

# Evaluation of the Shares about Temporomandibular Disorders in Social Media

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## ABSTRACT

**Aim:** Temporomandibular disorders (TMD) are a class of degenerative musculoskeletal conditions associated with morphological and functional deformities. Although TMDs symptoms occur in about 25% of the population, very few individuals consult a specialist for the treatment. Patients are looking for different ways of acquiring information. One of these methods is social media. New definitions have entered our lives with Instagram. “Hashtag” is one of them that provides a quick link to related articles, content, and videos. The aim of this study was to determine the use of Instagram about TMD as well as to evaluate the content of the most frequently viewed video shares related to TMD using hashtag “#temporomandibular joint (TMJ) disorder.” **Materials and Methods:** On December 17, 2019, #TMJ disorder which is the most shared hashtag related to TMD was searched in Instagram. In this study, first 80 video was preferred, but some videos were excluded due to irrelevant (4) and no-English (8). The remaining 68 video sources are divided into three categories by the researcher; non-professional, professional, and news. **Results:** “Number of views” is the most in professionals (10179.7), then the news (9439,5) and nonprofessionals (4385.4) are the least. Although “number of like” is the same ranking (195.7–103.8–62.3), “number of comment” shows an increase in non-professionals (12.8–7.6–9.2). **Conclusion:** Videos shared by professionals are more common in TMD-related videos in Instagram. Health professionals need to be careful to create a reliable resource for patients. The content of the videos was also found poor about what can be done to avoid TMD. In addition to treatment-oriented videos, the number of videos including preventive options should increase.

**Key words:** Social media, temporomandibular disorders, temporomandibular joint

## INTRODUCTION

Temporomandibular Joint (TMJ) is a ginglymoarthroidal joint, so it has the ability to perform both rotation and translation movements. TMJ is different in structure and development from other joints. Due to this difference, a disease affecting every joint in the body may not affect TMJ. In addition, these differences between TMJ and systemic connections may be the cause of the unique age and gender distribution of TMJ disorders.<sup>[1]</sup>

TMJ disorders (temporomandibular disorders [TMDs]) are a class of degenerative musculoskeletal conditions associated

with morphological and functional deformities.<sup>[2]</sup> TMDs include intra-articular disc position, structural abnormalities, and dysfunction of the associated muscular system.<sup>[3]</sup> Clinical signs and symptoms include orofacial pain including joint sounds, limitation of movement or deviation, and cranial and/or muscle pain.<sup>[4]</sup>

Although TMDs symptoms occur in about 25% of the population, very few individuals consult a specialist for the treatment.<sup>[5]</sup> In addition to applying to the clinics for information about their illness, patients are looking for different ways of acquiring information. One of these methods is social media. Social media applications that enable people

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to create and share content and join social networks are rapidly becoming widespread throughout the society. Some studies show that by 2021, an average of 3 billion people will use social media. Since its establishment in October 2010, approximately 75 million users have shared 16 billion photos. Seventy percent of the users' log in at least once a day and 35% enter it several times a day.<sup>[6]</sup>

Social media is used to share information on health-related issues as well as many other issues.<sup>[7]</sup> The existence of social media in the context of health services has been documented by some studies.<sup>[8]</sup> For example, they have been reported to use the Internet to learn about HIV and sexual behavior, sensitive issues such as puberty, diet, fitness, and depression or drug use.<sup>[9]</sup> Some studies show that people prefer to learn about oral health information using social media. The reason for this preference is generally stated as ease of use and speed of access to information.<sup>[10,11]</sup>

New definitions have entered our lives with Instagram. "Hashtag" is one of them that provides a quick link to related articles, content, and videos. There are many hashtags related to TMDs, but the most used hashtag is "#TMJ disorder."

There is not enough literature on the use of Instagram about general health and especially TMDs. The aim of this study was to determine the use of Instagram about TMDs as well as to evaluate the content of the most frequently viewed video shares related to TMDs.

The research hypothesis of this study is that Instagram videos about TMDs will not provide sufficient, valid, and reliable information to patients.

## MATERIALS AND METHODS

On December 17, 2019, #TMJ disorder which is the most shared hashtag related to TMDs was searched in Instagram and videos were recorded to stabilize ever-changing lists. It has been reported that most of social media users looking for the first 60–200 videos, and the majority of users are only watching the first 30 videos.<sup>[12]</sup> So in our study, first 80 video was preferred; but some videos were excluded due to irrelevant (4) and no-English (8).

Video sources are divided into three categories by the researcher; non-professional, professional, and news. The non-professional category includes individual shares. The professional category describes any person with a professional background in healthcare. News category includes digital news published on social media.

Number of views, number of likes, and number of comments were determined by the researchers [Table 1]. The researcher determined whether or not the video mentioned any of

the following information: "TMJ" is; testing for "TMJ"; treatments for "TMJ" (eating soft foods, no gum or nail-biting, heat packs, relaxation including meditation and biofeedback, mouth guards, pain medication, exercise, and surgery); prevention; and the highlighting of a person's personal experience, whether it is selling a product [Table 2].

A spreadsheet (Excel v2016; Microsoft Corp) was used for processing statistical data. Results of the analysis were calculated as median, range (min-max), and 95% confidence interval.

## RESULTS

In this study, first 80 video was preferred, but some videos were excluded due to irrelevant (4) and no-English (8). The remaining 68 video sources are divided into three categories by the researcher; non-professional, professional, and news [Table 1].

Table 1 presents data on total number of views, number of comments, and number of likes. "Number of views" is the most in professionals (10179.7), then the news (9439.5) and nonprofessionals (4385.4) are the least. Although "number of like" is the same ranking (195.7–103.8–62.3), "number of comment" shows an increase in non-professionals (12.8–7.6–9.2).

Table 2 gives the frequencies of each of the categorical variables by their source categories. The most of the videos (%83.7) explained what "TMJ" is; while almost all of the professionals mentioned this issue, non-professionals never mentioned it. Non-professionals did not mention the testing of TMD as in explaining TMJ. Almost all the news (%91.7) mentioned testing, while more than half of the total videos (66.2) mentioned testing. All categories refer to treatment in all videos. When all treatment options are examined, the most frequently mentioned treatment is exercise in all videos (%55.9), and in nonprofessionals, the only mentioned treatment option is exercise. Other than exercises, pain medication and mouth guards are frequently mentioned in videos (27.9 and 30.9). All of the news mentioned prevention, while a few in total videos (%27.9) mentioned prevention. The only news mentioned surgery among the all categories. While the half of nonprofessionals mentioned personal experiences (%40), all of the news mentioned personal experiences. The purpose of selling the product in all videos has been identified only in one video and this video belongs to a professional company.

## DISCUSSION

The research hypothesis of this study was accepted because Instagram videos about TMDs did not provide

**Table 1:** Summary statistics (by source category) of number of views, likes, and comments

Source category	# n	Mean (SE)	Median	Range	95% CI	Total
Number of views						
Non-professional	10	4385.4 (4028.96)	3626	987–11889	2882.14	43854
Professional	46	10179.7 (8899.19)	9262	985 36589	2642.73	468270
News	12	9439.5 (7262.81)	9865.5	1254–22156	4614.57	113274
Number of likes						
Non-professional	10	62.3 (34.18)	65	16–98	24.45	623
Professional	46	195.7 (370.76)	97	16–2432	110.10	9006
News	12	103.8 (57.38)	110	36–235	36.46	1246
Number of comments						
Non-professional	10	9.2 (4.10)	11	2–13	2.93	92
Professional	46	12.8 (14.63)	11.5	0–86	4.34	590
News	12	7.6 (4.94)	9.5	0–13	3.14	92

**Table 2:** Frequency table of categorical variable levels by source category

Content category	Non-professional (n=10) n (col %)	Professional (n=46) n (col %)	News (n=12) n (col %)	Total (n=68) n (col %)
Explains what temporomandibular joint is	0 (0.0)	45 (97.8)	12(100.0)	57 (83.8)
Mentions testing	0 (0.0)	34 (73.9)	11(91.7)	45 (66.2)
Mention treatment	10 (100.0)	46 (100.0)	12(100.0)	68 (100.0)
Mentions treatment (soft foods)	0(0.0)	4 (8.7)	0 (0.0)	4 (5.9)
Mentions treatment (no gum or nail biting)	0 (0.0)	1 (2.2)	0 (0.0)	1 (1.5)
Mentions treatment (heat packs)	0 (0.0)	0 (0.0)	1 (8.3)	1 (1.5)
Mentions treatment (relaxation: meditation and biofeedback)	0 (0.0)	12 (26.1)	1 (8.3)	13 (19.1)
Mentions treatment (mouth guard)	0 (0.0)	7 (15.2)	12 (100.0)	19 (27.9)
Mentions treatment (pain medication)	0 (0.0)	9 (19.6)	12 (100.0)	21(30.9)
Mentions treatment (exercise)	9 (90.0)	17 (37.0)	12 (100.0.0)	38 (55.9)
Mentions prevention	0 (0.0)	7 (15.2)	12 (100.0)	19 (27.9)
Mentions surgery	0 (0.0)	0 (0.0)	12 (100.0)	12 (17.6)
Highlights a person's personal experience	4 (40.0)	5 (10.9)	12 (100.0)	21 (30.9)
Is selling products	0 (0.0)	1 (2.2)	0 (0.0)	1 (1.5)

sufficient, valid, and reliable information to patients. Especially in terms of prevention of TMD, videos have insufficient content. Treatment options are often focused on exercises, and there are fewer resources on other treatment options.

Instagram is a functional platform to reach large audiences as other social media sources.<sup>8</sup> People often refer to social media on health-related issues and watch videos about it. The subject is scanned, and generally, the first 30 videos are watched.<sup>[12]</sup> Patients want to get information quickly. That's why Instagram allows only 1 min short videos, making it more traceable.

Long titles can be prohibitive in reaching the desired source, but thanks to the “hashtag” used in Instagram, individuals can reach the desired source quickly. With a total of 18k sharing, “#TMJ disorder” is the most frequently searched topic related to TMD.<sup>[13]</sup>

The Internet is an important way for health professionals to acquire and share information.<sup>[14-17]</sup> Video-sharing sites offer health-related information resources in a visual and useful way. Patients often use social media to find the solution of their complaints. Since patients are looking for solutions to their complaints in short-term Instagram videos, videos are created in this direction. Therefore, in the videos, it is seen

that what is the TMJ that is briefly mentioned, and then, treatment option is mentioned.

## CONCLUSION

Videos shared by professionals are more common in TMD-related videos in Instagram. Health professionals need to be careful to create a reliable resource for patients. The content of the videos was also found poor about what can be done to avoid TMD. In addition to treatment-oriented videos, the number of videos including preventive options should increase.

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