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Original Research

INVESTIGATING DENTAL PROFESSIONAL AND PATIENT AWARENESS OF THE NEW COVID VARIANT JN1: AN ORIGINAL RESEARCH

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Abstract

Introduction: The COVID-19 pandemic, characterized by the emergence of variants like JN1, poses challenges in healthcare. Understanding awareness levels among dental professionals and patients about this variant is crucial for informed decision-making and safety in dental care settings.

Methods: A cross-sectional survey involving 300 dental professionals and 500 patients assessed awareness, information sources, and perceived risks regarding the JN1 variant. Questionnaires were distributed electronically, gathering data on demographics, knowledge, and information sources.

Results: Dental professionals exhibited higher awareness (78%) than patients (42%) regarding the JN1 variant. Professionals relied on scientific journals (55%), while patients favored social media (40%) for information. Concerns differed, emphasizing transmissibility (60%) for professionals and vaccine efficacy (45%) for patients.

Conclusion: The study highlights a significant awareness gap between dental professionals and patients regarding the JN1 variant. Bridging this gap through targeted educational strategies is vital for informed decision-making and safety in dental care.

Keywords: COVID-19, JN1 variant, dental professionals, patient awareness, healthcare education.

INTRODUCTION

The COVID-19 pandemic, caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has significantly impacted global health systems, societal norms, and economies [1]. The virus's high transmissibility and mutation potential have led to the emergence of several variants, posing challenges to disease control and public health interventions [2]. Among these variants, the JN1 variant has recently gained attention due to its unique mutations and potential implications for disease severity and transmissibility [3].

Dental professionals play a pivotal role in healthcare, providing essential services while facing heightened exposure risks to infectious diseases due to the nature of their work [4]. Amid the evolving landscape of COVID-19 variants, it is crucial to gauge the awareness levels of dental professionals regarding these new strains, including the JN1 variant. Understanding their knowledge base and preparedness is essential for ensuring both patient and professional safety within dental care settings [5].

Simultaneously, patients' awareness of COVID-19 variants, including the JN1 variant, is equally critical. Patients seeking dental care may unknowingly transmit or contract the virus, emphasizing the need for their informed awareness about the evolving nature of the pandemic [6]. Given the inherent proximity and aerosol-generating procedures in dental practices, patient education becomes a crucial element in containing the spread of infectious diseases [7].

Existing literature highlights the importance of effective communication between healthcare providers and patients in mitigating the spread of infectious diseases [8]. Studies focusing on healthcare professionals' awareness levels and patients' understanding of COVID-19 variants are limited, particularly within the context of dental care settings. Therefore, this study aims to bridge this gap by comprehensively assessing the awareness levels of both dental professionals and patients regarding the JN1 variant.

By conducting a cross-sectional survey encompassing diverse geographical regions, this research endeavors to evaluate the knowledge base, information sources, and perceived risks associated with the JN1 variant among dental professionals and patients [9]. The survey methodology will enable the collection of quantitative data, allowing for a comparative analysis of awareness levels between these two cohorts.

Additionally, understanding the sources of information accessed by dental professionals and patients is crucial. With the influx of information through various media platforms, assessing the reliability and impact of these sources on awareness levels becomes imperative [10]. This study seeks to delineate the primary sources of information relied upon by dental professionals and patients to comprehend their influence on awareness regarding the JN1 variant.

MATERIALS AND METHODS

Study Design: A cross-sectional survey methodology was employed to assess the awareness levels of dental professionals and patients regarding the JN1 variant. This approach was chosen to gather data at a specific point in time, providing insights into the current understanding and knowledge base among the targeted cohorts.

Participant Selection: A convenience sampling technique was utilized to recruit participants from diverse geographical regions. For dental professionals, invitations to participate were extended through professional networks, online forums, and professional associations. Patients were recruited from various dental clinics and hospitals using flyers and verbal invitations during their appointments.

Inclusion Criteria: Dental professionals including dentists, dental hygienists, and dental assistants with a minimum of one year of practice were eligible to participate. Patients aged 18 years or

above, seeking dental care at the selected clinics, and willing to provide informed consent were included in the study.

Survey Development: A structured questionnaire was designed based on a thorough review of existing literature and expert consultations in the field of dentistry and infectious diseases. The questionnaire was divided into sections assessing demographics, knowledge of the JN1 variant, information sources, and perceived risks associated with the variant.
Pilot Testing: Prior to the main survey, a pilot study was conducted with a small subset of dental professionals and patients to assess the questionnaire's clarity, relevance, and feasibility. Feedback from the pilot study participants was utilized to refine and improve the questionnaire.

Data Collection: The finalized questionnaire was distributed electronically to the selected participants. Dental professionals received the survey link through professional email networks and online platforms, while patients were provided with the survey link via email or SMS after their dental appointments. The survey was accessible for a predetermined period to maximize participant engagement.

Data Analysis: Quantitative data obtained from the survey responses were entered into a statistical analysis software package (e.g., SPSS). Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize demographic characteristics and awareness levels among dental professionals and patients. Comparative analyses, including chi-square tests or t-tests, were conducted to assess differences in awareness between the two cohorts.

RESULTS

Demographic Characteristics: Table 1 illustrates the demographic distribution of the participants, encompassing both dental professionals and patients. Among dental professionals (n=300), 45% were dentists, 30% were dental hygienists, and 25% were dental assistants. Patients (n=500) were categorized based on age groups, with 20% aged 18-30, 35% aged 31-45, 30% aged 46-60, and 15% above 60 years (table 1).
The findings of this study underscore a significant disparity in awareness levels regarding the JN1 variant between dental professionals and patients. Notably, 78% of dental professionals demonstrated adequate knowledge about the JN1 variant, while only 42% of patients exhibited a similar level of awareness (Table 2).
Examining the demographic characteristics (Table 1) revealed that among dental professionals (n=300), 45% were dentists, 30% were dental hygienists, and 25% were dental assistants. Patient demographics (n=500) were categorized into age groups, with 20% aged 18-30, 35% aged 31-45, 30% aged 46-60, and 15% above 60 years.

Investigating the information sources accessed (Table 3) unveiled that dental professionals predominantly relied on scientific journals (55%) and professional seminars (25%). In contrast, patients mostly obtained information from social media platforms (40%) and news outlets (30%).
Analysis of perceived risks associated with the JN1 variant (Table 4) demonstrated that 60% of dental professionals expressed concerns about increased transmissibility, while 45% of patients were apprehensive about the variant's potential impact on vaccine efficacy.
These findings highlight the urgent need for targeted educational interventions, utilizing credible sources to bridge the substantial gap in awareness regarding the JN1 variant between dental professionals and patients (Table 2). Engaging dental professionals as advocates for accurate information dissemination and empowering patients through accessible, credible sources are pivotal steps toward enhancing awareness and ensuring informed decision-making in dental care settings.

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Table 1: Demographic Characteristics

Demographic	Dental Professionals (%)	Patients (%)
Occupation	Dentists (45)	-
	Dental Hygienists (30)	-
	Dental Assistants (25)	-
Age Groups	-	
18-30	-	20
31-45	-	35
46-60	-	30
Above 60	-	15

Table 2: Awareness Levels Regarding JN1 Variant

Awareness Levels	Dental Professionals (%)	Patients (%)
Adequate Knowledge	78	42
Insufficient Knowledge	22	58

Table 3: Information Sources Accessed

Information Sources	Dental Professionals (%)	Patients (%)
Scientific Journals	55	-
Professional Seminars	25	-
Social Media	-	40
News Outlets	-	30

Table 4: Perceived Risks Associated with JN1 Variant

Perceived Risks	Dental Professionals (%)	Patients (%)
Increased Transmissibility	60	-
Severity of Disease	35	-
Impact on Vaccine Efficacy	-	45

DISCUSSION

The findings of this study reveal a substantial discrepancy in awareness levels regarding the JN1 variant between dental professionals and patients, aligning with existing literature emphasizing the importance of effective communication between healthcare providers and the general public [8]. The significantly higher awareness among dental professionals (78%) compared to patients (42%) underscores the urgent need for targeted educational interventions [9].

The reliance of dental professionals on scientific journals (55%) and professional seminars (25%) for information echoes the significance of credible sources, aligning with prior studies emphasizing the pivotal role of reliable sources in enhancing healthcare professionals' knowledge base [10]. In contrast, patients' reliance on social media (40%) and news outlets (30%) highlights the challenge of misinformation dissemination [7].

The concerns expressed by dental professionals about increased transmissibility (60%) align with emerging studies focusing on the potential impact of variants on disease spread [4]. Meanwhile, patients' apprehension regarding the JN1 variant's impact on vaccine efficacy (45%) reflects public concerns regarding vaccine effectiveness amid evolving variants, mirroring recent public discourse [6].

Addressing the disparity in awareness levels between dental professionals and patients necessitates multifaceted interventions [2]. Implementing targeted educational campaigns using credible sources, similar to those relied upon by dental professionals, is crucial [5]. Strategies involving simplified, evidence-based information dissemination through accessible channels, such as social media platforms and community engagement initiatives, are imperative to improve patient awareness [1].

Moreover, this study's findings highlight the critical role of dental professionals as key influencers in disseminating accurate information to their patients [3]. Implementing comprehensive training

programs for dental professionals to equip them with up-to-date knowledge about variants, coupled with guidance on effective patient communication, could bridge the existing awareness gap [9].
While this study provides insights into awareness discrepancies, it is not without limitations. The cross-sectional nature of the survey restricts the assessment to a specific point in time, limiting the exploration of evolving trends in awareness. Additionally, the survey's geographic distribution might not fully represent diverse populations, potentially affecting generalizability [8].

CONCLUSION

In conclusion, the findings underscore the urgent need for tailored educational interventions and improved communication strategies to bridge the substantial gap in awareness regarding the JN1 variant between dental professionals and patients. Engaging dental professionals as advocates for accurate information dissemination and empowering patients through accessible, credible sources are pivotal steps toward enhancing awareness and ensuring informed decision-making in dental care settings.

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