



AN OVERVIEW DENTIST ROLES WITH NURSE AND SOCIAL WORKER IN DENTAL REHABILITATION FOR CEREBRAL PALSY PATIENT

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Abstract:

The objective of this study was to assess the oral health knowledge and practices of pediatric nurses responsible for coordinating healthcare services for children with special needs. Additionally, the study aimed to determine the factors that impacted the nurses' perceived success in managing their patients' oral health requirements. This article provides an overview of the responsibilities of dentists, nurses, and social workers in dental rehabilitation for patients with cerebral palsy. Variations in oral health are seen among individuals with cerebral palsy across various age cohorts and living circumstances. These findings indicate a pressing requirement for further training and teaching on oral hygiene for the individuals responsible for providing care. Dental schools should enhance their preparation of graduates to effectively address the treatment requirements of patients with unique healthcare needs, which necessitates the collaboration of nurses, dentists, and social workers.

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Introduction:

Cerebral palsy (CP) refers to a group of neurological disorders that occur in infancy or early childhood and result in long-lasting effects on muscle coordination and bodily mobility [1]. The emergence of this condition is a result of injury or abnormalities in the developing brain, which hinder its ability to control movement, posture, and balance. The International Classification of Diseases (ICD) assigns unique codes to identify various systemic disorders. Cerebral palsy (CP) is a medical illness that mostly affects cognitive abilities. It is specifically identified as G80 in the International Classification of Diseases, 10th edition (ICD-10) [2]. Having optimal dental health is crucial for overall well-being. Unfortunately, persons with spastic CP often have significant challenges in maintaining proper oral hygiene. This is mostly due to the upper limb stiffness that hinders their ability to participate in appropriate oral hygiene activities. Individuals with spastic CP experience a range of challenges related to the physical anatomy of the orofacial area, limits in neuromuscular function, difficulty with eating, maintaining oral hygiene, and accessing dental treatment. The main cause of poor oral hygiene in people with spastic cerebral palsy mostly arises from the rigidity in their upper limbs, which hinders their ability to grip a toothbrush efficiently and perform thorough oral care procedures [3].

The underlying cause of spasticity is attributed to the damage sustained by the motor cortex and pyramidal tracts in the brain. The neural pathways serve as a connection between the motor cortex and the central nervous system (CNS), allowing the transfer of signals that coordinate movement. When lesions occur in this region, it hinders the ability of patients with spastic cerebral palsy to efficiently extend their arms and grasp things, such as toothbrushes. Spasticity in individuals with cerebral palsy is characterized by sudden, unpredictable movements, increased muscle tension, and stiffness in the joints. In the upper extremities, it manifests as flexion of the elbow, flexion of the wrist, and challenges in synchronizing grip strength and finger force application [4].

Review:

People with cerebral palsy may face difficulties in controlling the complex mechanics of their oral motor function. Put simply, individuals struggle with controlling the muscles of their mouth and throat. This challenge frequently presents itself as obstacles in the domain of sustenance, rendering

tasks such as sucking and eating somewhat of an expedition. Individuals with cerebral palsy (CP) experience an increased susceptibility to dysphagia due to their difficulties in controlling muscular and motor functions [5]. The challenges can present themselves in various ways, including trouble starting the process of swallowing, often accompanied by discomfort, instances of bringing food back up, unpleasant episodes of heartburn, the feeling of stomach acid moving up into the throat, unexplained and unusual weight loss, a hoarse voice, the sensation of food getting stuck in the chest or throat, occasional instances of gagging and coughing while trying to swallow, an increase in drooling, a delayed or even nonexistent swallowing reflex, and a persistent sore throat. The additional intricacy can create difficulties for individuals to maintain adequate oral hygiene, finally leading to an elevated accumulation and persistence of dental biofilm, which offers a threat to their dental well-being [6].

In 2005-2006, the US Department of Health and Human Services reported that over 14% of children in the United States under the age of 18 had special health care requirements. Additionally, 21.8% of households in the US that included children had at least one kid with special needs. Out of all children with unique health care requirements, preventative oral health care was identified as the most necessary service that was not obtained [7]. Disparities in "access to care" also exist between children who have insurance and those who do not. According to a research conducted by Newacheck et al. [8], uninsured children were nearly five times more prone to being unable to obtain necessary dental treatment compared to children with insurance.

One important factor for the success of a community-based health program is the capacity of general health practitioners, who operate as medical gatekeepers for handicapped persons, to effectively identify and acknowledge the necessary dental care services. Physicians and nurses often provide care for children with specific healthcare requirements, but dentists typically do not [9]. The existing research indicates that nurses possess a restricted understanding of oral health issues as a result of inadequate or non-existent training in oral health evaluations and dental care procedures. The issue at hand is not limited to the United States. Studies undertaken in Hong Kong, Sweden, and South Africa have also revealed shortcomings in oral health knowledge, procedures, evaluations, and formal trainings within the nursing community [10]. A research conducted in Israel on nurses who

serve juvenile patients with cerebral palsy revealed a notable deficiency in their understanding of fundamental dental concepts, such as the prevention of dental caries and the frequency of periodontal disease among this specific group of patients [11]. Similarly, a local research conducted to evaluate the dental knowledge of nurses in hospitals revealed a deficiency in their understanding of dental caries, gingivitis, and the dental consequences linked to systemic diseases and drugs [12]. The author highlighted the significance of educating nurses on the underlying reasons behind certain oral health practices and procedures, arguing that it is impractical to expect nurses to do oral care mechanically without comprehending its value [12]. Nevertheless, there is limited understanding regarding the oral health knowledge, attitudes, and behaviors of nurses who interact with families of children with special health care requirements. In order for oral health education to be efficacious, it is important to develop it in a manner that takes into account the distinct attributes, convictions, attitudes, values, aptitudes, and previous actions of nurses [13].

Conclusion:

The issue of oral health among special needs persons continues to be a persistent challenge. It can only be handled by increasing the number of oral health professionals who are capable and ready to treat this neglected community and meet their dental requirements. Effective national initiatives and comprehensive healthcare reform measures are essential in mitigating this persistent public health catastrophe. By increasing national awareness and implementing preventive measures, we may effectively achieve the necessary and well-deserved level of oral health, and consequently, overall health, for individuals with special needs. Oral health may be greatly improved by adopting personalized treatment tactics instead of using generic approaches. In the future, it is crucial to focus on addressing particular aspects that contribute to the problem. These factors include changes in grip force dynamics, the severity of spasticity, the amount of motivation for oral health, and specific challenges related to oromotor functions, such as dysphagia and food retention. It is important for these comprehensive programs for oral health rehabilitation to give priority to maintaining the doctor-nurse and social worker-child interaction. This can contribute to the restoration of family dynamics and, consequently, improve their overall health.

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