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Implementation of an adolescent risk behaviour assessment in an academic paediatric dental setting

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BRIEF REPORT

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ABSTRACT

Background
Adolescents commonly engage in negative risk behaviours which could have serious implications on their oral and systemic health. Health care providers must be able to identify signs and comfortably question adolescents regarding these risk behaviours

Aims
Allow dental providers to administer a risk behavior questionnaire addressed towards adolescents to begin the transition from the pediatric to adult model and assist them in taking personal responsibility for their health. When negative behaviors are recognized, the goal is to help the adolescent by providing them with educational information, such as brochures or other resources related to the identified risks, and offering referrals to relevant providers.

Methods
A medical questionnaire to assess adolescent's risk behaviors has been implemented at the University of Florida Pediatric Dental Clinic and is administered to patients 13+ as part of each examination appointment. A policy of confidentiality is discussed with the parent and informed consent obtained prior to conducting this questionnaire individually with the patient.

Results
During a period of over a year, the questionnaire has been administered by the pediatric dental faculty for a trial period; administration by the pediatric dental residents began this term and is currently ongoing.

Conclusion
Completion of the risk behavior questionnaire has provided an opportunity for teenagers to become more comfortable speaking individually with a dental provider. Identification of these risks allowed the pediatric dentist to help the patient seek appropriate care as they enter adulthood, and provide a more thorough approach towards the adolescent's oral and general health.

Key Words
Adolescent, risk behaviour, paediatric dentistry

Implications for Practice:

1. What is known about this subject?
A medical questionnaire addressing adolescent's risk behavior is currently not being implemented routinely in dental clinical settings.

2. What new information is offered in this report?
The University of Florida, Pediatric Dental Department has implemented a risk behavior questionnaire to provide a thorough approach towards adolescent oral and general health.

3. What are the implications for research, policy, or practice?
A protocol could be established in which assessment of risk behaviours is conducted in a regular basis with adolescent patients at dental clinical settings.

Background

Adolescence is a period of physical and mental growth, in which individuals are likely to participate in negative risk behaviours. Negative risk behaviours include choices in lifestyle activities, such as tobacco use, unsafe sex, oral piercings that may compromise mental and physical health and increase a patient's risk of suffering from a particular condition, illness, or injury. Major categories of negative risk behaviours include alcohol and drug use, sexual behaviour, mental health, and nutritional aspects.

The American Academy of Pediatric Dentistry guidelines site a few examples of oral problems associated with adolescent behaviors. This list includes but is not limited to: oral manifestations of sexually transmitted diseases, intra-oral and peri-oral piercing with local and systemic effects, changes in dietary habits, traumatic injury in athletic or other activities, perimyolysis due to bulimia, and effects of oral contraceptives and antibiotics on periodontal structures.[1] Recently, the University of Florida Graduate Pediatric Dentistry Department has obtained approval to administer a medical questionnaire to adolescent patients that identifies negative risk behaviors which could compromise the patient's overall health. With the administration of this questionnaire, dental providers will have the opportunity to gather information and provide a more comprehensive care. In addition, the questionnaire permits the adolescent patient to begin the transition from the pediatric to adult model aiming to assist them in taking personal responsibility for their health.

It is well documented that adolescents are more prone to participate in risk behavior in comparison to adults.[2] For example; there is a 40 per cent chance that a 17-year-old male patient has had more than 5 drinks in a row within the last month, and a 40 per cent chance that he uses tobacco. In addition, there is a 61 per cent chance that this patient is sexually active, as he is in the age group most commonly diagnosed with sexually transmitted diseases.[2] Four factors explain why adolescents are most susceptible to engage in unhealthy risk behaviours. However, first we must answer, "Are all risks bad"? The answer is no, risk behavior is a normal part of growing up. By taking risks, we learn more about the world, discover our own capabilities, and allow ourselves to enjoy new experiences. However, the delineation between healthy and unhealthy risks must be clearly defined. Healthy risk behaviors can include sports and traveling. Healthy risks can equally warrant negative health outcomes; however, these risks should be classified as a healthy part of adolescent development. Unhealthy risk behavior, as described previously by Jessor, should include unprotected sex and drug use.[3] Take for instance oral piercing which have become increasingly popular amongst adolescents. In a retrospective study conducted by Inchingolo et al. from 108 patients surveyed, 70 per cent of patients experienced mucosal atrophy, 80 per cent experienced perilesional edema 2–3 days after surgery, and 90 per cent experiences post-op bleeding 12 hours after surgery.[4] The above study findings corroborate the importance for the adolescents to be aware of the associated health consequences from their risk behaviors.

As health care providers, it is not only crucial to be able to recognize signs of negative risk behavior, but to be able to comfortably speak to adolescent patients regarding the consequences from these behaviors and provide the indicated information to seek further care. In order for these providers to express sincere concern and empathy it is important to react in a non-threatening manner, and to have an excellent understanding as to the reasons why adolescents are more prone to engage in negative risk behaviors. There are four main reasons why adolescents are most susceptible to engage in unhealthy risk behavior. The following risk factors include: (1) Family structure and influence of parents (2) Environmental risks including peer groups and the media (3) Stage of brain development in adolescents (4) Lack of awareness.[3]

The family structure has a significant impact on adolescent risk behavior. Direct communication initiated by parents towards their children regarding their expectations towards negative risk behaviors is critical.[5] A questionnaire conducted by Nelson et al. found that students who perceived a satisfactory relationship with their parents and parents who successfully communicate their expectations regarding risk behavior to their children had a meaningful influence on the reduction of unhealthy risk behavior.[5] Adolescents are more prone to engage in negative risk behaviors if the peer group they frequently associate with participate in these activities as well. They tend to migrate towards these deviant peer groups when there is high family conflict in the household. Ary and Duncan suggested that high family conflict leads to less parent-child involvement, which ultimately results in poor parental monitoring and associations with deviant peer groups.[6] Therefore, the household is a primary cause of adolescent negative risk behavior if there is high conflict and if parents do not successfully communicate their expectations regarding risk behaviors to their children.[6] It is important that health care providers convey the extent of parents' continued influence on their adolescent children and the

value of communication that helps to maintain the child-parent relationship.

Peer groups are a safe arena for adolescents to engage in negative risk behaviours.[7] These groups can provide an environment in which adolescents can learn, clarify, and maintain norms for social behaviors as well as practice these behaviors promoting socioemotional competence during a time when youth are attempting to establish their identity and autonomy from their parents.[7] A psychology study conducted by Gardner and Steinburg found that peer effects on risk taking and risky decision-making were stronger among adolescents than adults. Peer groups that focus on unhealthy risk behaviors tend to "idolize" its members that participate in the risk behavior, and offer acceptance to those who participate.[8] Acceptance is a monumental psychosocial reinforcement for the developing adolescent who is trying to figure out their identity and belonging in the world.

Media also plays a major role in adolescent risk behavior. During the process of adolescence, youths are vulnerable to external influence. They are a more direct target for the media, especially when adult role models are absent. Media constantly flashes models of nutrition, beauty, and health that are often not compatible with the social and economic conditions of youth or their stage of development. These "perfect models" portrayed by the media often lead to negative risk behaviors including nutritional disorders, psychological issues, and disturbances in the body. In the United States, studies have demonstrated that 10–30 per cent of the occurrences of acts of violence, sex, and use of drugs can be attributed to the influence exerted by the media.[9]

Neurologists have investigated the developing adolescent brain to explain risk behavior. Steinburg in "Risk Taking in Adolescence" proposes that adolescents' inclination to engage in risky behavior is not due to irrationality or ignorance. Instead, Steinberg claims there is a temporal gap between puberty, which impels adolescents toward thrill seeking, and the slow maturation of the cognitive-control system, which regulates these impulses, makes adolescence a time of heightened vulnerability for risky behavior.[10,11] Adolescents enjoy excitement, intensity and arousal. They are the first to see the latest horror movie, waiting to ride the most dangerous roller coaster at the amusement park, and enjoy video games that shock their senses. Adolescence is a time when sex, drugs, very loud music, and other high stimulation experiences take great appeal. Brain imaging studies have shown that several areas of the brain make adolescents more sensitive to the rewards of peer relationship than adults.[10]

The last reason that is worth mentioning to explain adolescent risk behavior is the development of "new risk behaviors". Although parent and school education programs have proven to be unsuccessful in influencing risk behavior outcome, there are novel risk behaviors where a lack of knowledge does exist. For example, hookah smoking is a fast-growing phenomenon experienced among adolescents. Studies indicate that many parents are unsure how the health risks from cigarette smoking compare to the health risks of hookah smoking. Majority of parents and adolescents believe that hookah smoking is a safer alternative to cigarette smoking, which is not the case.[12]

Understanding the reasons why adolescents are prone to engage in negative risk behavior will allow dentists to perform more comprehensive care, express understanding and empathy when caring for these patients, and raise their awareness on health compromising behaviors that they can encourage adolescents to discontinue

Methods

Protocol for administration of the Adolescent Medical Questionnaire

The University of Florida Pediatric Dental Department has currently implemented a medical questionnaire to assess adolescent's risk behaviors in the clinical setting. The questionnaire was developed based on a portion from the Pediatric Medical History form published on the American Academy of the Pediatric Dentistry Reference Manual.[13] Completion of the risk behavior questionnaire provides an opportunity for teenagers to become more comfortable speaking alone with an adult healthcare provider, to help begin the transition from the pediatric to adult model, and assist patients in taking responsibility for their health.

The questionnaire is completed with the adolescent patients (age 13+), as part of each new patient or recall examination appointment. The dentist must explain to the parents why it is important to conduct the adolescent questionnaire and subsequently a confidentiality policy is reviewed with the parent or legal guardian. The policy clearly outlines that information disclosed to the dentist by an adolescent patient will remain confidential to the extent permitted by law. Specific exceptions include if the patient discloses a plan to harm himself/herself or someone else or if the patient discloses information about being sexually or physically abused. In these cases, appropriate action must be taken to ensure everyone's safety. Adolescent patients

are encouraged to answer all of the questions truthfully, but they could opt not to answer an item. The last question they are asked is if they will like to discuss any other concerns confidentially with their dentist.

When appropriate, dentists are to encourage adolescent patients to share important information with their parents and provide guidance in doing so. The dentist is available to speak privately with parents during the visit about concerns the parents want to share about their child. However, the adolescent patient's confidentiality will be maintained during these discussions. These confidentiality considerations also extend to any telephone calls that the dentist may have with adolescent patients about their healthcare, including discussions about appropriate referrals or evaluations/results.

Once the parent has agreed to the confidentiality policy then their consent is recorded in the electronic record. Completion of the questionnaire occurs only between the dentist and the adolescent patient. Dental assistants are requested to remain out of the operatory during this time. If the dentist considers the adolescent patient should seek medical help, with approval of the adolescent patient, they are provided with informational brochures or referrals are made to appropriate healthcare providers.

Preparation and Experiences from the Administration of the Adolescent Questionnaire

Dental residents and faculty at the University of Florida Paediatric Dentistry Department have participated in several seminars regarding adolescents and risk behaviour. For the past year, paediatric dental faculty have been administering the questionnaire. More recently, the paediatric dental residents have been introducing the questionnaire as a regular part of their recall and new adolescent patient visits. Although most teenagers deny participating in risk behaviours, several patients reported the contrary. Subsequently, the dentist provided the adolescent patient with avenues to seek care.

The primary method for helping adolescent patients seek care after negative risk behaviours have been identified is to provide informational brochures. Informational brochures with helpful medical advice for smoking cessation, pregnancy, sexually transmitted diseases are available at the dental clinic for the patients. In certain cases, the adolescent patient has asked the dental provider to help them seek care and a referral to a primary care physician has been placed.

During one clinical situation at the Graduate Paediatric Dental Clinic, while a resident was trying to obtain consent to administer the questionnaire, the parent declined because their child sees a different resident for each appointment. The parent was concerned that the health information provided might not remain confidential. This practice of seeing a different residents or dental students for each appointment is commonplace in academic settings, as compared to private practice where continuity of care with the same dentist is expected. Therefore, explaining patient rights and ensuring parents and guardians that the information from the patient records are confidential is a skill that all dentists must acquire.

Overall, most adolescent patients handle the questionnaire maturely and have responded sensibly when any advice had been given with regards to some of their risk behaviours and the health consequences.

Discussion

In addition to a physician, the dentist is the first professional an adolescent may establish a trusting relationship with outside of their household. Compared to the sporadic encounters they have with medical doctors, teenagers will probably be seen by dental providers at least twice a year. Thus, dentists could play a critical role in detecting signs of risk behaviour and should be adequately trained to discuss those behaviours with adolescents, so that they know how to help them seek care when indicated.

For the dental providers to properly serve the adolescent patients, they must demonstrate empathy, and be sufficiently trained to question them in a non-invasive manner in order for them not to feel scared in revealing their intimacy. Education and training towards adolescent patients may not been formally implemented in the dental academics. In comparison, to the medical field, where the residencies in paediatrics, family and internal medicine require training in adolescent care; paediatrics is the only dental residency with the time committed to adolescent medicine.[14] Although these programs include training experiences directed towards taking care of teenagers, many practicing physicians feel inadequately trained to screen and address risk-taking behaviours.[15] Therefore, in medicine and dentistry needs to be greater awareness as to the problems adolescent patients face as they mature into adulthood and how many of these risk behaviours could have severe medical consequences.

There should be an emphasis for practitioners to use new technologies, when applicable, as a correct approach for

diagnosing oral manifestations from risk behaviours. Detecting and diagnosing lesions early is difficult, as it is not uncommon for a precancerous lesion to be incorrectly diagnosed as a specific inflammatory manifestation. One of the newer technologies used to diagnose cancers early, specifically intra-oral squamous cell carcinoma, is Bioimpedance. A study conducted by Tatullo et al. provided evidence showing that Bioimpedance, which specifically measures the electrical properties of biological tissue, can successfully characterize healthy and clinically oral lichen planus affected mucosa.[16] In addition to using new technologies to identify oral pathology, dental practitioners must be proficient at providing correct differential diagnosis when pathology is detected. No disease should be ruled out until a proper pathology assessment has been conducted. Just because an adolescent patient indicates that they participate in a certain risk, the practitioner should not jump to a diagnosis before ruling out other causes. Pathology can occur in the most atypical locations and a thorough examination must be completed for each case. Take for instance a case presentation conducted by Inchingolo et al. where a tongue lesion, specifically macroglosia and bleeding, was thought to be simply due to tongue biting and was ultimately found to be Non- Hodgkins Lymphoma.[17]

Future studies regarding the topics of adolescents, risk behaviours, and their associated oral manifestations could be of great benefit in order to achieve a more thorough approach when treating this patient population. For instance, this research is necessary to assess the percentage of adolescent patients and their consenting legal guardians who are allowing participation in the questionnaire. In addition, studies to assess the comfort level of the adolescent patient and the healthcare provider during administration of the questionnaire would be helpful as well. The findings from the studies mentioned above would particularly be valuable for training purposes. Health care providers who feel uncomfortable administering the questionnaire and discussing risk behaviours with adolescent patients may need additional training to gain comfort.

Conclusion

Overall, the goal to implement the Adolescent Medical Questionnaire as routine part of every dental visit has been nearly fulfilled in our pediatric dental residency program at the University of Florida. Through either personal feedback by the adolescent patient or facial expressions of comfort and relief, the overall impression from the implementation of the questionnaire into the academic dental setting has been successful and beneficial to this unique patient population. However, further research needs to be conducted in order to confirm effectiveness of the questionnaire. The pediatric dental residents and faculty have also provided positive feedback to the seminars regarding adolescent patient management. These seminars provided at the Graduate Pediatric Dental Department have helped raise awareness to a unique patient population who may require further guidance to avoid major health consequences from their risk taking. The reasons why adolescents are more prone to engage in negative risk behaviors are well reported in the literature.[11] It is critical for health care providers to be familiar with these reasons in order to have a better understanding of these patients. Better understanding allows for empathy, compassion, and sincerity when administering the questionnaire, which will permit the adolescent patient to feel more at ease. By helping adolescent patients understand that their actions and choices in life can have a direct impact on their overall health, we as healthcare providers are helping this patient population transition to the adult model of self-care. Risk behavior is an important topic in healthcare that needs to be addressed more frequently so that open communication can be established between the adolescent and the provider to benefit the overall systemic health of these patients.

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