ABSTRACT:
PURPOSE: To compare the opinion of dentists and dental assistants about the advantages of teamwork.

MATERIAL AND METHODS: We conducted an anonymous survey of 110 dental practitioners and 108 dental assistants in four cities in Bulgaria. The questionnaires for the two groups include several identical questions that allow the respondents’ opinions to be compared. The methods used are sociological (poll) and statistical (alternative analysis).

RESULTS: The majority of dental assistants - 75% are convinced that every dentist should work with an assistant, while 58.6% of the doctors are of the same opinion.

Almost the same number of surveyed doctors and dental assistants - mentioned as a strength of teamwork a relief of the doctor’s work (80.90% and 79.63%), an increase in the volume (68.18% and 57.40%) and quality (53.63% and 54.62%) of the medical activity and a reduction in working time (54.54% and 55.62%).

For dentists, the most important factors for creating a good team are observing rights and obligations (68.5%), mutual respect (67.6%) and a relaxed work atmosphere (56.8%).

For dental assistants, the most important factors for effective teamwork are mutual respect (74.1%) and the professional qualities of the dentist (72.2%).

CONCLUSION: The results show a positive attitude of dental doctors and assistants to teamwork, albeit with varying degrees of conviction.

Keywords: advantages of teamwork, dentist, dental assistants

INTRODUCTION
Increasingly, the individual practice of the dental practitioner is becoming a team activity. Teamwork and collaboration between healthcare professionals have an impact on results to achieve a higher quality of care and greater staff satisfaction.

From mostly individual in the past, the work of the dentist goes into teamwork; work with a multidisciplinary approach and cooperative components. At the beginning of the 20th century, dentists began to use assistants in their healing activities.

The pioneer in the use of support staff is American dentist Dr Edmund Kells. In 1905 he worked with two assistants - the so-called “Lady in attendance” and Chair assistant. [1] The most frequently used support staff in modern times by the dental doctor is the dental assistant.

According to data from studies in Bulgaria, only 24.76-49.03% of the Bulgarian dentists work with an assistant. [2, 3, 4]

In 1968, Glen Robinson summarized the concept of “4-handed Dentistry”. It involves the coordinated work of the dentist and the dental assistant working as a team. [2]

Teamwork increases the physician’s productivity by 33-75% [5], his quality of work [4] and reduces stress [6]. The personal and professional characteristics of team members help to build an effective dental team. [7]

PURPOSE
The purpose is to investigate dentists’ and dental assistants’ opinion about the positive and negative aspects of teamwork.

MATERIAL AND METHODS
An anonymous survey was conducted among 110 dentists and 108 dental assistants working in dental offices in Bulgaria. In the questionnaires for the two groups of respondents, we included several identical questions, which allow us to compare the opinions of the respondents.

The methods used are sociological (poll) and statistical (alternative analysis).

The study was performed after receiving a positive evaluation for scientific research by the Ethics Committee for the Research at the Medical University-Sofia on 19.04.2019.

RESULTS AND DISCUSSION
When asked about the need for a dental assistant, the majority of dental assistants - 75% said that every doctor should work with an assistant. The percentage of positively responding doctors is lower - 58.6%. (fig.1.)

This result corresponds to the real state of dental healthcare in Bulgaria – only 24.76 - 49.03% of the dentists work with an assistant. [2, 3, 4]

In a study conducted by Stoeva B., 81% of the dentists surveyed evaluated the role of the assistant as absolutely necessary in daily practice, and according to 19%, it is necessary but not obligatory. [8]
Fig. 1. The necessity of a dental assistant

Most of the surveyed doctors - 60.4% believe that the assistants need additional training, while less than half of the dental assistants - 41.7% respond positively to this question; 58.3% of dental assistants and 39.6% of doctors rely on dentist’s training. (fig.2, fig.3.). The fact that most dental assistants - 58.30% think they do not need additional training shows their inertia and the need to be motivated for further training.

In the research made by Durkan and Belsi, 83% of dental assistants had additional training and skills, and the rest 17%, also wanted to be trained. According to the study, the highest percentage is for radiography training. [9]

The Jordan R and Sirsch E study is for further training of supportive medical staff in Germany regarding improving oral health in nursing homes. After four months of additional training, the competence of the support staff and the oral health of the patients improved. [10]

Fig. 2. The opinion of dentists for additional training of assistants

Fig. 3. The Opinion of dental assistants for additional training

Most of the doctors and assistants who participated in the survey responded positively to the question of the benefits of teamwork.

An interesting fact is that almost the same number of doctors and assistants gave equal answers to the questions about the benefits of teamwork: 80.90% of the doctors and 79.63% of the assistants responded that the teamwork relieved the doctor’s work; 68.18% of the doctors and 57.40% of the assistants – that volume of the work increases; 53.63% of doctors and 54.62% of assistants believe that teamwork improves the quality of treatment; a majority of doctors –54.54% and of the assistants - 55.62% responded that the working time is shortened.

There is a difference of opinion only in answer to whether patients feel more relaxed in the presence of a dental assistant - more than half of the assistants gave a positive answer - 52.77% and only 36.36% of the doctors: (Table 1)
There is a statistically significant difference in the answers of the two groups of respondents only in the last question: Dental assistants have the confidence that their presence creates a more patient-friendly environment and the patients feel more relaxed, while less than half of dentists believe the same.

In a study in 1977 of Tzaribashev Kr, 94.93% of inquired dentists thought that the work with an assistant is more effective. [11]

In the study of Simov M., 96.70% of the respondents said that the presence of a dental assistant would improve the quality of services. [4]

The dental assistants are an important part of a team. Their responsibilities are different and include: assisting the dentist, working with radiographs, recording patient history, duties regarding infection control, disinfection and sterilization of instruments, workplace hygiene, patient care before and during treatment, providing oral care instructions to patients, administrative duties, etc. [12]

According to Debra Englehardt-Nash, each member of the dental team directly influences the success of the practice through their actions. The way team members communicate, the way they deliver quality to the patient and the way they discuss the financial side of treatment reveals the picture in practice. Each team member has the opportunity to make the practice more productive, more effective, and ultimately more cost-effective. [13]

When asked about the conditions needed to build an effective team, doctors identified at first place “knowledge and respect for the rights and obligations of each team member” (69.09%), followed by mutual respect (68.18%); maintaining a relaxed working atmosphere (57.27%); knowledgeable and capable assistant and observance of correct financial relations (52.72%). Fewer than half of the physicians responded that a competent and capable physician (48.18%), constant information sharing (40.90%), age compliance (14.54%) and personal information sharing (8.18%) were factors relevant to building an effective dental team.

The interviewed assistants identified mutual respect (74.07%) and the knowledgeable and capable doctor (72.22%) as the most important factors. Approximately half of them indicated the knowledgeable and potential dental assistant (51.85%) clearly defined and correctly fulfilled financial obligations and permanent exchange of information (50.92%), each member of the team should know and observe their rights and obligations and maintain a calm working atmosphere (50%). Fewer respondents said that age compliance (24.07%) and sharing of personal information (11.11%) are factors influencing the development of an effective dental team. (Table 2)

According to Gorter RC1, Bleeker JC, it is found that the gender of the dentist influences dental nurses for the communication styles used in the primary dental care setting. Dental nurses working with female dentists report a style that is characterized primarily by “friendly relationships” and “personal attention”. [14]

Table 1. Benefits of the teamwork

<table>
<thead>
<tr>
<th>Benefits:</th>
<th>Answers:</th>
<th>Dentists:</th>
<th>Dental assistants:</th>
<th>$t$-criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number:</td>
<td>%</td>
<td>Number:</td>
<td>%</td>
</tr>
<tr>
<td>The doctor’s work is relieved</td>
<td>89</td>
<td>80,90%</td>
<td>86</td>
<td>79,63%</td>
</tr>
<tr>
<td>The quantity of the work done increases</td>
<td>75</td>
<td>68,18%</td>
<td>62</td>
<td>57,40%</td>
</tr>
<tr>
<td>Teamwork increases the quality of treatment</td>
<td>59</td>
<td>53,63%</td>
<td>59</td>
<td>54,62%</td>
</tr>
<tr>
<td>Working time shortens</td>
<td>60</td>
<td>54,54%</td>
<td>59</td>
<td>55,62%</td>
</tr>
<tr>
<td>Patients feel calmer in the presence of an assistant</td>
<td>40</td>
<td>36,36%</td>
<td>57</td>
<td>52,77%</td>
</tr>
</tbody>
</table>

* - there is a statistically significant difference in respondents’ opinion – $t$ > 1.99

Table 2. Factors that influence the creation of an efficient dental team

<table>
<thead>
<tr>
<th>Factors:</th>
<th>Answers:</th>
<th>Dentists</th>
<th>Dental assistants</th>
<th>$t$-criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number:</td>
<td>%</td>
<td>Number:</td>
<td>%</td>
</tr>
<tr>
<td>Each team member knows and respects the rights and obligations</td>
<td>76</td>
<td>69,09%</td>
<td>54</td>
<td>50%</td>
</tr>
<tr>
<td>Mutual respect</td>
<td>75</td>
<td>68,18%</td>
<td>80</td>
<td>74,07%</td>
</tr>
<tr>
<td>Maintaining a relaxed working environment</td>
<td>63</td>
<td>57,27%</td>
<td>54</td>
<td>50%</td>
</tr>
<tr>
<td>Clearly defined and correctly implemented financial relationships</td>
<td>58</td>
<td>52,72%</td>
<td>55</td>
<td>50,92%</td>
</tr>
</tbody>
</table>
There are statistically significant differences in the opinions of physicians and assistants in terms of factors: each team member knows and respects his or her rights and obligations and the physician's personality. Dental doctors are more convinced of the importance of that every team member should know and respect their rights and obligations, while the assistants emphasized physician personality more.

According to a cross study of Hakanen JJ., dental nurses believe that interpersonal and hierarchical relationships between partners play an important role in the work process. [12]

A professional team’s good functioning and effectiveness depend on many factors - its members’ personal and professional qualities and their interpersonal relationships.

**CONCLUSIONS**

1. More than half of the two groups of respondents have expressed a positive opinion about a full dental team, but their opinions differ in the levels of conviction. The majority of dental assistants - 75% have expressed the opinion that every dentist has to work with an assistant, while 58.6% of doctors are of the same opinion.

2. Almost the same number of the doctors and dental assistants surveyed indicated as an advantage of the teamwork - the relief of doctors’ work (80.90 and 79.63%), increasing of the volume (68.18 and 57.40) and the quality of the medical activity (53.63 and 54.62%) and shortening of the working time (54.54 and 55.62%).

3. For doctors of dental medicine, the most important factors contributing to the development of an effective dental team are knowledge and observance of the rights and duties of each member of the team, mutual respect and a relaxed working atmosphere.

4. For dental assistants, the most important factors for effective teamwork are a mutual respect and professional qualities of the physician.

5. Most of the respondents think that the professional qualities of the members of the team play a more important role in creating a well-functioning dental team than personal relationships.

**Acknowledgements:**

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**Search history:**

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