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12-2022

Perspectives and Experiences of Practitioners and other Health Professionals During COVID-19: An Evidence-Based Practice Project

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An Evidence-Based Practice Project

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St. Catherine University

EBP Project completed in partial fulfillment of the requirements
for the Evidence-Based Practice Course
in the Graduate Occupational Therapy Programs

Fall, 2022

Recommended APA citation:

Eggan, L.S., Gilbertson, M.E., Harvey, K.M., Kluz, T.A., Lake, K.H., Marben, J.C., Ross, S.R.,
Ruff, J.A, Scherle, H.J., & Wickboldt, T.C. (2022). *Perspectives and Experiences of
Practitioners and other Health Professionals During COVID-19: An evidence-based practice
project*. Retrieved from <https://sophia.stkate.edu/>

Keywords: mental health, telehealth, COVID, health professionals, occupational therapy,
healthcare

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Introduction

Evidence Based Practice

Evidence based practice is defined as the integration of knowledge from professional and clinical expertise, patient/client unique values and circumstances, and best research evidence (Straus, Richardson, Glasziou, & Haynes, 2005). The EBP courses in the St. Catherine University occupational therapy programs emphasizes skill building in finding, analyzing, and synthesizing research.

A definition of Evidence-Based Practice (EBP)



(Straus, Richardson, Glasziou & Haynes, 2005)



The EBP Project

Occupational therapy graduate students at St. Catherine University complete an EBP project in partial fulfillment of the requirements for a course on Evidence-Based Practice.

The EBP Process

- Begins with a practice dilemma
- Dilemma is framed as an EBP question and PICO
P (population/problem) I (intervention) C (comparison group) O (outcome(s) of interest)
- Background learning
- Search for the best evidence
- Initial appraisal and critical appraisal of the evidence
- Summary of themes from the evidence
- Recommendations for practice
- Next steps – implementation in practice

Six EBP Projects: Coronavirus Disease 2019 (COVID-19) and Occupational Therapy Research, Practice, and Education

1. Experiences and perspectives of occupational therapy practitioners and other health professionals who provided care and services during COVID-19
2. Lived experiences and perspectives of occupational therapy and other health profession students who had educational changes because of COVID-19
3. Experiences and perspectives of individuals regarding their performance and participation during COVID-19
4. Characteristics of, effectiveness of and satisfaction with virtual, telehealth and technology-based interventions provided by occupational therapy and other health professionals to clients during COVID-19
5. Characteristics of effective virtual and technology-based learning activities provided to occupational therapy and other health profession students during COVID-19.
6. Client factors, performance, and participation characteristics of individuals with long COVID-19

EBP Cases: COVID-19 and Occupational Therapy Practice, Education, and Research

COVID-19 was chosen as the focus for these projects because of the extraordinary changes in occupational therapy practice and education from 2020 to 2022. There is growing interest in understanding how COVID-19 influenced the lives of individuals with the condition, students preparing to enter the occupational therapy profession, and interventions provided in occupational therapy practice. Because of the recency of the COVID-19 pandemic and limited published research, interprofessional studies were also examined related to each EBP question.

An EBP project always begins with background learning on definitions and key characteristics. The Centers for Disease Control and Prevention (CDC) provided background information on the disease related to the history, variants, transmission, risk factors, and variants (2021). The virus, SARS-CoV-2, was discovered in Wuhan, China around December, 2019 and caused the disease, Coronavirus Disease 2019 (COVID-19). The virus was very contagious and COVID-19 was associated with severe respiratory symptoms for many people. Individuals with certain medical conditions and older adults were at higher risk of severe illness and death from COVID-19.

Many occupational therapy organizations provided general resources on COVID-19. For example, the American Occupational Therapy Association (AOTA) published practice decision guides and case examples for outpatient, inpatient, telehealth and home health settings (n.d.). The Accreditation Council on Occupational Therapy Education (ACOTE) provided guidance to educational programs regarding distance education and allowed broad flexibility to support completion of fieldwork requirements (n.d.). The National Board for Certification in Occupational Therapy (NBCOT) provided regular new items to summarize how they were monitoring government guidelines for test centers (n.d.). The World Federation of Occupational Therapists (WFOT) provided information, resources, and an online forum for the global community of occupational therapy professionals (2022).

Our understanding of COVID-19 and its influence on occupational therapy practice and education is still in the early stages. In occupational therapy education, academic courses and fieldwork experiences were altered to minimize in-person requirements and adjust to quickly changing circumstances in clinical settings. In practice, occupational therapy professionals provided services using new or modified approaches and were recruited to serve in expanded capacities to meet growing needs. There were also growing concerns regarding long COVID or post-COVID conditions as well as the mental health of health profession students and practitioners. The findings from recent research now adds depth to our understanding of the characteristics, outcomes, and implications of these far-reaching changes due to COVID-19. These EBP projects will serve to summarize the evidence and lessons learned from COVID-19.

Appraisals of Best Evidence, Themes, and Recommendations

After searching and finding evidence available from library databases and alternative sources, students conducted an initial appraisal to evaluate the quality and relevance of the evidence and select the best research for further review. Then they conducted critical appraisals of the best formal reviews of primary research (e.g., systematic reviews, meta-analyses) and/or primary/original research studies. One of the steps in the critical appraisal process is to evaluate the strength or level of the research design and the types of conclusions that are possible from each design.

Initial Appraisal

- Quality of the evidence
 - type of evidence and research design
 - investigator qualifications and journal/publication/website
 - journal/publication/website
- Relevance of the evidence

Critical Appraisal

- Appraisal of methods, results, and implications
- Classification of type of research study
 - Reviews of primary research (e.g., systematic reviews, meta-analyses)
 - Qualitative studies
 - Psychometric studies
 - Primary quantitative research studies
 - Level 1: randomized controlled trials
 - Level 2: two groups, nonrandomized/cohort and case control
 - Level 3: nonrandomized, pretest/posttest and cross-sectional
 - Level 4: single subject
 - Level 5: case report

After completing initial and critical appraisals, themes are summarized related to the EBP question and other findings that emerged from the evidence. Recommendations for practice and reflection on participating in an EBP project are identified in the conclusions.

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EBP Question

What are the experiences and perspectives of occupational therapy practitioners and other health professionals who provided care and services during COVID-19?

Slide 1

Professional Presentation

Perspectives and Experiences of Practitioners and other Health Professionals During COVID-19

Leah Eggan, Marissa Gilbertson, Kendall Harvey,
Tara Kluz, Katie Lake, Josie Marben, Sophia Ross,
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EBP Question

What are the experiences and perspectives
of occupational therapy **practitioners** and
other health **professionals** who provided
care and services during COVID?

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Examples of Evidence Resources

Governmental and Major Foundations

- National Library of Medicine
- US Department of Health and Human Services

OT Specific Resources

- American Journal of Occupational Therapy
- Cochrane

Interprofessional Journals, Databases, Organizations

- PubMed
- American Psychological Association

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Background Learning

- COVID-19 led to increased healthcare worker demands
(Al-Dorzi et al., 2021; Best & Williams, 2021; Hoel et al., 2021; Houghton et al., 2020; Munn et al., 2021; Nyberg et al., 2022; Sawamura et al., 2022; Sotomayor-Castillo et al., 2021).
- The pandemic forced healthcare workers to adapt their roles
(Hoel et al., 2021; Houghton et al., 2020; Maas et al., 2022; Munn et al., 2021; Sawamura et al., 2022).
- Healthcare workers are at risk for developing mental health problems and burnout during and after the pandemic
(Bentley et al., 2021; Duffy et al., 2022; Houghton et al., 2020; Ingham et al., 2022; Ishioka et al., 2021; Lannigan & Tyminski, 2021; Maas et al., 2022; Mira et al., 2020; Pollock et al., 2020; Sawamura et al., 2022; Th'ng et al., 2021; Tse et al., 2021; Yadeta et al., 2021).
- There were several benefits and barriers of telehealth which varied across healthcare professionals during the pandemic
(Abbott-Gaffney et al., 2022; Bernacki et al., 2021; Dahl-Popolizio et al., 2020; Daniel, 2020; Ganesan et al., 2021; Hoel et al., 2020; Myrard, 2020; Proffitt et al., 2021; Spriano et al., 2020).

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Examples of Search Process

Databases used

- PubMed
- CINAHL
- Google Scholar

Most helpful search strategies

- MESH Terms
- Author Tracking

Most helpful keywords

- COVID-19
- Healthcare
- Occupational Therapy
- Telehealth
- Mental Health

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Initial Appraisal of Best Evidence

- **Primary Research Studies**
 - 23 articles
- **Reviews of Primary Research**
 - 21 articles
- **Conceptual/Theoretical Articles**
 - 1 articles

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**Overview of Critical Appraisals
of Best Evidence**

Primary Research

- Occupational therapists' perspectives during the COVID-19 pandemic. (Maas et al., 2022)
- Original Research: Well-being and resilience among health care workers during the covid-19 pandemic: A cross-sectional study (Munn et al., 2021)
- Prevalence of depression, anxiety, and insomnia among healthcare workers during the covid-19 pandemic: A systematic review and meta-analysis (Pappa et al., 2020)
- Telehealth for the provision of occupational therapy: Reflections on experiences during the covid-19 pandemic (Dahl-Popolizio et al., 2020)
- Another tool in your toolkit: Pediatric occupational and physical therapists' perspectives of initiating telehealth during the covid-19 pandemic (Wätmeier et al., 2022)
- General practitioners' knowledge preparedness, and experiences of managing covid-19 in australia (Sotomayor-Castillo et al., 2021)
- The impact of covid-19 for occupational therapy: Findings and recommendations of a global survey (Hoel et al., 2021)

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**Overview of Critical Appraisals
of Best Evidence**

Reviews of Primary Research

- The work environment during coronavirus epidemics and pandemics: A systematic review of studies using quantitative, qualitative, and mixed-methods designs (Nyberg et al., 2022)
- The mental health impact of the covid-19 pandemic on healthcare workers, and interventions to help them: A rapid systematic review (Muller et al., 2020)

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Critical Appraisal 1 and 2

Article Title: *Well-being and resilience among health care workers during the COVID-19 pandemic: A cross-sectional study* (Munn et al., 2021)

- **Focused Question:** How did the COVID-19 pandemic impact the well-being and resilience of healthcare professionals?
- **Clinical Bottom Line:** The COVID-19 pandemic increased demands on healthcare professionals, thereby negatively affecting well-being and increasing resilience.

Article Title: *General practitioners' knowledge, preparedness, and experiences of managing COVID-19 in Australia* (Sotomayor-Castillo, et al., 2021)

- **Focused Question:** How did general practitioners feel with their knowledge, preparedness, and experience during the COVID-19 pandemic?
- **Clinical Bottom Line:** Guidelines and plans were effective with feeling prepared during COVID-19, as well as using resources to follow information about COVID-19 and changes within the work environment. On the other hand, there was limited access to PPE, as well as general practitioners feeling less confident on wearing PPE during treatment.

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Critical Appraisal 3 and 4

Article Title: *The impact of Covid-19 for occupational therapy: Findings and recommendations of a global survey* (Hoel et al., 2021)

- **Focused Question:** What needs have been identified by occupational therapists around the world during the COVID-19 pandemic and what recommendations can WFOT make to better serve these professionals?
- **Clinical Bottom Line:** After analyzing the categories of accessibility, appropriateness, efficiency, effectiveness, person-centeredness, and safety, a global response of OT's demonstrated they felt ill prepared to be effective, safe or feel rewarded during the pandemic.

Article Title: *The work environment during coronavirus epidemics and pandemics: A systematic review of studies using quantitative, qualitative, and mixed-methods designs* (Nyberg et al., 2021)

- **Focused Question:** How did COVID-19 impact the work environment and health of employees?
- **Clinical Bottom Line:** Poor mental health of healthcare professionals was associated with the following COVID-19-related work environment changes: high demands, lack of support and resources, and fear of infection.

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Critical Appraisal 5 and 6

Article Title: *Telehealth for the provision of occupational therapy: Reflections on experiences during the COVID-19 pandemic* (Dahl-Popolizio et al., 2020)

- **Focused Question:** During the COVID-19 pandemic, was it sustainable for occupational therapy practitioners to use telehealth as an effective service delivery model?
- **Clinical Bottom Line:** Occupational therapy practitioners during the pandemic found telehealth to be an effective way to delivery occupational therapy services.

Article Title: *"Another tool in your toolkit": Pediatric occupational and physical therapists' perspectives of initiating telehealth during the COVID-19 pandemic* (Wittmeier et al., 2022)

- **Focused Question:** What are the experiences and perspectives of pediatric occupational and physical therapists implementing Telehealth during the COVID-19 pandemic?
- **Clinical Bottom Line:** Pediatric occupational and physical therapists described the implementation of telehealth to be a positive experience during the COVID-19 pandemic.

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Critical Appraisal 7, 8, and 9

Article Title: *The impact of COVID-19 pandemic on mental health of health care workers: Protocol for a rapid systematic review* (Muller et al., 2020)

- **Focused Question:** What are the effects on the mental health of healthcare professionals working during the COVID-19 Pandemic?
- **Clinical Bottom Line:** "Healthcare workers in a variety of fields, positions, and exposure risks are reporting anxiety, depression, distress, and sleep problems during covid-19 pandemic" (p. 9).

Article Title: *Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis* (Pappa et al., 2020)

- **Focused Question:** How was the mental health of healthcare workers impacted by the COVID-19 Pandemic?
- **Clinical Bottom Line:** Symptoms of anxiety, depression, and insomnia, were all prevalent among healthcare workers during the COVID-19 pandemic.

Article Title: *Occupational therapists' perspectives during the COVID-19 pandemic* (Maas et al., 2022)

- **Focused Question:** What were the perspectives of occupational therapists while providing services during COVID-19?
- **Clinical Bottom Line:** Occupational therapists faced many adversities to their mental health with anxiety, depression, burnout, etc., as well as a decrease in certain occupations such as exercise, leisure activities, social activities, and self-care.

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Theme 1:
Demands on Healthcare Professionals

The literature demonstrated increased demands on healthcare professionals during the COVID-19 pandemic.

- **Idea #1:** There were significant barriers to adherence to guidelines (Houghton et al., 2020; Hoel et al., 2021; Sawamura et al., 2022)
- **Idea #2:** Healthcare workers experienced a shortage of PPE that impacted on caring for patients (Best and Williams, 2021; Al-Dorzi et al., 2021; Nyberg et al., 2022)
- **Idea #3:** High patient populations led to a shortage of beds and a high demand for physical space (Al-Dorzi et al., 2021; Pedersen et al., 2021)
- **Idea #4:** Shortage of healthcare workers impacted on the high demand for patient care (Pedersen et al., 2021; Al-Dorzi et al., 2021)

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Theme 2:
Role Adaptations of Healthcare Workers

Healthcare demands of COVID-19 altered roles of healthcare professionals and influenced their experience in providing care.

- **Idea #1:** There were day-to-day changes in healthcare professionals' roles (Hoel et al., 2021; Robinson et al., 2021)
- **Idea #2:** A shift in the provision of services influenced healthcare professionals' experience in providing care (Calleton, 2021)
- **Idea #3:** There was a need for interprofessional collaboration (Hoel et al., 2022)
- **Idea #4:** OT's required more influence and support from administrative staff during their role adjustment (Mass et al., 2022; Sawamura et al., 2022)

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Theme 3: Telehealth

During the COVID-19 pandemic, the literature shows benefits and barriers of using telehealth for occupational therapy practitioners and various healthcare professionals.

- **Idea #1:** Support the use of telehealth as an alternative to in-person therapy (Dahl-Popolizio et al., 2020; Gamesan et al., 2021)
- **Idea #2:** Allowed rehabilitation professionals to use telehealth as a way to explore a patient's home environment and to increase family involvement (Kaur et al., 2021)
- **Idea #3:** Lack of accessibility to adequate technology and poor internet connection were the technical barriers healthcare providers and clients faced (Fionni et al., 2022)
- **Idea #4:** The need for acquiring and refining skills delivering telehealth services (Wittmeier et al., 2020)

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Theme 4: Professional Burnout and Mental Health

Healthcare workers during the COVID-19 pandemic experienced declines in their mental health and well-being.

- **Idea #1:** A protective factor for healthcare worker mental health is social support (Muller et al., 2020)
- **Idea #2:** The impact of COVID-19 and its direct correlation with the decline of mental health among workers on the frontline (Pappa et al., 2020; Virshup et al., 2020)
- **Idea #3:** Occupational therapists and other healthcare disciplines have expressed concern for their mental health while providing care during the COVID-19 pandemic (Mass et al., 2022; Shaukat et al., 2021)

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Recommendations for OT and Interprofessional Programs

- **Recommendation # 1** - Continue the use of telehealth to create a comfortable environment for patient care and allow for more exploration of home environments and family participation.
- **Recommendation # 2** - Promotion of accessibility of virtual occupational therapy services.
- **Recommendation # 3** - Implement a clear training program for COVID-19 patient care.
- **Recommendation # 4** - Increase interprofessional collaboration with rehabilitation staff.

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Summary and Reflection**Summary:**

- The experiences of healthcare professionals during the COVID-19 pandemic showed that the healthcare system, as a whole, was overworked, undertrained, and unprepared to continue services under unprecedented circumstances.

Reflection on Future Considerations:

- Emergency preparedness for future pandemics
- Support for occupational therapists and other healthcare professionals to improve their mental health
- Telehealth skill improvement and further outreach
- Greater development of interprofessional collaboration between occupational therapists and other healthcare workers

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Reflection on EBP Process

Main Takeaways

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Slide 22



Executive Summary

This evidence-based practice project reviewed the literature on the COVID-19 pandemic and its effects on healthcare practitioners and professionals, such as occupational therapists. There were increased healthcare worker demands due to the COVID-19 pandemic (Al-Dorzi et al., 2021; Hoel et al., 2021; Munn et al., 2021). To summarize the findings, we placed them into four categories: increased worker demands, role adaptations, benefits and barriers to telehealth, professional burnout, and changes in mental health. The research suggests that professionals have dealt with many interruptions and necessary changes throughout the pandemic, impacting their personal and professional lives. The studies recommend that systematic changes be implemented and standardized to better prepare for future pandemics and nationwide healthcare emergencies. Throughout the literature review, it was noted that there is a need to further look into ways to help healthcare workers to ensure their mental health is considered as they work on the frontline to help improve societal and worker health outcomes.

Theme 1: Increased Demands on Healthcare Professionals

The literature demonstrated increased demands on healthcare professionals during the COVID-19 pandemic, including adherence to guidelines and shortages of personal protective equipment (PPE), beds, and staff. A systematic review of 20 articles by Houghton et al. (2020) found increased challenges of working within a healthcare field, such as implementing ambiguous guidelines that frequently changed, enhancing infection prevention and control (IPC) guidelines, and a lack of structured training in PPE. These barriers prevented healthcare professionals from being able to provide sufficient care. A survey of 2,750 occupational therapists from 100 countries expanded on COVID-19-specific training. This study found that respondents who received COVID-19-specific training were 1.35 times more likely to find

employers' expectations reasonable (Hoel et al., 2021). Many healthcare workers did not receive COVID-19-specific training, which resulted in a decreased quality of care (Sawamura et al., 2022). Healthcare professionals who received COVID-19-specific training were more likely to demonstrate adherence to IPC guidelines during the pandemic.

In further detail, the literature explained that healthcare workers experienced high demands and shortages of medical supplies that led to a variety of conflicts when working with patients. Healthcare professionals have widely reported that there was a significant lack of PPE, which put the health and safety of those professionals at risk (Best and Williams, 2021). According to CDC guidelines, healthcare workers had to use and reuse N95 masks and water-resistant gowns as they cared for patients (Al-Dorzi et al., 2021). In addition, for healthcare professionals with access to PPE, longer shifts often led to adverse effects, including skin injuries and headaches (Nyberg et al., 2022).

Additionally, as the number of patients began to increase with confirmed cases of COVID-19, so did the demand for hospital beds. A case study was done through an Intensive Care Department (ICU) hit a substantial increase of 125 patients with COVID-19 in one day. The bed capacity increased from 58 to 71 beds by placing two patients in one room (Al-Dorzi et al., 2021). There was an increased demand for physical space within the healthcare environment, which led to nonessential units closing to provide additional space for those who were infected with COVID-19 (Pedersen et al., 2021). The high patient population increased the demand for healthcare professionals to provide quick care so that the bed could be used for another patient.

Shortages of healthcare workers also had a negative impact on the high demand for patient care. During the pandemic, 69% of hospitals implemented staffing and/or salary reductions (Pederson et al., 2021). An ICU used a team/task nursing model of care where two

nurses managed between four to six patients (Al-Dorzi et al., 2021). Due to the inability of ICUs to fill open positions and shifts, temporary staff were hired to meet the workload demands. Staffing reductions were a common practice due to a decrease in budget allocations, resulting in a high staffing-to-volume ratio, high rates of furloughs and layoffs, and reduced census (Pederson et al., 2021). These demands required quick changes on the part of healthcare workers to meet patient needs.

Theme 2: Role Adaptations of Healthcare Workers

Healthcare demands of COVID-19 altered the individual roles of occupational therapists and influenced this population's experience in providing care. The World Federation of Occupational Therapists (WFOT) conducted a cross-sectional study to assess the global experience of occupational therapists ($n = 2,750$) during the COVID-19 pandemic (Hoel et al., 2021). Their findings concluded that there was a significant shift in occupational therapists' role requirements worldwide. They were required to perform tasks outside of their role while experiencing an increased workload, isolation, and threatened mental and physical health (Hoel et al., 2021). For example, some outpatient occupational therapists were placed into labor pools and worked as screeners, PPE observers, blood bank runners, helpers at scrub distribution centers, and care support providers on COVID-19 cohort units (Robinson et al., 2021). A qualitative phenomenological research study explored how occupational therapists adapted their day-to-day work in a mental health setting in response to COVID-19 demands and restrictions (Culleton, 2021). Respondents ($n = 10$) highlighted having limited access to community resources and having to adapt to a more generic, supportive role when providing therapy online. Furthermore, online therapy diminished therapists' ability to observe their clients (Culleton, 2021). While COVID-19 led

to numerous role adaptations for occupational therapists, a number of organizational adaptations and supports served as facilitators for a smoother transition.

Several findings across the literature demonstrated a need for occupational therapist role adaptation on both an individual and an organizational level during the COVID-19 pandemic (Hoel et al., 2021; Maas et al., 2022; Sawamura et al., 2022). For example, the World Federation of Occupational Therapy implemented a global survey that suggested the need for inter-professional collaboration to dually support COVID-19 patients and the changing needs of rehabilitation itself (Hoel et al., 2021). More patients who desperately need care would be served by dividing and conquering patients' needs through sharing roles with physical therapy and speech. 2,750 survey responses from occupational therapists around the globe caused researchers to believe that more training is needed to fully adapt their roles to the ever-changing needs brought about by the pandemic (Hoel et al., 2022). A joint action training initiative could also be achieved through inter-professional collaboration (Hoel et al., 2022). Furthermore, current literature suggests that increased role demands have overwhelmed occupational therapy (OT) providers mainly due to a lack of administrative support (Maas et al., 2022; Munn et al., 2021; Sawamura et al., 2022). This claim was supported by a qualitative survey that found over 75% of responding occupational therapists ($n = 204$) felt overwhelmed, stressed, burned out, and unsupported by the administration (Maas et al., 2022). A Japanese-based cross-sectional study discovered a decrease in the quality of care being provided, which needs to be addressed by rehab managers to refine any role changes causing this decline (Sawamura et al., 2022). These findings suggest that there may not be enough administrative support to help providers during the constant role changes due to the pandemic.

Theme 3: Benefits and Barriers to Telehealth

During the COVID-19 pandemic, the literature shows the benefits of using telehealth for occupational therapy practitioners and various healthcare professionals. The three critical reasons include utilizing telehealth to deliver therapy services, using telehealth as an alternative to in-person therapy, as a way to decrease stress with in-person interactions, and as a beneficial way to explore home environments and family participation. Dahl-Popolizio et al. (2020), conducted an exploratory study using a cross-sectional design with a web-based survey. Occupational therapists and occupational therapy assistants ($n = 230$ respondents) were surveyed, with 77% and 78% of responses supporting the use of telehealth as a substitute for in-person therapy and as a permanent option for therapy services, respectively (Dahl-Popolizio et al., 2020). Second, COVID-19 brought a lockdown, social isolation, and social distancing for occupational therapists and all healthcare providers (Ganesan et al., 2021). Using telehealth creates an environment that makes these professionals feel comfortable. In a cross-sectional study conducted by Ganesan et al. (2021), 87.8% of therapists reported that using technology helped eliminate the stress due to COVID-19. Lastly, the COVID-19 pandemic allowed rehabilitation professionals to use telehealth to explore a patient's home environment and increase family involvement. In an exploratory survey study by Kaur et al. (2021), the most common strength identified by therapists (74%) using telerehabilitation was a better home environment assessment. The experiences of occupational therapy practitioners and other healthcare professionals during the COVID-19 pandemic brought about a change showing the benefits of using technology as a therapy delivery service model.

There were barriers for occupational therapists and other healthcare professionals in the implementation of telehealth services during the COVID-19 pandemic. Ftouni et al. (2022), conducted a systematic review among 1,194 papers and 27 studies, finding seven categories of telemedicine barriers during the COVID-19 pandemic: technical aspects, privacy, data confidentiality and reimbursement, physical examination and diagnostics, specific populations, training of healthcare providers and patients, practitioner-client relationship, and acceptability. Poor internet connection and accessibility were the technical barriers healthcare providers faced significantly. Wittmeier et al. (2020), conducted a semi-structured interview in a qualitative descriptive research study with pediatric occupational therapists ($n = 4$) and pediatric physical therapists ($n = 4$) who also described a barrier to therapy being their client and/or client family's inability to obtain adequate technology or internet service. Poor audiovisual quality, time lag, and latency in conversations between clients and therapists hindered the telehealth service experience (Ftouni et al., 2022). Hall et al. (2021), conducted a cross-sectional survey on pediatric physical therapists ($n = 259$) and found poor internet speed as a factor for clients in rural settings, as well as clients only having access to landlines and not having enough money to pay coverage fees exceeding their minutes on the phone.

Pediatric physical and occupational therapists established another key barrier to acquiring and refining skills in delivering telehealth services after their experiences during the COVID-19 pandemic (Wittmeier et al., 2020). Telemedicine made physical examinations and specific procedures difficult for practitioners (Ftouni et al., 2022). The refinement of communication, coaching, and teaching skills were all core components to breaking down instructions for families during telehealth sessions (Wittmeier et al., 2020). The accessibility

to technology and the need for acquiring and refining skills of occupational therapists and other healthcare professionals delivering telehealth services were displayed as barriers during the COVID-19 pandemic.

Theme 4: Professional Burnout and Mental Health

The literature showed an increased risk of burnout and mental health-related conditions in healthcare workers due to the COVID-19 pandemic showing both systematic and individual barriers. Healthcare workers' psychological factors, such as sleep and moods, are affected by increased anxiety, depression, and distress from exposure to COVID-19 at work (Muller et al., 2020; Sawamura et al., 2022; Shah et al., 2021). A systematic review that examined these psychological factors and relationships with healthcare workers during the pandemic showed concern about the changes to long-term outcomes on worker health (Shah et al., 2021). Adverse mental health side effects of helping with the pandemic decreased outcomes in performance. Muller et al. (2020), reported that social support is a protective factor affecting practitioners' mental health outcomes. Supports can be associated with mental health-related worker improvement. A lack of mental health services in hospital and healthcare settings led to poorer outcomes for staff (Varghese et al., 2021). Another systematic review that studied risk factors and their association with healthcare workers' mental health found that being in close contact with patients and the changes in job demands showed an increased risk for adverse mental health (Nyberg et al., 2022). Job demands and contact with sick patients showed an inverse relationship with healthcare workers' mental health outcomes. The quality of therapy was also shown to decrease. This was due to insomnia in mental health and depression in physical health (Sawamura et al., 2022).

The collected publications provide evidence on the impact of COVID-19 and its direct correlation with the decline of mental health for those healthcare workers (HCWs) on the frontlines. Pappa et al. (2020), conducted a systematic review to analyze further the rates of depression, anxiety, and insomnia among healthcare workers during the pandemic. After synthesizing 13 studies, varying prevalence of mental health existed in HCWs: 23.2% anxiety, 22.8% depression, and 38.9% insomnia (Pappa et al., 2020). To further specify results, the review included the subgroup of gender, finding that depression and anxiety had higher rates in female HCWs than in males (Pappa et al., 2020). Similarly, Vizheh et al. (2020), concluded that HCWs on the frontlines with higher exposure rates of COVID-19 experienced more severe mental health symptoms. The study illustrated the correlation between working in close proximity of COVID-19 and mental burnout (Vizheh et al., 2020). Both findings solidify the relationship between HCWs on the frontlines during the COVID-19 pandemic and the decline in mental health.

The synthesized evidence portrayed the mental health status of healthcare professionals through specific reports throughout the COVID-19 pandemic. A qualitative survey explored occupational therapists' perspectives ($n = 204$), and it was reported that most of them experienced concern for not only their health but their family's health while caring for COVID-19 patients (Maas et al., 2022). A systematic review from Shaukat et al. (2021) also found that healthcare professionals from a variety of disciplines reported concerns surrounding their mental health (i.e., burnout, depression, anxiety), increased stress, low self-efficacy, and lack of social support during the COVID-19 pandemic. Another qualitative survey examined different functional and/or dysfunctional coping strategies that healthcare workers reported using. This showed a relationship between the use of non-adaptive coping

strategies and diminished mental health (Ziarko et al., 2021). Moving forward, the research suggests that it is essential for healthcare professionals and administrators to utilize and implement healthy coping strategies within the workplace to increase one's well-being, decrease burnout, and better serve future patients (Maas et al., 2022, Muller et al., 2020).

Summary and Implications for Practice

Take Home Message and Findings

The research on healthcare professionals' experiences during the COVID-19 pandemic showed that the healthcare system, as a whole, was overworked, undertrained, and unprepared to continue services during unprecedented circumstances. Occupational therapists and other healthcare professionals needed to change their roles to accommodate the ever-changing healthcare landscape. These changes led to an increase in workload and burnout. Systematically, there were significant policy changes surrounding the delivery of therapy services, such as the implementation of telehealth.

Four themes found throughout the evidence include increased worker demands, role adaptations, benefits and barriers to telehealth, and professional burnout and changes in mental health. Systemic modifications in healthcare were a vital shift that consisted of policy changes, increased guidelines regarding care, and constantly changing expectations of one's roles and routines as a healthcare provider. These modifications provided a level of uncertainty that had not previously been experienced in the modern healthcare system. This level of change and uncertainty required occupational therapists and other healthcare professionals to adapt their roles to provide care, safety, and prevent the spread of COVID-19. Both individual healthcare workers and healthcare organizations changed their roles in order to triage care to those who needed it most. Individual healthcare professionals

experienced more inter-professional collaboration, a higher workload, decreased outcomes in performance, and decreased level of care. The changes were also experienced by institutions at large.

Healthcare organizations required more resources in order to provide proper personal protective equipment, support their employees, and adjust to workload demands. These organizations also had to create policies to implement telehealth care. Telehealth care was found to be beneficial in place of in-person care because of its decreased risk of being infected with COVID-19, increased environmental comfort for both practitioners and patients, ability to get a better picture of the client's environment, and increased familial involvement. While providing significant benefits, telehealth care was also difficult for some individuals because of internet use and comfort challenges, occupational therapy skills in telehealth services, and isolation. The changes that occurred because of the COVID-19 pandemic led to increased professional burnout and mental health issues among occupational therapists and other healthcare workers. The increased workload, lack of organizational support, anxiety about personal and familial health, and poor coping strategies resulted in high rates of burnout and poor mental health outcomes.

Strengths and Limitations

Research conducted on healthcare professionals' experiences during the COVID-19 pandemic displays various strengths and limitations. A strength within the literature was the recent experiences of healthcare practitioners and workers during this time. These encounters support the relevancy and focus of the research due to the significant impacts that it has had on workers in healthcare. Another strength is the variety of insights from different disciplines that provided diverse data and allowed the comparison of experiences.

The literature collected was sourced from peer-reviewed journals, which increases credibility.

Across the synthesized research, there were various limitations presented. In the cross-sectional studies, there was a lack of randomization, reducing the exploration of more diverse experiences from healthcare professionals during the COVID-19 pandemic. Various publications consisted of sampling bias as researchers only selected specific healthcare workers to participate in their study. Other literature summarized surveys of convenience which set limitations on the population size and professional diversity. These strengths and limitations lead to some collective implications and recommendations as we concluded the evidence-based literature review process.

Implications and Recommendations

The main implication for occupational therapy during the COVID-19 pandemic mainly surrounded the introduction of telehealth as a modality for occupational therapy. Telehealth became a valuable tool for services to be provided despite social distance regulations. From an occupational therapist's perspective, telehealth created a comfortable environment to allow for continued patient care. The increased use of telehealth allowed occupational therapists to explore home environments and allow for more external participation from family members and friends to participate in therapy sessions.

Recommendations for the successful implementation of therapy moving forward include inter-professional collaboration, a straightforward training program on COVID-19 patient care, and continued promotion of accessible care (e.g., telehealth) (Hoel et al., 2021). In the future, dividing workload across providers from the rehabilitation field could decrease workload and relieve feelings of burnout. Introducing clear training protocols would also

alleviate the stress of feeling unprepared and unsafe. Continuing the push for telehealth and improving the inadequate technology access will help fill the need of patients who do not have access to traditional in-person care. Overall, the COVID-19 pandemic has brought an opportunity to explore unique ways to provide occupational therapy services.

Future Considerations

The synthesized research provides insight into healthcare professionals' challenges during the COVID-19 pandemic. The publications indicated perspectives from the peak of the pandemic and the continuation to the present day, all emphasizing modifications made in healthcare, such as role adaptations and the introduction of telehealth. Psychological burnout of healthcare professionals on the frontlines was also prevalent. The research indicated gaps in the United States healthcare system relating to emergency preparedness that has become evident with the COVID-19 pandemic. Infection prevention and control standardization must improve to allow healthcare workers to feel safe while working during a healthcare crisis. One of the primary considerations the literature showed was the mental toll on healthcare workers due to the increased workload and that systematic or societal supports should increase to aid in addressing the mental health of frontline workers.

Telehealth has been shown to be beneficial in increasing community and healthcare access during the pandemic when unable to have in-person contact. The expanded use of telehealth could be applied to further healthcare outreach in low-income and rural areas. Laws to expand internet access to these areas ensure that all individuals can participate in healthcare to some level and would further prepare our society for future pandemic situations. Stakeholders concerned with quick results have put further pressure on healthcare professionals by implementing strenuous demands on their professional roles that affect

more than just their time at work. To mitigate a similar situation in the future, policymakers need to further support healthcare professionals for better patient and practitioner outcomes. This would promote a more cost-effective approach for the healthcare system to improve administrative support of professional psychological decline. Overall, the literature research and findings suggest change at a higher systemic level would best support our healthcare workers and improve the health of society at large.

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