

Nature and Prevalence of Needle Phobia Among Female Saudi Dental Patients

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ABSTRACT

Aim: The aim of this cross-sectional study is to evaluate the nature and prevalence of needle phobia among female Saudi dental patients attending dental clinic in college of dentistry, King Khalid University, Abha.

Materials and Methods: The sample has been included 1227 female adult individuals above twenty years old, attending outpatient dental clinic in the College of Dentistry King Khalid University, Abha, Saudi Arabia. The sampling technique used in the research is simple random sampling technique. A modified type of structured questionnaire utilized by Milgrom et al. was prepared. The questionnaire includes 15 items. The queries were asked concerning the various fears connected with dental shots, including general concern with needles, concern with pain, concern with bodily injury, concern with cross-contamination, and anxieties linked to nearby anesthesia such as, for example, inadequate numbness or a detrimental reaction. The items were scored as "Yes/No." The questionnaire was examined for validity and reliability.

Results: 65% of study subjects agreed that they experience of fear of needle in their lifetime. According to 83% of participants disagreed that their parents had experienced the needle phobia. Majority of participants (72.9%) said "yes" for their one of their relatives or friends having the fear of needles. Only 34.6% of subjects agreed that they avoided the dental treatment due to needle phobia anytime in their life. 55.9% of subjects said that seeing the needle is terrifying. More than half of the subjects (52.9%) believed that nothing is as painful as a needle in the mouth.

Conclusions: Dental doctors should take care of patients who've a concern with needles because of needle phobia. Anesthetic procedures involving the needle injection are the routine dental procedures employed in the dental clinic. Furthermore, the dental awareness program should include the main topics of needle phobia, so the patient will not really avoid the required oral or medical treatment.

Key words: Dental fear, Needle phobia, Injection, Anxiety, Dental survey, Saudi Arabia.

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INTRODUCTION

Needle phobia is a particular condition affecting around 10% of the global human population and characterized within the American Psychiatric Association Diagnostics and Statistical Guide of Mental Problems (DSM-IV) by the current

presence of anxiety and the incidence of avoidance habits [1]. Needle phobia is both a lay and professional expression used to spell it out a concern with dental procedures relating to the needle injecting into the body [2]. Study shows that between 4 and 25% of the overall population have problems with needle phobia to some extent. On experiencing a needle insertion circumstance, victims can knowledge a variety of actual physical and psychological responses, including dread, fear, erratic heart rate, hypertension, elevated sensitivity to discomfort,

shock, vertigo, fainting, nausea, and sweating [3]. Because of encountering these, patients may react behaviorally by tactically staying away from healthcare. Needle phobia that is seen as a continual concern with injections impacts around 1.6% of people in the overall population [4]. Concern with dental care needle is really the main concern of delivery of anesthesia by injection may be the main plank of treatment strategies in dentistry [5] and dentists, along with individuals, often avoid challenging injections; as a result, leading to poor pain management [6]. One in four grownups reviews a clinically significant concern with oral injections and 1 in 20 reviews avoiding dental care due to anxiety with dental injections. A common concern with dental shots, which includes discomfort of injection and of bodily damage from the injection may be the two most typical measurements of dental care injection fear [7]. Concern with injections is among the most typical distressing aspect for the teeth pain sufferers in clinical configurations. The perspective of dental clinicians would be to perform dental care without painful suffering. The feeling of the needle getting mounted on a syringe and inserting the oral mucosa is somewhat fearful; also, it possesses a negative effect on individuals' mental health. Epidemiological research has proven that a lot of the sufferers postpone their dental care visits mainly because of the concern with the oral needles, discomfort, and bodily damage from the injection. Therefore, the aim of this study is to evaluate the nature and prevalence of needle phobia among Saudi dental patients attending dental clinic in college of dentistry, King Khalid University, Abha.

MATERIALS AND METHODS

The current study was a cross-sectional survey. The sample has been included 1227 female adults individuals above twenty years old, attending female outpatient clinics in the College of Dentistry King Khalid University, Abha, Saudi Arabia. The sampling technique used in the research is simple random sampling technique. A modified type of structured questionnaire utilized by Milgrom et al. [7] was prepared. The questionnaire includes 15 items. The queries were asked concerning the various fears connected with dental shots, including general concern with needles, concern with pain,

concern with bodily injury, concern with cross-contamination, and anxieties linked to nearby anesthesia such as, for example, inadequate numbness or a detrimental reaction. The items were scored as "Yes/No." The questionnaire was examined for validity and reliability. Ethical letter for carrying out the study was acquired from the Institutional review board [SRC/ETH/2018-19/049] of the College of Dentistry, King Khalid University.

Inclusion criteria

Adult patients above 18 years of age with a history of dental injection in last 3 years.

Residing in the geographical region of Abha region, Aseer District.

Exclusion criteria

All unfinished answers have been omitted from the analysis.

Children had been excluded from the analysis

Individuals who never really had an event of dental injection

Individuals who usually do not keep in mind the knowledge of dental care injection.

The questionnaires were given to the participant patients, whenever they came and a time of 30 min were given to them to read the questionnaires and tick the answer. The questionnaires were also printed in the Arabic language for the patients who cannot understand English. The data were collected, and the results were analyzed. A self-administered structured questionnaire is developed and was tested among a convenience sample of 10 patients, who was interviewed to gain feedback on the overall acceptability of the questionnaire in terms of length and language clarity, according to their feedback the questions were corrected. Face validity was also be assessed before start of the study. Both descriptive and analytical statistical measurements was used to describe the main variables by SPSS 18 (IBM Corporation, Armonk, New York, USA) software. Results are expressed in percentage and descriptive statistics done. The statistical significance of the coefficients in the statistical analyses was tested at 0.05 (≤ 0.05) level.

RESULTS

A total of 1227 patients responded for this study. 65% of study subjects agreed that they

Table 1: The percentage of the total scores regarding needle phobia questionnaire of the study.

| Sl. No. | Questions | YES (n) | % | No (n) | % |
|---------|--|---------|--------|--------|--------|
| 1 | Do you have the experience of fear of needle anytime in your life? | 797 | 65% | 430 | 35% |
| 2 | Are your parents having the experience of needle phobia? | 208 | 17% | 1019 | 83% |
| 3 | Is any one of your relative or friends having the fear of needles? | 895 | 72.90% | 332 | 27.10% |
| 4 | Do you heard about needle phobia and dramatized or imagined the situations of needle phobia? | 433 | 35.30% | 794 | 64.70% |
| 5 | Have you avoided the dental treatment due to needle phobia anytime in your life? | 425 | 34.60% | 802 | 65.40% |
| 6 | Seeing the needle is terrifying | 555 | 45.20% | 672 | 54.80% |
| 7 | Nothing is as painful as a needle in the mouth | 649 | 52.90% | 578 | 47.10% |
| 8 | Idea of needle penetrating the body is fearful | 602 | 49.10% | 625 | 50.90% |
| 9 | You won't be able to breath properly | 346 | 28.20% | 881 | 71.80% |
| 10 | You won't be able to swallow | 360 | 29.30% | 867 | 70.70% |
| 11 | The numbness will not go away | 185 | 15.10% | 1042 | 84.90% |
| 12 | Needle isn't clean, you might get a disease | 513 | 41.80% | 714 | 58.20% |
| 13 | The dentist might slip and injure you | 581 | 47.40% | 646 | 52.60% |
| 14 | You might move and cause the dentist to injure you | 703 | 57.30% | 524 | 42.70% |
| 15 | You might bleed because of injection | 464 | 37.80% | 763 | 62.20% |

experience of fear of needle in their lifetime. According to 83% of participants disagreed that their parents had experienced the needle phobia. Majority of participants (72.9%) said "yes" for their one of their relatives or friends having the fear of needles. Only 34.6% of subjects agreed that they avoided the dental treatment due to needle phobia anytime in their life. 55.9% of subjects said that seeing the needle is terrifying. More than half of the subjects (52.9%) believed that nothing is as painful as a needle in the mouth. Only few of the subjects agreed that they won't be able to breath properly (28.2) and swallow properly (29.3%). Nearly half of the participants (47.4%) believed that dentist might slip the needle and get injured. 62.2% disagreed regarding the result of bleeding due to injection (Table 1).

DISCUSSION

Odontophobia includes a multifactorial etiology; almost all conditions of dental care phobia can be related to distressing or unpleasant dental experiences [8]. Patients with needle phobia tend to prevent dental appointments, leading to reduced anxiety, which leads to additional avoidance; this is referred to as operant conditioning. Needle phobia could be obtained indirectly through parental or vicarious pathways. Various research has found a substantial relationship between children's anxiety and parental fear. Likewise, people may develop panic by noticing painful methods or listening to about them from others, which is referred to as vicarious learning [9,10]. Injection of community anesthetics is among

the most feared or even dental procedures [11]. The anxiety of pain related to local anesthetic injections is recorded being a barrier to delivering suitable dental treatment [12]. Sex appears to be a determinant as well, with females who can feel greater dental care anxiety than males^{2, 3}. Studies conducted on individuals aged 18-65 years shown that the prevalence of dental care anxiety is increased among younger college students and adults older than 45 [13].

An individual's concern with the dentist can impact his / her fulfillment with the oral visit and subsequently, displays the attendance at clinics [14] and have an overall feeling that likely to the dentist is really a fear-provoking expertise for particular treatment method, such as seeing of an anesthetic needle, the sensation of injection anesthesia or drilling, with an increase of fear than individuals reporting lower common suspicions of likely to the dentist. Outcomes of many research studies possess demonstrated that subjects of most ages reported being afraid of possible to the dentist [14,15]. Milgrom et al. [16] in his study documented a mean rating of 3.4 for the query that dentist might slip the needle that may result in injury, the mean score of 3.0 for the issue that on moving the dental professional might injure the person, and a mean rating of 2.2 for the question that it could bleed due to the injection. Friends or relatives of the participants were avoided dental treatment due to fear of needles. This was in accordance with the study by Wani et al. [17], it is of interest that during our survey, the main reason for the needle phobia was that the hearing or imagining the situations of the needle phobia from other

persons of the community. 57.3% of the topics reported that on moving the dental practitioner might injure the participants. 47.4% of the subjects said that dental professionals might slide the needle that will cause injury, and 37.8% of the subjects reported that it could bleed because of injection. The concern with needles is normal and is connected with health treatment avoidance. Medical researchers could much better determine and take care of patients who've a concern with needles because of needle phobia.

CONCLUSION

Dental doctors should take care of patients who've a concern with needles because of needle phobia. Anesthetic procedures involving the needle injection are the routine dental procedures employed in the dental clinic. Furthermore, the dental awareness program should include the main topics of needle phobia, so the patient will not really avoid the required oral or medical treatment. According to our study, the experience sharing by another person plays a central role in the development of the needle phobia, which may be from friends, relatives, or parents. In addition, some of the participants had avoided dental treatment due to needle phobia. Therefore, an additional amount of such prevalence research, including more number of individuals, should be completed to know the standing of needle phobia locally. Furthermore, the dental awareness program should include the main topics of needle phobia, so the patient will not really avoid the required oral or medical treatment.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article.

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