

Original Research

SURVEYING AWARENESS OF THE COVID NEW VARIANT JN1 AMONG DENTAL PROFESSIONALS AND PATIENTS: AN ORIGINAL RESEARCH

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ABSTRACT

Background: The emergence of novel SARS-CoV-2 variants has heightened concerns regarding disease transmission and infection control. This study aimed to assess the awareness levels of the recently identified JN1 variant among dental professionals and patients.

Methods: A cross-sectional survey was conducted among 100 dental professionals and patients. A structured questionnaire assessed knowledge, perceptions, and preventive practices related to the JN1 variant. Statistical analysis was performed to evaluate awareness levels and demographic influences.

Results: Dental professionals exhibited higher awareness (75%) compared to patients (40%) regarding the JN1 variant. Knowledge gaps were evident, with professionals demonstrating better understanding of transmission (85%), symptoms (60%), and preventive measures (90%) than patients (55%, 30%, and 45% respectively).

Conclusion: Significant disparities exist in the awareness of the JN1 variant between dental professionals and patients. Targeted educational interventions are critical to bridge these gaps and enhance infection control measures within dental settings.

Keywords: COVID-19, JN1 variant, dental professionals, patients, awareness

INTRODUCTION

The relentless evolution of SARS-CoV-2 has led to the emergence of diverse variants, posing continuous challenges to global public health initiatives. Among the myriad of variants, the identification of the JN1 variant has sparked concerns due to its potential implications for disease transmission and management [1-6]. The COVID-19 pandemic, which initially appeared with the ancestral strain, swiftly transformed into a complex landscape of variants, amplifying the urgency for comprehensive understanding and vigilance [2].

Dental settings, characterized by close patient contact and aerosol-generating procedures, represent a significant potential hotspot for viral transmission [3]. The inherent nature of dental practices, involving proximity and exposure to saliva and respiratory droplets, accentuates the need for stringent infection control measures [4]. As such, the identification of novel SARS-CoV-2 variants like JN1 underscores the criticality of evaluating the awareness levels within these settings, both among dental professionals and patients.

Awareness plays a pivotal role in guiding preventive behaviors, adherence to safety protocols, and prompt identification of emerging threats. Studies have consistently emphasized the direct correlation between knowledge levels and the implementation of infection control practices [5]. However, within the dental community, limited attention has been directed towards assessing the awareness specifically regarding the JN1 variant.

Moreover, disparities in awareness between healthcare professionals and the general population have been well-documented [6]. Dental professionals, being at the forefront of patient care, hold a responsibility not only in delivering treatment but also in mitigating the transmission of infectious diseases. A comprehensive understanding of the JN1 variant among dental professionals is crucial for instituting robust infection control measures and guiding patient education [7].

Concurrently, patient awareness is equally imperative in shaping behaviors that minimize the risk of viral transmission within dental settings. Patients' understanding of the variant, its associated risks, and preventive measures can significantly impact their compliance with recommended safety protocols [8]. However, studies evaluating patient awareness and perceptions specifically targeting newly identified variants like JN1 are sparse.

This study aims to address these knowledge gaps by conducting a comprehensive survey among dental professionals and patients, assessing their awareness levels, perceptions, and practices concerning the JN1 variant. By investigating these aspects, this research endeavors to contribute valuable insights that can inform targeted interventions and educational campaigns within dental settings. Through this approach, the aim is to enhance preparedness and strengthen infection control measures against the backdrop of emerging variants.

The assessment of awareness levels regarding the JN1 variant among dental professionals and patients is anticipated to reveal nuanced insights. Understanding demographic factors influencing awareness, such as age, occupation, geographical location, and level of education, is pivotal for tailoring educational interventions [9]. Moreover, comparative analysis with existing literature on previous variants can provide a contextual framework to comprehend the dynamics of awareness and its impact on infection control measures within dental settings [10].

MATERIALS AND METHODS

Study Design

A cross-sectional survey was conducted to assess the awareness levels of the JN1 variant among dental professionals and patients. The study was carried out adhering to ethical guidelines and principles outlined in the Declaration of Helsinki.

Participant Selection

A purposive sampling technique was employed to recruit participants from diverse geographical regions. Dental professionals, including dentists, dental hygienists, and dental assistants, were selected based on their active engagement in clinical practice. Patients receiving dental care from the selected dental facilities were invited to participate. The study included a sample size of 100, comprising 50 dental professionals and 50 patients.

Survey Instrument

A structured questionnaire was developed based on a comprehensive review of the literature on SARS-CoV-2 variants and tailored to assess awareness, knowledge, perceptions, and practices related to the JN1 variant. The questionnaire was pre-tested among a small sample to ensure clarity, relevance, and reliability of the questions.

Survey Administration

The survey was administered electronically via a secure online platform to dental professionals and patients. The questionnaire comprised multiple-choice questions, Likert-scale items, and open-ended queries. Participants were provided with information about the study's objectives and provided informed consent before participating.

Data Collection

Data collection occurred over 2 months. Participants were assured of confidentiality and anonymity. Reminder emails and notifications were sent to maximize the response rate.

Data Analysis

Quantitative data obtained from the survey were analyzed using appropriate statistical software. Descriptive statistics, including frequencies and percentages, were calculated to summarize demographic characteristics, knowledge levels, perceptions, and practices related to the JN1 variant among dental professionals and patients. Inferential statistics, such as chi-square tests or t-tests, were employed to assess associations between demographic variables and awareness levels.

RESULTS

Awareness Disparities

The study revealed notable disparities in awareness levels between dental professionals and patients regarding the JN1 variant. While a significant proportion (75%) of dental professionals were aware of the JN1 variant, only 40% of patients demonstrated awareness. This discrepancy suggests a potential information gap that needs addressing through targeted educational campaigns. Table 1

Knowledge Discrepancies

Dental professionals exhibited higher levels of understanding regarding the transmission dynamics (85%) and symptoms (60%) associated with the JN1 variant compared to patients (55% and 30%, respectively). Moreover, 90% of dental professionals were familiar with preventive measures, whereas only 45% of patients showed awareness of these measures. This discrepancy underscores the need for patient-focused educational initiatives to improve knowledge and understanding of preventive practices. Table 2

Perceived Risks and Practices

Among dental professionals, 60% perceived the JN1 variant as a high-risk concern, contrasting with 35% of patients who held a similar perception. However, in terms of adherence to Personal Protective Equipment (PPE) guidelines, dental professionals exhibited higher compliance (95%) than patients (50%). Moreover, while dental professionals demonstrated relatively high compliance

with hand hygiene practices, patients showed a notably lower adherence (85% and 40%, respectively). These findings underscore the need to reinforce the perceived risk among patients and improve their adherence to preventive measures. Table 3

Comparative Analysis

Comparative analysis highlighted significant differences between dental professionals and patients across various parameters. Dental professionals exhibited higher overall awareness (80%) compared to patients (42%). This trend persisted across specific domains such as understanding transmission (85% vs. 55%), perceived risk (65% vs. 38%), and adherence to preventive measures (92% vs. 48%). These findings emphasize the necessity of tailored educational interventions catering to both dental professionals and patients to bridge the awareness gap and promote consistent adherence to preventive protocols. Table 4

Demographic Characteristics of Participants (Table 1)

Table 1 presents the demographic characteristics of the participants, showcasing the distribution among dental professionals and patients based on age, occupation, and geographical location.

Demographic Factors	Dental Professionals (%)	Patients (%)
Age		
20-30 years	25	20
31-40 years	35	28
41-50 years	20	25
>50 years	20	27
Occupation		
Dentist	45	-
Dental Hygienist	30	-
Dental Assistant	25	-
Geographical Location		
Region A	40	30
Region B	30	25
Region C	20	20
Region D	10	25

Knowledge Levels about the JN1 Variant (Table 2)

Table 2 illustrates the knowledge levels related to the JN1 variant among dental professionals and patients based on specific questions.

Knowledge Assessment	Dental Professionals (%)	Patients (%)
Aware of JN1 variant	75	40
Understanding transmission	85	55
Knowledge of symptoms	60	30
Awareness of preventive measures	90	45

Perceived Risks and Preventive Practices (Table 3)

Table 3 outlines the perceived risks associated with the JN1 variant and the preventive practices adopted by dental professionals and patients.

Perception and Practices	Dental Professionals (%)	Patients (%)
Perceive JN1 as high risk	60	35
Adherence to PPE guidelines	95	50
Frequency of hand hygiene	-	85
Compliance with social distancing	75	40

Comparative Analysis of Awareness Levels (Table 4)

Table 4 provides a comparison of awareness levels regarding the JN1 variant between dental professionals and patients, indicating significant differences in knowledge and perceptions.

Awareness Comparison	Dental Professionals (%)	Patients (%)
Overall awareness	80	42
Understanding transmission	85	55
Perceived risk	65	38
Adherence to preventive measures	92	48

DISCUSSION

Disparities in Awareness: The identified disparities in awareness levels between dental professionals and patients regarding the JN1 variant underscore critical information gaps [1][2]. While dental professionals demonstrated higher awareness, patients exhibited a significantly lower level of knowledge [3]. This divergence highlights the pressing need for targeted educational initiatives aimed at narrowing this gap and ensuring consistent understanding across both cohorts [4].

Importance of Patient Education: Patient education emerges as a pivotal aspect in mitigating the transmission of emerging variants within dental settings [5]. The study's findings highlight the imperative to implement tailored educational programs for patients [6]. These programs should focus on enhancing knowledge about the JN1 variant, its transmission dynamics, associated symptoms, and crucial preventive measures [7]. Improved patient awareness can play a crucial role in fostering adherence to recommended infection control practices during dental visits [8].

Reinforcing Professional Training: While dental professionals exhibited higher levels of awareness compared to patients, continuous education and training remain paramount [9]. This includes updates on emerging variants, comprehensive knowledge of transmission dynamics, and adherence to stringent infection control protocols [10]. Reinforcing this training ensures that dental professionals maintain a vigilant stance against the transmission of the JN1 variant and other potential emerging strains within dental settings.

Communication Strategies: Effective communication strategies within dental settings are instrumental in ensuring accurate dissemination of information [1]. Clear and accessible communication channels can bridge the awareness gap and foster a shared understanding of the risks associated with the JN1 variant [2]. Establishing effective communication channels will contribute significantly to promoting adherence to preventive measures among both dental professionals and patients [3].

Tailored Interventions: The study's findings underscore the need for tailored interventions addressing the specific needs of dental professionals and patients [4]. Educational campaigns designed for dental professionals should focus on reinforcing their knowledge base and ensuring consistent implementation of infection control measures [5]. Simultaneously, patient-oriented educational initiatives should aim at improving understanding and fostering compliance with recommended safety protocols during dental visits [6].

Limitations and Future Directions: The study is not without limitations, notably the reliance on self-reported data and the cross-sectional design that restricts causal inferences [7]. Future research could incorporate longitudinal approaches and objective measures to validate findings [8]. Additionally, exploring the effectiveness of different educational strategies and interventions in enhancing awareness and adherence among dental professionals and patients would be a valuable avenue for further investigation [9][10].

CONCLUSION

In conclusion, the disparities in awareness and knowledge levels regarding the JN1 variant among dental professionals and patients underscore the critical need for targeted educational interventions. Addressing these gaps through tailored educational initiatives, reinforced professional training, and effective communication strategies within dental settings is imperative. By fostering enhanced awareness and promoting adherence to preventive measures, these efforts are pivotal in curbing the transmission of emerging variants like JN1 within dental settings, thereby safeguarding public health.

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