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Clinical Practice Skills in Executive Function within Acute Care

Jasmine Lake, OTD-S

Kala Sheckler, OT/L & Sarasota Memorial Hospital

Introduction

- The Affordable Care Act (ACA) and the Centers for Medicare and Medicaid Services (CMS) placed a greater emphasis on occupational therapists (OTs) in the acute care setting to increase safe discharges to the home environment (Pritchard et al., 2019).
- The American Occupational Therapy Association (AOTA) advocated for OTs to focus on functional cognition in their initial evaluations, such as executive function (Giles et al., 2020; Pritchard et al., 2019).
- Executive dysfunction can impact all areas of life and is commonly seen in several conditions and hospitalized patients in the acute care setting (Giles et al., 2017; Stollings et al., 2016).
- There has been a relinquishing of this concern to other disciplines, other than occupational therapy, even though executive dysfunction has been shown to be predictive of hospital readmission and long-term utilization of health care (Giles et al., 2017; Giles et al., 2020).



(The human brain, 2022)

Site Description

Sarasota Memorial Hospital (SMH)

- 800+ bed acute care community hospital located in Sarasota, FL
- Population: Adults
- Interdisciplinary
- Units:
 - ICU
 - Cardiac
 - Respiratory
 - Neuro
 - Orthopedic
 - Oncology
 - Trauma
 - Psych
 - General



(The Brian D. Jellison Cancer Institute at SMH, 2020)

Summary of Needs Assessment

- Based on the prevalence of executive dysfunction associated with hospitalization and its impact on safe home discharges, OTs need to include objective executive function assessments in their evaluations at the acute care level.
- Executive function is often overlooked or undetected.
- Through analyzing the current use of standardized assessments and understanding of executive function, increasing awareness of risk factors of executive dysfunction, and implementing/promoting appropriate executive function assessments, the occupational therapy department will be able to provide quality care, make appropriate discharge recommendations, and decrease the risk of hospital readmission.

Literature Review Summary

- Executive functions* are defined as a set of complex abilities that includes "planning, initiating, shifting/sequencing, monitoring and inhibiting which enables individuals to engage in purposeful, goal directed behavior" (Stollings et al., 2016, p.177).
- Risk factors of developing executive dysfunction, such as history of falls, pain, severity of illness, length of stay, ventilation, medications, specific lab values, orthostatic hypotension, and a variety of conditions associated with the brain and neuronal tissue (Agrawal et al., 2019; Bocti et al., 2017; Dhakal & Bobrin, 2021; Hopkins et al., 2017; Lee et al., 2021; Montero-Odasso & Speechley, 2018; Morogiello et al., 2018; Radhakrishnan et al., 2020; Stollings et al., 2016; Yin et al., 2018; Zhao et al., 2020).
- Executive functioning assessments are predictive of hospital readmission and long-term utilization of health care, which may not be identified during evaluations (Giles et al., 2017; Pickens et al., 2017; Tkach & Bowyer, 2021).
- The Trail-Making Test, the Controlled Oral Word Association Test (COWAT), and the Menu Task have supportive research indicating their clinical utility to assess for executive functioning in acute care (Bauer & Malek-Ahmadi, 2021; Edwards et al., 2019; Kennedy & Cadet, 2018; Morogiello et al., 2018; Radhakrishnan et al., 2020; Shao et al., 2020).

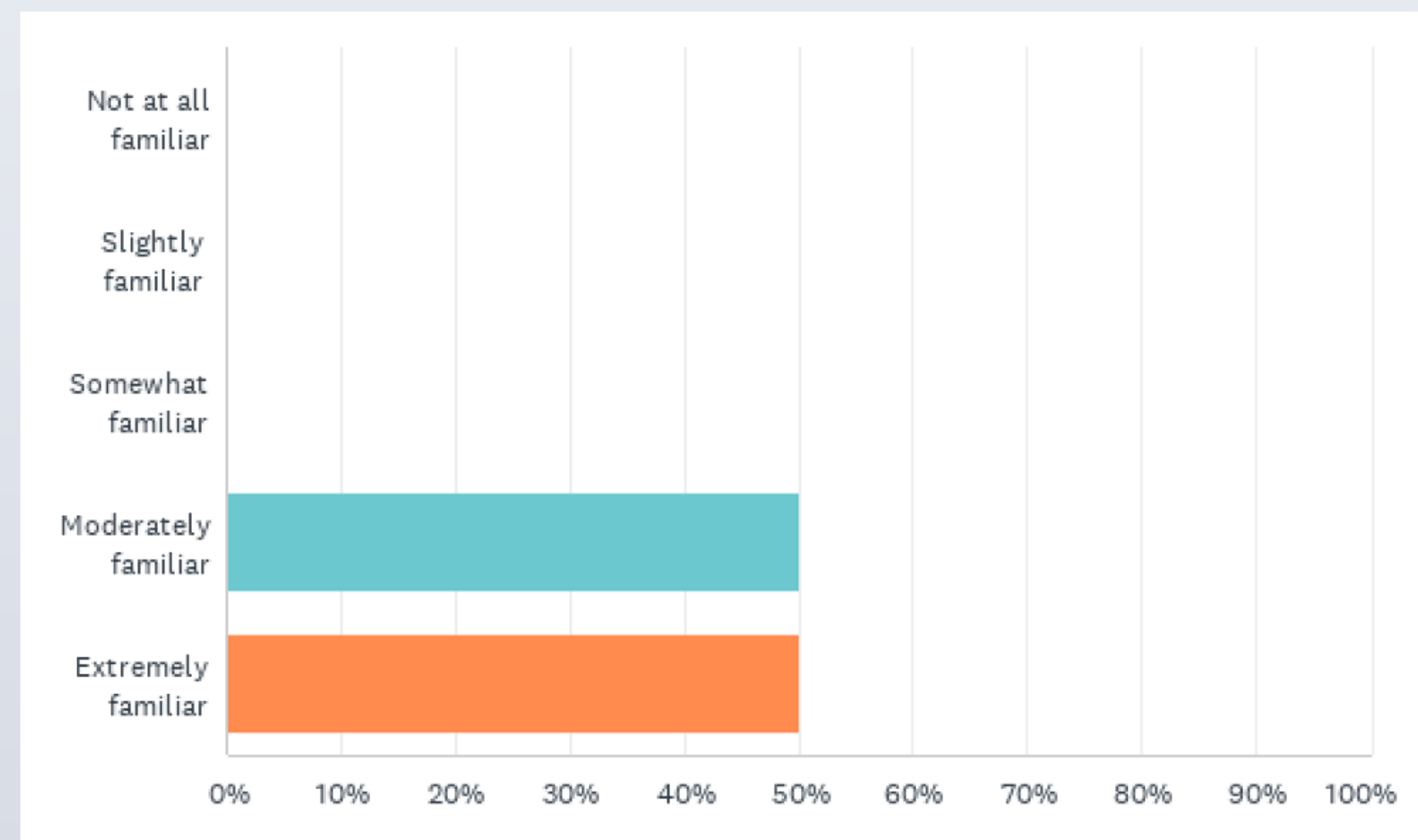


Figure 1
Question One of Survey: How familiar are OTs with the concept of executive function?

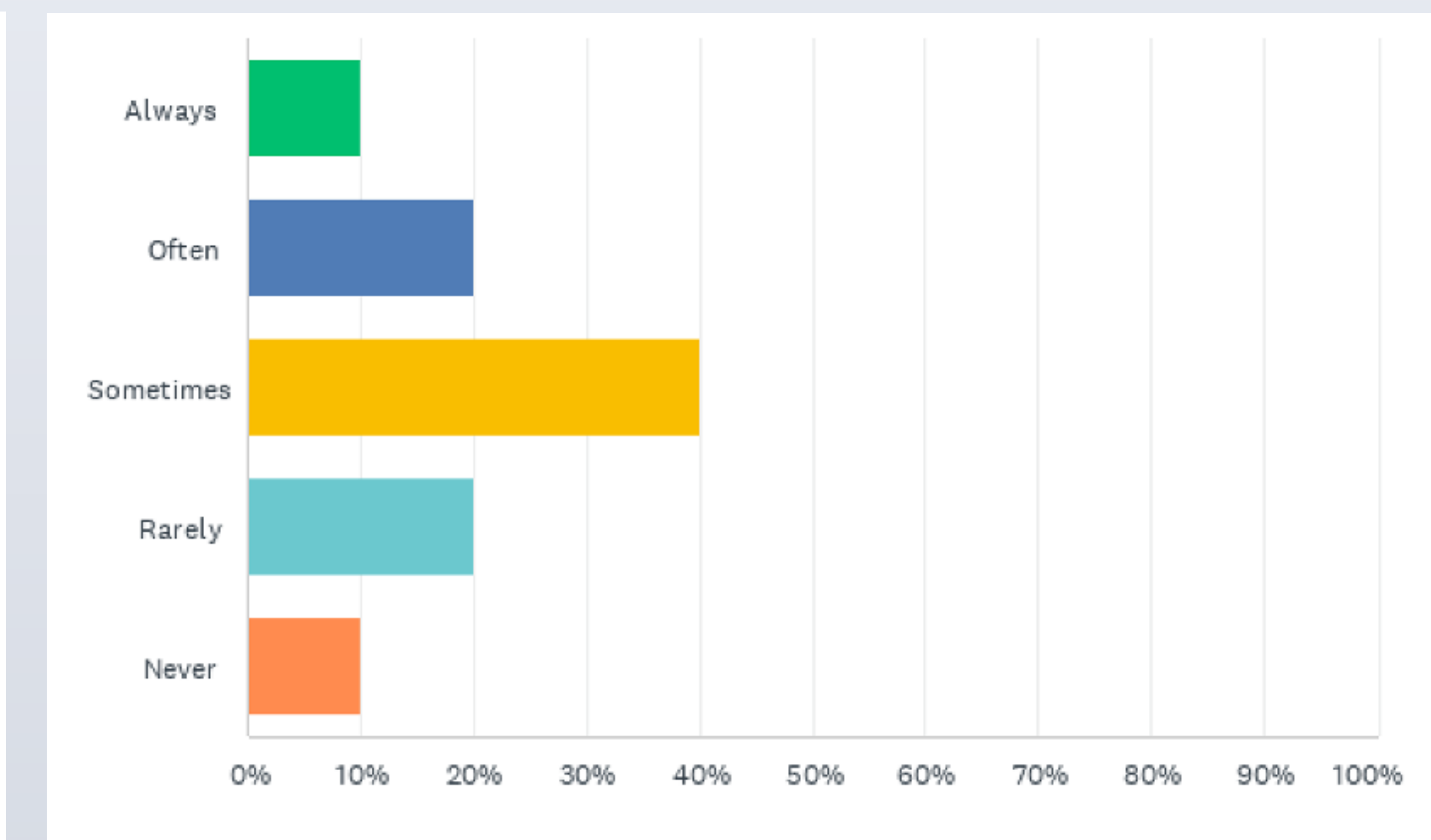


Figure 2
Question Two of Survey: How often do OTs screen for executive dysfunction in your initial evaluations?

Capstone Project Description

A 16-week project consisting of the development of clinical practice skills with the focus on increasing the use and understanding of executive functioning (EF) by promoting inclusion of executive function assessments/screening measures in the acute care setting.

Project Goals:

- Identification of risk factors of executive dysfunction
- Identification of appropriate objective measures of EF for acute care
- Implementation of a survey to OTs in order to understand current use and knowledge of EF
- Implementation of these EF assessments in initial evaluations
- Dissemination of findings to the occupational therapy practitioners

Project Outcomes:

- Increased use and understanding of EF assessments by occupational therapists at SMH
- Access to the EF assessments through SMH's electronic system
- In-service presentation on executive functioning and the implications for OT practice
- Education handout of EF, the assessments, treatment ideas, and discharge recommendations for occupational therapy practitioners to reference
- Less patients being discharged home or to other facilities with unrecognized executive dysfunction

RESPONSES
MMSE
Observation/cognitive questioning
Mini mental, MoCA, CAM-ICU, clock drawing, verbal fluency/divergent naming, spatial awareness recall, short term memory recall tests, serial 7s, Glasgow Coma Scale, Ranchos Los Amigos, and more that I cant think of!
I use parts of the SLUMS and MOCA
MMSE
MOCA, SLUMS, MINI-Mental
Mini mental
Mini-Mental; SLUMS
Clinical observation

Figure 3
Question Three of Survey: Which assessments do OTs use?

RESPONSES
End up needing to be the focus of the session, hard to do as a quick screen along with everything else
There aren't really any standardized assessments I know of in acute care for adults.
completing a formal assessment is often too difficult/time consuming. People may have limited strength and unable to write. Some tests are not appropriate for intubated patients, some appear to be more geared towards screening for just dementia.
They take too long to do with every patient, this is why I take parts of the assessment as a screen and will complete a full assessment if needed at a later date.
Fast, increases clinical picture of the patient
I would like one that is more specific for executive functioning not all that memory stuff that is in the other test
I like that these assessments are short and easy to score. I wish there were even more concise versions like the CAM-ICU to assess executive functioning and cognition
They are not objective and does not assist future therapists with progression, regression, or treatment techniques.

Figure 4
Question Four of Survey: Pros and cons of selected assessments

RESPONSES
N/A
n/a
Length of time to administer tests
N/A

Figure 5
Question Three of Survey: Why some OTs selected 'Never'

Learning Objectives Achieved

- Developed competency as an occupational therapist in the acute care setting by completing a full caseload independently
- Identified the risk factors of executive dysfunction during hospitalization and the appropriate executive function assessments with supportive research on its clinical utility
- Developed a survey for occupational therapists to analyze the current use and understanding of executive function in acute care
- Implemented and promoted screening/evaluation of executive functioning with the Trail Making Test, Controlled Oral Word Association Test, and the Menu Task with patients with risk factors for executive dysfunction
- Developed a presentation and education handout of my findings from implementing executive functioning screening tools and its impact on patient outcomes and discharge planning recommendations to prevent hospital readmission
- Integrated the executive function assessments into Sarasota Memorial hospital's electronic system for future use

Prevalence and Risk Factors for Patients in Acute Care

Conditions:

- Stroke
- Dementia
- Alzheimer's
- Parkinson's
- Multiple sclerosis
- Huntington's
- Depression
- Schizophrenia
- Chronic alcohol or substance abuse
- Brain tumors
- Hormonal imbalances

Medications:

- Sedatives
- Tranquilizers
- Anticholinergic
- Glucocorticoids

Executive Function in Acute Care

Implications for Occupational Therapy Practice

What is executive function?

A series of cognitive process, such as planning, initiating, set-shifting/sequencing, monitoring, problem solving, cognitive flexibility, emotional regulation, working memory, inhibiting, and concept formation (Kennedy & Cadet, 2018; Stollings et al., 2016).

How does it affect the daily life of our patients?

Executive functioning includes a set of abilities that impact several aspects of daily life, such as basic ADLs, IADLs, employment, social participation, and mobility skills (Giles et al., 2017).

Why is it important to our role as OTs in acute care?

The changes made by ACA, CMS, and AOTA places a greater emphasis on OT in acute care to decrease LOS, improve safe-discharges, and focus more on functional cognition. Executive dysfunctions often go undetected or are relinquished to other disciplines, while OTs focus more on safe care. Patients with impairments in functional cognition are more likely to be readmitted (Giles et al., 2017; Giles et al., 2020; Pickens et al., 2017; Pritchard et al., 2019; Tkach & Bowyer, 2020).

Figure 6
Samples of Educational Handout for the SMH OT Department

Implications for OT Practice

- Expanding the role of occupational therapy in acute care to include executive function
- Routine use of executive function assessments with patients at risk for executive dysfunction
- Advocate for patients that are not ready for discharge to the home environment and require further rehabilitation
- Communicate with the next level of care of the need for a more comprehensive executive functioning assessment
- Demonstrating occupational therapy's value in acute care through more utilization of standardized, objective measures



(McAlister, 2021)

REFERENCES & ACKNOWLEDGMENTS

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