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Evaluation Knowledge of Tabriz General Dentists about Partial Prosthesis Treatment Plan

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KEYWORDS

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A B S T R A C T

Although the number of toothless adults is decreasing, due to the increasing world population the total number of toothless people in need of prosthesis is growing. This reveals the necessity of the dentists' understanding of the principles governing the making and maintenance of prosthesis. Dentists are obliged to practice proper diagnosis and treatment at the time of making removable prosthesis. The aim of this study was to assess the knowledge of general dentists in Tabriz city about the partial prosthesis treatment plan. The results of this study can be used in the education planning for the removable prosthesis units of dentistry schools as well as in the formulation of retraining programs for dentists. This was a cross-sectional descriptive study of general dentists in Tabriz City in 2013. Results of the pilot study, which was carried out on 20 dentists from April 21 to May 21, 2013, indicated that the Cronbach's alpha coefficient for the research tool was 0.82. Hence, the questions and statements designed for the purpose of this investigation were appropriate. According to the results of assessing the knowledge of general dentists operating in Tabriz City about the partial prosthesis treatment plan using the 30-item questionnaire, the average knowledge of participants was 14.6, which ranged from 9 (minimum) to 25 (maximum). Assessment of the knowledge of general dentists in Tabriz City about the partial prosthesis treatment program indicated that 14.8% of dentists had little knowledge, 72.8% had medium knowledge, and 12.3% had good knowledge of the program. The knowledge of general dentists in Tabriz City about the partial prosthesis treatment plan was average while the knowledge of male dentists with more experience was higher than others.

Introduction

Although the number of toothless adults is decreasing, due to the increasing world population the total number of toothless people in need of prosthesis is growing (McCord *et al.*, 2000). This reveals the necessity of the dentists' understanding of

the principles governing the making and maintenance of prosthesis. Dentists are obliged to practice proper diagnosis and treatment at the time of making removable prosthesis (McCord *et al.,* 2000). They should take all considerations such as physiologic, anatomic and mental conditions of patients into account while also considering their medical health conditions (Geramipanah and Asadi, 2006). Following proper diagnosis and treatment, the dentist shall ensure the precision of the laboratory as well. In spite of such considerations and the concern of dentists for them, many dentists still face patients that experience problems with their prosthesis and cannot properly use the. During or following the delivery of prosthesis a wide range of behavioral problems are observed (Rahn and Hearthwell, 2002).

One of the most important stages of the making of dental prosthesis is the molding of oral living tissue (Zarb *et al.,* 1997). Although dentist receive regular trainings in the course of their education, after entering the labor market they sometimes use inaccurate non-scientific methods (Nokar *et al.,* 2002). Moreover, the rapid advancement of technology and the increase in the complexity of patient demands have led to an increase in the challenges faced by dentists (Mahshid and Ansari, 2003). According to the results of some studies, the dentists' knowledge of the methods for molding removable prosthesis is low and this reflects their need for training on these methods (Moshref and Sadrieh, 2004; Verrijt *et al.,* 2000; Epstein *et al.,* 2000; Seals and Jones, 2003; Evans *et al.,* 2002).

The aim of this study was to assess the knowledge of general dentists in Tabriz city about the partial prosthesis treatment plan. The results of this study can be used in the education planning for the removable prosthesis units of dentistry schools as well as in the formulation of retraining programs for dentists.

Materials and Methods

This was a cross-sectional descriptive study of general dentists in Tabriz city in 2013. Results of the pilot study, which was carried out on 20 dentists from April 21 to May 21, 2013, indicated that the Cronbach`s alpha coefficient for the research tool was 0.82. Hence, the questions and statements designed for the purpose of this investigation were appropriate.

The sample size was determined using the Power Sample Size software with the results of the pilot study. Assuming $\alpha = 0.05$, knowledge of 70% and precision of 0.1, a total of 81 samples were selected using the non-probability sampling method.

Data was collected using a research made questionnaire covering the age, gender and experience of respondents as well as their history of attending seminars and retraining courses. 30 questions assessing the level of knowledge were obtained from the partial prosthesis treatment plan. Every correct answer to each question was scored 1 while every wrong answer was scored zero. The total score of knowledge for each participant was obtained by summing the correct answers. The maximum score was 30 and the minimum score was zero.

Inclusion and exclusion criteria

Formal consent of participants was necessary for inclusion in the investigations. Incomplete questionnaires were excluded from the study.

Data Analysis Method

The software used for data analysis was SPSS 18 and $p<0.05$ was determined as

statistically significant level. The knowledge of participants was assessed based on their experience using the ANOVA and Kruskal-Wallis tests. Post hoc tests were also performed in the case of significant differences. The statistical significance level used for these tests was $p<0.05$. The Independent-Samples T-Test and Mann-Whitney U test were used to examine the knowledge of participants based on their gender and experience. The statistical significance level used for these tests was also $p<0.05$.

Results and Discussion

According to the results of assessing the knowledge of general dentists operating in Tabriz city about the partial prosthesis treatment plan using the 30-item questionnaire, the average knowledge of participants was 14.6, which ranged from 9 (minimum) to 25 (maximum). It is worth mentioning that the maximum score determined for the questionnaire was 30. In this research, scores 1-10, 11-20, and 20-30 were assumed to show low, medium and good levels of knowledge, respectively.

Assessment of the knowledge of general dentists in Tabriz city about the partial prosthesis treatment program indicated that 14.8% of dentists had little knowledge, 72.8% had medium knowledge, and 12.3% had good knowledge of the program. The Chi-square test results showed a significant difference between the levels of knowledge of women and men. In other words, the knowledge of male dentists about the partial prosthesis treatment program was significantly higher than women (Fig. 1). Results of the Chi-Square test also reflected significant differences in levels of knowledge based on experience (Fig. 2). According to the results of these tests, a significant difference was observed in the knowledge of dentists based on their history of attending seminars and retraining courses. In other words, the knowledge of dentists attending such courses was significantly higher than those avoiding such courses (Fig. 3).

One of the major needs of patients is replacing the lost teeth. Therefore, the knowledge of dentists about the principles governing the making and maintenance of prosthesis functioning properly is a necessity (McCord *et al.*, 2000). Following accurate diagnosis and selection of proper treatments, dentists shall ensure the precision of laboratories as well. In spite of such concerns by dentists, many dentists still see patients experiencing problems with their prosthesis who are not able to benefit from their prosthesis. During or after the delivery of prosthesis a wide range of behavioral problems are observed (Geramipanah and Asadi, 2006; Rahn and Hearthwell, 2002; Zarb *et al.*, 1997). Hence, in this study it was tried to assess the knowledge of general dentists in Tabriz city about partial prosthesis treatment plans.

Research results suggested that the average knowledge of general dentists in Tabriz city about the partial prosthesis program was 14.6 varying from 9 (minimum) to 25 (maximum). In addition, 14.8% of participants showed low levels of knowledge, 72.8% showed medium levels of knowledge and 12.4% showed good levels of knowledge. In general, the knowledge of dentists was assessed to be average. Moshref and Sadrieh (2004) carried out a study to assess the knowledge of 100 general dentists in Tabriz city about the molding of removable prosthesis. According to the results, the knowledge of participants about the methods of molding removable prosthesis was not adequate.

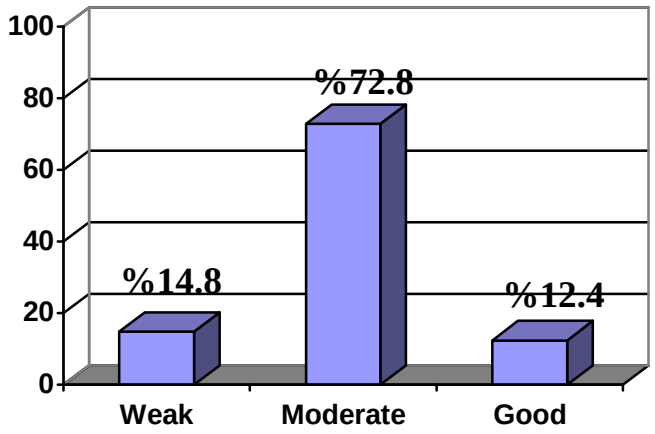

Figure.1 Evaluation knowledge General dentists of partial prosthesis treatment plan

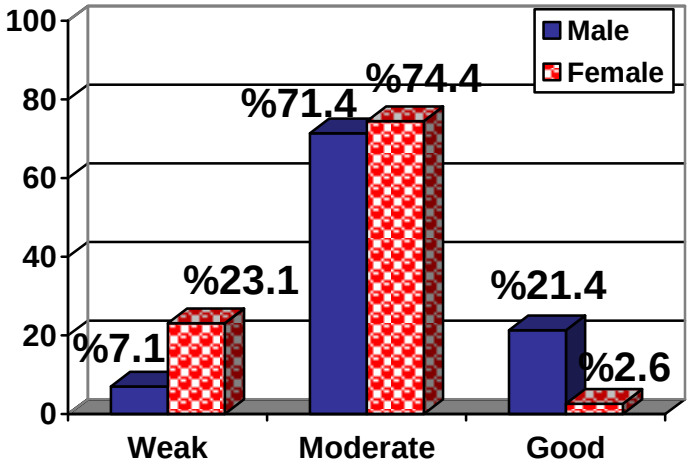

Figure.2 Evaluation knowledge General dentists of partial prosthesis treatment plan based on gender

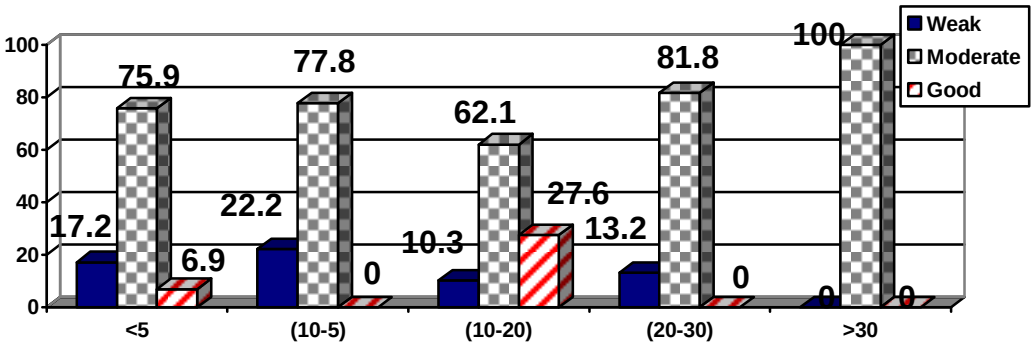

Figure.3 Evaluation knowledge General dentists of partial prosthesis treatment plan based on Work experience

Therefore, they need to improve their knowledge of these methods (Moshref and Sadrieh, 2004).

In another study, trained dentists with several years of experience stated that trainings they had received on removable

prosthesis methods were inadequate. They believed that it is necessary to improve the level of trainings provided in dentistry schools (Coates *et al.*, 1996).

Although no significant difference was unexpectedly observed between the knowledge of dentists based on their years of experience in the Chi-square results, results of other studies indicate that the knowledge of dentists reduces following graduation (Moshref and Sadrieh, 2004). This can be ascribed to the shortage of data or the lower knowledge of young dentists which is the result of the reduced quality of trainings. Considering such differences, the study focused on this issue. According to the study by Moshref and Sadrieh (2004) with an increase in the post-graduation experience of dentists their average scores decline significantly (Moshref and Sadrieh, 2004). In another study it was found out that newly graduated dentists had higher scores and their scores declined over time following graduation (Sackett *et al.*, 1997).

In addition, the knowledge levels of dentists who had attended retraining courses and who had escaped such courses were compared and it was revealed that the knowledge of dentists with a history of attending seminars and retraining courses was significantly higher than dentists avoiding such courses. Research results suggest that scientific and theoretical retraining courses and self-training can enhance the knowledge and skills of dentists and the quality of the treatment they provide (Seals and Jones, 2013).

Conclusion

The knowledge of general dentists in Tabriz city about the partial prosthesis treatment plan was average while the knowledge of male dentists with more experience was higher than others.

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