Barriers and Facilitators to Implementing Workplace Accommodations for Adults Who Require AAC: A Systematic Review

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Background

Employment has personal and financial benefits, and can contribute to quality of life.

Individuals who require AAC face additional challenges in employment and experience lower employment rates than the general population and general disability community.

There are several barriers to employment for people who use AAC, including societal attitudes, physical environment, and challenges related to communication.

Many supports, including workplace accommodations, are needed to enable participation in employment for people with disabilities including those who use AAC.

Blackory & Wagner, 1996; Blackstone, 1993; Bryen et al., 2006; Bryen et al., 2007; Carey et al., 2004; Light et al., 1996; Lindsay et al., 2018; McNaughton & Bryen, 2002; McNaughton et al., 2002; Odom & Upthegrove, 1997; McNaughton et al., 2001; Padkapayeva et al., 2017; Soloveiva et al., 2011

Objectives:
- to analyze research evidence on barriers and facilitators to implementing workplace accommodations for adults who require AAC
- identify implications for future research and practice

Operational Definitions

Barrier

any personal or environment factor that prevented or negatively impacted the implementation of workplace accommodations

Facilitator

any personal or environmental factor that supported access to and use of workplace accommodations

Workplace Accommodation

- an adjustment to a work environment that enables an individual to perform their job duties
- specialized equipment, modifications to work environment, adjustments to schedules or responsibilities (US Dept. Of Labor, n.d.)

Methods

Search Terms

AAC-related terms AND

Workplace accommodations-related terms

Electronic Database Search

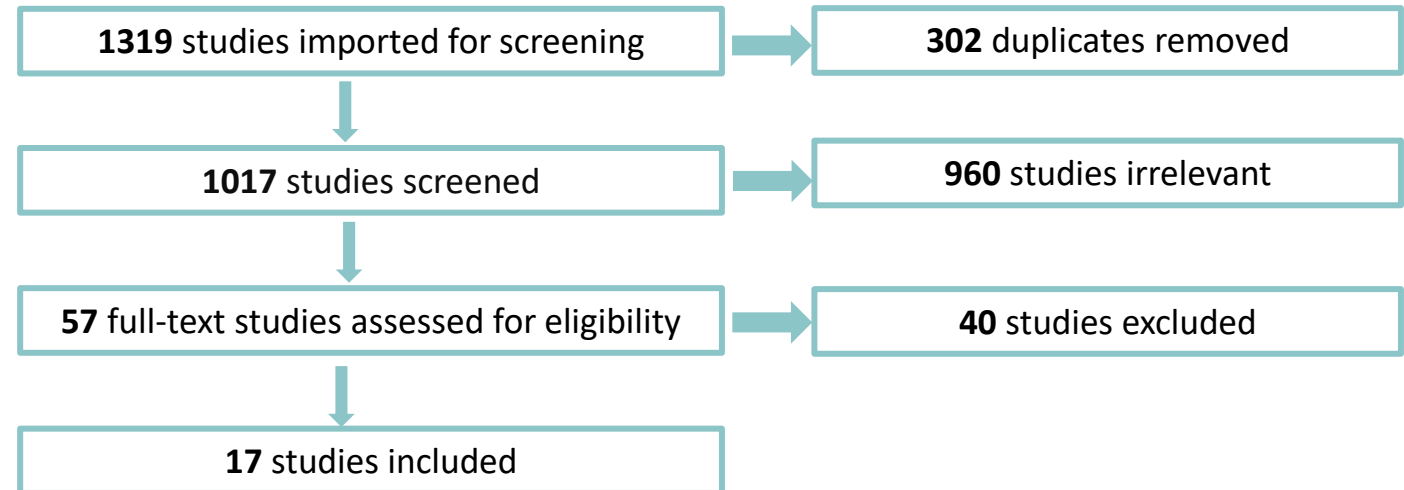CINAHL, EMBASE, Engineering Village, Global Health, HAPI, MEDLINE, PsycINFO, REHABDATA, and Web of Science

Inclusion Criteria

(a) peer-reviewed journals and conference proceedings published in English up to February 2021;

(b) explore or describe the barriers and facilitators of workplace accommodations for adults who use AAC;

(c) studies about internships, paid jobs or mandatory work programs;

(d) the perspectives and experiences of employees who use AAC, employers, employment specialists, job developers, or coaches or similar

(f) individuals seeking jobs, have been employed, or returning to work, and

(g) employees with new or changing accommodations during their employment.

PICo

Population	Individuals over 19 years of age who use AAC
Interest	Perspectives and Experiences
Context	Workplace Accommodations

PRISMA Diagram

1319 studies imported for screening → **302** duplicates removed

1017 studies screened → **960** studies irrelevant

57 full-text studies assessed for eligibility → **40** studies excluded

17 studies included

Quality Assessment

2 independent raters used the Oxford level of evidence and the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system (Guyatt et al., 2009).

Methods

Analysis

The barriers and facilitators were coded based on the International Classification of Functioning, Disabilities and Health (ICF) contextual factors - personal and environmental (WHO, 2001)

Quality of Studies

- Oxford level of evidence: 4.19
- GRADE: "Very low"
- 4 focus group studies scored positively for high quality and publication

Results

Data Collection Methods

- 5 surveys (n=38, 27, 28, 25, 54)
- 4 multi-method approach, including observations, questionnaires, and interviews (n=1, 14, 7, 12)
- 4 focus groups (n=5, 8, 7, 9)
- 3 interviews (n=1, 1, 24)
- 1 email conversation between authors; some responses were from previously written work, presentation materials (n=1)
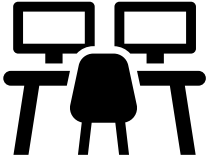
Contextual Factors

Personal Factors

o Education
o Work-related Experience
o Character
o Skills & Knowledge
o Psychosocial

Environmental Factors

- Products and Technology
- Built Environment
o Temporal Nature of Accessibility
- Support and Relationships
- Attitudes
- Services, Systems and Policies

o indicates inductive analysis – not in ICF
• indicates deductive analysis -- from ICF

Application of the ICF to the Barriers and Facilitators

	Barriers		Facilitators
Personal Factors	Lack of or inadequate education	**Education**	Adequate education for the job
	Lack of previous experience	**Work-related Experience**	Has previous volunteer/work experience; Participation in networking opportunities
	Poor self-awareness; Perception that employment is not possible	**Character**	Positive attitude; Motivated; Strong work ethic; Takes initiative; Persistence
	Inability to acquire new job skills; Poor literacy skills	**Skills & Knowledge**	Self-advocacy and communicate needs to employer; Competency with technology; Educate colleagues about disability and support
	Reluctance to request help; Feelings of failure	**Psychosocial**	Acceptance of communication abilities and of accommodations offered by employer
Environmental Factors	Technical issues with AAC and AT; AAC does not meet needs;	**Products and Technology**	Access to and use of assistive technology (AT) and AAC; Features that support employment
	Noisy work environments	**Built Environment**	Safe physical environments; Working from home
	Time required for alternative communication in fast paced environment	**Temporal Nature of Accessibility**	Provision of time on the job to problem-solve, develop accommodations, adjust to workplace
	Interacting and building relationships with colleagues and social networks	**Support and Relationships**	Positive relationship with employer, supervisor and coworkers; Social and job-related networks
	Negative societal attitudes	**Attitudes**	Manager's willingness to learn from employee and accommodate accordingly
	Inadequate transition services; Poor availability of information and services	**Services, Systems and Policies**	Work policies and practices that support accommodation; Funding for aides, transportation, job coaches, equipment

Discussion and Implications

17 qualitative studies with small number of participants; most addressed employment experiences based on diagnosis, type of employment or assistive and communication technologies.

More research is needed to address the implementation and effectiveness of workplace accommodations for people who require AAC.

Barriers and facilitators to workplace accommodations exist both **in and outside** of the workplace.
- Examples of external factors: preparation for employment, support services, societal attitudes, and transportation
- Examples of internal factors: availability of resources, access to technology, workplace policies, employers and co-workers

It would be beneficial to increase supports in the areas of career preparation, training, and transition to adulthood.

Technology was commonly identified as a facilitator however technological issues, unreliability, and ineffectiveness were barriers.

To reduce technological barriers, it is important for manufacturers, designers, and consultants to understand the technological issues faced by adults who require AAC in order to improve accessibility and functionality of assistive technology accordingly.

The findings of this review illustrate that personal factors seem to be shared by most people but some environmental factors are unique to people who require AAC. The interaction between personal and environmental factors is critical to consider.

Addressing barriers and facilitators to implementing workplace accommodations is complex and therefore addressing both environmental and personal factors requires a holistic, interdisciplinary approach from career preparation to employment and through employment.

Reference List available as a Google document: https://bit.ly/3rxQ17i