Akademska godina 2021./2022.

Naziv predmeta: Prosthodontic patient: assessment of oral health-related quality of life and d-PROMs: assessment tools (questionnaires), psychometric properties: validity, reliability, factor analysis

Zavod/katedra na kojoj se predmet izvodi: Department of Removable Prosthodontics

Adresa sjedišta zavoda/katedre: Ivana Gundulića 5, 10000 Zagreb

Broj ECTS-a: 4

Nositelj predmeta: prof.dr.sc. Asja Čelebić

Suradnici na predmetu koji sudjeluju u izvođenju nastave: None

Broj sati nastave

	Br. sati
Predavanja	6
Seminari	7
Vježbe	7
Ukupno	20

1 sat = 45 minuta

Opis predmeta:

In the course, students will receive information through lectures and seminars about the importance of the outcome of a therapy from the patients' perspective. This will refere to prosthodonticpatients as well as to patients in other branches of dental medicine. In contemporary medicine, health is defined not only as the absence of a disease, but as the overall psycho-physical well-being. Therefore, assessing the outcome of therapy from the patients' perspective has become the most important measure of the success of a therapy. Patient assessments have been measured by using validated questionnaires relating to one or more dimensions of oral health. One-dimensional questionnaires measure only one domain, eg. only a change in aesthetics achieved by dental procedures or only the change in the chewing function, or speech, etc. Many questionnaires used in prosthodontic research have multiple dimensions, ie. measure different domains, eg. chewing function, aesthetics, comfort, psycho-social impact of a therapy, etc., all dimensions comprised in one questionnaire. On the contrary, one-dimensional questionnaires contain questions (items) related only to one dimension, eg. only to orofacial esthetics. Different questionnaires use different scales for assessment. The scales can range from simple (yes, no) to scales with three or more choices. The most commonly used scales are analog Likert scale (5 point scale), analog-visual scale (1-10) or visual scale 0-10. The summary score of the questionnaire or the mean value of the questionnaire are calculated (The summary score divided by the number of questions). One of the most frequently used questionnaires in prosthodontics is the Oral Health Impact Profile (OHIP), which contains 49 questions in the original version; however abbreviated versions are most commonly used in research: the OHIP 14, OHIP-EDENT (19), OHIP TMD, OHIP-ESTHET, etc. Recent research indicates that the OHIP questionnaire has 4 dimensions, instead of the originally proposed 7, and most questions from other questionnaires frequently used in prosthodontic research fit into that concept. The best-known

one-dimensional questionnaires are the Orofacial Esthetic scale and the Chewing Function Questionnaire.

Each questionnaire after translation must be validated in the new cultural environment, ie, its psychometric properties must be investigated. These are usually reliability and validity, and exploratory factor analysis. When creating a new measuring instrument, it is necessary to decide whether it will be one or more dimensional, discuss the item content with the panel of experts and make a pilot study in patients and discuss items comprehensibility, and afterwards to explore dimensionality (exploratory and confirmatory factor analysis) and other questionnaire's psychometric properties. In the course, through lectures and seminars, students will be introduced about qualitative and quantitative data, the questionnaires most commonly used in dental prosthetics, their psychometric properties and dimensionalities, measurement scales and the effect of a therapy according to Cohen. Through the seminars, students will be explained the statistical methods used when assessing psychometric properties of a questionnaire. In the exercises, students will search for the published papers in which a new measuring instrument has been constructed, or a translation of a questionnaire in a new environment has been psychometrically tested, regardless of the branch of medicine. Analyzing different questionnaires, the student must answer the questions such as: which methods were used to assess psychometric properties: reliability, validity, whether the analysis of a questionnaire's dimensions was done, have the authors found a difference from the original instrument in the new environment, etc. In that way students will be able to use translated questionnaires and interpret psychometric properties after conducting a psychometric analysis, or will be able to construct a new measuring instrument which they need for their research after consultation with a statistician. They will construct new questionnaire depending on the purpose of their research. Practical work, ie. exercises will include analysis of some already published research studies answering questions: was translation of a questtionnaire performed and which assessments of psychometric properties were done; was the dimensionality of the questionnaire assessed; how many dimensions were found; was a new measuring instrument constructed; was it was used to assess effect of a therapy, was the effect of different rehabilitation options different.

Ishodi učenja

1. Learn and understand outcomes from the patients' perspective, learn about the most common measuring instruments in prosthodontic research, scales used for assessment, difference between qualitative and quantitative data.

2. Understand thedimensionality of the questionnaires and distinguish between one-dimensional and multidimensional questionnaires.

3. Learn and be able to interpret psychometric properties (reliability and validity), understand which types of reliability exist, know what is Cronbach's alpha, split-half, test-retest, etc., learn and understand the types of validity.

4. Analyze and interpret psychometric properties of different questionnaires used in various scientific research and studies.

5. Assess and interpret psychometric properties and dimensionality of a questionnaire based on the data collected in previous research after statistical analysis

Sadržaj predmeta

Lectures

	Teme predavanja	Broj sati nastave
1.	Health, oral health, assessments from the patients' perspective, types of data and measurement scales	1
2.	Questionnaires, dimensionality, summary score	1
3.	Psychometric properties of a questionnaire	1
4.	Reliability of a questionnaire, types of reliability, methods of analysis	1
5.	Validity of a questionnaire, types of validity, methods of analysis	1
6.	Dimensionality assessment, exploratory and confirmatory analysis	1
7.	-	-
8.	-	-
9.	-	-
10.	-	-

1 sat = 45 minuta

Seminari

	Teme seminara	Broj sati nastave
1.	The most common questionnaires used to measure changes in oral health based on dental-patient's assessment	1
2.	The most common measurement scales used in questionnaires	1
3.	Dimensionality of the most commonly used questionnaires	1
4.	Psychometric properties - reliability - methods of assessment	1
5.	Psychometric properties - validity - types of validity	1
6.	Exploratory factor analysis of the questionnaire	1
7.	Analysis of the dimensionality of the most commonly used questionnaires in scientific research worldwide	1
8.	-	-
9.	-	-
10.	-	-

1 sat = 45 minuta

Vježbe

	Teme vježbi	Broj sati nastave
1.	Search the Pubmed for scientific literature to find out which questionnaires are most commonly used in prosthodontics	1
2.	Analyse different e scales used and describe how the final summary score is calculated	1
3.	To analyze which methods were used to assess the psychometric properties of a particular measuring instrument and the studied population	1
4.	To analyze the dimensionality of the most frequently used questionnaires and interpret how many dimensions were found	1

5.	After statistical analysis of already existing databases, student will interpret the psychometric properties of the results	1
6.	Students will interpret the results after exploratory statistical analysis of already existing databases	1
7.	Students will analyse the effect of a therapy after different types of oral rehabilitation had been done - evaluate already published studies in PubMed	1
8.		1
9.		1
10.		1

1 sat = 45 minuta

Literatura

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Životopis voditelja kolegija i bibliografija

Prof. Ph.D. Asja Celebic graduated at the School of Dental Medicine, University of Zagreb in 1980. She received two Rector's Awards for student's research and another one as the best student. She has been employed at the same Dental School since 1982. She has been a Full Professor with tenure at the Department of Prosthodontics since 2007. She was the principal teacher of the course „Preclicical removable prosthodontics" from 2005-2013. She is the principal teacher of the undergraduate course "Temporomandibular disorders ", and the course „Removable prosthodontics 1" for the English language students. She is also the principle teacher of 4 courses in the Master programme and Ph.D. study. She teaches all preclinical and clinical courses in Removable prosthodontics. She won several scientific awards at the European and the International Prosthodontic conferences, alone or with her Ph.D. students (EPA Oral presentation Award, 3 EPA poster Awards, the first poster runner-up at ICP, the first award for clinical research in the join ICP-EPA conference in Amsterdam in 2019., etc.). She was the principal investigator of several research projects funded from Croatian Ministry of Science, Croatian Scientific Foundation (Mini Dental Implants) and of two International bilateral projects with the researchers from Slovenia. She collaborates with Japanese, USA, Sweden, Slovenian, Hungarian, German, Yemen, Bulgarian, Serbian and Romanian researchers. She was an invited speaker at many national and international conferences. In 2010 year she received the „Croatian State Award for Science" for research in the field of

Biomedicine and health, as the first doctor of Dental medicine in Croatia. She also received the award from the Croatian Ministry of Health in 2015. In 2020 she was the first doctor of Dental Medicine who received the national prize: „Andrija Stampar". In 2021. she was elected as Visiting professor in the School of Dentistry, Skopje, Macedonia.

She published over 100 CC/SCI papers in WoS. Her papers reached more than 1850 citations in the WoS with H index 25. She has been a reviewer of many scientific WoS journals. She has also been a member of Editorial boards of many scientific journals. She wrote the University texbook: Mini Dental Implants in a Clinical Practice. She is a member of numerous professional Societies and a member of Croatian Academy of Medical Sciences.