

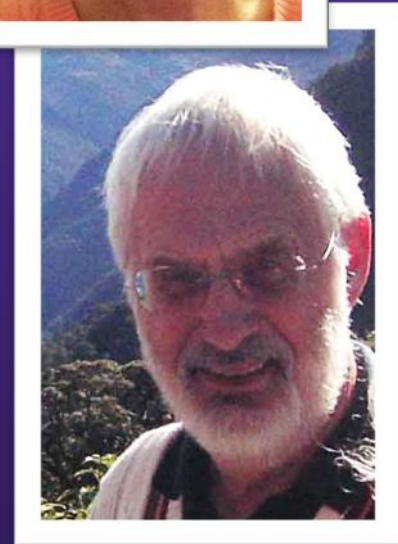
Cranio UK

*The Journal of the British Society for the Study
of Craniomandibular Disorders (BSSCMD)*

*Issue No. 12
Winter 2020*

In this issue:

-) 2 Studies reviewed -
by the Editor**
-) Survey on the effects of
extraction orthodontics -
by Dr Karin Badt**
-) Connections between sleep
disorders and CMD -
by the Editor**



BSSCMD

British Society for the Study of
Craniomandibular Disorders



Plus:

**“The Helen Jones Page “
and “Viewpoint”**

Issue No. 12 Winter 2020

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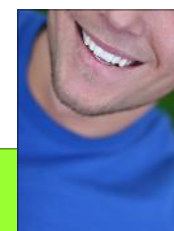
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Professor Karin Badt

Survey on the consequences of Orthodontic treatment with premolar extractions - Part 1 (Results)



Link to survey: <https://forms.gle/F5LEdN9ujjiMu4Mt6>

ABSTRACT:

Since the 1940s when premolar extraction was pioneered by Dr. Charles Tweed as an ideal orthodontic treatment, there has been an ongoing debate within the orthodontic profession about its potential adverse health and aesthetic consequences. The procedure of premolar extraction and retraction of teeth is purported to cause structural changes in the facial form, namely the retrusion of the maxilla and mandible, loss of vertical dimension and reduction of the oral cavity, and health issues consequent to these structural changes, specifically, temporomandibular disorder, inadequate tongue space, obstructive sleep apnea, forward head posture, neck/posture issues (cervicalgia, cervical kyphosis), atypical deglutition, pronunciation/speech difficulties, somatic tinnitus and frequent headaches.

To test the hypotheses that extraction-retraction orthodontics can result in one or more of these health issues, and to determine whether a constellation of multiple health issues correlates with extractions, a survey was disseminated randomly on the internet ad-

ressed to people who have had orthodontic treatment with extractions. Respondents were asked to check if they had any of 18 health symptoms hypothetically correlated with extraction orthodontics. Respondents were asked as well if any doctors had correlated their current health symptoms with their orthodontic treatment.

The survey also tested the hypothesis that adverse aesthetic consequences result from premolar extractions. Respondents were asked to report the changes to their appearance they observed following their orthodontic treatment, and whether they were satisfied or not with these changes.

FINDINGS:

114 respondents from 29 countries, aged 18 – 91, completed the survey. Of these respondents, **90%** reported at least 3 of the health symptoms on the list. **53%** reported having between 9-16 health symptoms, including sleep apnea or other breathing issues and TMD. **81%** reported having at least 1 negative aesthetic consequence, with the most frequently noted negative consequence being a recessed mandible. **64.9** percent reported that they were not satisfied with the changes

in their appearance caused by extraction orthodontics. (Fig 1.)

CONCLUSIONS:

Premolar extraction orthodontics has an adverse effect on health and appearance in a high percentage of those who have had the treatment. A constellation of multiple health symptoms correlates with premolar extractions in a high percentage of patients who have had this treatment.

DISCUSSION: The survey results suggest that the evident correlation between orthodontic premolar extractions and health symptoms should be a concern of the utmost importance for the orthodontic profession, and the subject of global study. Further surveys are in order with larger sample pools than this pilot survey to determine the greater precision the statistical percentage of those who incur health problems consequent to extraction orthodontic treatment.

Given that symptoms often occur years after the orthodontic treatment, longitudinal studies of extraction patients following their treatment for decades are in order. One way to to accomplish this challenging goal would be to ask orthodontists to distribute surveys to their former extraction-treated patients. This current survey was limited in that it was not distributed directly to the vast number of former patients known to have had extraction orthodontics. Comparisons with populations that have not had premolar extractions should also be made.

SAMPLE DESCRIPTION:

- Number of respondents: 114
- Criteria: 1-4 premolars extracted for orthodontic treatment
- Age range: 18 – 91 years.

- Extractions reported to have been done between 10 – 13 years of age.
- Countries of respondents (29): United States, Canada, Brazil, Venezuela, Australia, New Zealand, United Kingdom, Ireland, Belgium, Greece, Finland, Sweden, Denmark, Germany, Serbia, The Netherlands, Poland, Ukraine, France, India, China, Malaysia, Nepal, Cambodia, Guam, Hong Kong, the Philippines, South Korea, Botswana.

Survey was sent out via Facebook and Reddit on September 9, 2019, and results tabulated January 5, 2020.

RESULTS:

1. Health symptoms reported: (Fig 2)

90% of respondents checked that they had 3 or more health symptoms on a checklist of 18 symptoms. **84%** of respondents checked 4 or more health symptoms, including the *same 4* symptoms: insufficient space for the tongue, forward head posture, neck tension and difficulty maintaining good posture. **53%** reported having between 9-16 health symptoms, including obstructive sleep apnea or other breathing issues, and either TMD or TMJ. **7%** of the 114 respondents had 0 of the 18 health symptoms listed on the survey.

The health symptoms checked, in order of frequency:

- Forward head posture (75 respondents)
- Neck tension (74)
- Insufficient space for the tongue (73)
- Shoulder tension: (73)
- Difficulty in maintaining good posture (73)
- TMJ (61)
- Inability to put tongue completely on palate (52)
- TMD (50)
- Frequent headaches (51)
- Abnormal swallowing (50)

- Speech or Pronunciation Difficulty (40)
- Sleep apnea or OSA (41)
- Tinnitus (39)
- Mouth breathing (29)
- Lordosis (27)
- Snoring (21)
- Other breathing issues (18)
- Military neck (16)

2. Effects on appearance: (Fig 3)

81% of respondents reported at least 1 negative aesthetic consequence subsequent to extraction orthodontics.

The negative aesthetic issues reported:

- Recessed mandible 73.1%
- Thinning lips 53.8%
- Furrowed line in chin 33.3%
- Deep naso-labial folds 43%
- Large nose compared to small mouth 53.8%
- premature aging appearance 58.1%

64.2% of respondents reported they were unsatisfied with the changes to their facial appearance resulting from their orthodontic procedure.

3. Tongue space:

73.7% percent of respondents reported inability to put tongue completely on the roof of the mouth without the tip of the tongue lapping on or beyond the front teeth. 20.4% percent reported pronunciation difficulty with S, V, B and D.

4. Impact on Daily Life:

90% of respondents reported that 2 or more aspects of their day-to-day lives have been *somewhat* or *very much impacted* by their reported symptoms.

The areas reported to be *somewhat* or *very much* impacted are (in order of frequency checked):

- "Sense of overall wellbeing and peace" (*somewhat* 48, *very much* 55)
- "Feeling of self-esteem" (41, 53)
- "Sleep" (39, 53)
- "Relationships and socializing" (36, 46)
- "Athletic activity" (37, 45)
- "Concentration" (44, 40)
- "Work" (39, 42)

5. Verbatims:

In the space for personal comments on how premolar extraction orthodontics has impacted respondents' lives, 92% of the 72 who offered comments referred to severely impaired health, diminished physical attractiveness, and/or psychological difficulties resulting from these impairments. A number noted "depression," "anxiety," "loss of self-esteem" and "loss of confidence".

Excerpts from comments on physical and/or mental health consequences:

"severe anxiety," "depression," "extreme pain," "constant pain and discomfort," "stress and anxiety," "almost drove me to suicide due to constant pain and discomfort," "ruined my health," "use CPAP machine to sleep," "bad quality of sleep," "sometimes I feel I cannot get enough air," "I snore and was diagnosed with obstructive sleep apnea," "I cannot sleep like before. Most of the days I would be in my bed with heavy headache, watery eyes, jaw and teeth pain, just trapped. I feel trapped," "UARS and low self esteem," "extreme fatigue, teeth grinding and clenching, stress and anxiety, feeling depressed, concentration problems, unable to run," "overall discomfort all throughout my face, jaw, neck, shoulders, and back," "generalized anxiety, tinnitus,

OSA, posture issues," "severe neck pain," "loss of confidence," "depression and low confidence," "overall diminishing my sense of self-worth," "feel miserable," "ever since extractions, I take painkillers constantly," "I wish I had my teeth back to hold up my face and maintain my airway," "hard to relax mouth posture," "unstable bite," "teeth grinding," "my mouth seems pretty small now and my tongue has always felt big. When resting, my tongue presses against my upper teeth," "difficult swallowing," "chronic migraines and TMJ," "Vertigo and panic attacks thanks to TMD...TMD caused by invalid orthodontic treatment (extractions) in childhood (according to current doc)," "Fibromyalgia and CFS," "CFS," "fibromyalgia/chronic pain due to lifetime apnea likely resulting from extractions."

Excerpts from comments on aesthetic consequences:

"Depression, can't smile, so ugly," "do not want to smile," "it's made my smile smaller, teeth are further back in face," "difficult smiling comfortably," "small upper jaw development", "my face aged so bad", "dissatisfaction with facial appearance," "I trained as a classical singer, but could never get a nice jaw position," "lips flattened, whole lower face is inwards, lines under sides of lips, mouth looks sad," "I've only realized that naso-labial folds are caused by this, compared to my brother who has no extractions," "mostly impacted my physical appearance, then my self-esteem," "made me deeply insecure and anxious about the way I looked. Before braces I was a conventionally attractive, confident kid."

Comments on the general impact of extraction orthodontics:

"The mutilation of healthy teeth has ruined my life," "all the above started during and following orthodontics in 1999 at age 19," "The blunder was done to me which made my life horrible," "I

hope orthodontists stop extracting teeth," "it should be illegal under age 18," "impacted my life in an extremely negative way," "has had a major impact on my life," "Everyday I wake up and regret the money, time and health I put towards this unnecessary treatment," "if I had it to do all over, I would not," "Every day I am reminded by my pain and what I have gone through for 22 solid years."

Positive and neutral comments on the impact of extraction orthodontics:

6 of the respondents who offered comments said that extraction orthodontics had no effect or a positive effect on their lives, even if they had checked 4 or more health symptoms: "It did not impact my life [6 health symptoms reported]," "improved my appearance [0 symptoms reported]," "never noticed before anything wrong [4 symptoms reported]," "never thought about it [5 symptoms reported]," "no consequences" [0 symptoms reported]," "not sure what all has been affected from that or other reasons just have no explanation as of yet [13 symptoms reported]".

6. Doctors' diagnosis of their health symptoms:

32.2% reported that 1 or more doctors had introduced premolar extraction orthodontics as a possible cause for their symptoms. 38.4% reported that no doctor introduced extraction orthodontics as a possible cause for their symptoms. The rest had not consulted any doctors.

7. Respondents' awareness of the possible link between their health symptoms and extraction/retraction:

- 44.6 percent reported they *did not know* or only *suspected* there was a possible connection between their symptoms and their childhood orthodontics prior to taking the survey.

- 50 percent answered 'yes they were aware of the possible connection prior to taking the survey.' Of these, 70% had been given this diagnosis by a doctor.
- 5.4 percent still did not think there is a connection between extraction orthodontics and their symptoms after taking the survey - *"I still don't think they are related."*

FURTHER IMPLICATIONS OF SURVEY RESULTS:

One frequent lay objection to arguments that there are health consequences to extractions is "*if that is the case, why don't we already know about it?*" Given the great numbers of extraction cases that have been done globally since the 1940s—in up to 70% of all orthodontic cases today in some areas of the world (most predominantly in Asia)—there should already be global alarm regarding the dangers of premolar extraction orthodontics, if indeed it consistently causes major health problems.

A hypothesis by this writer, and a motivation for launching this survey, is that since very few people are aware of the biological connections between occlusion, jaws and other parts of the body, and doctors who address this correlation are rare, it is highly unlikely that those who may be suffering

from possible consequences of premolar extraction/retraction will make a correlation between their health issues and their childhood orthodontic treatment, given that the health issues commonly hypothesized to result from premolar extraction/retraction - such as temporomandibular disorders, sleep apnoea, neck pain or postural issues - involve areas of the body seemingly unconnected to teeth.

This hypothesis about lack of awareness was corroborated by the survey results. Of the 114 participants, only 50 percent reported they were aware, prior to the survey, of any possible correlation between premolar extractions and their health symptoms.

Significantly after taking the survey, awareness nearly doubled. Nearly 90% of respondents reported that they were willing to sign a petition to ask the orthodontic field to limit premolar extractions. This suggests that those who were unaware of a correlation before quickly joined up the dots. It is the hope of this writer that a global educational campaign about the relationship between occlusion and health be launched to better medical diagnosis and awareness of health issues potentially caused by extraction orthodontics.

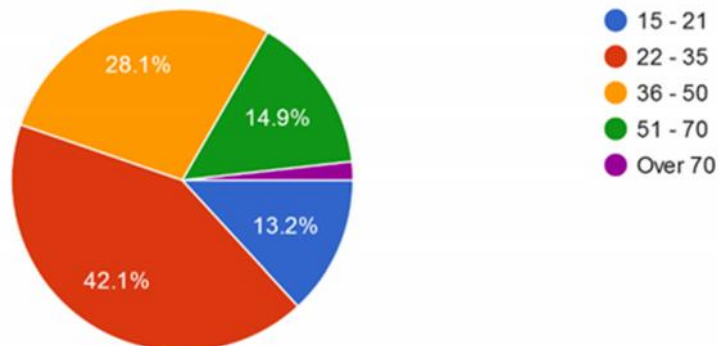
Dr Karin Badt is Associate Professor of Cinema and Theater at the University of Paris VIII and a journalist, with publications in the Huffington Post, New York Times, the Boston Globe, Cineaste and Tikkun. In her longstanding blog on the Huffington Post, she covered new findings in science and the arts. Her previous academic research was in neuroscience and film, and she is currently interested in the history of the premolar extraction debate in orthodontics. Her doctorate was in Comparative Literature from the University of Chicago.

(The reader will be aware that Dr Badt is a lay contributor to this journal. However, she has a passionate interest in the issues surrounding extraction/retraction orthodontics, for reasons which will become clear in Part 2 in the next (Summer) issue.
Editor.

Age Now (Range)

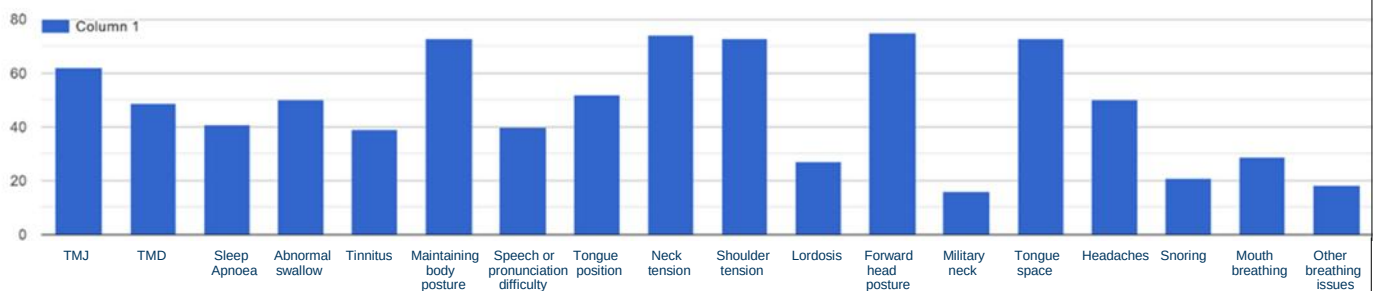
114 responses

Fig 1



Do you have any of the below symptoms? check all that apply.

Fig 2



Are you satisfied with the changes in your appearance resulting from orthodontic procedure(s)?

111 responses

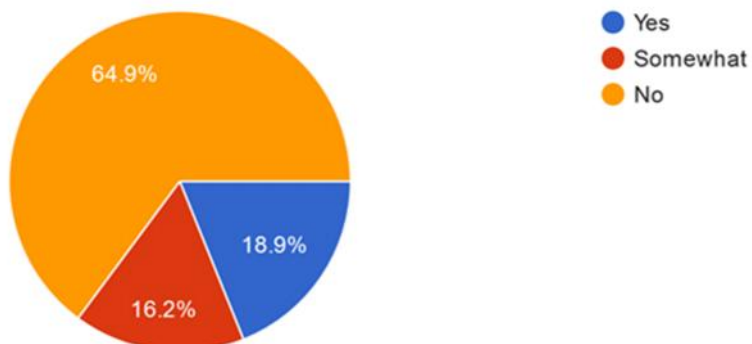


Fig 3

