Abstract

Research Question: A central element of this practicum was to conduct a systematic review answering the question: Does the treatment of sleep disorders among children (aged 2-12 years) with NDDs improve quality of life and/or sleep outcomes?

Methods: Used a comprehensive search strategy of key research databases, reference list searching, and hand-searching. Created a relevance assessment tool to gauge inclusion/exclusion in review.

Results: The total number of articles retrieved after duplicates removed was n=1243. Due to time limitations, focused review on articles about sleep and FASD (n=159). Of these articles, only n=3 met inclusion criteria. Consequently, inclusion criteria were relaxed, search broadened, and two sets of summary tables were produced (animal studies, n=14 human studies n=10). Summary tables will be included in upcoming Consensus Paper on Sleep Disorders and FASD.

Discussion: There is clearly little information available on the treatment of sleep disorders among children with NDDs (in general) and FASD (specifically). A growing number of abstracts and review articles on this topic indicates that researchers are aware of the importance of this issue and it is hoped that there will be more definitive results in the future.

Introduction

Neurodevelopmental disabilities (NDDs) are a major public health concern in Canada, but there is currently limited research on interventions/treatments (Jan et al., 2008). There are also limited resources/supports available to individuals and their caregivers in dealing with these chronic and lifelong disabilities (Miller, Resky, & Armstrong, 2007).

NeuroDevNet (NDN) is a Canadian Network of Excellence of researchers dedicated to studying children’s brain development from both clinical and basic perspectives. NeuroDevNet focuses on children’s brain development and three specific NDDs: Fetal Alcohol Spectrum Disorder (FASD); Cerebral Palsy (CP); and Autism Spectrum Disorder (ASD).

Knowledge Translation (KT) is becoming integral to public health, and is the central element of this project. KT is a process of dissemination, exchange, and ethically sound application of knowledge to improve health outcomes. KT is a growing area of research and practice (Novelli et al., 2011). Knowledge Translation (KT) is becoming integral to public health, and is an integral part of this project. KT is a process of dissemination, exchange, and ethically sound application of knowledge to improve health outcomes. KT is a growing area of research and practice (Novelli et al., 2011).

Results

• Total articles retrieved through database searching: n = 1733
• Total articles retrieved through hand-searching and reference list searching: n = 56
• Total duplicates removed: n = 546
• Total articles retrieved after elimination of duplicates: n = 1243

1) LIMIT TO STUDIES ON FASD

• To account for time limitations of practicum, change focus to FASD-related studies

Research Question: Does the treatment of sleep disorders among children (2-12 years of age) with FASD improve quality of life and/or sleep outcomes?

• After relevance assessment n = 159 articles, n = 3 remained

2) RELAXATION OF RELEVANCE ASSESSMENT CRITERIA

• Inclusion of animal studies, all publication types (studies, reviews, abstracts), no date restrictions
• Included n=14 animal articles and n=3 human articles

3) CREATION OF SUMMARY TABLES

• Created two sets of summary tables (one for animal articles, one for human articles)

• To be included in publication: "How to Approach Sleep Disorders in Children with FASD: The First Canadian FASD and Sleep Consensus Paper"

Discussion

• Clear that there is limited high-quality information available about interventions for sleep disorders among children with FASD

• Growing number of publications and abstracts indicates that this issue is being brought to the forefront by researchers in the field

• Publication of the Consensus document will provide some guidelines for treatment and spur continuing research into this area

Future Work/Recommendations

• A systematic review of the three articles that originally met inclusion criteria may shed light on the lack of empirical evidence about treating FASD and sleep disorders

• Similar analysis/review of original search evidence (including NDDs, CP, and ASD) could provide insight into the similar/differing treatment needs for sleep disorders among these populations

• NeuroDevNet’s Knowledge Translation Core can play a key role to play in not only implementing these research syntheses, but also disseminating the results to diverse audiences including researchers, healthcare professionals, caregivers for individuals with NDDs, and members of the interested public. This will involve a multi-pronged strategy, with information being made accessible in a variety of formats.

References


