Journal of Research in Medical and Dental Science
2021, Volume 9, Issue 8, Page No: 171-177

Available Online at: www.jrmds.in
eISSN No.2347-2367: pISSN No.2347-2545

Factors Associated with General Dentists Acceptance Attitude toward Dental Therapists: A Cross-sectional Study

Ehab N Alshouibi*

Department of Dental Public Health, Faculty of Dentistry, King Abdulaziz University, Jeddah, Saudi Arabia

ABSTRACT

Objectives: The aim of this study was to investigate general dentists' attitudes toward the use of dental therapists as a model in the workforce, and to explore the potential predictors which affected them the most. This study was limited to general dentists in the Western Province of Saudi Arabia.

Materials and Methods: A self-administered survey was distributed to 1500 practicing general dentists in governmental and private sectors, of three cities, in the Western Province. The data were collected, from January 2019 to January 2021, and analyzed using the Statistical Package for the Social Sciences (SPSS), version 22. Descriptive statistics, bivariate analyses, and a binary logistic regression model were performed at $p<0.05$, and 95% confidence intervals.

Results: A total of 1165 general dentists gave a 77.7% response rate. Almost 20.3% of the study population showed a positive acceptance toward dental therapists. The regression model showed 33% less acceptance amongst male general dentists. General dentists who had a negative financial standing showed 74% less acceptance. Inadequate knowledge of what dental therapists do, reduced acceptance by almost 62%. Government dental clinics showed 3.21 higher odds of positive attitude, compared to the private sector. These findings were statistically significant.

Conclusion: Gender, knowledge of a dental therapists' scope of work; a dentists' positive or negative financial standing, and the type of dental practice, were important factors that influenced acceptance of dental therapists. Financial standing was the most significant influencer.

Key words: Dental workforce, Mid-level dentistry, Dental therapists, Acceptance of dental therapist, General dentists

HOW TO CITE THIS ARTICLE: Ehab N Alshouibi, Factors Associated with General Dentists Acceptance Attitude toward Dental Therapists: A Cross-sectional Study, J Res Med Dent Sci, 2021, 9(8): 171-177

Corresponding author: Ehab N Alshouibi
e-mail ✉ :ealshouibi@kau.edu.sa
Received: 30/07/2021
Accepted: 13/08/2021

INTRODUCTION

Dental therapists are new members of the oral health care team, and are educated for their defined scope of practice to the same standard as a dentist, albeit for a much shorter period of time. They are considered as a mid-level primary care professional engaging in oral health promotion programs that can provide evaluative, preventive, minor restorative, and surgical dental care. These new dental team members are educated to provide care under the direct supervision of a licensed dentist through a collaborative management agreement or standing orders [1]. New Zealand was the first country that adopted and certified dental therapists to provide most of the oral health care services to children in school-based clinics, and to work off-site in remote rural areas. Nowadays, dental therapists are certified dental health care providers in more than 50 countries throughout the world, including: New Zealand, Australia, Netherlands, and Great Britain [2]. The concept of dental therapy and the use of dental therapists began to appear in the United States, in the frontier areas of Alaska, which were difficult to staff with dentists, as a solution to the dental care access problem of isolated and low-income regions. In dire contrast, in the United States, it takes up to 8 years of post-high-school education to graduate as a general dentist, whereas a dental therapist can be trained in only 2 years [2].

Dental therapists are well trained to work in both community and clinical based settings. In dental clinics, a dental therapists' scope of practice is restricted to basic and simple care, including, local anaesthesia administration, cavity filling, performing stainless steel crown fitting, primary tooth pulp therapy, simple extractions, and impressions for mouth guard fitting [3]. In school-based programs, dental therapists are dedicated to dental health education, topical fluoride application, preventive treatment and sealant application [4]. The importance of dental therapists in the dental business model comes in two folds. First, they provide services at a lower cost than a licensed general dentist, which in turn, increases the access to dental services and patient turnover. Dental therapists can also help general dentists lighten their work load which would give them more time

to focus on more complex procedures [3-5]. Evidence has found that dental therapists can provide safe, efficient, and a variety of quality dental care for both children and adults providing them a more patient sensitive, economical approach. Older studies have shown that most services provided by dental therapists are accepted by both the public and the dental profession [4-7]. However, contrary to this, are more recent studies revealing there are dentists who do not believe that oral health disparity and dental health care access problems can be alleviated by simply implementing dental therapists [5,8]. This opposing belief toward dental therapists is based on concerns about the quality of dental care services provided by dental therapists and whether or not a 2-year training program is sufficient to provide them with enough science and training skills required to do irreversible dental procedures. Moreover, the effect of the financial impact facets dental therapists have on a dentists' income is another major concern [4,9-12].

The mean prevalence of dental caries in Saudi Arabia is ranging between 70-95% in both children and adults in all regions throughout the country. This high prevalence might be attributed to lack of access to dental health services, especially in rural areas [13-15]. A similar problem has been seen in the United States, where populations with high prevalence of dental caries due to inadequate access to oral health services, has been addressed and relieved by accepting and embracing the practice of employing dental therapists [16,17]. Recognition and acceptance of dental therapists in the dental profession vary from one country to another. The objectives of the current study were to assess general dentists' knowledge of dental therapists and to evaluate the factors that create barriers and impact attitudes toward the use of dental therapists in the Western Province of Saudi Arabia.

MATERIALS AND METHODS

Ethical approval was obtained from The Research Ethics Committee of the Faculty of Dentistry at King Abdulaziz University in Jeddah, Saudi Arabia (Approval Number: 073-16). In this cross-sectional study, an existing validated survey was adopted from previously published studies and modified to accommodate the current study's objectives [3,12,18]. The survey was constructed in English and consisted of four main domains with a total of 22 closed-ended questions. The first domain regarded the participants' demographics. The second domain involved the evaluation of participants' knowledge regarding dental therapists and their scope of work. The third and fourth domain was formulated to measure a dentists' acceptance and financial attitude respectively. The total estimated time for the survey completion ranged from 10 to 15 minutes. Participation in the study was voluntary and participant confidentiality was maintained.

The current cross-sectional study was conducted through a self-administered, structured questionnaire distributed to active general dentists working in both governmental and private sectors in the Western Province. This region consists of three main administrative-territorial cities which are: Jeddah, Makkah, and Madina respectively. Government-sector dentists were recruited from all major dental hospitals within each city, whereas others were randomly selected from primary healthcare centres, distributed amongst five major districts (northern, southern, middle, eastern, and western) regions of each city. Equivalently, private-sector dentists were randomly selected from private hospitals and polyclinics in the same five major districts for each city. Eligibility criteria for study participation were active practicing licensed dentists of both genders who had been practicing for at least one year. This survey was distributed to all study participants and collected through well trained and calibrated data collectors. The data were gathered from the period between January 2019 and January 2021.

Three collective variables were constructed to estimate general dentists' knowledge, acceptance, and financial standing toward hiring a dental therapist. The first collective variable: 'general dentists' knowledge about dental therapists' was calculated as a summative variable of 7 knowledge-representing items in the questionnaire. If a participant scored 70% of the total items, which equalled 5 or more, they were considered to have an adequate knowledge of what a dental therapist is trained to do. The second and third collective variables were: 'general dentists' acceptance attitude toward dental therapists' and 'general dentists' financial standing toward dental therapists'. Both variables were calculated by combining 6 acceptance and financial attitude representative items respectively and separately. A participant was considered to have a positive acceptance attitude and financial standing, if they scored 70% of the total questions, which equalled to 4 or more items in each respective domain.

The collected data were statistically analyzed with the Statistical Package for the Social Sciences (SPSS) software program, version 22.0 (IBM, Armonk, New York). Descriptive statistics were used to define the background characteristics of the study population. Bivariate analyses, including the chi-square test, were used to examine potential associations between categorical variables. Dentists' acceptance attitude toward dental therapists was defined as the dependent outcome variable in a binary logistical regression model analysis. This regression model was conducted to estimate the effect of: gender, nationality, type of practice, general dentists' knowledge about dental therapists, and general dentists' financial attitudes toward dental therapists, as predictors and potential confounding factors in the regression model. All of these tests were done under the assumption of a normal distribution, 95% confidence intervals, and significance levels of 0.05.

RESULTS

A total of 1165 general dentists participated in this study out of 1500. The response rate was 77.67%. Approximately 47.98% of the study population was male. Almost 58% of the study population were Saudi general

dentists, and 54.25% were working in the government sector (Table 1). Detailed descriptions of general dentists' knowledge of dental therapists' scope of work, acceptance attitude and financial standing in each assessment item were presented in (Table 2) and (Table 3). The collective variable of 7-item knowledge assessment showed 25.49% of general dentists had an adequate knowledge of a dental therapists' scope of work. The 6-item acceptance attitude and financial standing assessments, showed 20.26% and 13.90% of the study population had a positive acceptance and financial attitude, respectively (Table 4).

Table 1: Demographic characteristics of the study population.

Variable		Percentage
Gender	Male	(559) 47.98%
	Female	(606) 52.02%
Nationality	Saudi	(675) 57.9%
	Non-Saudi	(490) 42.1%
Type of Practice	Government Sector	(632) 54.25%
	Private Sector	(533) 45.75%

Table 2: General dentist's knowledge of dental therapist's scope of work.

Statement	Yes	No
Are you aware of scientific evidence that dental therapists can perform high quality work	(105) 9.02%	(1060) 90.98%
Do you know dental therapist can administrate local anesthesia (Using topical local anesthesia, dentoalveolar infiltration, inferior alveolar nerve block)	(59) 5.06%	(1106) 94.94%
Do you know dental therapists can perform operative procedure, extraction, pulpotomy, and stainless-steel crown on primary teeth for children	(82) 7.4%	(1083) 92.96%
Do you know dental therapists can perform operative procedure and pulp capping in permanent teeth	(94) 8.07%	(1071) 91.93%
Do you know dental therapists can take and interpret periapical and bitewing radiograph	(210) 18.03%	(955) 81.97%
Do you know dental therapists can take impressions for constructing and fitting mouth guard	(245) 21.03%	(920) 78.97%
Do you know dental therapists must work under direct supervision of a dentist	(1165) 100%	(0) 0%

Table 3: General dentist's acceptance attitude and financial standing domain toward dental therapists.

Domain	Statement	Disagree	Agree
Acceptance Attitude Domain	Do you believe 2-year training is adequate for dental therapists to provide standard dental care services?	(852) 73.13%	(313) 26.87%
	Do you believe dental care services provided by dental therapist will be comparable to those provided by general dentists?	(996) 85.49%	(169) 14.51%
	Do you believe, in general, dentists will accept to work efficiently with dental therapists in team-approach?	(880) 75.54%	(285) 24.46%
	Do you believe, in general, patient will accept to be treated by dental therapists?	(863) 74.10 %	(302) 25.90%
	Do you believe using dental therapists may help to increase dentist's enjoyment of dental practice?	(763) 65.49%	(495) 42.49%

	Do you believe dental therapists will allow more time for dentists to focus on more complex dental procedures?	(670) 57.51%	(495) 42.49%
Financial Standing Domain	Do you believe dental therapists might cause higher dental care competition leading to lesser services to be provided by dentists?	(233) 20%	(932) 80%
	Do you believe dental therapist will negatively affect the dentist's income?	(77) 6.6%	(1088) 93.4%
	Do you believe hiring a dental therapist will expose the dental clinic to higher liability insurance cost by insurer companies?	(216) 18.54%	(949) 81.46%
	Do you believe hiring dental therapists will put more financial cost (salary, dental clinic time, malpractice insurance) compared to benefits for the dental practice?	(158) 13.56%	(1007) 86.44%
	Do you believe dentist's productivity could be affected negatively due to the burden of direct supervision over dental therapists in the practice?	(268) 23%	(897) 77%
	Do you believe hiring dental therapists will dilute dentist profitability due to split treatment services between dentist and dental therapist	(178) 15.28%	(987) 84.72%

Table 4: Collective variables estimating general dentist's knowledge, acceptance attitude, and financial standing toward dental therapists.

Variable		Frequency	Percentage
General Dentists Knowledge about Dental Therapists	Having Adequate Knowledge	297	25.49%
	Having Inadequate Knowledge	868	74.51%
General Dentists Acceptance Attitude Toward Dental Therapists	Having Positive Acceptance Attitude	236	20.26%
	Having Negative Acceptance Attitude	929	79.74%
General Dentists Financial Standing Toward Dental Therapists	Having Positive Financial Standing	162	13.90%
	Having Negative Financial Standing	1003	86.10%

Bivariate chi-square analysis showed that females had 25.4% higher positive acceptance attitude toward dental therapists compared to males. General dentists working in the governmental sector showed 79.2% positive acceptance attitude toward dental therapists compared to 20.8% of those working in the private sector. Bivariate analysis showed that 54.2% of general dentists with adequate knowledge of dental therapists' scope of work had a positive acceptance attitude toward dental therapists. On the other hand, 67.4% of general dentists with positive acceptance attitude toward dental therapists had a negative financial standing. All of these findings were statistically significant. Saudi general dentists showed 11% higher positive acceptance attitude compared to their non-Saudi counterpart, yet there were no statistically significant differences between them (Table 5).

Table 5: Bivariate chi-square analysis to estimate potential association of demographic predictors with general dentists' acceptance attitude toward dental therapist.

Demographic variable		General Dentists' Acceptance Attitude Toward Dental Therapist		P-value
		Positive Acceptance Attitude	Negative Acceptance Attitude	
Gender	Male	88 (37.3%)	471 (50.7%)	0.0002*
	Female	148 (62.7%)	458 (49.3)	

Nationality	Saudi	131 (55.5%)	544 (58.6%)	0.39
	Non-Saudi	105 (44.5%)	385 (41.4%)	
Types of Practice	Government Sector	187 (79.2%)	445 (47.9)	<0.0001*
	Private Sector	49 (20.8%)	484 (52.1%)	
General Dentist's Knowledge about Dental Therapist	Adequate Knowledge	128 (54.2%)	169 (18.2%)	<0.0001*
	Inadequate Knowledge	108 (45.8%)	760 (81.8%)	
General Dentists Financial Standing Toward Dental Therapists	Positive Financial Standing	77 (32.6%)	85 (9.1%)	<0.0001*
	Negative Financial Standing	159 (67.4%)	844 (90.9%)	

*Statistically significant at 0.05 level of significance.

The logistic regression model analysis was performed to assess the potential confounding effects of: gender, nationality, type of practice, general dentists' knowledge about dental therapists' scope of work, and general dentists' financial standing as predictors of general dentists' acceptance toward dental therapists as an outcome. The model indicated that male general dentists were 33% less likely to have a positive attitude compared to female general dentists. Also, general dentists working in a government sector showed 3.21 higher odds to have a positive attitude toward dental therapists compared to their counterpart who worked in the private sector. General dentists' positive acceptance of dental therapists significantly decreased by 62% when their knowledge of dental therapists' scope of work was lacking. Likewise, general dentists' acceptance significantly decreased by 74% if the general dentists had a negative financial standing which impacted their attitude toward dental therapists. All of these findings were statistically significant with p-value less than 0.05 (Table 6). On the contrary, nationality showed an insignificant effect on general dentists' acceptance toward dental therapists. The model indicated that Saudi general dentists were 3% less likely to have a positive attitude compared to non-Saudi general dentists. This finding was not statistically significant with p-value=0.45 (Table 6).

Table 6: Binary logistic regression model to estimate the effect of predictors on the dentists' acceptance attitude of dental therapists.

Variables in the Equation	Odd Ratio	95% C.I.		p-value
		Lower	Upper	
Constant	0.036			0.009*
Gender (Ref. Female)	0.67	0.46	0.79	0.0003*
Nationality (Ref. Non-Saudi)	0.97	0.67	1.82	0.45
Types of practice (Ref. Private)	3.21	1.89	6.6	0.001*
General Dentist's Knowledge about Dental Therapist (Ref. Having Adequate knowledge)	0.38	0.17	0.69	0.0007*
General Dentists Financial Standing Toward Dental Therapists (Ref. Having Positive Standing)	0.26	0.13	0.87	0.0004*

*Statistically significant at 0.05 level of significance.

DISCUSSION

The main goal to introduce mid-level dental practitioners is to improve social disparities to access dental care, lessen the financial burden to get such dental health care, and amplify the preventive and therapeutic services to underserved communities [9,10,19]. Dental therapists work under direct supervision of certified dentists to provide preventive and simple dental procedures with the aim to reduce oral health disparities and enhance access to oral health care services [1,6,20]. A study reported dentists' knowledge of mid-level practitioners, is crucial to enhancing dental therapist acceptance. As general dentist's knowledge increased from 41% to 94%, the number of dentists believing dental therapists could be part of access to dental care solutions, increased to

73% [12]. Our study showed that general dentists lack adequate knowledge of dental therapists. General dentists with adequate knowledge were estimated to be 25.49%, which represents a quarter of the study population. In the current study, binary logistic regression was done to quantify the unconfounded effect of the general dentists' knowledge about dental therapists' scope of work, and was found to be essential to increasing their positive attitude. The results of this study suggested that inadequacy of knowledge about the therapists' scope of work, led to a significant decrease in acceptance. Significantly, this study is the first to look at gender difference and its impact on attitudes toward dental therapists. The results indicated a 33% less acceptance attitude by the male general dentists compared to their female counterparts. The findings of this study corresponded with other study results, suggesting that knowledge of dental therapists' scope of work is imperative for higher acceptance of dental therapists as effective members of a dental health care team. Studies have suggested that including the concept of dental therapists' scope of work in the 4-year general dentists' education would foster more acceptances. Study findings have projected a 60% higher acceptance of dental therapists among dentists by incorporating dental therapists as an effective dental team member during the dental education process [18,21].

Globally, the financial impact of using a dental therapist is a controversial issue. As a result of internationally expanding dental therapy movements and in providing dental services at lower costs, literature has shown that dentists become protective in regard to their profession and personal financial security [3,11,12,22-24]. On the other hand, there are studies that suggest that using a dental therapist could have a positive impact on dentists through boosting the daily patient volume, and thereby improving the financial income for the practice and dentist [25-28]. This is the first study in the literature to examine the unconfounded effects of types of dental practice (private vs. governmental) and the effect of a general dentists' financial standing which impacts their acceptance level toward dental therapists. The logistic regression model analysis showed that private clinics were 69% less likely to have a positive acceptance toward dental therapists compared to governmental clinics. Moreover, the regression model, suggested that general dentists with a negative financial standing, were 74% less likely to have a positive acceptance attitude toward dental therapists. Based on the regression model, variables, negative financial standing and private dental practice, were fundamental, financially-related factors, affecting dental therapists' acceptance among general dentists. These findings were in accordance with the results of other studies suggesting negative financial concerns in relation with the concept of using dental therapists in practice. This financial concernment is projected from the fact that dentists are trying to protect their profession and the economic growth of their practice [3,11,12,22-24]. However, there is no scientific evidence that dental therapists are a negative cost-effective model, within the context of profitable and successful dental practices [29]. On the contrary, evidence has suggested that the dental therapists' model could represent a cost-effective and profitable model in the private sector [27].

This study's limitation was based on a self-reported questionnaire that might introduce self-reported bias and underestimate the outcome. Future research direction should be undertaken to study dentists' acceptance of dental therapists' model in underserved and rural areas. Moreover, to evaluate the importance of dental therapists as a model that enhances access to dental health care services, studying the patients' acceptance of dental therapist as a dental health care provider and their financial impact on dental health services are also needed.

CONCLUSION

The study revealed that positive acceptance of dental therapists among general dentists is predominantly influenced by three main factors. First, knowledge of general dentists of dental therapists' scope of work. Second, a general dentists' financial standing toward dental therapists, and lastly, the type of dental practice. The higher a general dentists' knowledge, in addition to their positive financial standing, and working in a government sector of dental practice proportionally enhanced the acceptance of dental therapists among the general dentist community. A negative financial standing was found to be the most influential factor that decreased acceptance amongst the general dentist society. Saudi dentists were 3% less accepting of dental therapists compared to non-Saudi dentists. This difference was not statistically significant.

CONFLICT OF INTEREST

There are no conflicts of interest. This research did not receive any grant from public, private, or a non-profit funding agency.

REFERENCES

1. Brickle CM, Self KD. Dental Therapists as new oral health practitioners: Increasing access for underserved populations. J Dent Educ 2017; 81:eS65-eS72.
2. Friedman JW, Mathu-Muju KR. Dental therapists: improving access to oral health care for underserved children. Am J Public Health 2014; 104:1005-9.
3. Beazoglou TJ, Lazar VF, Guay AH, et al. Dental therapists in general dental practices: an economic evaluation. J Dent Educ 2012; 76:1082-91.
4. Nash DA, Friedman JW, Mathu-Muju KR, et al. A review of the global literature on dental therapists. Community Dent Oral Epidemiol 2014; 42:1-10.
5. Barnes E, Bullock A, Chestnutt IG, et al. Dental therapists in general dental practice. A literature review and case-study analysis to determine what works, why, how and in what circumstances. Eur J Dent Educ 2020; 24:109-120.

6. Koppelman J, Singer-Cohen R. A workforce strategy for reducing oral health disparities: Dental therapists. Am J Public Health 2017; 107:S13-S17.
7. Freeman R, Lush C, MacGillveray S, et al. Dental therapists/hygienists working in remote-rural primary care: A structured review of effectiveness, efficiency, sustainability, acceptability and affordability. Int Dent J 2013; 63:103-12.
8. Blue CM, Rockwood T, Riggs S. Minnesota dentists' attitudes toward the dental therapist workforce model. Healthc 2015; 3:108-13.
9. Mandal M, Edelstein BL, Ma S, et al. Changes in children's oral health status and receipt of preventive dental visits, United States, 2003-2011/2012. Prev Chronic Dis 2013; 10:e204.
10. Wright JT, Graham F, Hayes C, et al. A systematic review of oral health outcomes produced by dental teams incorporating midlevel providers. J Am Dent Assoc 2013; 144:75-91.
11. Treadwell HM, Catalanotto FA, Behar-Horenstien LS, et al. Oral health provider perceptions of dental therapists and oral health equity in the southeastern United States. Dent Health Cur Res 2016; 3:1-5.
12. Alshouibi EN, Alalyani WS, Alharbi RN, et al. Awareness and acceptance of dental therapists among dentists: A cross-sectional study among dentists in Jeddah, Saudi Arabia. Dent Sci 2018; 17:143-149.
13. Al-Rafee MA, AlShammery AR, AlRumikan AS, et al. A comparison of dental caries in urban and rural children of the Riyadh region of Saudi Arabia. Front Public Health 2019; 7:195.
14. Alshahrani I, Tikare S, Meer Z, et al. Prevalence of dental caries among male students aged 15-17 years in southern Asir, Saudi Arabia. Saudi Dent J 2018; 30:214-218.
15. Marghalani AA, Alsahafi YA, Alshouibi EN. The cost of dental caries in Saudi Arabia. Putting numbers into context. Saudi Med J 2014; 35:93-94.
16. Nash DA, Mathu-Muju KR, Friedman JW. The dental therapist movement in the United States: A critique of current trends. J Public Health Dent 2018; 78:127-133.
17. Senturia K, Fiset L, Hort K, et al. Dental health aides in Alaska: A qualitative assessment to improve paediatric oral health in remote rural villages. Community Dent Oral Epidemiol 2018; 46:416-424.
18. Lopez N, Blue CM, Self KD. Dental school faculty perceptions of and attitudes toward the new dental therapy model. J Dent Educ 2012; 76:383-394.
19. Yee A, McGlaston K, Restuccia R. How dental therapists can address the social and racial disparities in access to care. Am J Public Health 2017; 107:S28-S29.
20. Chi DL, Lenaker D, Mancl L, et al. Dental therapists linked to improved dental outcomes for Alaska native communities in the Yukon-Kuskokwim Delta. J Public Health Dent 2018; 78:175-182.
21. Self KD, Lopez N, Blue CM. Dental school faculty attitudes toward dental therapy: A four-year follow-up. J Dent Educ 2017; 81:517-525.
22. Dharamsi S, Pratt DD, MacEntee MI. How dentists account for social responsibility: economic imperatives and professional obligations. J Dent Educ 2007; 71:1583-92.
23. McKernan SC, Reynolds JC, Momany ET, et al. The relationship between altruistic attitudes and dentists' Medicaid participation. J Am Dent Assoc 2015; 146:34-41.
24. Davis AL, Zare H, McCleary R, et al. Maryland dentists' perceptions and attitudes toward dental therapy. J Public Health Dent 2020; 80:227-235.
25. Guay A, Wall T. Considering large group practices as a vehicle for consolidation in dentistry. Am Dent Assoc 2016; 4:1-10.
26. Bailit HL, Beazoglou TJ, DeVitto J, et al. Impact of dental therapists on productivity and finances: I. Literature review. J Dent Educ 2012; 76:1061-7.
27. Koppelman J, Vitzthum K, Simon L. Expanding where dental therapists can practice could increase americans' access to cost-efficient care. Health Aff 2016; 35:2200-2206.
28. Collins RJ, Friedman JW. The Future of payment for dental care. Curr Oral Health Rep 2018; 5:147–153.
29. Wright JT. Do midlevel providers improve the population's oral health? J Am Dent Assoc 2013; 144:92-94.