

ORIGINAL ARTICLE

Influence of the ice-hockey environment on taking up snuff: An interview study among young males

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Abstract

In Sweden, snuff-use is an established and accepted phenomenon in society, especially in connection with certain sports. The aim of this qualitative study was to analyze and describe the psychosocial environment influencing young male ice-hockey players into starting to use snuff. The study sample comprised 16 male participants between 15 and 32 years of age strategically selected for being active or having been active as ice-hockey players – snuff-users and non-users alike. A grounded theory design, including in-depth interviews, was used to generate a theory from data and thereby create theoretical concepts explaining social phenomena, human behavior, and process. An interview guide containing different themes was used to cover the study area. Five higher-order categories were developed and labeled: *having a role model, residing in a consenting environment, experiencing performance demands, experiencing a sense of community and creating an image. Socialization in and through psychosocial norms of the ice-hockey environment* was identified as a core category describing the central meaning of the informants' experiences of snuff in the ice-hockey environment. In the present study, the identified categories that integrate within the environment in which the young people reside and pursue their sports activities have been interpreted as factors enhancing the commencement of snuff-use. We suggest health promotion activities within the ice-hockey environment based on a health psychology model of planned behavior.

Key Words: *Qualitative method, smokeless tobacco, sports, tobacco*

Introduction

The dental health-care authority is one of several authorities within the health-care sector that is responsible for promoting good health. The Swedish dental health care law, which regulates the goals and demands of dental care, gives priority to the promotion of good health. According to definitions of the law, dental care has to include preventive action. Dental care encompasses all actions brought on by oral and dental disease as well as disorders affecting the jaws and surrounding tissues. This includes the prevention of tobacco-use as a complement to the more traditional work in dental care.

The World Health Organization (WHO) stresses the preventive responsibility of dental health care in regard to tobacco. Through oral health programs, WHO aims to control tobacco-related oral diseases and adverse conditions [1].

In 1998, the European Union (EU) Working Group on Tobacco and Oral Health mailed a questionnaire to dentists in all EU countries requiring them to evaluate their knowledge, attitudes, behavior, and needs in relation to tobacco and oral health and smoking intervention strategies in the dental office. Swedish dentists confirmed a good knowledge of smoking and smoking-related diseases. The dental hygienist has a special position within the dental care team, since the working tasks are often aimed towards health-promotion among children and adults.

It is well known that young people start using tobacco as early as ages 11 to 16 [2–5]. Studies have shown that tobacco is almost always first used before the age of 20 [6,7]. Over a third of ninth-grade pupils in Swedish schools smoke and/or use snuff regularly, some on a daily basis, which means that a majority of these 15- to 16-year-olds are completely

tobacco-free. In Sweden, the use of snuff – smokeless tobacco in the shape of moist snuff, called ‘snus’ in Swedish – is more common among men than among women. A recent survey of tobacco-use has indicated that 22% of males 18–84 years of age and 3% of females in the same age group use snuff. Statistical examinations of tobacco-use among adolescents show that snuff may be a gateway to smoking and to a mixed use of tobacco [8–10].

Several studies have identified various stages in the development of smoking among adolescents. In a review of empirical studies, Mayhew et al. [11] describe the development in five stages, i.e. from the first stage of pre-contemplation, where the adolescents have never smoked and have no desire to start smoking, to the final stage, where daily smoking has been established. Different influences on smoking initiation in adolescence have been discussed. Multiple social, psychological, biological, and environmental factors have been shown to be involved and associated with the different stages of smoking.

Some of the intrapersonal factors influencing adolescents into starting to smoke are rebelliousness, risk-taking, and low self-esteem [12–14]. Adolescents who smoke report that they experience stress in their lives and perceive smoking as helping them to cope [15]. Factors in the social environment that have been identified as influencing the uptake of smoking in adolescence are attitudes and norms as well as relationships, such as having friends who use tobacco, or the tobacco use of family members [16–25]. It is obvious from the literature that most of the research on factors associated with adolescents’ use of tobacco has been focused on smoking. Research on snuff-use from the perspective of young people is still limited, and more knowledge is needed about the contexts that promote use and/or non-use of snuff.

Youth sport is one of our most important environments for adolescents in relation to development and fostering values. The issue is not just about practicing sports, it is also a question of learning norms and a set of values, learning how to behave and have a lifestyle [26]. Today, snuff-use is an established and accepted phenomenon in society. Rolandsson & Hugoson [3] have shown that snuff-use occurs to a higher degree than smoking among ice-hockey-playing boys (age 12–19). An increase in tobacco-use was also found in the follow-up study, which was carried out 3 years after the initial study [9]. However, snuff-use was less extensive among those who took part in sports other than ice hockey [9,19]. Other researchers have found that male athletes are more likely to use smokeless tobacco than are non-athletes [27–29].

If tobacco addiction is to be reduced, it is crucial to gain a fuller understanding of how young people conceptualize tobacco-use and addiction before they

are actually trapped, so that appropriate health-promotion measures can be taken.

Dental health care is an important part of health-promotion through its unique role of meeting children and young adults regularly. But the work of health-promotion has to reach beyond the clinic, since promotion of health in the settings where people live, work, learn, and play is clearly the most creative and cost-effective way of improving general and oral health. Sports activities are a great way to reach children and adolescents with information about how to make important health decisions in relation to tobacco-use, physical activity, and good nutrition.

Most earlier studies on snuff-use among adolescents have been performed using quantitative methods, and have therefore been limited in the sense that psychosocial interaction has not been considered. The overall aim of this study was to gain a better understanding of why ice-hockey-playing boys start using snuff. In turn, this would increase our knowledge about health promotion, especially oral health efforts, for adolescents residing in environments where there is an increased risk of their developing a tobacco habit, but also for adolescents in general. The specific aim of the study was to analyze and describe the psychosocial environment that influences young males who play ice hockey into starting to use snuff.

Material and methods

Grounded theory

A grounded theory design was used because of the unique possibility to generate a theory from data and thereby create theoretical concepts explaining social phenomena, human behavior, and processes. In order to create a grounded theory, the data collection has to be performed in such a way that it is not controlled by preconceived theory. The research questions always have to be as open as possible. The data are continuously coded and compared for both differences and similarities [30,31].

Informants

The study sample comprised males between 15 and 32 years of age, initially strategically selected in an open sampling process based on their activity/non-activity as ice-hockey players, and on whether they were snuff users or non-users (Table I). Later in the simultaneous data-collection and data-analysis process, the emerging results directed us to where to find new data and to which questions should be further elaborated, i.e. theoretical sampling. Data collection continued until saturation was reached, i.e. when further data elicited no new information. Out of the 16 informants, 9 were snuff users, 1 of whom

Table I. Distribution of the informants according to age, snuff-use, and playing ice hockey

Age in years	Snuff users	Non-snuff users	Active/not active ice-hockey players
32	1		1
30	1		1
22		1	1
22	1		1
21		1	1
20	1		1
19	1		1
18	1		1
18		1	1
17		3	3
16	3		3
15		1	1
Total	9	7	16

had started using snuff at age 12; 3 at age 13; 4 at age 15; and 1 at age 16. Thirteen of the informants were active ice-hockey players, while three stated that they had stopped playing.

Procedure

The prospective informants were each sent an information letter describing the purpose of the study and how it would be carried out. It was stressed that participation in the study was voluntary and that the individual's confidentiality and integrity would be considered throughout the research process. They were also informed that they would be contacted by telephone within a week, and asked whether or not they would like to participate in the study. Parental consent was asked among boys who had not yet reached 18 years of age. Three prospective informants declined: two were out of town and one was not interested in participation.

Interviews with the active ice-hockey players were, when possible, conducted in connection with a training session and in a separate, quiet, room in the clubhouse. In cases where the informant was not active as an ice-hockey player, the interview was carried out in a convenient room at Karlstad University. The informants were asked to sign and bring a document, which had been enclosed with the information letter, to confirm their participation. Before the tape-recorder was turned on, there was a more informal conversation when the informant was reminded orally of the purpose and confidentiality of the study. Furthermore, the informant was promised to take part of the final result of the study.

In-depth interviews

All interviews were carried out by the first author (M.R.). A tape-recorder was used and the interviews lasted for an average of 30 min (ranging between 15 and 60 min). In order to cover the study area, an

interview guide containing different themes had been constructed. The interview began with an open question about what it was like to be an ice-hockey player and to be in that environment, with the informant being given the opportunity to talk about his own image of the ice-hockey player. In this introductory phase, the conversation was steered towards the main question, which was snuff-use within an ice-hockey environment. Further questions were: Why did you start/not start snuffing and/or smoking? At what age and in what environment did you start using snuff? What does it mean to you to be a snuff-user, and if you chose not to use snuff what would it mean? Other themes concerned the attitudes of family members and ice-hockey coaches to tobacco-use and friends' attitudes towards tobacco-use, focusing on friends both inside and outside the ice-hockey environment. During the interview there was an opportunity for follow-up questions from the interviewer as well as for spontaneous information from the informant. Informant behavior, such as commitment, and other modes of expression were noted in writing as part of the data. Each interview was transcribed verbatim by M.R. and analyzed before the next informant was chosen.

Analysis of data

The data were analyzed in accordance with guidelines for grounded theory [30] consisting of three coding processes which often occur more or less simultaneously. The established interview protocol was first read in its entirety in order to form a total picture of the informant's statements. After a thorough read-through of each interview, open coding was performed. This process involved breaking the data down into discrete incidents, events, expressions, or other meaning units which were marked and gathered into substantive codes. These codes were given names that represented their main content (substance). Substantive codes with something in common were then gathered into a broader category. The final product of the open coding was a number of preliminary categories being created. These categories were labeled in more abstract and explanatory terms than were the substantive codes. In the next step of analysis axial (theoretical) coding, the characteristics and properties of each category were identified in the data and thereby each category was further developed. Related preliminary categories were gathered into higher-order categories. Hypotheses concerning relationships between categories were stated and tested in the data. Finally, selective coding involved identifying a core category which could be related to the higher-order categories. This process of integrating and refining the emerging categories generated a conceptual model. The first author (M.R.) analyzed all interviews. The third author (A.H.) was involved in the analysis as a

co-examiner and the second author (L.H.), who has extensive experience of qualitative research, acted as a consultant throughout the study.

Trustworthiness

Validity and reliability are concepts commonly used in the positivistic research paradigm. Glaser & Strauss [30] have suggested that the grounded theory methodology in itself guarantees that the result is grounded in the data. However, in qualitative research the concept of trustworthiness is used. The criteria included in judging trustworthiness are credibility, dependability, conformability, and transferability [32]. Briefly, these criteria have been met in this study as follows: the interviewer had an open relationship with the informant; an interview guide was used to cover the study area; the research process was carefully described as well as all phases in the study process; a careful description of how the data were collected and of the coding and categorization procedures was also given. In the present study, the co-examiners also participated in the analysis, and the outcome of the research has been thoroughly described and discussed [33].

Ethics

The Research Ethics Committee of Karlstad University approved the study (document registration number F 16/03).

Results

The core category emerging from the present data was labeled *socialization in and through psychosocial norms of the ice-hockey environment*. This category was related to five higher-order categories, which contributed to the social norms that allowed the start of using snuff. The generated categories formed a conceptual model describing the adolescents' *socialization in and through psychosocial norms of the ice-hockey environment*. The five higher-order categories were named *having a role-model*, *residing in a consenting environment*, *experiencing performance demands*, *experiencing a sense of community*, and *creating an image*.

Having a role model

Several informants related with great feeling how as early as the age of 6 or 7 they had started playing ice hockey. They told about how the game had developed from fun into a serious matter, when, for example, permission was given to start tackling, which made the game increasingly rough. During the first years of adolescence, club affiliation was important. Some of the informants described the "cool" feeling of wearing similar jackets when they

participated at different venues. Some said that the sport had recently developed into a "snob sport" with status thinking, and that the equipment needed to play was often expensive. For some adolescents this limited their chance to play ice hockey. Someone mentioned that the changed image of ice hockey had to do with the fact that elite players were now more prominent in the media, and were creating norms and setting trends. However, there was great unanimity among the interviewees that despite the changed character and culture of ice hockey it was still closely linked to snuff. The image of the role model is expressed in the following quotation:

They use snuff ... I guess a few don't ... but you know the coaches, managers use snuff ... those who've played hockey themselves ... often they're old inveterate hockey players so I guess they're brought up with it.

Hockey does have a certain label or ... yeah ... snuff label ...

... but I mean ... those who don't use snuff for example, they can be influenced by someone who does and then it feels like you're being very influenced by your coaches but they don't think so ...

Residing in a consenting environment

Most informants said during the interviews that many of the coaches and other individuals they came across during their ice-hockey playing used snuff. The informants also accounted for the consenting attitude of coaches regarding snuff-use compared to smoking, which they felt was not allowed since the coaches seemed to think that smoking affected the physical condition much more than snuff did. It was not just the consenting attitude among coaches that the adolescents emphasized; they also felt that the coaches did not react to or care about the informants' snuff-use, which was seen as natural. It also happened that players would ask the coaches for a bit of snuff and they would be given it. There was therefore no disincentive to prevent the adolescents from starting to use snuff. Few of the informants could remember receiving information about tobacco and its damaging effects; the exception was one or two listening to a lecture on drugs on a few occasions while at hockey school or camp.

I guess there were coaches who brought it up, but the coaches use snuff themselves so nobody cared ... we did as we liked ...

He said it's up to you if you want to use snuff or not ... he's using it himself, so ... even when we were younger it was accepted ...

Experiencing performance demands

All informants stated that they resided in a relatively demanding environment regarding physical and mental pressure. Physical pressure was mostly related to the required amount of practice that had to be put in. Around three practice sessions were planned for each week and often the hours were late. In addition to these sessions each week, one or two games were played, sometimes at venues out of town. Some adolescents admitted that schoolwork could suffer because of it. The mental pressure was felt by the informants to be connected with the demand of always having to be present at practice and having to perform to the best of one's ability. The feeling of competition with other players was also prominent. In spite of the apparently demanding environment, the informants expressed evident joy and satisfaction about having had the opportunity to participate in this sport. However, owing to the rough and demanding environment, some adolescents found they needed to use snuff. This was reflected in their answers when saying, among other things, that snuff was a stimulant which had a calm and peaceful effect on them.

... it might be extra precious in an intermission ... it calms you down if you're tired and worn out, then you take some snuff and calm down ... you just calm down, well it is a bit special ...

... it's very calming, that's true ... if you're very stressed then ... it does give a calming effect ...

Experiencing a sense of community

The informants described an environment in which a sense of community tied the team together and created team spirit. This spirit seems to obtain outside the ice-hockey environment, too, with several informants saying that they spent a lot of time socially as friends. The changing-room is also important. This is where the team gathers after games and celebrates in success or commiserates after defeat. For the uninitiated, the jargon might appear rough, with informants describing the atmosphere as "a bit special and masculine" and difficult for outsiders to understand the sense of community that existed. But after many years of being together – close relationships form between players and coaches – there is often great camaraderie breeding respect one for the other. Some of the informants felt that the hockey culture was a closed one: you stick together and stand by each other. Most of the adolescents claimed in the interviews that they had started using snuff after being influenced by friends in the ice-hockey world. Some of the informants stated that those who used snuff exercised some sort

of pressure on the non-users which could have influenced the latter into using snuff. Questions about experiencing a sense of community generated the following comments:

It's a part of strengthening the bonds in the group you're part of ... in the exact same way that you wear the same jackets and confirm each other that way and the use of slang ... mullet ... then snuff is a part of this ...

... on trips and ... when we go away for several hours and are in a bus ... since everyone else does it you usually take snuff because it tastes nice ...

Creating an image

A general image emerging from the interviews characterizes the ice-hockey player and the environment in which the sport is played. All informants described the environment as rough and cool, where the players were masculine and macho. Some also mentioned the ideal of having a well-trained body and the positive feeling from being seen. Since ice hockey is a close contact sport in which it is permissible to tackle opponents, occasionally the overly aggressive player may be sent to the penalty box. This is part of the game; an adolescent might even feel that having a tooth knocked out or obtaining a black eye during the course of the contest is something cool adding a touch of glamour to the hockey player. However, it seems that the individual feeling of being cool and macho as a hockey player is age-related and decreases with age. Snuff-use enhances the image of a masculine and macho hockey player in the eyes of adolescents.

... hockey, it's ... I guess snuff is ... supposed to be sort of masculine you know ... supposed to ... be like cool too ... I guess it's sort of macho ... hockey is supposed to be too ... guess it's sort of connected ... when you were 15 ... then it was really cool ... but now I don't know if it is that cool

Snuff-users ... don't want to seem weak ... want to be a bit macho ...

Analysis of the interviews revealed a high correlation between snuff users and non-users in regard to the reasons ice-hockey-playing boys start using snuff. The non-users explained that the reason they did not start using snuff was that the habit was unattractive and unclean, and that there was nothing positive about snuffing. The reasons are illustrated in the following quotations:

I've not been tempted . . . I don't think it looks nice . . . merely the smell of the snuff has discouraged me . . .

. . . even as a child I didn't want to snuff didn't see anything positive about it . . .

Discussion

Tobacco prevention activities are carried out at different levels in Swedish society. As the tobacco debut often takes place in childhood or adolescence, information about its damaging effects is given, among other places, in schools and at different health, medical and dental care facilities. The use of dental care staff in tobacco prevention is appropriate because of the damaging effect tobacco has on oral health, and also because there is already an organization directed at the oral health of children and adolescents (Swedish Dental Care for Children and Adolescents). It has also been shown that tobacco intervention combined with health instruction and periodontal care can be effective in reducing tobacco consumption [34].

The aim of this study was to describe and analyze the social environment influencing young male ice-hockey players into using snuff. The sample consisted of a strategically and theoretically selected group of informants: young males who were active or had been active as ice-hockey players, chosen with regard to age and whether or not they were snuff-users. This group was especially interesting because earlier studies have shown that snuff-use is more common among ice-hockey-playing adolescents than among adolescents generally in Swedish society [3,4,9]. Studies have also shown that snuff-use is less prominent among adolescents practicing sports other than ice hockey. Since it is forbidden to smoke in the ice-hockey environment, the study was able to focus on snuff-use only [9,19]. As the aim of the study was to describe and analyze why young males who play ice-hockey start to use snuff, both users and non-users were interviewed.

The group was also interesting to study from the perspective of the community and the athlete, not least in relation to the guidelines of the Swedish Sports Confederation. These state that sports have to constitute a safe environment for children and young adults and develop people in a positive direction, physically as well as socially and culturally. Sports should also work towards a tobacco-free environment. In addition, the guidelines say that sports coaches have to be aware of their roles as adult role models when they spend time with children and young adults.

While the road to adulthood brings biological changes, it also constitutes the time when a person shapes his or her lifestyle. Among adolescents, this

development might vary depending on financial, social, and cultural levels [35]. Identity is developed in the interplay with others and can be seen for the most part as a social process.

The result of this qualitative study indicates a core category, *socialization in and through psychosocial norms of the ice-hockey environment*, describing the central meaning of the informant's experiences of snuffing behavior. The core category relates to the sports environment into which the young adults are socialized at an early age, and where different power structures are found. These structures are presented in the results section as higher-order categories that act together and contribute to the social norms within the ice-hockey-environment culture. The identified higher-order categories – *having a role model*, *residing in a consenting environment*, *experiencing performance demands*, *experiencing a sense of community* and *creating an image* – integrate with each other within the environment in which the young people reside and carry out their sports activities and have been interpreted as enhancing factors for the commencement of snuff-use.

For adolescents in an ice-hockey environment, snuff-use can be seen as part of a lifestyle and of the creation of a social identity. In the present study, informants described how, at an early age, they came into contact with snuff-use among coaches and older players, but also through the exposure of famous ice-hockey players with snuff under their lip. There was consensus among the informants that, compared to other sports, the ice-hockey environment was the more strongly linked to snuff-use. Adolescents who at an early age enter the hockey environment and reside there during their teenage years are evidently exposed to a strong influencing factor. In the present study, this is described in the category named *having a role model*.

Castrucci et al. [23] and Komro et al. [24] have shown an association between young adults who take up smoking and their parents' attitudes to smoking. A corresponding association can be found in the present study, where the adolescents felt that there was a consenting attitude towards snuff in the ice-hockey environment. However, one of the informants reported that snuff-use was prohibited in his team. All the others were unanimous that snuff-use was allowed at all ages despite the guidelines presented by the Swedish Sports Confederation about a tobacco-free environment. The informants described an environment in which coaches did not really care whether or not the informants used snuff – even from an early age. The existing snuff-use among coaches and their consenting attitude in relation to the players can be interpreted as an enhancing factor influencing the start of snuff-use among adolescents.

In the interviews, the informants described the pressure they felt, i.e. not just physical pressure to

practice hard but also mental pressure always to be present for practice sessions. Among the older informants it was evident that they always had to compete for a place in the team and had a fear of being “dropped” from the team. Several of the snuff-users said that snuff gave a feeling of relaxation and calm after a tough practice session or game and that it had a comforting effect. In an interview study by Stjerna et al. [36], it was found that boys active in sports linked snuff to team sports and stated that snuff could enhance their performance. However, there was no indication by the informants in the present study that snuff heightened performance. The present results regarding snuff-use in ice hockey can be interpreted as a way of coping with the performance demands experienced.

The informants reported the sense of community within the team and the trust and understanding they felt for each other. Some of the informants related how those who used snuff at an early age tried to influence non-users into taking up the habit. Studies have shown that it is not only the type but also the number of friends who smoke that influences young adults to take up smoking [16,17,22]. It might be assumed that snuff-using friends have a similar effect. Since ice-hockey-playing adolescents live in such close relationship, the sense of community might be an enhancing factor for starting to use snuff.

The informants in the study stated that the hockey player sometimes appears masculine with macho jargon, and that the game itself has changed character over time in becoming rougher. An expression of the masculine attitude might be linked to snuff-use among ice-hockey players. It was noticeable that it was mostly the younger informants who voiced the opinion that it was “cool” to be a hockey player; the older ones related this same picture only after thinking back in time. This suggests a change in attitude to social identity and adulthood over time. However, several pointed out that although they were older there was a certain jargon, and snuff was still a part of it. Similar results have been found in studies among smokers [37] and snuff-users [38].

In previous studies among ice-hockey-playing adolescents [3], the provision of health information regarding snuffing habits has markedly increased our knowledge of the harmful effects of tobacco on general health and of local health in the oral cavity. Despite this, players have not changed their habits and given up snuff. The Health Belief Model [39] suggests that the core beliefs used should predict the likelihood that the behavior will occur. In this model, the construct *health motivation* to reflect an individual’s readiness to be concerned about health matters has been included. However, the Health Belief Model has been criticized for paying little attention to the social environment. There were most likely several explanations for the unchanged

behavior among the snuff-using players, but one possibility was simply the environment in which the players practiced their sport. This hypothesis has been supported by sports research, where sports as a social institution in modern society affect almost all individuals in one way or another. In this context, sports, like most activities, are not *a priori* good or bad, but have the potential to produce both positive and negative outcomes.

As the results from the present qualitative study indicate, the need for preventing and reducing snuff-use in the special environment of the ice-hockey player is obvious. Such health promotion activities have to be based on a social cognition model that takes account of the individuals’ representations of their social world, i.e. places the individual within the context of both other people and their broader social world. A helpful theory in this context might be the Theory of Planned Behavior [40]. The clinical implication of this strategy is that cooperation will be necessary among players, coaches, and others responsible for the organization of the ice-hockey team. Dental staff will need more knowledge about the factors of importance in the personal development of young individuals. They will also need more knowledge about factors of the environment that have an important influence on young adults if they are to facilitate healthy choices. There is obviously also a need for developing alliances with other health workers, because oral health problems have risk factors in common with diseases such as hypertension, heart disease, and cancer.

Certainly, no generalizations about the general population can be drawn from the results of this study. Instead, the present conceptual model, generated from and grounded in the data, offers a set of concepts and hypotheses that researchers can transfer to other substantive fields.

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