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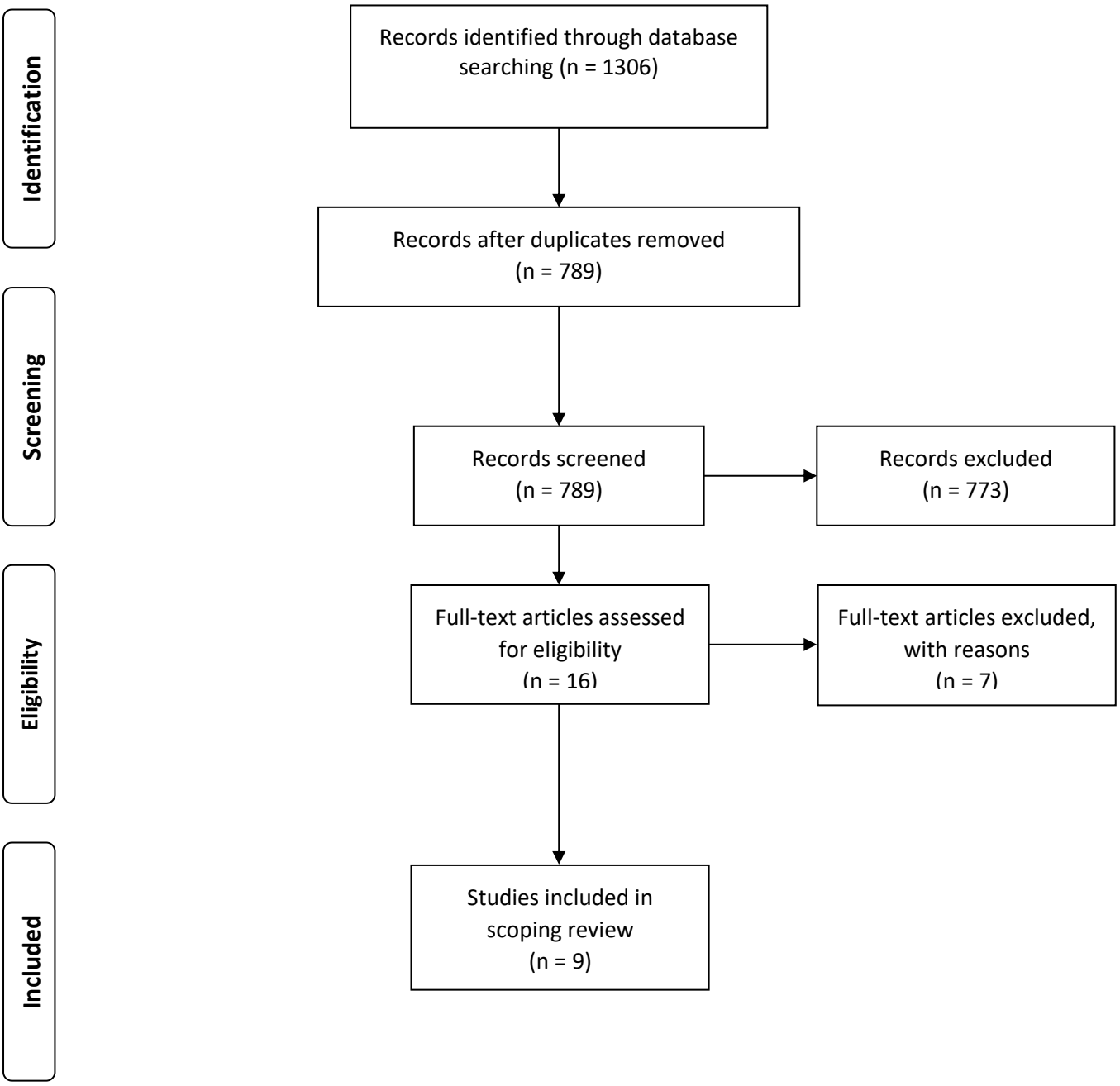
Figure 1 Flow diagram for literature search into qualitative research on dentures.



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit www.prisma-statement.org.

Table 1 - Standards for reporting qualitative research (SRQR – O'Brien et al, 2014)

Topic	Definition
1 – Title	Concise description of nature and topic of the study - identifying study as qualitative or indicating the approach or data collection methods
2 – Abstract	Summary of key elements of study in the abstract - typically background, purpose, methods, results, and conclusions
3 – Problem formulation	Description and significance of the problem studied; review of relevant theory and empirical work; problem statement
4 – Purpose or research question	Purpose of the study, and objectives or research questions
5 – Qualitative approach and research paradigm	Qualitative approach and guiding theory if appropriate; identifying the research paradigm; rationale for the study
6 – Researcher characteristics and reflexivity	Researchers' characteristics that may influence the research (personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability)
7 – Context	Study site and contextual factors; rationale
8 – Sampling strategy	How and why participants, documents, or events were selected; criteria for deciding when no further sampling was necessary; rationale
9 – Ethical issues pertaining to human subjects	Documentation of approval by appropriate ethics review board and participant consent, or explanation for lack thereof; confidentiality and data security issues
10 – Data collection methods	Types of data collected; data collection procedures (start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to study findings; rationale)
11 – Data collections instruments and technologies	Description of instruments (interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how these changed
12 – Units of study	Number and relevant characteristics of participants, documents, or events; level of participation
13 – Data processing	Methods for processing data prior to/during analysis (transcription, data entry, data management and security, verification of data integrity, data coding, anonymization)
14 – Data analysis	How inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale
15 – Techniques to enhance trustworthiness	Techniques to enhance trustworthiness and credibility of data analysis (member checking, audit trail, triangulation); rationale

16 – Synthesis and interpretation	Main findings (interpretations, inferences, themes); might include development of a theory or model, or integration with prior research or theory
17 – Links to empirical data	Evidence (quotes, field notes, text excerpts, photographs) to substantiate findings
18 – Integration with prior work, implications, transferability, and contribution(s) to the field	Short summary of main findings; how findings connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/ generalizability; identification of unique contribution(s)
19 – Limitations	Trustworthiness and limitations of findings
20 – Conflict of interest	Potential sources of influence/perceived influence on study conduct and conclusions; how these were managed
21 - Funding	Sources of funding and support; role of funders in data collection, interpretation, and reporting

Table 2 – findings of the quality assessment

Name, date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Cronin et al. 2009	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x	-	-	x
de Paula et al. 2019	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x
Graham et al. 2009	x	x	x	x	x	-	x	x	-	x	x	x	x	x	x	x	-	-	-	-	x
Meany et al. 2017	x	x	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-
Smith et al. 2005	x	x	x	x	x	x	x	x	x	x	x	x	-	x	-	x	x	x	x	-	-
Obrez and Grussing, 1999	x	x	x	x	-	-	-	x	x	x	x	x	-	x	-	x	-	-	-	-	x
Nand and Mohammadnezhad 2022 (a)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-[1]	x	x	x	x	x	x
Nand and Mohammadnezhad 2022 (b)	x	x	x	x	x	-	x	x	x	x	x	x	x	x	-[1]	x	x	x	x	-	-
Rodrigues et al. 2021	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x	-[2]	x	-

[1]Whilst a section on trustworthiness was included in the paper, this section is too vague and so does not conform to the standards put forward by O'Brien et al.

[2]Whilst there is some discussion of limitations, this section is too vague to be credible. For example, there is no assessment of the limitations of the sample, or any assessment of the quality of interaction between participants and the research team.

Table 3 – summary of included papers

Authors	Country	Date	Participants	Key themes
Obrez and Grussing	USA	1999	N = ? – Five focus groups of edentulous subjects with at least five years of wearing a complete denture in nursing homes in Chicago. Each group had 8-15 participants. Age range 52-81. Mix of gender, socioeconomic status, and ethnicity	• 12 conceptual domains produced: food difficult to chew; food texture difficult to chew; avoided foods; stability and retention of prosthesis; social constraints; bolus size; general satisfaction with current prosthesis; sensation of temperature; pain during chewing; taste; experiences with rinsing prosthesis after eating; time involved with eating. • Clear differentiation between home and social settings when trying new foods (as well as 'tough' foods). Some used different dentures for different settings (eating, socialising). • Fear of eating foods was sometimes associated with a fear of breaking the denture, pain, and imprecise biting (when eating raw or tough foods) • Tooth replacement in the form of dentures seen as the best compromise in achieving acceptable chewing function, phonetics and aesthetics. • Most expressed disappointment with the instructions they received when being introduced to dentures – they lacked information to prepare them for the changes ahead. • Stability and retention of dentures was a factor for many in their 'chewing strategy' – the maxillary denture also covered their palate, limited sense of taste and temperature. • Most common complaints among those not successfully adapting to chewing with dentures were difficulties chewing, avoidance of food, and burns due to not being able to detect temperature.
Smith et al.	Scotland	2005	N = 23 - Sampling people who had received a partial denture from Dundee Dental Hospital or from general practitioners. Aimed to recruit men and	• Most teeth were lost due to caries, periodontal disease or trauma. Some had taken good care of their teeth, making getting dentures harder to accept. Others viewed it as inevitable, with their own behaviours perhaps contributing due to this. • Quality of information and communication with dentists at the time of the fitting was considered very important – good information and

			women with range of ages and social backgrounds, diverse reasons for and experience with dentures.	communication had helped patients, while others felt rushed and less informed when making decisions. • Appearance (self-assurance) and functional considerations the most discussed aspects of wearing a denture • Denture use seen as a balance of wearing it vs discomfort • Costs, even under NHS treatment, deterred some from seeking help from their dentist. Some felt constrained about asking for help with difficulties with their denture
Cronin et al.	Ireland	2009	N=22 – Over 45s from public and private dental practices with tooth loss due to disease, trauma, or both. Recruited through private practice or through researchers' university(?). Split into age groups of 45-54, 55-64 and 65-74.	• The importance attached to tooth loss and the emotional impact of this • Motivation to seek treatment • Influences of type of treatment obtained • Satisfaction levels with use of RPDs • Expectations and preferences for current and future treatment for self and others o Patient aspirations and expectations regarding treatment ▪ The changing influence of social norms ▪ The importance of conservation of teeth ▪ Aspiration for future management of damaged/lost teeth o Patient's rising expectations regarding their role in decision making ▪ Satisfaction with and expectation of openness to discussion among dentists in contemporary practice ▪ Increased assertiveness among dental patients
Graham et al.	England	2009	N=33 (17 patients, 16 dentists). Dental Practice Board identified dentists using NHS payment database to sample high/medium/low frequency of RPD prescription. Purposive	• Decisions on whether to remove teeth for RPDs usually initiated by patient, while decisions between RPDs and fixed bridgework more influenced by oral health status and affordability – dentists more likely to recommend bridges for patients with 'clean mouths', and RPDs for 'dirty mouths'. • Cost effective work strategies in NHS dentistry - dentists with less experience of providing cobalt chromium dentures were less likely to offer this option (harder to get right first time, and more expensive).

			sampling used to identify patients in North and South of England with a variety of characteristics (affluent/deprived areas, population density, population-dentist ratio). Patients were at least 45 years old. Age range 52-82.	Generally, dentists were negative towards RPDS, seeing them as a last resort. • Aesthetics was a dominant influence for regular and occasional denture users (physical function was secondary to this). For non and occasional users instability of the denture, problems with speech, and having something 'foreign' in their body outweighed the positives. • Cobalt chromium dentures perceived more positively than acrylic resin dentures (tighter fit) • Upper RPDs seen as more stable than lower RPDs. • Dentists more concerned with functional aspects of the denture, while patients focused more on the mouth than teeth (RPDs can limit the function of the mouth), with physical function second in importance to appearance and social function/identity • Discrepancy between professionally assessed need for RPDs and patient expressed need • Perceived need to work cost-effectively within NHS fee structure and notions of professional satisfaction are also important part of the decision making process
Meaney et al.	Ireland	2017	N=16 – 11 undergoing treatment, and 5 who had recently undergone treatment at Cork Dental Hospital, Dublin Dental Hospital and private practices (Cork). Age range 59-83.	• Importance of denture functionality - loose fitting lower dentures were problematic and impacted QoL. Social impacts (embarrassment, issues with food) were also reported. • Some felt teeth were prematurely removed by practitioners (common practice at time – inevitable/optimal treatment). These requests were made so they could achieve an ideal – highlighting importance of aesthetics assigned to dentures. • Treatment options - many felt they had no option other than dentures, with no say or choice in past treatment. They had to adapt/persevere with what was provided. Replacement dentures now the only treatment option they'd consider. Satisfaction with dentures grew with adaptation, coping and perseverance. • None wanted to accept fixed implants – thought to be more painful/uncomfortable. Too late to change treatment at their age.

				• Denture maintenance and oral care – important to participants to keep them clean, with nothing to irritate gums. Routines were of great importance to ensure dentures were maintained, while participants were less concerned about oral hygiene as they had no teeth. Television/media used if they had problems, while some had not attended dentist in years/decades, feeling dentists wouldn't know how to treat them. Some were fearful of attending, and were happy they had dentures for this reason. • Concerns over the time it would take to get a denture if it broke – if damaged most attended clinical dental technician rather than dentist ('cut out the middle man'). • Despite dissatisfaction with denture functionality, older population seemed to accept the status quo. • Reluctance to consider implant-retained prosthesis - fear of surgery, and perception they were too old for complex treatment, and risks associated with surgery. • The sample were reluctant to seek any form of dental treatment, recalling unpleasant interactions with dental practitioners from their youth. • Denture wearers in this study identified dental technicians as preferred points of contact for repair or replacement of dentures
de Paula et al.	Brazil	2019	N=11 – Participants of 7 year follow up study evaluating user satisfaction and quality of dentures (in Belo Horizonte) who had a least one complete denture. Sample comprised public health service users.	• Lack of financial resources - major cause of tooth loss as it made access to dental treatment more difficult, along with geographical access • Socioeconomic status affecting acceptance of dentures – complete dentures only available option through public services (accepting of status quo). • Extraction as a method of pain relief – considered a natural event of life. Lower social classes saw extractions seen as only possible and definitive solution to pain, appearance, and embarrassment from visible tooth problems. • Tooth loss as natural, inevitable and culturally common event - not stigmatised by edentulism, where previously it was a marker of

				inequality. There were also negative feeling towards tooth loss, and comparisons with amputation. • Living toothless – 'negative surprise' related to disability and impairment, with psychosocial implications and constraints due to physical, biological and emotional changes. Functional losses, and socialisation affected. • Living with complete dentures – negative feelings during adaptation period (pain and discomfort, impaired oral functions). Lower dentures main cause of negative feelings – in some cases discomfort and instability of denture outweighed the aesthetic/functional benefits. But also, resilience and adaptability to cope with disability from reduced oral function. For some complete dentures could replace the missing part of the body and had a positive effect on self-esteem and socialising, gains in functionality, and being able to smile without embarrassment. Complete dentures seen as something lasting forever compared to 'fleeting' permanent dentition.
Rodrigues et al.	India	2021	In-depth interviews with 15 participants who had either partial or complete dentures from A.J Institute of Dental Sciences (Mangalore, Karnatka, India). Participants were aged 45 and over, and had no more than 24 natural teeth remaining.	• Transition from dentulous to partial or completely edentulous state - Tooth loss attributed to lack of information on oral care and prevention, and financial/accessibility constraints in getting to services. Teeth not deemed important, and extraction often preferred (eliminates dental problems, more economical, limit need for future visits). Oral hygiene and the social aspects of teeth still important though, and still a sense of loss for some, as well as altered face shape, impacts on speech and difficulty chewing ('hard items', slower eating, poor digestion) – led to some avoiding social gatherings (embarrassment/self-consciousness). Dentures restored confidence for some (natural look, improved facial aesthetics, important function of teeth at work). Some sought out dentures to improve chewing, aesthetics and speech, some wanted them to avoid looking older, while others felt social pressure to have one. • Varying experiences with the use of dentures - Initial adaptation included negative experiences with mastication, retention, ulceration, taste impairment, and increased salivation – some (i.e. taste) resolved

				over time. Difficulty chewing and slower eating were noted – a few preferred to eat without dentures (longer to eat). Benefits included improved appearance, speech, and self-esteem, as well as looking life-like, similar or even better than natural teeth, and greatly helping with chewing. Also helped with socialising. • Convenience and duration of wearing dentures – chosen to suit comfort and necessity, but mainly aesthetics. Those comfortable without dentures didn't wear them indoors, while one felt weird wearing dentures and only wore them when going out. Conversely, some did not remove dentures when going anywhere, and slept with them in (sometimes to avoid people knowing they had one). Some preferred having two sets, fearing loss/breakage. • Attitude of dentists towards patients' complaints - some patients put off by dentists' indifferent attitude or impatience. This made them reluctant to disclose problems (would wear ill-fitting dentures, fearing dentist would ask them to get new one rather than fix old one) • Knowledge and preference of available treatment modalities - Not much awareness of treatment options, including implants (mainly relied on dentists to make decisions). Though most were satisfied with their dentures, there were complaints of pain, food lodgement, and instability. Some preferred removable dentures (affordable, easy to clean/maintain, and more practical for removal/cleaning). Increased costs and fear of pain cited as deterrents for fixed denture treatment options.
Nand and Mohammadnezhad	Fiji	2022(a)	30 participants who were complete denture wearers were recruited for telephone interviews from four locations in Fiji – Fiji National University (n=8), Colonial War Memorial Hospital (n=8), Lautoka	• Lack of information – patients had little information about complete dentures, and no proper details provided during treatment (this applied to cleaning and maintenance as well). • Non-compliance – Blisters (stopped eating), difficulty closing mouth (pain, headaches), loose dentures (come out when sneezing/coughing) were common causes of non-compliance. • Overwhelmed by illness – other factors interfered with wearing the denture, including numerous other illnesses, older age, and poor oral

			Hospital (n=7), Labasa Hospital (n=7).	structures. Additional health problems also prevented one patient from getting dentures seen to. • Reduction in quality of life – pain and discomfort, and issues with lower CDPs being loose. • Financial barriers – there are high costs associated with denture treatment, although social welfare recipients received free dentures which was highlighted as a positive by this group • Personal acceptance of the denture – this was helped by well-fitted dentures (majority were satisfied with fit, and with the denture itself), and feeling the denture was 'for them to specifically fit them' (improving appearance, and confidence in interacting) – this improved if the denture was well fabricated. Where the denture did not fit as well there was anxiety on rejection, avoidance, anger, sadness or even depression.
Nand and Mohammadnezhad	Fiji	2022(b)	Fifty-eight participants (30 patients, 28 dentists).	Patient themes • Patient perception towards complete dentures - patients had fair knowledge of dentures, but some felt they were told 'what to do and what not to do' by dentists. Some patients were so impressed with the service they wished to get new dentures fabricated after using them for a long time, while others still faced problems which didn't allow them to wear their denture properly. Most patients has good experiences wearing their denture. • CDP care and maintenance – most patients had their own rules for cleaning dentures on a daily basis. Many utilised products/cleaning materials that are available at home, while those with more income purchased denture cleaning medications from local pharmacies. Most patients stored their dentures appropriately in containers. • Communication between patient and dentist. A lot of patients put a lot of effort into wearing their denture, and were fully motivated to wear them, but regardless felt they would not be like their natural teeth. • Challenges faced - lack of information from dentist, particularly about complete denture rehabilitation. Non-compliance stemmed from

				difficulties with eating and speaking, while reductions in quality of life affected patients with shallow ridges and loose lower dentures, who were unable to live normally with complete dentures. The cost of treatment was considered reasonable for many patients (social welfare recipients received free dentures). Dentist themes • Complete denture guidelines. • Post insertion advice - one highlighted the importance of this care, while another pointed to post care leaflets given to patients after care (at government clinics). The importance of motivating the patient to get used to the complete dentures was expressed, and that willingness must come from patients as well. • Care and maintenance - majority of dentists declared the process of maintenance was not just about patient effort but also about efforts from dentists ensuring patients adhere to guidance. One dentist mentioned advice on how dentures need maintaining to avoid fungal build up, and the need for good daily habits in maintaining dentures. • Challenges while treating patients - trouble understanding English and needing to call in officers to help translate. Also issues with understanding dental terminology. Patients had difficulties speaking with the complete denture in, while some would mix and match wearing their old and new dentures. Some patients did not accept that their old denture is different to their new complete denture - many continue to wear their old set even though they had a new one. • Management strategies for challenges faced - to meet patient demand, most dentists modified treatments (secondary impression of existing denture, adhesives for patients with atrophic ridges). Patient expectations need to be addressed prior to starting treatment, and allowing patients to see reality of the situation. Models kept to show difference to demonstrate heights of ridges, and why patients' denture is more retentive. Rapport building also seen as important to

				keep patients engaged. Caregivers who usually accompany patients were not felt to be well educated, which adds an additional barrier. • Practice of communication and teamwork – Effective collaboration and communication between dentists and technicians essential for successful denture treatment. Dentists appreciate the role technicians play in fabricating high quality complete dentures, particularly when they interact with the patient. Continuous communication throughout seen as important to keep patients encouraged. • Improving the quality of complete denture delivery in Fiji – need for dentists in prosthetics and dental technology to improve clinical and lab skills and continued professional development to help with service delivery. Also a need to standardise workloads, and not increase them (with realistic targets) – believed to bring more harmonious service delivery. Also need to open more prosthetic clinics across Fiji to improve delivery - due to demand for dentures in Fiji there needs to be more employment opportunities for dentists.