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Jaimee B. Hegge, *Sacred Heart University*



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Pre & Postnatal Urinary Incontinence & Occupational Therapy Interventions: A Scoping Review

Amanda Guindon, OTS, Belle Smith, OTS, Brianne Chewcaskie, OTS, Erin Sweeney, OTS, Sarah Hensal, OTS, Jaimee Hegge, OTD, OTR/L

Graduate Occupational Therapy Program, Sacred Heart University



BACKGROUND

- The increasing number of women in the US who are living with urinary incontinence calls for the development of evidence - based interventions to address symptoms and functional deficits at a public health level (Alden et al., 2020).
- Interventions to address the primary symptoms of urinary incontinence are necessary to mitigate the risk of secondary symptoms such as sleep disturbances, falls, and social isolation, as well as co-morbid anxiety and depression from occurring (Cunningham & Valasek, 2019).
- Current available evidence supports interventions that are within occupational therapy's scope of practice as effective in managing urinary dysfunction (Cunningham & Valasek, 2019). However, further research is needed to advocate for occupational therapy's distinct value in addressing urinary incontinence, especially in niche areas of practice such as postpartum and prenatal care.

PURPOSE & OBJECTIVE

The purpose of this scoping review is to develop an evidence – base for occupational therapy interventions that may be utilized to address pregnancy – related to urinary incontinence. The aim is to identify the gap between an emerging practice area in occupational therapy and a significant lack of evidence that supports treatment for the intended population.

METHODS

- The research team and faculty mentor developed the initial search terms and strategy in April of 2021.
- The research team conducted a search of six different databases including PubMed, Medline, OTSearch, OTSeeker, CINAHL with Full Text, and Academic Premier from May - November of 2021.
- The **search terms** utilized in each database included
 - “Prenatal urinary incontinence and occupational therapy”
 - “Postpartum urinary incontinence and occupational therapy”
 - “Postnatal urinary incontinence and occupational therapy”
 - “Urinary incontinence and occupational therapy”
- Exclusion criteria** used to guide data collection:
 - Surgical interventions
 - Pharmacological interventions
- Inclusion criteria** used to guide data collection:
 - Occupational therapy literature
 - Physical therapy literature
 - Nursing literature
 - Holistic interventions
 - Any interventions that fall within occupational therapy scope of practice
- The initial search yielded a **total of 470 articles** which were then dissected to analyze key themes.
- In November of 2021, the research team resolved discrepancies and agreed on a final determination of article inclusion for full test review.
- 2 articles were deemed eligible for inclusion.** Refer to “Figure X Flow Chart” for additional details.

Objective, Aim, or Purpose	Population (sample, etc.)	Intervention & Comparison
The purpose was to determine the effect of pelvic floor muscle training using a tampon as visual biofeedback	Sixty women all over eighteen years of age including those with and without urinary incontinence	Women all exercised at home with a program involving visual biofeedback using disposable tampons at home over a three month period. The Exercise program had two parts 5 series of 10 phasic contractions with a 10 second rest period and 5 tonic contractions lasting 10 seconds with a 10 second rest period in between.
The purpose was to investigate that pelvic floor muscle training can prevent and or decrease the pregnancy specific urinary incontinence in women with gestational diabetes mellitus or gestational hyperglycemia.	Inclusion criteria- RCT's of pregnant women with hyperglycemia (all levels), any type of UI developed during pregnancy, nulliparous, primiparous, and multiparous women during pregnancy, receiving PFM training to prevent and/or reduce the symptoms of PS-UI	Literature suggests that PFM exercises, accompanied by training approx. 12 weeks including aerobic and resistance exercises under intense supervised guidance, are effective for prevention treatment and reduction of PSUI in women with GDM and/or HG.

Figure 1. Excerpt from Data Summary Table

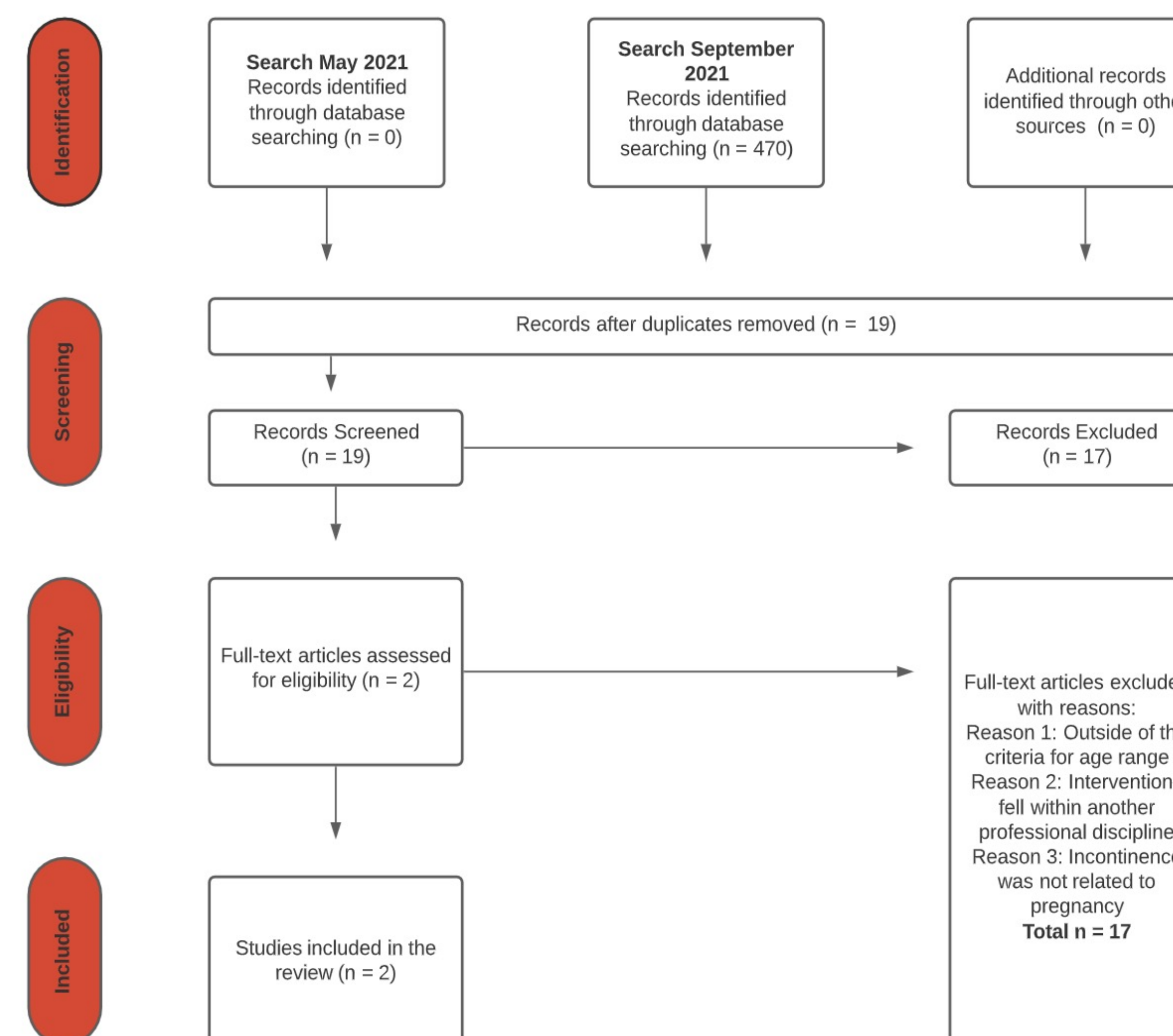


Figure 2. Data Collection Flow Chart

RESULTS

The literature search yielded 2 references that were eligible for inclusion. A total of 17 articles were eliminated by the research team based on exclusion criteria. A thematic analysis highlighted three themes: exercise, supervised versus unsupervised interventions, and physical therapy interventions.

I. Exercise

- Aerobic & resistance exercise, pelvic floor muscular training & home exercise program through visual biofeedback

II. Supervised v. Unsupervised Interventions

- Intense supervised guidance & unsupervised guidance (performed at home)

III. Physical Therapy Interventions

- Pelvic floor muscular training performed under physical therapy supervision & visual biofeedback home exercise program performed following physical therapy consultation

DISCUSSION

- A noted limitation for evidence to support interventions with this population in the research is a common practice of using pregnancy as exclusion criteria in studies. Future research would benefit from addressing pregnancy as a relevant and timely topic as more attention is being drawn to women's healthcare nationally.
- There is a body of evidence supporting urinary incontinence as within occupational therapy's scope of practice. As part of entry level qualifications, occupational therapists are educated in bowel and urinary health, as well as trained mental health professionals; these standards make occupational therapists uniquely qualified practitioners for this population. Further, the practice of activity analysis within occupational therapy is an asset to addressing issues that affect participation across occupations and the lifespan.

IMPLICATIONS FOR OCCUPATIONAL THERAPY

- Occupational therapy practitioners can work within prenatal and postpartum care to promote access to health promotion and disease management services.
- Holistic interventions, such as exercise, fall directly within the scope of practice of occupational therapy to address symptoms of pregnancy-related urinary incontinence.
- Primary and secondary symptoms of urinary incontinence have a direct impact on participation across occupations which highlights occupational therapy's distinct value in this area of practice.
- The significant gap in literature supporting occupational therapists' role in the treatment of pregnancy-related urinary incontinence calls for further research to build a strong evidence-base.

FUTURE RECOMMENDATIONS

- Occupational therapists use a holistic approach tailored to individuals to create relevance and motivation for the integration of interventions into the everyday lives of patients.
- An occupational base for the exercises, education, and guidance highlighted in our research could increase compliance with treatment by tailoring what could be a repetitive, mechanical task, into client-centered, dynamic activities designed for each individual.
- Examples of OT treatment include Kegels worked into an exercise routine, visual biofeedback during mirror time with affirmations, reminders through everyday activities such as during work, education, or leisure activities.