An Umbrella Review of Systematic Reviews: Characteristics of Communication Partner Training That Facilitate Learning in Communication Partners of Adults With Acquired Neurogenic Communication Disorders

Revue parapluie de revues systématiques : caractéristiques des formations des partenaires de communication qui favorisent l'apprentissage chez les interlocuteurs d'adultes atteints d'un trouble acquis de la communication d'origine neurologique

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KEYWORDS

ACQUIRED NEUROGENIC COMMUNICATION DISORDERS

COMMUNICATION PARTNER TRAINING

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ENGAGEMENT

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Abstract

Communication partner training is typically designed to equip communication partners of adults with acquired neurogenic communication disorders with the necessary skills to create communication opportunities. Communication partner training allows for opportunities for expression, language expansion, enhanced interaction, participation, and well-being in these adults. However, successful implementation of communication partner training programs is not guaranteed as various factors, such as adult learning principles, the teaching style of the trainer, and trainee engagement, impact on the quality of training, and training outcomes predict training transfer. An umbrella review of systematic reviews was employed for this article. Initially the searches yielded 75 systematic reviews, in which 40 duplicates were identified. The remaining reviews (n = 35) were then screened on title, abstract, and full-text levels, resulting in a final inclusion of eight systematic review studies. A deductive approach to narrative synthesis was used to analyze the data based on previous theory. First, codes were identified, then themes, subthemes, categories, and subcategories were listed based on six adult learning principles and three trainee engagement components. This review highlights the importance of adult learning principles and trainee engagement when designing and implementing communication partner training within natural, real-life communication settings.

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Les formations des partenaires de communication sont généralement conçues pour outiller les interlocuteurs d'adultes atteints d'un trouble acquis de la communication d'origine neurologique avec les habiletés nécessaires à la création d'opportunités de communication. Ces formations sont donc conçues pour générer des occasions où les personnes atteintes d'un trouble acquis de la communication peuvent s'exprimer, améliorer leurs habiletés de langage, ainsi qu'augmenter leurs interactions, leur participation et leur bien-être. Cependant, le succès de la mise en œuvre de ces programmes de formation n'est pas garanti; divers facteurs, tels que les principes de l'apprentissage chez l'adulte, le style pédagogique du formateur et le degré d'engagement des apprenants, ont une incidence sur la qualité et les résultats des formations. Ces facteurs sont également prédictifs de la rétention des acquis chez les apprenants. Une revue parapluie de revues systématiques a été réalisée dans cet article. Parmi les 75 revues systématiques initialement recensées, 40 se sont finalement révélées être des doublons. Les revues restantes (n = 35) ont ensuite été analysées à différents niveaux (titre, abrégé ou texte intégral) et le résultat de ce processus a abouti en l'inclusion de huit revues systématiques. Une approche déductive s'appuyant sur des théories précédemment publiées a été utilisée pour analyser les données et créer une synthèse narrative. Spécifiquement, des codes ont d'abord été identifiés, puis des thèmes, des sous-thèmes, des catégories et des sous-catégories ont été établis en tenant compte de six principes de l'apprentissage chez l'adulte et de trois composantes liées à l'engagement des apprenants. La présente revue souligne l'importance de tenir compte des principes de l'apprentissage chez l'adulte et de l'engagement des apprenants aux moments de la conception et de la mise en œuvre de formations des partenaires de communication dans des contextes de communication naturels et représentatifs de la vie réelle.

Adults with acquired neurogenic communication disorders often experience communication difficulties due to impairments in cognition (thought processes, problem solving, and memory), speech (dysarthria, apraxia, and/or aphasia), motor skills (muscle movement, range, and/or tone), sensory abilities (vision and/or hearing), and language (receptive and/or expressive functioning), varying with the specific etiology of their disorders. Communication partner training (CPT) is typically designed to equip communication partners with the necessary skills to create communication opportunities for adults with acquired neurogenic communication disorders to express themselves, to improve their language, and to enhance their interactions, participation, and well-being (Ahlsén & Saldert, 2018; Chang et al., 2018; Finch et al., 2017; Jensen et al., 2015; Simmons-Mackie et al., 2010). CPT is regarded as the gold standard for reducing communication barriers (Chang et al., 2018; Cruice et al., 2018; Eriksson et al., 2016; Kagan et al., 2018).

CPT aims to equip the communication partner with the skills and knowledge to observe, acknowledge, and accommodate the communication attempts of adults with acquired neurogenic communication disorders by capitalizing on communication techniques and tools that these adults understand (Jensen et al., 2015). Such techniques and tools can include a range of communication strategies to support interaction (e.g., providing structure by using a communication support that the person understands, providing them with opportunities to communicate, and setting up the environment to facilitate interaction), using cueing (e.g., providing visual, tactile, or auditory cues when the person has word-finding difficulties during an interaction), and employing expectant time delay strategies (e.g., actively waiting and giving the person sufficient time to respond). Employing such techniques creates positive experiences and typically leads to more successful interactions (Behn et al., 2021; Cruice et al., 2018).

It is important to train communication partners to create successful interaction, as adults with acquired neurogenic communication disorders often perceive these partners as one of the most prominent communication barriers to their participation (Croteau & Le Dorze, 2006; Emerson & Enderby, 2000). These partners tend to speak for the person rather than supporting the person to make their own contribution during interactions (Croteau & Le Dorze, 2006). Additionally, adults with acquired neurogenic communication disorders commonly experience their communication partners as acting uncomfortable and awkward around them, misunderstanding them, providing limited interaction opportunities, and being unaware of how to support them (Jensen et al., 2015). Often, when adults with acquired neurogenic communication disorders experience improved communication participation or engagement, their self-reported health outcomes, subjective well-being, and quality of life increase (Simmons-Mackie et al., 2010). These qualities are understandably also reflected by the communication partner as communication is coconstructed (Kagan et al., 2018; Simmons-Mackie et al., 2010, 2016).

However, even when including the communication partner and the adult with an acquired neurogenic disorder, the success of CPT programs may still be limited (van Rijssen et al., 2021). Various factors can influence the success of the training such as andragogy (the use of adult learning principles), the teaching style of the trainer (social learning strategies employed, materials used, presentation of information), and trainee engagement (Cruice et al., 2018; van Rijssen et al., 2021). These factors may impact the quality of the training and the training outcomes as well as predict training transfer (Moore et al., 2018). In this review, emphasis is placed on the components of CPT programs that target adult learning principles and trainee engagement to promote the successful transfer of skills to other settings. Research has shown that learning in adults occurs when they are self-directed, autonomous, motivated, interested, and cognitively engaged in the content of the program (Moore et al., 2018; Rangel et al., 2015).

Knowles (1984) suggested six critical adult learning principles: (a) having a need to know, which relates to understanding the reason and value of training and applying it to current life objectives; (b) being oriented to learning by applying knowledge in the current situation; (c) showing readiness to learn by relating life and developmental tasks to the social usefulness of the content; (d) building on prior experience to connect content to one's own life experience; (e) being internally motivated related to the experience of needs, interests, and benefits satisfied through learning; and (f) having a self-concept reflecting an internal locus of control that dictates responsibility for one's own life and decisions (Caruth, 2014; Mews, 2020). According to Tessier et al. (2021), these principles have been criticized in the literature for not including participant experience in training. To address this and ensure that training is effective, these adult learning principles proposed by Knowles (1984) were embedded with the concept of trainee engagement.

Trainee engagement refers to being actively involved in the learning experience (Moore et al., 2018; Rangel et al., 2015). Frade and Veiga (2014) described engagement in three domains, namely (a) cognitive engagement, referring to the use of metacognition to plan, monitor, and evaluate the completion of tasks, such as applying learning

strategies and effort on tasks; (b) behaviour engagement, which reflects adhering to the training protocol, applying the effort needed to persist, concentrating, contributing to tasks, and paying attention; and (c) emotional engagement, which suggests a subjective state where the trainee is completely engaged and experiences a sense of belonging and value. As learning is a continuous process, these six principles of adult learning (Knowles, 1984) can also be embedded in the three domains of trainee engagement (Frade & Veiga, 2014), in order to provide the conceptual framework for this review as presented in **Figure 1**. CPT programs that are founded on a combination of adult learning principles and embedded in the three domains of engagement may foster an autonomous, self-directed, and practical application of skills and knowledge for transfer to natural communication settings.

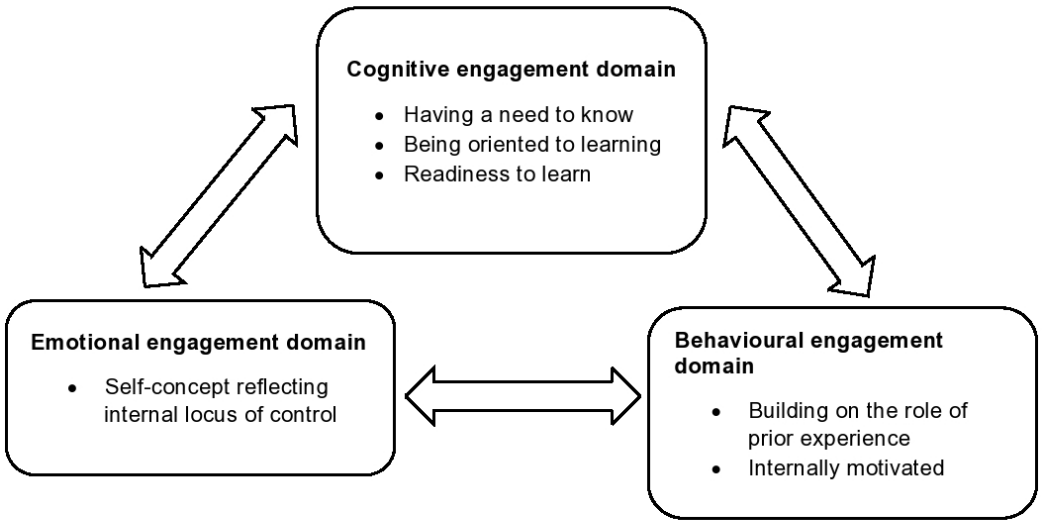
The aim of this review is to identify the characteristics of CPT that incorporate adult learning principles and trainee engagement for communication partners of adults with acquired neurogenic communication disorders to facilitate skill development. Numerous systematic reviews have been conducted on CPT programs within the field of acquired neurogenic communication disorders, each focusing on a specific disorder (Tessier et al., 2021). However, limited information is available on the application of adult learning principles and trainee engagement in the different programs mentioned in these systematic reviews (Cruice et al., 2018; Eggenberger et al., 2013; Simmons-Mackie et al., 2010; Tessier et al., 2021). To compare and contrast the findings of these systematic reviews and to obtain a deeper understanding of the existing CPT literature, an umbrella review-of-systematic-reviews methodology was selected (Smith et al., 2011). Umbrella reviews aim to synthesize the highest level of evidence, namely systematic reviews and meta-analyses, which is in line with the current study's aim to synthesize systematic reviews on CPT program characteristics (Aromataris et al., 2015).

An umbrella review was therefore used to effectively compare and contrast findings of separate systematic reviews informing evidence-based practice for clinical decision-making (Smith et al., 2011). An umbrella review is particularly useful for the aim of the current study as this method seeks to answer a broader question and to identify collective trends across the different systematic reviews (Faulkner et al., 2022). Additionally, an umbrella review is a method of synthesizing literature that is evidence-based, rigorous, and transparent (Faulkner et al., 2022; Smith et al., 2011). The findings of the current study therefore contribute to the replicability and transferability of the CPT programs within clinical practice.

The sub-aims of this umbrella review include the following:

1. Describe the characteristics of existing CPT programs (materials, duration of the individual sessions, content, withdrawal period, and the characteristics of the trainer).

Figure 1



Adult Learning Principles Embedded in Trainee Engagement for Continuous Learning

Note. Conceptualized from Frade & Veiga (2014) and Knowles (1984).

2. Identify the characteristics of CPT that facilitate adult learning principles embedded in trainee engagement for communication partners of adults with acquired neurogenic communication disorders.

3. Identify CPT programs that include aims 1 and 2.

Method

The population, exposure, and outcome (PEO) approach was used to ensure that this umbrella review included information relevant to the main aim, namely, to identify characteristics of CPT programs (exposure) that incorporate adult learning principles and trainee engagement for familiar or unfamiliar partners of adults with various acquired neurogenic communication disorders of both chronic and neurodegenerative natures (population) to facilitate acquisition of skills (outcomes).

Search Strategy and Study Selection

The three-part search strategy used started with a limited cross-database search to identify relevant keywords from studies relating to the topic with the support of an experienced librarian (Khalil et al., 2016). The specific focus of this review was addressed by identifying relevant study selection criteria (Anglemyer et al., 2020; Bellanger et al., 2020; Varker et al., 2015). The selection criteria were (a) studies that were published in English and included only adults 18 years and older (person and caregiver); (b) systematic review and/or meta-analysis study designs; and (c) studies published between 1990 and 2021, because a limited research synthesis was conducted prior to 1990 (Aromataris et al., 2015). Systematic reviews that focused only on the structure of CPT programs or on the layout were excluded (Loh & Musa, 2015). Structure refers to procedures used in pretraining, training, and posttraining phases; length of the training; generalization strategies; trainee support strategies; and follow-up procedures. Layout refers to the composition of one session and procedures during each individual training session.

Following the appropriate selection of relevant search terms, relevant interfaces, namely EBSCOhost, Scopus, ProQuest, and Cochrane were used to access databases such as Medline, CINAHL, PubMed, PsycArticles, Academic Search Complete, Humanities Source, Health Source: Nursing/Academic Edition, Taylor & Francis, APA PsycArticles, and APA PsycInfo. Reference lists of studies relating to the topic were also screened to identify additional sources (Khalil et al., 2016; Manafò et al., 2018; Tricco et al., 2018). Search terms included Boolean operators (OR; AND) and truncation and were used in all fields—including keyword, title, abstract, subject terms, and mesh terms. This aided in the quality control of searches and minimized potential errors during data entry (Varker et al., 2015). See **Table 1** for the search terms used, organized in PEO format.

Title/Abstract Selection

This phase consists of identifying relevant studies to meet the aims of the review. Initially, 75 studies were identified using database searches (n = 45) and manual review of reference lists (n = 30). This search strategy resulted in 40 (n = 40) duplicates, hence a total of 35 (n = 35) remained for title and abstract screening. **Figure 2** includes the PRISMA diagram illustrating the process followed and the number of studies identified through the searches.

The 35 remaining studies were uploaded onto Rayyan (https://www.rayyan.ai), an open access online platform developed for collaborative systematic reviews (Ouzzani et al., 2016). Rayyan proved to be beneficial as it increased the objectivity of study selection and aided in improving the interrater agreement (Ouzzani et al., 2016). Prior to the selection process, the authors organized regular meetings on Google Meet (https://meet.google.com) to confirm an agreement on the selection criteria for the title and abstracts to ensure that the selected studies aid in answering the research question (Smith et al., 2011). The first author screened all the titles and abstracts, and the studies were divided equally between the second and third authors to act as second reviewers. This process ensured that all the titles and abstracts were reviewed by at least two authors (Blanco et al., 2019; Smith et al., 2011). The titles and abstracts were divided into three groups: undecided, included, and excluded. Two of the articles were categorized as undecided and 33 articles were categorized as either included or excluded. During the initial review, 80% consensus occurred between the three authors. Another online meeting was arranged between the three authors to discuss the inclusion and exclusion of the articles as well as to finalize the full-text selection criteria. Full consensus was obtained between the three authors (Smith et al., 2011) attending the meeting. During the process of the meeting, 24 studies were excluded based on factors such as the aim and focus of the study not addressing this review's aims or not including a description of characteristics of CPT programs.

Full-Text Selection

A total of 8 articles were included for the full-text selection. The first author read through all the full-text articles, and the articles were divided equally between the second and third authors to act as second reviewers. During this phase, partial agreement was obtained between the authors. However, after a scheduled online

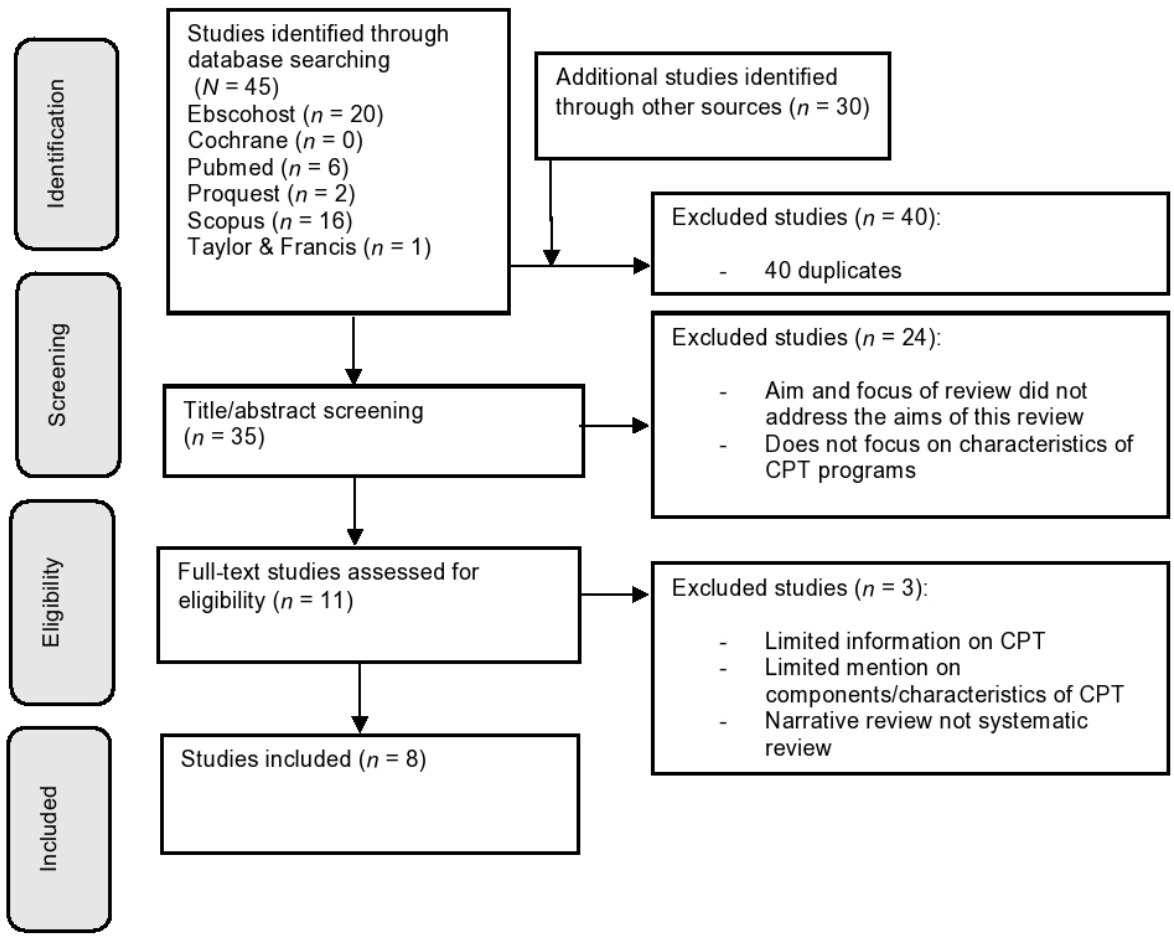
Table 1

Search Term Inclusion in PEO Format

Content	Keywords	Inclusion	Exclusion	Rationale
Population Familiar or unfamiliar communication partners of adults (≥ 18 years) with acquired neurogenic communication disorders of both a chronic and neurodegenerative nature	Familiar partners: Caregiver OR spouse OR partner OR carer OR family OR paid OR unpaid OR untrained OR informal Unfamiliar partners: Caregiver OR carer OR healthcare practitioner OR trained OR formal	Both trained (healthcare practitioner) and untrained (family, partner, or friend) partners of persons with acquired neurological disorders were included. Acquired neurological disorders include traumatic brain injury, stroke, brain cancer or tumours, dementia, and Alzheimer's disease, and other neurodegenerative disorders (e.g., Parkinson's disease, amyotrophic lateral sclerosis).	Communication partners of adults with cerebral palsy, autism spectrum disorder, cognitive and learning disorders, etc. were excluded.	Communication partners of adults with acquired neurological disorders require adequate support and training to effectively facilitate communication interaction with these adults (Wiseman-Hakes et al., 2019).
Exposure Structure and layout of CPT programs	Communication OR conversation OR interaction AND intervention OR training OR education	Systematic reviews on CPT are included. These systematic reviews need to include characteristics of CPT (e.g., duration of program, duration of training sessions, training strategies based on adult learning principles and withdrawal) and the layout of the sessions (e.g., includes theoretical and practical information during sessions).	Studies that targeted other dyads such as practitioner-caregiver communication and practitioner-practitioner communication were excluded. Studies targeting high-technology communication aids were excluded (e.g., virtual reality training); as were those with peer simulation, and those with training aimed at improving physical functioning, leisure activity, or activities of daily living.	Training communication partners may enhance their awareness of potential barriers and facilitators of communication (Behn et al., 2021).
Outcome All outcomes were included		The outcomes of the studies were not a determining factor in the inclusion or exclusion of studies. All outcomes mentioned in the studies were included.		Many similarities exist between different CPT programs targeting traumatic brain injury, aphasia, and dementia (O'Rourke et al., 2018). However, discrepancies exist as limited implementation details were provided for replication of the studies (Cruice et al., 2018; Eggenberger et al., 2013; Simmons-Mackie et al., 2010).

Note. CPT = communication partner training; PEO = population, exposure, outcome.

Figure 2



PRISMA Diagram for Review

Note. CPT = communication partner training. Based on the framework by Blanco et al. (2019).

meeting, full consensus was obtained. Only three studies were excluded as they had limited information on characteristics of CPT programs.

Data Extraction

A data extraction form was compiled to extrapolate data relevant in addressing the aims of the review (Smith et al., 2011). The form was not used as an exhaustive checklist but rather as a means to provide descriptive data of the key terms on the characteristics of CPT within the systematic reviews (Faulkner et al., 2022). Specific categories included CPT, components such as the name of the training, structure of the program such as duration of training and outcomes such as the primary and secondary effect of the training. The first author conducted the data extraction and transferred the raw data to an excel spreadsheet (Dawson-Hahn et al., 2017). These data were reviewed by the second and third authors to ensure that the data extracted were relevant and trustworthy (Loh & Musa, 2015; Sundström et al., 2017).

Data Synthesis and Analysis

The focus of this review is to provide a detailed account of the different components and characteristics of CPT programs and the relation it has to the principles of adult learning and trainee engagement. A deductive approach to narrative synthesis was used to analyze the data based on previous theory, namely adult learning principles and the three dimensions of trainee engagement (DeFranco & Laplante, 2017). This process occurred in a nonlinear fashion characterized by fragmenting, condensing, and dividing data into meaningful units followed by combining the units to form new patterns and reverted to context (Lindgren et al., 2020). Initially deductive codes were identified and

sorted by their similarities and differences abstracting them into categories (education) and then subcategories (disorder; Lindgren et al., 2020). These codes relate to labels attached to a phrase or short sequence of text such as diagnosis, symptoms, and impact on functioning and health, as shown in **Table 2**.

The deductive synthesis was followed by the processes of abstraction (different constituents were classified to a higher level) and interpretation (moving from descriptions of manifest content to latent content), which resulted in the formation of themes and subthemes (Lindgren et al., 2020). In this review, the categories are organized into themes (need to know) and subthemes (topic). The three authors independently coded data and then collaborated to establish themes and subthemes.

Quality Appraisal

Diaby et al. (2015), Duncan et al. (2017), Loh and Musa (2015), and Smith et al. (2011) suggested A MeaSurement Tool to Assess systematic Reviews (AMSTAR) to assess and describe the methodological quality and strength of systematic reviews. AMSTAR has good reliability and validity for quality appraisal of systematic reviews (Hospel et al., 2016). This scale tool consists of 11 items with four main responses: "yes," "no," "can't answer", and "not applicable" (Hospel et al., 2016; Loh & Musa, 2015). The responses are then added to obtain a score, rating the quality and strength of the systematic review (Hospel et al., 2016; Loh & Musa, 2015). Three main ratings are classified as having a *low* (0–3), *moderate* (4–7), or *high score* (8–11; Hospel et al., 2016) as shown in **Table 2**. Heterogeneity in study interventions assesses outcomes measures, follow-up periods, structure, and layout of programs, prevented pooling of intervention effects (statistical analysis conducted when the included studies have the same design) and quantitative metasynthesis across reviews. To reduce the risk of counting the same results twice, that is, evidence where multiple reviews contained some of the same primary studies, the synthesis was primarily a narrative review of interventions and outcomes. The strength of the evidence from each meta-analysis was characterized according to the AMSTAR rating (Chinnasamy, 2013).

Results

The findings of the umbrella review of systematic reviews are described according to the aims of the study and conceptual model provided earlier. **Table 2** includes a summary of the demographic information extracted from the data. Of the eight reviews, three were conducted in, or had affiliations with Australia, three in the United Kingdom, and the other studies had affiliations with the United States (25%), Canada (25%), and other countries. Most of the reviews included both familiar (different family members and friends; *n* = 8) and unfamiliar communication partners (police, volunteers, and healthcare practitioners; *n* = 7) in various settings (workplace, residential care, nursing homes, and rehabilitation centres). Additionally, five of the CPT programs were presented by speech-language pathologists or other healthcare practitioners such as psychologists and nurses (2 reviews), with three reviews not specifying who conducted the training. All the CPT programs included strategies that could benefit both the partner and the adult with an acquired neurogenic communication disorder.

Only one of the reviews had a *moderate* quality score (4–7) and seven reviews were rated as having *high* quality scores (8–11) on the AMSTAR quality appraisal. **Table 2** provides more information regarding the AMSTAR ratings of the included reviews. The adult learning principles were embedded in trainee engagement and are discussed as follows:

Characteristics of CPT Programs Focused on Adult Learning Principles and Trainee Engagement.

Cognitive Engagement Domain

Cognitive engagement of trainees related to three adult learning principles that were identified in all the reviews, namely having the need to know (topics of CPT), readiness to learn (cognitive learning), and orientation to learning (learning strategies used in the CPT programs). These findings are categorized in **Table 3** and were mentioned by all included reviews. First, to address the "having the need to know" principle, programs included components such as provision of information on the background of the disorder, specific information on the program, its purpose and information on communication (strategies on verbal and nonverbal communication). Both static (text materials) and dynamic materials (visual and audio output and audio output only) were used. Of the latter, PowerPoint presentations and video recordings or training videos were used in all the studies.

Second, the "oriented to learning" adult learning principle was included in all the reviews. These principles focused on learning strategies to assist in the application of newly acquired skills in the context related to the partner and person (e.g., modelling/demonstrating, repetition of information/revision, role-play).

Third, the programs included the trainees' readiness to learn. By including trainees' readiness to learn in the systematic reviews, CPT programs may facilitate cognitive learning through self-awareness and self-monitoring.

Table 2

Study Characteristics of Included Systematic Reviews

Authors and date	Countries	Communication assessment measures	AMSTAR quality rating [a] (level)	Diagnosis of population studied (*N*)	Target: Adult with acquired neurogenic communication disorder, partner, or both (*N* of studies)	Communication partners (*n*)	Course providers	Contexts	Categories of results reported
Behn et al. (2021)	UK Australia	Rating scales Questionnaires Linguistic analyses self-developed measures Self-reports (communication, knowledge, and confidence) Frequency counts (communication behaviour)	10 (high)	TBI (229)	Both (4) Partner (4)	Familiar partners: significant others (208) parents (14) siblings (2) friends (2) Unfamiliar partners: shop assistants (64) police recruits (20) paid carers (18)	S-LP Research assistant	Workplace activities: serving customers, telephone inquiries, everyday conversation	Participation (person and partner) Overall impression of communication Perceived communication ability of partner
Eggenberger et al. (2013)	Austria Germany UK	Questionnaires Observation of interaction Checklists Computer-assisted behaviour observation	9 (high)	Dementia (831)	Both (8) Partner (4)	Familiar partners: family members (162) Unfamiliar partners: HCP – nurses, doctors, OTs, paraprofessionals (519)	HCPs (S-LPs, nurses, clinical psychologists, psychiatrists, social workers)	Nursing home Hospital Home care Community dwelling	Partner knowledge skills and attitude Improved partner affect Depression Challenging behaviour of person Awareness of communication difficulties and communication strategies Reported communication difficulties

Table 2 (continued)

McGilton et al. (2009)	Canada	Rating scales Questionnaires Discourse analysis Self-reports Checklists Computer-assisted observation systems	6 (moderate)	Dementia (16–120)	Both (6)	Unfamiliar partners: HCP – nurses, nursing assistants, other unspecified HCP (16–106)	Nurse	Nursing homes Residential care	Communication behaviour, skills, and knowledge Use of positive statements Provision of information to residents Use of open-ended questions Engagement and warmth Patronization
Morris et al. (2018)	UK	Rating scale Questionnaire Video analysis Observation Checklist	11 (high)	Dementia (2245)	Both (20) Adult (2) Partner (16)	Unfamiliar partners: professional carers (1199) volunteers (29) Familiar partners: family members (1701)	Not specified	Care home Hospital Residential care Community care	Variability and care Barriers to participation Knowledge, skills, and attitude of partner Perceived QOL Partner self-efficacy Preparedness to provide care Satisfaction with training Use of facilitative communication strategies

Table 2 (continued)

Nguyen et al. (2018)	Australia	Rating scale Questionnaire Video analysis Observation Checklist Inventory	9 (high)	Dementia (712)	Both (11) Partner (6)	Unfamiliar partners: residential carers – nurses, nursing assistants, nursing aides, recreational activity advisors (527) Familiar partners: family members (spouses, partners, children) and friends (267)	Not specified	Residential care Community care Nursing homes	Partner knowledge, skills and attitude Use of facilitative communication strategies Partner satisfaction Partner engagement Communication competence
Simmons-Mackie et al. (2010)	Australia Netherlands US	Rating scale Questionnaire Discourse analysis Observation Standardized assessment	8 (moderate)	Aphasia (319)	Both (16) Partner (15)	Unfamiliar partners: volunteers, students, strangers, acquaintances (118) Familiar partners: family members (niece/nephew, brother/sister, fiancé, spouse, sister-in-law) and friends (234)	S-LP Psychologist	Rehabilitation centre Community care Residential care Nursing home Clinic Boarding school Rustic camp	Partner knowledge, skills, and attitude Communication
Simmons-Mackie et al. (2016)	US	Rating scale Questionnaire Discourse analysis Observation Self-reports Standardized assessment	9 (high)	Aphasia (185)	Both (16) Partner (9)	Unfamiliar partners: HCP – medical professionals and students (339) Familiar partners: family members (spouses and children) and/or friends (115)	S-LP	Rehabilitation centre Residential care University Hospital Care centre	Partner knowledge, skills, and attitude Use of facilitative communication strategies Communication competence

Table 2 (continued)

Wiseman-Hakes et al. (2020)	Canada	Questionnaire Discourse analysis	9 (high)	TBI (228)	Both (8) Partner (4)	Unfamiliar partners: police officers (20) paid carers (15) sales assistants (64) HCP (23: doctor [1]; nurses [7]; physio [8]; S-LP [7]) Familiar partners: family members (167)	Not specified	Rehabilitation centre Community care Long-term care Sales Police	Partner knowledge, skills, and attitude Efficient-focused interactions Use of facilitative communication strategies Knowledge, skills, and attitude Satisfaction with course

Note. S-LP = speech-language pathologist, OT = occupational therapist; HCP = healthcare practitioner; TBI = traumatic brain injury; UK = United Kingdom; US = United States; QOL = quality of life.
[a] AMSTAR ratings of 0 to 3 = *low*, 4 to 7 = *moderate*, and 8 to 11 = *high*.

Behaviour Engagement Domain

Behaviour engagement included two specific adult learning principles that were incorporated in the reviews, namely being internally motivated and building on the role of the trainee's prior experience. The data are presented in **Table 4**. CPT programs incorporating internally motivated principles were supported by the format of the training and included aspects such as the adaptation of the program, program length, the maintenance of skills and intervals of withdrawal of training, the structure of the training sessions, and the strategies employed to facilitate behaviour modification. TBI Express was the only program mentioned in the reviews that allowed for the adaptation of the content and length (Behn et al., 2021). Five reviews included a withdrawal of training at an interval of 3 months for trainees to generalize skills to their real-life contexts (Behn et al., 2021; Morris et al., 2018; Nguyen et al., 2018; Simmons-Mackie et al., 2010; Wiseman-Hakes et al., 2020). Great variability existed with the length of the programs, and it appears that each program based the length of training on the needs of the trainees. All of the CPT programs included in the review used a structure that commenced with lectures followed by practicing the newly learned skills taught in training through mentorship. All the trainees included in the training programs appeared to demonstrate persistence and motivation to complete the CPT and a minority received gratification such as certificates of completion when the training was completed (Eggenberger et al., 2013; Wiseman-Hakes et al., 2020). The findings of this review suggest that CPT programs should be based on various theoretical models as well as include the trainees' prior experience. Conceptually, all the reviews were based on the social model of disability.

Emotional Engagement Domain

Emotional engagement in CPT programs was related to a self-concept that reflects internal locus of control in trainees and included training aspects that centre on social connection and self-reported outcomes. **Table 5** includes more detail on these concepts. All the reported CPT programs included both individual and group support and the most typical mode of delivery was face-to-face training. All the reviews (n = 8) used self-reported outcomes, including improved knowledge, skills, and attitudes; self-efficacy; facilitated self-reflection; and increased satisfaction with the course (Morris et al., 2018; Nguyen et al., 2018; Wiseman-Hakes et al., 2020).

The CPT program mentioned most frequently for supporting persons with a traumatic brain injury (TBI) was TBI Express/TBI Connect (Behn et al., 2021; Wiseman-Hakes et al., 2020); for persons with dementia, MESSAGE (Morris et al., 2018; Nguyen et al., 2018), and for persons with aphasia, Supported Conversation for Persons with Aphasia and Supporting Partners of People with Aphasia in Relationships and Conversation (Simmons-Mackie et al., 2010, 2016).

Table 3

Characteristics of CPT Programs Focused on Adult Learning Principles and Trainee Engagement (Cognitive Engagement Domain)

Cognitive trainee engagement themes (adult learning principle)	Content of CPT programs				Mentioned in
	Subthemes – components of training	Category	Subcategory	Code	
Having a need to know (understanding the rationale for training and the feasibility during the partner's current life situation)	Topics (topics addressed in the program)	Education (providing information and increasing awareness for the partner)	Disorder	Diagnosis, symptoms, and impact on functioning and health	All reviews
				Effect of disorder on communication	All reviews
				Future planning for changing needs of person as the disease progresses	Nguyen et al. (2018)
				Person-centred care	Nguyen et al. (2018)
			Program Communication	Components (e.g., purpose, structure, and layout)	All reviews
				Communication strategies that support nonverbal and verbal communication	All reviews
				Successful and failed communication	All reviews
				Negative communication strategies that cause barriers	All reviews
				Managing different situations/contexts	All reviews
			Behaviour	Managing challenging behaviour	McGilton et al. (2009) Morris et al. (2018) Nguyen et al. (2018) Simmons-Mackie et al. (2010)
				Caregiver attitude towards person	Eggenberger et al. (2013)
			Psychological aspects	Emotional components (e.g., depression and anxiety of partners)	McGilton et al. (2009)
				Maintaining personhood	Simmons-Mackie et al. (2016)
				Maintaining autonomy and independence (abilities-focused)	Nguyen et al. (2018) Simmons-Mackie et al. (2016)
				Counselling	Nguyen et al. (2018) Simmons-Mackie et al. (2010)
				Self-care and relaxation	Nguyen et al. (2018)

Table 3 (continued)

		Cognition	Memory strategies	Nguyen et al. (2018)
			Cognitive stimulation	Nguyen et al. (2018)
			Perspectives on tools or program	McGilton et al. (2009)
		Environment	Environmental adaptations	Nguyen et al. (2018) Simmons-Mackie et al. (2016)
			Multisensory and motor stimulation	Nguyen et al. (2018) Simmons-Mackie et al. (2016)
			Safety	Nguyen et al. (2018)
			Music	Behn et al. (2021)
			Participation strategies	
Materials (materials used to facilitate the learning of new skills)	Dynamic material (material that changes)	Visual and audio output	Video recordings/training videos	All reviews
			PowerPoint presentations	All reviews
			DVD	Morris et al. (2018)
			Case studies	Nguyen et al. (2018) Wiseman-Hakes et al. (2020) All reviews
		Audio-only output	CD	Wiseman-Hakes et al. (2020)
			Audio recordings	Behn et al. (2021) Morris et al. (2018) Simmons-Mackie et al. (2016)
	Static material (material that remains the same)	Text	Information sheets/fliers	All reviews
			Manuals	Behn et al. (2021) Nguyen et al. (2018) Wiseman-Hakes et al. (2020)
			Workbooks	McGilton et al. (2009) Nguyen et al. (2018) Simmons-Mackie et al. (2010)
			Booklets	Eggenberger et al. (2013) Nguyen et al. (2018) Simmons-Mackie et al. (2010)
			Handouts	Behn et al. (2021) Eggenberger et al. (2013) Nguyen et al. (2018)

Table 3 (continued)

		Vignettes	Eggenberger et al. (2013) Nguyen et al. (2018)
		Recommended educational readings	Eggenberger et al. (2013) McGilton et al. (2009)
		Caregiver guides	Eggenberger et al. (2013) Nguyen et al. (2018)
		Cue cards (e.g., with communication techniques, memory cards, reminder cards)	Eggenberger et al. (2013)
		Memory books	Nguyen et al. (2018)
		Posters	
Being oriented to learning (application of knowledge in current situation)	Teaching strategies (strategies used to facilitate the learning of new skills)	Demonstration/modelling	All reviews
		Repetition/revision	All reviews
		Hands-on practice	All reviews
		Workshops	Simmons-Mackie et al. (2016) Wiseman-Hakes et al. (2020)
		Feedback/mentorship/supervision	All reviews
		Video/audio recording of interaction between caregiver and person	All reviews
		Case discussions (i.e., brainstorming, planning, problem solving, and analysis of videos)	All reviews
		Role play	All reviews
		Reflection	All reviews
		Observation	All reviews
		Provision of instructions	All reviews
		Rehearsal	All reviews
Readiness to learn (partner realizes the need to learn and is prepared to participate in learning activities related to current life situations)	Cognitive learning (cognitive processes employed by the participant to learn new skills)	Self-awareness	All reviews
		Self-monitoring	All reviews

Note. CPT = communication partner training.

Table 4

Characteristics of CPT Programs Focused on Adult Learning Principles and Trainee Engagement (Behaviour Engagement Domain)

Theme (Adult learning principle) Behaviour engagement	Subtheme	Category	Definition	Code	Mentioned in
Building on the role of previous experience (the participants' ability to connect the content of the CPT to their own life experience)	Content of CPT	Theoretical model	Theoretical model that forms the basis of CPT and facilitates partner behaviour modification	Supported conversation	Simmons-Mackie et al. (2010, 2016)
				Social model	All reviews
				Snoezelen multisensory environmental intervention	McGilton et al. (2009)
				Nursing child assessment satellite training model	McGilton et al. (2009)
				Participation model	Behn et al. (2021); Wiseman-Hakes et al. (2020)
				Functional behavioural approach	Wiseman-Hakes et al. (2020)
				Behavioural supervisory model	McGilton et al. (2009)
Internally motivated (the participants' experience of needs, interests, and benefits satisfied through learning)	Format of CPT	Adaptation	If the program was implemented as prescribed or if it was adapted	Adapted TBI Express (length and content)	Behn et al. (2021)
				Unspecified adaptations	Morris et al. (2018); Wiseman-Hakes et al. (2020)
				Not adapted	Morris et al. (2018); Wiseman-Hakes et al. (2020)
				Not specified	Eggenberger et al. (2013); McGilton et al. (2009); Nguyen et al. (2018); Simmons-Mackie et al. (2010, 2016)
		Length of programs	Range of length of the CPT	1–24 weeks	Behn et al. (2021)
				1–8 weeks	Eggenberger et al. (2013)
				Cognitive components, 1–3 days; behavioural components, 3–4 weeks; psychological components, 3–6 months	McGilton et al. (2009)
				1–16 weeks	Morris et al. (2018)
				1–17 weeks	Nguyen et al. (2018)
				1–12 weeks	Simmons-Mackie et al. (2010)
				1–20 weeks	Simmons-Mackie et al. (2016)
				1–10 weeks	Wiseman-Hakes et al. (2020)

Table 4 (continued)

	Maintenance of skills	Maintenance of skill after withdrawal and follow-up sessions	Maintenance	Behn et al. (2020); Eggenberger et al. (2013); Morris et al. (2018); Nguyen et al. (2018); Wiseman-Hakes et al. (2020)
			Not specified	McGilton et al. (2009); Simmons-Mackie et al. (2010, 2016)
	Interval of withdrawal	Timing of maintenance	3 months	Behn et al. (2021); Morris et al. (2018); Nguyen et al. (2018); Simmons-Mackie et al. (2010); Wiseman-Hakes et al. (2020)
			6 months	Behn et al. (2021); Eggenberger et al. (2013); Morris et al. (2018); Nguyen et al. (2018)
			9 months	Behn et al. (2021); Nguyen et al. (2018)
	Structure	Structure of the training sessions	Lecture and practice opportunities	All reviews
	Participant persistence	Activities during training sessions that allowed for behaviour modification of partners	Motivation and gratification (e.g., certificate of completion)	Eggenberger et al. (2013); Wiseman-Hakes et al. (2020)
			Mentoring by course provider or facilitator	All reviews
			Persistence to complete course	All reviews

Note. CPT = communication partner training; TBI = traumatic brain injury.

These programs' content and structure included adult learning principles that were embedded in trainee engagement. **Table 6** includes a comparison of the different learning principles and trainee engagement concepts included in the different programs.

Discussion

The aim of this review was to identify the specific adult learning principles embedded in trainee engagement facilitated by the characteristics of CPT programs targeting both familiar and unfamiliar partners of adults with acquired neurogenic communication disorders. Despite the diverse evidence base and variations within and across reviews in terms of the characteristics, duration, and intensity of interventions, some positive trends were evident. From the findings of this study, it appears as if the majority of CPT programs included all the principles of adult learning across different domains of engagement in training. The CPT programs included in this review appear to include aspects of cognitive engagement that can facilitate the immersion of trainees in in-depth reflective learning processes that are situated in realistic problem-solving tasks (Hospel et al., 2016). The findings of the current review support the notion that CPT incorporates cognitive engagement as the trainees are expected to use cognitive and metacognitive strategies during the training to understand and master related knowledge and skills respectively. Additionally, findings suggested that cognitive engagement can be facilitated through trainee motivation by being oriented to learning and using deliberate and sustained attention during CPT, which requires mental effort. The findings of this review also confirmed that readiness to learn was a learning principle that can enable cognitive engagement of trainees due to trainees' application of metacognition and self-regulated learning. This can

Table 5

Characteristics of CPT Programs Focused on Adult Learning Principles and Trainee Engagement (Emotional Engagement Domain)

Theme (adult learning principle) Emotional engagement	Subtheme	Category	Code	Mentioned in
Self-concept reflecting internal locus of control	Format of CPT (format of CPT that allows for social connection)	Mode of delivery	Face-to-face	All reviews
			Video conferencing	Behn et al. (2021); Wiseman-Hakes et al. (2020)
		Type of support	Individual	Behn et al. (2021); Eggenberger et al. (2013; Morris et al. (2018); Nguyen et al. (2018); Simmons-Mackie et al. (2010); Simmons-Mackie et al. (2016); Wiseman-Hakes et al. (2020)
			Group	All reviews
	Self-reported outcomes (outcomes related to participants' self-reports)	Affect upon course completion	Decreased depression	Eggenberger et al. (2013)
			Improved general affect	Eggenberger et al. (2013)
			Positive attitude	McGilton et al. (2009)
			Satisfaction with training	Morris et al. (2018); Nguyen et al. (2018); Wiseman-Hakes et al. (2020)
			Improved confidence	Simmons-Mackie et al. (2016)
		Self-reported competence	Self-reflection	All reviews
			Self-efficacy	All reviews
			Increase knowledge, attitude, and skills	All reviews

Note. CPT = communication partner training.

allow trainees to engage in effortful tasks with purpose and for continued use of strategies (Hospel et al., 2016).

The CPT programs mentioned in the studies also appear to target behaviour engagement facilitated by the participation of trainees, their motivation to complete the training, and their involvement during learning activities (Hospel et al., 2016). Trainees' internal motivation can be supported by their ability to set learning objectives based on their individual needs. In particular, Chinnasamy (2013) suggested that the mentorship that trainees receive facilitates their ability to identify their own needs for learning and allowed them to identify others' as well as their own experiences as the greatest resource for learning. CPT programs appear to particularly focus on this social aspect due to the application for both the adult and the partner who can identify each other as resources for learning. Additionally, seven systematic studies included in the review focused on training both familiar and unfamiliar communication partners. This may benefit adults with an acquired neurogenic communication disorder as it can facilitate the creation of an inclusive society and an accessible environment, as well as reducing participation barriers within different environments for these individuals (Tessier et al., 2020), which is in line with the social model of disability.

Table 6

Reviews that Mentioned Adult Learning Principles Embedded in Trainee Engagement

Author and date	Cognitive engagement			Behaviour engagement		Emotional engagement	Programs mentioned
	Having a need to know	Being oriented to learning	Readiness to learn	Building on the role of prior experience	Internally motivated	Self-concept reflecting internal locus of control	
Behn et al., 2021	✓	✓	✓	✓	✓	✓	TBIconneCT TBI Express Mentioned only authors, not program names
Eggenberger et al., 2013	✓	✓	✓	✓	✓	✓	Mentioned only authors, not program names
McGilton et al., 2009	✓	✓	✓	✓	✓	✓	Mentioned only authors, not program names
Morris et al., 2018	✓	✓	✓	✓	✓	✓	Mentioned only authors, not program names
Nguyen et al., 2018	✓	✓	✓	✓	✓	✓	Eight function-supporting elements Talking sense Reminders, environment, consistent routines, attention, practice, and simple steps (RECAPS) Maximise attention, watch your expression and body language, keep it simple, support their conversation, assist with visual aids, get their message, encourage, and engage in communication (MESSAGE) Intensive interaction Psychoeducational program Focused, interventions, training, and support (FOCUSED) program Abilities-focused program of care Other programs' authors were mentioned but not the names of the programs

Table 6 (continued)

Simmons-Mackie et al., 2010	✓	✓	✓	✓	✓	Supported conversations for persons with aphasia Supporting partners of people with aphasia in relationships and conversation (SPPARC) Conversation coaching Solution focused therapy Other programs' authors were mentioned but not the names of the programs
Simmons-Mackie et al., 2016	✓	✓	✓	✓	✓	Connect partner training Learner-centred approach Supported conversations for persons with Aphasia Patient-centred communication intervention Communication therapy for people with aphasia and their partners Total communication approach Aphasia couples therapy Conversation partner scheme Better conversations with aphasia Interactive storytelling Solution focused couples therapy Supporting partners of people with aphasia in relationships and conversation (SPPARC) Other programs' authors were mentioned but not the names of the programs
Wiseman-Hakes et al., 2020	✓	✓	✓	✓	✓	TBI Express TBIconneCT Other programs' authors were mentioned but not the names of the programs

Moreover, by founding CPT programs on the social model, prior experiential origins can be targeted and environmental barriers to facilitate behaviour engagement can be reduced (Hospel et al., 2016). One critique of adult learning principles is that they do not include the social or cultural aspects of learning (Ekoto & Gaikwad, 2015). According to Booth et al. (2019), communication is a dialogical process that is dictated by sociocultural and sociohistorical influences and therefore should be considered during CPT. To address these influences, the authors of CPT programs appear to employ the social model of disability.

Emotional engagement included in CPT programs related to the emotional reactions of trainees during and after the training (Hospel et al., 2016). From the findings of this review, emotional engagement in CPT training appeared to allow trainees to feel supported, which can greatly influence their self-reported outcomes (Hospel et al., 2016). Emotional engagement can also closely relate to trainees feeling satisfied with their learning. Learning satisfaction can encompass both face-to-face and/or blended trainings. Additionally, trainee satisfaction can be influenced by their subjective perceptions of learning experiences as well as their expectations of learning (Ekoto & Gaikwad, 2015). The subjective experience of training can impact on the generalization of training, maintenance of learned skills, and the effectiveness of the programs (Passer et al., 2009; Smidt et al., 2007). The majority of CPT programs appear to target trainee experiences through self-reported questionnaires where trainees commented on positive experiences and skills maintained for months after the initial training period and withdrawal of training. Last, generalization of learned skills in CPT programs can be influenced by communication partners reporting positive outcomes and application to real-life contexts.

Limitations

This review provided insights into the collective trends across the included studies to demonstrate the components of CPT programs that address adult learning principles embedded in trainee engagement during training. The limitations are largely due to the heterogeneity in the reporting of the original studies' aims, methodology, outcomes, and populations targeted and reported in the systematic reviews. As this was a secondary analysis of the systematic reviews, some information on adult learning principles in the original studies may not be included in this article. As this review focused on identifying the trends seen across the systematic reviews, future research may include empirical studies explicitly attending to the role of engagement in CPT programs by using the theoretical frameworks proposed in the current umbrella review.

Conclusion

From the findings of this umbrella review, it is clear that adult learning principles can be embedded in different domains of engagement that play a key role in trainees' perceived effectiveness of CPT programs. Addressing these when considering the structure and layout of CPT programs should be of cardinal importance when designing and implementing training within natural, real-life communication settings. Ideally, these aspects should be analyzed in both the partner and the adult with an acquired neurogenic communication disorder to assess and optimize the benefits of CPT for both parties. Course providers should consider the learning style of the trainee and teaching style of the instructor. Future research could include assessing the level of engagement of both the partner and the adult with acquired neurological disorder. Additionally, future research could include assessing the level of engagement of both parties in multiple contexts (including culturally and linguistically diverse populations and those in low-to-middle-income countries).

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