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Knowledge, Attitude and Practice about Temporomandibular joint dysfunction among physiotherapists in Mumbai

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Abstract

Temporomandibular joint dysfunction is defined as musculoskeletal disorder affecting the temporomandibular joint, masticatory muscles and associated structure including dental occlusion and cervical spine. It is most chronic orofacial pain condition and it significantly affects the patient's quality of life. And there is relatively less awareness of role of physiotherapists in temporomandibular joint dysfunction (TMD). Hence, this study was conducted to assess knowledge, attitude and practice about temporomandibular joint dysfunction (TMD) among physiotherapists of Mumbai by using face- validated questionnaire. Data was analyzed and descriptive statistics was carried out. Out of 132 physiotherapists, 98% physiotherapists had knowledge that they play an important role in treating temporomandibular joint dysfunction (TMD). More than 90% feel there is less awareness about temporomandibular joint dysfunction (TMD) among physiotherapists and 96% therapists felt more physiotherapists should be trained. 98% of the therapists are willing to treat temporomandibular joint dysfunction (TMD) and 92% willing to get trained for the same. Around 70% of the therapists have treated less than 20% temporomandibular joint dysfunction (TMD) patients in their practice. Temporomandibular joint dysfunction (TMD) hypomobility (39%) were most common type of temporomandibular joint dysfunction (TMD) and most common treatment used to treat joint mobilization (23%) and soft tissue (23%). However, the physiotherapists are knowledgeable about temporomandibular joint dysfunction (TMD), have positive attitude towards treating patients.

Keywords: Attitude, Knowledge, Practice, Physiotherapist, Temporomandibular joint dysfunction.

Introduction

The Temporomandibular joint (TMJ) is one of the most complex and used joint in human body. It is responsible for mandibular function which includes mastication, phonation and deglutition [1]. The articular surface is covered by avascular and non-innervated fibro-cartilage which has a high regenerative capacity. The temporalis and masseter muscle control joint motion. Temporomandibular joint dysfunction (TMD) is

defined as musculoskeletal disorder affecting the temporomandibular joint (TMJ), masticatory muscles and associated structure including dental occlusion and cervical spine [2,3]. Temporomandibular joint dysfunction (TMD) is most common chronic orofacial pain condition and it can significantly affect the patient's quality of life. Prevalence of having Temporomandibular joint dysfunction (TMD) is higher in women (52.9) as compared to men (37.9) and it's more in middle age individual (age less than 56) [4]. It is diminishing the individual's ability to work and interact in social environment [3]. Temporomandibular joint dysfunction (TMD) sign and symptoms are pain in TMJ, and/or masticatory muscles, limitation or deviation with jaw movements, joint noise during movements and tension headaches [5,6,7]. Cervical spine disorders were shown to be associated with Temporomandibular joint dysfunction (TMD) pain 70% of the time [6,7,8,9,10]. Temporomandibular joint dysfunction (TMD) can be acute or chronic, simple or complex with persistent and associated cognitive, psycho-social and behavioral factors [11]. A multidisciplinary approach is particularly important for successful treatment of Temporomandibular joint dysfunction (TMD) cases [12]. Treatment of Temporomandibular joint dysfunction pain may involve dentists, physical therapist (PTs), speech pathologist, physician and psychologists. An ideal treatment option would be that one that is least invasive and most cost effective, while considering the Temporomandibular joint dysfunction (TMD) associated factors such as parafunctional habits, poor posture, widespread pain, poor sleep and depression.[3]. Physiotherapy is one of the cost-effective conservative treatments of temporomandibular joint dysfunction (TMD) pain [13]. Physiotherapy is among other noninvasive therapies including behavioral therapy and occlusal appliances that were shown to improve patients with temporomandibular joint dysfunction [14]. Physiotherapists can treat temporomandibular joint- related pain with similar intervention. It includes modalities to treat temporomandibular joint dysfunction pain secondary to inflammation, masticatory, muscle pain, temporomandibular joint hypo/hypermobility, disc displacement, bruxism and fibrous adhesion [7]. Based on systematic reviews manual therapy, jaw exercises and postural reeducation were shown to be effective to reduce pain and improve mobility/function in Temporomandibular joint dysfunction patients [15,16]. However, there is dearth in literature regarding practice of physiotherapy in temporomandibular joint dysfunction (TMD). Hence this project is undertaken to know knowledge, attitude and practice of physiotherapists in Mumbai about Temporomandibular joint dysfunction (TMD). The objective of this research is to know if physiotherapists in Mumbai are aware of temporomandibular joint dysfunction (TMD). Along with it know their attitude and outlook towards temporomandibular joint dysfunction (TMD). Through this study we will understand the level of awareness among physiotherapists about temporomandibular joint dysfunction (TMD) and their willingness towards its treatment.

Materials and Methods

This was cross-sectional descriptive study. Sample size was calculated using open Epi software. A questionnaire was created and face validate through 5 Physiotherapy experts. The questionnaire included questions related to demographic details, knowledge,

attitude, practice and referral. Physiotherapists included in study where from Mumbai with working experience of more than 2 years post Bachelors of Physiotherapy. They were contacted by an email which had a link to Google questionnaire. Google questionnaire included statement of the study, objective and consent form. By completing and submitting the Google questionnaire, the physiotherapists were informed that they were consenting to participate in the study. A reminder was given 2 times every week through an email. Responses were noted, taken up for further analysis.

Data analysis

The data was entered using Microsoft Excel and analyzed using primer of biostatistics, frequency, percentage, cross tables, bar diagram. Pie charts were used for data summarization and presentation. Descriptive statistical analysis was carried out and results on continuous measurement in number percentage.

Results

The study revealed 98% physiotherapists had knowledge that they play an important role in treating temporomandibular joint dysfunction (TMD). More than 90% physiotherapists feel there is less awareness about temporomandibular joint dysfunction (TMD) among physiotherapists and 96% physiotherapist felt more therapists should be trained. 98% of the therapists are willing to treat temporomandibular joint dysfunction (TMD) and 92% willing to get trained for the same. Around 79% of therapists have treated less than 20% of patients in their practice. Temporomandibular joint hypomobility (39%) were most common type of temporomandibular joint dysfunction (TMD). To treat Temporomandibular joint dysfunction (TMD) most common treatment used by them was joint mobilization (23%) and soft tissue (23%). 88% physiotherapists agreed that patients were referred to other practitioners, most of yen were general dentist (29%) and oral surgeon (29%).

Discussion

The purpose of the study was, to determine the knowledge , attitude and practice about Temporomandibular joint dysfunction (TMD) among physiotherapists in Mumbai was based on the belief that insight of physiotherapy on Temporomandibular joint is an important aspect.

According to analysis of the data, it was observed that out of 132 subjects, 80% were female physiotherapists, 20% were male physiotherapists. The level of education by physiotherapists participated in survey were 44% bachelor's, 55% master's and 1% doctoral degree. 95% physiotherapists were practicing from 2-20 yrs and remaining 5% were practicing from 21-40 yrs. Physiotherapists participated in the survey were from the different field and majority were musculoskeletal physiotherapists (53%).

Most of the physiotherapists studied temporomandibular joint in detail in their bachelor's (75%) and remaining during their master's (25%). Only 27% physiotherapists attended and CME's/ Workshop on Temporomandibular joint dysfunction (TMD),73% did not attend. 96% physiotherapists felt that more physiotherapists should be trained to treat temporomandibular joint dysfunction (TMD). This suggested that training workshop or webinars on Temporomandibular joint dysfunction (TMD) to be conducted for physiotherapists. Also, 92% physiotherapists were willing to get trained treat temporomandibular joint dysfunction (TMD).

98% physiotherapists feel that they play an important role in temporomandibular joint dysfunction (TMD). According to them, muscle tightness) tender points (36%), Temporomandibular joint hypomobility (32%), Temporomandibular joint hypermobility (19%) and Temporomandibular degeneration (13%) were types of Temporomandibular joint dysfunction (TMD) treated majorly. For treating these types of Temporomandibular joint dysfunction (TMD), best treatment techniques were 23% joint manipulation, 22% soft tissue technique,18% ultray,16% facial muscles relaxation, 11% stretching,8% dry needling and 2% others (matrix, postural reeducation etc.). Even 98% had knowledge that there is relationship between neck pain, forward head posture and cervicogenic headache.84% physiotherapist agreed that they play role in all stages (acute, subacute, chronic) of Temporomandibular joint dysfunction (TMD). Around 73% physiotherapists were aware that sometimes sign or symptoms get unnoticed by physiotherapists during evaluation.The data analysis showed physiotherapists treated Temporomandibular joint dysfunction (TMD) patients were (70%) 0-20% patients, (22%) 21-40%, (6%)41-60% (2%) 61-80%. 39% Temporomandibular joint hypomobility,37% muscle tightness/tender points, 17% Temporomandibular joint hypermobility and remaining 8% Temporomandibular joint degeneration were type of Temporomandibular joint dysfunction (TMD) patients treated or evaluated by physiotherapists. The methods used during evaluation were 32% used jaw movement during opening/ closing, 29% Temporomandibular joint palpation, 19% masticatory muscles palpation, 19% Temporomandibular joint sounds. Addition to it, forward head posture(37%), cervicogenic headaches (37%) and neck pain(25%) were conditions were also present bin patients during evaluation. It was found out that 75% patients who had forward head posture, cervicogenic headaches and neck pain were later diagnosed with temporomandibular joint dysfunction (TMD). A research was conducted by Susan Armijio Olvio and David Magee which showed that subject with Temporomandibular joint disorder presented with cervical flexor and extensors muscle [23]. Most of the temporomandibular joint dysfunction (TMD) patients were seen during subacute stage. For these patients most of physiotherapists used joint manipulation technique (23%), soft tissue technique (23%) followed by facial muscles relaxation (19%), ultrasound (18%), stretching techniques(11%), dry needling (5%) and others (2%). Similarly, research was conducted by Leticia Bojikian Calixtre showed that neck joint mobilization, muscle stretching and segmental stabilization seems to cause improvement in pain free MMO, self-reported pain and mandibular functionality in subjects with myofascial pain or mixed TMD [24].

Around 88% physiotherapists agreed that they referred patients to other health care provider/ practitioners. Most of the patient's were referred to general dentist (29%), oral surgeons (29%) followed by orthopedic surgeon (21%), ENT (15%), speech therapist (3%) and physicians (3%). The research conducted by Evane Goncalves de Toledo showed that their interrelationship between dentistry and Physiotherapy in the treaty of Temporomandibular disorder [25].

90% agreed it's matter of concern among physiotherapists, that there is less awareness related to Temporomandibular joint dysfunction (TMD). Reason were as follows less exposure of the patients related to Temporomandibular joint patients (39%), lack of

awareness of physiotherapy treatment patients (33%), lack of awareness in health care provider (19%), less publicity by physiotherapists (8%) and others (1%). Thus, more of this can be helpful for holistic approach treating patients. A similar study can be done in Maharashtra and India.

Conclusion

Through the study, we conclude that physiotherapists had knowledge about their role in Temporomandibular joint dysfunction (TMD). Most of physiotherapists feel that there is less awareness about temporomandibular joint dysfunction (TMD) among physiotherapists and felt more physiotherapists should be trained. Many therapists are willing to treat temporomandibular joint dysfunction (TMD) patients and are willing to get trained for the same. Most of physiotherapists have treaty few temporomandibular joint dysfunction (TMD) patients in their practice. Temporomandibular joint hypomobility is most common dysfunction treated. Joint manipulation, soft tissue techniques, facial muscles relaxation and ultrasound are the common mode of treatment.

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