moxley, et al., 1993; Rinaudo & Ennals, 2012; Unger & Pardee, 2002). Others see it as a means for improved vocational outcomes (e.g., Ennals, et al., 2014; Megivern, et al., 2004; Unger, 2013; Unger, 2014), while some see the value of both aspects (e.g., Hain & Gioia, 2004; Unger, 1993).

This dichotomy is also seen in program implementation: either SEd alone or in combination with SE.

Theoretical Frameworks

Theoretical models and underlying principles were discussed as the foundations for the SEd interventions in 33 of the 126 documents reviewed. Amongst these 33, two articles cited Antonovsky's Salutogenic Model of Health (Morrison & Clift, 2006; Morrison, et al., 2008) and the remaining 31 articles linked SEd to principles of psychosocial rehabilitation (PSR) and recovery. Even when not explicitly stated, these recovery principles are incorporated throughout the descriptions of SEd programs, focusing on hope, self-direction, choice, empowerment, and individualization (e.g. Buckles, et al., 2008; Fernando, et al., 2017; Lloyd & Tse, 2010; Lloyd & Waghorn, 2007; Mansbach-Kleinfeld, et al., 2007; Mowbray, et al., 2005; Soydan, 2004; Unger, 2014).

Service Delivery Models

There are three primary models of service delivery for SEd programs described in the research: classroom, on-site and mobile support (Unger, 1991). In the classroom model, which is the most structured approach, students attend classes on a postsecondary campus with other students who have mental illness. They learn a set curriculum, often with remedial content aimed at improving basic skills which will help with transitioning into academic life or mainstream classes on campus. The self-contained classroom model can tailor its content to the needs of the cohort while being on campus, and may be best suited to those with little post-secondary experience or success. Students may or may not receive academic credit. Staffing and student support is offered either by members of the academic institution or from the sponsoring mental health agency (Anthony & Unger, 1991; Morrison & Clift, 2006; Mowbray, et al., 1993; Ringland, 2007; Unger, 1991; Unger, 1992). The advantage of the classroom model is that "being in a classroom builds participants' confidence in their abilities to enter a "real" class-room in the future" (Collins, Mowbray & Bybee, 2000, p. 775). However, this model has its disadvantages as it is a costly approach and does not fully integrate students into the college environment (Unger, 1991). One example of a classroom model is a program in Israel which has a "Beit Midrash, a study hall for religious studies" (Shor & Avihod, 2011) as its SEd program. The Beit Midrash is a culturally valued course of post-secondary study for Orthodox or Ultra-Orthodox males. In addition to the normative environment and individual support which are central to SEd (Hain & Gioia, 2004), the program incorporates strengths-based focus of PSR and enhances the participants' sense of belonging and meaning, all of which aid recovery.

In the on-site model, students attend regular classes at the postsecondary institution and receive course credits. Support and accommodations, including support for more instrumental tasks, are provided by staff from the postsecondary site through their student supports or counseling offices (Unger, 1991). This model is conceptualized as a middle ground between full integration into campus life and the self-contained classroom. Students receive an orientation on campus then take regular academic classes with additional support and advice provided on-site. The on-site model teaches specific skills and offers a safe place to discuss issues that arise in the adjustment to post-secondary education. The on-site model allows for full integration on campus; however, it does require students to identify themselves as requiring supports (Solomon & Cullen, 2008; Unger, 1991). An example of an innovative on-site model is from University of Wisconsin, Milwaukee. There, on-site supports are offered by

students in the health professions including nursing, psychology, education, social work, and occupational therapy (OT) under the supervision of the program coordinator. Students needing support meet with their student providers one or more times weekly and can participate in group interventions to help meet their identified goals. Individual and group sessions cover varied topics including stress management, social and study skills, leisure exploration, self-awareness, and self-esteem. This program serves to support students with mental illness and offer training to future health professionals in working with these individuals (Jacobs, et al., 1996).

The mobile support model is similar to the on-site support model; however, the supports are offered through community-based mental health services rather than through the academic institution's staff (Unger, 1991). Although some students may take upgrading or preparatory classes offered by the community support agency, the mobile support model begins when students begin attending post-secondary education. Staff help students connect with on campus supports and provide individualized supported-education services on or off campus, as needed (Anthony & Unger, 1991; Shor & Avihod, 2011). "The primary task is to provide new students with emotional support as they begin to feel comfortable in their role as student" (Unger, 1991, p. 5). Mobile support may use existing staff (e.g. case managers) to support students in their new role, avoiding extra expense. However, it may be difficult for staff to become familiar with and travel to the various academic institutions, to provide the support (Unger, 1991). One example of a mobile support model in the reviewed literature is a program through Laurel House, a clubhouse in Connecticut. Two staff members are assigned to work with students to assist with educational planning, coordinating involvement of educational, mental health or ancillary supports, and supporting instrumental activities such as enrolment or financial aid. Laurel House serves as home base for the students, where they can drop in for tutoring, studying, or work on assignments. Participants can practice writing or public speaking through the clubhouse newsletter or meetings (Dougherty, et al., 1996).

Aside from the three main models—classroom, on-site and mobile—some studies reference a free-standing service delivery model which offers services on campus or provides mobile services but also has off-site or central offices. Additionally, the free-standing model provides "at least two services besides individual counseling, or employ .5FTE or greater staff" (Mowbray, Megivern, & Holter, 2003, p. 161). There does not seem to be consensus as to whether this is a fourth service delivery model or an alternate classification of service delivery models based on the organizational settings i.e. clubhouse, college onsite, or free-standing (Mowbray, et al., 2005; Rogers, et al., 2010).

Within the pool of 126 articles, 44 unique programs were described and were categorized

based on their service delivery approach (table 2). The remaining articles were theoretical or duplicate publications about other aspects of those 44 implemented programs (see Appendix).

Table 2 - Articles Divided by Service Delivery Model

Model	**Number of programs employing that model**
Classroom	14
On-site	3
Mobile	9
Hybrid/combination	18
Total	**44**

Of the 18 programs with a hybrid approach, four were trials with multiple treatment conditions i.e. classroom and mobile approach compared. Two articles could not be categorized due to lack of clarity about the program implementation. Of the 44 programs distinguished by model, four offer services in inpatient hospital units, rather than on campus or at a community agency.

Supported education and supported employment models

Aside from the theoretical frameworks, many of the articles discuss theoretical and practical approaches to SEd implementation. Fifty articles included in this review combined SEd with SE approaches. One program is the Supporting Education Enhancing Rehabilitation program in the US, which offers individualized vocational and educational services, employing on-site support (Hain & Gioia, 2004). Another is the Supported Education and Employment Program in New Zealand, which is a collaboration of health, community education, and employment institutions to help young adults with mental illness secure employment or additional education (Cattermole, 1995).

In addition to the SE/SEd combination programs, several of the articles align SEd implementation with service delivery practices that have been successfully utilized in SE programs. One widely-used service delivery model is choose-get-keep, which is discussed in 25 references (e.g. Biebel, Mizrahi, & Ringeisen, 2017; Russell & Strauss, 2004). Sullivan, Nicolellis, Danley and MacDonald-Wilson explain, “the three phases of program activities—choosing, getting, and keeping—parallel the SEd components of pre-enrollment, enrollment, and follow-along. However, in keeping with PSR principles, the terms choose, get, and keep were selected to focus on participant process rather than on practitioner activity” (1993, p. 58).

In the choosing phase, people make decisions about why and where they would like to return to school. This includes choosing a school, a goal, and an enrollment target date. In the getting phase, the focus is on enrollment, including financial aid applications and placement testing. Also in this phase are decisions about whether to disclose illness, and arrangements for any academic adjustments such as decreased course load, extended exam time, or additional supports required. In the keeping phase, plans are implemented to help students stay in school including resource coordination and specific skills supports such as time management, study skills, etc. (Lloyd & Tse, 2010; Soydan, 2004; Sullivan, et al., 1993).

The evidence-based, standardized version of SE called individual placement and support (IPS), was mentioned in 23 of the included studies. These studies indicated that this model was adapted to introduce a SEd component, with several using it as their SEd implementation model (e.g. Murphy, Mullen & Spagnolo, 2005; Rinaldi, et al., 2010). Some principles of IPS are easily applied to SEd programs including zero exclusion, integration of program and mental health teams, consumer preference, and time-unlimited and individualized support (Bond, 2004).

The integration of SEd and SE was seen to address both educational and vocational progress. The goals of SE currently focus on job placement, rather than career development. Adding in an educational component would allow focus on long term issues of job retention or career development, which might increase consumers' marketability in a competitive employment market (Murphy, et al., 2005; Rudnick, et al., 2013).

Supports and Accommodations

Some of the papers reviewed discuss specific interventions or supports which are utilized or recommended to help students enroll in, persist and succeed in their postsecondary environments. Unger (1991) recommended assistance with registration and financial aid, extended time for exams or alternate exam locations, note taking or tape recording of lectures, changes to seating arrangements, allowing beverages in class–for students experiencing dry mouth due to medications–peer support, non-threatening meeting location on campus, "incomplete" grades rather than failures in cases of relapse, time management strategies, and study skills. Other authors list supported education tasks including obtaining funding to return to school; teaching problem solving; monitoring and dealing with symptoms; managing stress and stigma associated with mental illness; supplemental academic tutoring; advocacy; and skill development including social skill building, study skills, self-esteem and self-awareness, affirmations, time management, leisure exploration, and health education (Collins, et al., 2000; Frankie, et al., 1996; Jacobs, et al., 1996; Megivern, et al., 2004; Pettella, Tarnoczy, & Geller, 1996; Stein, 2005). Some SEd programs offer access to computers or teach computer and internet skills, utilization of library resources and public speaking to help students with academic transitioning (e.g., Gutman & Schindler, 2007; Levine & Orlowski, 1997; Mowbray, Megivern & Holter, 2003; Rudnick & Gover, 2009; Unger, Pfaltzgraf, & Nikkel, 2010); several used computer based technology as a core component of their SEd delivery (e.g., Holter & Paul, 2004; Hutchinson, Anthony, Massaro & Rogers, 2007; Kidd, Bajwa, McKenzie, et al., 2012).

Supported education offered in a clubhouse setting may offer mobile support to students taking classes on campus. Staff arrange campus tours, liaise with campus staff to help determine students' remedial needs, and aid with course selection. Clubhouse staff can also help students with their transportation needs: learning bus routes, arranging carpools, or providing financial assistance for travel. At the clubhouse, members can receive counseling and case management services or assistance with academic skills training for their clubhouse- or campus-based classes, including homework assistance, and test preparation (Dougherty, et al., 1992; Holter & Paul, 2004). These same supports and accommodations are recommended by other authors across settings and service delivery models (e.g., Collins, et al., 2000; Frankie, et al., 1996; Pettella, et al., 1996).

Cooper (1993) surveyed students and staff of a mobile SEd program about which support services they considered most essential. Responses included general and specific supports, including an academic coach, increased outreach or counseling services, and better dissemination of information about those services, early problem identification, stress management, prioritizing study time, peer support

groups, more mental health training for faculty, and reasonable accommodations to remove participation barriers. Other authors stressed the importance of ongoing community support for students pursuing their education including case management, crisis services, and practical or instrumental support (Egnew, 1993; Soydan, 2004).

Researchers who approach supported education through the choose-get-keep model (e.g., Sullivan, et al., 1993; Soydan, 2004) indicate that this model incorporates the same instrumental supports and accommodations utilized by all SEd programs and service providers, as outlined above, but specific supports correspond to a specific phase of choose, get or keep. For example, the choose phase may include assistance with school selection; the get phase may involve arranging academic accommodations and the keep phase may require teaching study skills (Lloyd & Tse, 2010; Soydan, 2004; Sullivan, et al., 1993). Regardless of the models of service delivery, these supports and accommodations aim to increase student success and perseverance. Some researchers also discuss utilizing motivational interviewing (Manthey, 2011) and resilience building (Hartley, 2010) as approaches to improve student retention.

Discussion

The purpose of this review was to determine how the term "supported education" has been conceptualized and operationalized in the literature. A scoping review was conducted to capture the breadth of research on principles and practices in the area of SEd, a field that has emerged over the past 30 years. A synthesis of the articles' content demonstrates that most authors agree on defining SEd as supports for students with mental illness pursuing post-secondary education. Services are offered for as long as they are needed and are individualized to best assist the student to succeed. This review also highlighted the strong alignment of SEd with PSR and recovery principles, which are well documented in the literature. This review summarized authors' reports on how SEd programs incorporate these principles in their implementation to offer young adults with mental illnesses opportunities to redefine themselves as students, build on their strengths, (re)connect with meaningful goals, and offer choices and hopes for the future.

This review draws attention to the variations in stated goals and practices in SEd: whether educational pursuit is an end in itself or a means to securing better employment and a better career trajectory than can be offered through traditional SE programs. Implementation of SEd is often delivered in combination with SE or builds upon SE models. When we compare the evolution of SEd with that of SE, which is now considered to be an evidence-based intervention with a set of core characteristics and standards for practice (Bond, 2004; Modini, et al., 2016), we see that more work is needed to streamline how SEd is approached and unify the core interventions. In reflecting on the studies included in this review, the amount of research in the SEd field has not increased substantially in nearly 30 years (see Table 1); an increase in SEd research would contribute to the evolution of an evidence-based, effective and efficient approach to SEd implementation.

In addition to the defining features and theory of SEd, this review also highlighted the geographic distribution of the research. This finding is important because the context in which the research takes place is a clear indicator of the progress the country has made in the field and suggests where further research is needed, as well as potential gaps in service delivery. To date, research in SEd stems primarily from Western countries, especially the United States. Within the US, the Continuing Education Program (CEP) in Boston University was one of the earliest known SEd programs (Unger, 1989). Canada was also an early leader in SEd with RTE at George Brown College beginning in 1973 (Gilbert, et al., 2004), but Canadian research has not kept pace with the literature emerging from the US in

this area. Some international research can be found, for example from developing countries such as Malaysia, but it is clear that more research is needed to advance the field.

Despite the lack of research in SEd specifically, there is progress in the area of assisting students with mental illness in their academic pursuits. In the province of Ontario, Canada, funding has been provided to support student well-being with the acknowledgement that early identification and treatment of mental illness are critical. Ontario launched a comprehensive mental health and addictions strategy in 2011. This included a fund to support new and innovative approaches for post-secondary students and those transitioning to post-secondary education, to access mental health services (Ministry of Advanced Education and Skills, 2015; Office of the Premier, 2015). With a provincial focus on the needs of students, the time has come to prioritize the learning needs of students with mental illness, and increasing SEd programs at postsecondary institutions may be one approach. Research on outcomes and efficacy of SEd is now needed. Outcomes of SEd programs and accommodations for students with mental illness should be examined to determine its effectiveness and the approaches or characteristics associated with positive outcomes.

Student mental health is finally emerging on the federal horizon. The Mental Health Commission of Canada (MHCC) identified the urgent need for better supports to promote student mental health and academic success. The Mental Health Commission has launched several national initiatives, however, SEd is not one of them. The “Inquiring Minds” pilot program at Canadian universities aims to combat stigma, build resilience and teach the Mental Health Continuum Model approach (MHCC, 2018). The MHCC has committed to developing a National Standard on Psychological Health and Safety for post-secondary students, a collaboration of students, families, post-secondary institutions and faculty, scheduled to begin in the fall of 2018. These are first steps in recognizing the need to address student mental health and its impact on both short and long-term outcomes for Canadians with mental illness, but they are insufficient. Policy level changes are needed to protect the rights of students with mental illness, and supports such as SEd services are needed to maximize student access to education and success in a postsecondary environment.

Limitations

Many of the limitations around this review are related to the identification, retrieval and selection of studies for inclusion. Specifically, there are four limitations to the comprehensiveness of review. First, the term “supported education” has not been mapped. This means that despite searching in eight databases, unless the article had the searched term in the title, abstract or author keywords, it would not have been retrieved in the search. As such, it is possible that many articles on the topic would not have been identified through database searches. The remaining issues which arose involved the timeframe of this review. The limited timeframe meant that three aspects related to study identification and selection were omitted. The first was hand-searching of key journals and included documents’ reference lists, which likely would have produced many, if not all of the outstanding documents. The second omission was grey literature, which was not included in the review. The remaining issue was that although there were an additional 12 articles which were screened for inclusion based on titles and abstracts, they were not included, either because they were not available through ILL, or could not be obtained within the timeframe required. These study identification and selection issues can be easily rectified, which would be beneficial in future research. A final limitation involved the training of extractors; because both were new, some processes required multiple attempts to ensure accuracy.

Conclusions

Researchers whose work is included in this review align SEd with recovery principles and PSR, which calls for opportunities for developing one's potential and capacities, including those in education. Supported education has been discussed in the literature since the 1980s; however, it has not been mapped, and a robust discussion of its principles and practices has not been reached. Though there is some general consensus on how SEd is defined, features of how it is delivered have not developed into high fidelity service delivery practices like those that exist for SE. Furthermore, public policy has lagged in declaring the unequivocal rights of students with mental illness. Progress on all of these fronts is needed to demonstrate that youth mental health is an important priority on Canadian campuses and those around the world.

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Appendix - Implemented Programs with Multiple Publications

Program	Publications
BRIDGE Program (New York and New Jersey, USA)	Gutman & Schindler, 2007 Gutman, Kerner, Zombek, Dulek, & Ramsey (2009) Gutman, Schindler, Furphy, Klein, Lisak, & Durham (2007) Schindler (2014) Schindler (2018) Schindler & Kientz (2013) Schindler & Sauerwald (2013)
Kansas Consumer as Provider (CAP) Program (Kansas, USA)	McDiarmid, Rapp, & Ratzlaff (2005) Ratzlaff, McDiarmid, Marty, & Rapp (2006)
Laurel House (Connecticut, USA)	Dougherty, Campana, Kontos, Flores, Lockhart, & Shaw (1996) Dougherty, Hastie, Bernard, Broadhurst, & Marcus (1992)
Michigan Supported Education Research Project (MSERP – Michigan, USA)	Bellamy & Mowbray (1998) Bybee, Bellamy, & Mowbray (2000) Collins, Bybee, & Mowbray, (1998) Collins, Mowbray, & Bybee (1999) Collins, Mowbray, & Bybee (2000) Frankie, Levine, Mowbray, Shriner, Conklin, & Thomas (1996) Levine & Orlowski (1997)

	Mowbray (1999) Mowbray (2000) Mowbray, Bybee, & Collins (2001) Mowbray, Bybee, Collins, & Levine (1998) Mowbray, Bybee, Megivern, & Szilvagyi (2001) Mowbray, Bybee, & Shriner (1996) Mowbray, Collins, & Bybee, (1999) Mowbray, Korevaar, & Bellamy (2002) Mowbray & Megivern (1999)
Redirection Through Education (RTE – Ontario, Canada)	Gilbert, Heximer, Jaxon, & Bellamy (2004) Goyette (1995) Kidd, Bajwa, &Haji-Khamneh (2012) Kidd, Bajwa, McKenzie, Gangui, & Khamneh (2012)
Technical and Further Education (TAFE – Sydney, Australia)	Best, Still, & Cameron (2008) Robson,Waghorn, Sherring & Morris (2010)

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